

▶ CPMI Brief No 2

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payment developments:
a regional analysis of AMF
member countries**

February 2024

In cooperation with



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This Brief is written by staff members of the CPMI secretariat and the Arab Monetary Fund (AMF). The views expressed in this Brief are those of the authors and not necessarily the views of the AMF, the BIS, the CPMI, or its member central banks.

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Monitoring cross-border payment developments: a regional analysis of AMF member countries¹

Habib Attia, Marc Glowka, Anamaria Illes and Thomas Lammer

Highlights

- Making cross-border payments cheaper, faster, more transparent and easier to access across the globe is a priority for the G20. The Bank for International Settlements' Committee on Payments and Market Infrastructures (CPMI) and the Arab Monetary Fund (AMF) support this global effort and cooperate on the monitoring of cross-border payment developments.
- Cross-border payments are important for AMF member countries,^{2,3} because of the growing volume of interbank transfers in the region and the relevance of remittances for it. A stocktake conducted in 2021 showed that the operating hours of payment systems within the region largely overlap with the "global settlement window".⁴ However, compared with the global average, non-banks are less likely to have direct access to payment systems.
- Regular monitoring of cross-border payment developments and analysis of progress at the regional level can provide useful insights and demonstrate progress on identified priority actions. The 2023 cross-border payments monitoring survey of central banks, conducted by the CPMI and supported by the AMF, will provide further insights on developments over the past two years.

Introduction

The G20 has made enhancing cross-border payments a priority under the Saudi Arabian presidency in 2019. Faster, cheaper, more transparent and more inclusive cross-border payment services would deliver widespread benefits for citizens and economies as well as supporting economic growth, international trade, global development and financial inclusion. These enhancements could be especially beneficial for economic growth in emerging markets and developing economies (EMDEs) and support regional integration initiatives, for example through more efficient international remittances or reducing frictions in regional trade.

The Financial Stability Board (FSB) in coordination with the Bank for International Settlements' Committee on Payments and Market Infrastructures (CPMI) and other major international organisations

¹ We thank David Brown, Emilie Fitzgerald and Tara Rice for their valuable comments and are grateful to Ilaria Mattei and Nolan Young Zabala for their excellent research assistance.

² AMF member countries ([see here](#)) have a combined population of 411 million people (AMF (2022)).

³ 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.

⁴ The global settlement window is a concept introduced in CPMI (2022a). The global settlement window is the time frame during which the highest number of real-time gross settlement (RTGS) systems on a global level are open, allowing cross-border transactions to settle across those jurisdictions without delays being incurred, *ceteris paribus*. At present, the global settlement window is best characterised as the time period from 06:00 to 11:00 Greenwich Mean Time (GMT) on working days.

and standard-setting bodies developed a roadmap for enhancing cross-border payments. The roadmap was endorsed by the G20 in 2020 and aims to address long-standing challenges in the cross-border payments market, including high costs, low speed, limited access and insufficient transparency. The programme comprised the necessary elements of a globally coordinated response in the form of a set of 19 building blocks, based on a CPMI report to the G20 (CPMI (2020a,b)). The following year, the G20 endorsed quantitative targets at the global level for addressing these challenges (“G20 targets”), most of which are expected to be achieved by end-2027 (FSB (2021)).

In line with the G20 targets, policymakers in Arab Monetary Fund (AMF) member countries (“the region”) have set out an agenda to enhance intraregional cross-border payments by increasing their efficiency and speed, as well as reducing their costs and liquidity requirements. These developments should be supported by improved financial crime compliance and payment system oversight. Enhanced cross-border payments would ultimately support regional financial and economic integration by furthering the efficiency and harmonisation of trade within the region.

At the global level, the CPMI has largely completed its foundational work, which included stocktakes, analysis and reports. One of these stocktakes explored the status of access to payment systems, their operating hours and the interlinking between payments systems. The AMF supported this stocktake in 2021 by promoting the survey among its member countries. This effort contributed to the high response rate of central banks within the region – they comprised around 15% of the total responses. In October 2022, the FSB published a prioritisation plan and engagement model for taking the programme forward (FSB (2022)). The plan reflects that the roadmap has reached an inflection point and needs to move to implementing practical projects to enhance cross-border payment arrangements to achieve the agreed quantitative targets. A prioritised roadmap published in February 2023 details the specific actions that will be taken under three priority themes to achieve the targets by 2027 (FSB (2023)). The three interconnected themes for orienting and focusing the current phase of the programme are (i) payment system interoperability and extension; (ii) legal, regulatory and supervisory frameworks; and (iii) cross-border data exchange and message standards.

This paper provides insights on the importance of cross-border payments for the region, evidenced by international remittances. It documents the status of payment system interoperability and extension, as well as legal, regulatory and supervisory aspects in the region at the launch of the cross-border payments programme. Finally, it provides an outlook for regular monitoring across the priority themes going forward.

Importance of cross-border payments for the region

Increasing regional trade, digitalisation, and labour and capital mobility are indicators of continued growth in cross-border payments within the region. Migrant workers typically use international remittance services, both within the region and with one leg of the transaction outside the region, to support their families in their country of origin.

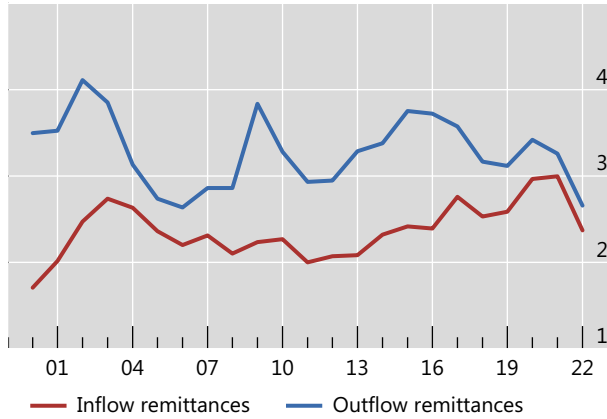
Countries within the region are important senders and receivers of remittances. The estimated total value of received remittance (inflows from other countries within the region and from outside the region) was \$62.4 billion in 2022, equalling 2.4% of the gross domestic product (GDP) across 14 countries of the region for which data is available. On the sending side (outflows), remittances had a total value of \$70 billion in 2022, or 2.7% of those countries’ combined GDP (Graph 1.A). However, there are notable differences at country-level. While Kuwait, Oman and Saudi Arabia are predominantly remittance-sending jurisdictions, remittance inflows (measured as a share of GDP) are substantially higher in Egypt, Jordan, Morocco, Tunisia, and particularly in Comoros. Lebanon stands out from the other countries in the region, as not only is the main receiver of remittances (29.5% of GDP), but it is also the third largest sender of remittances (7.9% of GDP) in 2022 (Graph 1.B).

Scale of remittances for selected AMF member countries¹

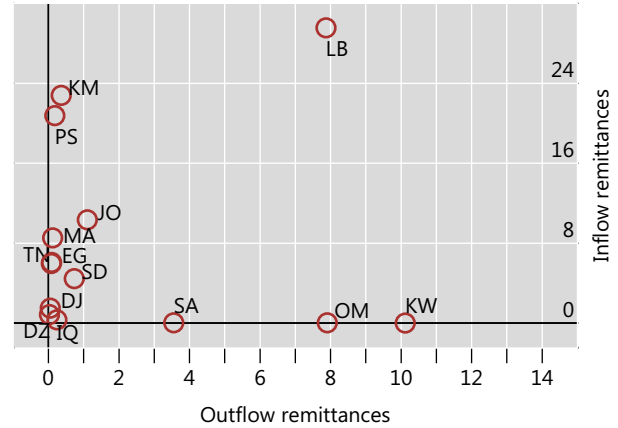
In per cent of gross domestic product

Graph 1

A. Remittance inflows/outflows across countries analysed



B. Country-level breakdown in 2022



¹ Countries included are DJ, DZ, EG, IQ, JO, KM, KW, LB, MA, OM, PS, SA, SD and TN and have been chosen depending on data availability for both inflow and outflow remittances. For PS, 2021 data is used for 2022 calculations.

Sources: IMF, *World Economic Outlook*; World Bank-KNOMAD, December 2023; authors' calculations.

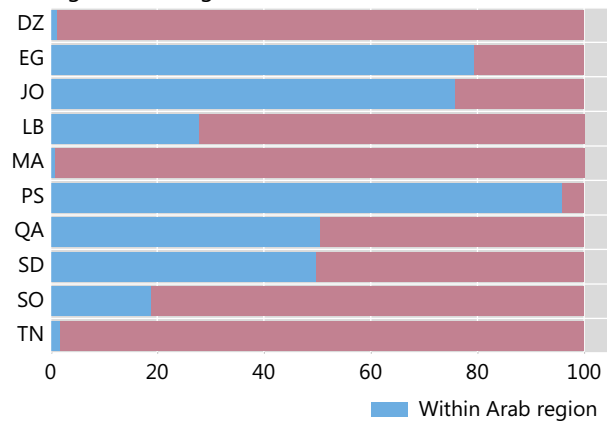
The importance of intra- and interregional remittances differs substantially across AMF member countries. Palestine, Jordan and Egypt receive the largest share of their remittances from other countries in the region, while Algeria, Morocco and Tunisia receive more than nine out of 10 remittances from countries outside the region (Graph 2.A). On the sending side, most of the remittances from Jordan, Lebanon and Libya go to another country within the region, while for Oman and Qatar this is the case for fewer than 20% of remittances sent (Graph 2.B).

Remittance flows among AMF member countries in 2021

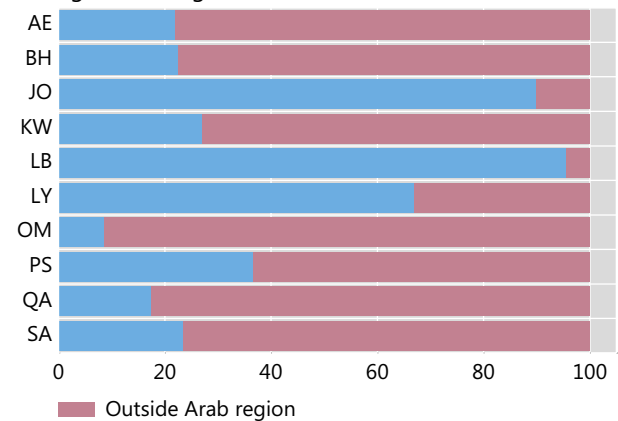
Value share of remittances in per cent

Graph 2

A. Largest receiving countries¹



B. Largest sending countries²



¹ Countries were ordered based on their absolute value of inflow remittance in US dollars. ² Countries were ordered based on their absolute value of outflow remittance in US dollars.

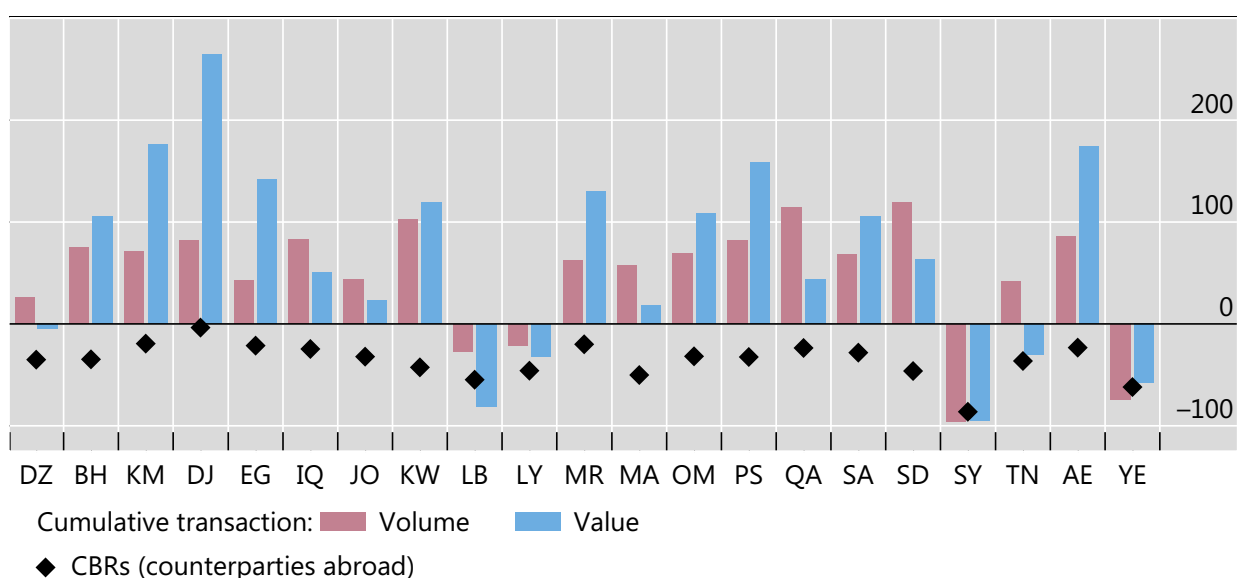
Source: KNOMAD/World Bank Bilateral Remittance Matrix 2021, December 2022.

While remittances are often closed loop or on-us transfers⁵ and/or bundled for clearing and settlement, higher-value cross-border retail payments (eg consumer-to-business or business-to-business transactions) and cross-border wholesale payments (eg transfers between financial institutions) are typically exchanged via correspondent banking arrangements. Between 2011 and 2022, most countries within the region saw a considerable increase in payments exchanged via correspondent banking arrangements, despite a decreasing number of active correspondents. Graph 3 shows the cumulative number of messages (volume) and their total value in USD over that period. Given the importance and continued growth of cross-border payments within the region and beyond, enhanced cross-border payments would not only benefit to an increasing number of payers and payees in the region, but would also be a considerable contribution to achieving the global G20 targets.

Changes in correspondent banking relationships 2011–22

Cumulative transactions and correspondent banking relationships (CBRs)

Graph 3



Sources: National Bank of Belgium; SWIFT BI Watch.

Payment system interoperability and extension: a regional and global priority alike

To achieve the G20 targets, the CPMI, the FSB and other implementing bodies have begun to focus and prioritise their future work, drawing from the analysis to date and the feedback received from stakeholders. One priority theme focuses on improving payment system interoperability, extending real-time gross settlement (RTGS) system operating hours and expanding access to payment systems (FSB (2023)). This prioritisation was informed by the findings of the 2021 stocktake survey, which also forms the basis for the regional analysis of these three aspects presented in the following.

⁵ In the case of closed loop or on-us/intragroup transfer, the payment service provider (PSP) of the payer is the same entity (or part of the same group) as the PSP of the payer. This can be the case for proprietary arrangements or multinational banks that are present in the payer and the payee's jurisdiction. In this case, rather than relying on a connection between institutions or infrastructures in the two jurisdictions, the PSP itself serves to bridge the two jurisdictions (CPMI (2018)).

Improving access to payment systems for cross-border payments

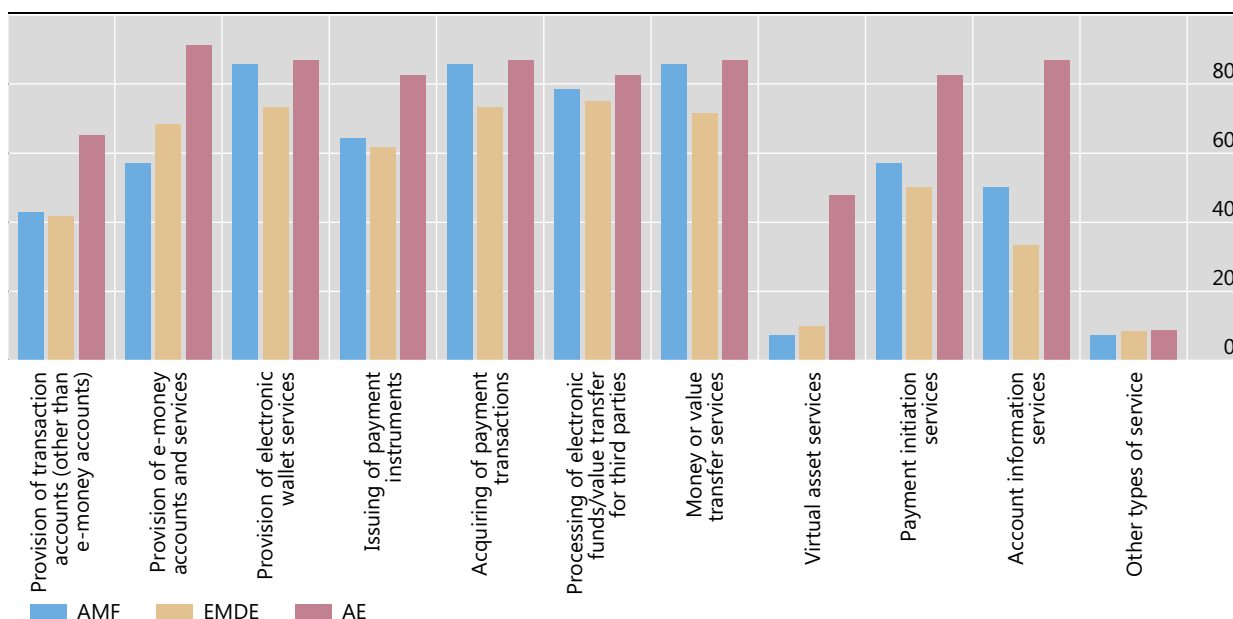
The G20 cross-border payments programme considers expanding access to (domestic) payment systems that settle in central bank money as important to increase the speed and reduce the cost of cross-border payments (CPMI (2020a,b), FSB (2020c)). Hence, access to payment systems is a priority action in achieving the G20 targets (FSB (2021, 2023)). Access to payment systems can be either direct or indirect, depending on the needs of participants as well as the institutional framework in place for a specific payment system. Direct access generally means that an entity has the capacity to instruct, clear and settle payments on its own behalf. Such access typically requires the entity to have a settlement account at a central bank. In contrast, indirect access involves a direct participant as an intermediary, thus offering an alternative to direct payment system access. In general, expanded access to payment systems can foster competition and innovation as all payment service providers (PSPs) would operate on the same level playing field. Consequently, end users would benefit from a greater choice and better pricing, and financial inclusion can be improved (CPMI (2022b)).

While banks with a local presence are typically allowed to become direct participants, non-banks can find it more challenging, despite their growing importance in payments. Based on the survey results, specialised payment services that include the provision of electronic wallet services, the acquisition of payment transactions, and money or value transfer services are available in 86% of the responding jurisdictions and are often offered by non-banks (Graph 4). In 76% of the responding jurisdictions, non-banks can process electronic funds or value transfer for third parties. The provision of e-money accounts and services (57%) as well as transaction accounts (43%) is comparable with the level in other EMDEs but lags behind the level of advanced economies (AEs).

Payment services that non-bank PSPs are allowed to offer

Share of respondents within country group

Graph 4



Calculations are based on the number of respondent countries that permit non-banks to offer payment services.

AE = Advanced economies; AMF = Member countries of the Arab Monetary Fund; EMDE = Emerging market and developing economies.

Source: 2021 CPMI survey.

Non-bank PSPs can offer transaction accounts and give people without traditional bank accounts access to digital payments, including cross-border payments. Current regulatory and political initiatives seek to increase the availability of these services in the region. Alternatives to traditional credit transfers

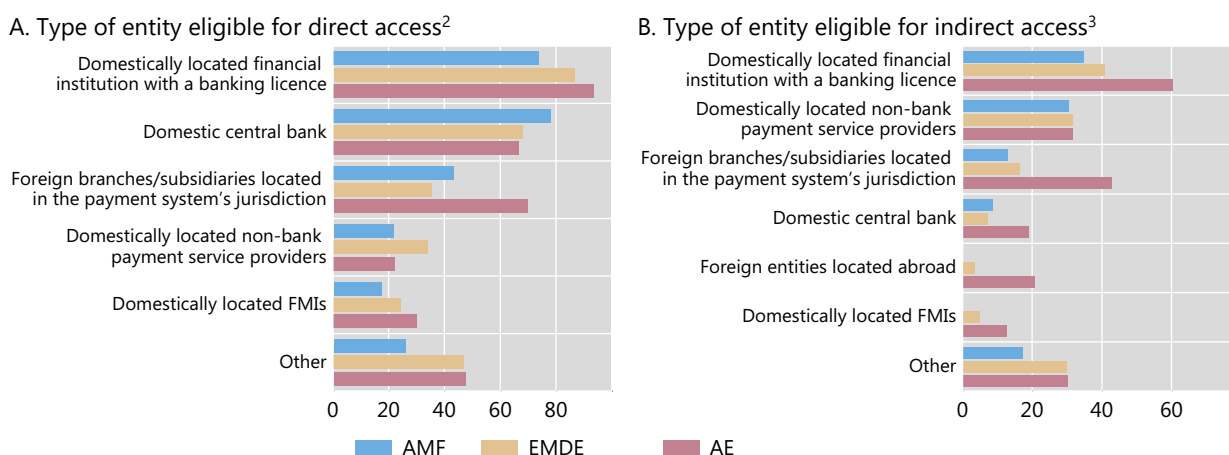
particularly include, for cross-border payments, remittance services that allow individuals and businesses to send and receive funds both domestically and internationally, and mobile payment services that let customers send and receive payments using their mobile phones. The growing adoption of mobile phones and an expanding range of mobile money service offerings can help to reduce remittance costs and increase financial inclusion. Some AMF member countries have taken steps to license non-banks to hold customer funds, typically as e-money, in transaction accounts for sending and receiving payments.

Stakeholders in the cross-border payment ecosystem, such as non-bank PSPs, financial market infrastructure (FMIs) and foreign banks often face challenges in becoming direct members of multiple payment systems across different jurisdictions. Such challenges include, among others, the lack of harmonisation between legal and regulatory frameworks as well as operational, technical and financial barriers. Similar access requirements for payment systems could encourage PSPs to expand their service offerings to different jurisdictions. However, at a global level, only a minority of payment systems currently provide direct access to entities other than domestic banks. Access to payment systems is typically more restrictive in the region, compared with the global average and particularly AEs, even for domestic financial institutions with a banking licence (Graph 5.A). While the primary focus of the cross-border payments programme lies on direct access, in some cases indirect access may be a viable alternative that can achieve net risk-efficiency benefits for certain types of provider. However, the difference is even more pronounced for indirect access, which is offered only to domestic financial institutions by one third of the surveyed payment systems in the region, compared with 60% in AEs (Graph 5.B). One notable exception is direct access by domestic central banks, which is the highest in the region (78%) compared with other AEs and EMDEs.

Type of entity eligible for payment system access¹

As percentage of reported payment systems

Graph 5



AE = Advanced economies; AMF = Member countries of the Arab Monetary Fund; EMDE = Emerging market and developing economies.

¹ The category "Other" includes domestically located broker-dealers, domestically domiciled commercial entities including technical aggregators and the option "others" given to the respondent. ² Participants that have direct access are participants in a system that directly exchange transfer orders with other participants in the system, without an intermediary, and are directly responsible for settling them. In some systems, direct participants also exchange orders on behalf of indirect participants. The sample includes 81 payment systems in CPMI jurisdictions and 103 payment systems in non-CPMI jurisdictions. ³ Participants that have indirect access are firms that rely on the services offered by other firms (participants that have direct access) to use the payment system's facilities. The sample includes 81 payment systems in CPMI jurisdictions and 103 payment systems in non-CPMI jurisdictions.

Source: 2021 CPMI survey.

While direct access by foreign branches and/or subsidiaries located in the payment system's jurisdiction is on average higher in AMF member countries compared with the EMDE average, it is considerably lower than in AEs. Approximately one out of five payment systems have an access policy that allows non-bank PSPs to become direct participants, which is comparable with AEs, but lower than the

EMDE average. Technological innovation and changes to the legal and regulatory frameworks have contributed to the increased importance of non-bank PSPs in the region, as in many other parts of the world. These non-bank PSPs are increasingly interested in directly accessing payment systems to reduce their dependence on banks. Authorities and payment system operators might face barriers that need to be overcome to expand access to payment systems. Legal and regulatory frameworks can limit the type of entity eligible for direct access to payment systems or central bank settlement accounts. Operational, technical and financial barriers to be considered can include funding requirements, the provision of adequate staffing and technical infrastructure investments. The CPMI has developed a self-assessment framework as a tool that could help authorities and payment system operators to holistically evaluate the benefits, risks and barriers of expanding direct access (CPMI (2022b)). Payment system operators are encouraged to conduct self-assessments, based on the guidance developed by the CPMI, identify any changes required to expand access and map out extension plans as part of the cross-border payments programme. The CPMI will help coordinate central banks in conducting this self-assessment, among other actions, via a community of practice for central bank-operated payment systems (FSB (2023)).

Extending and aligning payment system operating hours for cross-border payments

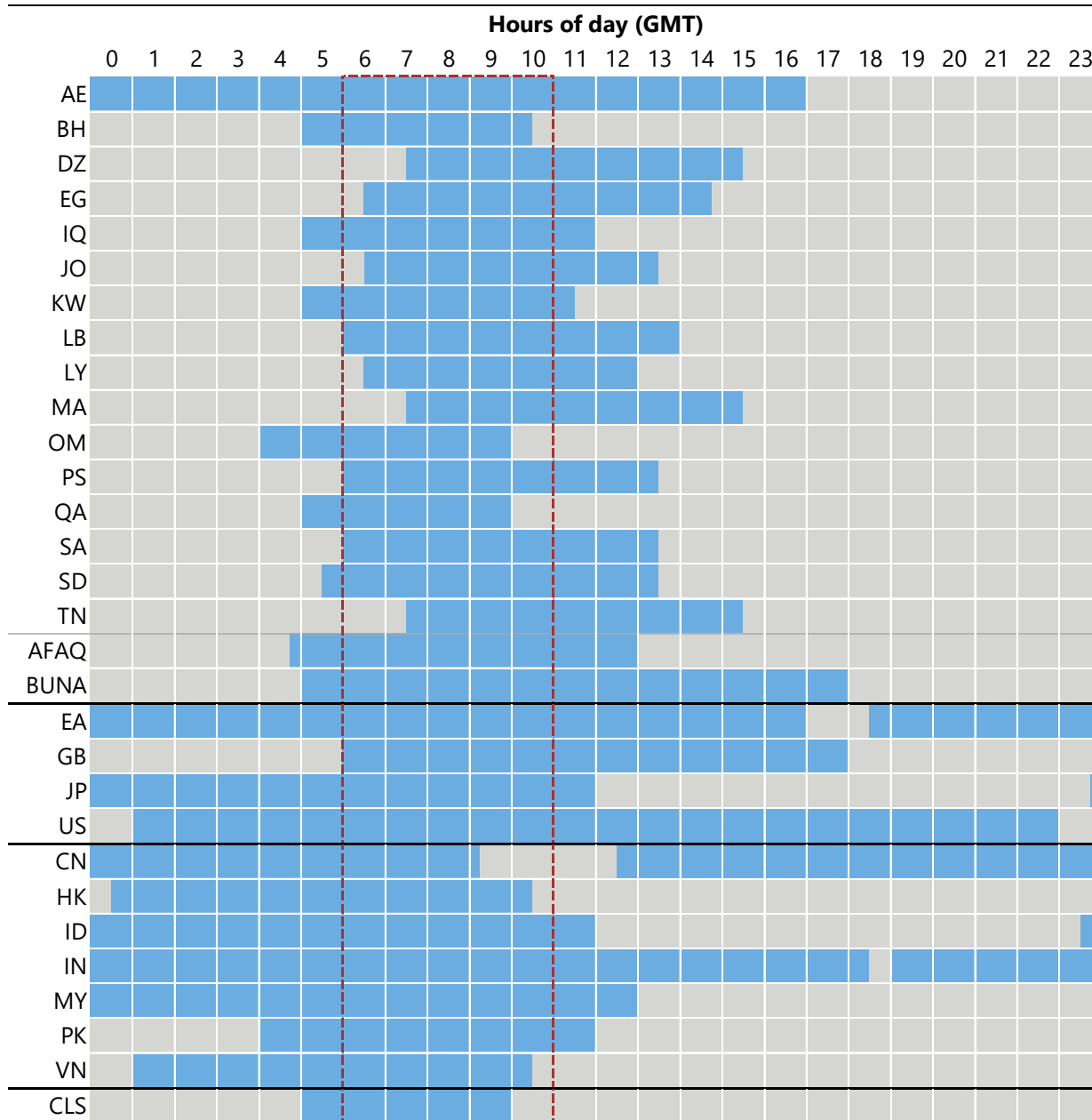
An extension of RTGS system operating hours across jurisdictions could speed up cross-border payments, improve liquidity management, reduce settlement risk and enhance the performance of ancillary payment systems that may be used for cross-border payments. RTGS systems typically facilitate settlement in central bank money and, as a result, provide the foundation on which other payment systems and arrangements involved in cross-border payments rely. However, limited RTGS operating hours across jurisdictions can lead to a delay in cross-border settlement, especially between countries with significant time zone differences (CPMI (2022a)).

The extension and greater alignment of the operating hours of RTGS systems could help to address the slow speed and other challenges affecting cross-border payments, as well as help other building blocks take effect. In addition, while a focus on RTGS systems is appropriate given their key role in supporting cross-border payments, in particular fast payment systems (FPS) have operating hours and execution times that could potentially alleviate certain frictions in cross-border payments (CPMI (2022a)).

At a global level, operating hours vary significantly across RTGS systems in different jurisdictions, and there are sizeable gaps in their daily operating hours that at least partially explain delays in the processing of cross-border payments. On a daily basis, gaps in operating hours exist across nearly all jurisdictions, affecting both AEs and EMDEs, although gaps tend to be larger for EMDEs. Gaps are particularly pronounced across regions, exceeding 20 hours per day for some jurisdiction pairs and sometimes approach (or even span) the entire day. Daily gaps are less sizeable, but still noticeable, for jurisdictions within the same region due to smaller time zone differences (CPMI (2022a)).

RTGS operating hours within the region are, with an average of eight hours, considerably shorter than the global average of almost 11 hours (Graph 6). However, the operating hours of Arab RTGS systems largely coincide with the global settlement window and have a considerable overlap with RTGS systems that settle the major reserve currencies as well as CLS in performing foreign exchange settlement. In particular, as 55% of cross-border payments in the region in 2018 were denominated in US dollars, a large overlap with the United States is important. Furthermore, RTGS systems in the region have an overlap with RTGS systems in Asia which are relevant for major remittance corridors.

Gaps in operating hours are even greater when considering weekly availability, as only a limited number of RTGS systems are available on weekends. At present, average operating hours on a weekly basis are almost 25% less than if current average weekday operating hours were to apply throughout the entire week. This gap can at least partly be attributed to the fact that standard business days can differ across the region, eg from Sunday to Thursday in many countries in the region compared with Monday to Friday in most other jurisdictions, limiting the overlap of standard business days to four days a week.



This graph is based on RTGS system operating hours in 2021. The global settlement window is marked red. AFAQ and Buna are regional payments systems owned by the Gulf Payments Company and the Arab Monetary Fund respectively.

Sources: 2021 CPMI survey; authors' calculations.

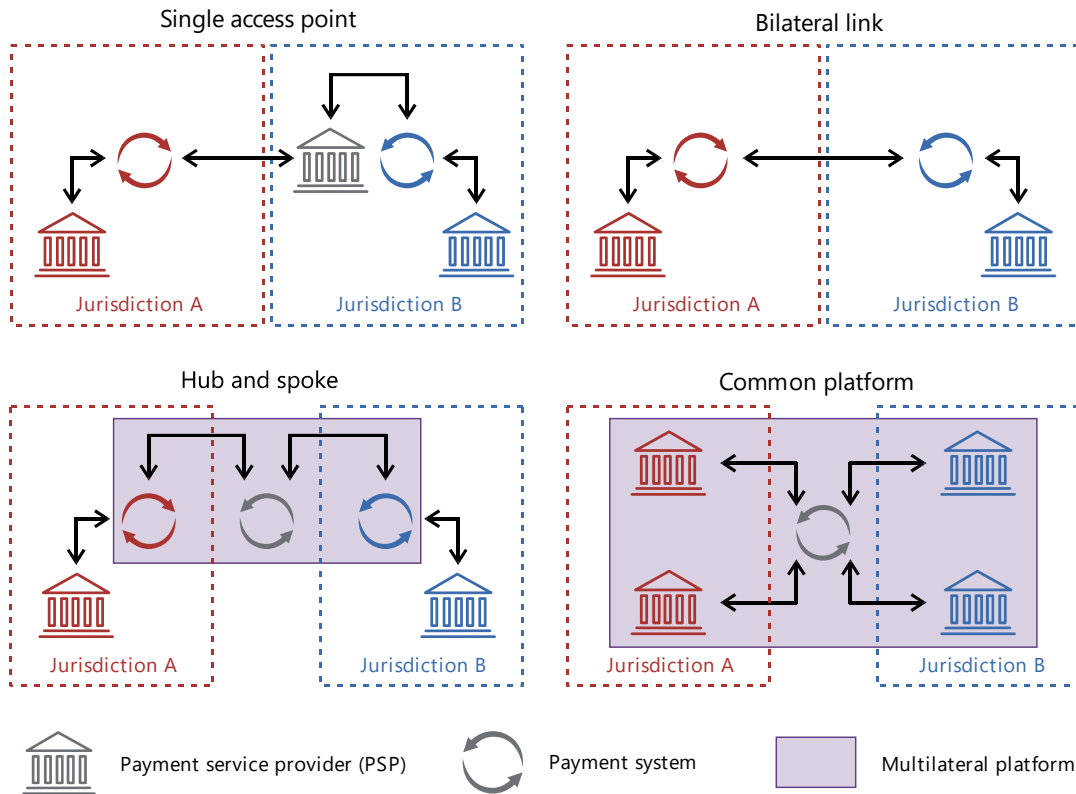
Multilateral platforms and interlinking of payments systems

Another approach to enhancing cross-border payments is the interlinking of payment systems or the establishment of multilateral platforms. As this can shorten transaction chains, reduce overall costs and increase the transparency and speed of payments it is an important element of the G20 cross-border payments programme. In principle, an interlinking arrangement allows banks and other PSPs to transact with each other without requiring them to participate in the same payment system or use intermediaries (ie correspondent banks). Multilateral platforms and interlinking arrangements share several

characteristics. Both involve comparable design choices and similar considerations of benefits, costs and risks. Multilateral platforms too can form part of the interlinking arrangements. Interlinking arrangements are typically classified into four stylised models (Graph 7).

Stylised models for interlinking cross-border payment systems^{1, 2}

Graph 7



¹ Examples include Hong Kong's RMB CHATS links with Mainland China's payment systems (single access point), Directo a México (bilateral link), the Regional Payment and Settlement System (REPSS) of the Common Market for Eastern and Southern Africa and Southern African Development Community (SADC)-RTGS (common platform). ² The multilateral platform includes the participants and the entity operating the arrangement. In the hub-and-spoke model, the participants are payment systems. In the common platform model, the participants are PSPs.

Sources: CPMI, BIS Innovation Hub, IMF and World Bank (2023).

At the time of the survey, slightly fewer than one tenth of payment systems (26) at a global level reported that interlinking arrangements had been established with foreign payment systems. In the region, three payment systems reported that they maintain linkages with foreign payment systems. In general, payment systems with interlinking arrangements are typically those that have been launched only recently. A potential explanation might be that newly launched systems are more likely to use modern technologies and standardised data formats, making it easier to interlink them. Existing interlinking arrangements are more likely to be established within a region than across the globe. Anecdotal evidence suggests that the interlinking of FPS in particular has become increasingly important over the past two years and additional links have been launched, eg between Singapore and Thailand as well as Singapore and India.

With Buna, the AMF founded in 2018 a cross-border and multicurrency payment system comparable with the common platform model laid out in Graph 7. Buna was created to implement the decision by the Council of Governors of the Arab Central Banks and Monetary Authorities to mandate the AMF to establish a cross-border payment system that supports further economic and financial integration between AMF member countries and expand trade and investment activities with the global trading partners. Buna went live in 2020 and enables commercial banks, central bank and other financial

institutions, in the region and elsewhere, to send and receive payments in both regional and key international currencies. Buna is operated by the Arab Regional Payments Clearing and Settlement Organization (ARPCSO), which is owned by the AMF. More than 100 participants can currently make payments in regional (AED, SAR, EGP and JOD) and international currencies (USD and EUR). By offering the exchange of payment messages and data in real time and settlement in a variety of currencies, Buna facilitates cross-border payments within the region. Buna has adopted a centralised model, consisting of a single, multicurrency and pre-funded platform. As a result, every established link can operate separately for every currency. This model simplifies and streamlines the process of connecting ancillary systems. At the same time, this makes it attractive for international payment systems to establish links with Buna, as they will have a single point of connection to all participating AMF member countries. More international linkages would enhance cross-border payment flow from and to the region.

Outlook on the next phase of the work and monitoring of progress

With the majority of initial actions completed, and recognising that the quantitative targets will not be achieved merely on paper through analyses and recommendations, the next phase of work will focus on the three priority themes identified: (i) payment system interoperability and extension; (ii) legal, regulatory and supervisory frameworks; and (iii) cross-border data exchange and message standards (FSB (2023)). Implementing actions and projects in support of these themes was determined to be the best way to achieve the cross-border payments targets, which serve as a guiding principle in the prioritisation of the next phase of the G20 cross-border payments programme deliverables. Learning from the experiences in different regions can help jurisdictions as they move towards enhanced cross-border payments. Regular engagement of the public sector with senior managers and with technical experts will bring both strategic perspectives and subject matter expertise to ongoing projects. The CPMI has launched a central bank community of practice, in which the AMF participates, and an industry task force on payments interoperability and extension. The taskforce has approximately 30 members from a wide variety of jurisdictions and regions, including Buna, and comprising different types of private sector institution and business model. The FSB has in parallel launched a taskforce on legal, regulatory and supervisory aspects and holds an annual cross-border payments summit.

As work moves forward in this new phase of practical actions, focused and effective monitoring plays a crucial role in the G20 cross-border payments programme. Measurement against the outcome targets endorsed by the G20 leaders will allow to determine the progress made in improving the speed, access and transparency of cross-border payments and reducing their costs to users. Monitoring progress on infrastructure changes is equally important and provides insights into the current status of the challenges faced. Comprehensive and timely information from central banks and other authorities about the global state of play will also help to identify actions and areas that require greater attention, allowing the programme to be adjusted as needed. As such, engagement and updates from as many jurisdictions as possible are needed if the overall global effectiveness of the cross-border payments programme is to be measured effectively.

Hence, the CPMI, in cooperation with the FSB, the International Monetary Fund, the World Bank and regional institutions such as the AMF, invited central banks to participate in a monitoring survey on progress made in the priority themes earlier in 2023. Central banks were asked to respond to a survey of their respective jurisdiction's RTGS systems, FPS and deferred net settlement systems with a focus on enhancing cross-border payments. The aim was to ensure a good coverage of both G20 and non-G20 jurisdictions. The survey should be repeated annually and will allow the CPMI to analyse the progress made and identify regional trends. Initial findings fed into the FSB's annual progress report to the G20 and a comprehensive analysis will be published early 2024. The monitoring survey results will inform work by international and regional institutions as they seek to implement changes in market infrastructures and arrangements in pursuit of the G20 targets.

Annex A: Country codes

AE	United Arab Emirates	IQ	Iraq	PK	Pakistan
BH	Bahrain	JO	Jordan	PS	Palestine
CN	China	JP	Japan	QA	Qatar
DJ	Djibouti	KM	Comoros	SA	Saudi Arabia
DZ	Algeria	KW	Kuwait	SD	Sudan
EA	euro area	LB	Lebanon	SO	Somalia
EG	Egypt	LY	Libya	SY	Syria
GB	United Kingdom	MA	Morocco	TN	Tunisia
HK	Hong Kong SAR	MR	Mauritania	US	United States
ID	Indonesia	MY	Malaysia	VN	Vietnam
IN	India	OM	Oman	YE	Yemen

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