BANK OF ENGLAND

Speech

Fintech: Opportunities for all?

Remarks given by
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I am grateful to my colleagues, in particular the Digital Currencies team, for their assistance in preparing the speech.

It is a pleasure to be here, at the second international workshop for P2P Financial Systems: an event focused on the exciting changes that technology is making to the world of finance, and in particular digital currencies and distributed ledger technology, crowdfunding and peer-to-peer lending.

The Bank is proud to co-sponsor this valuable opportunity to bring together a diverse range of experts – academics, technology innovators, financial institutions, policy makers, and regulators – to share knowledge, make new connections, and sow the seeds for future collaboration.

The Bank of England has long been committed to, and benefitted from, collaboration. Last year alone we launched the One Bank Research Agenda[1] and held a stimulating Open Forum[2]. We are currently engaging with a wide range of stakeholders on a number of key policy areas of importance to the Bank's future work, from digital currencies to climate change.

The benefits of working together across sectors and employing genuine diversity of thought are not new and were acknowledged by John Stuart Mill almost 170 years ago:

> *'It is hardly possible to overrate the value…of placing human beings in contact with persons dissimilar to themselves, and with modes of thought and action unlike those with which they are familiar…such communication has always been…one of the primary sources of progress.'*[3]

For this reason central banks across the world, many of which are present here today, have historically worked together with universities. We continue to develop and benefit from these relationships and we seek to learn from the private sector and from innovators.

Technology has never been more important to our day-to-day lives. We rely on it to keep us informed about the news, for shopping, for finding our way around, and even, I understand, for finding romance. Technology has also had a huge impact on commerce.

The past decade or so has witnessed the emergence of new business models that utilise technology to offer goods and services in different ways. We now have many new household names – Uber, Netflix, Airbnb, I could go on. Firms like these have recalibrated the demands of consumers, who increasingly expect goods and services to be provided more quickly, cheaply, and effortlessly - often by using of smartphones. Some businesses have emerged, some have prospered, but others have failed to adapt, resulting in the disappearance of some once famous names from the high street.

And technology is also changing the financial system: a sector that is perhaps more susceptible than most to transformation, given its products are already almost entirely digital. Finance is also a sector where there is scope to do more to meet the growing demands of consumers.

There is a lot of interest in Financial Technology – FinTech. The very nature of technological developments means that we can't know how technology will be used in the future – could anyone in the 1980s have been able to predict what the internet is used for in 2016? There is a high expectation that the latest wave of FinTech activity will be transformative, with considerable activity expected not least around distributed ledger technology (DLT). Some of the most recent changes have been more tactical, and focused on enhancing the customer experience, while leaving the core structures unchanged. We have yet to see the paradigm shift. But there are projects underway that could reshape the trading and settlements landscape[4], and some have suggested that new crowdfunding and peer-to-peer deposit and lending schemes could disintermediate incumbent banks.

Since 2010, more than $50bn has been invested in almost 2,500 FinTech companies. In 2015 alone, the UK alternative finance sector grew by 84%.[5] Over 24 countries are currently investing in DLT with $1.4bn in investments over the past three years. Over 90 central banks are engaged in DLT discussions worldwide and more than 90 corporations have joined blockchain consortia. 80% of banks are predicted to initiate DLT projects by 2017.[6]

So, why is a 322 years old institution interested in FinTech? What are the opportunities for us? We are responsible for monetary and financial stability, for the macroprudential regulation of the many participants within the financial system, and for operating and promoting safe and efficient payment systems, including through the provision of the ultimate risk-free asset: central bank reserves and banknotes. We need to understand what FinTech means for the entities we regulate, how it might impact the overall safety and soundness of the financial system, and how it could alter the transmission mechanism for monetary policy. And of course for our own operations, through which we implement those policies.

In his recent speech "Enabling the FinTech transformation: Revolution, Restoration, or Reformation?" [7] the Bank of England Governor Mark Carney, set out the ways the Bank is enabling the FinTech transformation:

- widening access to central bank money to non-bank Payment Services Providers;
- being open to providing access to central bank money to new forms of wholesale securities settlement;
- exploring the use of DLT in our core activities;
- partnering with FinTech companies on projects of relevance to our mission;
- calibrating our regulatory approach to FinTech developments.

I would like to focus on 2 of these – widening access, and DLT. And before becoming too distracted with crystal ball gazing, I would briefly like to step back into the past - to 1694, when the Bank of England issued its first banknotes. Since then, the function of banknotes has remained broadly the same. A banknote is essentially an IOU from the central bank with a clear unit of account which enables the bearer to hold it as a store of value and use it as a medium of exchange.

One could argue that, Bank of England notes were ahead of their time. They have always offered a very widely accepted, fully distributed, peer-to-peer payment mechanism. And banknotes provide full and final instantaneous settlement in central bank money. These banknotes are still a key payment method today and accounted for around half of consumer payments in 2015, with around 2.2mn UK citizens relying almost exclusively on cash for everyday transactions.[8] And with demand expected to remain strong, it is important that banknotes too benefit from the state of the art technology. Indeed we look forward to launching our first polymer banknote – the £5 featuring Sir Winston Churchill, next week, on 13 September.[9]

Banknotes are not the only way that we enable settlement in central bank money. The Bank also provides commercial banks and a range of non-banks with access to central bank deposit accounts (usually referred to as ‘reserves’) and the ability to settle interbank obligations across these accounts, amounting to around £500 billion every day. Since we launched Real Time Gross Settlement (RTGS) infrastructure in 1996, settlement banks have benefitted from full and final instantaneous settlement. Now RTGS is twenty years old, the Bank is drawing up a blueprint for a new generation of RTGS[10]. We will be consulting on a package of proposals very shortly, and have already committed to broadening access further to non-bank payment service providers.

What do banknotes and RTGS have to do with developments in FinTech? We need to consider how we can harness FinTech to enable us to continue to deliver a safe and efficient payments system in a changing environment.

Separate to the current RTGS review, we are undertaking more fundamental long-term research on the wide range of questions posed by the potential of a central bank-issued digital currency (CBDC). Whether a CBDC would be feasible and whether it would benefit the economy and the financial sector, over the medium term are big issues, and the answers remain far from clear. We have embarked on a multi-year research programme so that any future decision is informed with a full understanding of the implications. To support this we have invited contributions to a set of research questions that we have recently published[11] on the opportunities and challenges that could arise from the introduction of CBDC.

We need to understand the potential <u>economic</u> impact of extending access to central bank money.[12] A key part of the question relates to the potential breadth of access to CBDC and the functionality provided. At one end of the spectrum, CBDC could be quite limited and reserved for financial institutions: indeed RTGS today would be viewed as a limited-access CBDC, and the Bank’s proposals to widen access will extend its reach over the next few years.

But the really big questions arise at the other end of the spectrum, where CBDC is available to everybody, allowing businesses and households to hold balances in central bank money and to pay each other in real time with full and final settlement, in an electronic format. While households are able to achieve this today directly with banknotes, they must use commercial banks or other financial institutions to make electronic payments. In the UK, those intra-bank payments are themselves fully backed by central bank money – either directly in the case of RTGS, or through so-called 'prefunding' in the retail payment schemes, eliminating settlement risk. The question is what could the benefits and costs be of removing this layer and of allowing businesses and consumers to transact directly and instantaneously in central bank money.

There are numerous implications to be thought through. As Deputy Governor Ben Broadbent highlighted,[13] providing wide access to CBDC could fundamentally change the structure of the financial system. For example, if a CBDC provided competition for commercial bank deposits, one outcome could be a reduction in deposit funding available to commercial banks, undermining their ability to provide credit to consumers. The risks that this could pose need to be fully explored and understood.

We also need to understand the technology options. Could, and should CBDC be delivered using DLT and is this technology the best way to achieve the necessary scalability and resilience? What are the implications on the privacy, and how could the rules for the operation of the distributed ledger be managed? DLT is still in its infancy, and there are numerous questions that need exploring. The Bank has already undertaken a proof of concept using this technology and we are looking for new opportunities through our FinTech accelerator[14].

These are significant questions and we are keen to receive external input and innovative ideas as we work through the possibilities. There is already a well-established relationship between the Bank and academia and we published our research questions in July in order to help stimulate further research in this area.

I hope you all have a successful and inspiring conference. In the words of Sir Tim Berners-Lee - *'we need diversity of thought in the world to face new challenges'.*

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[1] One Bank Research Agenda, February 2015.
[2] Bank of England Open Forum , The role of central banks in financial markets, 2015.
[3] Mill, John Stewart. *Principles of Political Economy with some of their Applications to Social Philosophy*. 1848.
[4] Speech by ASX Deputy CEO Peter Hiom, Adopting Blockchain in our financial markets: ASX plans and the benefits for the market, June 2016.
[5] University of Cambridge, Pushing Boundaries, February 2016.
[6] World Economic Forum, The future of financial infrastructure, August 2016.
[7] Speech by Mark Carney, Enabling the FinTech transformation: Revolution, Restoration or Reformation?, June 2016.
[8] Source: Annual Statistical Publications, Payments UK.
[9] The New Fiver.
[10] Speech by Minouche Shafik, A New Heart for a Changing Payments System, January 2016.
[11] Bank of England Digital Currencies research questions, July 2016.
[12] Barrdear, John and Kumhof, Michael, The macroeconomics of central bank digital currency, July 2016.
[13] Speech by Ben Broadbent, Central banks and digital currencies, March 2016.
[14] The Bank of England FinTech Accelerator.