

Innovation in Payments

A SPOTLIGHT ON DIGITAL CURRENCIES



Executive Summary

With a host of new industry initiatives and emerging technologies in development, multiple paths are available to unlock the future of payments: a world where all have the expectation and ability to move money instantaneously, 24/7/365 and with full transparency.

One such path is digital currencies.

The development of digital currencies—whether cryptocurrencies, central bank digital currencies or stablecoins—could change the way we look at settlement speed, liquidity, reconciliation and risk. And if the model proves a success, they could ultimately even impact the traditional role of correspondent banking and intermediaries.

As we look to tomorrow, the coexistence of digital tokens and fiat money, with an array of different rails, channels and solutions supporting varied client and payment needs, will collectively form part of a wider tool kit of bank offerings that clients — institutional, corporate and others—can use to meet their individual needs and optimize their businesses.



Digital Currencies: A Potential Path to a New World of Payments

As detailed in our accompanying paper *Innovation in Payments: Multiple Paths, One Destination*, one of the many solutions that banks are exploring to enhance payments—and settlements in particular—is digital currencies. Digital currencies, which are centered on distributed ledger technology (DLT), can be divided into three categories:

- **CRYPTOCURRENCIES:** a digital currency that uses encryption techniques to control the creation of monetary units and verify the transfer of funds.¹ Since their inception they have suffered from highly volatile prices, limited scalability and issues in governance and regulation.
- **CENTRAL BANK DIGITAL CURRENCIES (CBDCs):** essentially the digital form of a fiat currency, which is issued and regulated by the monetary authority of a country or region.
- **STABLECOINS:** While stablecoins share many of the features of cryptocurrencies, they seek to avoid the high levels of volatility associated with these digital currencies by linking the value of the coin to a pool of assets, thereby stabilizing the coin.²

¹ <https://www.pwc.com/us/en/industries/financial-services/fintech/bitcoin-blockchain-cryptocurrency.html#:~:text=Bitcoin%20is%20the%20name%20of,verify%20the%20transfer%20of%20funds.>

² [https://www.bis.org/cpmi/publ/d187.pdf.](https://www.bis.org/cpmi/publ/d187.pdf)

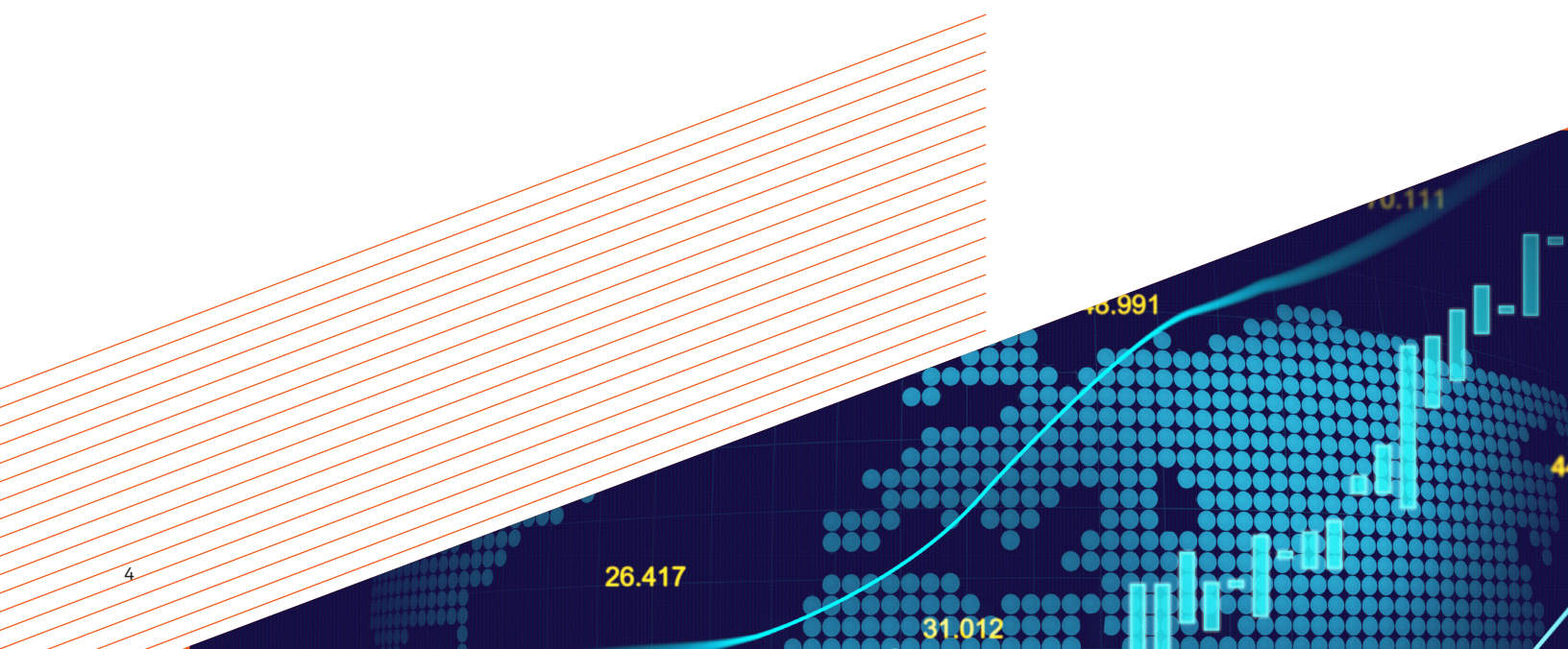
In the future, these digital currencies could offer an alternative to how we process payments today. Currently, payment rails are predicated upon a centralized model. Furthermore, new, transformative rails—such as the Real-Time Payments (RTP®) network in the U.S., Australia’s New Payments Platform (NPP) and the Faster Payments network in the U.K.—are restricted in terms of the value that can be transferred. This is an issue for wholesale payments in particular, where values significantly exceed such ceilings.

A key property of digital currencies is that, like a physical \$10 bill we might use to purchase an item in a store, they are token-based, meaning they can be held directly by the participants of a transaction. Importantly, as a result, digital currencies can be transferred directly on a peer-to-peer (P2P) basis—instantly and irrespective of value—without the involvement of any centralized third-party intermediaries in the settlement process.

This could translate into an entirely new processing model and structure for some forms of payment and settlement—as well as having implications for risk mitigation, liquidity management and correspondent banking strategies. With such transformative potential, what is the way forward for digital currencies and how exactly could they impact transactions?

With cryptocurrencies representing an unproven, unstable and largely unaccepted form of payment, and with the introduction of most CBDCs still a long way off, stablecoins would seem to have the most immediate potential to transform and modernize the interbank payments space—delivering benefits in three key areas:

cross-currency FX swaps, securities settlement and, if the model proves successful, even cross-border payments.



Cross-Currency FX Swaps

Digital tokens could be applied to payment-versus-payment (PvP) transactions, allowing cross-border FX payments to be made in real time, 24/7/365. Under the current model, if a bank needs to perform a same-day cross-currency FX swap, it needs to factor in cutoff times. Take an FX swap from U.S. dollars to pound sterling, for example. Given that the Bank of England's cutoff time is 5 p.m.—or 12 p.m. in New York—the U.S. bank would have to send the funds as early as 5 a.m. New York time for the trade to go through on the same day. Any later, and the same-day cross-currency FX swap would not be possible.

With a tokenized model, provided the bank were able to find a counterparty and agree to a rate in the marketplace, the bank could execute the same swap later on in the day using a digital currency, with the funds transferred and exchanged almost instantly. This would alter the notion of cutoff times and provide banks with a longer window in which to transact. And, by settling the transaction on the same day, the bank could avoid having an unsettled trade on its books overnight. This would free up capital for the bank that would have previously sat as an assurance against the unsettled trade.

Today, masses of cross-border payments reach the intended recipient with a value less than that sent by the originator. This is due to FX fees and fluctuating rates, as well as the various charges incurred as the payment makes its way along the chain. With FX payments made via digital tokens, these factors—as well as lack of transparency as the payment is routed through multiple banks—are eradicated due to the P2P, real-time nature of the transaction.

Risk would also be reduced as the transfer in the two currencies takes place synchronously and with finality.

Enhanced Securities Settlement

Because stablecoins would be classed as a trusted digital currency, free of the volatility and risk of unregulated cryptocurrencies, it would be possible to apply them to the payment leg in a delivery-versus-payment (DvP) digital asset settlement. This would be groundbreaking. The key to enhancing asset settlement lies with digitizing the payment leg, as the settlement of the payment is what creates the time lag. Currently, settling these transactions requires multiple parties, as well as two distinct platforms: one processing the settlement leg regarding the transfer of securities, and one processing the payment leg regarding the transfer of funds. In order to address settlement risk, DvP mechanisms are applied that ensure the securities leg is implemented only after the payment has been made and finalized.

In tomorrow's world, stablecoins could be the enabler of a more efficient and faster payments leg. With both the asset and cash tokenized, both legs of the transaction could be completed instantly in an atomic transaction—with the buyer and seller simultaneously receiving their respective asset and payment on the same ledger or via interoperable ledgers. What's more, the transaction would be completed P2P, removing the need for third parties. Such an approach could also lead to a reduction in settlement risk, counterparty credit risk, capital costs and reconciliation efforts.

In debt capital markets, DLT could enable participants to work even more collaboratively. There are opportunities for new revenue streams and new product offerings, but only if the entire market moves forward. Much is to be gained—including risk reduction, cost savings and simplification—with digitalized assets enabling fractionalized ownership, access to new investor bases, securities to be traded 24/7/365 and T-instant settlement.

A TOKENIZED MODEL WOULD ALTER THE NOTION OF CUTOFF TIMES AND PROVIDE BANKS WITH A LONGER WINDOW IN WHICH TO TRANSACT.

Cross-border payments

Further down the road, if the stablecoin model proves successful and the network effect is achieved, it could potentially have an impact on the way cross-border transactions are processed. Under the current system, these transactions —whether wholesale, retail or consumer—use a correspondent banking model involving numerous parties. This can lead to multiple costs, multiple risks and a process that can take multiple days. If stablecoins do come of age, cross-border payments could potentially ultimately be settled P2P.

By leveraging tokenized cash for payments, transactions could be performed instantly and securely on a P2P basis, while also creating a system in which payments can be made 24/7/365. This has the potential to radically alter the traditional correspondent banking model, with the immediate settlement reducing counterparty and institutional risk, as well as providing additional risk mitigation due to there being no credit lines or locked capital held in accounts.

Though correspondent banking as we know it today will not be going anywhere soon, with numerous developments working to improve upon the current model, stablecoins are one option that have the potential to change the cross-border transactions of tomorrow.

**TRANSACTIONS COULD
BE PERFORMED INSTANTLY
AND SECURELY ON A
P2P BASIS.**



The Impact On Liquidity Management

The nature of digital currency transactions has implications for liquidity management. Today, transactions in cash, securities and FX markets typically settle on a T+2 basis, with the time lag allowing treasurers time to collect or move money to ensure funds are available for payment, or to invest the money for a short term to maximize yield. As that begins gradually to change to an instant-payment model through the use of digital tokens, cash will instead debit on a T-instant real-time basis. Organizations will therefore have to fundamentally change their approach to intraday liquidity management and optimization.

Beneficiaries will receive the cash straightaway, but the originator, used to having the cash available for an additional period due to longer settlement times, will need to factor in the need for the money to be available there and then.

For example, many U.S. bank treasurers currently manage their intraday liquidity using their intraday Fed overdrafts, holding back payments and waiting for new payments to come in to keep overdrawn positions to an absolute minimum. If service-level agreements (SLAs) are instant, treasurers will need to factor this in and potentially rely on a different way to manage their payments and intraday liquidity. Furthermore, settlement is going to be taking place 24/7/365; there is no longer a logical “end of day,” and different deadlines exist in different countries. Treasurers will also need to consider this and make sure that accounts are not underfunded. Funding requirements will, of course, depend on each specific use case and the nature of the transaction (e.g., FX swaps or tokenized asset settlement).

In a world of real-time liquidity management and forecasting, having a solid partner institution will be key for many organizations—both corporates and FIs. A provider is needed that can not only act as a gateway to digital payments—including

providing tokens and settling on a third party’s behalf—but also with which a robust relationship is in place that enables effective liquidity support, when and if required. Banks will need to ensure clients are positioned to manage liquidity more efficiently and effectively, delivering intraday liquidity options should scenarios arise in which money to pay for an instant transaction is not instantly accessible. The advances in technology that are emerging will ultimately enable the introduction of liquidity models and products that no one has as yet thought of.

Equally, banks may have to alter the way in which they manage their own intraday liquidity to enable clients to make T-instant payments, ensuring they are liquid enough; that they employ efficient, cutting-edge systems to avoid instances of trapped liquidity; and that they are working closely with clients to fully align regarding exact time frames for when that liquidity is required. Because, of course, if the cash is not available there and then, the trade will fail.

Real-time liquidity could also mean that changes to the way in which interest is calculated, as well as ways to consolidate cash and maximize its value once it has been received into an account. Indeed, it should also be taken into account that, for beneficiaries, there will no longer be the issue of waiting to receive payments—funds can be utilized instantly—and counterparty risk exposure is reduced.

As real-time payments become increasingly commonplace, not only are there implications for the speed of transactions, it is also important to focus on what they mean for liquidity, reporting and visibility. When packaged together, these real-time elements can deliver a truly optimized cash management experience, centered on efficiency and enabling an abundance of capital to be released that would otherwise be trapped by traditional banking infrastructure.

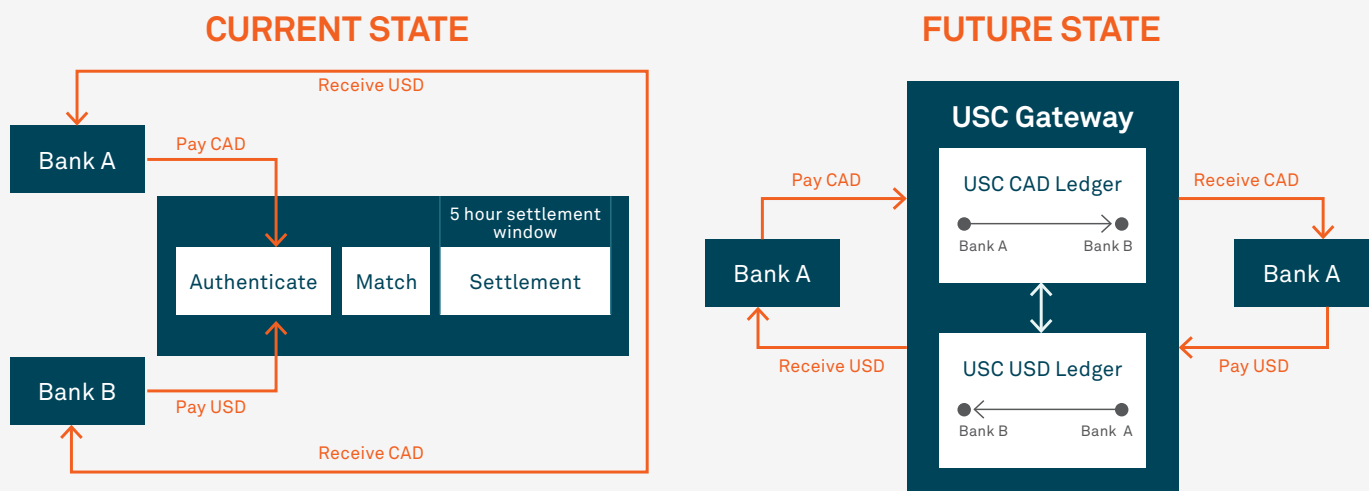
**IN A WORLD OF REAL-TIME LIQUIDITY
MANAGEMENT AND FORECASTING,
HAVING A SOLID PARTNER INSTITUTION
WILL BE KEY FOR MANY ORGANIZATIONS.**

Case study: Finality

Finality is one example of a stablecoin industry initiative. This consortium of FIs is exploring how tokenized cash assets might be used to settle securities trades using DLT. Finality aims to transform wholesale payments by creating a new payments system called Finality Global Payments (FGP) that removes the need for intermediaries by taking advantage of the innovations brought on by DLT and cryptocurrency technology. The FGP aims to use a regulated tokenized cash settlement asset called the Utility Settlement Coin (USC) to enable settlement. USC would be a 100% pre-funded token, representing fiat currencies, and backed on a one-to-one basis by cash deposits at respective central banks, with the superior risk characteristics of central bank money. USC has all the attributes of being a CBDC, without being issued by a central bank—this model instead centers on a company providing a market infrastructure.

Through FGP, as long as both banks are participants in the network, payments can be made P2P. Cross-currency tokenized transactions are simplified through the P2P process (see Figure 1), removing settlement risk in FX transactions via (PvP) settlement.

FIGURE 1:
Cross-currency FX swaps: today vs. tomorrow

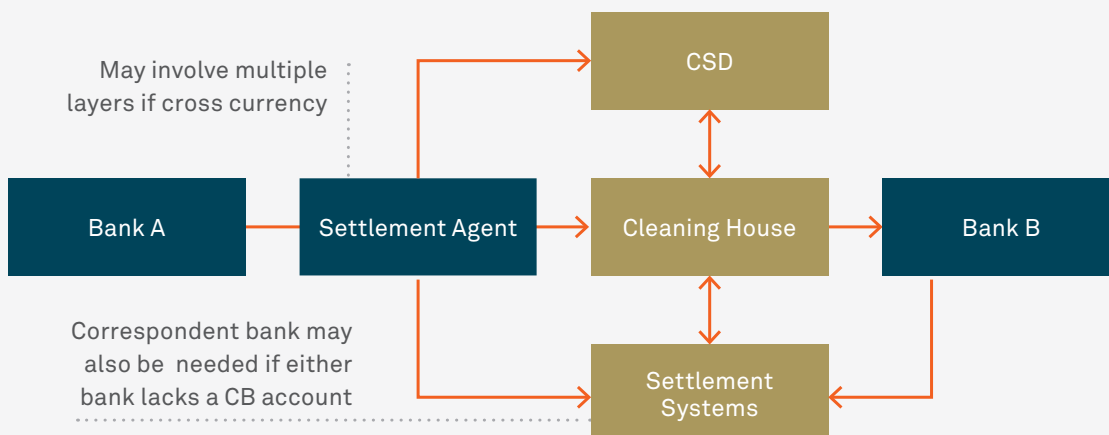


The potential for USC digital tokens extends beyond enhancing payments. When both parties are participants, FGP can be used to support an ecosystem in which tokens are used for the payment leg of a transaction involving the settlement of digital assets—or tokenized securities—such as stocks and bonds (see Figure 2). This enables both the asset exchange and payment to occur instantly and simultaneously, effectively removing the settlement, counterparty and institutional risk.

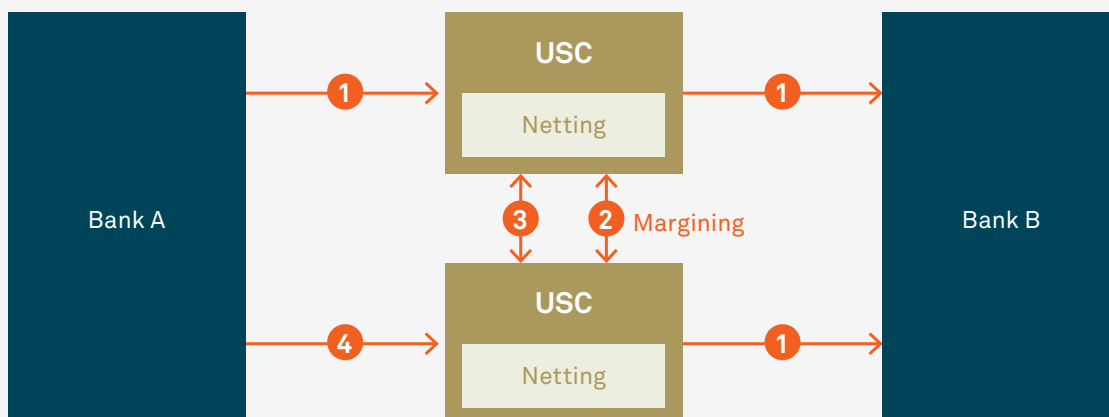
FGP will operate as a private, trusted network with direct and indirect participants. Only eligible participants would be able to effect P2P settlements. In the early phases at least, corporates and asset managers would not be participants in the network and would need a gateway to use this model. Corporates and many banks will therefore continue to need to partner with banks that have direct access to this ecosystem to enable P2P settlement to take place.

FIGURE 2:
Digital Asset Settlement Today vs. Tomorrow

CURRENT STATE



FUTURE STATE



Correspondent banking: A model for the future

Though we are by no means there yet, digitalized currencies are presenting an opportunity to revolutionize cross-border payments in the future. By tokenizing cash, using an enabler such as a stablecoin, funds can be transferred directly from one party to another on a P2P basis, which would remove the traditional role of correspondent banks from the settlement process. This would de-risk cross-border payments and allow for the instant and secure transfer of funds.

This evolution could fundamentally change the role of a correspondent bank, as both a provider of a service and as an enabler of payments. For example, under the current system, if a U.K. bank had no presence in the U.S., it would have to engage a correspondent bank in the U.S. to send and receive all of its U.S. dollar payments.

In a P2P system, if the same U.K. bank held a U.S. dollar digital wallet, and provided the counterparty was on the same chain, it could make the payment itself without having to engage its correspondent bank. This would change the way the U.K. bank and the U.S. correspondent bank perceive their business models. The U.K. bank is now in charge of its U.S. payment flows, while the U.S. correspondent bank no longer holds the U.K. bank's balances and is no longer involved in its transactions—dramatically changing its revenue stream.

So how do correspondent banks stay relevant in this potential scenario? Not every counterparty will be a direct participant of a P2P system. While the number of P2P payments will increase, the concept of an intermediary will not become obsolete. Rather, the correspondent banking model is likely to pivot, with banks becoming a gateway to a P2P system—acting in a role akin to today's settlement agent—as well as a liquidity provider delivering value-added services. Revenues would not cease, but they would see significant changes.

As these models pivot, it is important to see the bigger picture. While digitalization is advancing across the payments space, some areas will be affected more than others. SWIFT payments through Fedwire and CHIPS, ACH settlement, real-time payments, and even cross-currency FX will continue to be executed through traditional means. The story is not one of complete digital overhaul—there will be no “big bang” transition away from correspondent banking. Instead, it is a reaction to digital developments within the industry to ensure services remain relevant and that banks are well placed to provide a holistic suite of tools that cater to their clients' ever-changing needs.

Conclusion:

Transformational Paths for Payments

Digital currencies have the potential to rewrite existing models, impacting settlement speed, risk mitigation, reconciliation and liquidity management, as well as the traditional role of correspondent banking and intermediaries in the settlement process. As digital currencies edge closer to becoming a reality in wholesale payments and settlements, there are implications for stakeholders across the industry, including considerations for corporates.

Of course, the future of payments is not being shaped by digital currencies alone. The industry is abuzz with innovation, with a host of new technologies presenting opportunities to enhance current processes (for an overview of some of the other key initiatives underway, read our accompanying white paper *Innovation in Payments: Multiple Paths, One Destination*).

Indeed, we believe that no one initiative or technology is a silver bullet for delivering optimized payments—nor is there one path that will take us there. It is a combination of capabilities that will enable payments and settlements to be truly optimized. Going forward, the industry will see coexistence and interaction between traditional rails, the more established emerging technologies and the new landscape of digital currencies. Digital tokens and fiat money will coexist, with different rails and channels remaining relevant, supporting different payment needs and delivering value.

Banks will need to adapt to the evolving landscape, meeting the varied needs of clients with a tool kit of solutions and services. This means investing in the advancement of payments through industry initiatives and emerging technologies, including SWIFT gpi, artificial intelligence (AI) and real-time capabilities; supporting and driving ongoing enhancements to traditional rails; becoming the gateway provider of choice for tokenized payments and a valued liquidity provider.

The transformation of payments is already underway. Equipped with a suite of capabilities, banks will be ready to fully support clients as the new era of payments unfolds.

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