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# THE FUTURE OF PAYMENTS 2023

**GAINING GROUND ON GLOBAL  
INTEROPERABILITY**



**Finextra®**

# THE FUTURE OF PAYMENTS 2023

## GAINING GROUND ON GLOBAL INTEROPERABILITY

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# INTRODUCTION

The European Central Bank defines interoperability as “the set of arrangements/procedures that allows participants in different systems to conduct and settle payments or securities transactions across systems while continuing to operate only in their own respective systems.”

While technological efficiency is critical to gaining ground on global interoperability, there are other elements that are crucial to the success of a global payments network. This includes the ability to build seamless connections, connect payment systems across different jurisdictions with varying regulatory requirements and ensure different demographic groups can transact reliably and securely.

The payments and transaction banking industry may be unsure of where the fintech evolution will go next, but what is evident is that models for public and private sector collaboration must be established.

What this means is that financial services must reach a resolution for the continued challenges around cross border payments, correspondent banking and liquidity management, if we are indeed on the cusp of the instant payments era.

The European legislative landscape must also be looked upon as a support, not a hindrance and more must be done to implement the clever use of data so industry participants can forge ahead with initiatives such as open finance, banking as a service and turning payments processing into a business opportunity.

Further to this, as technologies such as cloud, artificial intelligence (AI) and robotic process automation (RPA) are utilised for innovation, banks and other financial institutions must step up their fraud prevention and cybersecurity games and establish new ways of customer authentication.

Now is the time for commercial banks to lead and the emergence of central bank digital currencies (CBDCs) has proved that strategic potential is there for this sector to thrive and pave the way for the next generation of payments.

With expert views from **Banking Circle**, **Quant** and **Wise**, in this report, you will learn from industry leaders about the events and trends defining global payments in 2023 and beyond. The report includes insights from BNY Mellon, Cecabank, Deutsche Bank, HSBC, ING, Nationwide Building Society, NatWest, SEBA Bank and Société Générale.

# WHERE THE FINTECH EVOLUTION GOES NEXT – AN EXPERT VIEW FROM BANKING CIRCLE



**Laust Bertelsen**  
CEO, Banking Circle



Technology has played a part in financial services for much longer than many people realise. As the Payments Association explains, the utilisation of technology to enable financial transactions began way back in the 19th century. Early fintech saw electronic fund transfers being made via telegraphs and Morse code – not advanced by today's standards, but an exciting leap forward in 1866 when the new transatlantic cable allowed funds to be transferred over much larger distances.

The next big step in fintech occurred from the 1960s, as finance began to digitalise and eventually went online in the 1990s. However, perhaps the biggest leap forward came swiftly on the heels of the 2008 financial crisis, when regulation was amended to enable a new type of provider to enter the financial landscape. New entrants, including Banking Circle which launched in 2015, didn't have the same legacy infrastructure slowing them down, so were free to innovate, to stir up the industry and deliver exciting solutions. They were able to respond to the growing list of pain points and frustrations faced by businesses and consumers transacting in an increasingly global online marketplace.

Throughout the latest phase of the fintech evolution, from 2008 to now, we have seen rapid and exciting change. Financial inclusion has increased drastically, and even the smallest businesses can now trade internationally without incurring the high costs and long delays of the past.

## Blurring the fintech/bank lines

How fintechs relate to banks is a significant portion of how they have evolved. Entering the market to challenge banks' offering, then shifting to provide complementary solutions before being able to compete successfully alongside, blurring the lines between what is a bank and what is a fintech. The next stage will see banks and fintechs working together even more closely. Recent research from Finastra and East and Partners revealed that three in four global banks plan to connect with an average of three fintechs in the next 12-18 months. 73% of the European banks surveyed said they want to plug into a platform of integrated fintech solutions, while only 5% plan to build capabilities in-house.

Changing regulation and open banking have allowed the lines between banks and fintechs to become even harder to distinguish, with the growth of embedded finance and banking-as-a-service being two key examples. Companies don't even need to be a specialist fintech business to offer financial services today – as long as they have a partner that can deliver that expertise. Fintechs are now able to offer traditional financial services, including loans and debit cards.

The average consumer would be forgiven for having a hard time accurately distinguishing between a bank and a fintech in 2023.

## Fintech challenges today

Despite their success and expansion over the years, fintechs still face numerous challenges on their journey to providing the best possible financial services for businesses and consumers. Fintechs' merchant customers are shifting online, meaning digital payment methods are essential and must be accessible to all customers. Recent Banking Circle research amongst merchants in the UK, Germany and the Netherlands found that just 34% of SME merchants still use a physical outlet for sales. 49% use online marketplaces, 46% their own website and 39% harness social media as their sales channel.

The result is fintechs need the ability to offer payment options that work seamlessly with each of these platforms, so they can stay ahead of the competition. Recognising the global marketplace in which so many merchants now operate is critical. According to the recent Banking Circle research, of the four biggest pain points merchants experienced with their Payment Services Provider (PSPs), two relate directly to cross-border payments: speed of settlements (29.5%) and FX facilities (27.5%).



## Banking the non-banks

What fintechs really want is the ability to offer banking services without being a bank – and without having to deal with all the regulatory and investment requirements that go along with that title. They want their customers to see them as their bank, so they need their own Bank Identifier Code (BIC) to simplify cross-border payments and they want to provide instant settlement, direct debits, credit and clearing.

## Realising fintech ambitions

Those fintechs offering access to a suite of solutions and added-value propositions in one place will be an attractive option for merchants. Keeping multiple solutions under one roof simplifies integration as well as payments themselves. The more solutions a fintech provides to its customers, the more payments those customers will send to that fintech. The challenge is, however, that no non-bank fintech can single-handedly build and maintain a broad enough suite of solutions to remain competitive.

Fintechs were built to meet a specific need and to meet it better than a traditional bank can. They were not built with the capacity to design, engineer, launch, run and continually update and upgrade a vast array of financial services solutions.

The only way for fintechs to offer their customers a wide enough range of propositions is in partnership with expert external partners like Banking Circle. The financial ecosystem contains almost limitless broad and niche financial solutions ready and waiting for fintechs to pick and mix. Choosing the right partner with the right solutions means fintechs can offer market-leading solutions underpinned by fit-for-purpose tech and supported by the relevant regulatory expertise.

## Tomorrow's history

As we move forward, customer expectations will continue to rise and fintechs will need to innovate more quickly to meet changing needs if they are to remain competitive and retain customers. Embracing new technology is essential in future-proofing the fintech offering, with machine learning and artificial intelligence playing increasingly important roles in all areas – from tailored Buy Now Pay Later offers within the payment journey to advanced fraud detection and decision-making processes.



# MODELS FOR PUBLIC AND PRIVATE SECTOR COLLABORATION

Now that we are on the way to achieving a truly interconnected, global economy, it's past the time for full transparency on business and government activities surrounding the worldwide mélange that is the financial arena. And beyond the fact that most news (and opinion) of any kind is largely 'public' now – shared nearly everywhere across the internet and through every conceivable social media channel – there are many opportunities in our emerging much-more-free-than-ever market to step up the private/public collaboration to upgrade the universe and utility value of payment processing for everyone – whether using it or profiting from it, or both.

## **The only thing constant in payments is change**

On one side, traditional and emerging financial services players are constantly raising the bar from a technological and customer experience standpoint. Meanwhile, regulators around the globe are scrambling their experts, analysts, and lawyers to help make sense of new products, nascent services, and spiking trends and potential hang-ups associated with the maturation of payments and banking.

Their aim: to ensure the constantly changing best practices of the financial services industry don't impinge upon the best interests of the populace. And maybe even make things better for commerce among humankind and their interactions with business enterprises too.

In fact, the [World Bank](#) weighs in on the subject with its own support of the interoperability that is emerging in payment systems all across the globe, stating that the “increased transparency for national authorities and system participants” can allow all sides to “gain a more holistic view of payment flows [...]while helping to combat fraud more effectively,” as well as open up new “corridors” for more participants around the world, which is a good thing for everyone, in their view, and potentially could result in “boosting revenue” for payment system providers as well.

## Payments innovation: Everybody's doing it

For everyone involved, banks, non-bank financial institutions (NBFIs), and the fintechs that help innovate or power the systems of some or all of most of the foregoing, balancing all the facts, factors and fears that the evolving, increasingly complex financial world presents is no easy proposition.

To learn more about the challenges and solutions confronting financial institutions, their partners, and the regulators they must answer to, we asked a number of banking industry leaders to weigh in on why collaboration among government and private business interests must increase, especially in the financial arena. And how such joint approaches to making banking better for all are, in fact, growing in use and shared sensibility, across the globe.

Alexandre Maymat, head of GTPS at Société Générale, one of the largest banks in the world at #21, according to [S&P Global](#), clearly 'gets' the importance of collaborating with the public side of the financial system, and note that even as payment system providers work to reduce payment costs for end-users, "it will be necessary for market players to leverage on the already existing services and develop standardised and interoperable market solutions."

And for that to occur, Maymat says to Finextra that: "World payment authorities will indeed also have a key role to play to make payments more affordable, inclusive and faster. They can help to reach this goal by harmonising disparate compliance and payment control rules across jurisdictions and by avoiding redundant investments, (e.g., by choosing not to develop public payment infrastructures locally when regional infrastructures are already available)."

When talking about changes in the ways and means of making payments, the subject of Swift and its strong quasi-regulatory position in between governments and the marketplace invariably arises. In Maymat's view: "The effective interoperability for payments also relies on the ability of financial markets to converge on common international standards and a political will to drive the adoption of those standards. This will imply a coordinated action of regulators and associations like Swift to limit variabilities in the implementation of those standards."

Annelinda Koldewe, global head of wholesale banking and payments for Netherlands-based ING (ranked #8 by assets among European banks), shares more on the recent innovations Swift has brought to market, and how some of its newer services will specifically come into play, in this growing payment interconnection and efficiency movement.

“Swift gpi, Swift Go and SWIFT Pre validation are examples paving the way to increase speed and transparency, improving the straight through processing rate while reducing costs of international payments. Key in these solutions is avoiding deduction of fees as the beneficiary end, which is the most important client criterium in the international payments service offering next to speed.”

In her view, blockchain will also become a much greater factor in future payment processing innovation. However, that won't occur without a few challenges along the way. “The market is exploring several initiatives interlinking instant payment or blockchain based payment infrastructure with each other. For these alternatives to be successful, reach will be the determining factor.

“Adoption will depend on models that are viable for all parties concerned. Legal and compliance frameworks are the most challenging issues to solve, not so much technology or formatting of messages.”

Yves Longchamp, head of research at SEBA Bank, a Switzerland-based global crypto challenger institution, agrees, and sees lots of possibilities, and mostly pluses, in this emerging record-keeping tool, even across borders and time zones.

And as a potent protection against errors and other mistakes, not to mention fraud and money laundering too: “Blockchain is a technology made for increasing speed and transparency while reducing the cost of payments. It increases speed as the transactions are happening instantaneously — there is no delay between the order and its execution. Blockchain works 24/7, 365 days a year.

“Consequently, opening hours, weekends, and bank holidays are irrelevant. Blockchain is a public ledger and is transparent by definition but that transparency does not mean all information is public, a layer of privacy can and must be added. Transparency helps to trace any movements between funds, identifying any illicit use.

“Commercial banks, PSPs, and central banks can potentially connect to a public blockchain and use it as a common ledger of all transactions and payments. Imagine all financial actors were to use one or several interoperable blockchains; it would give all participants access to the same truth and thus the risk of mistakes would be limited.”

The focused view of Cecabank, headquartered in Madrid and with wholesale banking offices in major European centres, is that: “Payment infrastructures are called to facilitate the largest number of payment instruments available to public administrations, so that the payment experience for users in their interactions with government agencies is as seamless as possible.”

The Spanish bank offers examples on one side of the public/private banking equation: how people and public entities actually pay each other, how this can be made more efficient, and in fact is already occurring. It’s not just about improving the ease of use via traditional methods, but adding emerging instruments, like digital currencies, as well.

“In Spain, for example, there are an array of successful integrations between municipalities and banks enabling the payment of taxes and municipal fees, within a secured and integrated customer journey provided by the public entity’s website.

“Another use case can be found in integrations with the central tax administration enabling payments by direct debit, credit cards and bank transfers while generating the payment receipt reference online. In this regard, the potential arrival of a digital euro will offer a new universal instrument to make payments even more convenient for users.”

None of the banking providers we surveyed are shying away from the obstacles that need to be overcome in pursuit of the opportunities coming with greater public and private collaboration on payments capabilities and regulatory issues.

Maymat says that “efficiency and robustness of payment systems being key to the development of international trades, interoperability and global reach also are an economical and national sovereignty issue”, and that, like Cecabank, ING, and SEBA Bank, their institution is convinced that it must actively take part in financial standardisation and interoperability facilitation initiatives.

“This is a challenge which requires us to partner with all the stakeholders of the payments’ ecosystem (peers, fintechs, regulators, users’ groups, solutions providers).

# THE STATUS OF IMMEDIATE CROSS BORDER PAYMENTS – AN EXPERT VIEW FROM WISE



**Abid Mumtaz**

Commercial Lead, Wise Platform



The speed of cross-border payments has never been more important, or more possible, than it is today. In an increasingly interconnected world, providing instant payments is critical to meeting the needs and expectations of customers and businesses alike. Banks and financial institutions who cannot meet those demands risk losing their business to competitors who can.

While significant progress has been made both from an innovation and policy standpoint, there is still a long way to go to ensure immediate cross-border payments become the norm – not the exception.

## Why do instant cross-border payments matter?

There are two main reasons why instant international payments are vital: customer experience and cost.

People's lives move quickly – and so should their money. Customers have (rightly) become more demanding in recent years about the speed of international payments. As the competitive landscape of FX continues to grow, the fastest providers are likely to gain an advantage over others.

At Wise, we have found that customers who experience instant transfers are significantly happier than those who have to wait for days. This makes sense – at any given point, customers' main worry is 'where is my money?' a problem that can be solved by instant payments. This shows up in the numbers too; Wise customers who have experienced instant payments have recorded over 90 in their NPS.

Satisfied customers are more likely to be loyal to their current provider and continue to use their services in the future. They are also more likely to recommend the same service to others, which can help attract new customers and increase market share. On the other hand, customers who experience longer transfer times are less likely to return and use the same service again.

If this isn't compelling enough, slow payments are also extremely expensive. Customers who experience longer transfer times are understandably much more likely to contact customer support to check on the status of their payment, which leads to an increase in support costs and a strain on resources. At Wise, we have calculated that the average industry cost of each customer contact is £50. Reducing contacts means that this money can be invested elsewhere into improving products and refining customer experience.

### **Progress, but not perfection**

It's clear that instant cross-border payments are essential for modern financial services. At Wise, speed has been one of our major focuses for the last decade. We have built an entirely new cross-border payments network which allows us to send money around the world faster and cheaper than traditional providers. In Q1 2023, 55% of payments made via Wise arrived instantly (in under 20 seconds).

We have been able to achieve this in part thanks to the number of instant payment networks and central banks we have integrated with, both of which increase the speed of payments made via Wise. Wise has obtained direct access to financial infrastructure in four markets: the UK, Hungary, Australia, and Singapore. To give just one example of how effective this has been, in the UK, direct access led to a 98% decrease in speed of payments, from 15 minutes to <20 seconds. Nonbanks can also directly join up to other schemes, such as PIX in Brazil.

Direct access to financial infrastructure in these markets allows Wise to bypass intermediaries and traditional correspondent banking networks. So, Wise can initiate and process payments directly through local payment systems, reducing the complexity of each payment and therefore improving the speed of transactions. This has had a direct impact on customers' experience of sending money abroad, with over 93% of funds reaching their destination in <24 hours, and in 55% of cases, under 20 seconds, compared to the traditional banking system's days or weeks.

This is to say nothing of the effect direct access has had on the cost of FX payments. By cutting out intermediaries, Wise can simultaneously offer more competitive exchange rates and lower fees on international payments for our customers. So, the streamlined process and efficiency gained from direct access to payment systems translate into cost savings that can be passed on to customers.

But this isn't feasible everywhere, as not every country with an instant payment scheme allows direct access for nonbanks. This is sometimes due to regulatory limitations, security concerns, or a desire to maintain more control over the financial system. For example, FedNow in the US is currently restricted only to licensed banks in the region, which excludes smaller challengers from going toe-to-toe in the market without a sponsor bank – often a direct competitor – to facilitate faster payments.

Many of the concerns around opening up direct access are misplaced. By allowing non-banks such as Wise to directly access financial infrastructure, the systemic risk is reduced. Fewer non-banks cluster around the same banks, and consumers can benefit from faster, cheaper and more innovative financial services, including instant payments. It also mitigates the commercial and competition issues non-banks often face vis-a-vis their 'sponsor' banks.

There have also been efforts to push more banks and financial institutions towards offering instant payments from governments and international organisations like the EU, but thus far most have had limited impact. This is because the schemes that are introduced are often not mandatory to participate in, which means it's easy for banks to drag their heels.

For example, in 2017 the EU launched the SEPA Instant Credit Transfer (SCT Inst) scheme as an initiative to facilitate faster and more efficient cross-border euro payments within the European Union. However, the voluntary nature of the scheme led to low uptake among banks. While SCT Inst aimed to harmonise payment processes and reduce transaction costs, banks were not compelled to participate, which limited its effectiveness.

This isn't necessarily just because of a lack of interest, though. Part of the reason for the low uptake is that banks are operating with legacy infrastructure and systems that are not easily changed. Implementing the SCT Inst scheme required significant investments in upgrading technology and systems to meet requirements, and many banks were hesitant to incur these expenses on the basis of improvements to cross-border payments, particularly because most banks are predominantly focused on domestic transactions.



Many banks question whether instant payments solve a customer problem. Some have used the slow uptake to illustrate that point, failing to mention that in many cases instant payments are offered as a premium service. This discourages people from choosing instant, so we end up with a self-fulfilling prophecy. Without a regulatory push or compelling advantages, banks can be less motivated to invest resources and time into integrating schemes like SCT Inst.

## Solutions

For schemes like SCT Inst to be successful, and for instant payments to be adopted across the board, policymakers and regulators need to get tougher on adherence. The European Commission submitted a proposal to introduce mandatory adherence to the SCT Inst scheme, both for sending and receiving instant payments. And in the US, conversations around opening up access to nonbanks are ongoing, though slow-moving.

Embedded finance and as-a-service infrastructure also represents an opportunity for banks and non-banks alike wishing to speed up their international payments.

Significant progress has already been made when it comes to immediate cross-border payments, but there's still a long way to go. Mandatory participation in instant payment schemes is a good start, while embedded finance provides a hopeful solution for banks and nonbanks who want to speed up cross-border payments without undergoing a major technical overhaul.

The world is only becoming more global. Enacting solutions that will enable immediate cross-border payments for every customer, no matter where they are in the world, has never been more important.

# CORRESPONDENT BANKING – ESSENTIAL OR DISPENSABLE?

Correspondent banking plays an essential role in the global economy. Over the last few decades, correspondent banking has helped banks enable global payments, enhancing growth in international payments and trade.

Yet, this stalwart of the banking system is now facing an increasingly complex regulatory shift. The nature of correspondent banking means it must deal with international and domestic regulations for each country a payment is sent to.

Adding this pressure, the traditional system is now being overtaken by technologies which offer the ability to circumvent some of the delays which correspondent banking is plagued with.

Within this context, there have been questions raised over removing correspondent banking from the international payments system entirely, and replacing it with more efficient and innovative systems. However, the reality is that currently these systems are essential in many parts of the world.

## **Correspondent banking: increasing compliance cost**

Compliance costs pose a major risk to global correspondent banking, as they have an unusually high amount of compliance to deal with through international cross border payments. Adding to this, the global banking landscape is generally much more complicated than it was 20 or 30 years ago, meaning in some ways, correspondent banking systems are not designed for the current environment.

Bana Akkad-Azhari, head of treasury services Europe, Middle East and Africa (EMEA), BNY Mellon points out that, “concerns over compliance costs – including the potential for penalties for non-compliance – and heightened regulatory requirements has caused many banks to reassess their strategies to reduce costs and mitigate the risks associated with correspondent banking relationships. In some instances, this has led to the practice of de-risking, whereby banks terminate or limit their relationships with businesses, sectors or entire regions/countries deemed ‘high-risk’.”

Koldewe has a similar sentiment: “Compliance puts strict requirements on correspondent banking, which demands that banks have their compliance operations well organised.”

However, despite these arguments, Marc Recker, global head of product, institutional cash management, Deutsche Bank, displays a positive outlook towards the regulatory impacts of correspondent banking. “While it is true that correspondent banks face mounting costs and compliance burdens, international correspondent banks are still well positioned to fulfil a vitally important role in ‘high value cross-border payments’. Banks such as Deutsche Bank are fully aware of their responsibility to remain the lifeblood of the global economy.”

Indeed, Deutsche Bank currently has a ‘Top 10 list of priorities for correspondent banking,’ which includes a number of points on compliance, including continuing to not only gain a clear understanding of current regulatory requirements, but also look to the future regulatory trends by maintaining a dialogue with regulators, correspondent banks and industry groups.

Akkad-Azhari also offers a solution to this problem in correspondent banking, arguing that: “Enhanced information sharing and capacity building – in jurisdictions with higher risk profiles are both potential means of helping to reduce compliance burdens; while partnerships, shared utilities and innovative, digital solutions can streamline processes and reduce costs.”

### **Clear messaging in correspondent banking**

Clear messaging and harmonisation are necessary in correspondent banking. This is already on its way with ISO20022, however, even with this progress, there remains problems which may cause issues for the future of correspondent banking.

Akkad-Azhari notes the progress made in messaging: “Clearer guidance and harmonised standards could also help banks to navigate compliance obligations more effectively. A shining example of this is ISO20022 – the new global messaging standard for cross-border payments – which supports the inclusion of richer and more structured transaction data in payments messages.”

However, she notes that while this has been strong progress, there remains inconsistencies: “While the new standard creates a strong foundation for interoperability, variability remains. Within cross-border payments, ISO20022 is being interpreted and used differently, which is working to undermine the long-term benefits of having a global standard.”

The G20 cross-border payments programme has identified fragmentation of payments messaging standards in cross-border payments as one of the major frictions contributing to the high cost, slow speed, and lack of transparency.

While ISO20022 has gone a long way to encourage this, the BIS has pointed out in their [consultative report](#) that, “how the standard is used in practice can vary quite considerably, meaning that frictions in the processing of cross-border payments could continue to persist even as ISO20022 is adopted. The limited adoption of ISO 20022 messages by end customers (i.e., corporations) also imposes a further challenge for harmonisation. Jurisdictions, payment system operators and participants should play a key role in encouraging adoption by end users.”

The BIS report lays out a number of requirements to make sure this messaging works in the way envisioned. Nancy Pierce, managing director, payments, global payments solutions, HSBC, argues that “with the focus on improving the transparency of the messages that banks use to send payments, it is arguably one of safest ways to move money around the world. As such, there should continue to be a role for the correspondent banking model into the future, alongside the many innovations that are occurring in the overall payments landscape.”

### **New technologies threatening correspondent banking**

The encroachment of newer technology on correspondent banking is an area which has caused some to be concerned about the future of correspondent banking, and whether it is necessary at all.

This is something expressed by Yves Longchamp, head of research at SEBA Bank, who argues that in, “a blockchain-based financial system, there is no need for dedicated correspondent banks as all actors are connected to a new global system. The blockchain allows users to trade directly with their peers, whilst still being monitored due to inherent transparency.”

Akkad-Azhari also notes some of the new technologies that are presenting challenges to correspondent banking: “New cross-border payment models – such as payment system interlinking, and peer-to-peer models based on blockchain – have the potential to disrupt how these transactions are processed going forward.

Using innovative technologies might prove to be the saving grace of correspondent banking. As Akkad-Azhari adds, “it is important that correspondent banks stay abreast of these developments – and, importantly, pivot as necessary – to ensure relevance for the future.”

Koldewe says: “On top of these relationships Swift related initiatives like Transaction Manager and Swift Go will enable banks to optimise the international payments proposition, whilst not reinventing the wheel and based on a reach of 200+ countries.”

For correspondent banking to move forward, it will need to embrace newer technologies. Akkad-Azhari points to “leveraging advanced technologies like artificial intelligence (AI) and machine learning (ML), banks can look to better enhance certain compliance processes and due diligence procedures.” Indeed, within the Deutsche Bank’s top 10 list, one of the priorities is the “further automation of controls and increasing application of AI.”

### **Moving forward with correspondent banking**

Ultimately, there is still room for correspondent banking in the future, indeed, it may be necessary in many countries to maintain their cross-border payments systems. Alexandre Maymat, head of GTPS at Société Générale tells Finextra: “Correspondent banking is showing its ability to transform and adapt to an ever-faster world without renouncing its clients’ security. Banks are indeed trustworthy actors that are heavily regulated and supervised. We should also bear in mind that banks have decided not to sell their clients data and are currently unique payment actors providing universal payment solutions to their clients, on the contrary of the so-called closed-loop services.”

Many of the restrictions and slower capabilities of correspondent banking services are in place to protect the users and remain compliant. Perhaps as these services begin to embrace more clear messaging and some innovative technologies, these delays could be improved on.

Going forward it is essential to reduce this existing friction, as Pierce notes: “The key for correspondent banking is to focus on ways to reduce the remaining frictions in cross border payments, i.e., those things that prevent safe and secure end to end straight through processing. It is critical that the industry completes this journey to unleash the many benefits this will provide to customers and market participants.”

Recker concludes: “Fundamentally, correspondent Banking is and remains vital to the global economy. Despite the global Covid-pandemic crisis as well as ongoing geopolitical events, the world continues to be, to source, to produce, to trade, to live global. Globalisation has been one of the overarching key trends of the last and current decade.”

# LIQUIDITY MANAGEMENT 4.0

The future of liquidity management is volatile. Liquidity management is facing the challenges of regional conflict and the impact of sanctions, inflation, and supply chain delays. This economic climate's instability has increased the pressure for financial institutions to ensure they have assets in the right place at the right time.

Globally, banks and fintech firms are feeling the strain of current liquidity management pressures. Adding to this pressure is the increasing amounts of real-time processes. While these processes are the direction the global banking system is heading towards, it places large strains on liquidity supplies.

Within this current climate, it is not surprising that only 41% of [C-suite executives](#) are highly confident in their liquidity management. It is imperative that banks and their clients are able to adapt to the current reality. They must be able to cope with and overcome the challenges they face within liquidity management. To not do so could result in dire consequences for each institution.

## Challenges facing liquidity management

Silicon Valley Bank has placed liquidity management under a greater spotlight. The bank faced a liquidity crisis which resulted in its collapse. In light of this, many financial institutions have faced a reassessment of their liquidity management systems.

Alexandre Maymat, head of GTPS at Société Générale comments that these recent events have shown that “in an ever interconnected and 24/7 operational world, massive liquidity bank runs can happen within a few hours. This is a major challenge for our treasurers which are seeing their role become more complicated as instant payments volumes grow.”

With this environment under a microscope, there are further pressure from increasing interest rates. Inflation fell by 10% in April 2023, according to the UK Government, and while the lowering inflation may help with interest rates, this has continued to place a tension around liquidity management.

Olu Adebisi, global head of liquidity and account services, BNY Mellon, explains the importance of maintaining “effective liquidity management has always been crucial in any environment, essentially ensuring that your cash is in the right place, at the right time, and in the right currency. These factors, coupled with a volatile macroeconomic environment, create challenges for treasurers looking to optimise operating cash, maximise yield and manage risks effectively and efficiently.”

As the market continues to be unpredictable, it is imperative that financial institutions have control of liquidity management and are prepared for adverse events.

### **Future-proofing liquidity management**

Using predictive models is one of the main ways treasury and cash management departments can better prepare themselves for changes in the economy. Companies are already availing of this technology, but there is a need to have more extensive models with increased access to data.

Maymat continues on this point, arguing that “it will be of utmost important for them to have ever better predictive models for liquidity usage and consumption, allowing them for example to anticipate peaks of activity when monthly or yearly taxes are due.”

Adebisi also shares this perspective and offers five key strategies of where liquidity management can be improved, and two of these are related directly to the technology used.

The first is to “digitalise and automate. Digitalisation can play a significant role in enhancing liquidity management by providing real-time access to financial information, streamlining processes, and improving efficiencies. It can, for example, be used to automate various liquidity management tasks, such as cash flow forecasting, invoice processing, and payment reconciliation, which, in turn, reduces the need for manual intervention, and can save time and resources.”

Streamlining of processes can be imperative in spotting any red flags in liquidity management which is missed when bogged down in other issues. Considering this, Adebisi also recommends leveraging technology. “Having access to the latest technologies will be key in cash management solutions of the future. That is why banks are increasing investments in blockchain rails and APIs to help improve the ways in which treasurers can seamlessly manage their liquidity.”



Utilising technology and predictive models can help institutions to anticipate any adverse event, however, Maymat, offers the suggestion of liquidity bridges for how to deal with events as they occur and avoid a crisis.

“A central bank liquidity bridge is a short-term intraday liquidity arrangement set up between two or more central banks. With a liquidity bridge, collateral held by a payment service provider at one central bank can be used in another jurisdiction to get intraday liquidity from another central bank. Liquidity bridges may thus help reduce credit and settlement risks arising from foreign exchange transactions while making liquidity flow more fluently at a cross-border level.”

The possibility of liquidity bridges is something that the G20 has advocated for in their [roadmap](#) to enhance cross-border payments. Additionally, the Bank for International Settlements also advocated for this in their paper: “Liquidity bridges may also support financial stability by reducing asset and currency volatility and stabilising the demand for collateral and reserves. They could make LVPS participants’ cross-currency liquidity management more robust to market disruption, e.g., limited access to FX swap markets.”

Adebiyi also notes how relationships with banking partners can help ensure the security of treasurers’ cash and investments. “Treasurers should consider whether the bank’s credit rating, scale, on- and off-balance sheet capabilities and functionality meet their cash and investment objectives. They should also evaluate the bank’s suite of liquidity management solutions, such as sweeping and pooling capabilities, to have greater access to data for cash forecasting and investment decisions.”

Adebiyi recommends centralising cash positions in a single location or a main header account to allow for better visibility of global cash positions. Additionally, investigating investment policies to ensure diversification and ask banking partners what type of end-to-end investment options they offer for both operating and strategic cash could be beneficial.

# ON THE CUSP OF THE INSTANT PAYMENTS ERA

Faster payments are not new. Instant payments, however, are truly the ‘newest kids on the block’ when it comes to payments, though they look different depending on where you find them. Standardisation, innovation, and regulation are all playing a part in elevating the ‘young upstarts’ of the payment world to leadership status for our new global economy.

Efforts to speed up payment transactions have been around for a while now, in nearly all major markets across the world. In fact, there has been a consistent drive, albeit one with fits and starts, led by large financial players and their customers and partners in the financial services ecosystem to accelerate and increase the value thresholds/limits for payments of nearly all kinds for decades.

Fintechs have played a pivotal part, in as much of an innovation and partnering role as in trying to disintermediate or supplant those traditional powers in the marketplace. Everybody wants everything faster, and for good reason in our growing, connected, 24x7 society. Why not payments too?

Such speed used to (and still does) come at a higher price for those involved on both sides of the transaction in Real Time Gross Settlement (RTGS) payments – or what most of the world has commonly called wire transfers. In the UK, these travel via the CHAPS system, in the US, via the Fedwire or CHIPS (private large bank gateway exchange) networks.

In both cases, like other RTGS payments in most places, payment and settlement occur in a network serving immediate, safe, secure, highly regulated and typically higher-value transactions with no top-side restrictions except those based on the originator’s and their financial institution’s credit standing and the capacity of the network.

These transactions are final within moments of execution, except when they happen on a weekend. To get your money from even a wire transfer, if sent after the day’s deadline on a Friday, for example, you’d have to wait until Monday (or later perhaps, in case of a holiday), no matter how much you paid to get it executed.

## 'Faster' is not enough anymore

So, faster payments solved this problem, and at a lower cost than RTGS options, right? Unfortunately, no. Faster isn't necessarily real time for many 'improvements' on legacy systems or other payment networks like them.

For instance, 'faster' might have meant a few years ago execution from end to end in one day instead of the typical two, three, or more days' processing time for the US ACH network, or faster than one day for that Clearing House's same day ACH alternative introduced in 2016 – subject to value thresholds at first, and with the ability to debit, and not just credit another participant's account added a year later.

## SEPA and ISO20022 play major roles as instant payments grow

Wherever they operate around the world, each of these separate payment types, not necessarily traveling on individual 'rails' but using their own rules, had or has its limitations. But standardisation, whether via now-ongoing transition to the common transaction language and structured data set of ISO20022 being promoted and introduced by banks (and Swift) across all areas of financial services, or through the rules of engagement for regional systems like Single Euro Payments Area (SEPA), as one prominent example is coming.

According to the [US Federal Reserve](#), "ISO20022 messages are vital to instant payments and play an important role in the overall modernization of payment processes. They provide a structured and data-rich common language that is readily exchanged among corporates and banking systems. ISO20022 messages also provide the opportunity for enhanced analytics, which can help organizations offer valuable new levels of payment services to their customers."

We are indeed now in an era of nearly constant innovation and change, in some cases on multiple levels at the same time. Some countries and regions have forged ahead of others, like the [SEPA network](#) offering both same or next day and, increasingly, instant payments (as of 2017) throughout the EU universe, and not necessarily via high-cost, traditional payment rails.

And don't forget about other parts of Europe like Denmark, Sweden, and other markets, or Australia (2018). Or in parts of Asia, with faster payments platforms in India, China, and Singapore all showing rapid growth in usage and innovations to make that adoption and use easier for participants, according to the [US Federal Reserve](#). These efforts have really gained ground as faster payment systems have addressed the needs of both consumer focused as well as business to business (B2B) transactions.

## **Speed yes, but 24x7 up-time even more important for many use cases**

Now the star of instant payments is rising, and there is clearly a strong appetite for them in the consumer sector and increasingly business circles as well. As Annelinda Koldewe, global head of wholesale banking payments, ING notes, her company has grown its expertise in the field already.

She notes that “instant payments have been the norm in two (of ING’s) home markets, Netherlands and Belgium, for several years.” As for the source of ongoing and emerging demand? “Retail markets are moving more and more to a 24x7 economy. Also, for corporates use cases in insurance and logistics are emerging: with more focus on 24x7 availability than 5-10 seconds execution time.”

It’s an interesting point Koldewe makes regarding a lightning-fast time of execution not being as important as the up-time of the system itself, to support these business cases as well as ecommerce – all requiring “always-on” functionality to achieve their customer experience and efficiency aims. But it may not matter in the long run, as instant payments are for all practical purposes, instant anyway.

## **Faster means more fraud opportunity**

ING, like many other institutions, Koldewe says, “is rolling out Instant payments across its Pan European network.” As they and other financial institutions do this, Matt Cox, director of digital payments and cards at Nationwide Building Society addresses another reason why this is occurring and sounds a few notes of caution on the risks of the irrevocable nature of instant payments to be considered – along with their rewards – which providers and users of Zelle in the US, for example, likely know a bit about themselves, given skyrocketing fraud rates experienced on the network.<sup>4</sup>

It starts with a bit of history, and a look at how the cards business has evolved is in order, Cox says. “There is a growing drive, from regulators and parts of industry for bank account to account payments to provide a true competitor to cards. Whilst there may be benefits of this to merchants and consumers, there are also risks. Before we go too far, the industry must ensure that equivalent consumer protections are in place, with a clear liability and dispute model. This requires funding to be effective so a commercial model must be established. Most importantly, we must ensure there are equivalent fraud controls and protections in place.”

Cox points out it has been a long road to the present state for the cards business, and those who press for rapid implementation of instant payment solutions would be wise to take a look back at lessons learned from this sector: “Card payments have developed (over) 50-60 years of investment to provide this very scalable solution for consumers. Developing a true competitor through bank account to account payments will take time and careful planning.”

Nationwide’s own card payment fraud cases have dropped substantially, says Cox, as a result of “the investments we have made in Strong Customer Authentication for online shopping [...] c. 2000 fewer members each month are victims of fraud through this route. We need to now focus on uplifting the defences in other areas such as account to account payments if they are to be used in the same way by consumers.”

### **Reconciliation, speed and ease key benefits available**

Outside of the concerns of increased fraud that come with operating a new instant payment rail, Yves Longchamp of SEBA Bank sees their main advantages, at least from a bank’s “business perspective,” as their ability to keep both “reconciliation costs and risks to their minimum.”

These benefits should have particular relevance to corporates and other businesses with large quantities of invoices and complex business details to accompany payments. That’s one area where the implementation of ISO20022 as a standard with richer data structure, a central dictionary of terms, and a common set of rules – not just for instant payments, but across payment channels, methods, platforms, and international borders, can bring huge value.

Spain’s Cecabank, a wholesale institution focused on the business market, would agree. They cite both consumer and corporate use cases in their analysis of the instant payments field as it stands now and going forward into the future.

“Undoubtedly, the expansion of instant payments against an account represents a real opportunity to promote the exchange of small payments among individuals who were previously outside the banking system, as they were conducted in cash. It also improves payments mechanisms in business, particularly in the electronic realm.”

The Madrid-based wholesale bank shares an example from their own local experience. “In Spain, a mobile payment system between accounts has been highly successful in this regard. Starting with P2P payments and now reaching 23 million users, it is expanding its use cases to include e-commerce.

Therefore, instant payment models against an account are already a reality that should be interoperable as soon as possible to gain scale at the European level. Schemes like R2P or the digital euro can also contribute to accelerating the implementation of this kind of payment.”

## Instant payments growth

What would Request to Pay functionality add to the list of benefits for instant payments? It would mean, in simple terms, a simpler and faster way, even than proprietary (and costly) systems or exchanges that have been around for decades, to match payments to invoice details. And it would be vastly cheaper than those proprietary networks.

In such cases, as the [Fed](#) points out, “the biller (payee) is able to present invoice details through the...system to their customer (payer) and in turn, the customer is able to easily initiate the responding payment and automatically link it to the relevant invoice. With this feature, corporate payers may be able to automate their payables processing, and billers may be able to automate reconciliation of these faster payments against the related invoices.”

There are already examples of this functionality offered by The Clearing House in the US, and it’s soon to launch in the UK, which points out its flexibility to “settle bills between businesses and organizations as well as among friends.” The flexibility part is important here, says the UK’s Faster Payments group, as it “gives the payer more control by allowing them to either pay in full, in part, decline or even ask the payee for more time.

Additionally, says Deutsche Bank’s Marc Recker, global head of product, institutional cash management, there are other domestic/international interlinking examples in several regions of the globe. Immediate Cross-Border Payments (IXB) will interlink domestic instant payments in EUR and USD.

Other similar cross border payments projects include PayNow/PromptPay linkage for the Singapore dollar (SGD) and Thailand’s Baht (THB) as well as the Nexus project, spearheaded by the Bank for International Settlement (BIS) Innovation Hub. This effort in collaboration with authorities from Singapore, Malaysia, and Europe to connect their payment systems together.

Notwithstanding some well-placed concerns about fraud protection measures required and some not-so-happy lessons learned in this regard in the early days of the instant payments revolution, as well as a lack of standardisation of instant payments systems among various regions of the globe, it’s clear that the time for real-time payments is coming soon – to the degree they’re not already available in your country, or offered by your financial institution.

## **Multiple 'pluses' will fuel explosion in instant payments**

With adoption of consistent regulatory standards, uniform transaction limits and employing common data exchange languages like ISO20022 brings to the table – plus emerging innovations like Request to Pay flexibility – instant payments will surely begin to take over the reins of faster, and more secure transaction functionality from traditional RTGS and Faster Payments rails. Consumers and businesses in numerous sectors, across multiple markets of trade and commerce and many international borders as well, will benefit from 24x7 availability and a richer set of data to enable quicker reconciliation from payee to payor.



# HOW TO PREPARE FOR THE NEW EUROPEAN LEGISLATIVE LANDSCAPE

Geopolitical uncertainties and macroeconomic challenges have resulted in increased innovation that have ensured that RTGS and Faster Payments rails are superseded by instant payments and paved the way for ISO20022. This could not have been possible without legislation and support from regulators. October 2022 saw the European Commission announce a proposal to make instant payments in Euros available to all citizens with a bank account in the European Union or European Economic Area.

The aim of this endeavour was to increase the number of instant payments, eradicate fees for instant payments, ease the sanction screening process and boost security and confidence in real-time transactions. By mandating that banks and payments services providers (PSPs) provide instant payments, uptake of the SEPA-wide instant payment scheme should see major uptake across all countries in Europe, not only regional pockets where payments innovation has flourished.

The Cecabank spokesperson agrees with this and says that making instant payments mandatory “has the objective of accelerating the adoption of this said payments while making them more secure with the incorporation of elements such as beneficiary verification. This objective should not collide with competition in terms of service offerings and pricing strategies among PSPs, considering also that any new payment infrastructure has its costs for intermediaries, and these costs may vary between instant and non-instant payments.”

## High time for a review of PSD2, open banking and open finance

In addition to further developing the payments framework with proposals for instant credit transfers in Euros, the Payment Services Directive (PSD2) is under review. Gaps in the legislation and grey areas need to be clarified now that open banking has evolved to open finance, creating new opportunities for new industry entrants. Further data protection and API standardisation is also required.

It is still to be determined what a potential PSD3 will incorporate, but a number of recommendations were made last year. For example, the new regulation will call into question some of the newer, yet successful payment methods in the landscape, such as digital wallets, transactions involving cryptocurrency assets or Buy Now Pay Later.

A new legislation, as with all mandated change, could have substantial implications for the payments ecosystem, especially for those organisations that rely on APIs. In Cecabank's view, we must keep this potential shift front of mind.

“We must also not forget the anticipated modification of the second Payment Services Directive (PSD2) and the need for upcoming changes aimed at contributing to a faster extension of payments innovation. These changes should improve the usability for consumers in cases where the PSD2 has shown room for improvement.”

Open finance refers to the sharing, access, and reuse of personal and non-personal data for the purposes of providing a range of financial services, moving towards data-driven innovation. This initiative should also seek to provide customers with broader choice, as well as increased personalisation.

With personalisation comes improved access for all segments of customers and organisations, such as SMEs, the underserved and the unbanked. Furthermore, giving consumers meaningful control over how their data is shared and reused helps facilitate interoperability of data in open finance. AI and ML models are also being utilised to build these tailored products, but also ensuring financial institutions focus on more accurate prudential risk management.

However, some believe that the industry has not and must get open banking right before we move on to bigger and better things. The UK, arguably the birthplace of open banking, or at least, where it was first regulated, has more recently outlined a review to the mandated open banking rules. The Joint Regulatory Oversight Committee (JROC) has proposed its aims and timeline for moving forward this initiative, to lay the foundations for open finance.

## **MiCA and DORA policies still need to be established**

As part of its [Work Programme](#), the EBA's priorities for 2023 to 2025 include delivering both the Markets in Cryptoassets (MiCA) regulation and the Digital Operational Resilience Act (DORA), and depending on the outcome of the legislative process, the policy work will need to be developed in advance of the application date. Innovation and the effective use of data also come into play here, as the market prepares for the implementation of these regulations.

Regarding MiCA, the volatility of the cryptocurrency market in 2022 confirmed the need for greater regulatory clarity across this area of financial services and this standard is expected to come into force by the end of 2024. The legislation's intention is to create a single market as well as one regulatory and operating environment across Europe by including registration and authorisation requirements for crypto issuers, exchanges, and wallet providers.

The new rules will force stablecoin issuers and cryptocurrency custody services to comply with risk mitigation, security and safety measures and address cybersecurity and operational failures. A framework that prevents market abuse, insider trading and manipulative behaviour will also be provided.

It is important to remember that this comes at a time when the Securities and Exchange Commission (SEC) have acted against exchanges Binance and Coinbase for failing to register as licensed brokers and offering unregistered securities.

DORA, formally adopted in early 2023, will come into effect in 2025. The legislation will apply to a plethora of institutions such as payment services providers, credit unions, investment firms, asset managers, market infrastructures, insurance firms and crypto-assets providers. It will also manage IT risk by overseeing third party providers, reporting incidents and auditing systems and processes.

Similar and complementary to the General Data Protection Regulation (GDPR), DORA will also empower data controllers and processors to ensure the resilience of their IT systems and protect personal data. By implementing gap analysis, financial institutions will find that DORA will enable a holistic approach that in a way, covers all bases when it comes to security requirements.

### **ESG in abundance: too many regulations, too little time**

Also part of the key priorities outlined in the European Commission, EU Council and European Parliament's Work Programme, is the development of ESG legislation, which includes the Corporate Sustainability Due Diligence Directive (CSDDD) and the European Green Bonds Regulation (EU GBS).

Alongside this, the European Markets Authority will also focus on developing remaining technical standards under the Sustainable Finance Disclosure Regulation (SFDR) and understanding how to combat greenwashing in its strategy for 2023 – 2028. Within this same strategic blueprint, the ESMA has also mentioned coordination of a Common Supervisory Action (CSA) across sustainability to address greenwashing risk in sustainable investment products.

# THE CLEVER USE OF DATA

Data is crucial to every financial institution and a coveted asset for customer growth and innovation. The incentives of having and using data are well known and offer benefits to both financial institutions and consumers.

There is the possibility for financial institutions to have greater collaboration in the sharing of their financial data and to better take advantage of the smart data solutions which are on offer.

However, with any topic related to financial data, there are often valid concerns raised by the industry and the customers over the safety of sharing this information. Yet, it seems that with the progress of open banking, the sharing of data is only more likely to increase.

Therefore, it's important to look at the benefits of sharing this data and what clever uses of data can offer, as well as the roles fintechs can play.

## **Data collaboration between financial institutions**

The opportunities and possibilities for sharing data between financial institutions has grown significantly since the advent of open banking. However, for many the risks of this still outweighs the benefits.

Looking at some of the benefits, Alexandre Maymat, head of GTPS at Société Générale states that data is a crucial asset for all banks. They further argue that “collaboration between banks can make this data even more valuable as (i) it increases its volume and hence its statistical accuracy and (ii) it diversifies the sources of those data and reduces the bias that one single bank can encounter on its unique set of clients.”

Increasing the accuracy of the data used by banks can be beneficial in creating more personalised services for individuals and flagging any issues across multiple data sets. Additionally, the diversification of data sources is essential in lowering bias sets in their data, which is a continuing problem across data sources.

Contributors note that one of the main benefits of greater data sharing between financial institutions is the prevention of financial crimes like fraud and money laundering. Matt Cox, director of digital payments and cards at Nationwide Building Society argues: “The biggest opportunity we see is in the smart sharing of data between providers to protect consumers payments and help in the fight against Fraudsters – possible the single biggest challenge the industry is facing.”

He continues: “The ‘Confirmation of Payee’ service has started this smart exchange of data but there is more we can do as an industry and this is an area we must collaborate on as a priority above all else. Given the data providers hold about the sending and receiving individuals, imagine what we could do if we used this and shared it in real-time to check that it wasn’t at risk of going to fraudsters.”

Maymat agrees with this sentiment: “Fraud prevention is one possible use case that may be clearly enhanced by banks’ collaboration on data. For instance, it may help identify large transactions split in smaller amounts between many different banks to try to hide it from AML authorities.”

### **Dangers of data sharing between financial institutions**

Privacy and safety of customer data will always be one of the biggest battles and barriers when it comes to greater data sharing initiatives. The fear surrounding this is not something missed by the financial community. Yet, this does not stop them from seeing the potential which greater data sharing holds.

Yves Longchamp, head of research at SEBA Bank argues to this effect that “sharing data in a competitive environment is very difficult as all actors want to keep their own knowledge private. From a final user point of view, a world where all data is shared should ultimately lead to better financial services.”

Maymat offers a specific example of an obstacle which data sharing presents to these institutions, “exchanges of data between banks face a clear hurdle: a prior anonymisation of those data. Many PET (Privacy Enhancement Technologies) already exist but without any clear standard emerging. This standardisation of PET will be greatly facilitated by open banking and aggregation of those data by third parties like regulators or regulated fintech or startups.”

The standards for protection of data will continue to develop as open banking progresses. However, this does offer the opportunity for fintechs to fill this space and enable better services in this area.

## Clever use of data: better customer experience

The benefits of data sharing are multitude. They can provide customers with a greater freedom in banking. However, it also gives banks the opportunity to create a better relationship with their customers through the specialisation of services. This can not only be useful for financial institutions to provide products for their customers, but also for the individuals to know they are receiving the best financial outcome.

Longchamp argues for a more future perspective of what greater data sharing can provide: “Open finance applications can offer financial advantages to established financial institutions (so they don’t need to develop and maintain their own e-solutions) in return for the application receiving the institutions’ data. This model would be similar in spirit to Web2.”

This offers one image of the way these institutions are able to build a greater web of their customer data. Longchamp continues: “Fintech companies play the third-party role of providing the services ‘for free’ and financing themselves with the provision of metadata.”

However, Longchamp offers another vision of building wider data networks. “Another possibility could be the use of blockchain and DeFi applications as an open-source open finance, providing a service that is open to everyone, and whose data is available via an explorer. With full transparency and an easy and cheap way to fork a smart contract, gradual improvement may emerge toward the sharing of information for society’s ultimate benefit.”

Ultimately, there seems to be a driver for greater data sharing between institutions. This can provide customers with the correct financial services they need. It is important that within this movement, customers data security and protections are respected. However, it seems that many financial services companies are aware of these risks and working to create protections.

# OPEN FINANCE IN THE CORPORATE WORLD

Banking and finance, circa 2019:

- Everybody knows large corporates and international firms are the only ones who need more than one bank, right? And for those who do, there are all sorts of customised connectivity options offered by the banks they use, and even APIs to make it work beyond those in-house systems, if required. So why does any less complex or SME want open banking? How many accounts or services do they really need or use that would really help them?
- Especially since credit lines are often allocated based on ancillary banking business expected (say cash management, trade services, merchant services, or corporate cards), or stated the other way around, where on Earth does open finance fit in the banking equation for anyone but the smallest corporations? Is it even an option for larger companies, served mostly by their credit providers? Sure, fintechs want a piece of the financial pie, but they'll just need to work harder for it, as the banks have spent years and huge budgets to develop their legacy products and connectivity to provide transactions and reporting for their customers, right?

These might have been actual conversations in the not-too-distant past. Now, the questions, and the answers too, are changing for corporates of all sizes when it comes to open banking and open finance.

## Proprietary connectivity

Celent's 2022 report, [Corporate-to-Bank Connectivity: Embedded Finance for Transaction Banking](#), states just how critical APIs are in the financial world now. They call them: "The most significant addition to the mix of corporate digital channels." More specifically, they refer to "APIs that enable real-time, unattended connectivity between financial institutions and third parties."

In Celent's analysis, it's no longer okay for banks to provide only proprietary connectivity to their products and services, and only on set schedules. Instead, they say their research "highlights APIs as a new connectivity channel for bank clients, enabling real-time, embedded, and automated data flows between corporate clients and their banks."



But how many channels are we talking about for each bank? That's a big part of the challenge, as Celent maintains, in that: "Most corporate treasury departments use more than one channel to connect with their banks. Each connectivity channel has unique advantages, which often leads corporate treasurers and finance teams to use a variety of channels." They go on to list a few examples, like "web portals to approve payment batches submitted using APIs, host-to-host to aggregate balance and transaction data, and Swift to initiate large-value cross-border payment messages. With an increasing demand for cross-channel value-added services and use cases, omnichannel transparency and visibility become more critical."

### **Opening new doors for standardisation**

This virtual explosion of banking channels and hybrid, omnichannel connectivity solutions is taking place as many companies are increasing their cross-border activities. They are also likely facing many new requirements that go along with the massive digitalisation of banking – especially for businesses – as well as new rules of engagement for transaction structure and handling, like ISO20022 standardisation in the payments world, for just one example.

Banks have done a solid job up until now keeping all of their own corporate connections updated, but it's certainly not a quick process to establish and maintain complex client-to-bank connectivity. The timelines for doing so have also been exacerbated by slim IT resource availability on the part of the corporate customers, faced with many new technology demands post-Covid-19 especially.

### **Keeping corporates connected requires new approaches**

What does this new, digital-dependent world bring to banks and their clients?

The bank typically is looking for more automated processing of banking data to and from the client, as well as a 'stickier' customer relationship. In the client's view, the first objective is added to providing smooth integration with their internal ERP, Treasury, and accounting systems, and the only way anyone sees this working well in a multiple-bank, often multi-channel world is through APIs that minimise the customisations required across multiple institutions, products, and reporting lines.

In the past, efforts to streamline such processes have often run smack-dab into resource constraints and the banks' and their customers' siloed, overcommitted technology teams. Enter third party providers, and not just to make connections simpler, or faster, or more efficient. Now we're talking whole new products and applications, which is why regulators in the UK and elsewhere see open banking and open finance as being not just about connectivity, but also as avenues to increase market fairness and broaden access to new and emerging competitors.

## **APIs for open banking and open finance are 'democratising' the industry**

In one bank's view, as APIs have steadily emerged from banks, especially in response to the recent pandemic, open banking – the exchange of services and data between financial institutions and third-party providers (TPPs) “has led to the democratisation of the financial services industry.” Alexandre Maymat, head of GTPS at Société Générale maintains that open finance facilitates new developments in the financial market for both bank customers and third-party providers.

“The rise of both open banking and open finance have led to an increased competitive environment in the financial markets, and competitive markets are the perfect environment for innovation. This contributes to making sure that customers' needs are met to the highest level, by forcing competitors to offer the best product at the best price, to the benefit of corporates and SMBs.”

Continuing, Maymat offers examples of how open banking has innovated in many fields “from debt reduction to easier credit access. Access to open banking data has resulted in a wide range of new products and services and open finance will take this one step further, with the use of open APIs, including bank APIs, that enable third-party developers to build applications and services for a wide variety of financial institutions.”

Yves Longchamp, head of research at SEBA Bank, agrees, noting that low barriers to entry for both open banking and open finance are “encouraging innovative financial solutions to emerge and to be implemented alongside existing financial solutions.”

## **New ways of doing 'old' business**

Annelinda Koldewe, global head of wholesale banking payments, ING, sees open banking and open finance offering what she calls “a range of opportunities for corporates and SMEs to improve their financial management, gain access to a wider range of products and services, and enhance their competitiveness in the marketplace.” Included in her list:

- a. Enhanced financial access:** access to a wider range of financial products and services beyond traditional bank offerings, potentially “including loans, investment opportunities, insurance products, and more.”
- b. Improved cash flow management:** by integrating financial data with third-party applications and platforms, business customers can gain a “real-time view of their cash flow.”
- c. Efficient payments and collections:** “Corporates and SMEs can integrate payments initiation services, offering customers more convenient payment options,” and, she says, open banking APIs can play a big role in payables and receivables efficiency by “optimising the reconciliation process, reducing manual effort and (improving) accuracy”.

Maymat adds a few more examples of how open finance opens new doors beyond payments, noting how it “makes it possible for a trusted and authorised third party to access wider financial data, such as tax, insurance, and pensions. This access to data will make it easier for financial institutions to offer products and services which have been individually tailored to meet the requirements of a specific customer, all to the benefit of corporates and SMBs.”

### **Open banking and open finance offer bi-lateral benefits**

And it can go the other way too, asserts the bank, as “bank APIs can feed third party financial institutions with accurate data to build their target services, enhancing their offering to include for instance mortgages, savings, pensions, insurance, and consumer credit.”

Cecabank sums up that businesses will likely be the primary area of their application (and advantage for smart new providers seeing this opportunity), given commercial clients’ need for an “integrated view of their various positions across banks.” They note cost reductions and other pluses delivered by the move to APIs, saying freely published, simpler bank connectivity options are “expected to enhance reconciliation processes and data aggregation, which currently are based on non-standard and costly infrastructures and formats for companies.”

# THE RISE OF BANKING-AS-A-SERVICE

Banking-as-a-Service (BaaS) has become one of the major trends rising within payments. [Gartner](#) predicts that BaaS will be mainstream before the end of 2024 and this trend has sat at the top of the Gartner Hype Cycle from September 2022.

BaaS is when banks open their APIs to allow digital banks and other third parties to build their own bank offerings through the regulated offerings provided by banks. Platform-as-a-Service (PaaS) works in a similar way, with both ultimately working on the cloud. This end-to-end model offers the global banking world a new window into innovation.

## Why BaaS and PaaS?

Companies, both financial and non-financial, are looking towards BaaS and PaaS to improve their services. It is important to understand what the benefits are for these entities. Alexandre Maymat, head of GTPS at Société Générale tells Finextra: “For financial institutions, adopting managed services like BaaS or PaaS transforms the way they interact with fintechs, by offering rapid access to banking and payment services.”

Annelinda Koldewe, global head of wholesale banking payments, ING, points to the benefits this offers to smaller banks: “The decision to adopt these services heavily depends on the size of the banks. Smaller banks where integration is straight forward are more likely to adopt BaaS or PaaS solutions.”

Maymat adds that one of the major benefits is the cost saving. BaaS and PaaS can cut costs by enhancing efficiency and reducing investments. It does this by lowering the time to market of solutions, and reducing the IT and maintenance costs which you might have seen in a more traditional option.

Koldewe agrees with this sentiment, arguing that “smaller banks may be unable to afford the high investment in (payments related) applications, as regulatory requirements are increasing year by year.” Increased security is seen as another benefit. BaaS solutions access data through a secured platform, which reduces the data loss and data theft risks.

In addition to these improvements to comparably older systems, BaaS solutions are inherently more scalable than previous iterations. They can scale up and down financial services as needed, adapting and changing to customer needs. One further for BaaS and PaaS is that they allow smaller firms to specialise across the services they provide, which can work to increase their value in the market.

Koldewe agrees and adds that smaller banks are “then able to specialise on niche products like private banking or securities related business. In other words, other than core payment services which are delivered by the BaaS or PaaS provider and are not core business of those banks.”

Overall, this adaptability and specialisation offers an improved customer experience. Services are more adaptable and efficient for customers. Furthermore, with the access to data offered in BaaS there is an increased accuracy of services provided. In Maymat's view: “BaaS is an attractive option for companies that want to focus on their core business, save time and money, and scale their banking and financial services as needed.”

## Issues with BaaS and PaaS

One question that continued to be debated is why larger banks might go for this technology, when many of the major benefits appear to be for the smaller banks. While some banks are becoming increasingly involved in this endeavour, there remains some apprehension. The argument for larger banks to become involved in this movement is that through offering BaaS and PaaS, they would be able to keep up with their fintech competitors. For many, this can be seen as part of future proofing themselves.

However, Koldewe points to another issue which is that “for larger institutions with complex infrastructures, a PaaS service would be more difficult to implement. Where banks are systemically important, regulators will want to make sure local payment infrastructures remain guaranteed.

Maymat alternatively argues that “the limits of embedded finance and BaaS mostly lay in marketing or branding concerns, as it could devalue banks’ brands in the market as it shifts customer’s loyalty to fintechs instead of banks, and with the fintechs taking some risks to move their business to another bank or switching BaaS provider. At Société Générale, we are developing BaaS services ensuring platform integration facility, data integrity, and working on solutions to ensure our ability to scale.”

However, Cecabank seem to offer a positive outlook on their experience of BaaS and PaaS: “Fintech newcomers and incumbent entities are called to collaborate to provide better financial services for users. At Cecabank, as a wholesale bank specialised in offering ‘white-label services’ to the financial sector, we understood this from the beginning and created meeting points between different entities. Being a bank has also allowed us to provide reliability, as we are subject to all banking regulations and accountabilities to all participants in the value chain.”

Despite these apprehensions, according to the [Market Statsville Group](#), the BaaS market size is expected to grow from \$541.62 million in 2022 to \$5,423.59 million by 2033.

# PAYMENTS PROCESSING – FROM COMMODITY TO BUSINESS OPPORTUNITY

According to Alexandre Maymat, head of GTPS at Société Générale, increased demand for faster and more efficient payments processing and the need for digital payments systems have led to the fostering of Payments-as-a-Service (PaaS). “PaaS platforms allow access to a wide range of payment rails from a single source and integrate with business ERPs. This combination has made it easier than ever for businesses to reduce costs, improve workloads, prevent fraud, and get a clearer insight into their payment process.

“Businesses have understood that in-house payment applications appear unviable, due to the high costs of development and high standards of regulatory requirements. In addition, as banks have been perceived as costly, providing unreliable data, and sticking to paper-driven payment processes, PSPs have seized the opportunity to position themselves as alternative business partners.”

Maymat adds that “PSPs providing PaaS are facing challenges that make banks unavoidable partners to remain a relevant player in the market.” These four challenges are as below:

1. **Regulatory compliance:** increased complexity between local, federal, and international rules is an ongoing concern to providers expanding operations internationally, which banks are used to dealing with.
2. **Security and fraud:** onboarding users properly and monitoring activity for anomalies and suspicious transactions are both critical requirements part of the ‘bank as usual.’
3. **Technology:** fintech companies looking for equity face challenges in upgrading their payments stack to stay ahead of the competition. Banks have understood the need for increasing interoperability of their legacy infrastructure.
4. **Cost:** profitability is critical in payments, as investment to build a full payments stack (licensing, compliance, tech, and programme management) and keeping it up to date is too great.



It is evident that to enable the future of payments and keep pace with customer demand and requirements, banks and technology-savvy organisations need to collaborate to remedy these challenges and develop this PaaS approach.

In Cecabank's view, payment processing has become a strategic component for the development of financial services, especially in an environment where payments are subject to constant changes and disruption. Traditional payment instruments and rails are subject to review, integration, and transformation." Cecabank can act as a one-stop shop for payments, facilitating and processing various kinds of payments based on the evolution of the different infrastructures.

Exploring this further, Simon Eacott, head of payments, NatWest Group, adds: "Customers require high quality and accessible banking products such as payments, point-of-sale credit, and merchant cash advances that are end-to-end digital; PaaS is making this possible by enabling non-financial brands to 'embed' services directly into their ecosystems to create seamless customer journeys that offer the next generation of financial services and experience.

"Additionally, PaaS can meet the evolving needs of business customers as they look to embed financial products in their propositions and journeys. The transformation of retail banking technology means PSPs have 3 main strategic options i) develop PaaS in-house ii) purchase and integrate off the shelf PaaS solutions or iii) create strategic partnerships."

But how can companies utilise PaaS to ensure it is utilised as a business opportunity, rather than a commodity? Firstly, payments processing must be considered of paramount importance to the e-commerce industry and how smoothly and securely payments are processed can enhance customer experience and in turn, increase consumer loyalty.

Customers also value flexibility and choice in their payment methods, for instance, contactless payments, which allow consumers to make payments without physical contact with a payment terminal. Automated billing that can be made available with subscription-based payments can also help to reduce administrative burdens and improve cash flows for organisations, and, of course, the customers.

Biometrics authentication is also becoming increasingly popular with the likes of Apple Pay taking off, also providing individuals with a contactless payment method, but with this, offering enhancing security and convenience, more so than traditional passwords and PIN numbers. In attempts to enhance security, some providers are also looking to AI to improve risk management and fraud detection by analysing large amounts of data to detect patterns and mitigate problems immediately.

However, for PaaS providers to deliver on these enhanced e-commerce gateways and leverage AI, they must operate on cloud-based platforms to efficiently offer personalised products to consumers.

# BRIDGING THE CLOUD MIGRATION GAP

Financial services sector participants are aware that innovation usually increases at a slow, gradual pace, and as certain technologies mature, this leads to acceleration. This has not been the case in recent years and much of this accelerated adoption of technology has been because of fear, uncertainty, or doubt. Exponential growth has been on the horizon for years, and there are no signs of slowing down.

## Customers call the shots now

It is also clear that customers are now dictating what banks should add to their tech stacks and cloud has been proven to provide the scalability that banks require. Innovation can only be achieved with experimentation, and cloud has the potential of enabling this without adding to existing technical debt that some traditional financial institutions may be overburdened with.

By bridging the cloud migration gap and establishing a holistic strategy for how technology can be leveraged, successful cloud usage can separate the winners from the losers and establish competitive advantage. Cloud allows companies to remain differentiated, go to market with unique propositions and operate with predictable cost.

Further to this, while cloud supports a progressive banking model and platforms that are built on modular capabilities, digital transformation is becoming more complex by the minute and newer firms are also creating technical debt by attempting to resolve issues with security, scalability, and resilience. Digital transformation and cloud migration are two sides of the same coin, and you cannot have one without the other.

As new cloud strategies emerge, the migration process becomes more complex and dealing with regulatory fragmentation becomes a struggle which involves multiple options in cloud providers, and a unique array of approaches to the transition.

The UK's FCA is an innovative regulator, and they are picking up on how the industry is changing. Across Europe, it is essential to have the support of authorities to operate under their guidelines and frameworks to design products and services within the cloud infrastructure up to their expected standards.

In addition to this, financial institutions must strike the balance between migration processes taking servers temporarily offline, ensuring data does not become unavailable or at risk of breach and keep pace with loyalty or personalisation initiatives, at the same time. Everything starts with the customer: all users and customers are humans and banks, when establishing new products and services, should understand that their expectations are shaped by the experiences they are having with their financial services providers.

Simone Satan, global head of digital market management, treasury services, BNY Mellon, highlights that “one of the focuses for banks is to improve profitability, either by enhancing the customer experience or by improving operational efficiency.” The upgrades that banks are currently undergoing, and will continue to do so, by leveraging emerging technologies play a substantial role in the wider digital transformation of the entire financial services industry.

Satan continues: “Banks, however, generally struggle to isolate and quantify the cost and revenue impact of their digital transformation strategies. For example, the transformation budget can easily be consumed by updates to legacy systems, which leaves limited budget available for innovation that is necessary to keep the bank's competitive advantage. This is ever-more concerning as new market entrants and requests for tailor-made digital solutions continue to intensify and present new competitive market pressures for banks.”

### **Cross-border payments, open banking and innovating the rest**

With enhanced customer experience at the forefront of minds and utilising technology to support this, Satan also calls into question the example of open banking and how this initiative allows banks to “open their IT infrastructure, leverage historical client data and utilise market intelligence to help build new solutions that matter to their customers.” With innovation in mind and as banks integrate products into their core banking systems, leveraging solutions owned by third-party vendors, financial institutions should choose providers that meet their requirements from a financial, operational and compliance risk perspective.

Satan also references a [BCC](#) report in which it is projected that the cross border payments market will grow from \$176.5 billion in 2021 to \$238.8 billion in 2027. Banks could lead the charge in this space and if these organisations continue to innovate, maintain competitive advantage. Satan explores use cases such as regional banks looking to leverage the capabilities afforded to them by global financial institutions to offer their customers global FX payment services.

“Sometimes, initiating FX transactions online and creating customized self-service options do not provide a seamless experience. Other challenges include complications in accessing real-time rates and limited multi-currency exchange capabilities because of the legacy payment systems.

“Partnering up with global players in the cross-border banking space that offer these FX capabilities – such as real-time payments, tracking, and AI – can be the secure, predictable, and fast low-value cross-border payment solution regional banks are looking for. Having such capabilities integrated through new technologies such as APIs can create a shift towards customer-centric payments transparency and build a competitive advantage.”

# FRAUD PREVENTION AND CYBERSECURITY IN THE ERA OF PaaS

Payments-as-a-Service (PaaS) providers operate on cloud-based platforms and offer services such as card issuance, cross-border transactions, and e-commerce gateways. PaaS platforms have disrupted the financial industry as non-bank competitors and fintech startups that are offering personalised and innovative products to consumers.

PaaS makes payments transactions and processing faster, cheaper, smoother, and more efficient, however, there is also the risk that they can open up platforms to threats of fraud and cybercrime. Monitoring and customer onboarding processes present a concern around security as data is potentially facing greater levels of exposure.

As Alexandre Maymat, head of GTPS at Société Générale remarks: “The challenges payment service providers (PSPs) are facing consist of delivering fast and easy payments options to customers without compromising security and compliance, in a competitive and dynamic market. Technology and innovation play a leading role in allowing PSPs to face these challenges: new solutions such as one click check out, mobile wallets, biometric authentication or contactless cards allow enhanced frictionless and more convenient payment experiences. However, frictionless and instantaneous payments expose higher fraud risk and data breaches, where customer identity or payment information are hacked.”

A [crime survey by the UK Government](#) taken over the course of 2021 and 2022, found that fraud makes up for 41% of all crime in England and Wales, indicating the move to fast and frictionless payments has increased the amount of payment scams that occur.

In 2022, one in 15 adults were targets of fraud, and 18% of them were targeted more than once. The diagram below demonstrates how there has been an increase in authorised fraud in comparison to unauthorised fraud, showing that crooks have become savvier in tricking victims into authorising funds being taken from their accounts.

Many large PSPs have been built on legacy technology and are therefore looking outwards to source preventative methods and integrating risk solutions to keep up with fraudsters. They face concerns of cost-effectiveness and interoperability when using third parties to combat challenges. With the increasing usage of embedded payments and third-party payments platforms that require shared data, payment services providers and banks need to enhance their fraud prevention and cybersecurity strategies to stay ahead of cybercriminals.

A [2022 survey by the Association for Financial Professionals](#) found that in 2021, 71% of participating organisations were victims of payments fraud, which was lower than the 81% reported in 2019. The survey also concluded that 36% of participating firms validate payment recipient information through their vendor or bank and 30% by using an external service.

### **Payments providers are taking innovative measures to prevent crime**

PSPs are developing new approaches in risk management to combat fraud, and PaaS services such as embedded fraud and risk management, advanced security features, and reporting and analytics insights can reduce payments-related crime.

[Deutsche Bank](#) has been experimenting in ‘swarm intelligence’ fraud prevention methods, which combines its data with that of other businesses and corporates in the cloud, to create a ‘data-lake’ that can be used to assist in detecting fraud. This idea can create a secure community of data for analysis.

Yves Longchamp, head of research at SEBA Bank, comments on the use of decentralised identities (DIDs): “The detection of payment fraud can be improved with the generalisation of DIDs. A DID offers both security — as one can verify the payer and receiver — and, at the same time, adds a layer of privacy, which is attractive to users.”

AI and machine learning technologies are also being deployed to enhance fraud detection and reduce human error when it comes to preventing crime. AI technologies can learn behaviours and note patterns in screening processes to better understand their users and help identify criminals. Technology can also flag inconsistencies in payment patterns and investigate changes in payment processes.



Maymat remarks: “The challenge is to find the right balance between security and convenience. Using advanced technology could boost both. Artificial Intelligence and Machine Learning for instance can be used to analyse customer behaviour, transactions patterns, and risks factors to better adapt authentication method based on risk exposition assessment. Tokenisation and encryption can protect customer and payment data from breaches.”

Payments giant Stripe uses Stripe Radar for their risk management. Stripe Radar monitors the wide scale of Stripe’s data that operates in 197 countries and processes the data from partners, payments, and checkout tools to ensure that all transactions are administered securely. The platform uses signals to check for fraud threats, such as device fingerprints to authenticate the user, patterns in historical data, and identifying proxies, and uses all of the above to score transactions to determine if a payment is valid.

Annelinda Koldewe, global head of wholesale banking payments at ING, notes that transaction monitoring and real-time analytics are key tools to work against payments fraud. “Given the nature of payments involving multiple parties, sharing of data to detect anomalies is intuitive, but is in practice restricted by data protection regulations,” says Koldewe. “Specifically for instant payments, the introduction of ‘confirmation of payee’ is a step to reduce risk of payments fraud. To ensure efficient working, a single European solution is required.”

Maymat states that PSPs must focus on regulation compliance and staying up to date on governance guidelines in order to protect consumers and ensure transactions are made securely. PSD2 requires customer two-factor customer authentication and PCI DSS sets requirements for secure cardholder data.

The [UK’s Payments Systems Regulator \(PSR\)](#) aims to publish data on how well customers are being protected from APP scams and fraud by payment service providers in the UK later this year, which will further understanding of how PSPs are combatting cybersecurity issues.

Payments fraud is on an upwards trajectory due to the widening of the online payments space and influx of digital payments innovations, but PSPs are reaching out to outside fintechs and technology providers to aid them in creating a preventative barrier to secure consumer transactions and safeguard them against fraud. Additionally, more and more regulators are putting governance guidelines in place for payments service providers to protect consumers.

# NEW WAYS OF CUSTOMER AUTHENTICATION IN PAYMENTS

Customer authentication has become a staple in security processes for payments as a way for the platform to verify a consumer's identity and ensure the transaction is approved and secure. While there are a range of digital authentication processes, a common use case among banks is two-factor authentication which verifies the user's identity at two points, for example using a passcode and a fingerprint scan, or using a passcode and sending a unique code to your mobile number.

There are many different factors of strong customer authentication that are employed by banks and payments services providers. In multi-factor authentication processes, providers aim to combine two factors of authentication, for example a combination of one 'possession' factor and one 'inherence' factor can authorise the payment.

As crooks and fraudsters have become more persistent and sly in their schemes and scams, financial institutions are looking to new measures to authenticate customers and creating air-tight security systems to prevent false transactions.

## Emerging innovations in authentication methods

EMV 3-D Secure (EMV 3DS) authentication uses data to verify card-not-present payments. To verify the consumer's identity, the merchant sends transaction information to the issuer to review and process and authenticate the payment.

The Fast Identity Online Alliance (FIDO) has developed standards to promote authentication based on public-key cryptography, which means that all sensitive information remains on the customer's device so that if there is a breach in the network of the issuer, it will not reveal customer's authentication data. Using FIDO methods, consumers can build-in authentication to browsers and platforms using USBs, mobile devices, or Bluetooth connections.

Matt Cox, director of digital payments and cards at Nationwide Building Society, comments: “Use of the mobile device and biometric authentication as part of this provides a very good and secure experience for our members. When shopping online, 80% of our members now choose this option. Of course, it’s also important that we provide alternatives to meet all member needs, not just for those that use smart phones and this is something Nationwide has taken very seriously in its design. Our aim is to provide a great, secure digital experience, but not at the expense of our non-digital members. It’s also not about having no friction in the journey. It’s about having the right amount of friction at the right times; when there is more risk.”

Other modes of authentication such as on web application, mobile phones, desktop applications, and automated devices are provided through authentication protocols such as OAuth 2.0, OpenID Connect, and Mobile Connect.

### **Biometric authentication as a popular trend**

An increasing number of PSPs are beginning to implement biometric authentication, in which fingerprints, iris scans, and the user’s voice can be factors of authentication. Google Pay and Apple Pay are examples of day-to-day use of biometric authentication, requiring customers to scan their face or fingerprint before making contactless payments.

The benefits of biometric authentication include efficiency, easy user interface, reduced administrative costs, and frictionless and seamless payments transactions. Machine learning and AI will enhance the biometric authentication methods currently in place, with [research currently being conducted](#) into gait analysis, palm vein scanning, wearable biometric devices, payment cards that include biometric sensors, and blockchain-based biometric payments.

A spokesperson from Cecabank states: “Fraud prevention should rely on detection systems that do not penalise the user experience, leveraging elements such as user behaviour rules and biometrics. Cooperative detection and artificial intelligence applied to transaction analysis can significantly enhance the prevention against fraud.”

Additionally, biometric authentication in payments could lead to progress on the financial inclusion front. As posited by [Catharina Eklof of IDEX Biometrics in Fintech Magazine](#), the seamless nature of facial recognition or fingerprint scanning authentication makes it easier for a range of people, from those struggling with Alzheimer's and dementia to financially illiterate individuals who have trouble using financial products. Moreover, biometric payments creates an official identifying link to an individual, which is significant to a large amount of people worldwide who are without government identification.

While convenient and easily accessible, biometrics can be an invasion of privacy, as it requires collecting personal and unique physical traits to gain access to personal information. Therefore, research need to be conducted in a manner that regulators can keep an eye on innovations and set guidelines for PSPs if necessary.

### **National authentication requirements**

Europe has Strong Customer Authentication (SCA) requirements that apply to customer-initiated payments conducted online or through contactless offline transactions. 3D Secure, which requires authentication of the online buyer as a legitimate owner of their payment card by sending a code to their phone is one of the main requirements laid down by the EU's PSD2 regulation. However, some payment providers have exemptions to SCA processes for transactions defined as low-risk, for example, payments under €30.

Other countries such as Hong Kong, China, India, and Mexico have issued regulation that require banks to provide two-factor authentication to users making online and digital payment transactions. In the US, PSPs are obligated to carry out risk assessments and mandate multi-factor authentication.

New methods of customer authentication are on the rise to make digital payments smoother and faster, however there needs to be guidelines in place to ensure that innovations in biometric authentication do not violate the privacy and security of users. Banks and payments providers must focus on maintaining stringent governance regulations to ensure that multi-factor authentication is in place for users making digital transactions.

# CENTRAL BANK DIGITAL CURRENCIES: WHY IT'S TIME FOR COMMERCIAL BANKS TO LEAD – AN EXPERT VIEW FROM QUANT



**Gilbert Verdian**  
Founder and CEO, Quant



Anyone who has ever been involved with a technology project will know that they are notorious for being overtime and over budget. We've recently completed one that bucks this trend. It has the potential to significantly reshape our underlying monetary system and the nature of currency – creating a slew of opportunities for banks and payments firms that get ahead of the game.

Headed by the Bank of International Settlements (BIS) London Innovation Hub, Project Rosalind is an experiment involving more than a dozen commercial banks and payment companies. Since June 2022 it has been testing how to safely distribute and settle a retail central bank digital currency (CBDC) issued by the Bank of England.

The project specifically looked at a public-private sector collaboration model, in which the public sector would issue the currency and provide basic infrastructure, while the private sector worked to produce innovative consumer-facing applications. With our Overledger platform, Quant provided the technology to facilitate interoperability between blockchains and legacy systems, as well as the secure smart contract and tokenisation expertise which served as the foundation for this project.

Although the experiment itself was a resounding success – demonstrating amongst other things that a CBDC will enable citizens and businesses to automate cumbersome payments and processes and implement logic into money – it would be naïve to ignore the fact that the banking industry as a whole – and indeed its customers – still have questions and, in some cases, concerns.

The first, and most existential challenge is the tendency for onlookers to ask, ‘why do we need a CBDC anyway?’. It is a fair question. Many of us are very satisfied with the real-time payments and internet banking offerings already available. The introduction of open banking in recent years has led to the creation of even more convenient payment options. But this overlooks the fact that a key responsibility of any central bank is to make central bank money useful and accessible to citizens. Cash alone is now struggling to fulfil this mandate, given it has become commonplace for vendors to refuse to accept it.

CBDCs, running on blockchains and benefitting from embedded secure smart contracts, are a form of programmable money that could usher in a range of improvements in terms of efficiency, security, and transparency that will benefit banks and their customers.

For example, one of the banks participating in Rosalind allowed users to program the CBDC to create a form of automated escrow. In this use case, a customer would purchase goods from a vendor using their CBDC account, though the funds were temporarily held to ensure that the seller and goods were genuine, and the money could not simply disappear into the ether – a situation that sadly occurs with thousands of online transactions every day. The courier then acted as the third-party verifier who signalled that the delivery had been successfully accepted, and the funds could be released.

In the UK, victims of authorised push payment (APP) fraud paid out more than £500 million to criminals over the past year, with purchase scams making up more than half of this, according to UK Finance. Meanwhile, the Payments Systems Regulator is ushering in new rules that will mean banks must reimburse virtually all victims of APP scams. Imagine how much of this fraud could be prevented with the enhanced verification described above – a huge cost saving for banks, and one that spares customers the distress of being scammed.

The next counter challenge that is raised against CBDCs is the ‘big brother’ theory: the idea that this form of currency will allow the state to spy on us and directly view what we are spending our money on. Privacy was a key focus for Rosalind, and we implemented a system in which only the institutions which own the customer relationship can see who owns an account.

Meanwhile, the key idea behind a CBDC – that it is the digital replacement for cash – saw Rosalind participants create an ‘offline’ payments system which allowed users to send CBDCs between their digital wallets, outside of the formal banking system. This is rather like withdrawing cash and handing it to a friend who is then free to spend it or deposit it into their own bank account – a more private transaction than those made via traditional online payment rails.

The BIS has published an in-depth report on the findings from the project. From our perspective, one of the most exciting aspects of CBDCs is the opportunity they present for the private sector. CBDCs, together with other forms of tokenised, programmable money, are just a few years away and, far from being a threat or a cost to business, they represent a once in a generation opportunity for forward-thinking banks and payment firms to differentiate themselves with new products hitherto impossible.

Our advice is to start today, lay the foundation for the future of payments, by ensuring you have the infrastructure in place to tokenise deposits, issue them as smart digital currencies, and integrate – in due course – with central bank digital currencies. The key is to make this trustworthy and ready for the future. Those that do that will seize the lead.



# DIGITAL CURRENCY STRATEGIES AND THEIR CONSUMER POTENTIAL

As digital currencies become integrated into the mainstream, payments service providers and technology providers are investigating how consumers will adapt to this new addition to the financial ecosystem. As banks and fintechs become more comfortable with crypto payments, the role of technology firms becomes more integral to the consumer's journey.

To facilitate the integration of digital assets into the financial sector, what is expected of PSPs and technology providers is to be able to support banks and legacy financial institutions in the shift to modern, digital platforms.

## Emergence of crypto payments

There is an increasing consumer interest in cryptocurrency, especially in younger generations. According to a survey conducted by [Visa](#), 55% of 18-34 year olds in the US intend to invest in bitcoin in the next five years, a higher percentage than in 2017. The cultural influence of digital assets online and across social media has swayed millennial and Gen Z interest.

Lewis Sun, global head of domestic and emerging payments at HSBC, notes: "Both PSPs and Banks will need the support from technology providers, which is especially important when the market is embracing very nascent emerging technologies. PSPs surely will play an integral role and continue to focus on innovations that bring better client experience, such as cheaper, faster or more secure options."

Major benefits to stem from digital currencies will be automation, transparency, efficiency, and the support of new businesses models. Alongside the induction of digital currencies into the payments system, there will be an increase in infrastructure for tokenisation, distributed ledger technologies, and smart contracts. To take advantage of these benefits, payments fintechs need to simplify their infrastructure and banks must embrace digitisation.

Annelinda Koldewe, global head of wholesale banking payments at ING, comments: “Regarding crypto payments, we definitely see the importance and potential of stablecoins and tokenised deposits. Not primarily to facilitate a universe of thousands of cryptocurrencies, but rather to nurture a new and emerging world of tokenised financial instruments and perhaps decentralised finance.”

The possibilities for crypto payments can facilitate cross-border transactions and reduce fees, however, could also exacerbate the digital divide. A large significant portion of the global population remains unbanked and underbanked, and crypto payments could further create distrust of digital payment methods.

Leading payments companies such as Revolut, PayPal, and Square have been offering consumers access to digital assets on their platforms. Visa is currently engaging in the crypto economy by evolving the network to integrate digital currency in its payments processes and allow Visa merchants and consumers to exchange funds using digital assets.

In order for payments providers to remain dialed-in in the transition to crypto payments, research should be focused on interoperability, scalability, fraud detection, and security to ensure that digital currencies can flow smoothly and securely.

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This report is published by Finextra Research. Finextra Research is the world's leading specialist financial technology (fintech) news and information source. Finextra offers over 100,000 fintech news, features and TV content items to visitors of [www.finextra.com](http://www.finextra.com).

Founded in 1999, Finextra Research covers all aspects of financial technology innovation and operation involving banks, institutions and vendor organisations within the wholesale and retail banking, payments and cards sectors worldwide.

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Quant is the foundation of the blockchain economy. Assets of all kinds, from currencies to carbon credits, are being tokenised on blockchain, making their ownership immutable, their provenance traceable and their use easy to manage. Our patent-pending technology makes this simple, trusted and future-proof. We work with financial institutions and corporates to dramatically reduce their time-to-market, create new revenue lines, and mitigate risk by delivering enterprise-grade solutions built with security and compliance front of mind. Founded in 2018, Quant is UK-based with a US presence. We spearheaded the Blockchain ISO Standard TC307 adopted by 57 countries and solved interoperability with the creation of the world's first blockchain-agnostic platform, Overledger, which is now available to all via [Quant Connect](#).

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Co-founded by Kristo Käärmann and Taavet Hinrikus, Wise launched in 2011 under its original name TransferWise. It is one of the world's fastest growing, profitable technology companies and is listed on the London Stock Exchange under the ticker, WISE.

16 million people and businesses use Wise globally, which processes £9 billion in cross-border transactions every month, saving customers around £1.5 billion a year.



## **Finextra Research**

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