BANK OF ENGLAND

Remarks

Real-Time Gross Settlement (RTGS) Renewal: Enabling the Next Generation of Payments

Remarks by

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I would like to thank Richard Lewis and Cameron Penny for their contributions.

Opening

Good morning, it is a pleasure to join you today at the Technology and Innovation Risk Conference. I would like to update you on an exciting programme to renew our Real Time Gross Settlement (RTGS) service, where we are seeking to use the latest technology to help to reduce risks and increase innovation and competition in payments, and in the financial sector more broadly.

RTGS is a key piece of national infrastructure but one which many people have not heard of. This morning I would like to demystify the acronym and take you through the work the Bank is undertaking to enhance this vital service and to innovate for the future.

The RTGS service supports accounts for banks, building societies, financial market infrastructures, and most recently, non-bank payment service providers, and provides sterling settlement services for Bacs, CHAPS, Cheque & Credit, CREST, Faster Payments (FPS), LINK, Visa and cheque clearing. Most payments in the UK eventually pass through the RTGS service, and on average over £600billion of payments are settled through the system each day - roughly equivalent to the UK's GDP every three days. Under the real-time gross settlement model payment instructions are exchanged and settled individually on a gross basis throughout the business day (unlike under a 'deferred net settlement' model where payments are exchanged by participants during a 'clearing cycle'). Under the RTGS model 'settlement risk' does not occur and our financial stability objective is promoted as claims and liabilities between banks and other participants are settled in central bank money which is the ultimate secure and liquid asset. It is also the platform through which monetary policy decisions are implemented and provides liquidity to the financial system.

Why are we renewing?

Just metres from this conference venue is Pudding Lane where in 1666, after a long, hot summer it was an ember from a baker's oven that set off the Great Fire of London. This triggered the rebuilding of St Paul's Cathedral, the city's gates and bridges and much more. I'm pleased to say that the Bank of England today finds itself in the far more fortunate position of renewing its critical infrastructure through choice rather than necessity.

RTGS was launched in 1996, and the world, let alone the financial system, has changed dramatically in the intervening 22 years. RTGS has undergone various upgrades but now is time for a more fundamental renewal. Technology is changing, the payments landscape is changing and the demands of users and potential users are changing. There are also a wide range of domestic and international policy changes ranging from the creation of the New Payments Architecture to the implementation of PSD2 so now seems an opportune time to promote the transformation of the payments landscape. The Bank is committed to introducing the new service in a safe and sustainable way which ensures the integrity of the high-value payments system and provides for close levels of co-ordination with participants.

A core objective in the renewal programme is to ensure the resilience and safety of the UK's payment infrastructure whilst also supporting competition and innovation in the financial services industry. We want to support new ways of doing business and serving society's payment needs. Our vision of the future RTGS was set out in a Blueprint published in 2017.[1] In developing this vision we undertook considerable dialogue with industry: it is essential that the new system meets its needs.

Our vision

Five guiding principles sit behind our vision for the renewed Real-Time Gross Settlement service.

Higher resilience: Resilience to operational and security issues will be at the heart of the new service, as it is today.   The renewed RTGS will continue to offer best-in-class resilience which means it will be designed to deliver an improved objective of zero or near-zero downtime for currently known resilience problems.

Broader access: The Bank wishes to promote membership of RTGS and has made steps towards this by extending direct access to RTGS accounts for non-bank Payment Service Providers (PSPs). We will also continue to focus on streamlining the onboarding and testing regimes for direct members.

Wider interoperability: We will promote ways in which users can reroute payments especially if outages occur. This will reduce the risk of downtime and help to keep the economy moving. Implementation of the ISO 20022 Common Credit Message (CCM) across CHAPS, Bacs and FPS will aide in this.

Improved user functionality: The new system will be designed to better support the needs of users, for example enhanced liquidity management. And we will also look to extend opening hours.

Strengthened end-to-end risk management: A more robust system with greater oversight and governance from the Bank of England has been introduced since the operation of CHAPS was brought in-house in November 2017. The Bank now has responsibility for system-wide risk management, including relationships with participants, and clearer lines of responsibility and integrated governance will help to reduce further the risks in the High-Value Payment System (HVPS).

Today I will cover three key areas:

- Firstly, how we want to expand access to RTGS to enhance financial stability and promote competition;

[1] Bank of England, A blueprint for a new RTGS service for the United Kingdom, *https://www.bankofengland.co.uk/paper/2017/a-blueprint-for-a-new-rtgs-service-for-the-uk*

- Secondly, how we are examining ways of supporting settlement across innovative payment technologies; and
- Finally how ISO 20022 implementation will support innovation, harmonisation and resilience.

Improving access

The Bank wants to see the next generation of RTGS support greater competition and innovation within the payments industry. Expanding access to the service also has the benefit of providing greater financial stability by reducing operational reliance on a small number of banks and lowering the credit exposures between direct and indirect participants. We have therefore changed the access criteria to enable non-bank Payment Service Providers (PSPs) to join. Earlier this year Transferwise was the first non-bank to gain direct access to RTGS, followed soon after by Ipagoo.

Going forward we also want to make the onboarding process smoother and more efficient. For instance, we intend to introduce automated testing, which will reduce the burden and manual effort required by both new and existing participants when someone joins RTGS. And we will introduce simulators to help onboarders better familiarise themselves with RTGS and the full functionality it offers before going live.

Innovative payment technologies

The UK is a world-leader in financial services technology and innovation. We have a fintech industry which employs over 60,000 people.[2] This success is not limited to London; centres of excellence exist across the country including Manchester, Leeds, Edinburgh and Cambridge (where Sir Dave Ramsden is today chairing a fintech roundtable). Innovation is not the preserve of those in the fintech sector; the banking industry as a whole is making system-wide changes to improve how it serves the people of the UK. The Bank is also no stranger to innovation and in my previous role as Chief Cashier I oversaw the introduction of the new cleaner, safer and stronger five pound and ten pound notes.

We decided not to build the renewed RTGS on Distributed Ledger Technology (DLT), wanting to first see greater proof of resilience and scalability. However, we are keen to facilitate the use of new technologies and we are working to deliver a service that has the capability to interact with DLT systems should demand emerge.

The Bank has recently concluded a Proof of Concept (PoC) with a number of fintech firms on this topic. The purpose of this PoC was to (a) understand how RTGS could be capable of supporting settlement in systems operating on innovative payment technologies. (b) To understand the limitations that such systems might need to navigate. Amongst those considerations was what additional functionality the renewed RTGS service

[2] KPMG, Value of Fintech, *https://assets.kpmg.com/content/dam/kpmg/uk/pdf/2017/10/value-of-fintech.pdf*

would need to provide in order to enable platforms using innovative technology to optimise their access to central bank money settlement.

The results of the POC were published on the Bank of England's website in June this year.[3] The results were encouraging and demonstrated that participants using alternative technology, such as DLT, could connect and settle. If used in this way, it could enable a wider range of institutions and infrastructures to access prefunded settlement, supporting competition and innovation, offering efficiency gains for users preparing RTGS for future demand.

Another area of research is synchronisation – sometimes known as 'atomic settlement'. This would provide the ability to link payments (or other asset movements) so that each individual movement would happen if and, only if, they all do. Initial industry feedback suggested that for certain transaction types (such as housing transactions, corporate transactions, securities settlement and cross-border payments), synchronisation might reduce cost and risk, improve efficiency, and support innovative new methods of settlement. We recently published a Call for Interest on synchronisation; the deadline for which is 28 September.[4]

ISO 20022

None of our ambitions; be they higher resilience, broader access, wider interoperability, improved user functionality, or stronger end-to-end risk management, would be possible without a messaging standard in place. A messaging standard is a common set of rules for exchanging relevant payment information in order to enable efficient communication with participants and related infrastructures. Messaging standards cover such things as:

- How senders and receivers identify each other;
- How key properties of a payment message, such as currency, amount and value date, are represented; and
- What additional information can be included.

The Bank is committed to transitioning to a new standard, specifically ISO 20022, as is the New Payment System Operator (NPSO). This is an open and global standard which can continually evolve to meet the needs of users. It is network agnostic to enhance interoperability with various operating systems and it has substantially increased data carrying capacity. Ultimately, in the very long term, ISO 20022 could also enable us to include a diverse range of characters from existing languages and other communications systems, though we will focus on ensuring we get the basics right first. In any case, this transition from the legacy and

[3] Bank of England, RTGS Renewal Programme Proof of Concept: Supporting DLT Settlement Models, *https://www.bankofengland.co.uk/news/2018/july/rtgs-renewal-programme-proof-of-concept-supporting-dlt-settlement-models*
[4] Bank of England**,** Call for interest: Synchronised settlement in central bank money, *https://www.bankofengland.co.uk/-/media/BoE/Files/payments/rtgs-call-for-interest-synchronised-settlement-in-central-bank-money*

restrictive standards currently used will have far-reaching implications and benefits for not only the UK's payments system, but participants and their customers.

One of the key changes will be the creation of the UK Common Credit Message (CCM).The proposed CCM would provide a set of definitions, structures and rules for inputting data into a payment message for Payment Service Providers and users. Domestic adoption of the CCM will ensure that the majority of the content in high-value and retail payments is aligned, streamlining processes for payment services providers and potentially enabling rerouting of payments between different payments systems in the event of operational disruption.

Other benefits arising from ISO adoption will be much improved information concerning the identities of those in payment transactions. This will include the adoption of Legal Entity Identifiers (LEIs), which when rolled out more widely have the potential to enable banks and non-bank payment service providers to deploy next-generation fraud prevention measures. The Bank will ensure that this functionality is in place but it will be up to industry to deliver these enhanced services for customers.

As with the overall RTGS Programme the Bank is committed to proactively engaging with industry to get this right. A consultation on ISO 20022 closed in July 2018 and the Bank, in collaboration with the NPSO, is reviewing the responses received. There will be an update on next steps and how the Bank will structure future ISO engagement towards the end of the year. We are also maintaining an active dialogue with the NPSO as it takes forward plans for the New Payments Architecture which will also deploy on ISO 20022.

Close

The RTGS Programme is a significant piece of the puzzle for the future of payments in the UK. I would like encourage the industry to continue to work with us to help shape the future of RTGS a smooth transition to the new service. We need to have a close and transparent working relationship with key stakeholders across the whole payments industry over the next few years. As the Bank builds and delivers its renewed RTGS system, and stakeholders make changes and improvements to their own payment processing systems, we can ensure that the full benefits of a renewed RTGS are enjoyed and delivered as safely, securely and efficiently as possible, across the whole of the payments industry.

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