BANK OF ENGLAND

Speech

Setting standards

Remarks given by

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With thanks to Carsten Jung, Amy Lee, Varun Paul, Neil Pearston, Cameron Penny, James Southgate and Tom Smith.

Welcome all to today's ISO 20022 conference. ISO produces a lot of standards, but it's those related to financial messaging, and in particular payments data which is what we're here to talk about today. I'm going to open this event by talking a little more about why the Bank, along with Pay.UK and the Payment Systems Regulator (PSR), is so keen to work with the payments industry to deliver this important change to create the conditions for the next generation of innovation in UK payments and internationally.

To the Bank of England, data, and the ability to collect, process and interrogate them, is vital to its ongoing ability to deliver its mission. Careful analysis of economic data is a key input into the Monetary Policy Committee's deliberations. The Bank collects large quantities of data from the firms it supervises; that lets us understand their businesses individually and collectively, and so underpins the decisions of the Financial Policy Committee and Prudential Regulation Authority. In my own area, Markets and Banking, financial market data are crucial for calibrating and managing our own operations and risk management. The decisions that we make affect the whole economy, and ultimately serve the good of the people of the United Kingdom. And, making these decisions effectively relies on good data.

This isn't new: the Bank has been collecting data in one form or another since its foundation in 1694. But while data have always been important, the pace of change in technology has unlocked much greater potential.

Across public and private sectors alike the possibilities of leveraging data on a massive scale or in innovative ways are being explored – in health and consumer tech, in finance in the form of fintech, and regtech and suptech for regulators like the Bank.[1] As well as providing new opportunities for individual firms, the use of data in fintech – to better price and allocate capital and to monitor the uses to which it is being put – has the potential to support productivity growth across the wider economy.[2] [3]

It is often said that "*data is the new oil*" fuelling a new industrial revolution. While the transformational potential is similar, there are differences from oil which mean that the nature of that revolution will be very different. Unlike oil, data are "non-rivalrous", meaning more than one person can use the same piece of data at once. Once in the public domain it also becomes by definition "non-excludable", meaning you can't control who does and doesn't have access. Taken together these two features mean publicly accessible data are a public good.[4] In addition datasets can produce additional insights quite distinct from the question they were originally created to answer – they generate positive externalities. And the analytical value produced by combining two datasets can be more than the sum of its parts – there are economies of scope in data.

[1] For more on this see Mark Carney's recent speech at the University of Toronto's Machine Learning and the Market for Intelligence Conference: Carney, M (2018), "AI and the Global Economy", slides available at https://www.bankofengland.co.uk/-/media/boe/files/speech/2018/ai-and-the-global-economy-mark-carney-slides.pdf.
[2] I set out the Bank's approach to fintech in a speech at the Treasury's International Fintech Conference in London earlier this year: Ramsden, D (2018), "Open to Fintech", available at https://www.bankofengland.co.uk/-/media/boe/files/speech/2018/the-bank-of-england-open-to-fintech-speech-by-dave-ramsden.pdf
[3] Indeed "AI and Data" is one of the four "Grand Challenges" identified in the Government's Industrial Strategy. Details available at https://www.gov.uk/government/topical-events/the-uks-industrial-strategy.
[4] There is a longer discussion on this in HM Treasury (2018), "The Economic Value of Data", available at https://www.gov.uk/government/publications/the-economic-value-of-data-discussion-paper

But like oil, data must be refined and cleaned in order to be used, and in this regard not all data is created equal. Unstructured, non-standardised and siloed data can be challenging to interrogate for insight, and significantly reduce the efficiency and effectiveness of automated processes. In banking and finance, and in particular in payments, data standards are a foundation for providing critical economic functions.

Given these considerations, the public sector has to be forward looking in its approach to data. HM Treasury set out the Government's ambitions for data[5], and the policy challenges presented by its economic characteristics, in an insightful discussion paper this summer. At the Bank, we have been exploring how new sources of data can deepen our understanding of the economy and financial sector to further our mission.[6] There are many use cases I could give, but in order to best frame today's proceedings, I will focus on our ambitions for renewing the Real-Time Gross Settlement (RTGS) service.[7]

The RTGS renewal programme

The renewal of the RTGS service is an opportunity for the Bank of England to influence the future of data from the heart of the UK economy. To play our part in the data revolution we are using this programme of investment in critical national infrastructure as an opportunity to set data standards nationally and drive them internationally.[8]

Infrastructure change does not happen very often – our current RTGS service is over twenty years old. But when it does, it is a foundational change – not least because, as the central hub for payments in the UK, everyone talking to it needs to speak the same data language. The current language – SWIFT's MT messaging – has its origins in the 1970s, to replace paper forms and Telexes. It was not designed for the modern era, and indeed earlier in the year SWIFT itself consulted users on retiring MT messaging for payments in 2025/26. So, as well as delivering the highest levels of resilience, we need to make sure we take this once in a generation opportunity to facilitate innovation for many years to come by expanding the functionality of the renewed service. Whether that is ensuring that the new RTGS can interact with Distributed Ledger Technology, or developing hooks to allow third party operators to synch the movement of funds on the RTGS ledger with movements across other ledgers, we expect to deliver a platform that enables the future generation of financial services.

Across all of these services, the data that are used, and the way that they are formatted and presented to users, is vital. And because the standards we are implementing are used internationally, there is a critical need to ensure we implement them well.

[5] See previous footnote.
[6] For numerous examples, see Haldane, A (2018), "Will Big Data Keep Its Promise?", available at https://www.bankofengland.co.uk/-/media/boe/files/speech/2018/will-big-data-keep-its-promise-speech-by-andy-haldane.pdf
[7] The Real-Time Gross Settlement service is the infrastructure that holds accounts for banks, building societies and other institutions. The balances in these accounts can be used to move money in real time between these account holders, this delivers final and risk-free settlement.
[8] As set out in Carney, M. (2018), "New Economy, New Finance, New Bank", Mansion House Speech 2018, available at https://www.bankofengland.co.uk/-/media/boe/files/speech/2018/new-economy-new-finance-new-bank-speech-by-mark-carney.pdf.

But many of the data standards currently used across the payments chain are either a legacy standard or not a standard at all – a bespoke format originally created for an internal processing system a generation before the internet. In today's connected world, there are huge benefits to be gained from the whole payments chain moving to international standards which, when implemented properly, provide a seamless flow of data from one end to the other.

Enter the standards produced by the International Organisation for Standardisation, ISO. Across technology and manufacturing it has produced over 24,000 standards for business and government to follow. I am going to focus on two today - ISO 20022 and how we plan to implement it for payments in the UK, and also ISO 17442, more commonly known as the Legal Entity Identifier – an important tool that can be carried within an ISO 20022 payments message.

ISO 20022 consultation

Given its characteristics, data standards are one area where we, as the Bank, can only do so much on our own. And this brings us back to why we are here today. In June this year, together with the PSR and Pay.UK, the operator of the retail payment schemes, we launched an ambitious consultation on our vision for implementing ISO 20022 in the major UK payment systems. I'm pleased to report that, as outlined in our Consultation Response Document[9] published a week ago, we received wide and consistent support for our proposals. We will be going forward with implementing ISO 20022, via the introduction of the Common Credit Message or CCM – which is central to message harmonization across the UK's main interbank payment systems, as well as providing compatibility with the emerging international consensus. The Bank's direct responsibility is for the UK's high value payment system, CHAPS[10], so we will be working closely with Pay.UK as we develop the CCM. But success will also require ongoing input from across the whole payment chain.

It is important we implement this change effectively. Both to mitigate the risks that migration brings, but also to ensure we capture this opportunity. I want to emphasise that we must not think of the ISO 20022 implementation as one-off change, to be left untouched in the UK's payment systems for years and allowed to become outdated. Furthermore, we must work hard to ensure that our implementation of ISO 20022 is not just inwardly focussed but internationally harmonised; international co-ordination will be key to unlocking the potential benefits for users of payment systems globally.

Beyond the migration, there will need to be an ongoing evolution, development and enhancement of ISO 20022 and payments data in the UK. We must keep this in mind as we implement the standard; and indeed

[9] The Consultation Paper is available at https://www.bankofengland.co.uk/-/media/boe/files/payments/rtgs-renewal-programme/iso-20022/iso-20022-consultation-paper.pdf. The Consultation Response Document is at https://www.bankofengland.co.uk/-/media/boe/files/payments/rtgs-renewal-programme/iso-20022/iso-20022-consultation-response.pdf.
[10] See https://www.bankofengland.co.uk/payment-and-settlement/chaps for more information.

start thinking now about the opportunities that the UK's implementation of ISO 20022 – and the CCM – may unlock in 5 to 10 years' time.

Legal Entity Identifiers

To seize the opportunities for future improvement, we need to examine where there might be existing inefficiencies. Huw Van Steenis is currently leading a major project in the Bank, Vision 2030, to map out what the future of the financial system might look like and the role the Bank can play in making the system as effective as possible for households and businesses in the UK. One of the themes that comes up repeatedly in our engagement is that the burden of identification is heavy – both for banks and businesses.

All but the simplest of business transactions involve a chain of institutions in the financial network. Across this chain there can be many unique ways of identifying a business, and because of that, there are manual checks and reconciliation processes involved every step of the way. A single, universally recognised identifier could dramatically improve the speed and efficiency of identification, by cutting out this manual process at every stage.

Which brings us back to the Legal Entity Identifier (LEI). The LEI has its origins in the post-crisis financial market reforms pioneered by the international policy-setting and regulatory community[11], serving as a means to better aggregate and monitor exposures (amongst many other goods) ultimately helping us preserve financial stability. The LEI has particular features: it is a unique identifier, requires annual verification, carries useful information about company structure, and is a globally recognised ISO standard. The Bank believes it has all the right ingredients to deliver much wider benefits for end users – raising efficiency, competition and productivity. Beyond the financial sector LEIs have the potential to be a transformative building block for the real economy.[12]

With the LEI as a critical building block, technology holds the promise of delivering efficiencies for end users of the financial system. Rapid identification will enable efficient know-your-customer (KYC) and on-boarding processes. Given the complexities of cross-border transactions, it could unlock substantial efficiencies for importers and exporters. And, it could one day enable a business to build up its own credit data file and use it to shop around for the best products, much like we do as individuals. Our work suggests that a widely recognised and unique digital identifier for all businesses is foundational to delivering that future vision.

[11] Following the collapse of Lehman Brothers, one of the key issues regulators had to tackle was the difficulty in unpicking the firm's exposures, given the large number of distinct but interrelated legal entities that fell under the Lehman Brothers corporate umbrella. The LEI, a globally unique reference for each legal entity, recommended by the G20 and taken forward by the Financial Stability Board, was one solution to prevent recurrence of this problem. See: http://www.fsb.org/2012/06/fsb-report-global-legal-entity-identifier-for-financial-markets/

[12] For example, in the charity sector, being able to quickly establish the identity of other international organisations, and cross-check with permissions granted under sanctions licenses, should make sure that humanitarian funds go to the correct recipient quickly. Likewise government could have the ability to more closely track contract awards and also make it easier to bring SMEs into tendering processes by establishing an accurate picture of smaller firms and their identities. It will also help financial institutions to improve existing AML checks, by being able to identify the full range of entities involved in the payments chain, which will provide a broader social benefit globally by helping stop fraud and terrorism.

Because of the benefits the Bank sees in LEIs, our consultation response outlined that we will make them a mandatory feature of transactions between financial institutions in CHAPS. But in order to unlock the LEI's full potential we need to encourage the adoption of LEIs amongst all those who use payment messages, not just within the financial services industry, but in all sectors of the economy, including corporates.

The opportunity of the infrastructure upgrade as part of RTGS Renewal, and similar opportunities in future, could provide the appropriate levers to encourage this broader take up of LEIs - to maximise the benefits of this public good. Engagement with key stakeholders[13] is also vital - and we're very pleased to be hosting a Financial Stability Board workshop on LEIs here on 10 December. But, crucially, this means that both public sector and private sector will need to show concerted commitment, drive and leadership to deliver success.

Looking forward

And this brings us back to why we are here today. The need for close private and public sector collaboration is why we sought your feedback through our consultation. And, it is why we, with Pay.UK, have announced the Standards Advisory Panel, a senior group providing strategic advice on the adoption of new payments standards in the UK. This group will bring vital private sector expertise into the Bank and Pay.UK's work to ensure consistent adoption of standards including ISO 20022, the CCM, and the wider adoption of LEIs.

The cutover for moving to ISO 20022 messaging for sending and receiving CHAPS payments is planned to occur in 2022. This will be on a like-for-like basis with the current messaging standard, but we will then introduce enhanced data into CHAPS payment messages, including LEIs for messages in financial institutions in 2023. And, as I mentioned earlier, we will then look at further enhancements, including a broader inclusion of LEIs in payment messages, over later years. This may seem on the horizon now, but I'm sure I don't need to remind a room full of payments experts that strategic change deadlines are never as far away as they seem.

With the renewal of RTGS, the wider implementation of ISO 20022 messaging standards for payments and the inclusion of LEIs in credit messages, the Bank is committed to changes which will have a positive impact for users of payment services. But we, together with Pay.UK, and all of you here today need to keep up the momentum and energy to deliver this critical change – a foundational change which will help future proof UK payment systems; deliver the new products and services which your customers are asking for; and support and contribute to the wider economic transformation being brought about by the data revolution.

[13] Such as HM Treasury, and GLEIF - the global body charged with supporting the implementation and use of LEIs.