

## GLOBAL INFRASTRUCTURES AND CROSS-BORDER PAYMENTS



### ULRICH BINDSEIL

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### Improving cross-border payments: from analysis to implementation

Along with globalisation, cross-border payment volumes have been increasing for many years and will keep on increasing in the future despite the current set back in international relations. Challenges remain. Although digitalisation has made instant cross-border communication quasi cost-free, the costs of executing cross-border payments have not yet declined as one would have expected. There are two main reasons for this. First, intermediaries struggle to ensure compliance with AML/CFT regulations and fear the legal and reputational risks of non-compliance, which both boost costs and reduce competition (“de-risking”). Second, whereas “front-end” payment service providers executing the first step of cross-border payment transactions have enhanced user convenience, the “back-end” facilitating payments through payment and market infrastructures continues to face challenges.

The international standards for AML/CFT are set by the Financial Action Task Force, an inter-governmental watchdog that together with the Basel Committee on Banking Supervision is in charge of “Applying AML/CFT rules consistently and comprehensively” within the FSB led G20 roadmap for enhancing cross-border payments. The part of the FSB road map concerning payment systems and infrastructures is mainly led by the BIS-hosted Committee on Payments and Market Infrastructures (CPMI).

The G20 work is now moving forward from the phase of analysis to the phase of implementation and actual progress. This requires commitment by the official and private sector to implement changes and to engage more closely with each other under an adjusted governance. To meet the targets set by the Financial Stability Board (FSB) for end 2027, progress should also be monitored and adjusting measures taken in a timely manner when needed. A guiding report on the implementation approach for progress monitoring, including Key Performance Indicators (KPIs) and data sources for calculating KPIs, will be published by the FSB Board by October 2022.

**The G20 work is moving forward from analysis to implementation and actual progress.**

The objective of achieving globally efficient and integrated solutions for payments has been affected by the well-justified EU and G7 sanctions imposed on Russia further to its attack on Ukraine. The sanctions excluded the major Russian banks from being served by global financial messaging service providers on which cross border payments also rely. This will however not disrupt the ongoing trend towards the common reliance on global standards and infrastructures. Global and autonomous regional solutions are somewhat more likely to co-exist in the future.

The war also seems to have brought a rise in cyber-attacks on some EU countries – forcefully reminding how crucial cyber-resilience, also against sophisticated state actors has become

today. Payment infrastructures have so far proven resilient, but the ECB remains committed to applying the Eurosystem cyber resilience oversight expectations (CROE) for financial market infrastructures and the TIBER EU framework for ethical hacking.

A much-debated topic is the role of new technologies such as DLT for improving cross-border payments – both in the wholesale and in the retail domain. Certainly, new technologies have a role but often their proponents have difficulties in explaining which unique ability they possess to solve real world payment problems. Unbacked crypto-assets, for example, are unsuitable as a means of payments (e.g. due to high price volatility and lack of a fair value anchor) while global stablecoins can be based on DLT as well as on standard centralised ledgers and are centrally run by a provider. From a functional perspective, stablecoins seem close to an e-money institution and will be regulated accordingly in the EU. Regulation should be based on functional considerations and policy objectives independently of the underlying technology adopted unless that matters for the regulatory objectives. Evidently payments based on DLT/blockchain must not give rise to any loopholes in AML-CFT compliance and the public sector must remain fully committed to achieve a level playing field.

To sum up: progress is achievable towards immediate, cheap, universal in terms of reach and securely settled cross-border payments. The rapid decline in the costs of global electronic data transmission and computer processing, new payment system technology (e.g. for instant payments), innovative concepts (including CBDC), as well as the unprecedented political will and global collaboration as in the G20 work on enhancing cross-border payments are key factors supporting this expectation. Innovative concepts, such as the interlinking of domestic instant payment systems with a competitive FX conversion layer, have high potential. This solution, as well as a number of other approaches, retain a competitive and open architecture, avoid the dominance of a handful of market participants that would be tempted to exploit their market power, preserve monetary sovereignty and refrain from crowding out local currencies.



## TARA RICE

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Committee on Payments and  
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### Many roads lead to improved cross-border payments; central banks are providing direction

Since the launch of the G20 cross-border payments roadmap almost two years ago, the transformation of the payments landscape has continued to evolve at pace. The ongoing financial innovation offers the prospect of new payment services and greater competition in payments but also opens the door to different risks.

The global financial system faces a potentially game-changing moment as private initiatives in the field of payments proliferate, with a staggering number of stablecoins entering markets and interacting with other cryptos and decentralised finance (DeFi). Disruptions in crypto markets over the recent months have illustrated, however, that not all innovations in payment methods and technologies are safe and efficient. These recent developments have heightened the urgency for authorities to address the potential risks posed by cryptos, including stablecoins.

To address this risk, the Bank for International Settlements' Committee on Payments and Market Infrastructures (CPMI)

and the International Organization of Securities Commissions (IOSCO) in July published their guidance on stablecoin arrangements. The guidance confirms that the CPMI-IOSCO Principles for Financial Market Infrastructures apply to systemically important stablecoin arrangements that transfer stablecoins. The risk management, governance and transparency standards for existing payment systems are stringent; that same level of robustness and integrity is expected in any systemically important stablecoin arrangements. To that end, the guidance is a major step forward in applying "same risk, same regulation" to systemically important stablecoin arrangements.

This work is a key contribution to the Financial Stability Board's work on stablecoins as well as a commitment in the G20 cross-border payments programme, and the CPMI will continue to analyse how a well-designed and risk managed stablecoin could help address the frictions in cross-border payments.

**Central banks play a core role in improving cross-border payments by safeguarding the payment system, supporting private sector innovation and acting as a catalyst for change.**

Stablecoins first gained attention as one possible solution to enhancing cross-border payments. But there are a number of other viable options. Turmoil in crypto markets puts a spotlight on the deeper structural flaws that make crypto unsuitable as the basis of a monetary system or as the silver bullet for cross-border payments: that is, the lack of a nominal anchor, the fragmentation of the crypto universe and their reliance on speculation. Moreover, given the wide variety of payment options worldwide, as well as the diverse needs of end users, we will not end up with one single solution or platform. The future global payment landscape will be able to support a diverse ecosystem of private payment service providers at domestic and cross-border levels, rooted in settlement on the central banks' balance sheets.

Access to central bank payment systems; interlinking of fast payment systems (FPS), and fostering the development of cross-border central bank digital currencies (CBDCs) are among the G20 programme's 19 "building blocks".

In July, the CPMI published a report which lays out a framework for the interlinking of payment systems and provides practical analysis on the use of APIs. Interlinking arrangements, especially among FPS, hold promise for improving the speed, cost, efficiency, and transparency of cross-border payments. The BIS Innovation Hub Project Nexus has received considerable attention in this regard.

Another report published by the CPMI in July, together with the BIS Innovation Hub, the International Monetary Fund and the World Bank, highlights the need for CBDC design to consider cross-border access and interoperability. This report provides a tool for central banks to assess different access and interoperability options. It builds on last year's report to the G20, on domestic CBDC designs and experimentations and potential to enhance cross-border payments.

A CPMI survey showed that at the end of 2021 more than a quarter of central banks were developing or running concrete CBDC pilots. However, there is no "one size fits all" model for access and interoperability. Central banks have different motivations for exploring or developing FPS or CBDC systems, and the demand for improved cross-border payment rails differs across jurisdictions. Therefore, different central banks might opt for different access and interoperability options.

To help central banks in the planning and development of their FPS or CBDCs and to make sure that cross-border functionalities are considered in time, open and regular dialogues between central banks would be instrumental. Even jurisdictions not planning to issue a CBDC or operate an FPS ought to be closely involved in this work as they will still be part of this flourishing cross-border payments landscape.

The CPMI, alongside the FSB, has been working to identify some priority project areas to take forward the building blocks of the G20 cross-border payments. This year's (second annual) G20 cross-border payments progress report will outline the high-level priorities as well as set out measures to help stakeholders achieve the G20 targets agreed last year, thereby taking another major step on the road to enhancing cross-border payments - safely and efficiently.

*This article has been co-written by Thomas Lammer and Takeshi Shirakami, CPMI*



## PIERO CIPOLLONE

Deputy Governor -  
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### FSB CBP Roadmap: contemplating the idea of interlinking existing payment systems

The G20 Roadmap for enhancing cross-border payments is steadily progressing in line with the milestones established in October 2020. Several reports have been published over the last few months and foundational steps have been taken, in particular, by setting specific quantitative targets in terms of speed, cost, transparency and access. Despite the progress achieved so far, our ability to follow the Roadmap is now threatened by the new geo-political context, which is likely to be characterized by reduced mutual trust and multilateral cooperation, both fundamental ingredients for advancing the G20 program. Another factor is the less favorable economic outlook. The new scenario makes it more complicated to develop global multilateral infrastructures, driving us to focus our efforts, on maximizing what we can achieve on our targets.

One of the areas where it is of utmost importance to invest more resources is the interlinking of existing payment systems, provided that it is complemented by other actions, such as aligning regulatory frameworks to

make it easier to perform AML/CTF checks and improving interoperability through greater harmonization of standards. Interlinking, in fact, means reusing existing infrastructures, thus reducing implementation times and the related costs for the financial communities of the jurisdictions involved, which to some extent may continue processing payments using legacy procedures and formats.

Fast payment systems (FPSs), in particular, have operational features that offer the greatest potential for achieving the goals of the Roadmap. First, FPSs are operational on a 24/7/365 basis, resulting in a full overlapping of operating hours across jurisdictions. Then, they are generally based on standardized messaging formats and present a high degree of semantic interoperability (i.e. they speak the same language). Finally, FPSs process payments in a few seconds or minutes, ensuring that the journey of a payment from the payer to the payee lasts a short time, whereas interconnected traditional retail payment systems may take hours, or even days, to complete payments.

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On the other hand, interlinking entails complexity when there are bilateral interconnections among a wide number of systems. This drawback can be addressed by relying on existing fast payments regional platforms, such as TIPS in the European Union, which could seek to expand their geographical scope as much as possible in order to reduce the number of links between jurisdictions. Standardized interfaces and multilateral connections may further contribute to mitigating connection costs.

TIPS (TARGET Instant Payment Settlement) is a service that provides PSPs and ACHs with a Europe-wide solution for the settlement of instant payments in central bank money.

TIPS ensures pan-European reachability for instant payments. All PSPs can settle instant payments across the entire euro area via TIPS without depending on bilateral agreements between ACHs. In this regard all ACHs participate and compete in TIPS for

the provision of instant payment services, with no exposure to credit risk for cross-ACH transactions. Each PSP may decide independently (i) where to instruct (in an ACH or in TIPS) and (ii) where to hold its liquidity and settle (in an ACH or in TIPS). The choice of each PSP in this respect does not condition the choices of other PSPs.

TIPS is by design a multi-currency platform, capable of processing other currencies as well as the euro. As of May 2022, instant payments denominated in Swedish kronor can be settled in TIPS. Also the Danmarks Nationalbank is currently undergoing the same onboarding process, with the objective of going live with the settlement of instant payments in Danish kroner by 2025, while the Norges Bank is assessing whether TIPS may be used to provide an instant payment service in central bank money for the Norwegian kroner and is expected to make a decision in the course of 2022.

From this perspective, when contemplating the idea of interlinking existing payment systems, TIPS may well be considered the best positioned candidate for playing the role of 'regional hub' for Europe.

Against this background and in its role as service provider of the TIPS platform for the Eurosystem, Banca d'Italia is exploring different options to support the settlement of instant payment transactions in a cross-currency and cross-platform scenario. In 2021, for example, Banca d'Italia and the Arab Regional Payments Clearing and Settlement Organization (ARPSO) performed a joint experiment focusing on the bilateral interconnection between TIPS and Buna, the two instant payment settlement platforms operated by the two organizations.

More recently, Banca d'Italia joined the Nexus project, a proof-of-concept coordinated by the BIS Innovation Hub of Singapore and involving the instant payment systems of Singapore and Malaysia as well, with the goal of assessing the pros and cons of a multilateral connection amongst FPSs.



## CHARLOTTE HOGG

Executive Vice President  
and Chief Executive Officer -  
Visa Europe

### Improving cross-border payments needs public-private collaboration

Cross-border payments are often perceived as expensive, unpredictable, and slow. They involve routing across different banks, networks, and regulatory regimes and there's no consistent method of processing models, costs and speed.

Yet they are indispensable. More than €117 trillion in payments volume flows each year between businesses, and €9.7 trillion of that volume is cross-border trade.

Recent global challenges such as the Covid-19 pandemic, a high inflationary environment, and the war in Ukraine have put the spotlight again on the need for easy, streamlined, and frictionless cross-border payments.

While certain types of cross-border transactions such as e-commerce payments have become straightforward thanks to innovations by the ecosystem, there are still pain points around others such as remittances, payments among businesses, and account transfers. To answer these challenges and resolve frictions, policymakers and the private

sector have come together via the G20 Cross-border roadmap.

Visa is supportive of the roadmap's workstreams in general, and we are eager to see progress made in the areas of streamlined licensing and approvals, which can facilitate market innovation, competition, global interoperability, and international standards, which can ensure that payment products and services can be easily accepted worldwide. At the same time, consistent and streamlined compliance requirements would improve transparency, effectiveness, and efficiency of cross-border solutions offered by the private sector. Particularly as they relate to anti money laundering and customer identity regulation.

To set up the cross-border roadmap for success, it has been important for policymakers to involve the private sector from the outset. The public sector doesn't necessarily need to build new cross-border infrastructure to address challenges, but it can help remove roadblocks for continued private sector innovation. At Visa, our priority is to enable smooth, swift, and safe global money movement. We believe payments infrastructure (regardless of who runs it) needs to deliver against three main policy objectives: resilience and security, innovation and competition, and value for all users. These are key to building trust and should be part of a holistic approach to thinking about things like cost and speed.

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#### The public sector can help remove roadblocks for continued private sector innovation.

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We have invested nearly €8.7 billion over the last five years in enhancing and securing our core technology platforms. Visa prevents an estimated €24.5 billion in global fraud every year and incidents of fraud occur in less than 0.1% of transactions—among the lowest of all payment forms.

We have simplified cross-border payments by investing in our payment infrastructure, connecting it to other networks for even broader reach, and exploring new offerings. In addition to our card network, we also operate Visa Direct—our global money movement platform—which enables almost 30 new types of payment flows, including remittances, merchant settlement, and gig economy wages with real time

capabilities across 180 countries. For the particular challenges of business-to-business payments, our Visa B2B Connect network offers same-day payment services, enabling seamless cross-border business transactions by removing the friction associated with multiple banks in the process chain.

At Visa, we are also extending our thinking to new and innovative cross border flows. For instance, in a recent paper we propose how digital currencies, including Central Bank Digital Currencies, can be used cross-border.

The reality of cross-border payments is that the activity is simple to describe—the movement of money cross-border—but the networks, end-user needs, and value propositions governing them are often complex and interlinked. We are pleased to see that the Financial Stability Board is adopting a “use case” method to look at retail payments. People and businesses want different things from cross-border payments depending on the situation. What is important for parties in a large-value business-to-business transaction may be different than what a consumer cares about when buying goods across borders from a merchant with which there is no prior relationship. In the latter case, consumer protection and dispute resolution capabilities loom large, and these convey value to parties which are additive to pure money movement.

It is therefore reasonable that different retail use cases might have different cost structures and differing tradeoffs on a number of other characteristics, including speed. Involving the private sector in the debate is therefore crucial to ensure that cross-border payments continue to improve, and improve for all end-users, today and in the future.



## MARC BAYLE DE JESSÉ

Chief Executive Officer -  
CLS Bank International

### Shifting sands: challenges to increasing PvP settlement in the FX market

CLS is a financial market infrastructure (FMI) that protects settlement members and their clients from settlement risk in the FX market by settling the payment instructions for FX transactions between counterparties across the globe through CLSSettlement. CLS currently settles on average over USD6.0 trillion daily across 18 currencies, accounting for a large proportion of FX trades in the market.<sup>[1]</sup>

In recent years, both regulators and industry participants have become increasingly concerned that FX settlement risk is rising once again. This is because the proportion of FX transactions not settled on a payment-versus-payment (PvP) basis has increased – particularly due to increased trading in some key emerging market currencies – exposing FX market participants to substantial FX settlement risk.

This has heightened the focus on overall risk management in cross-border payments, with both the public sector and market participants calling for greater adoption of PvP mechanisms to mitigate rising settlement risk. In October 2020, the Financial Stability

Board (FSB) published the G20 Roadmap for Enhancing Cross-Border Payments, an initiative targeted at addressing certain challenges in cross-border payments.<sup>[2]</sup> The FSB Roadmap's building block 9 focuses on the recommended mitigation of settlement risk for a cross-border payment. In a recent update, the FSB stated that the Committee on Payments and Market Infrastructures (CPMI) "will develop proposals for increased adoption of PvP by encouraging enhancements to existing PvP arrangements and/or the design of new public sector and/or private-sector solutions for PvP arrangement[s] that currently do not exist".

In addition to the CPMI's work to tackle settlement risk, the Global Foreign Exchange Committee called on the industry to adopt PvP more widely in its three-year review of the FX Global Code (the Code), a set of global principles of good practice for the FX market.<sup>[3]</sup> The updated Code includes amendments to the key settlement risk principles – Principles 35 and 50 – encouraging FX market participants to explore ways to further mitigate risk and reduce operational costs by adopting a best practice approach to FX settlement risk management and netting.

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**Settling via PvP and  
leveraging netting  
solutions are the most  
effective ways to reduce  
FX settlement risk.**

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#### Challenges with increasing PvP coverage

Access to CLSSettlement for currencies and members is governed by strict rules. As a systemically important FMI, CLS is subject to the Principles for Financial Market Infrastructures (PFMI) published by the CPMI and the Technical Committee of the International Organization of Securities Commissions (IOSCO) in 2012.

The PFMI standards are designed to ensure that the infrastructure supporting global financial markets is robust and able to withstand financial shocks. Therefore, adding new currencies to CLS is an extended effort subject to several complex factors, particularly the necessity of verifying that crucial legal, risk and liquidity standards are met in the jurisdiction whose currency is onboarded. Local authorities – and not CLS – determine the timing and pace to implement the agreed onboarding

process. Also, adding a new currency involves encouraging broader, active participation in CLS from both local banks and CLS members across the global FX market, which takes time.

In response to policymakers and market participants calling for greater PvP adoption in the FX market to further enhance financial stability, CLS has actively engaged the industry to explore alternative PvP mechanisms for non-CLS eligible currencies, and these efforts have received strong support.

However, recent geopolitical events have led CLS to reassess the pace at which this project moves forward. And this highlights one of the most significant challenges when it comes to expanding PvP coverage: progress in this area does not necessarily result from strong industry cooperation and technology advancements. As a trusted FMI, CLS already has the requisite technology, oversight, governance, credibility and support of its members. Instead, progress will result from overcoming the regulatory and geopolitical challenges that currently present the biggest obstacles to expanding PvP coverage.

For these reasons, CLS has made a strategic decision to allocate further resources to make functional enhancements to CLSNet, its bilateral payment netting calculation solution that standardizes and automates post-trade matching and netting processes for over 120 currencies. The functional enhancements will provide risk mitigation for currency flows outside CLSSettlement and support Principle 50 of the Code. Given the current geopolitical environment and the regulatory challenges with expanding PvP settlement, market participants should adopt the best practices recommended in the Code by settling eligible currencies via PvP and leveraging netting solutions for non-eligible currencies. For now, these are the most effective ways to reduce FX settlement risk and increase efficiency in cross-border transactions.

[1] Australian dollar, Canadian dollar, Danish krone, euro, Hong Kong dollar, Hungarian forint, Israeli shekel, Japanese yen, Korean won, Mexican peso, New Zealand dollar, Norwegian krone, Singapore dollar, South African rand, Swedish krona, Swiss franc, UK pound sterling and US dollar.

[2] FSB's Enhancing Cross-border Payments: Stage 3 roadmap (October 2021). <https://www.fsb.org/2020/10/enhancing-cross-border-payments-stage-3-roadmap/>

[3] The FX Global Code (July 2021). [https://www.globalfx.org/fx\\_global\\_code.htm](https://www.globalfx.org/fx_global_code.htm)



## THIERRY CHIROSÌ

Chief Executive Europe -  
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### The future of finance is a connected one

Over the last two years, the world has undergone an unprecedented transformation. Despite this, the financial services industry has proven itself to be highly adaptable, demonstrating great resilience under extraordinary pressure, and an ability to innovate during difficult times.

The global payments industry has served as a touchstone of this change. Against a backdrop of rapid globalisation and shifting geopolitical realities, the need for a frictionless and inclusive international payments system has come to the fore. To achieve this, we must collaborate on the fundamentals.

#### Interoperability as a key enabler

The key enabler in realising a frictionless international payment ecosystem will be a focus on interoperability – both at market infrastructure and individual firm level. By working in collaboration, industry participants can develop the standards necessary to avoid market fragmentation and encourage growth across emerging asset classes, without compromising on security and trust.

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**A focus on  
interoperability will  
be key to realising a  
frictionless international  
payment ecosystem.**

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This need for interoperability will also be crucial in ensuring the successful implementation of many innovation projects that are taking shape across payments. Indeed, accelerating innovation and enabling back-end interoperability go hand in hand in an increasingly complex and fragmented world.

This points to the promising work being done in Central Bank Digital Currencies (CBDCs) and new digital

assets. The metamorphosis of money as we know it has never been at a more exciting juncture, and its digital form could create a more inclusive, connected financial ecosystem.

Again, interoperability, underpinned by a universal set of standards, will be the linchpin to guarantee this. If CBDCs are adopted at scale, ensuring that different jurisdictions and the respective industry players within each are working in collaboration will be key to their success and longevity.

#### Looking ahead

The financial services industry is at a point where investment in emerging technologies is no longer seen as a choice, but a necessary step in preparing for the future.

When it comes to payments, this has never been more tangible. Alongside the emergence of CBDCs and digital assets, we are seeing crucial digitisation at all stages of the payments lifecycle to power this new generation of money. From ubiquitous digital apps to machine learning, innovation across payments extends to every corner of the industry.

But an ambitious innovation agenda cannot work in isolation. As we embrace the future, we must prioritise strengthening the linkages between the various infrastructures and relationships that connect us globally. With this approach, finance has an exciting time ahead.

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