



▶ **CPMI Brief No 7**  
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February 2025

Committee on Payments  
and Market Infrastructures



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# Acta, non verba: interlinking fast payment systems to enhance cross-border payments

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# Acta non verba: interlinking fast payment systems to enhance cross-border payments<sup>1</sup>

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## Highlights

- The G7 supports responsible innovation that enables interoperability among new and existing cross-border payment systems; a level playing field for private sector competition and innovation; and the observance of relevant international standards.
- Emerging markets and developing economies have made considerable progress in fast payment adoption, laying the foundation for interlinking at the regional and international levels – thus enhancing cross-border payments.
- The CPMI is committed to delivering on its roadmap actions, focusing on those that support end users that are most disproportionately affected by inefficient cross-border payments and redoubling its efforts to promote implementation at the jurisdictional level.

## Introduction

Safe and efficient cross-border payments can offer benefits to all, through lower costs, faster speed, greater transparency and improved access. These enhancements could be especially beneficial for emerging markets and developing economies (EMDEs), for example, through improved international remittance services or in reducing frictions to further encourage regional trade. In 2023, the G20 endorsed a prioritised cross-border payments roadmap, building on the foundations laid by the public sector through analyses, stocktakes and guidance in the first years of the programme. As part of the prioritised roadmap, three priority themes have been put forward: payment system interoperability and extension; data exchange and message standards; and legal, regulatory and supervisory frameworks (FSB (2023)).

Improving cross-border payments and reducing the risk of fragmentation through greater integration of payment infrastructures was identified as a key priority of the Italian G7 Presidency in 2024. G7 members discussed and welcomed initiatives to take forward the G20 roadmap and have reaffirmed their support for international cooperation within the G7 and beyond, in particular with EMDEs.<sup>2</sup> The support from jurisdictions beyond the G20 is a critical success factor in enhancing cross-border payments for all, particularly those that depend on remittances from family and friends.

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<sup>1</sup> The views expressed in this CPMI Brief are those of the authors and do not necessarily reflect those of the Bank for International Settlements, its Committee on Payments and Market Infrastructures, its member central banks, or those of the G7, its Presidency or its members. We are grateful to Anamaria Illes and Ilaria Mattei for excellent research assistance.

<sup>2</sup> G7 Finance Ministers and Central Bank Governors (2024).

Improving cross-border payments should contribute to financial integration and counter the risk of market fragmentation. The G7 supports responsible innovation that enables interoperability among new and existing cross-border payment systems, a level playing field for private sector competition and innovation, and the observance of relevant international standards. As such, the G7 has emphasised that such solutions should embed values that are widely shared across the international monetary and financial system, including appropriate transparency, the rule of law and sound economic governance.

Among those solutions, payment system interlinking arrangements may deliver significant improvements in a relatively short time. Interlinking arrangements allow banks and other payment service providers (PSPs) of different jurisdictions to transact safely and efficiently with each other, without requiring them to participate in the same payment system, and they can reduce the need to use intermediaries (eg correspondent banks). Such arrangements can shorten transaction chains, reduce overall costs and increase the transparency and speed of payments. Building on the findings from engagement with public and private sector stakeholders, the Bank for International Settlements' Committee on Payments and Market Infrastructures (CPMI), together with the G7 Presidency, organised a conference to expedite the interlinking of fast payment systems (FPS) in July 2024. This CPMI Brief summarises the high-level findings of the conference. The conference programme can be found in the annex.

## Current state of FPS interlinking

Linking FPS has been identified as a priority action to enhance cross-border payments by the G20 and a number of FPS operators have shown interest in establishing links. Progress on technical interoperability and governance are paving the way to establish safe and efficient links among FPS at scale. Successful FPS links have certain design principles in common, including commercial viability and scalability. Additionally, taking a long-run view of possible technological advancements and the future requirements of a digital economy is deemed equally important (CPMI (2023a)).

Several FPS already have a cross-border interlinking arrangement, and these links are predominantly intraregional, such as within the Asia-Pacific region or Europe.<sup>3</sup> Around half of FPS plan to have at least a first or additional link established by the end of the year. Those FPS that currently do not have any plans to establish interlinking arrangements often want to first prioritise promoting greater adoption of fast payments domestically to reap the benefits of interlinking initiatives in the longer term.

The interlinking model chosen often depends on business case considerations, and the types of currencies and legacy systems involved.<sup>4</sup> For example, a hub and spoke model may be beneficial to connect regional blocks, whereas common platforms may work well for jurisdictions that want to transact in a common currency. Most of the current interlinking initiatives are through bilateral links. In the medium term, multilateral arrangements such as hub and spoke arrangements or common platform solutions are likely to gain more traction. However, there is likely to be a continued and important role for bilateral links in facilitating trade over particular high-volume corridors or payment use cases.

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<sup>3</sup> Based on the results of the 2023 CPMI cross-border payments monitoring survey, which covered 45 FPS, 30% of FPS have some form of interlinking arrangement in place (Fitzgerald et al (2024)).

<sup>4</sup> The interlinking model can be categorised into four stylised models: single access point, bilateral link, hub and spoke, and common platform (CPMI (2022)).

## Domestic and regional fast payment systems

Designing, implementing and operating an FPS is a complex but surmountable task. The number of FPS continues to grow, but countries have taken different approaches to designing FPS, depending on central bank mandates, societal preferences and technological developments. For example, in some jurisdictions, the public sector – typically led by central banks – plays a more active role by owning and operating the FPS. In others, the private sector operates the FPS. Some FPS allow non-bank PSPs to be a participant, but others do not. Many interlinking arrangements, for the time being, rely on correspondent banks as providers of foreign exchange (FX) services. Multi-currency arrangements, which process more than one currency in parallel, or cross-currency arrangements providing FX conversion, are still the exception. This variety of options is also present in the settlement procedures, ranging from deferred net to real-time gross settlement – the type of use cases supported also varies.

The impressive fast payments adoption in many EMDEs can be explained by their service design as a low-cost, user-friendly alternative to cash. Fast payment systems have become an important tool to increase financial inclusion and are a key component of domestic payment system reforms in many jurisdictions. These developments have the potential to bring many people into the formal financial system, particularly when complemented by broad financial capacity-building initiatives. Learning from the success stories of EMDEs and understanding their requirements will help to raise the bar for cross-border payments overall.

Several regional payment infrastructures are in operation or under development, many of which form part of a broader regional economic strategy. A key success factor has been leveraging the support of central banks and other public authorities and creating trust among participating PSPs by demonstrating consistent performance and reliability. Some overlaps currently exist between regional initiatives, and others will emerge with increasing integration of payment systems across borders. In many cases, this offers an opportunity to bridge gaps between different regions or cover different use cases and/or corridors. However, overlapping regional initiatives may also present several challenges, such as competing for participation and volumes, or leading to inefficiencies in terms interoperability and liquidity management. While a certain level of fragmentation is unavoidable due to geopolitical and other reasons, the challenges of regional integration can be minimised by setting up interlinking arrangements that are not restricted to possible further international expansion.

## Interoperability as a facilitator for interlinking

Updating domestic payment systems is also an investment in enhanced cross-border payments, since the first and last mile of these payments is typically processed domestically. Enhancing the safety and efficiency of domestic FPS, in terms of their functionality, use of messaging standards and alignment with compliance requirements, will also contribute to their readiness to join multilateral arrangements if, and when, the opportunities arise.

The growing global adoption of the international financial messaging standard ISO 20022 by payment systems and financial institutions offers the prospect of greater interoperability, with benefits for cross-border payments. Inconsistencies in the implementation and use of ISO 20022 for cross-border payments risks undercutting some of its benefits. To address this fragmentation, the CPMI published harmonised data requirements for ISO 20022 messages for cross-border payments. These data requirements establish a consistent minimum set of data to be used in a cross-border payment transaction end to end (CPMI (2023b)). Given the rapid transition to ISO 20022 messaging under way, the coming years will be crucial for harmonising its use to fully leverage its potential for cross-border payments.

Application programming interface (API) protocols are arguably even less harmonised than ISO 20022 data models, impeding interoperability and reducing the potential benefits of their implementation. Supporting greater harmonisation of APIs has thus been identified as a priority for achieving cheaper, faster, more transparent and accessible cross-border payments. The CPMI, together with market stakeholders, has developed recommendations for greater API harmonisation (CPMI (2024a)).

Issues of compliance screening and fraud prevention are highly relevant in the realm of cross-border payments. FPS interlinking could potentially reduce the complexity of the payment chain, due to reducing the number of intermediaries required to complete a payment. However, the real-time nature of FPS interlinking arrangements may heighten the pressure of compliance processing. There are opportunities to leverage new technologies such as artificial intelligence and network analytics for fraud detection, and harmonised data and messaging frameworks to improve transparency in cross-border payment arrangements.

Interoperability can also be achieved by leveraging existing solutions, thus reducing regional and global fragmentation. A notable case is the implementation of a “clone” of the Eurosystem FPS TARGET Instant Payment Settlement (TIPS) by several Western Balkan jurisdictions as their domestic FPS, rather than developing a solution from scratch.<sup>5</sup> “Cloning” could allow jurisdictions to benefit from a “service approach” without having to technically operate the platform themselves, while maintaining full control of the business side and benefiting from any future enhancements. Due to jurisdiction-specific regulations, technology and other factors, “cloning” may not be feasible in many other cases, but the concept of reusing modules or the functionality of other payment systems could be applied more broadly.

## Technical assistance and funding support

Technical assistance and capacity-building play a critical role in helping to achieve the G20 targets and are important to support the development of fast payment systems that would pave the way for future interlinking. The International Monetary Fund (IMF) and the World Bank have developed a multi-year strategy to provide technical assistance and are committed to coordinating and collaborating on initiatives for enhancing cross-border payments wherever possible and appropriate (IMF and World Bank (2023)).

Recent and ongoing technical assistance by the IMF and the World Bank supports the three interconnected priority themes of the G20 roadmap. Having complete and reliable data is important to identify which frictions are most relevant in each jurisdiction, as there can be significant variation in the cost and speed of payments. These data can also assist with attracting the necessary funding, requesting technical assistance and prioritisation by policymakers.

The African continent has been identified as a region for additional focus and support from international organisations. Recent technical assistance has focused on domestic enhancements, mainly on legal and regulatory frameworks, implementing standardised messaging and opening payment

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<sup>5</sup> On 7 June 2024 the European Central Bank Governing Council approved the Bank of Italy, acting on behalf of the service-providing Eurosystem central banks, to provide a clone of the Eurosystem TIPS platform to the central banks of Albania, Bosnia and Herzegovina, Kosovo, Montenegro and North Macedonia.

systems to non-bank players. These enhancements at a domestic level should lay the foundations for later improvements to cross-border payments.

## Roles for the public and private sectors

Public and private sector commitment and recent advancements in technology can help address some of the risks, barriers and challenges. Especially in the start-up phase, integrating payment systems across borders will require decisive leadership. Decision-makers have a variety of options for the development and integration of payment infrastructure and should consider the roles that the public and private sectors can play.

Current initiatives typically involve only a small number of stakeholders. Actions that require more significant coordination, investment and effort have yet to start in many cases. The reasons for this can be resourcing and budget constraints resulting from competing priorities in the payments landscape. Further, the consultation and outreach required to secure industry buy-in for major initiatives can be slow and require significant effort. The difficulty of finding jurisdictions with which to partner on multinational initiatives and dependency on regulatory and supervisory reforms should not be underestimated.

A strong role for the public sector and cooperation with private sector actors that share the objectives, could be a key enabler for cross-border payment system integration. Central banks are positioned to examine which projects will help to enhance cross-border payments, taking into consideration the initial conditions and constraints. Central banks may act as a catalyst for development and innovation, and step in when there are gaps or coordination failures in the market, as is done for domestic payments. This role for the public sector is likely to become even more important for cross-border payments due to the number of stakeholders involved.

Cooperation with the private sector is also critical to fast payments adoption and the success of FPS interlinking arrangements. As a prerequisite, there must be adequate market demand for the arrangements. In some jurisdictions, the private sector may lead the development of the infrastructure for a cross-border arrangement, either for its own benefit or due to incentives. If this is not the case and the public sector steps in, maintaining a role for the private sector, such as in FX settlement, can help to ensure the commercial viability and adoption of the arrangement.

## Conclusion

As the number of domestic FPS grows, opportunities are emerging to facilitate the cross-border interlinking of safe and efficient FPS. Work is under way in many jurisdictions to enhance FPS readiness to participate in such links, particularly to improve their functionality and align with messaging and compliance standards. Successful links to date have prioritised interoperability and smoothly managed coordination between the public and private sectors and among jurisdictions.

It is expected that FPS links in the near term will continue to be based on bilateral links, while over the longer term, these may coexist with more open and future-proof multilateral arrangements. Over time, the market will likely evolve to link between regional groupings.

High-quality data at the jurisdictional level can help to gain useful insights for the planning and establishment of interlinking arrangements. Having complete and reliable data allows for attracting necessary funds, requesting technical assistance by international organisations and prioritising projects



with the greatest potential. Also, learning from the experience of first movers will help jurisdictions to navigate the complexity of establishing interlinking arrangements, particularly while they continue to manage other priorities.

In recent years there has been extensive progress towards interoperability, through the definition of harmonised data requirements for ISO 20022 messages (CPMI (2023b)) and the forthcoming recommendations for greater API harmonisation (CPMI (2024a)). Similarly, substantial progress has been made to define recommendations that, if implemented, would help to build a sound governance framework as well as applying the right oversight approaches in a multi-jurisdictional scenario (CPMI (2024b)). This work, together with technical assistance provided by the IMF and World Bank, will allow further development and greater interoperability in the payment system landscape and contribute to the readiness of FPS for future interlinking arrangements.

Over 2025, the CPMI is committed to delivering on its roadmap actions – and will focus on those actions that can support end users that are most disproportionately affected by inefficient cross-border payments. The CPMI will redouble its efforts to promote implementation at the jurisdictional level. In addition, the CPMI will emphasise two strategic initiatives, particularly for regions furthest away from the targets, especially in sub-Saharan Africa. The first initiative will focus on safety and transparency. Confirming the payee before a payment is initiated contributes to transparency and can avoid many challenges down the road. APIs offer the potential to roll out confirmation of payee solutions broadly. The CPMI and the South African G20 Presidency will bring existing initiatives together and identify their commonalities. The second initiative will seek to gain insights into cross-border payment flows in sub-Saharan Africa, their performance (eg cost and speed) and underlying frictions (eg access and transparency), which might also be relevant to other regions. The aim is to identify implementable actions to improve the data quality of cross-border payments.

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## Annex: Conference programme

### 1. Opening remarks and keynote speech

Fabio Panetta (Governor, Bank of Italy and Chair, CPMI)

### 2. Which type of links will support the establishment of fast payment system interlinking at scale?

To date, most of the current or near-term arrangements are bilateral links between fast payment systems (FPS). However, scaling up FPS interlinking will benefit from the successful launch of hub and spoke and common platform solutions. This session will discuss the types of links likely to succeed as well as the potential coexistence of different type of arrangements.

Panellists:

- Olivier Denecker (Director of Knowledge for Payments and Partner, McKinsey)
- Maha El Dimachki (Head of the Innovation Hub Singapore Centre, BIS)
- Sal Karakaplan (Chief Strategy Officer, The Clearing House)
- Godfrey Sullivan (Head of Corporate Strategy and Acting Head of Product for the Central Europe, Middle East and Africa Region, Visa)

Moderator:

- Tara Rice (Head of the CPMI Secretariat, BIS)

### 3. Update (virtual): G20 cross-border payments roadmap: progress and priorities

Klaas Knot (President, De Nederlandsche Bank and Chair, Financial Stability Board)<sup>6</sup>

### 4. Keynote speech (virtual) by the 2025 G20 Presidency

Lesetja Kganyago (Governor, South African Reserve Bank)

### 5. Domestic and regional fast payment systems: bridging the gap or risk of overlap?

While the focus on regional integration projects in the past has been on wholesale payments, opportunities are emerging to facilitate the integration of FPS within economic groupings. This session will discuss if domestic and regional FPS can complement each other and how the integration across regions can be factored into regional FPS projects.

Panellists:

- Faisal Al Hijawi (Chief Strategy and Development Officer, Buna)
- Maxine Hlaba (Manager, SADC Banking Association Secretariat)
- Syed Sohail Javaad (Executive Director, State Bank of Pakistan)
- Renato Dias de Brito Gomes (Deputy Governor, Central Bank of Brazil)

Moderator:

- Chiara Scotti (Deputy Governor, Bank of Italy)

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<sup>6</sup> Knot (2024).

**6. Interoperability as a facilitator for interlinking: develop a fast payment system or adopt a “clone”?**

Interoperability and standardisation between jurisdictions’ payment systems can enable more efficient interlinking of FPS. Adopting the identical technical solutions, however, goes a step further. This session will explore the potential of “cloning” FPS platforms for their future interlinking.

Panellists:

- Burkhard Balz (Member of the Executive Board, Deutsche Bundesbank)
- Shriyanka Hore (Managing Director, Swift)
- Alan Marquard (EVP Transfer Solutions, Mastercard)
- Giuseppe Zingrillo (Director General for Information Technology, Bank of Italy)

Moderator:

- Carol Brigham (Managing Director, Bank of Canada)

**7. Keynote speech (virtual) by the 2024 G20 Presidency**

Roberto Campos Neto (Governor, Central Bank of Brazil)

**8. Implementation of fast payment systems and their interlinking: how can jurisdictions leverage technical assistance and funding support?**

Technical assistance plays a critical role in helping countries to improve their payment systems. International organisations, such as the International Monetary Fund and World Bank, play a key role by providing coordinated and customised assistance at the country level to address specific challenges, including the strengthening of their legal frameworks. This session will discuss technical assistance and funding support for domestic FPS implementations and their interlinking.

Panellists:

- Tommaso Mancini-Griffoli (Division Chief of the Payments, Currencies, and Infrastructure Division, International Monetary Fund)
- Luljeta Minxhozi (First Deputy Governor, Bank of Albania)
- Kosta Peric (Deputy Director, Inclusive Financial Systems Global Growth and Opportunity, Bill and Melinda Gates Foundation)
- Jean Pesme (Global Director of Finance, Finance Competitiveness and Innovation Global Practice, World Bank)

Moderator:

- Victoria Cleland (Executive Director for Payments, Bank of England)

**9. Keynote speech: How BIS Innovation Hub projects can support FPS interlinking**

Andréa Maechler (Deputy General Manager, BIS)

**10. Taking safe and efficient fast payment system interlinking into practice – what roles for the public and private sectors?**

A strong role for the public sector, in cooperation with private sector actors, could be a key enabler for FPS interlinking. This session will discuss the options that policymakers, regional bodies, operators and/or international organisations could consider as they analyse potential approaches for safe and efficient FPS interlinking.

Panellists:

- Piero Cipollone (Member of the Executive Board, European Central Bank)
- Jessica Renier (Managing Director and Head of Digital Finance, Institute of International Finance)
- Christopher Waller (Member, Board of Governors of the Federal Reserve System)

Moderator:

- Morten Bech (Head of the Innovation Hub Swiss Centre, BIS)

**11. Concluding remarks**

Fabio Panetta (Governor, Bank of Italy and Chair, CPMI)





Bank for International Settlements (BIS)

ISSN (online) 2958-8758

ISBN (online) 978-92-9259-835-8