

## Written evidence submitted by the Bank of England

Dear Dame Meg,

### AI in Financial Services

The Bank of England welcomes the opportunity to respond to the Treasury Committee's inquiry on artificial intelligence (AI) in financial services. I am delighted to share the Bank's response to the Committee's call for evidence, which we are submitting today at the same time the Financial Policy Committee publishes a Financial Stability in Focus on AI in the financial system<sup>1</sup>.

Please do not hesitate to get in touch if you have any questions about our written evidence or the wider Financial Stability in Focus, and we would of course welcome the opportunity to provide oral evidence to the Committee on this topic should you wish.

Yours sincerely



Sarah Breeden  
Deputy Governor for Financial Stability

## AI in financial services: written evidence submitted by the Bank of England

### Introduction

1. The Bank of England's mission is to promote the good of the people of the United Kingdom by maintaining monetary and financial stability. The Bank (including the Prudential Regulation Authority, "PRA") welcomes the opportunity to respond to the Treasury Committee's inquiry into the use of artificial intelligence (AI) in financial services and sets out its response in this document.

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<sup>1</sup> [Financial Stability in Focus April 2025](#)

This document should be read in conjunction with the Financial Policy Committee's Financial Stability in Focus: Artificial intelligence in the financial system<sup>2</sup>, published on 9 April 2025.

2. The Bank – in collaboration with the FCA – has been exploring the implications of the use of AI and machine learning (ML) in financial services for many years.<sup>3</sup> But AI is developing at a fast pace and applications are broadening.
3. Recent advances in AI have seen AI systems become both more powerful and more accessible. Advanced AI models (including generative AI models) can be dynamic, learning automatically from new input data, meaning that their outputs can evolve over time. They can be used to produce complex outputs and make decisions autonomously. And they are trained on vast volumes of data, on a different scale to previous modelling tools. As a result, they have powerful capabilities across a wide range of use cases. As a general-purpose technology, AI has the potential to bring productivity gains to many economic sectors and support long-term productive economic growth. AI is already helping many financial institutions to automate and optimise their internal processes and to enhance their interactions with customers.
4. The Bank and PRA are focused on ensuring our policy frameworks can enable the safe adoption of AI and ML in financial services, so that the financial sector and the wider economy can harness its considerable potential benefits for productivity and growth.<sup>4</sup>
5. The Bank adopts a technology-agnostic approach to supervision and regulation. We do not regulate technologies – rather we regulate the use of technology by our regulated firms, where such use gives rise to risks to our objectives. As AI technology continues to develop, we are keeping under review whether we can continue to rely on existing regulatory frameworks to mitigate risks from AI to our objectives for firms' safety and soundness and to financial stability.<sup>5</sup>
6. Certain technologies may raise novel challenges for firms and regulators, which may mean it is difficult for firms to understand how existing rules apply to that technology. In those cases, we may issue guidance or use other policy tools to clarify how the existing rules and relevant regulatory expectations apply to those technologies.<sup>6</sup> For example, although our supervisory expectation on how PRA-regulated firms and financial market infrastructures should manage outsourcing and third-party risks are technology neutral, they include specific examples,

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<sup>2</sup> [Financial Stability in Focus April 2025](#)

<sup>3</sup> [DSIT-HMT letter highlights the substantive work undertaken in relation to AI and ML.](#)

<sup>4</sup> [Growth: What does it take in today's world? - Lecture by Andrew Bailey | Bank of England](#)

<sup>5</sup> [Engaging with the machine: AI and financial stability – speech by Sarah Breeden | Bank of England](#)

<sup>6</sup> [DSIT-HMT letter](#)

references and chapters “which aim to address the specific characteristics of cloud [computing] usage and set out conditions that can help give firms assurance and deploy it in a safe and resilient manner”.<sup>7</sup>

7. To support our work, our focus in the past few years has been on exploring the take-up of AI and ML by financial services firms, and their potential implications for our statutory objectives and regulatory framework. We are actively engaging with other regulators domestically and internationally in building our understanding of the impacts of AI and how regulators are responding to them.<sup>8</sup>
8. In order to both understand fully the impacts of AI and to realise its benefits, it is important that the Bank uses AI internally. We have a long history of incorporating AI methods into our work, including in research as well as applied data science projects. For example, we have used natural language processing to study the media<sup>9</sup>, monetary policy communications<sup>10,11</sup> the content of prudential and banking regulations,<sup>12</sup> job adverts,<sup>13</sup> and letters to firms that we supervise.<sup>14</sup> We have also applied ML to forecasting UK inflation, financial crises, and bank distress; and studied it in methods-focused papers on statistical learning, interpretable ML, and designing effective human-AI partnerships for financial stability.<sup>15</sup> More recently, we have been trialling off-the-shelf AI assistants with staff across the Bank and have found productivity benefits, while we are also developing home-grown AI solutions that are more tailored to our staff and their domains of expertise.
9. Advances in AI have added three priorities to our data agenda. First, AI is placing additional requirements on our technological foundations. We have moved to set up our new enterprise data platform on the cloud which will support

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<sup>7</sup> [SS2/21 Outsourcing and third party risk management | Bank of England; The Bank of England's policy on outsourcing and third party risk management for Financial Market Infrastructures \(FMIs\) | Bank of England](#)

<sup>8</sup> We contributed to the Financial Stability Board's [report](#) on the implications of AI for financial stability, published in November 2024.

<sup>9</sup> Kalamara et al. (2020), '[Making text count: economic forecasting using newspaper text](#)', [Bank of England Staff Working Paper No. 865](#)

<sup>10</sup> Firrell and Reinold (2020), '[Uncertainty and voting on the Bank of England's Monetary Policy Committee](#)', [Bank of England Staff Working Paper No. 898](#),

<sup>11</sup> Munday and Brookes (2021), '[Mark my words: the transmission of central bank communication to the general public via the print media](#)', [Bank of England Staff Working Paper No. 944](#)[Opens in a new window](#)

<sup>12</sup> Amadxarif et al (2021) '[The language of rules: textual complexity in banking reforms](#)', [Bank of England Staff Working Paper No. 834](#)[Opens in a new window](#)

<sup>13</sup> Turrell et al. (2018), '[Using job vacancies to understand the effects of labour market mismatch on UK output and productivity](#)', [Bank of England Staff Working Paper No. 737](#)

<sup>14</sup> Bholat et al. (2017), '[Sending firm messages: text mining letters from PRA supervisors to banks and building societies they regulate](#)', [Bank of England Staff Working Paper No. 688](#)

<sup>15</sup> [TRUSTED AI: Ethical, safe, and effective application of artificial intelligence at the Bank of England – speech by James Benford | Bank of England](#)

a wide range of AI applications, informed by pilots we are running. Second, AI is broadening the scope of our data management and governance work. Alongside management of structured data, we are now looking closely at how we manage unstructured data and records – such as documents – together with their metadata in this new world. Third, AI is broadening our skills foundation. We strive for AI literacy for everyone at the Bank and AI fluency for our expert data professionals.<sup>16</sup>

## **AI use in financial services**

10. Our work highlights that AI is being used for an increasing range of applications in financial services. For the past five years, alongside the FCA, we have run a periodic survey of how financial services firms in the UK are using AI and ML. The latest [survey](#), carried out in 2024, covered nearly 120 firms, including banks, insurers, asset managers, non-bank lenders and financial market infrastructure. The results, published in November 2024, show that 75% of firms are already using some form of AI in their operations with a further 10% planning to use AI over the next three years. This compares to 58% and 14%, respectively, reported in our 2022 survey. For the first time in 2024 we asked about foundation models, 17% of all use cases were using foundation models - including large language models<sup>17</sup>.
11. We ask firms, in our survey, to rate the materiality of their AI use cases; in 2024 62% of all use cases were rated low materiality, 22% as medium materiality and 16% as high materiality by respondent firms. Materiality was defined in the survey to mean how important a use case is as measured by (a) quantitative factors such as exposure, book or market value or number of customers to which a model applies and (b) qualitative factors relating to the purpose of the model and the relative importance to informing business decisions and considering the potential impact on the firm's solvency and financial performance.
12. We see the application of AI in financial services firms distributed among a range of use cases. 41% of firms reported using AI to optimise their internal processes. 37% of firms use AI to mitigate the external risks from cyber-attack, and 33% for fraud detections. Over the next three years, an additional 36% of respondents expect to use AI for customer support (including chatbots), 32% for regulatory compliance and reporting, 31% for fraud detection, and 31% for optimisation of internal processes.

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<sup>16</sup> [TRUSTED AI: Ethical, safe, and effective application of artificial intelligence at the Bank of England – speech by James Benford | Bank of England](#)

<sup>17</sup> Whilst our survey doesn't ask for specific model deployments, large language models generally would encompass models such as OpenAI's GPT4

13. Some other use cases are more pertinent to the safety and soundness of individual firms and overall financial stability by impacting the overall financial resilience of firms. 16% of respondents reported using AI for credit risk assessment with a further 19% planning to do so over the next three years. 11% are using it for algorithmic trading, with a further 9% planning to do so in the next three years. 4% of firms are already using AI for capital management with a further 10% planning to do so in the next three years.

## **Risks to safety and soundness of individual firms and financial stability**

14. The use of AI among firms can have positive impacts. AI and ML can improve risk management in firms in a number of areas such as the detection of fraud, prevention of money laundering, and cyber defenses. AI is already helping many financial institutions automate and optimise their existing internal processes, such as code generation, as well as their interactions with customers. A likely area of development over the coming years is advanced forms of AI increasingly helping to inform firms' core financial decisions, such as credit and insurance underwriting. By enabling new sources of data to be used the technology could ultimately enhance firms' offering to customers.
15. But it can amplify or introduce new risks for individual firms, especially in relation to data and models. For example, the lack of explainability and potential autonomy of advanced AI models could – if deployed without appropriate governance and risk controls – lead to poorly understood decisions. Furthermore, deepfakes and text created by generative AI can increase the sophistication of phishing attacks.
16. The Bank has undertaken work to understand potential risks and benefits to firms from AI. From 2020 to 2022, the Bank and the FCA ran [\*\*AI Public-Private Forum\*\*](#) (AIPPF), examining the challenges of using AI/ML within financial services, as well as opening dialogue between the public and private sectors on this topic. In 2022, the Bank, PRA, and FCA published a [\*\*Discussion Paper\*\*](#), which sought views on whether the existing regulatory framework was sufficient to address the risks associated with AI/ML.
17. In the Bank's technology-agnostic approach to the use of AI/ML in financial firms, we expect firms to meet existing relevant standards such as those on [\*\*data management\*\*](#), [\*\*model risk management\*\*](#), governance<sup>18</sup> and [\*\*operational resilience\*\*](#) (including reliance on third parties). Per the [\*\*feedback statement\*\*](#) we published in 2023 to our Discussion Paper, while many respondents thought there were no major regulatory barriers to the safe and responsible use of AI in

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<sup>18</sup> Details on relevant governance requirements are outlined in more detail in the Annex, under point 6: Accountability and Governance, of our [\*\*letter to DSIT/HMT\*\*](#), which we published in April 2024.

UK financial services, some feedback suggested specific areas where clarification of the regulatory framework could be beneficial, and we are considering how and whether we could do so.

18. In addition to exploring how best to address potential risks to individual firms' safety and soundness, we are also assessing risks to overall financial stability, and the Bank welcomes the Committee's focus on the risks to financial stability, and how they can be mitigated, in its inquiry.
19. The Financial Stability in Focus report sets out the financial stability implications of AI in more detail. Financial stability risks can arise even where risks to the safety and soundness of individual firms are well-managed by microprudential authorities. In assessing financial stability risks we are focussed in particular on the following channels:
  - **Greater use of AI in banks' and insurers' core financial decision-making (bringing potential risks to systemic institutions).** While bringing potential benefits to both firms and their customers, such as greater choice and product availability, AI can introduce risks, especially in relation to models and data. Firm-level risk management and microprudential regulation can help mitigate these risks by applying appropriate controls to the use of AI, including agentic AI (that is, systems which can take autonomous action to achieve specified goals by utilising tools, learning from feedback, and adapting to dynamic environments). But there is the potential for systemic consequences to emerge, for example if common weaknesses in widely used models cause many firms to misestimate certain risks and so misprice and misallocate credit as a result. Such common weaknesses could also lead to a loss of service provision for some households or businesses. More widely, a reliance on AI models for key decisions could lead to conduct-related risks, for example if certain decisions or processes were to be subject to legal challenge and financial redress.
  - **Greater use of AI in financial markets (bringing potential risks to systemic markets).** Greater use of AI to inform trading and investment decisions could help increase market efficiency. But it could also lead market participants inadvertently to take actions collectively in such a way that reduces stability. For instance, the potential future use of more advanced AI-based trading strategies could lead to firms taking increasingly correlated positions and acting in a similar way during a stress, thereby amplifying shocks. Such market instability can then affect the availability and cost of funding for the real economy.
  - **Operational risks in relation to AI service providers (bringing potential impacts on the operational delivery of vital services).** In order to capitalise on the productivity benefits of AI, and just as for other

IT services, financial institutions generally rely on providers outside the financial sector for AI-related services. Reliance on a small number of providers for a given service could lead to systemic risks in the event of disruptions to them, especially if it is not feasible to migrate rapidly to alternative providers. The new regime for critical third parties (CTPs) to the UK financial sector could, once implemented, include providers of AI-related services in future if the disruption or failure of these AI-related services was deemed to pose risks to financial stability.<sup>19</sup>

- **Changing external cyber threat environment.** While AI might increase financial institutions' cyber defensive capabilities, it could increase malicious actors' capability to carry out successful cyber-attacks against the financial system. And financial institutions' own use of AI could create new vulnerabilities that such actors could exploit.

## Future work

20. Looking forward, given the inherent uncertainty over the future evolution in use and sophistication of AI systems and how they might be used in financial services and the broader economy, the potential future impact of and risks from AI is uncertain. To enable the Bank to keep under review whether our regulatory frameworks enable the safe adoption of AI and adequately mitigate risks to firms' safety and soundness and to financial stability, we are launching an AI Consortium composed of the private sector and AI experts to help us understand more deeply not only AI's potential benefits but also the different approaches firms are taking to managing its risks. We will use insights from the Consortium to consider what we can do to spread best practices widely in the industry and consider whether further guidelines and guardrails may be helpful in enabling AI's safe adoption.

21. At the macroprudential level, the effective monitoring of AI-related risks is essential for the FPC to understand whether and at what point risk mitigations – in addition to existing measures – might be warranted to enable safe innovation in support of sustainable growth, as well as what they might be. The FPC's priority is to build out its monitoring approach to enable it to track the development of AI-related risks to financial stability. The FPC's approach will need to be flexible and forward looking given the uncertainties and potential pace of change in AI. To this end, working with the Bank, the PRA and the FCA, the FPC plans to make use of a blend of quantitative and qualitative information sources, including the regular Bank and FCA Survey on AI in UK financial services, the AI Consortium, and targeted market and supervisory intelligence gathering. The FPC will continue to adapt and add to these tools in a flexible way as the risk environment evolves.

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<sup>19</sup> [SS6/24 – Critical third parties to the UK financial sector | Bank of England](#)

**9 April 2025**