AIFS0043

Written evidence submitted by Finance Innovation Lab and The Financial Inclusion and Markets Centre

Summary

1. A well-functioning financial services industry is integral to the success of the UK economy. The Global Financial Crisis 2007–09 resulted in the deepest recession in terms of lost output since quarterly data were first published,[1] leading to disastrous consequences for the economy and people's lives. The avoidance of similar events is the purpose of the regulators' financial stability and consumer protection objectives. The increased use of Machine Learning and AI models, as well as the rise of cybercrime and misinformation, may amplify systemic risks, some known and others unknown, to financial stability.[2]

2. Financial services is an industry with data at its core, and as such is ripe for utilising AI to provide insights and analysis and to automate decision-making. While this could bring some benefits, there are significant risks, some known and others unknown, that need to be assessed by the regulators.

3. There is no better way for the UK to lead the way in AI than to focus on the delivery of positive social outcomes from AI and avoid the many significant risks. This can be achieved by placing the broader public interest, consumer protection, economic stability and climate concerns at the heart of the government's strategy. Given that many of the risks are significant, and the impacts difficult or even impossible to estimate, it also means employing a precautionary approach to AI regulation. This should be the aim of the government's AI agenda.

4. This is a joint submission from the Finance Innovation Lab and the Financial Inclusion and Markets Centre. Please contact Jesse Griffiths, CEO, Finance Innovation Lab, to discuss this submission: jesse@financeinnovationlab.org.

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[1] Allen, Grahame. Recession and Recovery. Key Issues for the New Parliament 2010. House of Commons Library, 2010.https://www.parliament.uk/globalassets/documents/commons/lib/research/key_issues/Full- doc.pdf.

[2] Maple, Carsten, Lukasz Szpruch, and Gregory Epiphaniou. The AI Revolution: Opportunities and Challenges for the Finance Sector. The Alan Turing Institute, 2023. https://www.turing.ac.uk/sites/default/files/2023-09/full_publication_pdf_0.pdf.

Finance Innovation Lab

5. The Finance Innovation Lab is a UK charity promoting a vision of the financial system that serves people and planet - a system that is democratic, sustainable, just and resilient.[3] This submission builds on the Lab's previous work on AI and reflects dialogue the Lab has pursued with senior policy makers in relation to financial services regulation.[4]

Financial Inclusion and Markets Centre

6. The Financial Inclusion Centre has created a new unit called the Financial Inclusion and Markets Centre to focus on financial services policy and regulation, financial market reform, and evaluating the economic, environmental, and social utility of finance. The new unit also covers work evaluating the impact of developments at the intersection of finance and technology including AI.[5]

Response to call for evidence

We have only responded to questions where we believe we can add value to the Committees call for evidence.

What are the risks to financial stability arising from AI and how can they be mitigated?

7. The Committee will be well aware of the recent survey from the Bank of England and FCA of AI and ML in UK financial services. It found that 75% of the firms surveyed are already using some form of AI in their operations. That's up from 53% in 2022. 17% of all cases are using foundation models, which apply advanced ML to very large quantities of data for a wide range of uses. Its use is mainly in low-risk situations, such as automating customer support and mitigating external risks from cyber-attacks, fraud and money laundering. However, some firms are using AI for more high-risk situations, especially from a financial stability perspective: 16% are using AI for credit risk assessment; 11% are using AI for algorithmic trading; and 4% of firms are using AI for capital management. In all three areas there are plans by firms who aren't currently using AI to do so in the future.[6]

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[3] https://financeinnovationlab.org/
[4] https://financeinnovationlab.org/insights/ai-in-financial-services-how-to-avoid-the-big-risks/
[5] About | The Financial Inclusion Centre
[6] Bank of England & Financial Conduct Authority. Artificial intelligence in UK financial services. Bank of England, 2024.https://www.bankofengland.co.uk/report/2024/artificial-intelligence-in-uk-financial-services-2024

8. The world's financial markets are fragile at the best of times and can respond negatively to unexpected events. The International Monetary Fund (IMF) has said that the use of foundation models presents significant new challenges to cybersecurity, and its adoption in sensitive and heavily regulated sectors such as finance warrants "careful contemplation".[7]

9. There are several systemic risks presented by using AI in financial services. In the sections below we have provided more detail on three key areas: Instability and undermining public trust, cybersecurity risks and misinformation.

10. **Instability and undermining public trust.** Over the past few decades data-driven algorithms have played an increasingly central role in the trading strategies of financial services firms. In the modern era, these use ML and AI models acting independently and adapting trading strategies based on learning, and this is set to increase over the coming years. This presents a serious risk to market stability, particularly in unstable markets, which, due to the interconnected nature of financial markets, could increase systemic risk. Generative AI is particularly susceptible to herd mentality bias and mispricing risk if, for example, it captures data at times of market euphoria, or based in inaccurate reporting, with human investors following suit.[8] These 'hallucinations', where generative AI produces inaccurate information, have been recognised by financial firms as a potential risk to firms and consumers relying on or trusting AI as a source of financial advice or information.[9] The rise in popularity of AI- driven robo advisors to support portfolio management, trading and risk management has increased the complexity of models, which can be difficult for managers to monitor and scrutinise, meaning they may step away from managing potential crises.[10] In addition, financial institutions face operational risks from unregulated external systems, as well as concentration risks – where a handful of dominant AI firms control critical models and infrastructure, creating

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[7] Shabsign, Ghiath, and El Bachir Boukherouaa. Generative Artificial Intelligence in Finance: Risk Considerations. IMF Fintech Note 2023/006, International Monetary Fund, Washington, DC, 2023. https://www.imf.org/en/Publications/fintech-notes/Issues/2023/08/18/Generative-Artificial-Intelligence-in-Finance-Risk-Considerations-537570

[8] Svetlova, Ekaterina. AI Ethics and Systemic Risks in Finance. AI Ethics 2 (2022): 713–25.https://doi.org/10.1007/s43681-021-00129-1.

[9] Bank of England and FCA. FS2/23 – Artificial Intelligence and Machine Learning, October 2023. https://www.bankofengland.co.uk/prudential- regulation/publication/2023/october/artificial-intelligence-and-machine-learning.

[10] Bartram, Sohkne E., Jurgen Branke, and Mehrshad Motahari. Artificial Intelligence in Asset Management. CFA Institute Research Foundation, 2020. https://www.cfainstitute.org/-/media/documents/book/rf-lit-review/2020/rflr-artificial-intelligence-in-asset- management.ashx.

systemic vulnerabilities. Data manipulation and the inevitable exhaustion of human-generated data to train AI models are added threats, leading to nonsensical results and the undetectability of falsehood.[11] These risks, combined with privacy concerns, could undermine the public's trust in the integrity and safety of an AI/ML-driven financial system.[12] There is also a risk of an accountability gap caused by a lack of understanding of how the AI works and what it's capable of. This leads to two undesired outcomes: 1) a failure of governance leads to firms selling products, or introducing processes, that haven't been fully assessed for risk; and 2) a lack of knowledge at the regulator results in an inability to understand market activity. Both have unfortunate similarities to the build-up to the global financial crisis.

11. **Misinformation and market instability.** A significant risk presented by AI/MLI is the use of corrupt data that leads to poor decision-making. This risk is particularly acute in financial services and foundation AI, such as generative AI, where not only could billions of pounds be at risk, but so could financial stability. This area of financial services is also at risk of misinformation, fuelled by social media, which can impact price formation across global markets. Such a scenario could become systemically important if the misleading information spread in the financial system. This has already happened: on 22 May 2023, a suspected AI-generated image purporting to show the Pentagon in the aftermath of an explosion spread across social media just as the US markets opened. This jolted global financial markets, with the S&P 500 declining by about 0.3% to a session low, until US officials clarified it was a hoax.[13] The impact may have been limited in that instance, but it demonstrates the potential risk of AI-generated content for the financial markets. Financial services regulators will need to think about how to prevent bad actors from systematically using 'fake news' to target individual companies or manipulate markets. In addition, financial institutions face operational risks from unregulated external systems, as well as concentration risks – where a handful of dominant AI firms control critical models and infrastructure, creating systemic

[11] Philipponnat, T. Artificial intelligence in finance: how to trust a black box?. Finance Watch, 2024. https://www.finance-watch.org/wp-content/uploads/2025/03/Artificial_intelligence_in_finance_report_final.pdf

[12] Boukherouaa, El Bachir, Mr Ghiath Shabsigh, Khaled AlAjmi, Jose Deodoro, and Ebru S Farais. Powering the Digital Economy: Opportunities and Risks of Artificial Intelligence in Finance. IMF 2021, no. 024 (n.d.): 34.

[13] Alba, Davey. How Fake AI Photo of a Pentagon Blast Went Viral and Briefly Spooked Stocks, 22 May 2023. https://www.bloomberg.com/news/articles/2023-05-22/fake-ai- photo-of-pentagon-blast-goes-viral-trips-stocks-briefly?in_source=embedded-checkout- banner&leadSource=uverify%20wall.

vulnerabilities. Data manipulation and the inevitable exhaustion of human-generated data to train AI models are added threats, leading to nonsensical results and the undetectability of falsehood

12. **Cybersecurity risks.** New tech-driven processes present new avenues for cyberattacks, particularly in an industry as lucrative and important as financial services. Unique and more sophisticated threats presented by ML/AI include 'data poisoning attacks', where the manipulation of data at some stage of the lifecycle allows attackers to evade detection and prompts ML/AI to make harmful decisions or to extract information. Constant oversight of the algorithm is required to ensure safety.[14] Financial firms have expressed concern that the opaqueness of advanced AI models might make it difficult for them to distinguish between poor model performance and cyberattacks, reducing their ability to mitigate and potentially resulting in systemic risks to financial markets.[15] According to the IMF, the use of foundation models presents significant new challenges to cybersecurity, and its adoption in sensitive and heavily regulated sectors such as finance warrants "careful contemplation".[16] Both the wholesale and retail segments of the financial system are exposed to this risk. This has been evidenced by the vulnerability found in Log4, an open-source logging library commonly used by apps and services across the internet, that allowed attackers to break into systems, steal sensitive information (such as passwords), extract data and infect networks with malicious software.[17] Even if financial firms have the capability to monitor for new risks, they are helpless if there is a vulnerability embedded in the software from the very beginning.

What are the benefits and risks to consumers arising from AI, particularly for vulnerable consumers?

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[14] Boukherouaa, El Bachir, Mr Ghiath Shabsigh, Khaled AlAjmi, Jose Deodoro, and Ebru S Farais. Powering the Digital Economy: Opportunities and Risks of Artificial Intelligence in Finance. IMF 2021, no. 024 (n.d.): 34.

[15] Bank of England and FCA. FS2/23 – Artificial Intelligence and Machine Learning, October 2023. https://www.bankofengland.co.uk/prudential- regulation/publication/2023/october/artificial-intelligence-and-machine-learning.

[16] Shabsigh, Ghiath, and El Bachir Boukherouaa. Generative Artificial Intelligence in Finance: Risk Considerations. IMF, 22 August 2023. https://www.imf.org/en/Publications/fintech-notes/Issues/2023/08/18/Generative-Artificial-Intelligence-in-Finance-Risk-Considerations- 537570.

[17] NCSC. Log4j Vulnerability - What Everyone Needs to Know, 2021. https://www.ncsc.gov.uk/information/log4j-vulnerability-what-everyone-needs-to-know.

13. There will undoubtedly be *some* benefits for *some* consumers. In the right hands, it could enable the development of more responsive products and services. It could also reduce end-to-end supply chain and distribution costs, which if passed on to consumers would result in better value for those consumers the market wants to serve.

14. However, there are undoubtedly significant risks, especially for vulnerable consumers. The types of AI-related consumer detriment we are concerned about can already be seen in financial services as a result of the increased use of technology and big data.[18] There is evidence of: manipulation of consumer behaviours and psychological biases, and dissemination of misleading information using techniques such as 'dark patterning';[19] consumers more readily exposed to online scams and fraud;[20] tech services combining with vertical product providers to promote overconsumption of products and credit; [21] and hyper-personalised profiling of consumers causing and exacerbating financial exclusion and discrimination whether explicit or by proxy. Outright digital exclusion remains an issue. We are concerned that unless robust safeguards are put in place by policymakers and regulators, the increased use of AI in finance will heighten these risks and exacerbate the harms.

15. AI (or indeed any other technological/data innovation) does not alter the fundamental nature of market based financial services. The retail financial services sector is built on segmenting and profiling consumers into high/low risk/profitability. This is not a criticism, it is just the nature of markets. However, AI/tech allows financial services firms to segment and profile consumers at an even more granular level. It is driving an even greater personalisation of financial products and services and individualising of risk.

16. This may be to the benefit of those consumers who are considered to be a good risk/commercially attractive. They may well receive better products and services as a result. However, AI could exacerbate the inherent tendency of market-based financial services to segment and profile and result in further financial exclusion, discrimination, and inequality. Biased or discriminatory decisions can arise from bias in the underlying

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[18] These are set out in more detail in Fintech: beware of geeks bearing gifts? Fintech – beware of 'geeks' bearing gifts? | The Financial Inclusion Centre

[19] Dark patterns - Which? Policy and insight

[20]. Scale and impact of online fraud revealed - Ofcom

[21] A particularly worrying example of 'embedded finance' is buy now, pay later (BNPL) credit. See: Sustainability | Free Full-Text | Click to Buy: The Impact of Retail Credit on Over-Consumption in the Online Environment (mdpi.com)

data on which the AI model is trained, with the data reflecting historical biases in society, or being incorrect or unrepresentative of society, leading to biased decisions for consumers.[22] This can lead to consumers experiencing unfair bias relating to their gender, ethnicity and disability, in terms of access to products, pricing of products and services received.[23]

17. AI is already facilitating even more data-intensive profiling. Insurance is a prime example.[24] AI could enable greater risk profiling according to behaviours not just the financial risk a consumer represents for an insurer or lender. In other words, financial services will be making what are tantamount to value judgments about a person's character, not just commercial judgments about consumers.

18. The increased use of and reliance on ML/AI processes will entrench power in the hands of 'Big Tech' platform companies, which are increasingly making inroads into finance but are not subject to the same regulatory oversight as regulated financial firms. Benefiting from 'network effects' and economies of scale, these Big Tech platforms have become some of the largest firms in the world. Their dominance means that they will be able to scale-up the use of AI much faster than smaller firms, benefiting from greater data insights, computing power and financing. A healthy and well-functioning market requires a multitude of business models. This imbalance of power will reduce the diversity of firms in financial services and disadvantage smaller firms that offer specialised services to specific groups.

19. The increased use of ML and AI processes risks weakening the effectiveness of the FCA's flagship Consumer Duty reforms and existing consumer protection regulation. It is very difficult for non-technical people to understand the complex and opaque nature of AI decision-making algorithms. This means boards of firms and senior management, even if they cannot be expected to understand what is inside the 'black box', should place even greater emphasis on ensuring the right consumer outcomes. The FCA

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[22] Bank of England, 'DP5/22: Artificial Intelligence and Machine Learning' DP5/22 - Artificial Intelligence and Machine Learning | Bank of England

[23] Maple, Szpruch, and Epiphaniou, 'The AI Revolution: Opportunities and Challenges for the Finance Sector'. The AI Revolution: Opportunities and Challenges for the Finance Sector | The Alan Turing Institute

[24] See: Marvin van Bekkum, Frederik Zuiderveen Borgesius & Tom Heskes (11 Mar 2025): AI, insurance, discrimination and unfair differentiation: an overview and research agenda, Law, Innovation and Technology, DOI: 10.1080/17579961.2025.2469348 AI insurance discrimination and unfair differentiation an overview and research agenda.pdf

recently published findings from its review of how firms treat vulnerable consumers and how firms are responding to the Consumer Duty. [25] There are real concerns about how firms monitor outcomes for vulnerable consumers, and governance and oversight. The FCA found that most firms were unable to effectively monitor outcomes for customers in vulnerable circumstances. Only 39% of firms had formal governance bodies or committees that oversee and can influence outcomes for customers in vulnerable circumstances.

20. If firms are performing poorly even before AI has become fully established, it does raise concerns about the ability and willingness of boards and executives to ensure AI generates the right outcomes for consumers. The combination of poor understanding of the AI decision-making algorithms and weak governance and oversight of the treatment of vulnerable consumers does not bode well.

21. Consumers currently have to choose between thousands of firms and products. Not surprisingly, they will often make use of financial advisers or other information intermediaries to help them get the right outcomes. With AI expected to play a much bigger role in this intermediation process between consumers and primary providers of products (banks, insurers, asset managers and so on), this will raise challenging questions about the boundary of responsibility and liability between firms, intermediaries, AI platforms, and consumers themselves when things go wrong. This uncertainty is yet to be resolved and should be a priority for the FCA. Competition and Markets Authority (CMA) and Information Commissioner's Office (ICO).

22. As mentioned, in some ways AI is an evolution of existing tech/data so many of the issues relating to data use will be the same. However, there are some potential differences. AI can be used to trawl public fora such as social media and retail websites for consumers' behavioural data to feed into models. This is different to consumers 'volunteering' relatively limited personal data to firms and intermediary marketing organisations. Given current data capability levels we think it is unlikely that consumers will fully appreciate the data they are revealing online, and the potential consequences of doing so. Consumers not only have a poor understanding *that* their data is being used, but *how* it is used. Research has found that a university education is needed to

[25] See: Delivering good outcomes for customers in vulnerable circumstances – good practice and areas for improvement | FCA

understand the language used in terms and conditions which explain what can be done with your data.[26] The relevant regulators, the FCA and ICO, could try to raise consumer awareness and understanding of how their data is now being used. However, if financial education initiatives are anything to go by, digital education initiatives are unlikely to be effective in constraining market behaviours. Again, this points to the relevant regulators developing more robust standards and ensuring there is greater transparency about the AI models and the data being harvested.

How can Government and financial regulators strike the right balance between seizing the opportunities of AI but at the same time protecting consumers and mitigating against any threats to financial stability?

23. History tells us that financial crises occur following periods of deregulation and sector growth, combined with risky behaviour. The new government has asked the FCA to encourage more risk taking to accelerate efforts to support the growth and competitiveness of financial firms. This has echoes of 1970s deregulation and pre-2007 behaviour with the added element of a powerful and complex technology that we don't fully understand. Gary Gensler, the outgoing chair of the US Securities and Exchange Commission, said that the immediate risk from AI is not a robot takeover but a new financial crash, and that the likelihood of an AI-driven financial crisis within a decade would be "nearly unavoidable" if there were no regulatory intervention.[27] Unless the regulatory regime acts in a more precautionary manner, we may very well see another financial crisis. The difference will be that this time it will be driven by AI, and the extent of the impact could go well beyond anything we've seen before.

24. The FCA should adopt a precautionary approach to AI in finance. It should ensure that boards and senior management have a better understanding of the outcomes generated by AI and implement robust governance and oversight of AI driven business models. If boards and senior management are not able to demonstrate that better knowledge, or the FCA is not satisfied that robust governance and oversight is in place, then the regulator should not be afraid to require firms to pause the use of AI driven decision making until issues have been addressed.

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[26] What tech giants really do with your data - BBC News

[27] Financial Times. "How to prevent AI from provoking the next financial crisis". October, 2023. https://www.ft.com/content/f05c5bbb-4d05-45b3-a4a7-01f522803015

25. The FCA should issue specific guidance and standards on the use of AI decision-making algorithms and ensure there is greater transparency about the operation of AI models to allow civil society and academics to investigate the impact of AI and challenge firms on its use.

26. Surprisingly, given the worrying findings about the poor oversight of consumer outcomes mentioned above, the FCA plans to remove the requirement for firms to have a Consumer Duty Champion in place.[28] To address the concerns about AI and poor outcomes, the FCA should require firms to nominate a board member or other senior person to take lead responsibility for assessing how AI models affect vulnerable consumers and report to the FCA.

27. The FCA, CMA, and ICO should prioritise clarifying where the boundary of responsibility and liability lies between firms, intermediaries, AI platforms, and consumers when things go wrong as a result of AI decision making.

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[28] PS22/9: A new Consumer Duty | FCA