



New economy, new finance, new Bank

The Bank of England's response to the van Steenis
review on the Future of Finance





BANK OF ENGLAND

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Executive summary

The Bank will adapt so a new financial system can meet the needs of the new economy

The very nature of commerce is changing as new technologies shape a new economy. An increasing amount of activity is taking place online as platforms enable direct connections between people and businesses globally. These online interactions are generating vast quantities of data that is being used to improve and personalise services. Artificial intelligence (AI) is managing a growing range of tasks. New technologies are 'unbundling' financial business models into their component parts and providing more cost-effective, tailored and inclusive services.

In parallel, major transitions are under way across the globe. To address climate change, governments and businesses are creating the path towards a carbon-neutral economy. Emerging market economies are dramatically increasing their share of global economic activity and in the process altering trade patterns and capital flows. We are living longer and working in increasingly flexible employment.

These changes are bringing enormous opportunities that could lead to stronger, more inclusive and more sustainable growth. But they are also creating new risks. Cyber-threats are growing in an ever more data-rich and interconnected world. The transition to a carbon-neutral economy is an economic and environmental imperative; but if the transition is abrupt, the risks could prove material, pervasive and unpredictable.

Finance is changing to serve the new economy and support these major transitions. Embracing new technologies in financial markets could bring leaner, faster and more customised operations, reducing costs and benefiting customers. International finance can mobilise investment and help businesses seize new opportunities by bringing local and global markets closer together.

As it has throughout its long history, the Bank will adapt again to provide a platform for a resilient, innovative and competitive financial system. The Bank's strategy is to enable innovation and empower competition, while ensuring its core objectives of monetary and financial stability. The levers are the hard and soft infrastructure it controls:

- hard infrastructure, such as the real-time gross settlement (RTGS) service, which lies at the heart of the UK financial sector; and
- soft infrastructure, such as rules, standards and supervisory approach.

This report sets out five priorities where action by the Bank can have greatest positive impact for the end-users of the UK's financial system — the businesses and people of the UK.



New economy

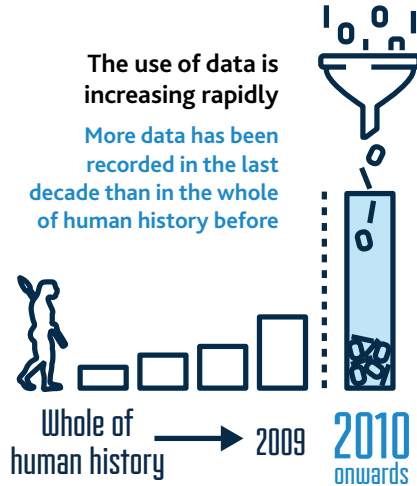
The economy is becoming more digital

UK consumers spent £265 billion online in 2018



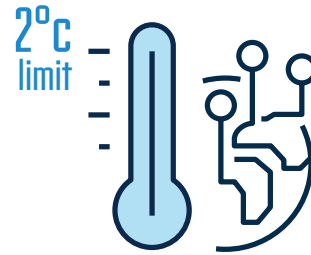
The use of data is increasing rapidly

More data has been recorded in the last decade than in the whole of human history before



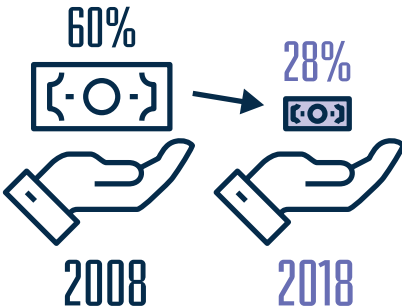
Economic growth places greater demands on the world's natural resources and climate

Governments have committed to keeping global temperatures within 2°C of 1850 levels



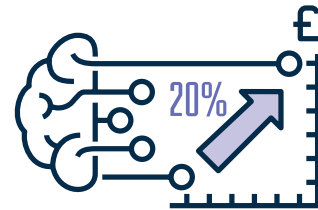
New finance

A digital economy means use of cash in the UK is declining rapidly



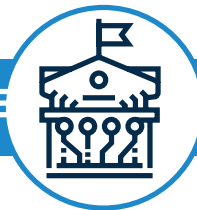
Investment in technology can boost productivity and innovation

Artificial intelligence could generate 20% greater revenues for the biggest banks



Investment can also help to address the challenges to our climate

US\$90 trillion global investment needed in the next 10 years to meet the 2°C target



New Bank



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



We will facilitate firms' use of technology, like the cloud, to increase their operational resilience

Five priority areas for action by the Bank

Enable the new economy

Priority 1: Support a more resilient, innovative and competitive payments system for UK households and businesses

Payments for UK households and businesses will be cheaper, instantaneous and more seamless, including across borders

- Consult in 2020 on the appropriate level of access to the Bank's payments infrastructure and balance sheet, including necessary safeguards. Launch a forum to explore the future of money in an increasingly digital economy.
- Fully engage in HM Treasury's (HMT's) National Payments Strategy review in order to maintain UK leadership, and unite innovators, businesses, policymakers and infrastructure providers. Alongside the Financial Conduct Authority, Payment Systems Regulator and other relevant authorities, help drive forward the review of payments regulation led by HMT.
- Partner with other central banks to explore how high-value payments systems could be used to deliver instant settlement in different currencies, which would empower private innovations in cross-border finance.

Priority 2: Help create an open platform to boost access to finance for small businesses and choice for households

Help to close the £22 billion SME funding gap in the UK

- Help small businesses harness the power of their data by developing the concept of a portable credit file, to give greater access to more diverse and competitive financing options, including for global trade.
- Respond to the Government's Smart Data Review with recommendations for how data standards and technology can promote an open platform for finance and deliver greater choice and keener pricing for businesses and individuals.
- Champion the Legal Entity Identifier (LEI) as a globally recognised and unique identifier for all businesses in the UK, including integrating the LEI in the Bank's new RTGS service and mandating its use in payment messages.

Navigate transitions

Priority 3: Support an orderly transition to a carbon-neutral economy

The financial sector will support the transition by managing the risks and seizing the opportunities

- Conduct a climate stress test for financial institutions in 2021, to help mainstream climate risk management. To facilitate scenario design, the Bank will publish a discussion paper in the autumn of 2019 and work with industry and other authorities through the Climate Financial Risk Forum and the Network for Greening the Financial System.
- Continue to encourage TCFD disclosures by UK financial institutions and companies to provide better information on climate-related risks and opportunities. We expect by 2022 that all listed companies and large asset owners will be disclosing this information.
- Lead by example by increasing transparency over the Bank's exposures to climate risks and approach to managing them, and adopt best practice to reduce its own carbon footprint.

Build resilience

Priority 4: Deliver a world-class regtech and data strategy

The £2 billion-£4.5 billion reporting burden will be substantially reduced, and enhanced supervision will lead to a safer system

- Launch a review in consultation with banks, insurers and financial market infrastructures to explore a transformation of the hosting and use of regulatory data over the next decade. The review will seek ways to decrease the burden on industry and to increase the timeliness and effectiveness of data in supporting supervisory judgements.
- Identify and implement improvements in the Bank's use of data in the next one to three years, including better tools for peer analysis, and beginning to exploit the benefits of machine learning and AI for regulation and supervision.
- Explore proofs of concept to deliver interim improvements over the next three years, for example integrating multiple data sources for market monitoring and automating parts of the authorisations process for new firms.
- Complete the process of making the PRA's Rulebook machine-readable over the next three to five years, with the aim of simplification and removing redundancies.

Priority 5: Facilitate greater resilience and adoption of the cloud and other new technologies

The financial system will be safer and more efficient, unlocking savings for customers without compromising resilience

- Publish a supervisory statement in 2019, describing the PRA's modernised policy framework on outsourcing arrangements, including a focus on cloud technology and setting out conditions that can help give firms assurance on its use.
- Convene a Post-Trade Technology Market Practitioner Panel to explore how market participants can leverage technological improvements to deliver a more efficient and resilient post-trade ecosystem.
- Establish a public-private working group with the FCA and firms to further the dialogue on AI innovation; and explore whether principles and guidance could support safe adoption of these technologies.

Enable the new economy

1 Support a more resilient, innovative and competitive payments system for UK households and businesses

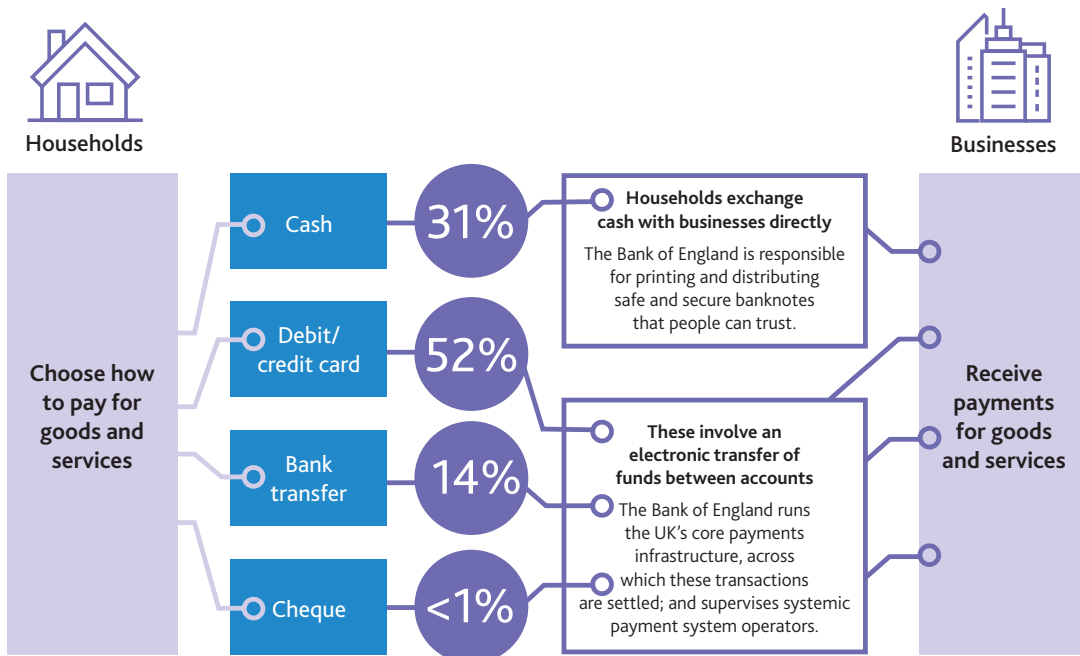
The Bank will ensure the resilience of the UK payments system to support a dynamic, data-rich economy. It will also provide the public infrastructure that allows competition to thrive and the private sector to create products that support greater choice for consumers.

Technology is changing the way we live. Digital communications are instant and transactions are increasingly taking place online and across borders. Customers are seeking to transact in real time, reliably and at low cost, and want checkout to be integrated seamlessly in online platforms and social media.

The financial system is responding to meet these demands. In 2017, for the first time, cards overtook cash for payments. One in six people now use digital wallets, which power seamless payments with smartphones and in online marketplaces. Contactless is replacing cash for small transactions and now represents one in five payments in the UK.

The Bank is supporting payments innovation and greater consumer choice. It was a vocal advocate of the UK's Faster Payments System, which became one of the first 24/7 real-time payments systems in the world in 2008. The Bank runs the UK's RTGS service, which processes on average £650 billion of electronic payments every day. Last year, it opened this up to non-bank payment service providers, to encourage greater innovation and competition for the benefit of customers. And it has convened relevant stakeholders to develop a new sustainable system for cash distribution.

Explainer: UK payments options and the role of the Bank



Sources: Bank of England and UK Finance.

Note: Figures show the share of consumer payments, rather than the total payments used for infographic on page 2. Other (2%) includes PayPal, ApplePay and Google Pay.

It is likely that the payments revolution is just beginning. Card networks dominate UK payments. Cards have delivered high levels of resilience and offer ancillary benefits for customers, but fees are variable and can sometimes exceed 2% per transaction, making them typically more expensive than direct-to-bank payment options that are popular in countries such as Sweden and the Netherlands. Internationally, cross-border payments remain inefficient with complex transaction chains that can experience delays of up to a week and fees of between 5% and 25%.⁽¹⁾

Recognising the potential to ease frictions and improve customer experience in international payments, a number of fintech firms are building their own global networks and have begun to disrupt this market. The Bank's initiative to widen access to RTGS has enabled these start-ups to compete directly with incumbent banks, offering a superior customer experience, often at a fraction of the cost. A consortium of global banks and market infrastructures are developing a new settlement system, based on tokenised forms of several major global currencies on a distributed ledger, to improve efficiencies and reduce transaction costs in wholesale financial markets. And most recently, a group of technology and e-commerce companies have proposed a new payments infrastructure based around an international 'stablecoin', backed by a basket of currencies, which could be exchanged between users on messaging platforms and with participating retailers. This could connect customers around the world and transform how we send money across borders; by offering faster, cheaper, more secure and more inclusive payments.

The Bank will continue to reform its hard and soft infrastructure to foster innovation and competition in payments, with the aim of removing barriers to direct-to-bank payments and reducing the costs and delays in cross-border payments. It will offer its support, resource and analysis for the development of the regulatory framework to achieve this.

The Bank will:

- Consult in 2020 on the appropriate level of access to the Bank's payments infrastructure and balance sheet, including necessary safeguards. Launch a forum to explore the future of money in an increasingly digital economy.
- Fully engage in HM Treasury's (HMT's) National Payments Strategy review in order to maintain UK leadership, and unite innovators, businesses, policymakers and infrastructure providers. Alongside the Financial Conduct Authority, Payment Systems Regulator and other relevant authorities, help drive forward the review of payments regulation led by HMT.
- Partner with other central banks to explore how high-value payments systems could be used to deliver instant settlement in different currencies, which would empower private innovations in cross-border finance.

2 Help create an open platform to boost access to finance for small businesses and choice for households

The Bank will support the development of an open platform for SME finance. By bringing together a global identity standard and a safe, secure and permissioned method of sharing information; this open platform could harness novel data sources and advanced analytics to provide SMEs with more choice and better access to productive finance.

Tech firms are demonstrating the value of gathering and analysing data at scale to understand trends and predict demand. And innovative businesses are using novel sources and big data to understand customers better and deliver a more tailored user experience. A world of open data could put households and businesses in control of their information and enable them to share in the value generated by it.

Small and medium-sized enterprises (SMEs) are an engine of growth in the UK, employing 60% of the private sector workforce⁽²⁾ and contributing 50% of UK GDP.⁽³⁾⁽³⁾ But because of poor information, many small businesses

(1) *The Economist* (11 April 2019).

(2) Federation of Small Businesses.

(3) European Commission SBA Fact Sheet (2018).

struggle to access the finance they need. Increasingly the assets that companies are seeking to borrow against are intangible — for example their reputation or existing customer base — rather than physical. Survey evidence suggests that more than 50% of SMEs⁽⁴⁾ consider only one provider when seeking a loan and 6 in 10⁽⁵⁾ of those who would like to borrow resort to personal funds rather than corporate finance.

This problem is neither new nor unique. Other countries have tried to fill the information gap with initiatives such as national credit registers. But sale and search data collected online, potentially offers a different way of solving the problem. Harnessing this data could help SMEs gain access to more diverse and competitive sources of finance.

Open banking is already beginning to change how the UK financial system uses data. Though so far focused on a limited set of products, it has demonstrated the potential for sharing data securely around the financial system in a standardised way through an Application Programme Interface (API).

An 'Open Finance' that applied these principles more broadly could allow users not only to link their data held at banks and utilities companies to build a richer credit file, but also to make use of search, ratings and social media data. And linking public sources such as the Passport Office, DVLA, HMRC and Companies House could vastly improve the underwriting process for a loan. Opening this data using common messaging and data standards should eliminate the informational barrier to entry. And by levelling the playing field for banks and non-bank providers of credit, it should increase competition in the market for SME lending and help close the £22 billion SME funding gap.⁽⁶⁾

Identification of businesses and verification of their data is crucial to make this work. The Legal Entity Identifier (LEI) was designed in response to the financial crisis, as a unique way of identifying financial entities. But in recent years, there has been increasing interest in its potential as a unique corporate identifier for businesses across the economy.

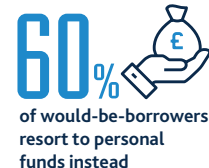
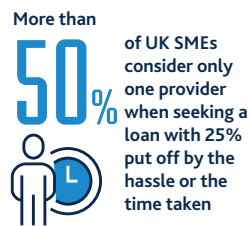
If adopted widely, the LEI could vastly increase the value of data for companies. Its potential is further enhanced by virtue of being a global standard, endorsed by the G20 group of Governments and recognised across the world. Building a globally recognised and unique corporate identifier into this vision for 'Open Finance' would enable businesses to move around the financial system seamlessly. They could pull their data together under a single identity, into a portable credit file to shop around for the finance they need. And because of global recognition, it will help businesses access finance for cross-border trade.

Explainer: How an open data platform could deliver a portable credit file for SMEs

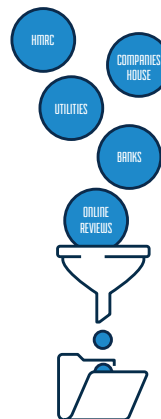
SMEs are an engine of growth in the economy



SMEs struggle to access the finance they need to grow



SMEs would benefit from being able to bring all their data together into a 'portable credit file'



This file could be shared more easily with banks and other credit providers, allowing better access to more diverse and competitive sources of finance



Sources: Bank of England, BVA BDRC Continental SME Finance Monitor and Competition and Markets Authority Retail Banking Market Investigation.

(4) CMA Retail Banking Market Investigation (2016).

(5) BVA BDRC SME Finance Monitor (2018 Q4).

(6) National Audit Office Report, Improving access to finance for small and medium-sized enterprises (2013).

Adoption would also put into practice the recommendations from Professor Furman's Digital Competition Expert Panel report on how to extract value from data and promote competition. One of the most important recommendations in this regard is to give consumers control of their data. This personal data mobility would allow consumers to move their personal information from one platform to another, to avoid lock-in and open the door to new services.

The Bank can leverage its role at the heart of the UK payments system to help catalyse change. It will support the potential of 'Open Finance' by using levers available to it to promote data standards and improved digital identification. And while it is for Government and business to build an open platform for SME finance, the Bank will offer its support, research and analysis.

The Bank will:

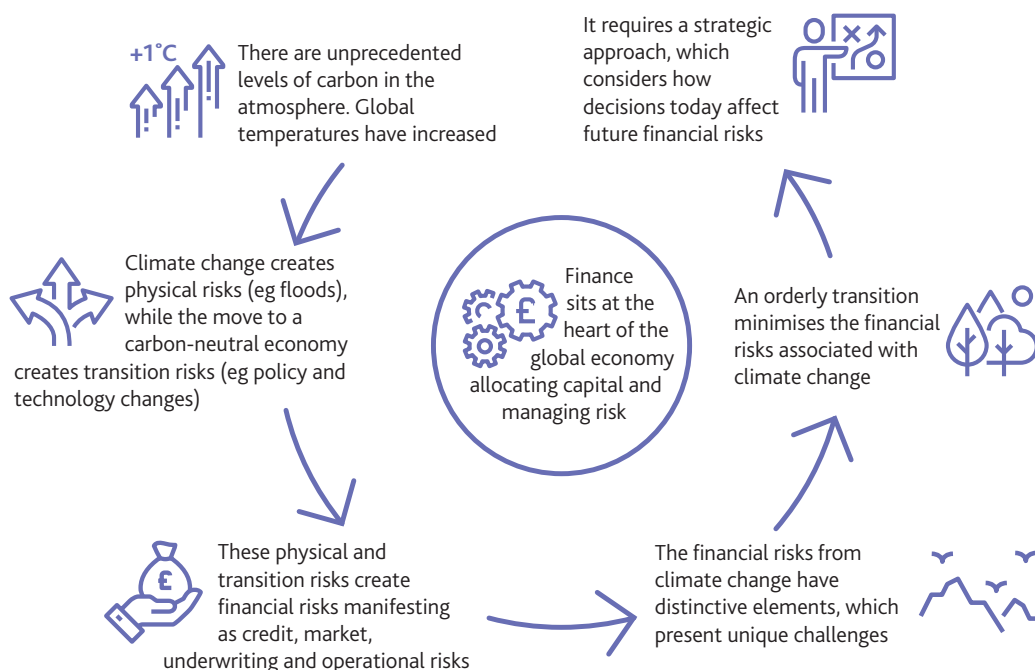
- Help small businesses harness the power of their data by developing the concept of a portable credit file, to give greater access to more diverse and competitive financing options, including for global trade.
- Respond to the Government's Smart Data Review with recommendations for how data standards and technology can promote an open platform for finance and deliver greater choice and keener pricing for businesses and individuals.
- Champion the Legal Entity Identifier (LEI) as a globally recognised and unique identifier for all businesses in the UK, including integrating the LEI in the Bank's new RTGS service and mandating its use in payment messages.

Navigate transitions

3 Support an orderly transition to a carbon-neutral economy

The Bank will act to encourage an earlier, and therefore more orderly, transition to a carbon-neutral economy. It will lead by example to help mainstream a culture of climate risk management throughout the economy.

Explainer: How the risks from climate change affect the Bank's core objectives



Climate change will shape our economy and financial system for years to come. Failure to act will result in widespread damage to land and property, depletion of natural resources such as water, increased frequency and severity of weather events and shifts in the pattern of migration.

The transition to a carbon-neutral economy brings both risks and opportunities. Some business models will become obsolete and, in anticipation of this, valuations will be reappraised. But those businesses that are able to adapt and provide solutions will grow tremendously. The transition will require substantial investments in green infrastructure, by some measures US\$90 trillion⁽⁷⁾ across the G20 by 2030 and £22 billion⁽⁸⁾ per year in the UK.

Finance is adjusting by demanding information on exposures to climate risk and embedding climate risk management in decision-making. In 2015, in response to a call by the G20, the Financial Stability Board launched the Task Force on Climate-related Financial Disclosures (TCFD). The proportion of companies disclosing information has increased up to nearly 15% over a two-year period. Nearly 800 public and private sector organisations have now announced their support for the TCFD, including global financial firms responsible for assets in excess of US\$118 trillion.⁽⁹⁾

The momentum behind TCFD's voluntary disclosure is creating a virtuous circle by encouraging learning by doing. The TCFD will also continue to work with market participants to refine metrics so that they are consistent, comparable and decision-useful. In the future, disclosure will move into the mainstream, and it is reasonable to expect that more authorities will mandate it.

Recently, central banks and supervisors have come together to launch the Network for Greening the Financial System (NGFS). Members represent jurisdictions responsible for near half of the global greenhouse gas emissions. The NGFS is leading the way on encouraging greater recognition of the risks of climate change to the financial system and to individual firms. That includes ensuring that climate-related risks are discussed at Board level and considered in risk management, investment and strategic decisions.

Financing the investment needed for the transition to a carbon-neutral economy, particularly in green infrastructure, requires the mobilisation of both public and private finance. This will provide an opportunity for new products and services, from 'green bonds' and sustainable investment funds, through to green ratings, indices and data providers. And increasingly, asset managers and their clients recognise that the transition to the carbon-neutral economy is fundamental to investment decisions.

While there has been progress in recent years, more action is required to ensure the financial sector is resilient to the risks from climate change, prepared for public sector action and can support the transition to a carbon-neutral economy. The window for an orderly transition that minimises those risks is finite and closing.

The Bank will:

- Conduct a climate stress test for financial institutions in 2021, to help mainstream climate risk management. To facilitate scenario design, the Bank will publish a discussion paper in the autumn of 2019 and work with industry and other authorities through the Climate Financial Risk Forum and the Network for Greening the Financial System.
- Continue to encourage TCFD disclosures by UK financial institutions and companies to provide better information on climate-related risks and opportunities. We expect by 2022 that all listed companies and large asset owners will be disclosing this information.
- Lead by example by increasing transparency over the Bank's exposures to climate risks and approach to managing them, and adopt best practice to reduce its own carbon footprint.

(7) [The New Climate Economy Report \(2014\)](#).

(8) [Committee on Climate Change \(2017\)](#).

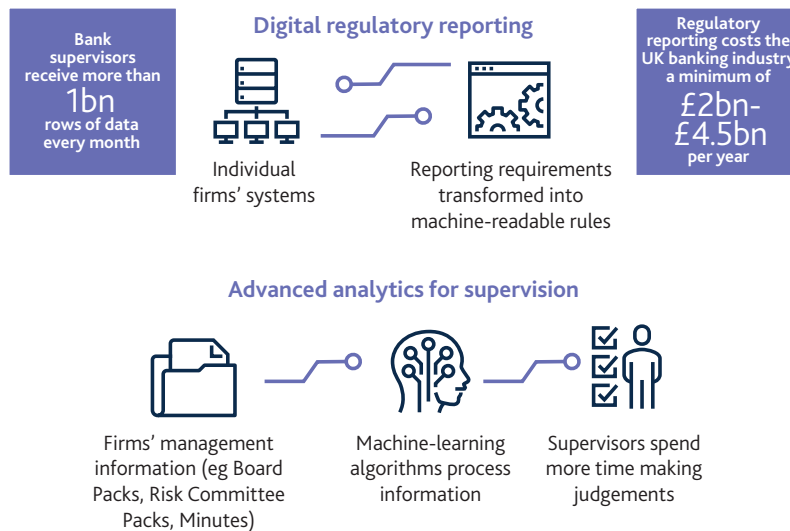
(9) [Task Force on Climate-related Financial Disclosures, 2019 Status Report](#).

Build resilience

4 Deliver a world-class regtech and data strategy

The Bank will embrace new technologies to improve its efficiency and effectiveness as a regulator, and deliver benefits to financial services firms and the real economy.

Explainer: What is regtech and why is it needed?



Sources: Bank of England and McKinsey & Company.

The new economy is increasingly data-rich. Every interaction leaves a trail of data, which can be stored cheaply and accessed remotely. Basic processes are increasingly automated and vast computing power can be deployed to analyse big data at speed.

The financial system, and the regulation of it, are no different. There has been an explosion of data since the financial crisis and the Bank's supervisors now receive more than 1 billion rows of data each month. Financial sector firms and regulators are often constrained by legacy systems and traditional approaches to data and analysis. And while storing and accessing that data has become cheaper, producing it is still labour-intensive and costly. According to some estimates, standard regulatory reporting and targeted, individual requests cost the UK banking industry a minimum of £2 billion–£4.5 billion per year.⁽¹⁰⁾ New technologies may provide opportunities to streamline firms' regulatory processes.

The Bank has an important role to play. It supervises banks, insurers and financial market infrastructures and is responsible for maintaining financial stability. Using data to monitor and safeguard the system is essential. However, the amount of data available in regulatory and management reports now exceeds our ability to analyse it using traditional methods. So the Bank, working in collaboration with the Financial Conduct Authority and industry, has in recent years piloted new approaches, including proofs of concept in areas such as natural language processing and machine-readable rules.

Technology may now offer a much greater prize. The Bank has the opportunity to completely rethink the way it collects, stores and analyses data. In its role as a regulator, it cannot do this in isolation but must engage with industry to explore a range of potential options, including:

- pulling data directly from firms' systems;
- a 'post and subscribe' model using a web portal or other mechanism;
- use of APIs allowing communication over various platforms without manual intervention; or
- using distributed ledger networks to allow replicated, shared and synchronised data.

(10) McKinsey & Company.

Such a vision will require intensive engagement between regulators, financial and technology firms and will take time. The costs of redesign will not be small, but the benefits to the industry will be felt for many years. It should free up resources for financial firms to focus on delivering a better service to their customers, and by enabling better monitoring of risks it should also help the Bank to ensure the system is safe and sound.

The Bank will:

- Launch a review in consultation with banks, insurers and financial market infrastructures to explore a transformation of the hosting and use of regulatory data over the next decade. The review will seek ways to decrease the burden on industry and to increase the timeliness and effectiveness of data in supporting supervisory judgements.
- Identify and implement improvements in the PRA's use of data in the next one to three years, including better tools for peer analysis, and beginning to exploit the benefits of machine learning and AI for regulation and supervision.
- Explore proofs of concept to deliver interim improvements over the next three years, for example integrating multiple data sources for market monitoring and automating parts of the authorisations process for new firms.
- Complete the process of making the PRA's Rulebook machine-readable over the next three to five years, with the aim of simplification and removing redundancies.

5 Facilitate greater resilience and adoption of the cloud and other new technologies

The Bank will consider the benefits and risks of cloud use, to enable firms to deploy the cloud in a safe and resilient manner.

Explainer: The risks and benefits of cloud computing for the financial system



Sources: Bank of England, McKinsey & Company and Synergy Research Group.

Speed and agility is crucial to compete in today's often global and instant marketplace. Cloud service providers offer ready-made solutions that can accelerate time to market. With the benefit of their scale, they also offer leading-edge analytics, enabling businesses to learn and adjust their business models almost in real time. And they can offer greater resilience. And as customer expectations rise, businesses are increasingly choosing to harness artificial intelligence and the cloud to improve the user experience continuously.

Reflecting the benefits of scale, the market for the provision of cloud services is currently dominated by four or five firms in advanced economies. The speeds of remote computing have risen, making remote servers cost-effective and resulting in public (off-site) cloud replacing private (on-site) servers across a range of industries.

The financial system has harnessed new technologies too, with varying degrees of success. Electronic trading has used algorithms for years, but post-trade processes remain highly manual. Large parts of the financial system have been held back by antiquated systems. For decades, as a consequence of mergers and acquisitions and developments in regulation and technology, new layers of complexity have simply been patched onto old systems. There is widespread recognition that patching up old systems is fast becoming too costly and risky to continue. At the same time, new banks are emerging, apparently unencumbered by these legacy problems and capitalising on the agility that cloud has to offer.

Operational resilience is critically important. Firms are responsible for the management of their systems and any risks involved, but the Bank has an important role to play. With responsibility for maintaining financial stability and the safety and soundness of financial firms, the Bank will always demand that any changes to core infrastructure are robust and resilient. But it also recognises the potential cyber and operational benefits cloud-based models can bring, particularly for smaller firms. By reducing time to market and increasing agility, these models may also offer the potential to create a more diverse financial system.

The Bank will:

- Publish a supervisory statement in 2019, describing the PRA's modernised policy framework on outsourcing arrangements, including a focus on cloud technology and setting out conditions that can help give firms assurance on its use.
- Convene a Post-Trade Technology Market Practitioner Panel to explore how market participants can leverage technological improvements to deliver a more efficient and resilient post-trade ecosystem.
- Establish a public-private working group with the FCA and firms to further the dialogue on AI innovation; and to explore whether principles and guidance could support safe adoption of these technologies.

Initiatives to help the Bank achieve its vision for the Future of Finance

Domestic initiatives with global implications

Each of the five action areas will benefit from global co-ordination.

In payments, the Bank will co-ordinate with other central banks to reduce some of the frictions in cross-border payments and to assess the benefits of and safeguards necessary for new cross-border payments technology.

In SME finance, it will champion an open data platform built on global standards to help UK businesses transact across borders and access global finance providers in the future.

On climate, the Bank will work closely with its peers around the world, through the NGFS and will champion global standards of disclosure and risk management, including through London's role as a financial centre.

On regtech, it will learn from experience around the world to develop a world-leading strategy for data and regtech, with a commitment to utilise global standards, recognising the global nature of the firms it regulates.

And on cloud, it will seek to lead the conversation globally, working closely with regulators around the world to develop a consistent approach to the boundary and necessary risk mitigants that recognises the global nature of the largest cloud service providers.

Culture and how the Bank works

The Bank has, and will continue to have, colleagues with deep expertise and extensive knowledge and experience. This is essential to serving the people of the United Kingdom well. But, as it has through its long history, to meet the needs of the new economy, the Bank is changing. Culturally, it is becoming more agile to respond to new challenges more quickly. It is seeking out an ever more diverse set of skills and backgrounds, reflected in its hiring, training and career-long learning programmes. And it is becoming more collaborative with a wider set of stakeholders and authorities than ever before.

In recent years, the Bank has already begun to adjust its recruitment, training and talent programmes to optimise the mix of skills in the organisation. It is recruiting more diverse candidates, looking beyond its traditional skills to fields such as data science and cloud computing. It provides colleagues from diverse backgrounds with the tools they need to contribute to its mission through qualifications, such as the Central Banking Qualification. It is training new and existing colleagues in emerging fields, for example offering apprenticeships, at all levels up to masters.

The Bank is also changing how it works. It has set a target for colleagues to spend, on average, one day a week working on projects within the Bank, outside their immediate area and it is creating collaborative workspaces to allow new teams to come together quickly. And it is changing the organisational structure; the new Chief Data Office is tasked with bringing the data analytics and collection areas of the Bank to work more closely with colleagues in technology and supervision.