AIFS0079

Written evidence submitted by Clara Martins Pereira

Associate Professor of Financial Law, Durham Law School, Durham University

Table of Contents

Executive Summary

I. AI and the UK financial sector: AI is currently widely used in the UK financial sector. Indeed, 75% of firms currently use AI in the provision of their services, with a further 10% of firms planning to use AI over the next three years-for a total of 85% of financial firms presently using/planning to use AI applications. These numbers are broadly aligned with the data available for the global financial industry, where 85% of the global financial sector already implements AI. Importantly, recently surveys show that the financial services industry is more exposed to AI transformation than most other industries—and has accordingly been investing in AI technologies at a faster rate than other industries. The development and deployment of AI and other algorithmic technologies is being carried out by different types of market participants, with FinTechs placing marginally ahead of incumbents when it comes to

the adoption of AI technologies and using AI in different ways—with a bigger emphasis on the development of new products and services rather than on the optimisation of existing processes. Notably, not all areas of financial services are adopting AI at the same rate; however, while most use cases of AI in financial services come from the banking and insurance sectors, the use of algorithmic technologies has actually been shaping the European financial markets for decades, in the shape of algorithmic trading (which now comprises around 80% of all trading in equity secondary markets).

II. **AI and productivity in financial services:** algorithmic technologies have several important use cases in finance, AI set to play a key role in improving productivity in financial services. Across the UK financial industry, the most popular use case for AI is the optimisation of internal processes. Specifically in banking, AI is being used for customer segmentation, credit scoring and for the detection of illicit activities. In insurance, AI is being used in underwriting, pricing, claims management, operational risk management and fraud detection. In the capital markets, AI is being deployed across the entire trading life cycle, including pre-trade analysis, trading and post-trade processing. At the same time, there are a variety of both regulatory and non-regulatory constraints to AI adoption. In particular, concerns over job security may well be justified, particularly following recent advances in GenAI. More broadly, GenAI creates important risks for adopters, including both internal and external risks, as well as risks for clients and the broader market. However—and even though such challenges could materialise in virtually any area of the financial services—certain GenAI use cases create less risk than others (in the sense of giving rise to smaller or more contained losses), particularly internal-facing applications that give employees the opportunity to familiarise themselves with the possibilities of this new type of AI in supervised environments.

III. **AI and financial stability:** The relationship between AI and financial stability has become a significant source of apprehension for policymakers and academics. There are four main potential sources of systemic risk: greater use of AI in decision-making by banks and insurance firms; greater use of AI in financial markets; operational risks connected to third-party AI service providers; and a changing cyber threat environment. First, the use of AI in decision-making by banks and insurance firms can create systemic risk if a large number of firms rely on the same open-source model components and data libraries. The risk of taking correlated positions also exists in financial markets; to the extent that firms again rely on the same models and data, the use of AI technologies in this context could again increase the tendency for market participants to take correlated positions. Importantly, risks of hallucination and herding behaviour have long been found in the simpler algorithmic technologies that have been dominating modern (equity) markets for decades—making the question of whether more complex AI algorithms are a more significant (or, indeed, a different) source of systemic risk than simpler algorithms a very difficult one. Third, cybersecurity challenges are widely seen as a key source of systemic risk financial systems populated by AI technologies, which create new opportunities for cyberattacks both when they are deployed by financial institutions and when they are deployed by malicious actors themselves. Finally, an important source of systemic risk arising from the use of AI in financial services comes from the fact that many financial institutions rely on third-party service providers sitting outside the financial sector—given both the significant third-party dependency reported by market players, and their reliance on a small number of third-party providers. Relatedly, concerns can be raised about the competition risks arising from the concentration of third-party technology services among BigTech firms, as there is a reported feedback loop between AI investments and firm size, and the data gathered by BigTech firms can be especially valuable in areas like insurance and credit provision. At the same time, it is worth noting that, in Europe, the use of social media data by market players is heavily restricted when it comes to social scoring. By contrast, the use of alternative data sources in asset management and trading appears to be on the rise.

IV. **AI and consumer protection in finance:** Advancements in AI technologies play a significant role in process optimisation—helping reduce many of the costs currently associated with the financial industry—but it is also hoped that AI-fuelled products and services may further contribute to the financial inclusion of communities that have traditionally lived at the fringes of the financial system At the same time, there are several reasons for remaining sceptical as to the potential of AI for furthering financial inclusion in UK financial markets, in particular the fact that digital exclusion still affects millions of UK citizens, the fact that successive governments have resisted electing financial inclusion a statutory regulatory goal, and the fact that the use of AI in finance also exposes vulnerable customers to a variety of additional risk. When it comes to credit scoring, self-learning algorithms might enhance pre-existing biases in data, to the detriment of vulnerable borrowers; the popularisation of algorithmic trading has also raised concerns about the creation of two-tiered markets. Another important channel for maximising the potential of AI for vulnerable consumers relates are data sharing frameworks. The importance of (good quality) data for AI technologies, and for the development and deployment of products and services cannot be understated. Indeed, unequal access to data explains many of the competitive dynamics experienced by players in the financial services industry and data sharing frameworks like open banking can play an important role in increasing competition and in empowering consumers to make the most out of their data. This can in turn open new channels for underbanked and underfinanced segments of the population. As the UK prepares its transition into open finance, the proportionate application of a reciprocity principle might contribute to levelling the playing field between BigTechs and financial institutions, without unduly burdening smaller FinTechs—ultimately resulting in more data sharing and improved financial inclusion.

V. **Regulatory approaches to the use of AI in finance:** policymakers and financial regulators face a difficult puzzle when attempting to strike the right balance between seizing the opportunities of AI while also addressing the risks that it creates. First, outlining and appraising current regulatory approaches to the use of AI in finance is a complex challenge, with many jurisdictions struggling to map out and analyse their own regulatory approaches to the use of AI in finance. This state of affairs seemingly has a profound effect on market players and should prompt policymakers into action: first, by determining the extent to which advancements in AI technology have created new benefits/risks in finance; second, by determining whether private actors and/or existing regulatory and quasi-regulatory frameworks already adequately address such benefits/risks; and, third, by designing frameworks that appropriately tackle identified market failures, with benefits exceeding costs. Notably, most instruments in existing regulatory frameworks do not contain AI-specific requirements, having been designed with simpler algorithms in mind. As such regulators are encouraged to revisit existing frameworks applicable to robo advice, algorithmic trading, market manipulation and algorithmic credit scoring. At the same time, it is worth noting that no specific changes/additions to existing regulatory and quasi-regulatory frameworks appear to be urgent, as most AI risks are already (at least somewhat) covered by existing frameworks. Going forward, the Government and regulators are likely to require additional information, resources and expertise to help monitor, support and regulate AI implementation in financial services. The trilemma faced by policymakers looking to promote market integrity (including consumer protection and financial stability)—while also encouraging innovation means and providing clear rules that satisfy the industry's need for legal certainty—can only be addressed through a combination of different tools, which will are likely to include close domestic agency cooperation; ambitious international coordination with policymakers in key markets, and the enlistment of private players. The Government and regulators should also be prepared to make full use of their regulatory and quasi-regulatory arsenal—including tools that have consolidated the UK's competitive advantages in the financial sector like industry-informed recommendations, regulatory sandboxes, and tech and policy sprints—as well as invest in SupTech technologies. At the same time, it is possible that maximising the opportunities brought by the use of AI in finance—while also addressing the risks created, in

particular, for financial stability and consumer protection—can only be achieved through more structural transformations of foundational features of the UK economy.

Introduction

1. This submission is made in response to the Call for Evidence issued by the Treasury Committee of the United Kingdom ('UK') Parliament on the use of Artificial Intelligence ('AI') in financial services ('Call for Evidence'). It covers the use of AI across various sectors within financial services, with a particular focus on asset management and trading, reflecting the expertise of the author.

2. It is broadly organised across the five areas on which evidence is being sought—*(I)* AI and the UK financial sector; *(II)* AI and productivity in financial services; *(III)* AI and financial stability; *(IV)* AI and consumer protection in finance; and *(V)* regulatory approaches to the use of AI in finance—although not all areas are given equal attention.

3. Importantly, this submission adopts a purposefully wide definition of AI. Similarly to the UK government's own definition of AI, it encompasses products/services that are adaptable and autonomous[1]—but it also recognises that algorithmic technologies and AI exist on a spectrum and also embraces the study of the simpler algorithms that continue to be popular, in particular, in UK financial markets.[2] As noted recently by the European Securities and Markets Authority ('ESMA') 'a large part of what is branded as AI in finance is not technically new but has existed in the form of statistical or econometric modelling techniques for a long time'.[3]

I. AI and the UK financial sector

How is AI currently used in different sectors of financial services and how is this likely to change over the next ten years?

4. AI is currently widely used in the UK financial sector. This section of the response: first, *(i)* discusses how AI is changing the financial services sector, particularly when compared to other sectors in the economy; second, *(ii)* it highlights the role played by different types of market participants (including FinTechs); and, finally, it *(iii)* outlines the different areas where financial services are being transformed by AI (with a particular focus on markets and algorithmic trading).

(i) The transformation of the financial industry by AI

5. The latest survey conducted by the Bank of England ('BoE') and the Financial Conduct Authority ('FCA') on the use of AI and machine learning ('ML') in UK financial services, published in November 2024, reveals that **75% of firms currently use AI in the provision of their services, with a further 10% of firms planning to use AI over the next three**

[1] UK Government, 'A Pro-Innovation Approach to AI Regulation' <https://www.gov.uk/government/publications/ai-regulation-a-pro-innovation-approach/white-paper> accessed 11 April 2025.

[2] Financial Conduct Authority, 'Algorithmic Trading Compliance in Wholesale Markets' (2018) <https://www.fca.org.uk/publications/multi-firm-reviews/algorithmic-trading-compliance-wholesale-markets> accessed 11 April 2025.

[3] European Securities and Markets Authority., 'Artificial Intelligence in EU Securities Markets' (2023) ESMA50-164–6247 <https://data.europa.eu/doi/10.2856/851487> accessed 11 April 2025.

years—for a total of 85% of financial firms presently using/planning to use AI applications.[4]

6. This represents significant growth when compared to numbers reported in previous editions of the same survey: in the second edition of the BoE/FCA survey, published in October 2022, 58% of financial firms were then using AI, with a further 14% planning to do so[5] (for a total of 72% of firms using/planning to use ML applications)[6]—whereas, in the first edition of the BoE/FCA Survey, published in October 2019, only two thirds of firms reported using ML in their business.[7]

7. **The numbers reported in the UK financial sector are broadly aligned with the data available for the global financial industry.** A 2020 survey conducted jointly by the Cambridge Centre for Alternative Finance and the World Economic Forum ('WEF') revealed that **85% of the global financial sector was already implementing AI 'in some way'**.[8] High adoption rates may be explained by a combination of factors—in particular the fact that the global financial industry has been employing AI and other algorithmic technologies for several years now, [9] and investing significant capital on the development and deployment of these technologies.[10] Indeed, a White Paper published by the WEF in January 2025 notes that the global financial services industry has been using AI in their processes 'for decades', having spent an estimated USD $35 thousand million on AI in 2023 alone.[11]

8. **Importantly, recently surveys show that the financial services industry is more exposed to AI transformation than most other industries** (with 97% of employers expecting AI and information processing technologies to transform their business by 2030).[12] Accordingly, **the global financial services industry appears to be investing in AI technologies 'at a faster**

---

[4] *See* Bank of England and Financial Conduct Authority, 'Artificial Intelligence in UK Financial Services - 2024' (2024) <https://www.bankofengland.co.uk/report/2024/artificial-intelligence-in-uk-financial-services-2024> accessed 11 April 2025. Foundation models—which are a form of Generative AI—currently represent 17% of all AI use cases in UK financial services, although adoption rates are expected to increase (*see* ibid).

[5] ibid.

[6] Bank of England and Financial Conduct Authority, 'Machine Learning in UK Financial Services' (2022) <https://www.bankofengland.co.uk/report/2022/machine-learning-in-uk-financial-services> accessed 11 April 2025.

[7] Bank of England and Financial Conduct Authority, 'Machine Learning in UK Financial Services' (2019) <https://www.fca.org.uk/publication/research/research-note-on-machine-learning-in-uk-financial-services.pdf> accessed 11 April 2025.

[8] Cambridge Centre for Alternative Finance and World Economic Forum, 'Transforming Paradigms: A Global AI in Financial Services Survey' (2020).

[9] For a discussion of the definition of AI and the distinction between AI and other algorithmic technologies, *see* Paragraph 3 of the Introduction, above.

[10] Companies in the financial sector are also particularly successful at external investment (*see* UK Government - Department for Science, Innovation & Technology, 'Artificial Intelligence Sector Study 2023' (2024) <https://www.gov.uk/government/publications/artificial-intelligence-sector-study-2023/artificial-intelligence-sector-study-2023> accessed 11 April 2025.

[11] World Economic Forum, 'Artificial Intelligence in Financial Services' (2025) White Paper <https://reports.weforum.org/docs/WEF_Artificial_Intelligence_in_Financial_Services_2025.pdf> accessed 11 April 2025., 5.

[12] World Economic Forum, 'Future of Jobs Report - 2025' (2025) Insight Report <https://reports.weforum.org/docs/WEF_Future_of_Jobs_Report_2025.pdf> accessed 11 April 2025., 62. By contrast, only 72% and 76% of employers in the Energy, Technologies and Utilities sector and in the Government and Public sector (respectively) expect to have their businesses transformed by AI in a similar time frame.

rate than other industries'—followed by some distance by consumer industries, the media entertainment and sports industry and the healthcare industry.[13] Similarly, a survey conducted by the OECD in 2022—and discussed by the European Commission in 2024—reveals that a larger % of businesses active in the financial industry use AI when compared to businesses active in the manufacturing industry.[14] In 2027, projected investment in AI by the global financial services industry is expected to reach USD $97 thousand million across the various areas of financial services, reflecting a strong belief in the importance of AI for conducting business in this particular area.[15]

(ii) Different market participants and AI adoption

9. It is worth noting that **the development and deployment of AI and other algorithmic technologies has been—and is being—carried out by different types of market participants:** incumbents (including banks, insurers, investment firms, pension funds, financial infrastructures, etc), but also technology companies—including both large non-financial firms (sometimes called 'BigTechs') and smaller 'FinTech' start-ups. In some cases, these technology companies are subsidiaries of well-established financial institutions; in other cases, they are entirely independent.[16] Interestingly, the financial services sector appears to be the second sector with the highest number of AI companies, surpassed only by the Information Technology ('IT') sector.[17]

10. The 2020 survey conducted by the Cambridge Centre for Alternative Finance and the WEF shows that **FinTechs have been placing marginally ahead of incumbents when it comes to the adoption of AI technologies**. This might be explained by a variety of factors: first, because FinTechs are not required to transform their core business offerings when adopting AI (and are unburdened by legacy systems and siloed data systems); second, because FinTechs appear to invest higher proportions of their research and development ('R&D') on AI (after adjusting for size); and, third, because they have historically placed more emphasis on the strategic importance of AI to their businesses (particularly in terms of business-differentiation strategies). At the same time, incumbent institutions typically enjoy better pre-existing reputation, customer reach and data access than FinTechs; as a result, incumbents and FinTechs often form partnerships, to the benefit of both.[18]

11. Crucially, it would appear that **FinTechs use AI differently when compared to incumbents.** First, it appears that incumbents are currently experimenting with more different types of AI than FinTechs.[19] At the same time, incumbents have been historically more conservative than

---

[13] World Economic Forum, 'Artificial Intelligence in Financial Services' (n 11)., 8.

[14] European Commission. Directorate General for Economic and Financial Affairs., 'Artificial Intelligence: Economic Impact, Opportunities, Challenges, Implications for Policy.' (2024) <https://data.europa.eu/doi/10.2765/48272> accessed 11 April 2025.

[15] According to the 2025 WEF report, '70% of financial services executives believe that AI will directly tie to revenue growth in upcoming years' (*see* World Economic Forum, 'Artificial Intelligence in Financial Services' (n 11)., 11. Similarly, the 2020 survey conducted jointly by the Cambridge Centre for Alternative Finance and WEF had also noted that '77% of all respondents [had anticipated] AI to possess high or very high overall importance to their business within two years'.

[16] Expert Group on Regulatory Obstacles to Financial Innovation, 'Thirty Recommendations on Regulation, Innovation and Finance' (2019) <https://finance.ec.europa.eu/document/download/98a331c4-6700-4355-b545-cb97a49f13c2_en?filename=191113-report-expert-group-regulatory-obstacles-financial-innovation_en.pdf> accessed 11 April 2025., 9, 25, 67.

[17] UK Government - Department for Science, Innovation & Technology (n 10).

[18] Cambridge Centre for Alternative Finance and World Economic Forum (n 8)., 18-25.

[19] Bryan Zheng Zhang, Arvind Ashta and Mary Emma Barton, 'Do FinTech and Financial Incumbents Have

FinTechs when it comes to AI implementation: while incumbent institutions mostly use AI to improve existing products and foster process innovation within existing portfolios, FinTechs are more likely to create new AI-based products and services, as well as to sell AI-enabled products as a service, with presumably higher impact on profitability.[20] Importantly, data from 2019 shows that both incumbents and FinTechs have historically been using AI mostly as a tool to complement human decision-making—with FinTechs being more likely than incumbents to employ 'fully autonomous' AI solutions. Technological development and increased data availability could in theory lead to more widespread development and deployment of 'fully autonomous' AI solutions, but factors like client preferences/lack of consumer trust, regulatory constraints and pervasive technological limitations may also justify a continued preference for solutions that merely complement human decision-making.[21] Indeed, in the latest BoE / FCA survey, only 2% of AI use cases were reported as delivering 'fully autonomous decision-making'.[22]

(iii) The impact of AI in different areas of financial services

12. Notably, **not all areas of financial services are adopting AI at the same rate**.[23] In the UK, the biggest users of AI are insurance firms (at 95%), followed by international banks (currently at 94% but projected to surpass insurance firms). By contrast, only 57% of financial market infrastructure firms currently use AI (although a further 10-15% appear to be planning to use AI in the near future).[24]

13. Although currently most use cases of AI in financial services come from the banking and insurance sectors, **the use of algorithmic technologies has actually been shaping the European financial markets for decades, in the shape of algorithmic trading**. Indeed, the first regime in the world 'to define best practices for algorithm oversight'—the second iteration of the Markets in Financial Instruments Directive ('MiFID'), which came into effect in 2018 and was then transposed and implemented by the UK ('UK MiFID framework' as onshored)—was precisely aimed at regulating algorithmic trading (and the infrastructures and activities that host and facilitate it). Currently, **it is estimated that between 70%-80% of all trading in European secondary equity markets is algorithmic trading**, with around 60% of traded volumes being attributed to High-Frequency Trading ('HFT')[25]—numbers that grew steadily starting in the early 2000s[26] and have since appeared to plateau.[27] In bond markets

---

Different Experiences and Perspectives on the Adoption of Artificial Intelligence?' (2021) 30 Strategic Change 223.

[20] Cambridge Centre for Alternative Finance and World Economic Forum (n 8)., 12.

[21] ibid., 107-108.

[22] Bank of England and Financial Conduct Authority, 'Artificial Intelligence in UK Financial Services - 2024' (n 4).

[23] Information about specific use cases (and the relative importance of AI across different use cases and business functions) can be found below.

[24] Bank of England and Financial Conduct Authority, 'Artificial Intelligence in UK Financial Services - 2024' (n 4).

[25] HFT is a sub-type of algorithmic trading characterised by infrastructure intended to maximise trade speed, automatic order initiation, generation, routing or execution and high message intraday rates, including orders, quotes and cancellations (*see* article 4(1)(39) of MiFID).

[26] European Central European Central Bank, 'Algorithmic Trading: Trends and Existing Regulation' (2019) <https://www.bankingsupervision.europa.eu/press/supervisory-newsletters/newsletter/2019/html/ssm.nl190213_5.en.html> accessed 11 April 2025., and European Securities and Markets Authority, 'Reply Form for the Consultation Paper on the Algorithim Trading' (2020) ESMA70-156–4086.

[27] Non-algorithmic trading is likely to continue to play a role in periods of higher volatility/reduced liquidity, as

too, algorithmic trading appears to account for around 80% of trading;[28] however, and contrary to equity markets, virtually none of that trading is HFT. Finally, algorithmic trading in derivatives markets corresponded to around 30% of traded volumes.[29]

14. A recent survey focusing more broadly on the use of AI in (European Union) financial markets—and across the entire trading lifecycle (including also pre-trading also post-trading activities)—also notes that market participants have been increasingly using 'AI to support certain activities and optimise specific phases of their business', although they are also of the opinion that increasing adoption rates do not appear to be leading to a 'fast and disruptive overhaul of business processes' due, in particular to three factors: technological constraints, client preferences and regulatory uncertainty.[30] Such factors—and, in particular, client preferences and regulatory concerns (and, more specifically a desire to avoid making false claims/attracting regulatory attention)—could also explain a degree of underreporting of AI use cases in financial markets.[31]

15. Finally, not all types of AI technologies are likely to be uniformly adopted across different financial services areas. Gradient boosting models and transformer based models appear to be popular across the board;[32] however, Machine Learning ('ML')—specifically neural networks—and Natural Language Processing ('NLP') are expected to become particularly prevalent in asset/portfolio management, trading and post-trading.[33] Generative AI ('GenAI') is also expected to have a marginally bigger impact in banking and capital markets, when compared to the insurance sector.[34]

In summary: AI is currently widely used in the UK financial sector. Indeed, 75% of firms currently use AI in the provision of their services, with a further 10% of firms planning to use AI over the next three years-for a total of 85% of financial firms presently using/planning to use AI applications. These numbers are broadly aligned with the data available for the global financial industry, where 85% of the global financial sector already implements AI. Importantly, recently surveys show that the financial services industry is more exposed to AI transformation than most other industries—and has accordingly been investing in AI technologies at a faster rate than other industries. The development and deployment of AI and other algorithmic technologies is being carried out by different types of market participants, with FinTechs placing marginally ahead of incumbents when it comes to the adoption of AI technologies and using AI in different ways—with a bigger emphasis on the

---

well as for more complex transactions (*see,* in regard to bonds, Marko Mravlak Vazouras Ioannis, 'Electronic Trading – a Boost to ESM Bond Market Resilience' (*European Stability Mechanism*, 20 November 2024) <https://www.esm.europa.eu/blog/electronic-trading-boost-esm-bond-market-resilience> accessed 11 April 2025.).

[28] ibid. Notably, this trend is 'confirmed across market segments of different investor types and regions' although a few segments are 'more advanced than others, e.g. private fund managers compared to central banks and other public institutions'; the volume of algorithmic trading as a % of traded volumes in bond markets appears to have stabilised, but 'it remains to be seen if the electronification of small bond traders will expand further' (*see* ibid.).

[29] European Securities and Markets Authority, 'MiFID II Review Report: MiFID II/MiFIR Review Report on Algorithmic Trading' (2021) ESMA70-156–4572 <https://www.esma.europa.eu/sites/default/files/library/esma70-156-4572_mifid_ii_final_report_on_algorithmic_trading.pdf> accessed 11 April 2025., 20-21.

[30] European Securities and Markets Authority. (n 3).8.

[31] ibid.

[32] Bank of England and Financial Conduct Authority, 'Artificial Intelligence in UK Financial Services - 2024' (n 4).

[33] European Securities and Markets Authority. (n 3)., 6.

[34] World Economic Forum, 'Artificial Intelligence in Financial Services' (n 11)., 7-9.

development of new products and services rather than on the optimisation of existing processes. Notably, not all areas of financial services are adopting AI at the same rate; however, while most use cases of AI in financial services come from the banking and insurance sectors, the use of algorithmic technologies has actually been shaping the European financial markets for decades, in the shape of algorithmic trading (which now comprises around 80% of all trading in equity secondary markets).

II. AI and productivity in financial services

To what extent can AI improve productivity in financial services?

16. **AI has several important use cases in finance, across a variety of business areas and functions.**[35] Such use cases may be key for improving productivity in financial services, as illustrated by the positive role played by machine learning ('ML') systems in mitigating the impacts of the recent Covid-19 pandemic—during which banks used ML algorithms to help process surges in loan applications and customer inquiries, allowing them to handle higher volumes with existing sources[36]—or by the recent electronification of trading—which appears to have had positive impact on transaction costs.[37] This section of the response: first, *(i)* lists the most popular use cases for AI, in general and across specific sectors (banking, insurance and markets); second, *(ii)* highlights key barriers to the adoption of AI in financial services (focusing particularly on concerns with job losses and on the risks created by GenAI); and, finally, *(iii)* discusses whether the UK's financial sector is well-placed to take advantage of AI in financial services compared to other countries.

(i) Use cases for AI in finance

17. Briefly, algorithmic technologies—including AI technologies—and the algorithms that underlie them can have: different modes of operation (ranging from simpler algorithms to more complex AI-driven algorithms); different types of application (depending on whether they are outward-facing algorithms used by businesses to manage their interactions with customers and markets, or whether they are inward-facing algorithms helping businesses optimise processes and manage risks); and different functions that they ultimately perform (giving rise to different use cases).[38] This section focuses on AI use cases.

18. **Across the UK financial industry, the most popular use case for AI is the optimisation of internal processes**, with 41% of the responded to the survey conducted by the FCA/BoE in 2024 reporting the use of AI in this area, followed by cybersecurity (37%) and fraud detection (33%). Areas of significant predicted growth include customer support (where 36% of respondents expect to start using AI in the next three years) and regulatory compliance and reporting (32%)—as well as fraud detection (31%) and internal process optimisation (31%).[39]

19. Specifically in the **banking sector, AI is being used by firms for customer segmentation, credit scoring and for the detection of illicit activities**.[40] In the **insurance sector, AI is**

[35] Bank of England and Financial Conduct Authority, 'Artificial Intelligence in UK Financial Services - 2024' (n 4).

[36] Bonnie G Buchanan and Danika Wright, 'The Impact of Machine Learning on UK Financial Services' (2021) 37 Oxford Review of Economic Policy 537.

[37] Albert J Menkveld, 'The Economics of High-Frequency Trading: Taking Stock' (2016) 8 Annual Review of Financial Economics 1.

[38] For a useful 'AI Use Case Heatmap' illustrating the (more or less widespread) use of AI to fulfil different business objectives, *see* Expert Group on Regulatory Obstacles to Financial Innovation (n 16).

[39] For a comprehensive review of AI use cases in the financial system, *see* also Buchanan and Wright (n 36).

being deployed in areas that include underwriting, pricing, claims management, operational risk management and fraud detection.[41] In the **capital markets, AI is being deployed across the entire trading life cycle**. This includes the use of AI in asset management—in particular portfolio management and investing and financial advice—, the use of AI in trading itself (algorithmic trading), and the use of AI in post-trade processing.[42]

20. In particular, investors at the pre-trade analysis stage may use AI to identify investment opportunities, using Natural Language Processing algorithms to parse through a company's annual report and extract information that can inform decisions on whether to buy or sell instruments in that company. At the trade execution stage, a pension fund might use a Deep Learning Model to rebalance a portfolio. Finally, at the post-trade processing stage, Machine Learning might be used to predict the likelihood of a trade being settled and automatically manage the collateral allocated to cover expected losses.[43]

21. Interestingly, in the EU, the number of EU investment funds 'mentioning AI or related terms in their name' has stabilised, after seeing steady growth until 2023.[44] Crucially, fund managers emphasize that the use of AI in investment research and alpha generation is essentially focused on augmenting existing capabilities, rather than on implementing full automation.[45] As mentioned previously, this might be the product of client preferences/lack of consumer trust, regulatory constraints (including regulatory uncertainty), and pervasive technological limitations.[46]

(ii) Key barriers to adoption of AI in finance

22. These are not the only barriers to adoption of AI in financial services. More broadly, respondents to the survey conducted by the FCA/BoE in 2024 identified **a variety of both regulatory and non-regulatory constraints to AI adoption**. The main areas of regulation seen as constraining the adoption of AI include the regulation of data protection and privacy (identified by 23% of respondents as a large constraint), followed by resilience, cybersecurity and third parties' rules (12%) and the FCA Consumer Duty and conduct (5%).[47] When it comes to types of regulatory constraints, the main concern expressed by firms pertained to the high regulatory burden inherent in AI adoption, followed by regulatory uncertainty, and either insufficient regulation, or lack of alignment with international and national legal frameworks (depending on the area).[48]

---

[40] European Banking Authority, European Securities and Markets Authority and European Insurance and Occupational Pensions Authority, 'Joint Committee Update on Risks and Vulnerabilities in the EU Financial System – Spring 2025' (2025) <https://www.eba.europa.eu/sites/default/files/2025-03/c9723ef6-82b0-4232-b0f7-37cbf9cb78a9/Joint%20Committee%20Update%20on%20risks%20and%20vulnerabilities%20in%20the%20EU%20financial%20system%20-%20Spring%202025.pdf.pdf> accessed 11 April 2025.

[41] ibid.

[42] European Securities and Markets Authority. (n 3).

[43] ibid.

[44] European Securities and Markets Authority, 'TRV Risk Monitor - ESMA Report on Trends, Risks and Vulnerabilities' (2024) 2 <https://www.esma.europa.eu/sites/default/files/2024-08/ESMA50-524821-3444_TRV_2_2024.pdf> accessed 11 April 2025.

[45] Mercer, 'AI integration in investment management - 2024 global manager survey' (2024) Portfolio Strategies <https://www.mercer.com/assets/global/en/shared-assets/global/attachments/pdf-2024-Mercer-AI-integration-in-investment-management-2024-global-manager-survey-report-03212024.pdf> accessed 11 April 2025.

[46] European Securities and Markets Authority. (n 3).

[47] Bank of England and Financial Conduct Authority, 'Artificial Intelligence in UK Financial Services - 2024' (n 4).

23. As for non-regulatory constraints, the three main concerns reported by respondents to the 2024 BoE/FCA questionnaire are safety, security and robustness (named by 19% of firms as a large constraint), insufficient talent or access to skills (25%), and lack of transparency/explainability (16%).[49]

24. These constraints echo the barriers to AI adoption identified elsewhere by policymakers and academics. For example, the WEF Future of Jobs Report of 2025 identifies lack of skills to support adoption as the most significant barrier to AI adoption, while also noting the importance of lack of vision of managers and leaders, the high cost of available AI products and services, the lack of customisation to local business needs, the complex and costly regulations around the use of AI and data and the lack of demand among customers.[50]

25. In the literature, Lopez-Garcia and Rojas—investigating the implementation of AI in the manufacturing, finance and insurance industries—also name lack of skills and government regulations as significant barriers to AI adoption (together with high costs and technological scepticism).[51] More broadly, obstacles to the implementation of AI may further include lack of AI strategy, lack of reusable models, lack of usable data, lack of infrastructure, uneven distribution of computing power and data, challenges in problem selection/ solution monetization, lack of trust, lack of digital and/or financial education, lack of leadership commitment, organisational culture; risk/aversion/failure-aversion culture; regulatory fragmentation, competition from other technologies (eg, quantum computing), and concerns over job security.[52]

26. **Concerns over job security may well be justified, particularly following recent advances in GenAI**.[53] Generally, artificial intelligence and information technologies are expected to have a more significant impact on business than any other technological change.[54] Specifically in the financial industry, the percentage of tasks done predominantly by people in 2024 is expected to reduce from 44% to 28% by 2030,[55] with significant impact on jobs. Indeed, according to the 2020 survey conducted jointly by the Cambridge Centre for Alternative Finance and the WEF, 'the employment impact of automation and AI on Financial Services is expected to be the greatest of all industries into the late 2020s', in particular given the large numbers of employees that carry out repetitive, labour-intensive tasks and back-office functions in that industry.[56] The same report also notes that although job replacements by AI technology are expected to affect between 9% and 20% of workers in the

---

[48] ibid.

[49] ibid.

[50] World Economic Forum, 'Future of Jobs Report - 2025' (n 12)., 63.

[51] Jessica Lopez-Garcia and Esperanza Manrique Rojas, 'Barriers to AI Adoption and Their Influence on Technological Advancement in the Manufacturing and Finance and Insurance Industries', *2024 IEEE Colombian Conference on Communications and Computing (COLCOM)* (2024) <https://ieeexplore.ieee.org/document/10720309> accessed 11 April 2025.

[52] For a useful literature review of the various barriers to AI adoption, *see*, e.g., Sudatta Kar, Arpan Kumar Kar and Manmohan Prasad Gupta, 'Modeling Drivers and Barriers of Artificial Intelligence Adoption: Insights from a Strategic Management Perspective' (2021) 28 Intelligent Systems in Accounting, Finance and Management 217.

[53] World Economic Forum, 'Jobs of Tomorrow: Large Language Models and Jobs' (2023) White Paper <https://www3.weforum.org/docs/WEF_Jobs_of_Tomorrow_Generative_AI_2023.pdf> accessed 11 April 2025.

[54] World Economic Forum, 'Future of Jobs Report - 2025' (n 12). 10-11.

[55] ibid.

[56] World Economic Forum, 'Artificial Intelligence in Financial Services' (n 11). 58.

financial industry by 2030, employment losses may be somewhat offset by the creation of new jobs within FinTechs (where workforces might increase by as much as 20%).[57] As noted by Lin in 2019, 'while artificial intelligence has reduced and eliminated many jobs in finance and beyond, it has also produced new jobs, some of which are highly desirable.'[58]

27. At the same time, the Cambridge Centre for Alternative Finance / WEF report was published in 2020—before the recent boom in GenAI—and it appears that 70% of working hours in finance are effectively exposed to LLMs.[59] Indeed, recent estimates point to 32-39% of the work performed across the financial services industry having high potential to be fully automated (with an additional 34-37% having high augmentation potential).[60]

28. Relatedly, it is worth noting that—in addition to the risks and constraints generally associated with the adoption of AI in finance (and beyond)—particular sub-types of AI technologies may give rise to particular risks and constraints. In particular, the popularisation of GenAI has generated significant debate about its impact on the financial industry. In addition to the aforementioned impact on jobs[61]—**GenAI creates important risks for adopters, including both internal and external risks, as well as risks for clients and the broader market**.

29. First, GenAI tools create important intellectual property risks: GenAI content created in response to the prompts of one organisation might contain another organisation's intellectual property, potentially giving rise to disputes. Relatedly, because GenAI typically retains data inputted from its users—which, in turn, can be used in response to prompts inputted by other users—it also carries the risk of facilitating proprietary data leaks, especially when GenAI models are trained in public clouds. Other important internal risks include the risk of misuse of GenAI by employees—who might feel tempted to pass off content created by GenAI as their own—and, relatedly, the risk of producing and working on the basis of inaccurate and outdated information (produced by GenAI technologies). Additionally, the use of GenAI by members of the financial services industry might carry significant costs, including, in particular, implementation costs, energy costs—and, in the case of regulated firms—governance and regulatory compliance costs. Finally, GenAI tools expose companies to more sophisticated forms of cybercrime.[62] Beyond the risks created for GenAI adopters, GenAI also creates risks of bias, discrimination and unfair outcomes for consumers (linked to lack of explainability), financial stability and financial crime risks, employment risks, competition risks and environmental risks.[63]

30. Despite the existence of these widely-documented risks, various reports attest to GenAI being extensively deployed across the financial services industry, with use cases in financial reporting, earnings analysis, market research, finance planning and scenario generation, asset management, risk assessment and management, trading, credit scoring, fraud prevention, performance management, customer support, software development, report/contract

[57] ibid., 58. In similar vein, *see* also Zhang, Ashta and Barton (n 19).

[58] Tom CW Lin, 'Artificial Intelligence, Finance, and the Law' (2019) 88 Fordham Law Review 531.

[59] World Economic Forum, 'Jobs of Tomorrow: Large Language Models and Jobs' (n 53).4.

[60] World Economic Forum, 'Jobs of Tomorrow: Large Language Models and Jobs' (n 53)., 5.

[61] For a discussion, *see* above.

[62] *See* OECD, 'Generative Artificial Intelligence in Finance' (2023) Working Paper <https://www.oecd.org/en/publications/generative-artificial-intelligence-in-finance_ac7149cc-en.html> accessed 11 April 2025. *See*, also the reports issued by KPMG and BCG: respectively, KPMG, 'The Flip Side of Generative AI' (2023) <https://kpmg.com/us/en/articles/2023/generative-artificial-intelligence-challenges.html> accessed 11 April 2025. and BCG, 'Generative AI in the Finance Function of the Future' (2023) <https://www.bcg.com/publications/2023/generative-ai-in-finance-and-accounting> accessed 11 April 2025.

[63] For a thorough discussion of these risks, *see* OECD (n 62).

generation and other writing tasks.[64] This begs the question of whether all areas of the financial services industry are equally exposed to the risks inherent in GenAI, or whether certain financial services should be able to adopt GenAI with little to no risk.

31. First, it is worth reflecting on the meaning of 'risk', which can be defined as a measure of exposure to danger, including both the likelihood and the extent of loss.[65] With that definition in mind, even though **the challenges identified previously could materialise in virtually any area of the financial services (or other industries) employing GenAI, certain use cases create less risk than others** (in the sense of giving rise to smaller or more contained losses).[66] In particular, internal-facing applications of GenAI—that give employees the opportunity to familiarise themselves with the possibilities of this new type of AI in supervised environments—are less risky than outward-facing applications of GenAI that might, for instance, involve the use of personal client data (e.g., credit scoring), lead to the spread of misinformation (e.g., customer support), or create threats to market stability (e.g., trading). In that sense, it is unsurprising that the most prevalent use cases of GenAI in financial services are 'internally facing' and 'closely monitored', with relatively few examples of products directly 'aimed at increasing sales or revenue'.[67]

32. In the end, the risks and constraints discussed in this section are not just industry and technology-dependent—they are also country dependent. The adoption rate and ability to take advantage of AI (namely in financial services) may differ significantly from country to country, in particular due to differences in the digital performance of different economies, differences in the business environment of different countries, different availabilities of AI and digital skills and talent, and differences in data availability.[68]

(iii) Competitive advantages of the UK's financial sector

33. There are a **number of reasons why the UK financial sector might be particularly well equipped to take advantage of the transformative potential of AI for financial services (when compared to other countries)**. First, the UK economy has a 'long-standing specialisation in services' that makes it a relatively strong exporter of services.[69] In particular, the UK has an extremely well developed financial sector, with London remaining one of the most important financial centres in the world.[70] This status has allowed the UK to build a diverse community of financial firms with significant accumulated expertise in financial products and services—and access to diverse client bases and data pools—as well as the

[64] *See* BCG (n 62).

[65] Karen Yeung and Sofia Ranchordás (eds), 'The Rise of Risk in Regulatory Governance', *An Introduction to Law and Regulation: Text and Materials* (2nd edn, Cambridge University Press 2024) <https://www.cambridge.org/core/books/an-introduction-to-law-and-regulation/rise-of-risk-in-regulatory-governance/ECC66780C32BE16BED97C7B747133B60> accessed 11 April 2025.

[66] Nydia Remolina Leon, 'Generative AI in Finance: Risks and Potential Solutions' (2024) 1 Law, Ethics and Technology 1.

[67] UK Finance, 'Generative AI in Action: Opportunities & Risk Management in Financial Services' (2025) <https://www.ukfinance.org.uk/system/files/2025-01/Generative%20AI%20in%20action-opportunities%20%26%20risk%20management%20in%20%20financial%20services.pdf> accessed 11 April 2025.10.

[68] For a discussion in the context of the EU, see European Commission. Directorate General for Economic and Financial Affairs. (n 14).

[69] Josh De Lyon and others, 'Enduring Strengths: Analysing the UK's Current and Potential Economic Strengths, and What They Mean for Its Economic Strategy, at the Start of the Decisive Decade' (2022) <https://www.resolutionfoundation.org/app/uploads/2022/04/Enduring-strengths.pdf> accessed 11 April 2025., 17.

[70] Financial Centre Futures, The Global Financial Centres Index 36, September 2024.

institutional and regulatory infrastructures needed to support AI development and adoption in this area. Second, the UK has a rich culture of FinTechs (e.g., Monzo) which, as noted above, have tended to lead the industry in its adoption of AI.[71] Third, the UK has a mature open banking framework that presently supports data sharing by incumbent banks with smaller FinTechs—and which is set to be followed by a wider open finance framework.[72] Fourth, the UK's approach to regulation is assumedly pro-innovation, as reflected in its principles-based, sector-led approach to AI regulation, or in regulatory initiatives like regulatory sandboxes or the Tech and Policy sprints organised by its regulators. Finally, UK research funding bodies have broadly elected AI as one of their areas of investment and support.

In summary: Algorithmic technologies have several important use cases in finance, AI set to play a key role in improving productivity in financial services. Across the UK financial industry, the most popular use case for AI is the optimisation of internal processes. Specifically in banking, AI is being used for customer segmentation, credit scoring and for the detection of illicit activities. In insurance, AI is being used in underwriting, pricing, claims management, operational risk management and fraud detection. In the capital markets, AI is being deployed across the entire trading life cycle, including pre-trade analysis, trading and post-trade processing. At the same time, there are a variety of both regulatory and non-regulatory constraints to AI adoption. In particular, concerns over job security may well be justified, particularly following recent advances in GenAI. More broadly, GenAI creates important risks for adopters, including both internal and external risks, as well as risks for clients and the broader market. However—and even though such challenges could materialise in virtually any area of the financial services—certain GenAI use cases create less risk than others (in the sense of giving rise to smaller or more contained losses), particularly internal-facing applications that give employees the opportunity to familiarise themselves with the possibilities of this new type of AI in supervised environments.

III. AI and financial stability

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

34. **The relationship between AI and financial stability has become a significant source of apprehension for policymakers and academics.**[73] In the UK, the BoE's Financial Policy Committee has recently expressed concerns over the financial stability implications of AI, pointing to **four potential sources of systemic risk: greater use of AI in decision-making by banks and insurance firms; greater use of AI in financial markets; operational risks connected to third-party AI service providers; and a changing cyber threat environment**.[74] This section of the response: first, *(i)* discusses the meaning of systemic risk in this context; second, *(ii)* addresses each of the aforementioned sources of systemic risk in turn; and, finally, *(iii)* discusses whether any of these risks are amplified by the increasing

[71] For a discussion, *see*, i.a., Giulio Cornelli and others, 'Regulatory Sandboxes and Fintech Funding: Evidence from the UK' (Social Science Research Network, 1 April 2023) <https://papers.ssrn.com/abstract=3727816> accessed 11 April 2025., and Lerong Lu, 'Financial Technology and Challenger Banks in the UK: Gap Fillers or Real Challengers?' (Social Science Research Network, 1 June 2017) <https://papers.ssrn.com/abstract=2988599> accessed 11 April 2025.

[72] For a discussion, *see,* i.a., Clara Martins Pereira, 'The Uncertain Path towards Open Finance: Mutual Lessons from the United Kingdom and European Union Regulatory Approaches' (Social Science Research Network, 15 December 2023) <https://papers.ssrn.com/abstract=5042940> accessed 11 April 2025.

[73] *See,* i.a., Georg Leitner and others, 'The Rise of Artificial Intelligence: Benefits and Risks for Financial Stability' <https://www.ecb.europa.eu/press/financial-stability-publications/fsr/special/html/ecb.fsrart202405_02~58c3ce5246.en.html> accessed 11 April 2025.

[74] Bank of England, 'Financial Stability in Focus: Artificial Intelligence in the Financial System' (2024) <https://www.bankofengland.co.uk/financial-stability-in-focus/2025/april-2025> accessed 11 April 2025.

provision of financial services and products by AI-powered BigTechs—particularly to the extent that they might make use of alternative sources of data, including social media data.

(i) The different dimensions of systemic risk

35. Briefly, systemic risk is defined by the European Systemic Risk Board Regulation as a risk of disruption in the financial system with the potential to have serious negative consequences for the internal market and the real economy. **Typically, this type of risk can be measured through two dimensions: a 'cross-sectional dimension' that measures the distribution of risk within the financial system at a particular point in time; and a 'time dimension' that relates to pro-cyclicality and looks at how aggregate risks and vulnerabilities build up and evolve over time**.[75] The next paragraphs demonstrate how the different sources of systemic risk identified previously amplify systemic risk in one or both of these dimensions.

(ii) Sources of systemic risk arising from the use of AI in the financial sector

36. **First, the use of AI in decision-making by banks and insurance firms can create systemic risk if a large number of firms rely on the same open-source model components and data libraries**—so that errors and biases inherent in such models and data can cause many firms to underestimate/misprice risk and misallocate credit in correlated ways. As a result, the materialisation of such risks can generate correlated losses for firms—which may travel even further through the financial system given the interconnected nature of the network of institutions and markets that comprise it. In short, a shock hitting a few firms can quickly spread to other markets and institutions in a 'domino effect'.[76] To the extent that such shock might also be felt by consumers looking to access particular products and services—giving rise to conduct-related breaches and cause for legal claims—sector stability could be further affected.[77]

37. **The risk of taking correlated positions also exists in financial markets**. AI technologies are increasingly being used in the formulation of investment decisions; to the extent that **firms again rely on the same models and data, the use of AI technologies in this context could again increase the tendency for market participants to take correlated positions**. This decreases the system's resilience, in particular, to shocks—especially to the extent that AI models might struggle to respond to historically unprecedented events and scenarios of heightened uncertainty.[78]

38. Importantly, **risks of hallucination and herding behaviour have long been found in the simpler algorithmic technologies that have been dominating modern (equity) markets for decades**. Indeed, algorithmic trading has long been vulnerable to both operational risks—i.e., risks arising from reliance on automated-trading technology (which is always somewhat vulnerable to glitches, erroneous source code and connectivity disruptions)—and inherent risks—i.e., risks arising from the disintermediation and higher speeds of automated trading (and the fact that humans may not always be able to intervene in real-time to address malfunctions).[79] Simpler trading algorithms might struggle when confronted with highly

[75] Anat Keller, Clara Martins Pereira and Martinho Lucas Pires, 'The European Union's Approach to Artificial Intelligence and the Challenge of Financial Systemic Risk' in Henrique Sousa Antunes and others (eds), *Multidisciplinary Perspectives on Artificial Intelligence and the Law* (Springer International Publishing 2024) <https://doi.org/10.1007/978-3-031-41264-6_22> accessed 11 April 2025.

[76] ibid.

[77] Bank of England (n 74).

[78] ibid.

[79] Yesha Yadav, 'How Algorithmic Trading Undermines Efficiency in Capital Markets' (2015) 68 Vanderbilt Law Review.

complex environments—such as the modern financial markets—particularly to the extent that they may be especially receptive to certain types of data (while being prone to ignore others),[80] leading to a degree of correlation in the strategies of different algorithmic traders.[81] Additionally, algorithm malfunctions can put significant strain on venue infrastructure, absorb liquidity and spread quickly to other market participants and across markets. Ultimately, misbehaving algorithms have been known to contribute to significant cross-market instability, leading to the creation of persisting and self-enforcing trends that can develop into price bubbles.[82]

39. The clearest illustration of this systemic risk created by algorithmic trading is the extreme bad volatility episodes that have come to be known as 'flash crashes'—of which the biggest example has been the 2010 Flash Crash.[83] Other examples of algorithmic malfunctions with systemic consequences include the Knight Capital trading glitch, where a malfunctioning automated order router mistakenly sent a large volume of erroneous orders to the market in rapid succession, with effects rippling across the financial markets and causing abnormal movements in the prices of close to 150 stocks.[84]

40. **The question of whether more complex AI algorithms are a more significant (or, indeed, a different) source of systemic risk than simpler algorithms is a difficult one**:[85] on the one hand, simpler algorithms might be more limited in their ability to assess the complexity of modern financial markets when compared to AI systems[86]—increasing their potential for triggering 'extreme price movements.'[87] Additionally, AI technologies that facilitate the building of custom trading and investment strategies can increase diversity in financial markets. Finally, to the extent that AI—and, in particular, GenAI—contributes to financial inclusion, AI adoption could ultimately contribute to diversifying capital market bases.[88]

41. At the same time, if a handful of AI systems and models—trained on similar data bases—emerge as dominant, widespread AI adoption might also lead to the harmonisation of risk perceptions and more crowded trades, with significant potential for destabilizing the financial system.[89] Indeed, a report published by the International Monetary Fund in 2024 casts

---

[80] For a discussion, *see* Clara Martins Pereira, 'The Case for Soft Information Disclosure in the New Automated UK Financial Markets' (Social Science Research Network, 31 August 2024) <https://papers.ssrn.com/abstract=5042952> accessed 11 April 2025.

[81] 'Rise of the Machines: Algorithmic Trading in the Foreign Exchange Market - CHABOUD - 2014 - The Journal of Finance - Wiley Online Library' <https://onlinelibrary.wiley.com/doi/abs/10.1111/jofi.12186> accessed 11 April 2025.

[82] Steffen Kern and Giuseppe Loiacono, 'High Frequency Trading and Circuit Breakers in the EU: Recent Findings and Regulatory Activities', Global Algorithmic Capital Markets - High Frequency Trading, Dark Pools, and Regulatory Challenges (Walter Mattli, Oxford University Press 2019.

[83] For a discussion, *see*, i.a., Andrei A Kirilenko and Andrew W Lo, 'Moore's Law vs. Murphy's Law: Algorithmic Trading and Its Discontents' (2013) 27 The Journal of Economic Perspectives 51.

[84] For a discussion, *see* Clara Martins Pereira, 'Unregulated Algorithmic Trading: Testing the Boundaries of the European Union Algorithmic Trading Regime' (2020) 6 Journal of Financial Regulation 270.

[85] This is a question with regulatory implications. For a discussion, *see* below.

[86] FSB (2024), The Financial Stability Implications of Artificial Intelligence Opens in a new window

[87] *See* US CFTC and SEC, 'Findings Regarding the Market Events of May 6, 2010' (n 83), quoted by ESMA in its 2011 Consultation Paper.

[88] FSB, 'The Financial Stability Implications of Artificial Intelligence' (2024) <https://www.fsb.org/uploads/P14112024.pdf> accessed 11 April 2025., 21-22.

[89] For a discussion, *see,* i.a., Jón Daníelsson, Robert Macrae and Andreas Uthemann, 'Artificial Intelligence and Systemic Risk' (2022) 140 Journal of Banking & Finance 106290.

'herding and market concentration' as the biggest key risk associated with AI (and, in particular, generative AI).[90]

42. Herding and market concentration are intimately connected to both dimensions of systemic risk: the correlation vulnerabilities plaguing AI could mean that shocks affecting a sub-set of financial institutions using the same models and data could affect them 'as if it were a single institution' (cross-sectional dimension); additionally, the use of similarly calibrated models producing similar risk assessments can 'exacerbate pro-cyclicality in markets' (time dimension).[91]

43. **Finally, it is worth flagging the potential impact of algorithmic and AI trading in market manipulation**. **Whereas the evidence linking (simpler) algorithmic trading to market manipulation is relatively thin, the use of AI in trading opens the door to trading algorithms tacitly colluding to manipulate markets without any previous form of agreement, communication or intention**.[92] An increase in these 'unintentional' forms of AI-driven market manipulation could have significant impact on market stability, particularly to the extent that AI algorithms learn that instable markets—more volatile and less liquid—create heightened opportunities for profitable market manipulation,[93] and might even take actions to artificially increase market instability.[94] Notably, although 'tacit collusion' is flagged in the 2024 BoE/FCA survey on the adoption of AI by the financial industry as one of the systemic risks arising from the use of AI in finance, it is seen as less significant than risks pertaining to herding behaviour, procyclicality and market manipulation, more broadly.[95]

44. **Third, cybersecurity challenges are widely seen as a key source of systemic risk financial systems populated by AI products and services**—with respondents to the 2024 BoE/FCA survey on the use of AI in finance ranking cybersecurity as the highest potential risk (and expecting it to remain the highest potential systemic risk for the foreseeable future). The use of AI creates new opportunities for cyberattacks both when it is deployed by financial institutions—potentially creating vulnerabilities that can be exploited by malicious actors—and when it is deployed by these malicious actors themselves. For cyber-attackers, in particular, GenAI creates new opportunities to commit fraud and manipulate the employers and customers of financial institutions.

45. The systemic implications of cyberattacks arise from the deployment of common AI models—to the extent that 'shared cyber vulnerabilities across systemic firms [could] represent a system-wide vulnerability', creating opportunities for large-scale attacks that can more easily spread across the system, with greater negative impact on market confidence.

---

[90] IMF, 'Global Financial Stability Report, October 2024 - Steadying the Course: Uncertainty, Artificial Intelligence, and Financial Stability' (2024) <https://www.imf.org/en/Publications/GFSR/Issues/2024/10/22/global-financial-stability-report-october-2024> accessed 11 April 2025., 91.

[91] FSB (n 88)., 21.

[92] Winston Wei Dou, Itay Goldstein and Yan Ji, 'AI-Powered Trading, Algorithmic Collusion, and Price Efficiency' (Social Science Research Network, 30 May 2024) <https://papers.ssrn.com/abstract=4452704> accessed 11 April 2025.

[93] According to Danielsson and Uthermann, 'since profit maximisation will be an integral component in the objectives of private sector AI, there is considerable potential for AI engines to coordinate on socially undesirable solutions, such as bubbles and crashes' (*see* Daníelsson, Macrae and Uthemann (n 89).

[94] Bank of England (n 74).

[95] Bank of England and Financial Conduct Authority, 'Artificial Intelligence in UK Financial Services - 2024' (n 4).

46. **Finally, an important source of systemic risk arising from the use of AI in financial services comes from the fact that many financial institutions rely on third-party service providers sitting outside the financial sector**; indeed a third of all current AI use cases deployed by respondents to the 2024 BoE/FCA survey on the use of AI in the provision of financial products and services reportedly correspond to third-party implementations—a marked increase (17%) compared to responses to the previous BoE/FCA survey (published in 2022).

47. This increase in third-party implementations presumably reflects increased dependency on third parties, particularly in the areas of human resources, risk and compliance and operations and IT—where over 50% of applications come from third-party service providers. The reasons for this high dependency on third parties may lie on the complexity and high cost of developing AI applications (in particular large language models), lack of infrastructure (which can be offered, for instance, by the providers of cloud-based services) and lack of data (which can be provided, for example, by external data aggregators). Such dependency is only likely to grow as model complexity increases and the costs of outsourcing decrease. Finally, it is worth noting that the top three third-party providers of cloud, models and data accounted to which UK financial firms resort account for 73%, 44% and 33% of all name providers (respectively).

48. While some firms targeted by the 2024 BoE/FCA survey on the use of AI in finance reported using existing frameworks for evaluating and integrating third-party AI systems, respondents to the survey nevertheless ranked critical third-party dependencies as the second highest source of AI-driven systemic risk—as well as the source of systemic risk expected to experience the largest increase over the next three years.

49. **The link between the provision of AI services by third parties and systemic risk is explained by two main factors: first, the significant (and increasing) third-party dependency reported by market players, and second, their reliance on a small number of third-party providers.** Indeed, reliance on third parties for the performance of key functions increases the potential impact of operational disruptions, as the outage of just one AI model can leave financial firms unable to deliver core products and services. And because multiple financial firms might rely on the same AI model, model outage is set to have rippling effects across the system. In certain cases, market concentration in AI providers can also lead to 'lock ins' where financial institutions that depend on a specific AI provider are unable to replace their services—compounding the systemic effects of operational disruptions.

(iii) The impact of BigTechs on the provision of AI-driven financial products and services

50. **Relatedly, concerns can be raised about the competition risks arising from the concentration of third-party technology services among BigTech firms. This is a significant danger, as there is a reported feedback loop between AI investments and firm size, with investment in AI being concentrated in larger firms** (which grow larger still due as they invest in AI). Crucially, the benefits from AI are significantly dependent on who owns big data—and BigTechs have access to significantly more data than traditional financial services firms.

51. **Areas where the data gathered by BigTech firms might have the most value include insurance and credit**. As noted in a recent Feedback Statement issued by the FCA, BigTechs may have privileged access to customers' searches for new homes (and might therefore be able to target them for mortgage/home insurance much sooner than a traditional financial institution or a smaller FinTech would); equally, BigTechs may also have access to data—originating, for instance, in social media use, browsing records, or online purchases—that might allow for more accurate assessments of creditworthiness and affordability.

52. **In Europe, the use of social media data by market players is heavily restricted when it comes to social scoring** (*see* the EU GDPR / UK Data Protection Act and the EU Consumer Credit Directive). **By contrast, the use of alternative data sources in asset management and trading appears to be on the rise**, as AI allows players to rely on alternative and unstructured datasets as relevant sources of information for identifying investment opportunities. Indeed, a recent study by Tan and Tas (investigating the impact of social media on S&P constituents for US, European and emerging markets) finds that Twitter—now X—activity and sentiment are 'associated with trading volume and returns', indicating their potential usefulness in trading strategies.

In summary: The relationship between AI and financial stability has become a significant source of apprehension for policymakers and academics. There are four main potential sources of systemic risk: greater use of AI in decision-making by banks and insurance firms; greater use of AI in financial markets; operational risks connected to third-party AI service providers; and a changing cyber threat environment. First, the use of AI in decision-making by banks and insurance firms can create systemic risk if a large number of firms rely on the same open-source model components and data libraries. The risk of taking correlated positions also exists in financial markets; to the extent that firms again rely on the same models and data, the use of AI technologies in this context could again increase the tendency for market participants to take correlated positions. Importantly, risks of hallucination and herding behaviour have long been found in the simpler algorithmic technologies that have been dominating modern (equity) markets for decades—making the question of whether more complex AI algorithms are a more significant (or, indeed, a different) source of systemic risk than simpler algorithms a very difficult one. Third, cybersecurity challenges are widely seen as a key source of systemic risk financial systems populated by AI technologies, which create new opportunities for cyberattacks both when they are deployed by financial institutions and when they are deployed by malicious actors themselves. Finally, an important source of systemic risk arising from the use of AI in financial services comes from the fact that many financial institutions rely on third-party service providers sitting outside the financial sector—given both the significant third-party dependency reported by market players, and their reliance on a small number of third-party providers. Relatedly, concerns can be raised about the competition risks arising from the concentration of third-party technology services among BigTech firms, as there is a reported feedback loop between AI investments and firm size, and the data gathered by BigTech firms can be especially valuable in areas like insurance and credit provision. At the same time, it is worth noting that, in Europe, the use of social media data by market players is heavily restricted when it comes to social scoring. By contrast, the use of alternative data sources in asset management and trading appears to be on the rise.

IV. AI and consumer protection in finance

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

53. Data protection is not an area of the author's expertise and so it is not extensively covered by this response. However, the author will make two points pertaining to the benefits and risks arising from AI, in particular for vulnerable consumers. The *(i)* first point pertains to the role played by digital technologies—and, in particular, AI—in regard to financial inclusion; the *(ii)* second point relates to the importance of data sharing in terms of amplifying the benefits of AI for financial inclusion.

(i) The role played by AI in financial inclusion

54. As mentioned previously, **advancements in AI technologies play a significant role in process optimisation**—helping reduce many of the costs currently associated with the financial industry. **At the same time, it is also hoped that AI-fuelled products and services**

may further contribute to the financial inclusion of communities that have traditionally lived at the fringes of the financial system.

55. Financial inclusion can be defined as access to useful and affordable financial products and services by individuals regardless of their background or income. It is particularly significant for individuals at the margin of the financial system who struggle to access credit and insurance products and are worse positioned to handle unexpected expenses, emergencies and increases in cost-of-living pressures. Currently, it is estimated that 2.1% ok UK individuals do not have a bank account—with that percentage increasing in rural communities (particularly in Scotland), among young adults (18-24), among over-55s, and among particular religious and ethnic minorities (for example, Muslim populations).

56. **The development and deployment of AI products and services across the UK financial industry could play a significant role in addressing this problem**. For example, algorithmic credit scoring—i.e., the process of combining AI algorithms with alternative data in order to evaluate the creditworthiness of consumers—holds significant promise for widening credit access for borrowers with little to no information on file. The popularisation of algorithmic trading has also been credited with decreasing transaction costs, allowing for widened participation in the world's most developed financial markets.

57. **At the same time, there are several reasons for remaining sceptical as to the potential of AI for furthering financial inclusion in UK financial markets**. First, digital exclusion still affects millions of UK citizens (with age, socio-economic status, disability and region all identified as being key predictors). Second, successive governments have resisted making financial inclusion a statutory obligation for financial regulators like the FCA —with regulatory discussions remaining centred around the notion of (informed) 'consumer choice' instead of addressing the circumstances that contribute to the financial exclusion of marginalised individuals and communities. This can be contrasted with attitudes in the Global South, where countries like India and Brazil have taken significant strides in addressing financial inclusion.

58. Finally, it is **worth noting that the use of AI in finance also exposes vulnerable customers to a variety of additional risks**. When it comes to credit scoring, **self-learning algorithms looking to assess the creditworthiness of vulnerable consumers might enhance pre-existing biases in data** (either due to data selection mechanisms or to the quality of the data itself) to their detriment. For instance, a 2022 study by Fuster *et al* reveals that the use of ML techniques in credit scorings can lead to increased disparity in loan rates between and within groups—affecting, in particular, minority borrowers (in that case, black and Hispanic applicants).

59. In algorithmic trading, the electronification of trading venues, the popularisation of disintermediated market access and the development of HFT strategies has raised **concerns about the creation of two-tiered markets where retail traders are always at a disadvantage**.[96]

(ii) The importance of data sharing for AI adoption and financial inclusion

60. The Call for Evidence also raises the question of whether data sharing is needed to make AI more effective in financial services. **The importance of (good quality) data for AI technologies, and for the development and deployment of products and services cannot be understated**. This is true for any industry where AI is being deployed, but it is especially true in the financial industry—where customer and market data have always been the

[96] *See,* i.a., Steven R McNamara, 'The Law and Ethics of High-Frequency Trading' (2016) 17 Minnesota Journal of Law, Science & Technology 71.

fundamental basis for decision-making, from investment decisions to credit scoring and risk management.

61. Indeed, **privileged access to data by incumbent financial institutions and**—in the case of alternative financial and non-financial data—**by BigTechs explains many of the competitive dynamics experienced by players in the financial services industry**.

62. **Data sharing frameworks like open banking can play an important role in empowering consumers to make the most out of their financial data**—in particular by sharing it with smaller FinTechs. In fact, the UK open banking framework—widely seen as a blueprint for other mandatory open banking frameworks that have since been developed around the world—was adopted following an investigation of the retail banking market by the UK's Competition Market Authority ('CMA'), which found that incumbent institutions were not competing hard enough for customers, while smaller FinTechs struggled to enter the market.

63. **Crucially, the combination of open banking and AI can effectively 'improve the efficiency of operations and decision-making through automated and autonomous decision-making and insight creation'—as open banking frameworks empower financial institutions to leverage increasing amounts of data**. This **can be particularly important in the context of financial inclusion, as the sharing of more data**—in particular pertaining to creditworthiness and affordability—**can open new channels for serving underbanked and underfinanced segments of the population**.

64. **As the UK prepares its transition into open finance**—building on open banking to include a wider range of data-driven products and services[97]—policymakers are advised to keep in mind the growing importance of data sharing in a world where AI technologies are being widely adopted across sectors, and where different market actors have very unequal access to data. In particular, the author suggests that the **proportionate application of a reciprocity principle in data sharing might contribute to levelling the playing field between BigTechs and financial institutions, without unduly burdening smaller FinTechs**.[98] **Resulting greater availability of data could also play an important role in financial inclusion.**

In summary: Advancements in AI technologies play a significant role in process optimisation—helping reduce many of the costs currently associated with the financial industry—but it is also hoped that AI-fuelled products and services may further contribute to the financial inclusion of communities that have traditionally lived at the fringes of the financial system At the same time, there are several reasons for remaining sceptical as to the potential of AI for furthering financial inclusion in UK financial markets, in particular the fact that digital exclusion still affects millions of UK citizens, the fact that successive governments have resisted electing financial inclusion a statutory regulatory goal, and the fact that the use of AI in finance also exposes vulnerable customers to a variety of additional risk. When it comes to credit scoring, self-learning algorithms might enhance pre-existing biases in data, to the detriment of vulnerable borrowers; the popularisation of algorithmic trading has also raised concerns about the creation of two-tiered markets. Another important channel for maximising the potential of AI for vulnerable consumers relates are data sharing frameworks. The importance of (good quality) data for AI technologies, and for the development and deployment of products and services cannot be understated. Indeed, unequal access to data explains many of the competitive dynamics experienced by players in the financial services industry and data sharing frameworks like open banking can play an important role in increasing competition and in empowering consumers to

[97] *See*, i.a., The Organisation for Economic Co-operation and Development, 'Shifting from Open Banking to Open Finance - Results from the 2022 OECD Survey on Data Sharing Frameworks' (OECD, 2023) <https://www.oecd-ilibrary.org/docserver/9f881c0c-

[98] Jurisdictions that have included reciprocity principles in their nascent open finance frameworks include Brazil and Australia.

make the most out of their data. This can in turn open new channels for underbanked and underfinanced segments of the population. As the UK prepares its transition into open finance, the proportionate application of a reciprocity principle might contribute to levelling the playing field between BigTechs and financial institutions, without unduly burdening smaller FinTechs—ultimately resulting in more data sharing and improved financial inclusion.

V. Regulatory approaches to the use of AI in finance

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?

65. **The regulatory puzzle afflicting policymakers and financial regulators attempting to strike the right balance between seizing the opportunities of AI while also addressing the risks that it creates**—in particular for financial stability and consumers—**can be posed in the shape of a trilemma** (to use the analytical framework recently developed by Yadan and Brummer). The trilemma faced by policymakers in this area stems from the fact that—when looking to provide clear rules, maintain market integrity, and encourage innovation—regulators often struggle to achieve more than two of these three goals. Usefully, this trilemma illustrates the fact that regulation and innovation are not necessarily antagonistic: as argued recently by Bradford, safe technology regulation does not inevitably compromise innovation, even if a more complex regulatory framework might be the price to pay for attempts to optimise both safety and innovation.

66. This section of the response: first, *(i)* discusses whether existing regulations need to be modified because of AI; and second, *(ii)* reflects on the key conditions that need to be in place before Government and financial regulators can adequately address the 'trilemma' posed by the widespread adoption of AI by the UK financial industry.

(i) Regulating the adoption of AI in finance

67. **Outlining and appraising current regulatory approaches to the use of AI in finance is a complex challenge.** Across the globe, **AI policymaking has mostly followed a sectoral approach premised on the idea that AI has been allowed to develop within a 'complex patchwork of legal requirements' that were not originally developed with these technologies in mind**; indeed, even the EU's new AI Act acknowledges its complementarity with existing sectoral legislation. As a result, particular **jurisdictions may struggle to map out and analyse their own regulatory approaches to the use of AI in finance**.

68. **This state of affairs seemingly has a profound effect on market players**. Whereas high regulatory burden might be considered the main type of regulatory constraint limiting AI development in this area—at least according to respondents to the 2024 BoE/FCA survey on the use of AI in finance—the second regulatory constraint most often flagged by market players is 'lack of clarity of current regulation'. Interestingly, a number of respondents to this survey also highlight the role played by insufficient, inappropriate or out-of-date regulation—as well as regulation that is misaligned with international and national legal frameworks—as key barriers to AI adoption.

69. **The UK financial industry is not alone in these concerns**. As noted previously, regulatory constraints are often reported as a key barrier to AI adoption, and the Committee is encouraged to focus on this particular area going forward.

70. This response is not the place to include a complete list of all the regulatory and quasi-regulatory frameworks that might be relevant in the context of AI deployment across the UK financial system; still, it is worth noting that, at domestic level alone, this list would include at least:

a. The principles included in the UK Governments Pro-Innovation Approach to AI
b. The UK MiDIF/MiFIR framework
c. The UK Market Abuse Regulation
d. The Consumer Protection from Unfair Trading Regulations 2008 (CPUTRs)
e. The Senior Managers and Certification Regime
f. The BoE/PRA/FCA's Operational Resilience Rules
g. The BoE/PRA/FCA's approach to Critical Third Parties
h. The PRA/FCA's Outsourcing and Third-Party Risk Management rules
i. The FCA Handbook – Systems and Controls, including the Senior Management Arrangements, Systems and Controls (SYSC) sourcebook
j. The FCA's Threshold Conditions and Principles for Business (including the FCA's Consumer Duty, as well as its Guidance for firms on the fair treatment of vulnerable customers)
k. The FCA's Vulnerable Customer Guidance
l. The UK GDPR and Data Protection Act 2018
m. The Equality Act 2010

71. **Notably, most of these instruments do not contain AI-specific obligations and requirements—or were at least designed with simpler algorithms in mind**. This means, in particular, that **risks pertaining to the self-learning, generative and opaque nature of AI models and systems may currently remain unaddressed by existing frameworks**. As a result, effort should be made to:

a. **First, determine the extent to which advancements in AI technology and increased data availability have given rise to new benefits and risks**—or, instead to benefits/risks that had already been present/ are mere developments of the benefits/risks present in earlier forms of algorithmic (and other digital) technologies;

b. **Second, determine the extent to which private actors and/or existing regulatory and quasi-regulatory frameworks already adequately address the new benefits/risks** associated with the use of AI in finance—or whether such benefits/risks instead give rise to market failures that may need to be addressed by further regulatory/quasi-regulatory efforts; and

c. **Third, design regulatory and quasi-regulatory frameworks that are appropriate to tackle identified market failures and in addition carry more benefits than costs** (considering the trade-offs underlying the trilemma discussed above and any implementation costs).

72. In particular, **policymakers are encouraged to revisit regulatory and quasi-regulatory frameworks applicable to robo advice** (e.g., is specific guidance enough or are additional hard rules needed?), **algorithmic trading** (e.g., do existing reporting obligations allow the mapping out of new sources of systemic risk arising from model convergence and herding), **market manipulation** (e.g., do existing rules effectively capture tacit collusion between algorithms), and **algorithmic credit scoring** (e.g., should the UK take a harsher stance on algorithmic credit scoring after the EU identified it as a high risk application that can pose a threat to fundamental rights?).

73. Other issues worth consideration include regulatory architecture, regulatory resources, regulatory objectives, regulatory cooperation, and regulatory scope—particularly given the

increased importance of third-party providers in this area, as well as the challenges raised by the provision of financial products and services by BigTechs. Finally, discussions about competitiveness and growth should be accompanied by discussions about (digital) financial inclusion and the relationship between AI and sustainability.

74. At the same time, it is worth noting that **no specific changes/additions to existing regulatory and quasi-regulatory frameworks appear to be urgent, as most AI risks are already (at least somewhat) covered by existing frameworks** (e.g., the UK MiFID framework in regard to algorithmic trading). Still, there are several areas worthy of regulatory attention (see above at), potentially followed by regulatory action. Anecdotal evidence (obtained, e.g., during the FCA AI Sprint) suggests that further clarification/guidance is needed in the areas of robo advice and algorithmic credit scoring. Additional rules might also be needed to fully map-out sources of systemic risk/opportunities for market manipulation arising from the use of AI in trading, but industry players will likely push back against adding more rules to the UK's fairly comprehensive algorithmic trading regime.[99] Indeed, more evidence might need to be obtained before adding new rules, given potentially negative impact on market quality (especially liquidity) and competitiveness. A tougher regime would also need to be accompanied by a corresponding increase in supervisory intelligence (obtained through more dialogue with AI developers), supervisory resources and supervisory data monitoring/analysis capabilities.

(ii) Key conditions for appropriate regulation and supervision of AI in finance

75. **Going forward, the Government and regulators are likely to require additional information, resources and expertise to help monitor, support and regulate AI implementation in financial services**.

76. **The trilemma faced by policymakers looking to promote market integrity (including consumer protection and financial stability)—while also encouraging innovation means and providing clear rules that satisfy the industry's need for legal certainty—can only be addressed through a combination of different tools, which will are likely to include close domestic agency cooperation; ambitious international coordination with policymakers in key markets, and the enlistment of private players**, who can also contribute to the effective regulation of the use of AI in finance through tools like private monitoring and industry codes of conduct.

77. **The Government and regulators should also be prepared to make full use of their regulatory and quasi-regulatory arsenal, including tools that have consolidated the UK's competitive advantages in the financial sector like industry-informed recommendations, regulatory sandboxes, and tech and policy sprints**. Finally, they should also be prepared to **make the investments in Supervisory Technology ('SupTech')** required to allow them to recruit the potential of AI technologies for market supervision.

78. At the same time, it is possible that **maximising the opportunities brought by the use of AI in finance—while also addressing the risks created, in particular, for financial stability and consumer protection—can only be achieved through more structural transformations of foundational features of the UK economy**, pertaining in particular, to **competition and market structure, market infrastructure, education and culture.**

---

[99] The European Commission has reportedly described its algorithmic trading regime—broadly replicated by the UK MiFID framework—as the 'toughest package' of algorithmic trading-related measures in the world (*see* European Commission, cited by Martin Wheatley (in Martin Wheatley, 'Regulating High Frequency Trading' (FCA, 4 June 2014) <https://www.fca.org.uk/news/speeches/regulating-high-frequency-trading> accessed 11 April 2025).

In summary: Policymakers and financial regulators face a difficult puzzle when attempting to strike the right balance between seizing the opportunities of AI while also addressing the risks that it creates. First, outlining and appraising current regulatory approaches to the use of AI in finance is a complex challenge, with many jurisdictions struggling to map out and analyse their own regulatory approaches to the use of AI in finance. This state of affairs seemingly has a profound effect on market players and should prompt policymakers into action: first, by determining the extent to which advancements in AI technology have created new benefits/risks in finance; second, by determining whether private actors and/or existing regulatory and quasi-regulatory frameworks already adequately address such benefits/risks; and, third, by designing frameworks that appropriately tackle identified market failures, with benefits exceeding costs. Notably, most instruments in existing regulatory frameworks do not contain AI-specific requirements, having been designed with simpler algorithms in mind. As such regulators are encouraged to revisit existing frameworks applicable to robo advice, algorithmic trading, market manipulation and algorithmic credit scoring. At the same time, it is worth noting that no specific changes/additions to existing regulatory and quasi-regulatory frameworks appear to be urgent, as most AI risks are already (at least somewhat) covered by existing frameworks. Going forward, the Government and regulators are likely to require additional information, resources and expertise to help monitor, support and regulate AI implementation in financial services. The trilemma faced by policymakers looking to promote market integrity (including consumer protection and financial stability)—while also encouraging innovation means and providing clear rules that satisfy the industry's need for legal certainty—can only be addressed through a combination of different tools, which will are likely to include close domestic agency cooperation; ambitious international coordination with policymakers in key markets, and the enlistment of private players. The Government and regulators should also be prepared to make full use of their regulatory and quasi-regulatory arsenal—including tools that have consolidated the UK's competitive advantages in the financial sector like industry-informed recommendations, regulatory sandboxes, and tech and policy sprints—as well as invest in SupTech technologies. At the same time, it is possible that maximising the opportunities brought by the use of AI in finance—while also addressing the risks created, in particular, for financial stability and consumer protection—can only be achieved through more structural transformations of foundational features of the UK economy.

April 2025