



**WORLD BANK GROUP**  
Finance, Competitiveness & Innovation

# **IV Fintech Forum Meeting – CEMLA**

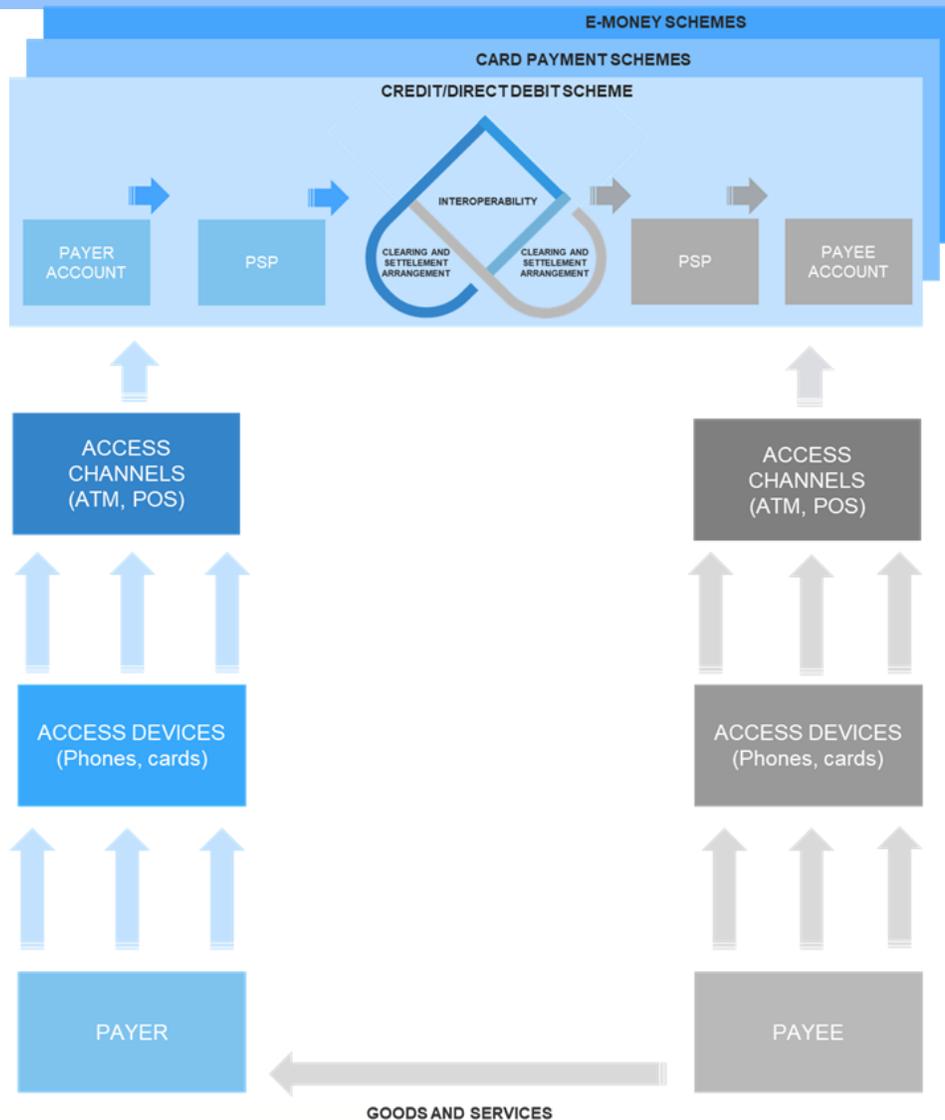
## **Interoperability and digital payments**

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# Interoperability and digital payments - overview

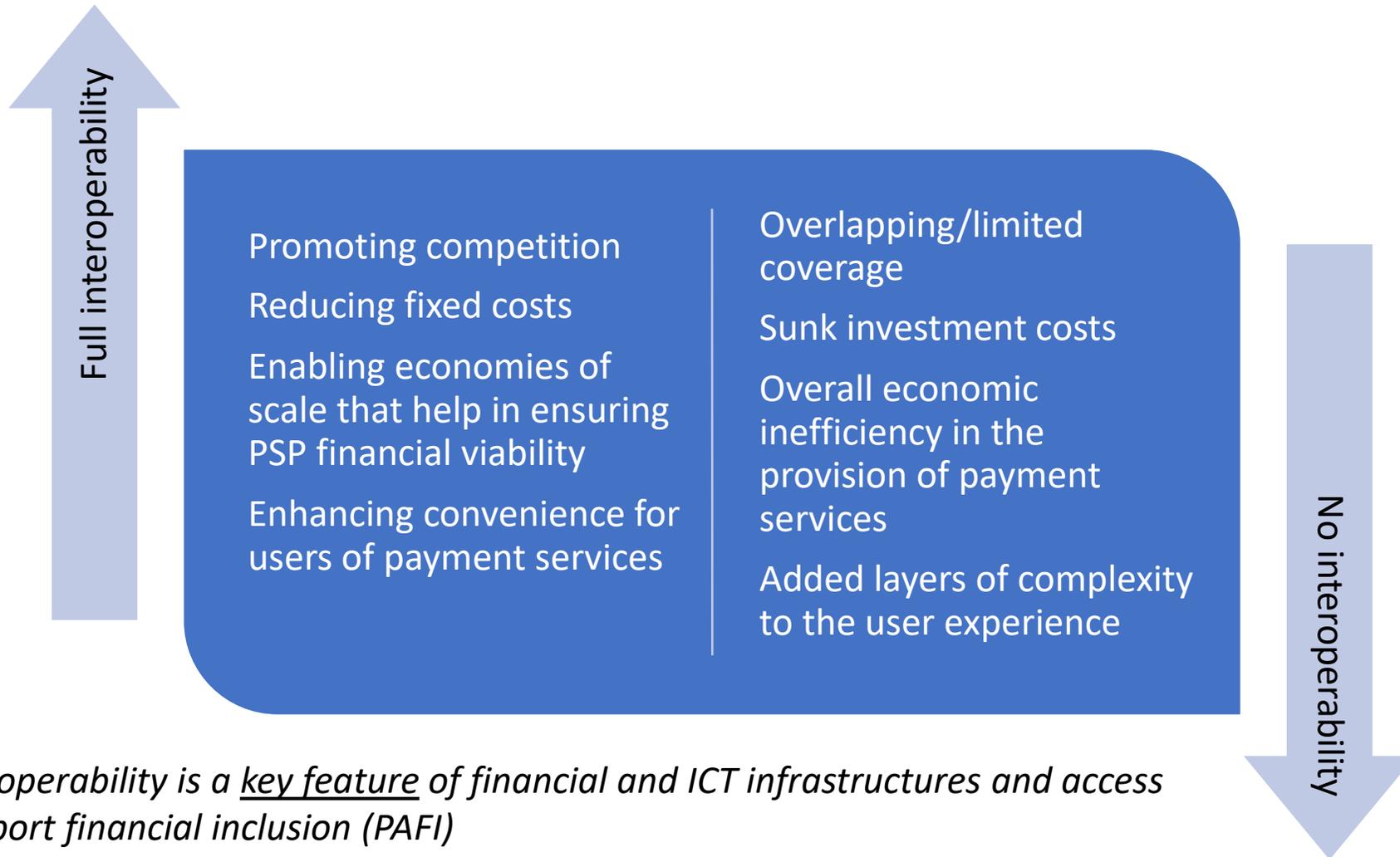
1. Interoperability – the “what” and “why”
2. Where do we stand on interoperability
3. The changing interoperability landscape
4. The cross-border payments perspective
5. Conclusions

# What is payment system interoperability?

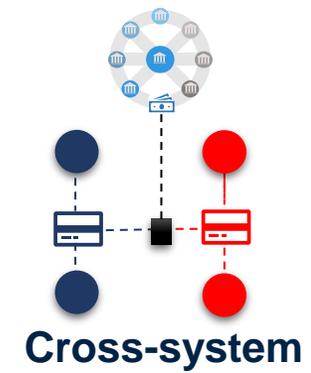
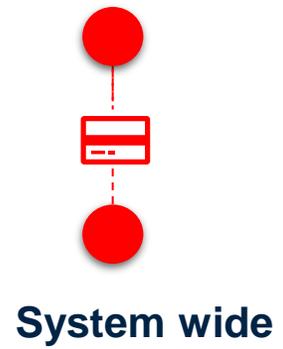
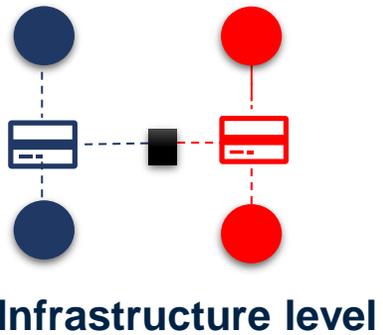


- Broadly speaking, interoperability is the technical or legal compatibility that enables a system or mechanism to be used in conjunction with other systems or mechanisms. *(BIS Glossary, updated Sept 2016)*
  - Payment system interoperability entails clearing and settlement arrangements AND business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

# Why is payment system interoperability important?



# Levels of interoperability



# Where do we stand on interoperability around the world?

## Card (access/acceptance) infrastructure is largely interoperable

|                     | ATMs                  |     |                       |     |                      |     |                     |     |
|---------------------|-----------------------|-----|-----------------------|-----|----------------------|-----|---------------------|-----|
|                     | Full interoperability |     | Good interoperability |     | Low interoperability |     | No interoperability |     |
|                     | #                     | %   | #                     | %   | #                    | %   | #                   | %   |
| Global              | 72                    | 65% | 24                    | 22% | 9                    | 8%  | 5                   | 5%  |
| High income         | 35                    | 85% | 4                     | 10% | 1                    | 2%  | 1                   | 2%  |
| Upper middle income | 19                    | 58% | 9                     | 27% | 3                    | 9%  | 2                   | 6%  |
| Lower middle income | 14                    | 50% | 10                    | 36% | 3                    | 11% | 1                   | 4%  |
| Low income          | 4                     | 50% | 1                     | 13% | 2                    | 25% | 1                   | 13% |

|                     | POS                   |     |                       |     |                     |     |                      |     |
|---------------------|-----------------------|-----|-----------------------|-----|---------------------|-----|----------------------|-----|
|                     | Full interoperability |     | Good interoperability |     | No interoperability |     | Low interoperability |     |
|                     | #                     | %   | #                     | %   | #                   | %   | #                    | %   |
| Global              | 71                    | 66% | 26                    | 24% | 6                   | 6%  | 5                    | 5%  |
| High income         | 35                    | 85% | 5                     | 12% | 0                   | 0%  | 1                    | 2%  |
| Upper middle income | 19                    | 58% | 9                     | 27% | 2                   | 6%  | 3                    | 9%  |
| Lower middle income | 15                    | 56% | 10                    | 37% | 2                   | 7%  | 0                    | 0%  |
| Low income          | 2                     | 29% | 2                     | 29% | 2                   | 29% | 1                    | 14% |

# Where do we stand on interoperability around the world (cont'd)?

## Mobile money services still lack interoperability...

|                     | Mobile Money        |     |                       |     |                      |     |                       |     |
|---------------------|---------------------|-----|-----------------------|-----|----------------------|-----|-----------------------|-----|
|                     | No interoperability |     | Full interoperability |     | Low interoperability |     | Good interoperability |     |
|                     | #                   | %   | #                     | %   | #                    | %   | #                     | %   |
| Global              | 54                  | 55% | 19                    | 19% | 13                   | 13% | 12                    | 12% |
| High income         | 16                  | 47% | 7                     | 21% | 7                    | 21% | 4                     | 12% |
| Upper middle income | 20                  | 67% | 3                     | 10% | 1                    | 3%  | 6                     | 20% |
| Lower middle income | 14                  | 54% | 8                     | 31% | 2                    | 8%  | 2                     | 8%  |
| Low income          | 4                   | 50% | 1                     | 13% | 3                    | 38% | 0                     | 0%  |

- 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.

|                     | For service providers facilitating acceptance via QR code, regulations enforce EMV or other Interoperability standard |     |     |     |
|---------------------|---|-----|-----|-----|
|                     | No  |     | Yes |     |
|                     | #   | %   | #   | %   |
| Global              | 74  | 71% | 30  | 29% |
| High income         | 29  | 76% | 9   | 24% |
| Upper middle income | 24  | 77% | 7   | 23% |
| Lower middle income | 15  | 56% | 12  | 44% |
| Low income          | 6   | 75% | 2   | 25% |

# 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

Large-volume payment streams (G2P, P2G, bill payments, transport)

New acceptance technologies, e.g., QR Code

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

**Interoperability** = enabling access to real-time payments from any (bank/non-bank) wallet and access channel, acquiring of merchants through common interoperable acceptance technology

Fast payments

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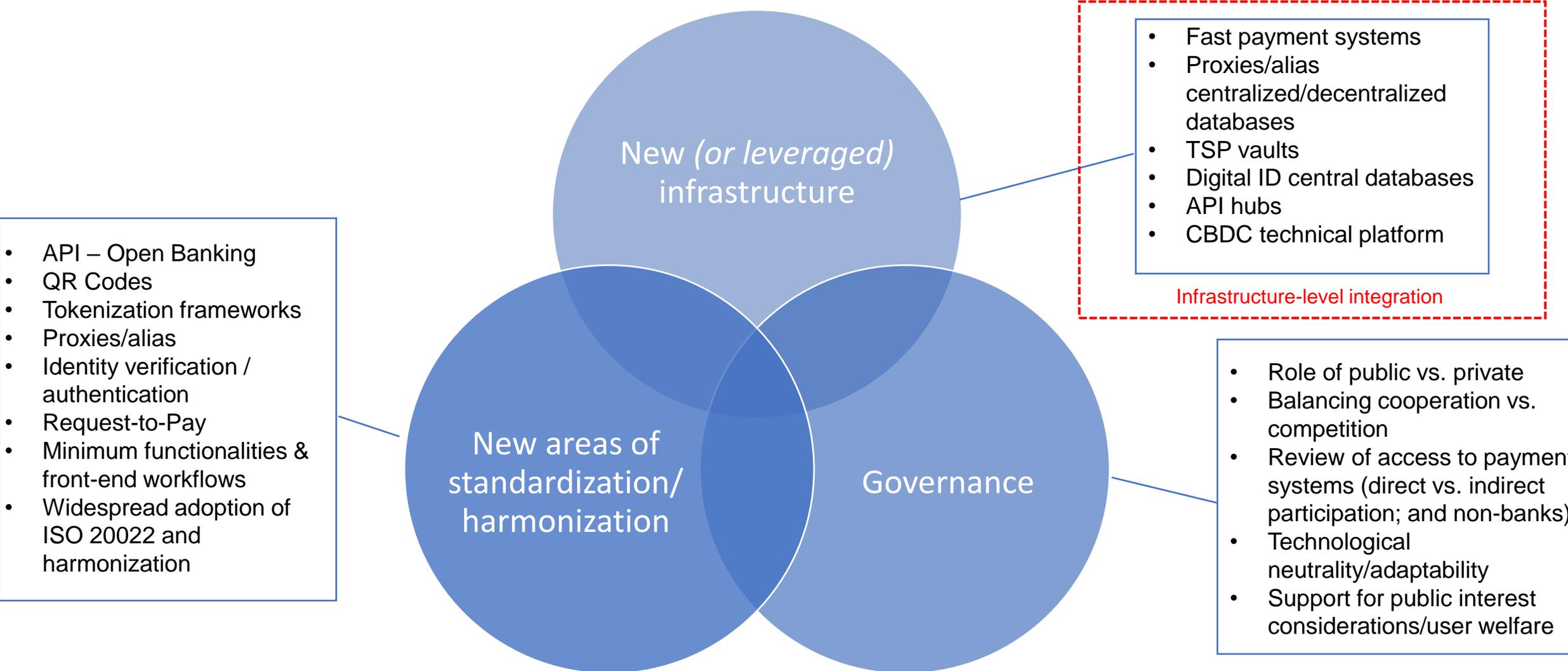
**Interoperability** = allowing the public to use different forms of money interchangeably and enabling the easy flow of funds between different systems

Central Bank Digital Currency

Open banking

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

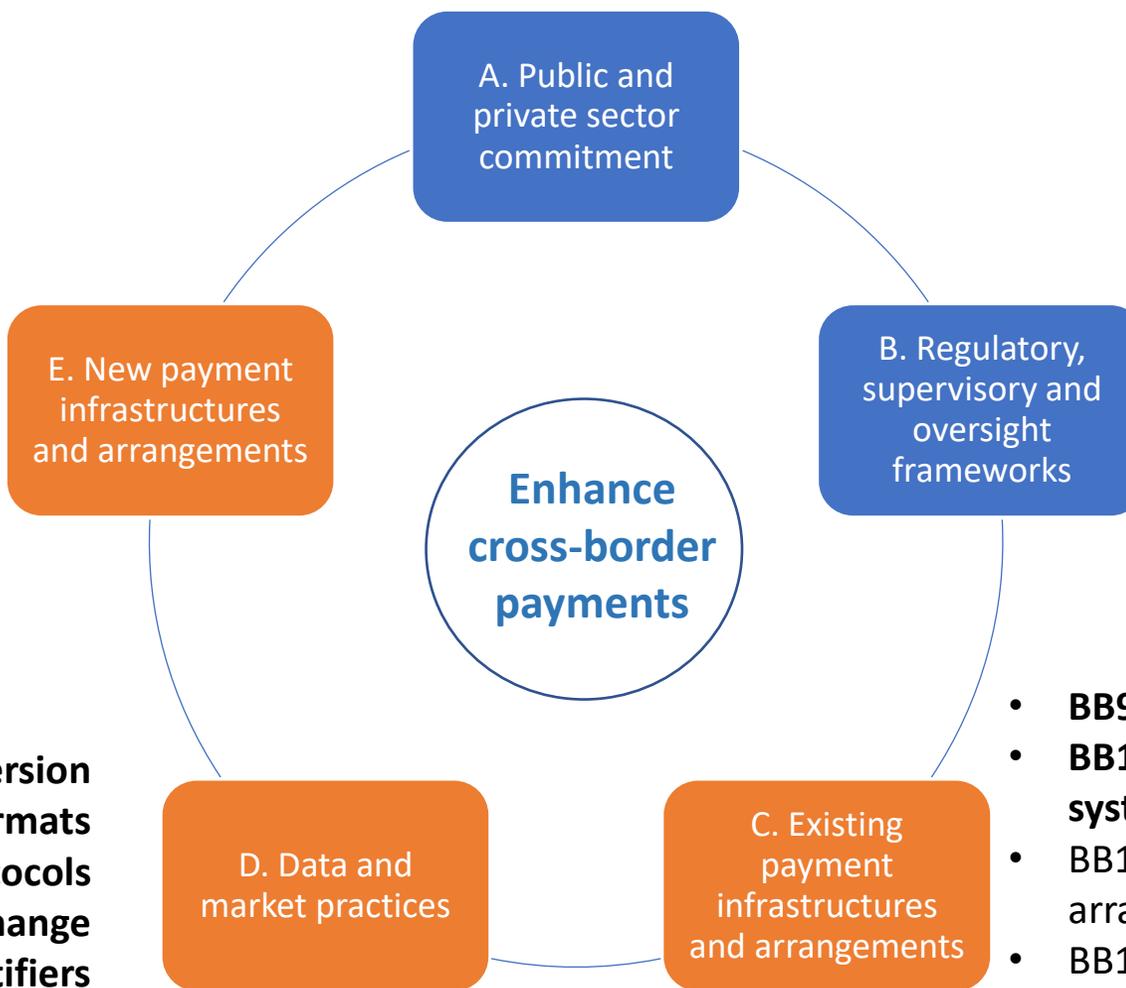
# New areas of standardization, new infrastructure, new governance



# 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**



- **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**

# 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.