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Moving on up: results of the 2024 cross-border payments monitoring survey

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Moving on up: results of the 2024 cross-border payments monitoring survey

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Highlights

- Advancements in payment system interoperability and extensions vary across different systems and regions. Operating hour results have largely remained consistent year on year, but interest in 24/7 operations is noticeably increasing. The Asia-Pacific region is at the forefront of implementing interlinking arrangements.
- The adoption of ISO 20022 messaging standards and application programming interfaces (APIs) is progressing well. Many payment systems are either already processing or planning to adopt ISO 20022 messages and are incorporating APIs for data exchange.
- Numerous jurisdictions are implementing or planning legal and regulatory reforms to enhance payment system access for non-bank payment service providers and to strengthen data privacy legislation. A significant number of these jurisdictions are adopting a risk-based approach to prevent financial crime and are introducing digital identifiers for individuals and businesses.

Introduction

Enhancing cross-border payments critically depends on improvements in domestic payment infrastructures and harmonised legal and regulatory frameworks. This is because the first and last miles of a cross-border payment typically rely on domestic payment rails. Therefore, modernising domestic payment infrastructure is crucial for improving interoperability with other payment systems and across jurisdictions.[2] These improvements are often part of a broader payment system strategy or financial sector reform. Improving payment infrastructures and the broader payment ecosystem requires significant time and effort. The Bank for International Settlements' Committee on Payments and Market Infrastructures (CPMI), in cooperation with the Financial Stability Board (FSB), monitors progress on the G20 Roadmap priority themes for enhancing cross-border payments: (i) payment system interoperability and extension; (ii) data exchange and message standards; and (iii) legal, regulatory and supervisory frameworks. The first monitoring survey among central banks was conducted in 2023, with results published in June 2024 (Fitzgerald et al (2024)).

[1] The views expressed are those of the authors and do not necessarily reflect those of the Bank for International Settlements, its Committee on Payments and Market Infrastructures or its member central banks. We thank Tara Rice and Daniela Della Gatta for their valuable comments.

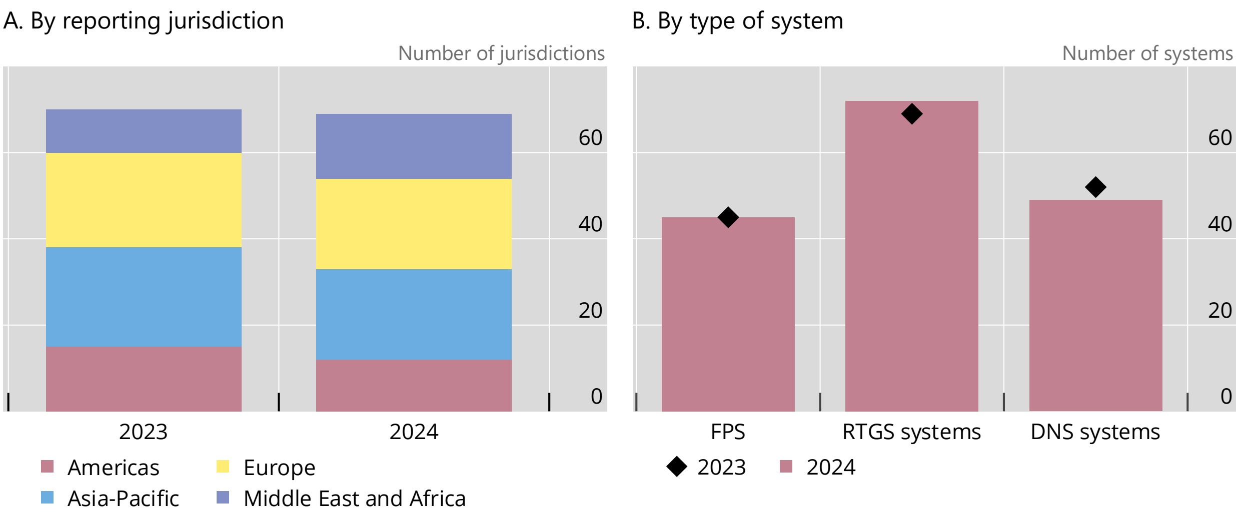
[2] The terms "country", "jurisdiction" and "economy" used in this publication also cover territorial entities that are not states as understood by international law and practice but for which data are separately and independently maintained. The designations used and the presentation of material in this publication do not imply the expression of any opinion on the part of the BIS concerning the legal status of any country, area or territory or of its authorities, or concerning the delimitation of its frontiers or boundaries. Names of countries or other territorial entities are used in a short form which is not necessarily their official name.

However, progress at the payment infrastructure level does not automatically translate into an enhanced end user experience. The FSB measures progress towards the G20 targets annually using key performance indicators (FSB (2023a, 2024a, 2025)). These indicators assess outcomes related to speed, costs, transparency and access. Transitioning from payment system developments to improvements in these outcome measures takes some time. Consequently, many end users have not yet experienced significant improvements in cross-border payments.

The CPMI, together with other international organisations, is actively promoting the implementation of the Roadmap, drawing on the insights and recommendations that have emerged from the G20 cross-border payments programme over the past years. The second iteration of the CPMI-FSB monitoring survey in 2024 included questions about the status of and plans for implementing this work.[3] This addition aimed at enhancing the data set while maintaining continuity in order to facilitate time series analysis where possible.[4]

Survey coverage

Graph 1



Sources: CPMI cross-border payments monitoring surveys, 2023–24; authors' calculations.

This CPMI Brief presents the findings from the 2024 survey and compares them with the 2023 data. It is based on responses to the 2024 iteration from 68 central banks, 49 of which also participated in the 2023 survey.[5] Despite the changing sample, the survey achieved a good regional spread among the jurisdictions covered (Graph 1.A).[6] Respondents reported 166 operational payment systems, comprising 45 fast payment systems (FPS), 72 real-time gross settlement (RTGS) systems and 49 deferred net

[3] The survey was carried out between June and November 2024. Submissions received after this date are not included in this analysis but will be considered in time series analyses for future publications.

[4] Further changes included streamlining the information collected on planned payment systems to have a stronger focus on systems in live operation. Additionally, the mainly qualitative questions on legal, regulatory and supervisory frameworks were complemented with quantitative ones in order to gain further insights on progress in that area. Finally, respondents were given the possibility to further differentiate between concrete plans and exploratory work on certain topics.

[5] In some cases, the respective central bank invited organisations responsible for operating and overseeing payment systems to respond directly to the survey.

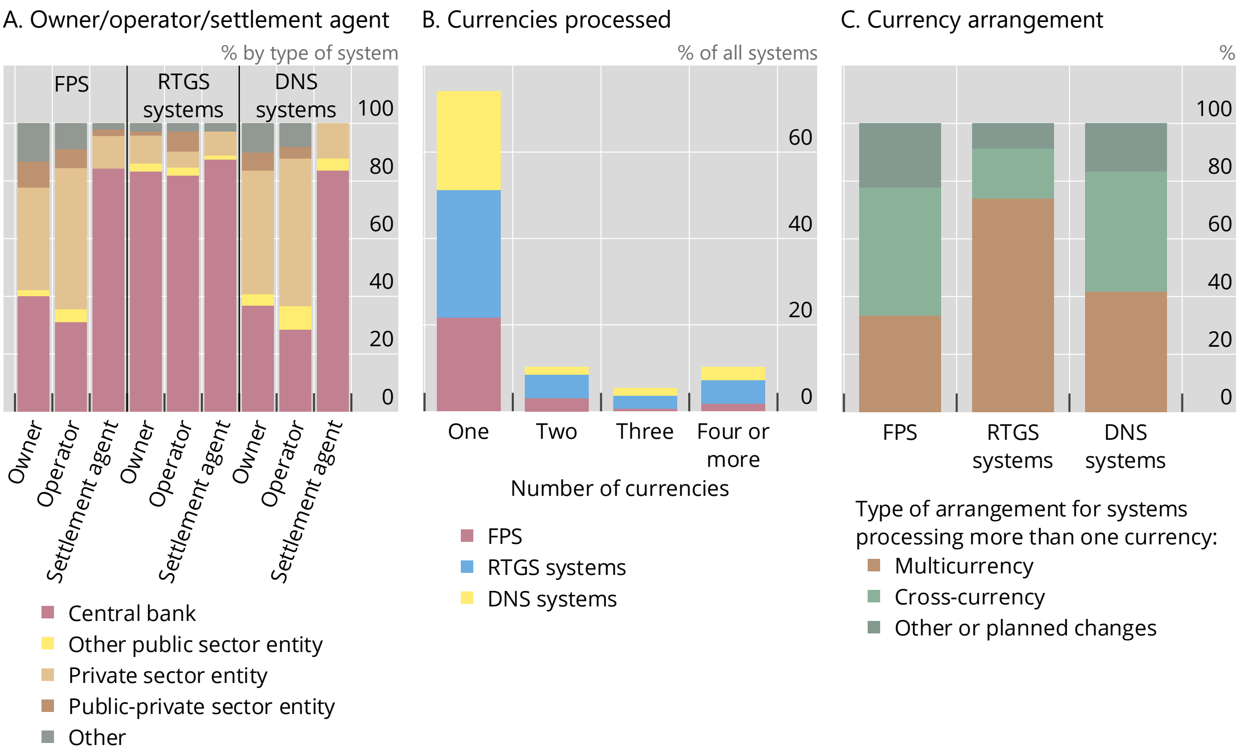
[6] The respondents to the survey are listed in the Annex. We would like to thank the Arab Monetary Fund, the Association of African Central Banks, the Center for Latin American Monetary Studies (CEMLA), the South East Asian Central Banks Research and Training Centre (SEACEN) and CPMI members for distributing the monitoring survey within the central banking community.

settlement (DNS) systems (Graph 1.B). The report primarily focuses on FPS and RTGS systems, with DNS systems included only in selected graphs.

As in the 2023 survey, jurisdictions in the Asia-Pacific region reported the largest share of FPS and RTGS systems in 2024. Most jurisdictions in the Asia-Pacific reported operating an FPS (81%), compared with less than half of the jurisdictions in the Americas (42%). The vast majority of jurisdictions reported operating at least one RTGS system per jurisdiction. The notable exception is Europe, where only slightly more than half of the jurisdictions reported operating an RTGS system. This can be explained by the fact that many of these jurisdictions are part of the Eurosystem and utilise common platforms such as T2 instead of operating a local RTGS system.

The survey captures payment systems owned and operated by various entities, including the public sector, private sector, a combination of both or other organisation types (Graph 2.A). Central banks serve as the owner, operator and settlement agent for 76% of RTGS systems. In contrast, for the 10% of RTGS systems that are privately owned, the operator is typically a private or public-private sector entity. FPS are predominantly privately owned and operated (36%), with central banks owning and operating 31%. The remaining third of FPS are mostly owned and operated by public-private sector entities or other organisation types.

Payment system characteristics[1] — Graph 2



[1] For panel A, as a share of 45 FPS, 72 RTGS systems and 49 DNS systems; for panel B, as a share of 166 payment systems; for panel C, as a share of nine FPS, 23 RTGS systems and 12 DNS systems.

Sources: CPMI cross-border payments monitoring survey, 2024; authors' calculations.

Nearly three quarters of all systems process only one currency, usually the local currency of the jurisdiction (Graph 2.B). For those that handle multiple currencies, the type of currency arrangement often varies with the type of payment system (Graph 2.C). RTGS systems are more likely to utilise a multicurrency arrangement, whereas FPS and DNS systems use multicurrency and cross-currency arrangements.

Payment system interoperability and extension

Payment system interoperability and extension focuses on the features of domestic or regional payment systems such as operating hours or access policies. Extending and aligning RTGS system operating hours across jurisdictions can facilitate the interlinking of FPS across borders, improve liquidity management, reduce settlement risk and expedite cross-border payments. Expanding direct access for non-bank payment service providers (PSPs) to payment systems can increase competition, foster innovation, improve transparency and enhance financial inclusion. Interlinking FPS across different jurisdictions can expand the end user experience of low-cost, fast, easy-to-access and transparent payments to the cross-border dimension.

Some RTGS systems have extended operations to weekends, while a select few operate 24/7

RTGS systems provide the foundation on which other payment systems, such as FPS and DNS systems, rely for settlement. Cross-border payment arrangements, such as FPS interlinking or correspondent banking, often use RTGS systems in both the sending and receiving jurisdictions for inter-PSP settlement. Consequently, limited RTGS system operating hours and gaps between jurisdictions' operating hours due to time zone differences can lead to delays in the settlement of cross-border payments. If cross-border payments are processed via FPS, which typically operate 24/7, end users might not experience such friction for retail payments and remittances. FPS themselves could benefit from extended RTGS system operating hours for the inter-PSP settlement of fast payments.

Currently, RTGS systems operate for an average of around 66 hours per week (out of a possible 168 hours in case of 24/7 operations). Five RTGS systems in the 2024 sample operate 24/7.[7] Two RTGS systems that reported plans to extend operating hours in the 2023 survey have completed those plans and now operate on previously non-operating days. Other respondents have made slight adjustments to their reported operating hours. Overall, the share of systems operating on weekdays and weekends remained largely consistent with the 2023 results (Graph 3.A). Almost three quarters of RTGS systems are open, on average, between 06:00 and 11:00 Coordinated Universal Time (UTC) on weekdays (Graph 3.B).[8] As such, this period remains the best characterisation of what currently constitutes the global settlement window.[9]

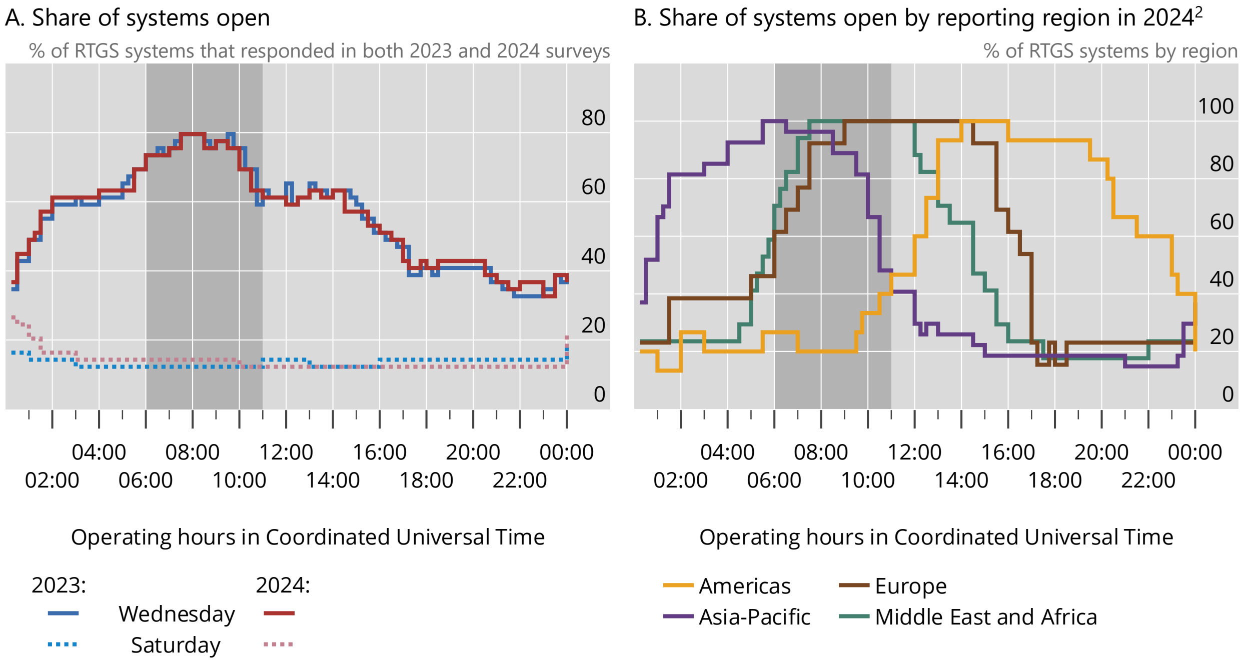
7 Seven systems were reported as operating 24/7 in the 2023 survey. The reduction is due to two systems leaving and one joining the sample. In addition, one system's hours were adjusted.

8 The weekday chosen for the analysis was a Wednesday.

9 The global settlement window is the time frame during which the highest number of RTGS systems across jurisdictions are concurrently open (CPMI (2022a)).

RTGS system weekday operating hours[1]

By 15-minute intervals Graph 3



[1] For panel A, as a share of 49 RTGS systems; for panel B, as a share of 72 RTGS systems. The shaded area represents the time period of the global settlement window. The conversion from local time to UTC, and therefore the overlap with the operating hours of other systems, may change for some countries depending on their use of daylight saving time. [2] Operating hours on Wednesday, which is representative of most payment systems' weekday hours.

Sources: CPMI cross-border payments monitoring surveys, 2023–24; authors' calculations.

In 2024, more than half of RTGS systems (53%) are either already operating with extended hours, planning to extend, or at least considering such an extension. This represents a notable increase from 2023 in the share of systems contemplating extensions, partly due to the inclusion of a new survey option capturing RTGS systems merely considering an extension rather than having concrete plans. Specifically, 28% of RTGS systems fell into this category, while the proportion actively planning to extend operating hours decreased from 26% in 2023 to 18% in 2024, largely due to changes in the respondent sample (see Graph 4).

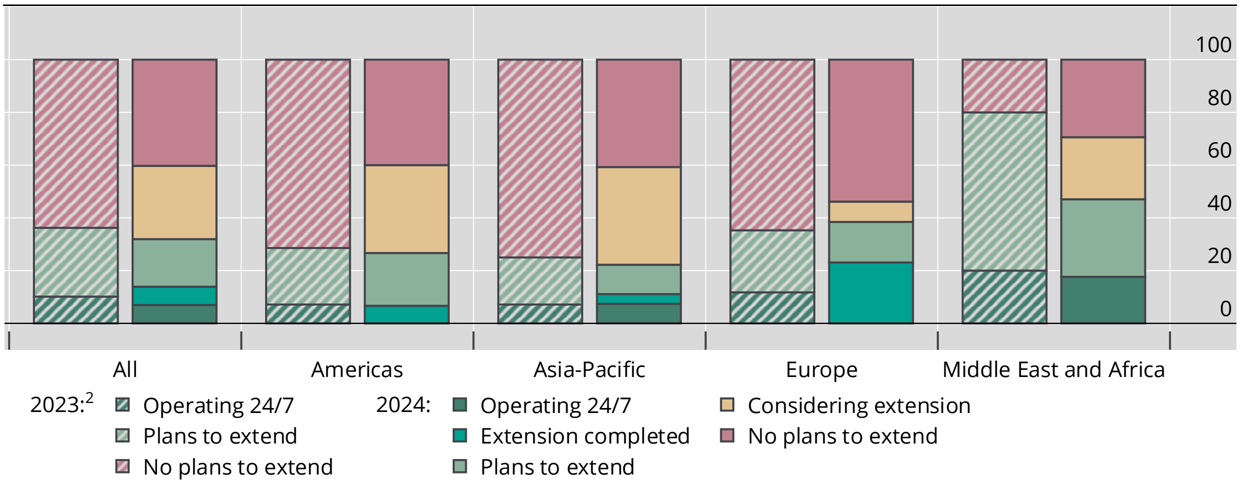
When holding the sample constant, four RTGS systems downgraded from planning to only considering an extension, two completed their planned extension (with one of those adding new plans for a further extension) and four others added new extension plans. Seven RTGS systems plan to complete operating hours extensions by end-2025, including four that aim to reach 24/7 operations. The Middle East and Africa have the largest proportion of RTGS systems operating 24/7 and with plans to extend operating hours, although the number of systems with plans has declined in those regions since 2023. Extension plans have remained steady in the other regions.

In addition to those with plans to extend operating hours, 28% of systems reported that they do not have firm plans but are considering an extension. The majority of these (55%) had reported no plans to extend operating hours in the previous survey, indicating an uptick in exploratory work on the topic, particularly in the Asia-Pacific and Americas.[10] Interest in extending operating hours is also evident from the number of RTGS systems that are conducting self-assessments for the extension of operating hours (Graph 5.A).[11] Almost half of RTGS systems operating less than 24/7 (48%) have completed, are in the process of conducting or plan to conduct a self-assessment. While these types of exploratory work and self-assessment do not necessarily result in extensions of operating hours, they are often the first step towards such initiatives.

Plans to extend RTGS operating hours[1]

As a percentage of RTGS systems

Graph 4



[1] As a share of 69 RTGS systems for 2023 and 72 RTGS systems for 2024. [2] For 2023 numbers, if the payment system did not respond to the question, it is counted towards "no plans to extend".

Sources: CPMI cross-border payments monitoring surveys, 2023–24; authors' calculations.

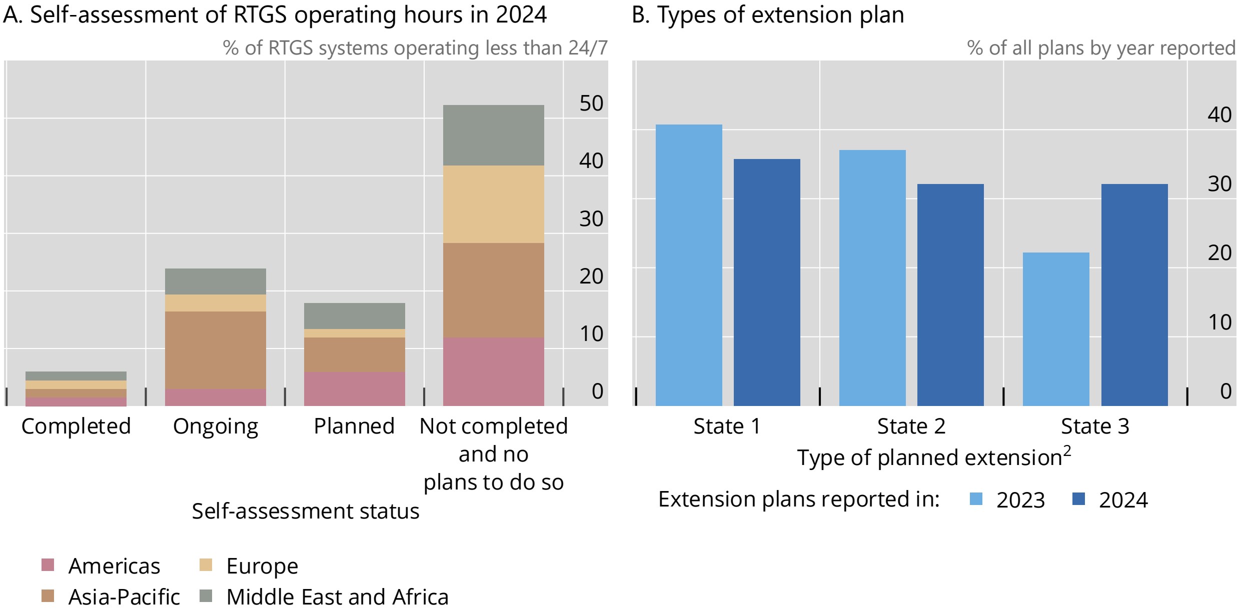
The proportion of plans to extend operating hours to state 1 (extension on current operating days), state 2 (extension to new operating days) and state 3 (24/7) evened out in 2024, with a noticeable increase in interest in 24/7 operations (Graph 5.B). This is also evident among those considering extensions, with more respondents considering state 3 than states 1 or 2. The scope and details of an extension are usually determined in consultation with payment system participants in order to ensure adoption of the additional hours, so the type of extension may change as the payment system progresses through the planning process (Choolhun et al (2025)).

[10] The remaining 45% comprised new respondents in 2024 (30 percentage points) and the three RTGS systems (15 percentage points) that downgraded from plans to only considering an extension.

[11] CPMI (2023a) proposes an analytical framework for central banks and RTGS system operators to help determine the most appropriate approach to extending operating hours, evaluating related technical and operational issues, and designing an implementation plan. Such an evaluation is also referred to as a "self-assessment" of operating hours.

Extending RTGS operating hours[1]

Graph 5



[1] For panel A, as a share of 67 RTGS systems; for panel B, as a share of 27 extension plans for 2023 and 28 extension plans for 2024. [2] State 1 refers to extending operating hours on existing operating days (but not 24/7); state 2 to starting operation on former non-operating days (but not 24/7); and state 3 to operating 24/7 or near 24/7.

Sources: CPMI cross-border payments monitoring surveys, 2023–24; authors' calculations.

Non-bank direct access to payment systems could double in the medium term

Direct access to payment systems can help banks, non-bank PSPs and financial market infrastructures provide cross-border payment services safely and efficiently. Allowing foreign banks to directly participate in a payment system could shorten correspondent banking chains for cross-border payments. Currently, around 63% of FPS and RTGS systems allow foreign banks that have a local presence in the jurisdiction (such as a foreign bank with a local branch) to directly access the system. Foreign banks without a local presence in the jurisdiction are less likely to have direct access, with only 14% of FPS and RTGS systems offering that option. No payment system currently has firm plans to expand access to either type of foreign bank. However, some FPS and RTGS systems are at least considering expanding access to entities without a local presence (7%).

Anecdotal evidence suggests that giving authorised and regulated non-bank PSPs direct access to payment systems can foster innovation, improve service offerings, increase market competition and reduce costs for non-bank PSPs. Currently, around one third of FPS are providing direct access to non-bank PSPs (Graph 6.A). Furthermore, over 50% of FPS allow non-bank PSPs to access the system directly or indirectly while using another entity for settlement, leaving less than 20% of FPS that do not allow any access to non-bank PSPs. The proportion of FPS offering direct access to non-bank PSPs is expected to reach nearly 50% by end-2025, with most of the plans to expand access indicated by payment systems in Europe.

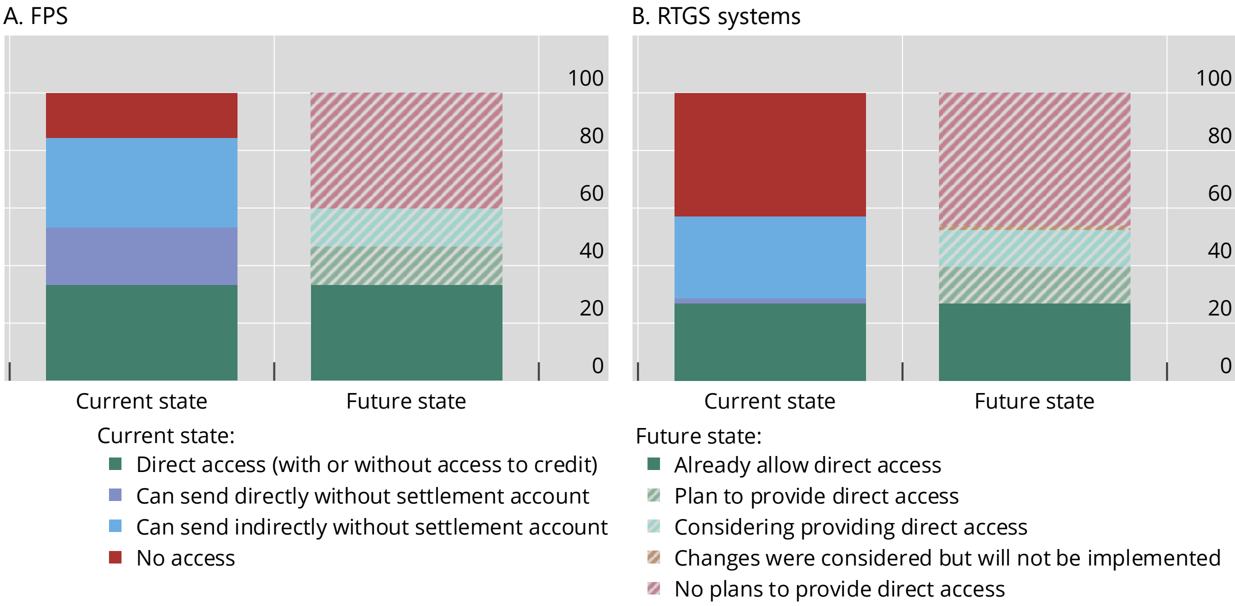
Compared with FPS, a slightly smaller share of RTGS systems (around 27%) currently offer direct access to non-bank PSPs, but a much larger share (more than 40%) do not allow any access to non-bank PSPs (Graph 6.B). Around 13% of RTGS systems plan to expand access, so the total share of RTGS systems allowing direct access to non-bank PSPs is expected to reach around 40% by end-2025. RTGS systems in

Europe and the Middle East and Africa account for all of the planned expansions to access. In addition, around half of payment systems (45%) have completed, are in the process of completing or plan to conduct a self-assessment of access to their system, which may result in additional plans to expand access to foreign or non-bank PSPs in future years (Graph 7.A).[12]

Access of authorised non-bank PSPs to FPS and RTGS systems[1]

As a percentage of systems

Graph 6



[1] As a share of 45 FPS and 63 RTGS systems (nine RTGS systems reported that this type of entity does not exist). Indirect participation in payment systems takes various forms but, in general, involves the use of a direct participant acting as an intermediary for payment initiation, clearing and/or settlement on an indirect participant's behalf. Therefore, indirect participants rely on a direct participant both operationally and commercially. Other possibilities include direct technical access without a settlement account. In this case, an indirect participant connects directly to the payment system to instruct its own payments, but the direct participant performs the settlement.

Sources: CPMI cross-border payments monitoring survey, 2024; authors' calculations.

Legal and regulatory frameworks and payment system access policies often exclude entities other than domestic banks from directly participating in payment systems. More than half of the RTGS systems (54%) and two thirds of the FPS (67%) cite legal and regulatory changes as a precondition for expanding their current access policies. Hence, the 2024 survey included a new question on jurisdictions' plans for legal and regulatory reforms in this area. While legal and regulatory changes take time, 29% of the jurisdictions covered in this survey plan to implement such changes by end-2025, and another 14% by end-2027. This is in addition to the 35% of jurisdictions that have already implemented reforms allowing for the expansion of access to payment systems. All responding jurisdictions in the Middle East and Africa and 95% of those in Europe have plans for or have already implemented reforms in this area, with the Americas and Asia-Pacific not too far behind at around 75% and 63% of jurisdictions, respectively (Graph 7.B).

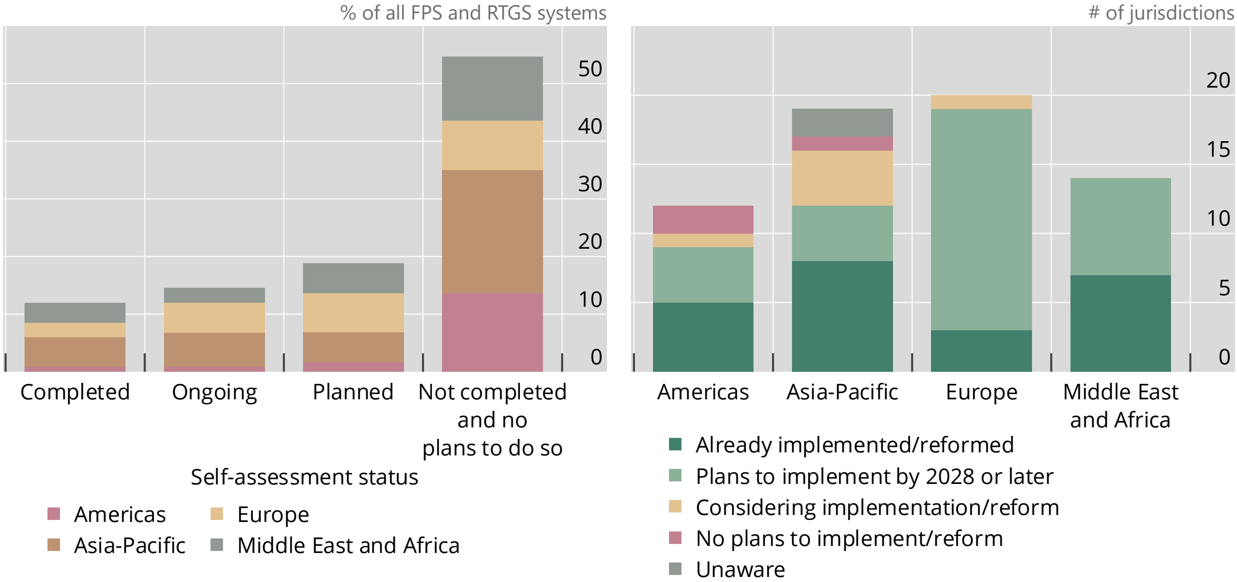
[12] Jurisdictions and payment system operators that are considering expanding access may undertake self-assessments of their respective access policies using the CPMI's framework, which is a tool intended to help evaluate the benefits, risks and barriers of expanding direct access to key payment systems (CPMI (2022b)).

Actions that may improve payment system access

Graph 7

A. Self-assessments of FPS and RTGS systems[1]

B. Jurisdiction plans to implement or reform laws, regulations or supervisory frameworks related to non-bank PSPs



[1] As a share of 117 payment systems.

Sources: CPMI cross-border payments monitoring survey, 2024; authors' calculations.

The Asia-Pacific is the leading region for FPS interlinking, with growing interest in other regions as well

FPS interlinking is a promising approach to enhancing international remittances and retail cross-border payments. Similarly, wholesale cross-border payments could benefit from the interlinking of RTGS systems. Three RTGS systems already have bilateral links with other payment systems, nine connect to other RTGS systems using a single access point and three are regional common platforms facilitating cross-border payments. The remaining 18 of the 34 RTGS systems that allow for processing the inbound and outbound legs of cross-border payments do so via their participants' correspondent banking relationships. Five RTGS systems have plans for future cross-border links, and a further 18 are conducting exploratory work on this.

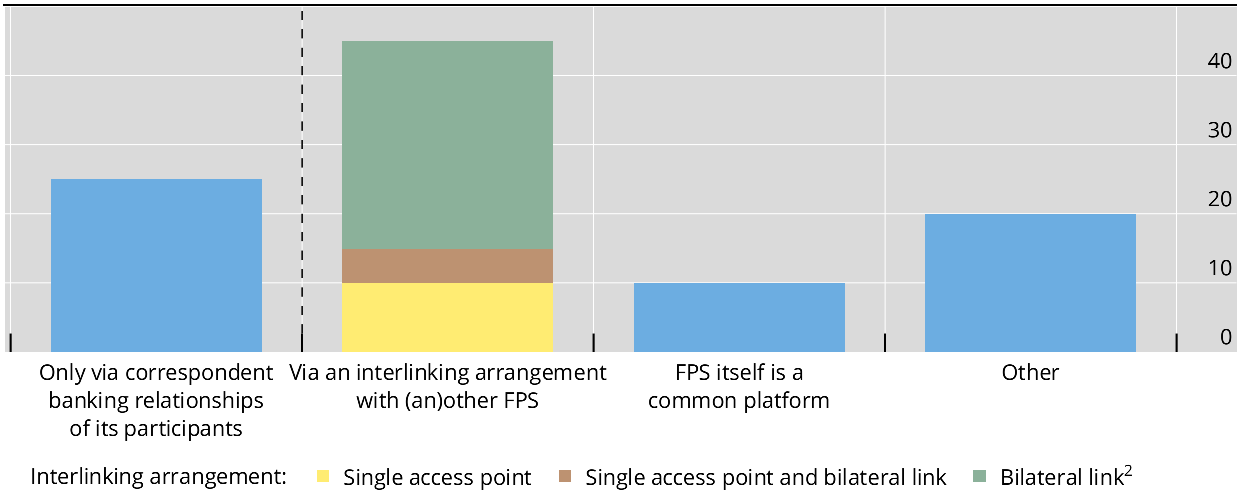
About half of FPS (53%) and RTGS systems (47%) process cross-border payments, while the remainder process domestic payments only. Anecdotal evidence suggests that it can still be the case that cross-border payments are mapped to domestic formats and are processed by domestic systems, regardless of whether the payment system offers cross-border payment services. In any case, the number of payment systems allowing for cross-border payments to be processed is likely to increase in the years to come: 46% of FPS and 24% of RTGS systems that currently restrict payments solely to domestic payments plan to provide the capability to process cross-border payments.

A quarter (five) of the 20 FPS that enable cross-border payments restrict them solely to payments processed by their participants via correspondent banking arrangements (Graph 8). Another two FPS (or 10%) are multi-jurisdictional by design, with PSPs from multiple jurisdictions able to exchange payments through a common payment system. A further nine FPS (or 43%) have interlinking arrangements with other payment systems, such as single access points and bilateral links.

FPS in the Asia-Pacific are currently the most actively involved in FPS interlinking, with six from that region reporting having at least one bilateral link. Together with one FPS from the Middle East and Africa that has established a bilateral link, these interlinking arrangements cover around 17 bilateral corridors. The vast majority of these bilateral links are multicurrency, allowing transactions to be processed in both currencies of the corridor. The remainder process payments in a single currency using a currency of one of the interlinked jurisdictions.

How FPS process the inbound/outbound leg of cross-border payments[1]

% of FPS that can process the inbound/outbound leg of cross-border payments Graph 8



[1] As a share of 20 FPS. [2] FPS participants may also use correspondent banking relationships.

Sources: CPMI cross-border payments monitoring survey, 2024; authors' calculations.

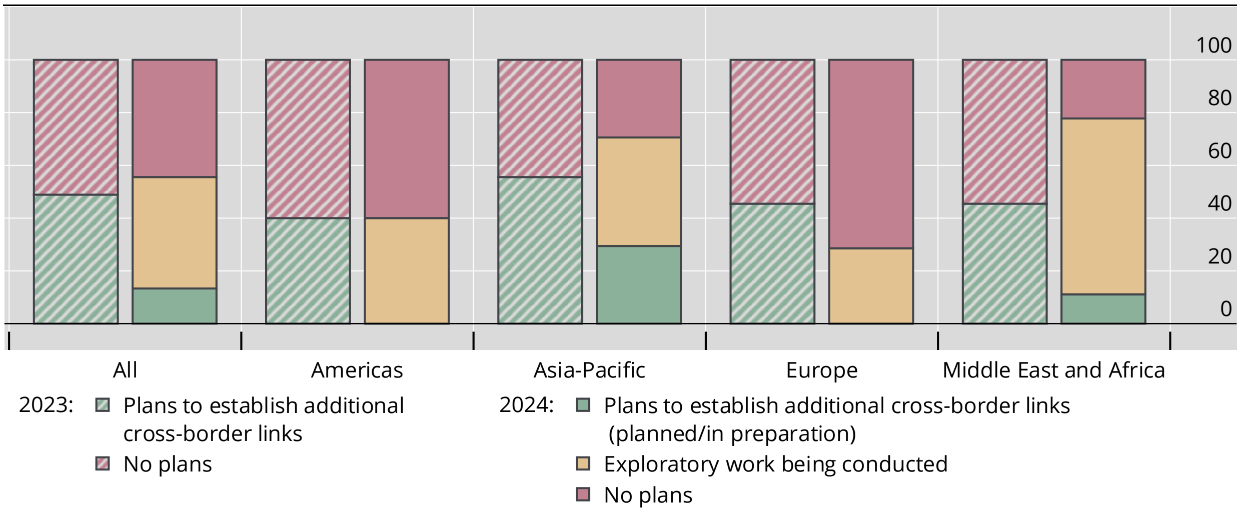
Adequate governance and oversight are crucial to mitigating risks in payments, clearing and settlement and related arrangements. However, establishing governance and oversight for interlinking arrangements can be challenging given their cross-border and multicurrency nature, as well as the different design choices available for interlinking FPS (CPMI (2024a)). All but one FPS with bilateral links are overseen by the respective competent authority in the payment systems' home jurisdictions. When it comes to overseeing the interlinking arrangement itself, only three out of the seven authorities of jurisdictions with FPS interlinking arrangements have the mandate to do so. Of those three, one jurisdiction indicated having a formal cooperative oversight arrangement in place with the overseers from the linked FPS' jurisdiction, one has informal oversight arrangements and one has no cooperation arrangement with overseers from the other jurisdiction.

Similarly to the 2023 results, the 2024 survey results show considerable interest in establishing FPS interlinking arrangements. More than half of all 45 reported FPS are exploring or planning interlinking arrangements (Graph 9). Additional details collected in 2024 show that most of these projects are still in an exploratory phase. Six FPS have reported firm plans, with either a memorandum of understanding established or the actual implementation of the interlinking arrangement ongoing. If all of these plans materialise, a total of 11 new links would be established. Most of the FPS with interlinking plans are from the Asia-Pacific region. These new initiatives include both bilateral and hub-and-spoke interlinking arrangements. Eight new links are expected to be launched by end-2025. Those seven FPS with existing interlinking arrangements that are working on establishing further links, for example based on the hub-and-spoke model, plan to continue with their current bilateral link in most cases. This points to the coexistence of bilateral and multilateral links going forward.

FPS plans to establish future cross-border links[1]

As a percentage of FPS reported

Graph 9



[1] As a share of 45 FPS for 2023 and 2024.

Sources: CPMI cross-border payments monitoring surveys, 2023–24; authors' calculations.

Data exchange and message standards

Message standards and formats continue to vary significantly across jurisdictions, infrastructures and messaging networks. The G20 cross-border payments programme identified the fragmentation of payment messaging standards as one of the factors contributing to frictions in cross-border payments. Growing global adoption by payment systems and financial institutions of the common international financial messaging standard ISO 20022 and application programming interfaces (APIs) offers the prospect of greater interoperability, with benefits for enhanced cross-border payments.

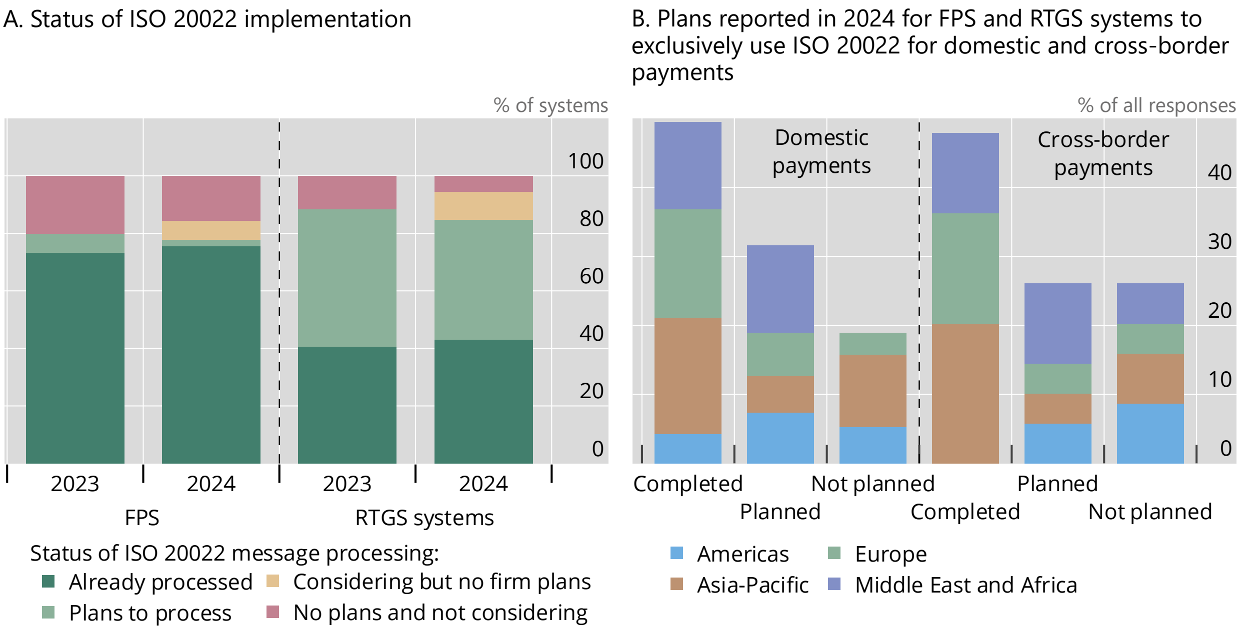
ISO 20022 will soon be "the" message standard for RTGS and FPS systems, with data harmonisation for cross-border payments on the rise

The adoption of ISO 20022 continues at pace, with the percentage of FPS and RTGS systems processing ISO 20022 messages increasing in 2024 to 76% and 43%, respectively. The number of RTGS systems planning to adopt ISO 20022 messaging decreased slightly, primarily due to seven RTGS systems completing their ISO 20022 implementation. Additionally, two RTGS systems downgraded from planning to only considering implementation. The adoption of ISO 20022 by RTGS systems is expected to surpass that of FPS and reach approximately 83% by end-2026. If payment systems that are considering adoption are also included, the rates could near 84% for FPS and 94% for RTGS systems in the medium term (Graph 10.A). Those with ISO 20022 implementation plans are generally at quite advanced stages, with most being in the technical build or participant testing phases.

In terms of geographical coverage, about 70% of payment systems in Europe are currently processing ISO 20022 messages. Globally, most of the payment systems in advanced economies (AEs) have adopted ISO 20022. Most of the payment systems that report ISO 20022 implementation plans are from emerging markets and developing economies (EMDEs), indicating that EMDE payment systems are likely to catch up with those from AEs soon. Those payment systems that do not currently process ISO 20022 and have no plans to do so are all from EMDEs in the Americas or Asia-Pacific.

ISO 20022 messaging[1]

Graph 10



[1] For panel A, as a share of 45 FPS for 2023 and 2024, 69 RTGS systems for 2023 and 72 RTGS systems for 2024; for panel B, as a share of 95 payment systems (36 FPS and 59 RTGS systems) for domestic payments and 69 payment systems (25 FPS and 44 RTGS systems) for cross-border payments.

Sources: CPMI cross-border payments monitoring surveys, 2023–24; authors' calculations.

Currently, it is common for FPS to exclusively use the ISO 20022 messaging format, while some RTGS systems have maintained other formats such as traditional SWIFT message type formats. This is likely because FPS are often built ISO 20022-native, while many RTGS systems were established earlier and based on older message standards. Around 78% of the FPS and 83% of the RTGS systems that replied to the question have already fully migrated to ISO 20022 messages for domestic payments or plan to do so (Graph 10.B). For cross-border payments, the numbers are slightly lower, with 72% of the FPS and 75% of the RTGS systems that replied to the question having already fully adopted or planning to fully adopt ISO 20022.

Box 1

The payments "lingua franca" ISO 20022 will considerably enhance cross-border payments

ISO 20022 is transforming cross-border payments by introducing a universal financial messaging standard that enhances efficiency, compliance and transparency. ISO 20022 delivers several key benefits. In terms of operational efficiency, it reduces manual intervention by enabling automation for up to 84% of exception and investigation (E&I) cases. The potential to increase the efficiency of E&I cases is huge: approximately 1–3% of payments result in inquiries, and E&I cases typically involve 5–10 manual touchpoints, with over 72% of data fields used for E&I cross-border messages being free format. Improvements due to ISO 20022 could save the financial industry USD 332 million in operational costs and USD 270 million in liquidity costs annually. Furthermore, the standard significantly speeds up payment investigations, reducing resolution times by up to 80%.

Between 5–10% of payments generate alerts, 99% of these being false positives, for example triggered by similarities in names or addresses. To strengthen compliance and risk management, ISO 20022 can enhance fraud detection and sanctions screening by utilising more than 20 structured data elements. It also reduces false positives in compliance alerts by 25–30%, improving alignment with regulatory requirements. In Indonesia, around 5% of rejected customer credit transfers in legacy Swift format in 2022 were due to invalid regulatory information, often caused by input inaccuracies stemming from human error. ISO 20022 has the potential to enhance data quality and compliance by helping to identify the nature and purpose of transaction details. Its structured format facilitates regulatory reporting and reduces the likelihood of rejected transactions caused by incomplete or invalid information.

Adoption of ISO 20022 also improves the experience for end users. By enabling structured remittance information, it enhances payment reconciliation processes, reduces errors and minimises delays in corporate treasury operations. This leads to greater transparency in payment details, fees and settlement times. Reliance on a shared international standard such as ISO 20022 facilitates FPS interlinking. For example, Nexus exclusively uses ISO 20022 messages aligned with the CPMI's harmonisation requirements and CBPR+ (Cross-Border Payments and Reporting Plus) guidelines, which will make it easier for FPS from different jurisdictions to connect to Nexus.

Despite these benefits, measuring the direct impact of ISO 20022 migration remains challenging due to variations in implementation approaches and the influence of concurrent technological changes. In order to realise the full potential of the standard, its adoption must go hand in hand with global market practices and alignment with harmonised data models.

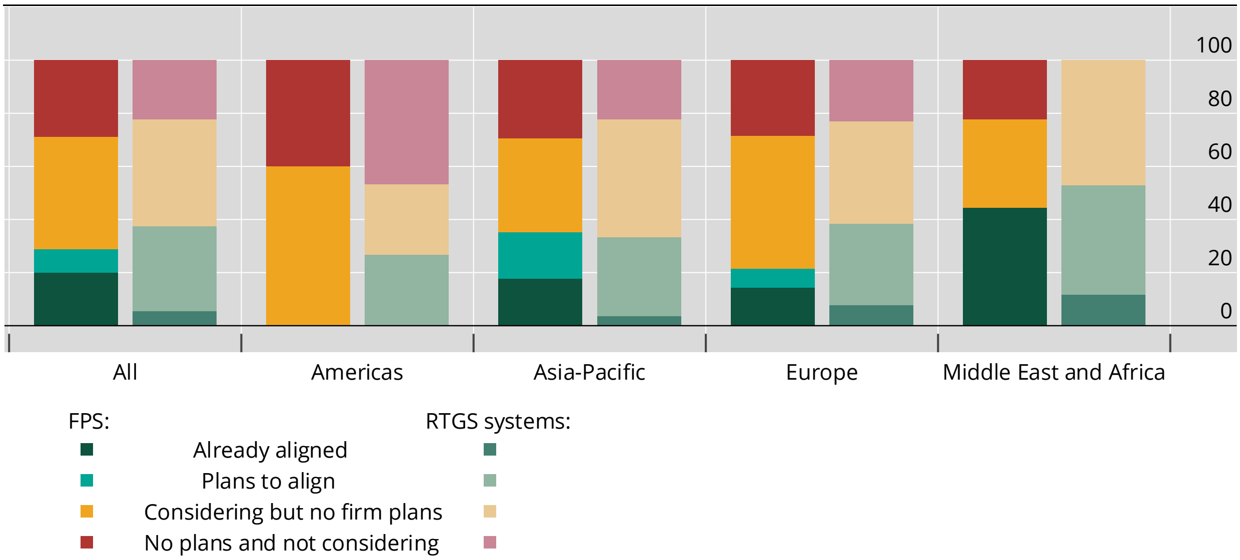
Sources: PIE task force (2025), SWIFT (2018, 2023, 2024, 2025).

The 2024 monitoring survey included for the first time a question on planned alignment with the CPMI's harmonised ISO 20022 data requirements for cross-border payments published in October 2023 (CPMI (2023b)). Approximately 20% of FPS and 6% of RTGS systems are currently aligned with those requirements. An additional 9% of FPS and around 32% of RTGS systems plan to align with the data requirements, while 40% of FPS and 40% of RTGS systems are considering it. From a regional perspective, FPS and RTGS systems in the Middle East and Africa are most likely to implement the harmonised data requirements (Graph 11). If the payment systems that are considering or planning on aligning with the data requirements follow through with their plans, around two thirds of FPS and RTGS systems could align with the harmonised data requirements in the next few years. Among the reasons for not planning to align with the CPMI's harmonised data requirements were the (current) focus on domestic payments and alignment with other market practices or rulebooks similar to the harmonised ISO 20022 data requirements.

Alignment with the CPMI's harmonised ISO 20022 data requirements[1]

As a percentage of systems

Graph 11



[1] As a share of 45 FPS and 72 RTGS systems.

Sources: CPMI cross-border payments monitoring survey, 2024; authors' calculations.

With API adoption nearing a saturation point, API harmonisation will be the next critical step

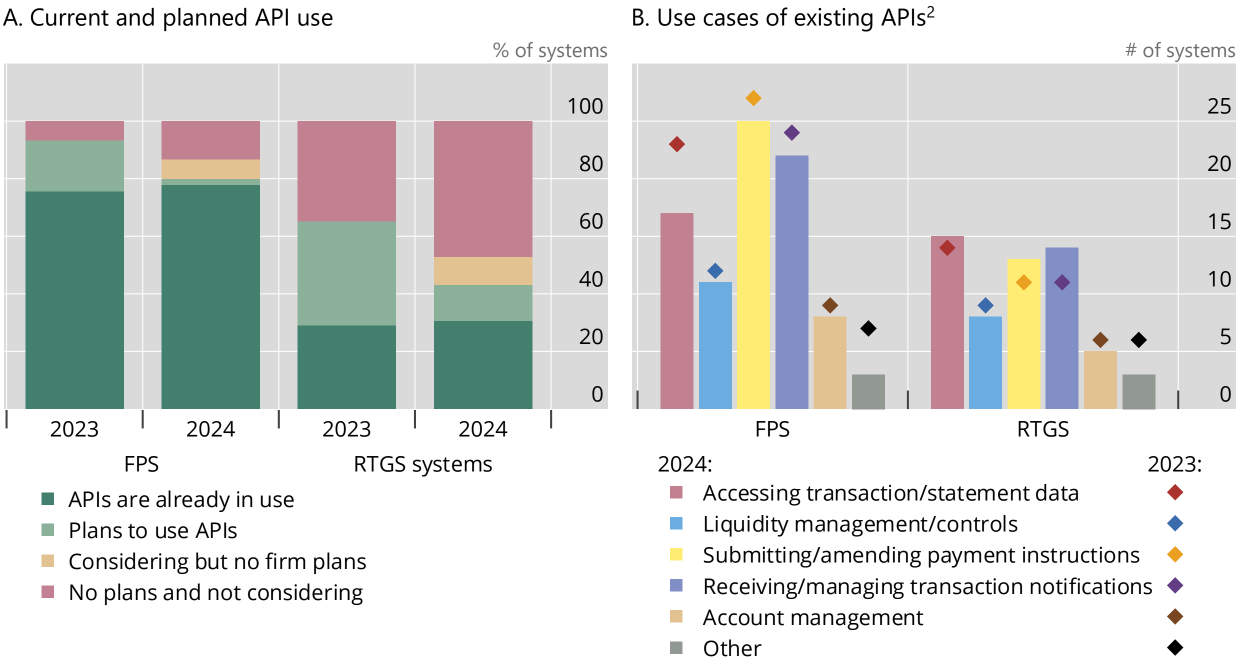
APIs can facilitate cross-border payment processes and increase their speed, transparency and security. The use of APIs remained stable between 2023 and 2024, with 78% of FPS and 31% of RTGS systems using APIs for data exchange (Graph 12.A). However, the proportion of FPS planning to introduce APIs decreased from nearly 20% in 2023 to only 2% in 2024. Similarly, the proportion of RTGS systems planning to implement APIs decreased from more than one third in 2023 to 13% in 2024. These declines suggest that API adoption might be nearing a saturation point.

There is significant regional variation in FPS' usage of APIs. All FPS in the Middle East and Africa covered in the 2024 survey are currently using APIs, and 94% of FPS in the Asia-Pacific expect to be using APIs by end-2025. RTGS systems' current usage shows less regional variation, with European payment systems leading in adoption, particularly when future implementation plans are considered. The Americas have the largest share of payment systems not using APIs and with no concrete plans to implement them.

Payment systems primarily use APIs to exchange information with participants, with only a few using them to exchange data with other payment systems. The relevance of the different use cases of APIs remained largely consistent compared with 2023. For FPS, APIs are mostly used for submitting and amending payment instructions, as well as receiving and managing transaction notifications. For RTGS systems, the use cases are more varied, including the two FPS use cases in addition to accessing transaction and statement data (Graph 12.B).

For both FPS and RTGS systems, the vast majority of respondents indicated that their APIs are based on some form of harmonised and standardised frameworks. With the publication in October 2024 of the CPMI recommendations and toolkit to promote the harmonisation of APIs to enhance cross-border payments, the next iteration of the monitoring survey will include further questions on alignment with those recommendations (CPMI (2024b)).

Application programming interfaces (APIs)[1] Graph 12



[1] For panel A, as a share of 45 FPS for 2023 and 2024, 69 RTGS systems for 2023 and 72 RTGS systems for 2024. [2] Respondents were allowed to select more than one use case per reporting system.

Sources: CPMI cross-border payments monitoring surveys, 2023–24; authors' calculations.

Legal, regulatory and supervisory frameworks

Work under this priority theme focuses on promoting an efficient legal, regulatory and supervisory environment for cross-border payments while maintaining their safety, efficiency and integrity. Key actions include consistently regulating and supervising banks and non-banks, enhancing information provided to end users and facilitating the consistent application of anti-money laundering/countering the financing of terrorism (AML/CFT) rules.

Survey questions on this theme were answered at a jurisdiction level by 65 central banks, coordinating with other relevant authorities as needed. In 2024, quantitative questions were added to the mainly qualitative questions asked in 2023 in order to gain further insights on progress on legal, regulatory and supervisory frameworks.[13] Most jurisdictions (78%) have already implemented a risk-based approach to prevent financial crime, with an additional 5% planning to do so (Graph 13). Jurisdictions in the Americas, the Middle East and Africa and Europe have made the most progress in this regard.

Digital identifiers for individuals have been implemented or are planned by almost half of the jurisdictions, while digital identifiers for businesses have been implemented or are planned by 38% of jurisdictions. Three quarters of jurisdictions in the Asia-Pacific region have already introduced or plan to

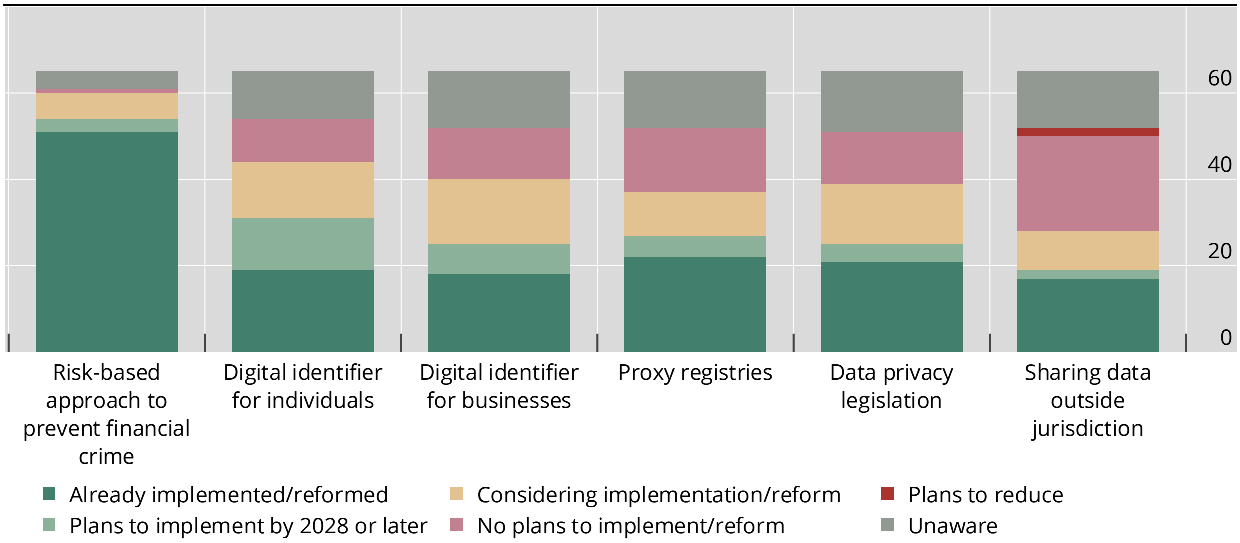
[13] As such, a year-on-year comparison of the quantitative results was not possible.

introduce digital identifiers for individuals. European jurisdictions are expected to have the highest implementation of digital identifiers for businesses (65%). None of the responding jurisdictions in the Middle East and Africa have implemented either type of identifier yet, and plans to do so are also limited.

The introduction of proxy registries has also been most common in the Asia-Pacific region, with 47% of jurisdictions already using them and a further 16% planning to do so. Many FPS allow for initiation of payments using proxy identifiers such as national ID number, mobile phone number, email address or other identifier. Responding jurisdictions in the Americas report the least current and planned use of proxy registries.

Legal, regulatory and supervisory frameworks

Number of jurisdictions Graph 13



Sources: CPMI cross-border payments monitoring survey, 2024; authors' calculations.

Around one third of jurisdictions have implemented or reformed data privacy legislation or frameworks that may help mitigate data-related frictions in cross-border payments. Only a small number of additional jurisdictions are planning to implement such reforms. Similar figures are observed for jurisdictions allowing or planning to allow greater sharing and processing of payments data outside of the jurisdiction. Additionally, two jurisdictions also have plans to reduce data-sharing outside of the jurisdiction.

Of those central banks that reported having access to data to evaluate Legal Entity Identifier (LEI) adoption in their jurisdictions, three quarters reported either low or no adoption of LEIs for payment routing. The use of LEIs for compliance checks is slightly more common, particularly in the Middle East and Africa and Asia-Pacific regions. Several central banks from Europe and the Asia-Pacific reported initiatives to improve LEI adoption. These results on LEI adoption are consistent with the qualitative responses to the 2023 survey.

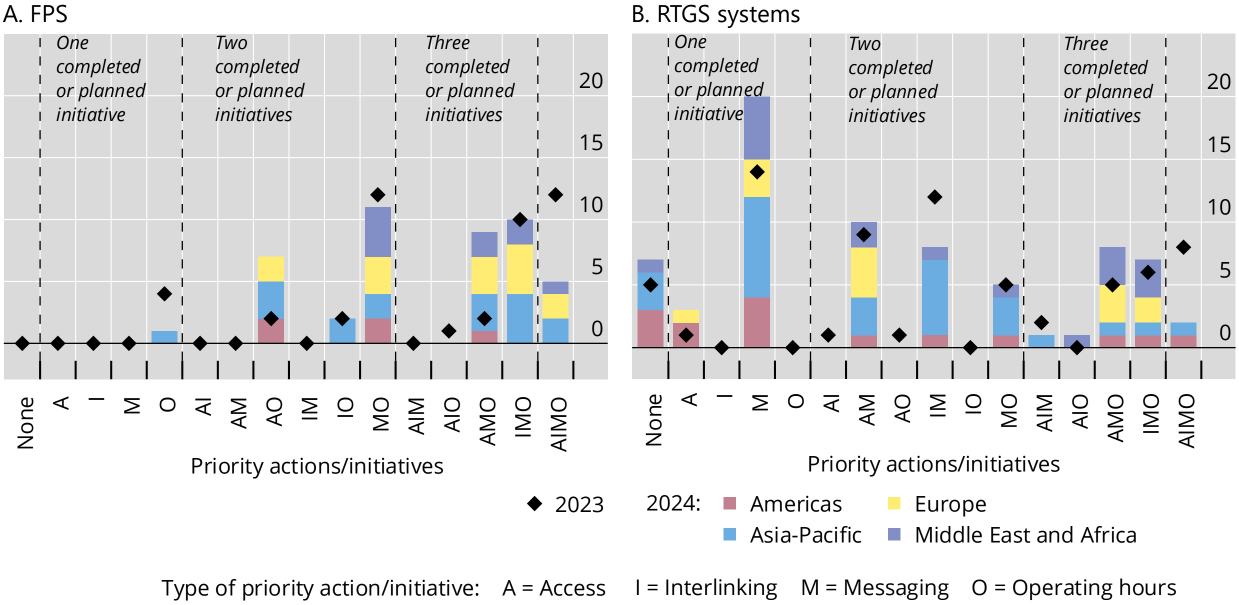
Conclusions on overall progress on enhancing cross-border payments

Improving domestic payment infrastructures is crucial for enhancing cross-border payments, as modernising domestic systems can increase interoperability with other jurisdictions. Enhancements to cross-border payments are typically part of a broader payment system strategy or financial sector reform. They require time and recognition that different jurisdictions and market segments have varying starting points and progress rates.

The G20 Roadmap serves as a toolkit outlining a variety of priority actions. However, local success often requires tailored implementation, adapting global priority actions to local conditions and capacities. Jurisdictions and stakeholders are encouraged to seize the opportunity and take the practical steps needed to enhance cross-border payments. Not all actions are equally relevant for every jurisdiction or payment system, nor will they be implemented simultaneously across jurisdictions.

Implementation of priority actions by mix of initiatives[1]

Number of systems — Graph 14



[1] Priority actions include: (i) already operating 24/7 or planning to extend operating hours to state 1, 2 or 3; (ii) already allowing access to or planning to expand direct access to authorised domestic non-bank PSPs; (iii) already having or planning to implement at least one cross-border link; and (iv) already processing or planning to introduce ISO 20022 messages. All FPS already operate 24/7 and thus there are no FPS with no completed or planned initiatives.

Sources: CPMI cross-border payments monitoring surveys, 2023–24; authors' calculations.

The share of FPS that have completed or plan to complete at least two priority actions increased from 91% in 2023 to 98% in 2024 (Graph 14.A). Conversely, this share decreased from 71% to 58% for RTGS systems (Graph 14.B). Given the important role RTGS systems can play in improving cross-border wholesale payments, their limited uptake of priority actions other than adoption of ISO 20022 warrants close monitoring and further discussion with market stakeholders and central bank payment system operators.

There is considerable variation among regions in terms of plans to undertake payment system enhancements. Jurisdictions in the Middle East and Africa have shown high rates of completed or planned initiatives across most categories. This is especially promising given the identification of sub-Saharan Africa as a region where further attention would be needed to make progress towards targets (FSB (2024b)). While jurisdictions in the Asia-Pacific are generally more advanced in linking FPS across borders, migrating to ISO 20022 and using APIs, they report fewer plans to extend RTGS operating hours or expand payment system access. Conversely, European payment systems have made more progress in extending RTGS system operating hours and have plans for legal and regulatory reforms to improve payment system access for non-bank PSPs. Jurisdictions in the Americas are, on average, at an earlier stage in planning and implementing the priority initiatives compared to other regions.

The ultimate test of success for payment infrastructure improvements is the outcome for users. While infrastructure enhancements are crucial, they do not guarantee better end user experiences. It is important that the CPMI and other international organisations continue to promote improvements through engagement with private and public sector stakeholders from G20 jurisdictions and beyond. Additionally, particular focus should be given to those corridors and end user groups disproportionately affected by high costs, slow speed and lack of access and transparency. Engaging with regional groups and stakeholders can help address these challenges.

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Annex 1: List of Respondents

Respondents to the 2024 survey[1] — Table A1

Banco de Portugal	Central Bank of Oman
Bangladesh Bank	Central Bank of Seychelles
Bank Al-Maghrib	Central Bank of Sudan
Bank Indonesia	Central Bank of the Dominican Republic
Bank of Albania	Central Bank of the Republic of Austria
Bank of Botswana	Central Bank of the Republic of China (Taiwan)
Bank of Canada	Central Bank of the Republic of Kosovo
Bank of England	Central Bank of Trinidad and Tobago
Bank of France	Central Bank of Uruguay
Bank of Greece	Czech National Bank
Bank of Guatemala	Danmarks Nationalbank
Bank of Israel	De Nederlandsche Bank
Bank of Italy	Eastern Caribbean Central Bank
Bank of Jamaica	European Central Bank
Bank of Japan	Hong Kong Monetary Authority
Bank of Korea	Maldives Monetary Authority
Bank of Mauritius	Monetary Authority of Macao
Bank of Mexico	Monetary Authority of Singapore
Bank of Mongolia	Narodowy Bank Polski
Bank of Mozambique	National Bank of Angola
Bank of Slovenia	National Bank of Belgium
Bank of Spain	National Bank of Cambodia
Bank of Thailand	National Bank of Georgia
Bank of Zambia	National Bank of Kazakhstan
Banky Foiben'i Madagasikara	National Bank of the Republic of North Macedonia
Board of Governors of the Federal Reserve System	Palestine Monetary Authority
Central Bank of Argentina	People's Bank of China
Central Bank of Armenia	Reserve Bank of Australia
Central Bank of Brazil	Reserve Bank of India
Central Bank of Colombia	Reserve Bank of New Zealand
Central Bank of Egypt	Reserve Bank of Zimbabwe
Central Bank of Iceland	South African Reserve Bank
Central Bank of Kenya	State Bank of Vietnam
Central Bank of Malaysia	Sveriges Riksbank
Central Bank of Malta	Swiss National Bank

[1] In some cases, the respective central bank invited organisations responsible for operating and overseeing payment systems to respond directly to the survey.

Source: CPMI cross-border payments monitoring survey, 2024.

Annex 2: Glossary of terms

The following main terms are defined for the purpose of the monitoring survey and this CPMI Brief. Additional definitions can be found in the CPMI Glossary and/or the Red Book methodology.

General terms	
Bank	An authorised deposit-taking financial institution. Depending on the specific legal framework, this could include credit unions, savings and loan associations and cooperatives.
Cross-border payment	A payment in which the PSP of the payer and that of the payee are located in different jurisdictions.
Domestic	Located in the same jurisdiction as the payment system's home jurisdiction.
End user	An individual, business and/or government agency that is a customer of a PSP and is in the role of a payer or payee of a retail payment transaction.
Foreign	Located in a jurisdiction other than the payment system's home jurisdiction.
Payment service provider (PSP)	An entity that provides payment services, including remittances. PSPs include banks and other deposit-taking institutions, as well as specialised entities such as money transfer operators and e-money issuers.
Payment system operator	An entity that operates a payment system and/or other payment infrastructures.
Settlement bank	Either a central bank or a commercial bank used to effect funds settlements. A payment system typically maintains an account at one or more settlement banks in order to conduct funds settlements between or among its participants.
Settlement agent	An entity that manages the settlement process for payment systems or other arrangements that require settlement. The settlement agent sometimes differs from the owner or settlement institution of the system.
Payment systems	
Deferred net settlement (DNS) system	Also referred to as automated clearing house (ACH), a wholesale or retail payment system other than an RTGS system or FPS that settles wholesale or retail payments on a net basis at the end of a predefined settlement cycle. Unlike an RTGS system or an FPS, funds are not made available in real time to the participant or the end user, respectively.
Fast payment system (FPS)	Also referred to as instant payment system, a retail payment system that clears and/or settles end user (or retail) payments in which the transmission of the payment message and the availability of "final" funds to the payee occur in real time or near real time and on as near to a 24-hour and seven-day (24/7) basis as possible.
Real-time gross settlement (RTGS) system	A wholesale payment system that allows for the real-time gross settlement of predominantly interbank (or wholesale) payments. RTGS is the continuous process of settling payments on an individual order basis, without netting debits with credits.
Interlinking models	
Interlinking arrangement	Can be (a series of) bilateral links between payment systems, each with their own rules, or links under a multilateral framework. A cross-border interlinking arrangement allows banks and other PSPs to transact with each other across borders without requiring them to open accounts abroad or to participate in more than one payment system.

Bilateral link model	A model in which two payment systems can be directly connected to each other to enable the transfer of funds among each other's participating PSPs. This model typically does not require participating PSPs in one system to become participants in the other (foreign) payment system. A payment system can have bilateral links with several other (foreign) payment systems, giving participating PSPs an experience like that of a hub-and-spoke or common platform model.
Common platform model	A payment system for cross-border payments that is multi-jurisdictional by design. PSPs from one jurisdiction can directly reach PSPs in other jurisdictions through one common payment system which runs on a single integrated technical platform. While the common platform model can have the same results as interlinking, it is in a strict sense not interlinking since PSPs are participating in one and the same payment system.
Hub-and-spoke model	A multilateral interlinking arrangement capable of linking more than two payment systems. In this model, inter-system accounting and clearing are done at a common intermediary (the hub). In some jurisdictions, the hub itself could be qualified as a multilateral payment system, with the connected payment systems as participants. The hub can effect settlement on its own books or use a settlement agent.
Single access point model	A model in which participants in one (domestic) payment system have access to a foreign system through a single "gateway" entity that directly participates in the foreign system. This model bears a resemblance to correspondent banking arrangements, but differs in that it ensures access to foreign systems based on common rules, service level agreements (SLAs) and access criteria.
Correspondent banking	An arrangement under which one bank (correspondent) holds deposits owned by other banks (respondents) and provides payment and other services to those respondent banks. Correspondent banking arrangements enable banks to access financial services in other jurisdictions and provide cross-border payment services to their customers, supporting international trade and financial inclusion.
Currency arrangements	
Cross-currency arrangement	An arrangement in which transactions are processed in multiple currencies and the conversion from one currency to another takes place on the platform, allowing one connected PSP to be debited in one currency and another connected PSP to be credited in the other currency.
Multicurrency arrangement	An arrangement in which transactions are processed in multiple currencies using account structures that are segregated by currency. Currency conversion happens outside the payment system, ie cross-currency transactions on the platform are not possible.
Single-currency arrangement	An arrangement in which transactions are processed in one currency, which can be the currency of the home jurisdiction or another national currency commonly used for international trade among the connected jurisdictions. The currency conversion, if any, is provided outside the arrangement by the payer's PSP, the payee's PSP and/or an international settlement bank.

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