



BANK OF ENGLAND

Speech

Payments: A platform for innovation

Speech given by

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With thanks to Sara Ward and Emma Playford.

It is a great pleasure to be speaking today at the 'UK payments infrastructure – renewing for growth' event at Sibos. This year's event is exciting for two reasons. First, it's National Inclusion week here in the U.K.¹ And, it's a great coincidence that SIBOS has fallen during this week: at the heart of its agenda are discussions around how change and diversification in payments could lead to a more inclusive financial system. Second, this is the first Sibos conference to be held in London – and it is certainly an exciting time for so many global payments experts and innovators to be here.

London has a long history at the heart of the global financial system. It continues to build on this expertise and is one of the leading fintech hubs in the world. It is home to an incredible pool of the world's best and brightest talent, with 44,000 people already working in fintech, more than in Silicon Valley or New York.² Investment into the UK's fintech sector continues to grow and reached a record level of \$2.9bn in the first half of 2019, which was nearly 85% of the 2018 total.³ And we can see that the UK fintech sector is maturing, evidenced by the size of increased investments.

Payments are vital to any real economy and in total nearly 40 billion payments were made in the UK in 2018.⁴ They are also at the heart of the financial system. This makes London the perfect location for a payments conference, which is focused on "thriving in a hyper-connected world". Payments are innovating, fast. From the infrastructure and the messages that support each transaction, to new players entering the market and consumers seeking new ways to pay for goods and services.

Future of Finance, Future of Payments

While the core mission for the Bank of England is maintaining monetary and financial stability, we also seek to enable innovation and empower competition in the financial system. To support our forward looking and dynamic approach we recently commissioned and responded to the Future of Finance report.⁵ It considered how financial services might evolve over the next decade, and what this could mean for each of us: for users, the system and the Bank itself.

The report highlighted that a new economy and new demographics demand a new financial system. This system must be resilient, fair and dynamic. We have prioritised **five areas of work**: we are enhancing the payments system for the digital age; we will champion a platform to boost access to finance for small businesses; we will support the transition to a carbon-neutral economy; we will develop a world-class regtech and data strategy; and we will facilitate firms' use of technology.

¹ <https://www.bankofengland.co.uk/speech/2019/victoria-cleland-national-inclusion-week-launch-event-at-house-of-lords>

² <https://files.londonandpartners.com/business/resources/london-fintech-scene-2017.pdf>

³ <https://www.innovatefinance.com/news/uk-fintech-investment-flying-high-in-h1-2019/>

⁴ <https://www.ukfinance.org.uk/system/files/Summary-UK-Payment-Markets-2018.pdf>

⁵ <https://www.bankofengland.co.uk/report/2019/future-of-finance>

Today, I will focus on how the Bank will support a more resilient, innovative and competitive payments system for UK households and businesses: we have a vision that payments will become cheaper, instantaneous and more seamless, including across borders. At the heart of this is the UK's Real-Time Gross Settlement (RTGS) service which settles around £650bn of payments each working day, close to a third of the UK's annual GDP. Not much business can be done without it, and most consumers are ultimately reliant on it. I will tell you shortly about our leading-edge work to renew this service, but this is not all we are doing. We are also pursuing a number of even more far-reaching strands which together have the potential to transform the current payments landscape. I want to share a few of these with you today.

First, cross border payment is for many a long standing frustration - often badged as slow; inefficient and expensive for both financial institutions and end users. In 2018 we published a summary of our joint collaboration with the Monetary Authority of Singapore and the Bank of Canada to explore opportunities to make cross-border payments more efficient. But we want to take this further and play a leading role in supporting effective change in this area. We have started new work to understand what the frictions are and how we can work with our central banking colleagues globally to push forward this agenda, to deliver prompt settlement in different currencies and empower private innovations in cross-border finance.

Second, we will continue to champion the Legal Entity Identifier (LEI) as a globally recognised and unique identifier for all businesses. The global LEI system contributes to many financial stability objectives such as improved risk management in firms, better assessment of micro and macro prudential risks, facilitation of orderly resolution, and enables higher quality and accuracy of financial data overall.

In addition to financial stability benefits, LEIs provide valuable data and support anti-money laundering and combating the financing of terrorism efforts. They could, if linked to portable credit files, improve access to the domestic and global financial system, support greater choice and competition for business finance. The LEI could also act as the unique identifier for a digital ID, which could help the two-step verification process required for a more secure system. For all these reasons, the Bank is supporting the specific recommendation on the use of LEI in payment messages made by the Financial Stability Board in its May 2019 report on LEI implementation.⁶ In this context, we welcome the report issued by the PMPG on adoption of LEI in payments messages and its recommendations that firms should adapt their business processes to ensure that LEIs are captured whenever a new counterparty or customer record is set up.⁷ And importantly we are integrating the LEI in the ISO 20022 messages used in CHAPS (the Bank-operated High-Value Payment System).

Third, we will consult in 2020 on the appropriate level of access for payments service providers to the Bank's infrastructure and balance sheet, including necessary safeguards. This is important to ensure that the right balance is struck between access, maintaining financial and monetary stability and protecting public money

⁶ <https://www.fsb.org/wp-content/uploads/P280519-2.pdf>

⁷ <https://www.swift.com/resource/lei-payments-market>

from undue risks. We will reach out to key firms and the users of payments services in the next couple of months, to understand the needs of market participants and the barriers that still exist to competition and innovation. This dialogue – along with detailed analysis of the potential benefits and impacts for monetary and financial stability - will feed into a consultation paper in 2020. We look forward to learning from the industry and will welcome your engagement in this process.

RTGS Renewal

Crucially, to deliver these priorities, and to facilitate innovation, we need strong, resilient foundations. That is why the Bank is undertaking an ambitious and exciting Programme to renew RTGS. For those not familiar with RTGS, it is a critical piece of national infrastructure and the backbone of UK payments.

Our vision is to develop an RTGS service which is fit for the future, increasing resilience and access, and offering wider interoperability, improved user functionality and strengthened end-to-end risk management of the UK's High-Value Payment System. This is a challenging but necessary Programme which is a key priority not just for the Bank but for the UK payments industry as a whole. The way payments are made has changed dramatically in recent years, reflecting changes in the demands of households and companies, changes in technology, and an evolving regulatory landscape. We need to respond to this and, in collaboration with the industry, develop the next generation of RTGS that delivers a world-leading payments service.

Innovation can only thrive when firms and end users are confident they are operating in a safe and secure environment. So at the heart of the Programme is the desire to make the new service **materially stronger and more resilient** to an increasingly complex and sophisticated environment. Our current system has, and meets, targets of 99.95% availability. This must continue regardless of the shocks, whether traditional BCP or cyber. We are building a system that will be flexible to protect against the threats we understand today and the ones we will need to withstand in the future.

The renewed service will provide a platform for private sector innovation and one which can respond to and shape a fast changing environment. We will harness leading edge technology to deliver this, coupled with changes to our policies to support growth and resilience. Key features will include:

- The renewed service will have a **flexible and modular architecture**, making it easier to change components of the service or add new components. This will enable us to respond quickly to market changes and continued innovation in payment technologies both from new fintechs and established players. Ultimately, we want to future-proof RTGS to interface with firms and technology that may not exist today.
- The renewed service will not be built on a Distributed Ledger Technology (DLT) **but firms who use DLT will be able to connect to the service**. We have completed a Proof of Concept to understand

whether our renewed service could be capable of supporting settlement in systems operating on innovative payment technologies. The punchline was that it could. We continue to engage with fintech firms to maintain our understanding of technology developments.

- While we currently plan to start operating the new service with the existing hours for CHAPS, the new service will have near 24x7 capability, and so when there is clear demand we expect, in consultation with industry, to extend operating hours. This flexibility means we can respond quickly to changing demands and an increasingly globalised economy.
- We will also provide **Application Programming Interface (API) access** to users to enable read and write of payments data. The Bank has committed to providing an exposed API to allow external participants to develop sophisticated and automated real-time tools for accessing RTGS transactional and liquidity data. We plan to announce in a few months our initial thoughts on the approach and implementation.

And with a visionary new system, we want more participants to be able to benefit from it. In 2018 we **expanded direct access** to non-bank payment service providers, making it possible for a broader set of firms to compete with banks.

Five non-bank payment service providers currently hold accounts in RTGS and many more firms are exploring the possibility of joining. In addition, the renewed RTGS service will further reduce barriers to entry for new players – for example on-boarding will be quicker and testing will be streamlined making joining speedy and efficient. For CHAPS, we expect to be able to meet demand from dozens of new participants a year, rather than a handful as currently.

There are two clear benefits from expanding access. First, increasing the number and diversity of firms that can directly access central bank money helps to reduce financial stability risk from events such as market wide shocks or a single firm failure. Second, it promotes competition and innovation in payments. Firms that have direct access to payment systems can benefit from faster transaction times and reduced individual transaction costs. By extending these benefits to a wider range of firms, the Bank hopes to encourage a greater diversity of players in the payments market, thereby encouraging innovation and competition through development of new business models, new products and services and ultimately cheaper and more efficient payments.

This is an ambitious Programme - and rightly so. The Bank is on track against published milestones. Having defined the Programme scope, with input from the payments industry, we are now running a competitive procurement process under the Official Journal of the European Union to appoint a Technology Delivery Partner. They will work with the Bank on the design and build of the core settlement engine. We plan to enter the contract with the Technology Delivery Partner in May 2020.

We then move to delivery, with the first technology changes in the first half of 2022. In light of other international migration plans, the Bank is revisiting its approach to the introductory phase of ISO 20022 implementation in 2022 – in particular on how we can support early adopters of enhanced ISO 20022 data. We are conducting industry engagement to inform our decision and would welcome input from interested parties. And the most significant moment is when we replace the core RTGS service, planned for 2023. Additional functionality will be delivered in 2024, to further drive innovation and change. For example we will introduce read/write APIs and are exploring the ability to synchronise the settlement of a payment in sterling central bank money to be coordinated with the transfer of one or more assets. The Programme is expected to close in 2025. It will be an exciting few years!

ISO 20022

One way in which RTGS Renewal can promote resilience and efficiency is through greater interoperability across payment systems. Could, for example, CHAPS be used as a contingency mechanism in the event of a retail payment system outage? Key to this is the introduction of a new payment messaging standard for UK payments, ISO 20022: the emerging global standard.

Following a consultation in 2018,⁸ the Bank and Pay.UK will introduce a Common Credit Message across CHAPS, Bacs and FPS which will bring greater message harmonisation for the UK's main interbank payment systems. The Bank is also engaging with other High Value Payment System operators to ensure the standard is compatible with the emerging international consensus. This is an exciting and important initiative which will bring significant and long term benefits for a wide range of firms.

A recent key milestones towards implementing ISO 20022 in the UK was the publication of the CHAPS ISO 20022 draft messages schemas and market guidance for making CHAPS payments. Draft messages and market guidance have been provided for the expected implementation phase of the ISO 20022 migration and we are seeking comments, via the Bank's website,⁹ until 3 October 2019. And I would encourage all firms with an interest to review and comment to inform the final schema specification.

Final specifications for the implementation phase of the ISO 20022 migration will be available by the end of 2019 – allowing firms to kick start their planning and preparations for ISO 20022 implementation in CHAPS.

RTGS Renewal – engagement with the payments industry

We have from the very start of the Programme – even before it could be described as a Programme - been working with industry to design and prepare for this change. This input is vital so we can shape and deliver

⁸ <https://www.bankofengland.co.uk/-/media/boe/files/payments/rtgs-renewal-programme/iso-20022/iso-20022-consultation-paper.pdf?la=en&hash=BC6A2A1018A7AC4AEF13FEB47F5D7C8C86571799>

⁹ <https://www.bankofengland.co.uk/payment-and-settlement/rtgs-renewal-programme/consultation-on-a-new-messaging-standard-for-uk-payments-iso20022>

the change industry want to see. We have a number of strategic and working level channels that allow us to seek input and advice from across the payments industry. These include the RTGS Renewal External Advisory Body, the Standards Advisory Panel and the CHAPS Strategic Advisory Forum.¹⁰ Membership spans current CHAPS direct and indirect participants (and not just the traditional large banks) and trade bodies, UK authorities, software vendors and corporate end users.

We also work closely with some of the organisations sharing the stage with me today, aiming to get the best result and to minimise the burden on industry. We work extensively with Pay.UK who are working to deliver change across the retail payment schemes through their New Payments Architecture Programme. Together, we are tackling issues such as whether we could build a shared Public Key Infrastructure (PKI) for UK payments. And of course payments globally continue to change apace, so we thrive on our engagement with other central banks on key topics such as standards harmonisation, where our close collaboration is a crucial part of how we can collectively transform the payments landscape. Working together provides the opportunity to learn, share insights and collaborate on common challenges.

Conclusion

Just as payment systems are at the heart of the economy, industry engagement must remain at the heart of the Programme. User input enables us to create the platform and capability that industry needs to innovate: the building blocks to transform the payments landscape. But as we mobilise delivery at the Bank, we need industry to mobilise too. We are on track against our plan and we need firms to develop theirs – so the payments industry is ready to transition safely to the new service and maximise the opportunities for innovation and transformation promised.

We are developing a strategy to work closely with Direct Participants to provide information, monitor key milestone completion, undertake testing and seek assurance that they are each ready to implement changes.

Together, we can build and promote a resilient and thriving financial system, and so I look forward to continuing to engage with many of you here – be you users, end users, suppliers, innovators, peers - to help shape and deliver a resilient and innovative payment ecosystem.

¹⁰ <https://www.bankofengland.co.uk/payment-and-settlement>