Citi Response to CPMI Consultation on Extending and Aligning Payment System Operating Hours for Cross-Border Payments

Can the extension of real-time gross settlement (RTGS) systems' operating hours materially continue to achieve the cross-border payments targets endorsed by the G20, especially in terms of speed? Please explain.

When operating hours of RTGS systems in different jurisdictions across the world do not overlap, processing and settlement finality of cross-border payments suffer delays. Extending operating hours of key individual RTGS systems would increase the speed in which final settlement of cross-border payments in central bank money could be achieved, especially where overlapping RTGS operating hours within regional/global settlement windows are expanded.

Increasing RTGS operating hours bears additional benefits as well, such as increased opportunities for payment-versus-payment (PvP) settlement of foreign exchange (FX) transactions (including same-day PvP), the establishment of liquidity bridges and the ability to perform additional settlement cycles for ancillary payment financial market infrastructures (FMIs) involved in cross-border payments. These benefits tie in with other building blocks (BBs) in the G20 cross-border payments programme: facilitating increased adoption of PvP mechanisms (BB9), liquidity bridges (BB11), interlinking of payment systems (BB13) and new multilateral platforms or arrangements for cross-border payments (BB17). This also supports the importance of considering building blocks in tandem rather than in isolation, as it is through a combination of enhancements that the G20's cross-border payments targets across cost, speed, transparency and access can be achieved.

What additional actions would be needed by the public sector and/or private sector entities, beyond those described in the G20 roadmap (see Annex3 of the current report), to facilitate the extension of RTGS operating hours and realise the benefits that could result from extended RTGS operating hours?

The CPMI should continue to maintain the inventory of RTGS operating hours globally which it built as part of Action 1 (Identification of payment systems relevant for [global] cross-border payments and stocktake of their operating hours). In addition, the CPMI should consider building and maintaining in parallel a similar inventory of Fast Payment System (FPS) operating hours and include in this inventory key features such as reliance on existing central bank RTGS systems for settlement.

Solutions to address certain risks and considerations identified by the CPMI as part of Action 2 (Setting out potential future "end states" to support enhanced cross-border payments, analysis of risks and policy considerations and potential solutions to address them) will require industry coordination at the global, regional and local levels. As planned for in Action 3, central banks and payment system operators wishing to align/extend operating hours should, sooner rather than later, work with their direct participants and other domestic stakeholders to consider each of the potential end states, along with the associated challenges, risks and potential solutions that have been identified, with the goal of seeking consensus on if and how best to move forward.

Action 3 (Development of technical and operational approaches on how to address key challenges) will be key in defining appropriate paths to take, and associated timelines, on the journey towards expanded regional/global settlement windows and ultimately an end goal of full 24/7 global availability. The CPMI should take inventory of where such discussions are taking place and share output from such discussions to identify areas where global standards may need to be prescribed either by the CPMI itself or in coordination with other standard setting bodies like the Basel Committee on Banking Supervision (BCBS). The goal of such exercise should be to ensure consistent application of global standards which need to be adhered to by all actors in the payment chain, including FMIs and FMI participants which themselves are subject to various regulatory requirements (e.g., operational resilience, liquidity stress testing, liquidity reporting, KYC/AML).

What benefits for cross-border payments other than speed do you perceive would accrue from an extension of RTGS operating hours? What additional domestic benefits from a jurisdiction do you perceive?

Gaps in RTGS operating hours lead to increased liquidity costs and settlement risk. Reducing such gaps will lead to better liquidity management opportunities for banks supported by increased operational efficiency and flexibility when rebalancing liquidity positions and collateral pools globally across currencies.

Furthermore, an extension of RTGS operating hours also offers the possibility to improve funding mechanisms for domestic and/or regional FPS and other ancillary FMIs.[1] As FPS themselves also have the potential to improve cross-border payments (subject to system design choices such as allowing for one-leg-out transactions or interlinkages), their potential to support cross-border payments should continue to be investigated in the context of RTGS systems serving as the backbone for settlement in central bank money. Extension of RTGS operating hours similarly enable the introduction of additional settlement cycles in ancillary payment systems (such as ACH) and could also serve as the bedrock for FX, debt, and equity markets to operate with expanded hours.[2]

While an extension of RTGS operating hours can help address current points of friction, it is important to acknowledge that local paths towards that goal will inevitably vary, and thus the timing and speed at which benefits materialize may vary as well. For example, in some cases cost objectives may not be met in the short term as central banks/RTGS system operators and industry participants invest capital in technology and operations infrastructure needed to enhance operating hours (e.g., product processors, credit risk management systems, treasury management systems, staffing). However, such costs will be spread over time and as benefits

[1] RTGS systems provide the venue for interbank settlement of FPS transactions and provision of liquidity to FPS. The implications for RTGS operating hours can differ depending on the choice of settlement model in the FPS. The recent (December 2021) CPMI report on ‘Developments in retail fast payments and implications for RTGS systems’ noted that FPS are increasingly settling obligations on a gross (i.e., payment-by-payment) basis in real time. If the interbank settlement for an FPS (FPS settlement) takes place in real time, RTGS operating hours in some cases may need to adjust as well.

[2] The Federal Reserve recently expanded operating hours of the Fedwire® Funds Service to support enhancements to same-day ACH transactions. The European Central Bank also extended operating hours of TARGET2 with a “night-time window” being available to support settlement of ancillary systems in central bank money with finality (particularly securities settlement). The Bank of England's RTGS renewal program is also targeting CHAPS technical capability to support 22 operating hours per day, 5 days a week plus short windows of operation available at the weekend for the net settlement of the retail systems.

of increased speed, expanded access, reduced settlement risk and more efficient liquidity management materialize, net benefits will be positive over the long run.

How well do the three identified end states capture key scenarios that individual central banks/RTGS system operators should consider as they assess current RTGS operating hours and plan for the future? What additional end states or refinements to the end states would you suggest?

The three identified end states capture key scenarios that individual central banks/RTGS system operators should consider as they assess current RTGS operating hours and plan for the future. While the 1st (an incremental increase in operating hours on current operating days) and 2nd (an extension to current non-operating days) end states accommodate different paths central banks/RTGS system operators may choose to take, a move towards an ultimate end goal of 24/7 as envisioned by the 3rd end state should be the industry's north star.[3]

Which end state, out of the three identified or another one you may want to consider, do you believe strikes the best balance between improving cross-border payments and managing the associated challenges?

While the 3rd end state of 24/7 availability should be the industry's north star, this end state will necessitate strong coordination and industry-wide assessment of liquidity management, risk management, operational process, IT infrastructure, market-wide practices and resilience for both FMIs and FMI participants. As central banks/RTGS system operators may decide to take different paths in extending operating hours of their domestic systems based on current operating hours and stakeholder needs, global alignment and coordination will be critical to ensuring cross-border payment benefits are realized since these payments require explicit and implicit coordination among all actors in a payment chain.[4]

While 24/7 provides the most benefits, other end states will be feasible to provide incremental benefits in the shorter term, while the changes needed for full transition to 24/7 are made. If the objective is to manage settlement risk, which is key for high value flows usually transacted during regular business hours, then perhaps the 1st end state (extended operating hours during business days) is sufficient for the short term. As FPS usage evolves and increases overtime (in terms of transaction size and aggregate values), then RTGS hours may need to gradually match FPS operating hours (largely 24/7) as well to ensure funding efficiency and mitigate settlement risk during evening hours and/or on weekends.

That said, building the RTGS infrastructure foundation will be required if full 24/7 availability is to be a possibility at all over the long run. To address cost concerns that may arise as infrastructure is built, optionality in terms of FMI member usage of extended hours availability will be key to ensure that material enhancements to payments processing are risk managed appropriately and take into account various business models and risk management capabilities of FMI members.

[3] Appropriate paths will be informed by current operating hours, business needs and FMI participant requirements which should be discussed as part of Action 3 consultations.

[4] For example, a client in Singapore deciding to make an AUD payment to a supplier in Hong Kong may need to consider four country jurisdictions for one payment: *SG clearing*, *US clearing* (assuming there is no direct conversion of FX from SGD to AUD and as such needs to be processed as SGD to USD and USD to AUD), *AU clearing*, and *HK clearing*, all considering respective cut-off times and holidays.

On the basis that the direction of travel - in terms of client expectations - is towards 24/7, it would also seem sensible that, where RTGS upgrades are under consideration, capability and capacity to accommodate 24/7 operations are built into project plans even if they are not fully implemented at the outset.

As a result of end state 3, which involves 24/7 RTGS operating hours, do you anticipate demand for 24/7 operations of RTGS systems in the future? If so, what do you expect to be the main drivers and over what time horizon do you expect this to happen?

As previously mentioned, an extension of RTGS operating hours improves funding mechanisms for domestic and/or regional FPS and other ancillary FMIs. In addition, extension of operating hours may also support certain client flows. Large-value B2B flows, which would benefit from 24/7 RTGS operations, currently operate mainly during normal business hours.[5] In the short term, support for large-value movement is needed mainly for emergency payments (e.g., paying for port fees to release goods stuck in the port on a weekend), ancillary FMI funding (e.g., funding FPS liquidity requirements during RTGS off-hours/off-days) or to better manage intercompany liquidity (e.g., company subsidiaries that are short of funds in one country/currency and wish to avoid overdraft charges may wish to move liquidity into/out of various accounts through existing cash pooling and sweep solutions).

Would your organisation make use of and/or benefit from extended RTGS operating hours?

Absolutely. An increase in RTGS operating times (aiming for 24/7) will scale up FPS settlement and high-value B2B flows, both domestic and cross-border.

How useful do you view the global settlement window as a concept for considering the aggregate implications of extensions to RTGS operating hours in individual jurisdictions? What alternatives or refinements, if any, would you propose in order to consider the aggregate implications of extensions to RTGS operating hours in individual jurisdictions?

Settlement windows (global and regional) will be helpful to reduce settlement risk across multiple jurisdictions and can provide a gradual extension of cross-border payment operating hours, with the aim of reaching the 24/7 end state in a sustainable manner. While maximising the potential overlapping of operating hour windows, it is important to identify the type of geographic flows that will benefit. For instance, expansion via the 1st end state may benefit more flow between America and Europe but not necessarily from Asia to America, unless it is close to 24/5 or 24/7.

In addition to RTGS operating hours extension and alignment in market-wide practices and standards, global policy will need to be compatible with country specific conditions. With a view that RTGS and FPS schemes offer complementary services, jurisdictions will be able to make use of RTGS to reduce liquidity settlement risks in their FPS systems. RTGS extended operating hours can also be used to make the wholesale FX conversion process more efficient.

[5] Based on client behaviour, current 24/7 instant access demand primarily comes from low-value B2C and C2B flows, most of which can be supported by existing FPS.

To what extent have the operational risk considerations related to an extension of RTGS operating hours been adequately identified? What additional considerations would you consider relevant?

The CPMI report usefully captures the risk and policy considerations regarding extended operating hours at a high level.[6] Such considerations will need to be examined further as part of Action 3 when local central banks and payment system operators wishing to align/extend operating hours work with their direct participants and other domestic stakeholders to consider challenges, risks and potential solutions relevant to the local context and operating model. That said, optionality in terms of FMI member participation in extended operating hours should be supported as certain banks may choose to avail of the full set of hours in major clearing centres or their respective hubs whereas in other jurisdictions they may choose to participate to a lesser extent (informed by varying businesses cases and relative size of payment flows).

What would you identify as the top five considerations related to an extension of RTGS operating hours in your preferred scenario? What mitigation measures could be taken to address them? What were some key lessons learnt from participation in RTGS systems that has extended its operating hours in the recent past?

Below are five key considerations in no order of importance:

- Global coordination on business day and value date conventions, especially in a 24/7 end state
- Optionality in terms of FMI member participation in extended hours, including a need for participant directories providing transparency on such participation to better inform payment and liquidity management[7]
- Consistency in liquidity regulations (e.g., monitoring, forecasting, management, reporting), considering evolving definitions of business day, value date and intraday vs. overnight liquidity flows in a 24/7 end state
- Technological considerations to ensure service level agreements (SLAs) and operational resiliency targets are met, supported by interoperability arrangements and harmonization of standards and protocols (e.g., usage of ISO 20022 payment message formats)
- Staffing considerations, including balancing efficiencies gained by employing follow-the-sun models with potential regulatory needs to have in-country management 24/7

In your view, to what extent will the above measures require coordinated action by industry participants and/or support/guidance from authorities, such as central banks, standard-setting bodies and supervisors (as opposed to actions by individual stakeholders)?

---

[6] Similar considerations have been identified by the Federal Reserve sponsored Payments Risk Committee which explored operational, risk, and policy considerations regarding the potential expansion of Fedwire® Funds Service operating hours. See: [prc-fedwire-expanded-hours-considerations-white-paper (newyorkfed.org)]

[7] For example, Japan's Zengin system can be accessed 24/7 and instant. However, banks are only mandated to access Zengin Mon-Fri business hours. Banks and clients can decide if they want to access and be accessed for 24/7 instant payments (both debits and credits). Each bank then decides if they want to operate after business hours and on weekends. Additionally, each client of the bank can decide if they want to receive credit after hours or only during business hours. So even if the sending bank can send payments 24/7 and instant, the bank will need to check upfront if the beneficiary bank is open, and if the beneficiary is willing to receive the funds.

Coordination is needed to a great extent. As central banks/RTGS system operators may decide to take different paths in extending operating hours of their domestic systems based on current operating hours and stakeholder needs, global alignment and coordination will be critical to ensuring cross-border payments benefits are realized since payments naturally require explicit and implicit coordination among all actors in a payment chain. In addition, coordination between regulators of FMIs and FMI participants will be key to ensuring regulatory requirements strike the right balance between common goals of payment system safety, soundness and efficiency.

If the RTGS system in your jurisdiction has not yet reached the end state signalled in the previous question, what time horizon (number of years from now) would you envision for reaching it?

Central banks/RTGS system operators are best positioned to determine appropriate end states and respective time horizons for reaching such targets. As a globally active bank and participant in several FPS and RTGS systems that already operate at or close to 24/7, Citi is fully supportive of the 24/7 end goal. We welcome the opportunity to work with various local central banks/RTGS system operators in developing project plans and timelines for extending operating hours towards various interim and ultimate end states deemed appropriate.