BANK OF ENGLAND

Speech

Response, and recovery: fintech during the COVID crisis and beyond.

Speech given by

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2nd Bund Summit on digital currency, fintech and inclusive finance

25 October 2020

Thank you to Louise Eggett, Shiv Chowla, Nick Butt, Varun Paul, Andrew Whitworth, Rachel Greener, Kathleen Blake, Tom Smith, Victoria Cleland and Andrew Hauser for their advice and suggestions.

Thank you to China Finance 40 and the Bund Summit organisers for the invitation to speak to you today. I was fortunate to visit Shanghai last year to join the summit dialogues and look forward to seeing you next year in person once again.

Today I'm going to recap on why fintech matters to the Bank of England, discuss how innovation has helped the economy respond to the shock of COVID, and reflect on the importance of regulation and our approach to central bank digital currency (CBDC).

Why fintech matters:

A question I am often asked is why fintech is important to the Bank of England. The answer I give – is that fintech matters a lot for our mission of monetary and financial stability, and our own capabilities as a central bank. Indeed fintech touches on almost everything we do:

- *Financial stability:* Fintech can improve financial stability through technologies that enhance diversity, promote efficiency and aid transparency in the financial system[1]. But innovation also brings risk - to which we are alert. Novel technologies can amplify operational and cyber threats. New infrastructures, including those that are 'decentralised' like distributed ledger technology, offer challenges for oversight and governance. And some fintech innovations present familiar risks in new guises. For example fintech lenders, who run liquidity and credit risks and may be prone to procyclical swings in the supply of credit depending on the behaviour of their investors and borrowers.

- *Monetary stability:* Technology offers the possibility of new forms of money, for example digital currencies. Fintech might also introduce new types of savings and credit intermediaries. These developments could have implications for the structure of the financial system, monetary stability and how we conduct monetary policy.

- *Safety & soundness:* The safety and soundness of financial firms is enhanced by innovation that allows legacy technology to be modernised, processes transformed through new infrastructures, and risk management informed by big data and advanced analytics. But risks to safety and soundness will increase if firms introduce technologies without fully understanding their implications and limitations.

- *Competition:* Fintech challengers boost competition by bringing diversity and choice. And innovations like cloud computing lower barriers to entry by reducing cost and widening access to technology. But innovative firms themselves may also have powerful advantages, particularly

[1] Financial Stability Board, 'Financial stability implications from fintech', June 2017: https://www.fsb.org/wp-content/uploads/R270617.pdf

those relating to data and analytic capabilities. Fintechs are often active in markets which can have powerful network effects, and be prone to 'winner takes all' dynamics. And our own actions as a central bank can have implications for competition. Therefore, as we make policy, and as we consider who has access to our infrastructure, we must keep competition front of mind.

- *UK economy:* Fintech matters for the UK economy. It employs 76,000[2] people and adds around £7bn to the UK economy[3]. The UK is also home to 8 fintech unicorns[4].

- *Our own capabilities*: And innovation is good for our own capabilities as a central bank. From our 'digital first' approach to regulation, to our ambitious rebuild of our high value payment system, we are using technology and innovation to improve our effectiveness, generate new insights and improve our efficiency. Indeed innovation was a cornerstone of the blueprint for our renewal of the Real Time Gross Settlement Service (RTGS).

Our fintech priorities:

Our approach is to embrace fintech and enable innovation. We started with an award winning fintech accelerator[5] that experimented with technologies such as AI and distributed ledger. We then created a Fintech Hub to lead our strategy, in partnership with colleagues across the organisation. And the 'Future of Finance' review last year[6] put forward a roadmap for how the Bank will support a more digital, innovative and greener financial system.

Looking to the future, the London branch of the BIS Innovation Hub offers exciting opportunities for experimentation and collaboration[7].

At the start of this year we identified three priorities for our fintech work:

1. Payments for a digital age; particularly central bank digital currencies.
2. The safe adoption of new technologies in finance, with a particular focus on artificial intelligence.
3. Influencing the interaction between the digital economy and finance, with open data for small business finance, and digital identity front of mind.

[2] Tech Nation, 'Fintech investor index', https://technation.io/fintech-investor-index/introduction-to-fintech/british-fintech-is-booming/
[3] HM Treasury, 'Review launched to boost UK fintech sector, July 2020. https://www.gov.uk/government/news/review-launched-to-boost-uk-fintech-sector
[4] CB Insights, 'Global fintech unicorns see Covid-19's impact', May 2020: https://www.cbinsights.com/research/fintech-unicorns-q1-20/
[5] Central Banking, 'Initiative of the year: Bank of England's fintech accelerator', January 2018: https://www.centralbanking.com/awards/3333176/initiative-of-the-year-bank-of-englands-fintech-accelerator
[6] Bank of England, 'The Bank of England's response to the van Steenis review on the Future of Finance', June 2019: https://www.bankofengland.co.uk/-/media/boe/files/report/2019/response-to-the-future-of-finance-report.pdf?la=en&hash=34D2FA7879CBF3A1296A0BE8DCFA5976E6E26CF0
[7] Bank for International Settlements, 'BIS Innovation Hub to expand to new locations in Europe and North America', June 2020: https://www.bis.org/press/p200630a.htm

Response, and recovery:

We couldn't have anticipated the challenges COVID would bring when we identified those priorities. But now they look more relevant than ever as innovation and fintech helps the economy respond, and then recover, from the shock of COVID.

Indeed, just imagine the impact had the COVID crisis occurred in 2000, not 2020. Back then, only 25% of British households had access to the internet[8], iPhone1 and 'Satoshi's' white paper were both 8 years away, Alibaba was less than a year old[9], and Jeff Bezos was predicting a day when 15% of retail sales were online[10] (in fact 32.8% of UK retail sales were online in August 2020, and have consistently been above 15% since 2016[11]).

Digital payments have supported an online shopping boom as we swapped 'in store' for 'on sofa' purchases. 'Plug and play' ecommerce solutions have allowed small businesses to rapidly get online to keep trading throughout the lockdown. And in the Bank of England, rich payments data has given us a valuable window into developments in the economy.

Cloud technology and digital communications have allowed us to work remotely; keeping up our productivity, and maintaining our collaborations with colleagues despite being away from our usual places of work.

And firms all across the economy have turned to machine learning to deal with an unprecedented volume of customer engagement, and pressures on their supply chains and logistics. Indeed, we recently surveyed the largest UK financial firms, and 25% said that COVID had already increased their plans to invest in machine learning.

The Bank can play a supportive role in helping fintech and innovators drive the recovery. I highlight just three ideas.

First, the entrepreneurship and innovation of our small businesses are the engine-room of our economy. But they lack the access to the capital they need to invest in their productivity and growth, due to a structural financing gap that is decades old[12]. Emergency loan schemes have been vital in providing crisis financing on a scale and at a speed that was previously unimaginable. But these schemes were not designed to provide the long term productive finance small business really needs. In March, we published research exploring how

[8] Office for National Statistics, 'Internet access – households and individuals, Great Britain, 2020', August 2020: https://www.ons.gov.uk/peoplepopulationandcommunity/householdcharacteristics/homeinternetandsocialmediausage/datasets/internetaccesshouseholdsandindividualsreferencetables
[9] Alibaba Group, History and milestones, https://www.alibabagroup.com/en/about/history
[10] Amazon, Shareholder letter for 2000, April 2001 http://media.corporate-ir.net/media_files/irol/97/97664/reports/00ar_letter.pdf
[11] Office for National Statistics, Retail sales index time series, September 2020: https://www.ons.gov.uk/businessindustryandtrade/retailindustry/timeseries/j4mc/drsi
[12] National Audit Office, 'Improving access to finance for small and medium sized enterprises', November 2013: https://www.nao.org.uk/report/improving-access-to-finance-for-small-and-medium-sized-enterprises/

a trusted, permissioned, platform for exchange of 'open data' could widen access to credit, and create a vibrant market-place for lending, including from fintechs[13]. We look forward to teaming up with partners in the UK authorities to explore the idea further.

Second, payments innovation has served us well through the COVID crisis. Indeed 38% of people were reported as having discovered a new payment provider during the lockdown[14]. And around half of UK fintechs are payments companies[15]. But there are further options that should be explored to deliver safe, efficient and convenient payments to shoppers and merchants. Naturally, CBDC is a focus, but we also consider that other payment options also offer significant potential, including 'bank to bank' payments. We will continue to explore the pros and cons of CBDC, and fully support HM Treasury's Payments Landscape Review.

Third, digital identity is an important, but also very delicate topic in the UK. In the Future of Finance review we set out the case for digital identity framework as an important piece of infrastructure, not just for finance but across the economy. In light of fresh cross Government interest in the topic[16], we will continue to research its possible applications in the financial sector, including its implications for CBDC.

The right regulation:

Innovation will be essential to our economic recovery. But if innovation isn't responsible, risks will quickly emerge, and its benefits will not endure. That's why the right regulation is so important.

The right regulation promotes stability, protects consumers and facilitates competition. And in turn this supports entrepreneurs and innovators. The confidence and trust that regulation can deliver encourages the public to try new products and services. And the resilience and stability it inspires gives confidence to experiment and invest.

As already mentioned, payments have been an area of rapid, and welcome, innovation. But the right regulation needs to be in place so these innovations are resilient and trusted. On this, our mantra is 'same risk – same regulation'. Meaning that where an innovation is deployed in a systemic payment chain, it must deliver the same protections as, and have equivalent regulation to, existing forms of money and payments, irrespective of the technology used.

[13] Bank of England, 'Championing a platform to boost access to finance for small business', March 2020: https://www.bankofengland.co.uk/research/future-finance/champion-a-platform
[14] Capgemini, World payments report 2020, October 2020: https://www.capgemini.com/gb-en/news/capgeminis-world-payments-report-2020/
[15] Bank of England analysis.
[16] Cabinet Office & Department for Media Culture and Sport, 'Digital identity: call for evidence response', September 2020. https://www.gov.uk/government/consultations/digital-identity/outcome/digital-identity-call-for-evidence-response

The Financial Policy Committee has articulated its expectations, including the importance of 'end to end' oversight of activities in systemic payment chains[17]. Experts in our Financial Market Infrastructure Directorate are working with colleagues in UK authorities to deliver these outcomes, including through the UK Crypto Assets Taskforce.

Looking at fintech more widely, the sector is certainly full of promise, but not yet of profits. We estimate that pre-COVID, up to 80% of UK fintechs were loss making, and that the time between funding rounds was on average less than a year[18]. Since then, the COVID crisis has placed both additional strain on some business models, and reduced the availability of funding, which could place further question marks over the viability of some fintechs.

Of course, most of these are businesses who do not undertake activity we would consider critical to the economy, and orderly failures of businesses can be part of a healthy market. However, where a 'fintech' is a UK deposit taker, authorised and regulated by the PRA, then we take a close interest in their strategy and business model viability. Our recent consultation on 'non systemic banks' seeks to provide clarity of our expectations to management of such companies as they scale[19].

Last but not least, we need the right regulation to ensure safe, and sustainable, use of new technologies in finance. Our consultations, together with the Financial Conduct Authority (FCA), on 'building operational resilience' and outsourcing and third party risk management' set out clearly the requirements for good risk management, including where new technologies might present novel operational and cyber risks[20]. And our AI Public Private Forum, made up of 20 world leading experts on Artificial Intelligence, met for the first time this month. By the end of 2021, that group will deliver a report recommending how regulation can support safe adoption of AI in finance, with a particular focus on data, model risk management and governance[21].

[17] Bank of England, Financial Policy Committee Summary and Record, October 2019: https://www.bankofengland.co.uk/financial-policy-summary-and-record/2019/october-2019
[18] Bank of England analysis.
[19] Bank of England, 'Non systemic banks: The Prudential Regulation Authorities approach to new and growing banks', July 2020. https://www.bankofengland.co.uk/prudential-regulation/publication/2020/new-and-growing-banks
[20] Bank of England, 'Operational resilience: Impact tolerances for important business services', December 2019, https://www.bankofengland.co.uk/prudential-regulation/publication/2018/building-the-uk-financial-sectors-operational-resilience-discussion-paper
[21] Bank of England, Financial Services Artificial Intelligence Public Private Forum: Terms of Reference, January 2020: https://www.bankofengland.co.uk/-/media/boe/files/fintech/aippf-terms-of-reference.pdf?la=en&hash=DE04D3A4E3AE052A5535C00CCE902511AFDA9333

Central bank digital currency:

The final word must be on CBDC.

As our Discussion Paper earlier this year stated, we haven't made any decision on whether or not to launch a retail CBDC[22]. But we are exploring the pros and cons with interest. I thought it might be helpful to set out some, hopefully simple, thoughts that are informing our explorations.

There's some things we can say with confidence it would be helpful for a retail CBDC to display:

- *CBDC must have a clear use case:* Our explorations initially focus on a CBDC with a 'payments' use case, using a 'platform model', where the central bank operates the core ledger, and private players the customer interface.

- *It should complement other forms of money:* CBDC must be able to coexist with, and complement bank notes and commercial bank money. Cash in particular, continues to be important to many people in our society, and will remain available for as long as people wish to use it.

- *There must be 'no harm' to monetary and financial stability:* Indeed, by addressing the risks of private money creation and by supporting resilient and trusted payments, a CBDC should contribute positively to stability.

- *Future payment needs should be supported:* Our economy is digitising, and our payments needs evolving. CBDC should therefore be flexible enough to support future use cases such as programmable money and micropayments.

- *Privacy must be preserved:* Privacy is a non-negotiable. It is essential to trust in money, and there must be a clear consensus for how society's expectations of privacy will be safeguarded. However, at the same time privacy, does not have to mean anonymity.

There's also some challenges we are being mindful of:

- *Technology shouldn't dictate policy:* Our focus is on public policy objectives, and the functional and economic design we want for CBDC. We shouldn't let the 'here and now' limitations of technology obscure our overall goals.

[22] Bank of England, Central Bank Digital Currency: opportunities, challenges and design, March 2020: https://www.bankofengland.co.uk/paper/2020/central-bank-digital-currency-opportunities-challenges-and-design-discussion-paper

- *CBDC doesn't have to use DLT:* There is no question that DLT is a very promising technology. It certainly is relevant to our explorations, but isn't the 'only' technology solution to think about.

- *Walled gardens should be avoided:* A CBDC network must promote competition and innovation. That means avoiding 'closed loop' systems, and ensuring interoperability with, and convertibility into and out of, other forms of money.

- *We can't 'go it alone':* Central Banks need to partner with a broad range of stakeholders given the breadth of issues presented by CBDC. We won't have all the answers, and working well with government, academics, private firms and civil society, at home and abroad, will be essential.

It has been a pleasure to talk to you today, I hope that next year we will be able to meet in person once again.