

THOUGHT LEADERSHIP

# Keeping pace in a global economy: Helping financial institutions get up to speed with real-time

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**ACI Worldwide**  
Real-Time Payments

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## INTRODUCTION

Countries all over the world are recognising that a vibrant digital economy requires the real-time movement of money, particularly for those looking to bring underbanked populations and underserved small merchants into a more formalised ecosystem. And even more so in the post-COVID era where liquidity management at every level of the economy remains crucial to recovery.

It's not hard to understand why. From central banks and governments to billers, fintechs and individuals, everybody in the payment ecosystem stands to benefit from real-time payments in some way. Whether paying other people, disbursing welfare and aid or financial institutions transacting among themselves, experiences are vastly improved by frictionless interaction. But there can be complexity involved in connecting this into the payment value chain. To truly capitalise on the opportunity of real-time payments, every interested party must understand the landscape and start planning for the future accordingly.

Here, Mastercard and ACI experts bring their global experience in developing and launching real-time payment systems and schemes, exploring the current real-time payment environment and modernised payment solutions. They share insights from around the world to help payment system operators and their participating financial institutions meet their national objectives for financial inclusion, economic stimulus and revenue generation.

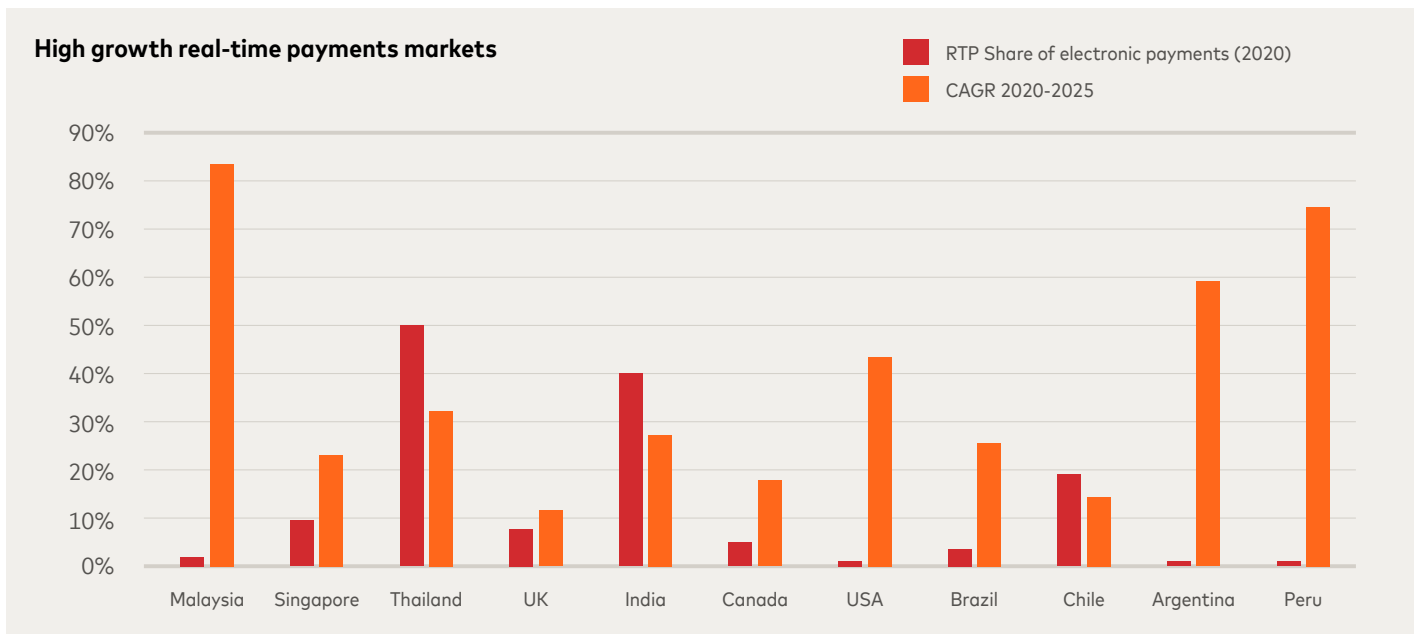
# Global acceleration to real-time

Consumer and business expectations for an on-demand economy are increasing. Real-time payments (also known as faster payments, immediate payments or instant payments) are growing to ubiquity in context and response to this drive.

When Vocalink, now a Mastercard company, partnered with the UK's retail payments operator to build and launch the Faster Payments in 2008, there were just 9 other [real-time payment systems](#) around the world. Fast forward to 2021 and there are now more than 60 live global real-time payments systems covering 65 different countries and territories. These markets account for the equivalent to over 89 percent of global GDP. Over 5,000 institutions globally are connected (either directly or through intermediaries) to real-time payment systems.

In many geographies, transaction volumes are accelerating rapidly, with further predicted growth. ACI's annual Prime Time for Real-Time report 2020 revealed the explosive [rise of real-time payments around the world](#), and COVID-19 appears to have only accelerated this momentum. Three of the top five global markets – India, Thailand and UK – have since released full year 2020 data showing a combined increase of 12 billion transactions for the year. ACI has recently forecasted there will be over half a trillion real-time payments processed by 2025.

Meanwhile, transaction values are decreasing, suggesting real-time payments are being adopted for day-to-day purchases in place of cash. Usage has also been driven by the increasing adoption of online banking, which has intensified as a result of the pandemic, allowing both businesses and consumers to continue remotely transferring funds to one another.



## Use cases

Real-time payments provide certainty of payment, real-time visibility of balances and immediate access to funds. They cater to all payment use cases, presenting financial institutions with an opportunity to enhance the product offering, generate new revenue streams, and to make life easier and better for end users.

For governments and central banks, real-time payments provide a means to migrate from an informal cash economy to enable a more vibrant and secure digital payments ecosystem that can be better managed for the benefit of citizens. Perhaps the biggest addressable market is in instances such as people paying other people. Real-time payments are instant and irrevocable, which makes them suitable for displacing cash in these scenarios by functioning as a proxy for trust.

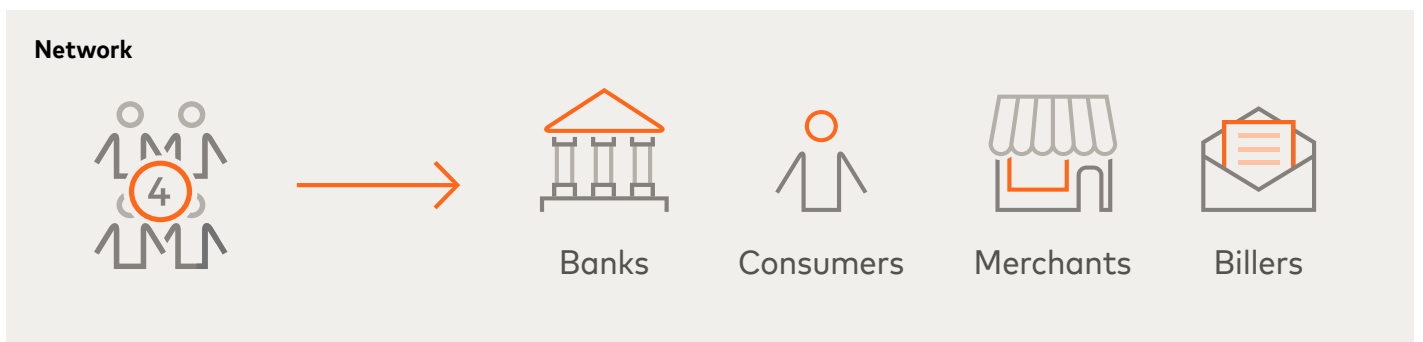
Existing system operators and participants are meanwhile under pressure from regulators who are looking to increase transparency on pricing, availability and services offered. A 2019 report from [Deloitte and Vocalink](#) shows how real-time payments can boost working capital and improve the efficiency of the financial system, with longer-term impact as corporates, start-ups and policymakers harness the infrastructure to deliver innovative products and services to consumers and businesses. The mix of benefits may differ from country to country, but the overall economic implications are powerful and convincing.

However, for financial institutions it's about meeting the demands of their customers, be they businesses or consumers, in an increasingly on-demand economy. Aging legacy systems have prevented banks from effectively addressing customer expectations for faster, more secure and more flexible ways to transact – the very areas where challenger banks and fintechs are making their mark.

Real-time payments can cater to all flows between consumers, businesses, governments and non-governmental organisations and their financial institutions. In India, for example, real-time payments are being used for an array of use cases including domestic remittances, paying bills and taxes, and government disbursements. Real-time payment applications can also be used at the point of sale to lower barriers for small merchants to receive digital payments, including by QR code or other unique identifier. For other businesses, real-time payments enable just-in-time supply chains, helping to create efficiencies in automated stock management and fulfilment.

And it's not just credit transfers. One particularly exciting use case, though it's not specific to real-time payments, allows a person or business to submit a digital payment request to a debtor account. The debtor, or payee, typically receives this request via their digital banking app. The capability is enabled by a financial message commonly called 'request to pay' or 'request for payment', which prescribes the payment value, due date and destination account. A growing number of operators, such as the in the UK, India and Malaysia have introduced request to pay services and/or schemes to govern interactions between participants.

In this instance, and many more, it is not a so much a competition of speed but of innovation – of leveraging the tools of a modernised payment system, including those that facilitate the development of improved experiences beyond speed and beyond the transaction.



## Beyond speed

The current generation of real-time payment systems herald a new era where value-added services take centre stage. These systems are designed to separate the core clearing and settlement engine from a platform layer that allows for the continuous exchange of value-added messages that can be used to develop innovative new products and services.

Almost two-thirds of real-time payments markets have access to a real-time system based on ISO 20022 data standards, whose advanced message capabilities provide greater context to the transaction and enable a range of innovative use cases. With widespread adoption, they enable global cross-industry interoperability.

Business and financial institutions can therefore derive additional benefits beyond speed, such as more efficient processing by back-office systems. Our customers testify to this. Tracey Black, of [Payments Canada](#), says: "Data – such as remittance information – can improve processing efficiency and reduce matching errors. And the reduced reliance on paper (including cheques) is expected to drive significant bottom-line value for Canadian businesses and government."

The aim for any market investing in a new payments system is to create continuous growth. Sometimes this is around migrating existing transactions to new rails (such as cash to real-time payments), but more often than not the focus is on creating net-new transactions. This expansion of digital transactions is driven by both financial and non-financial transactions connected to payment accounts and instruments, including microtransactions, balance inquiries, and the maturation of initiatives such as open banking to facilitate a variety of new use cases that drive ecosystem adoption.

In November 2017, [The Clearing House](#), a private firm owned by 24 of the largest US banks, launched a real-time payment service called the RTP® network in partnership with Vocalink, a Mastercard company. "The impetus for developing the RTP network for the US was about improving and driving the electronification of payments for banks and their customers," says Peter Davey, head of product innovation at The Clearing House. "Financial institutions, third parties and their customers can leverage those tools to create better experiences in a 21st Century digital world."

## CHAPTER 3

The RTP network uses ISO 20022 data standards to enable a range of payment and non-payment messages. "This makes it a very conversational system," says Davey. "It allows you to ask a question in context of the transaction and within that same secure channel. It's a really key component in contextual commerce." The extensible architecture of the real-time payment standard widens opportunities for innovation beyond the payment transaction itself into adjacent financial services. For example, [Sherpa Technologies is the first non-bank to connect to The Clearing House's network](#) to offer value added services to the credit union industry, including payroll and loan disbursements in real-time.

Peruvian operator [Cámara de Compensación Electrónica \(CCE\)](#) likewise recognises the advantages of modernising its payment system using ISO 20022 data standards. For Martín Santa Maria, Managing Director of CCE, it's an opportunity to diversify and enhance its offering: "We don't just want to be a highway for digital payments; we want to expand into other kinds of financial services; we want to provide more value-added services for our participants and their customers." [CCE plans a large number of value-added services for its platform](#), IPS including request to pay, interbank loan payments, and fraud monitoring. The ACI adaptor layer in its platform will facilitate rapid onboarding of participants, from banks to fintechs, and accelerate testing and certification.

Real-time payment infrastructure provides a platform for innovation, transforming the payments landscape for both financial institutions, people and organisations. "The journey [to modernisation] will make a big difference to our operations," says CCE's Santa Maria. "This new platform will... bring new functionality and new services to the market – to financial institutions and end users – that will add value across the ecosystem." An important feature of CCE's upgrade will be the multi-proxy service capability provided by Mastercard's instant payments platform. This allows users to send payments to recipients' mobile phone numbers, email addresses and taxpayer IDs, which are linked to their bank account or wallet. This will support multiple use cases and help drive adoption.



## Access, dependability and scale

Adoption of real-time payments reach a tipping point where consumer, merchant and biller adoption make real-time expectations the norm. At this stage, payment service providers must be able to meet those expectations with availability, scalability and security equal to that which underpin traditional payment types.

As revealed in Mastercard's recent [dependable services](#) research, provision of real-time payment services needs to be combined with robust reliability and the ability to scale without down time. Appropriate strength of service is essential to grow adoption and usage among consumers, merchants and corporates, and delivering the best possible customer experience.

Cloud deployment is one preferred solution to meet these needs. The benefits of Cloud are numerous: It's highly resilient, ensuring 24x7x365 availability. It scales up and down with demand, resulting in operational cost efficiencies. It's quick to build and deploy, and it enables fast and easy on-boarding for financial institutions (whether individually or as part of a scheme). Of course, trust features heavily in any consideration of Cloud as it relates to regulation, governance and risk. Cloud technology is highly secure – both to connect to, and as a data store. Furthermore, data hosted in the Cloud can be 'pinned' to ensure data sovereignty, which is highly important for some of the fastest growing real-time markets, such as India.

Proven expertise in delivering and maintaining these infrastructures of national importance is perhaps the number one assessment criteria for financial institutions and operators seeking to bring real-time payments to their markets. But a means of accessing these infrastructures is essential. It's not a case of 'build it and they will come', all participants in the payments value chain need fast, secure and simple mechanisms for onboarding to real-time payment systems and services, and a clear business case for investment.

Once participants have onboarded to a domestic real-time payment network, they look for improved regional interoperability. For financial institutions, especially those that conduct business across borders, a fragmented market can be extremely inefficient and costly, and deprive them of new sources of revenue. On-boarding to multiple systems is time-, resource- and cost-intensive, as is operating, updating and upgrading systems to meet evolving regulatory changes.

Common regional data standards and schemes are key enablers, making it possible for a financial service provider in one jurisdiction to transact more seamlessly with a counterparty in another. The benefits are multifarious: regionalisation allows payment system users to transact simply and securely across borders; it helps payment service providers reduce their operational costs, and it enables innovation of financial products and services at scale. Regional interoperability also supports increased velocity and volume of cross-border trade, which promotes global economic stability and growth.

Capturing the benefits from regional harmonisation should not be taken for granted. In the absence of currency union, achieving alignment across currencies and countries requires stakeholders to deliberately design and implement new payments systems with greater harmonisation in mind. This usually requires strong engagement from regulators and central banks – and not just on how data is exchanged, but also how payments are processed and how risk is managed, such as settlement models. Financial institutions must also collaborate to capture the full benefit of harmonisation, both at a domestic and regional level. The rewards of doing so open up a world of payment possibilities – for participants and their customers, too.

### **Bringing modernised, immediate interbank payments to Peru:**

Mastercard and ACI are working together to bring best-in-class central infrastructure, payments localisation and access solutions to central banks, scheme operators, financial institutions, payment service providers, and other organisations launching real-time payments initiatives around the world.

In February 2021, we announced that Peruvian payment system operator Cámara de Compensación Electrónica (CCE) would be the first to utilise the ACI Enterprise Payments Platform to simplify and speed up connectivity for participants to Peru's new real-time payments managed service ahead of industry testing, which will begin later this year. Financial institutions will be able to connect to the new scheme via new, modern APIs.

"The volume of immediate transfers that we process each month has more than quadrupled. In January 2020, we processed 580,000, a number that increased to more than 2.8 million per month by January 2021," said Martín Santa María, CEO at CCE. "Thanks to the Mastercard and ACI Worldwide partnership, we can exceed this growth, as both consumer and business demand for real-time payments rapidly increases across the country."

Mastercard's core proposition for payment system modernisation consists of hosted real-time clearing and settlement infrastructure to accelerate a future of growth and opportunity. It supports payment and non-payment messages using ISO 20022 data standards to enable a range of payment use cases.

ACI provides the necessary gateway connectivity for banks, processors and payment service providers (PSPs) to access new real-time schemes, translating between ISO 8583 and 20022 standards to help make efficient use of the rich functionality provided in the Mastercard payment solution. Through the partnership and joint offering, national infrastructure providers get best-in-class solutions for every element of a real-time payment system, including software, scheme rules, digital overlay services, testing, participant connectivity and onboarding. This improved speed to market with new services is a key differentiator for PSPs operating in a rapidly evolving real-time and open banking ecosystem.

## CONCLUSION

Banks, processors, acquirers and fintechs operating in established markets that have reached high transaction volumes, have understood the need to evolve their initial technology decisions to meet the demands of a real-time ecosystem.

ACI is one of the world's leading providers of real-time digital payment software and solutions, and Mastercard is a leading global technology company in the payments industry providing real-time payments infrastructure for 13 of the top 50 GDP countries. Together, we bring our customer references, experience and knowledge, spanning all domestic real-time schemes to ensure speed to market for new real-time payment systems, and the financial institutions leveraging them.

Mastercard and ACI have the expertise, experience and assets to support regulators and operators during the transition, including in critical phases such as the development of technical, business and operational playbooks and scheme rules. We can also help financial institutions articulate a solid value proposition to support their internal decision-making process, priorities and resource allocation by enabling rapid implementation of these new real-time payment services.

Those markets still in the nascent stages of instant payments, or yet to launch their real-time schemes, can take important learnings from their predecessors and launch their offerings with future-proofed solutions that provide value, facilitate participation, grow adoption, and enable future growth.

→ **Watch our webinar with Finextra or contact your Mastercard or ACI Worldwide account representative to learn more**

### **BMO: Modernising payments in record time:**

With many pending changes in the North American payments landscape, BMO chose to modernise its payment systems to implement a more efficient way to meet the evolving demands of its customers and create a platform for future innovation.

The bank went live with its first module within nine months of contract, with the second module being live after only another three months. It used agile methodology to achieve this in record time, incrementally replacing legacy technology with a real-time hub.

BMO forecasts its Payment Hub will realise significant savings based on products slated for delivery over the next five years. This figure includes savings from:

- Modernisation of existing legacy technology
- Rationalisation of technology in both Canada and the US
- The reuse of assets in future technology developments, including for new real-time schemes and overlay services

BMO has since gone live on The Clearing House's RTP Network® and Zelle and will be one of the first live with FedNow as it partakes in the Federal Reserve Bank's pilot programme. It is ready to leverage the Mastercard-powered Real Time Rail when it goes live in Canada.

[Read the full case study](#)



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