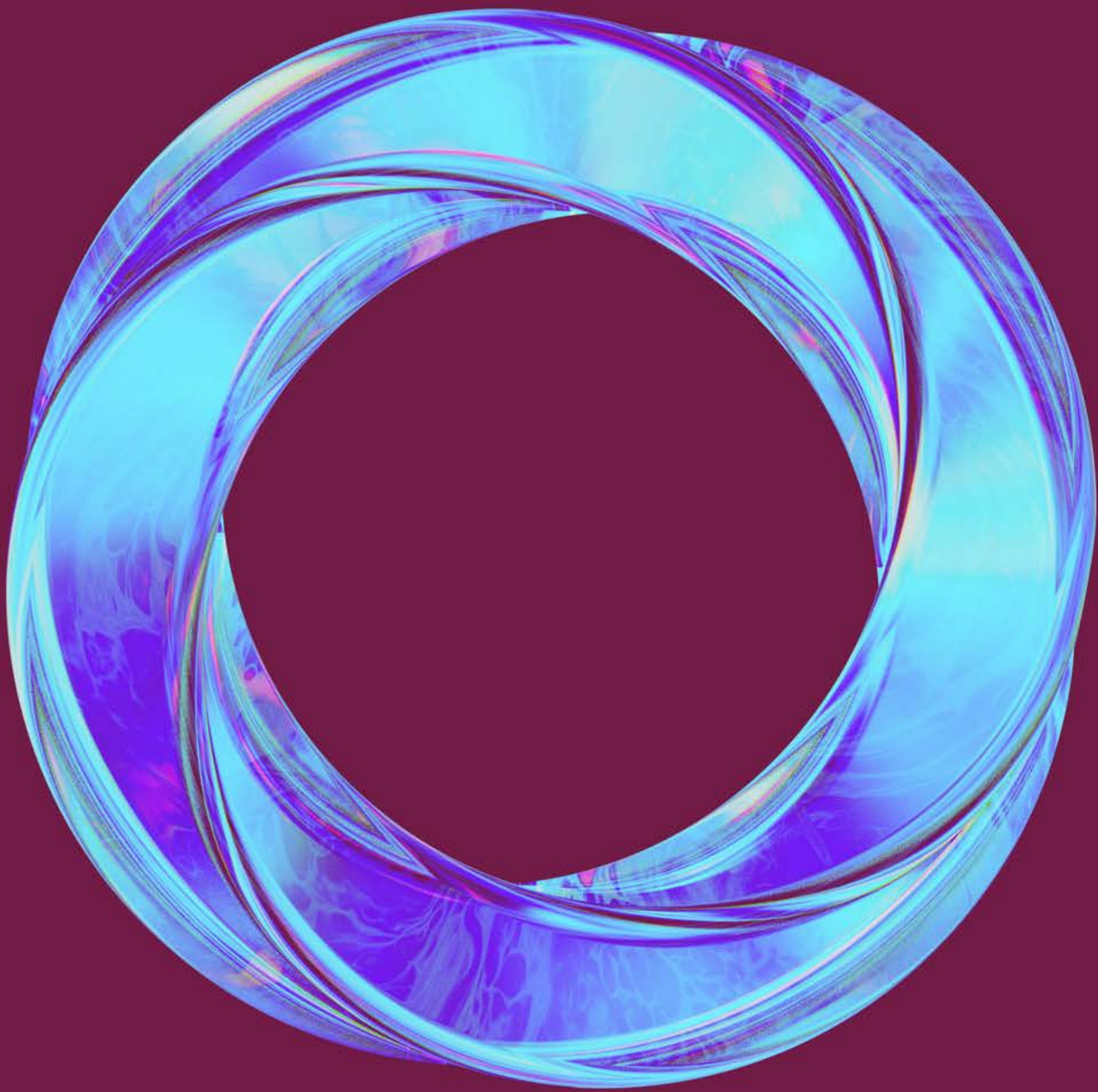
AI Update



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Foreword

The FCA has an important role to play in the continued success and competitiveness of the UK's financial services markets.

At the FCA, we are proud of our world-leading approach to innovation in the financial services industry. The nature and reach of our industry - providing essential products for consumers, financing business, and building the infrastructure through which capital flows - means that in a world of increasing digitisation, that focus on innovation is more important than ever.

Even in this context, recent leaps forward in the capability of Artificial Intelligence (AI) mean that in the two years since we published our Discussion Paper on AI, it has been propelled to the forefront of agendas across the economy with unprecedented speed. Financial services are already at the forefront of digitisation and AI could significantly transform the way these firms serve their customers and clients - in both retail and wholesale financial markets.

Harnessing AI for the benefit of humans and businesses alike has rightly become a priority of Governments, policy makers and regulators everywhere. The UK has a head start provided by world-class universities, brilliant cities and businesses attracting global talent, with internationally respected institutions. The birthplace of Turing and Lovelace has reason to be confident in its leadership as the world grapples with the benefits and risks of this technology.

As such, I am pleased to introduce an update on our approach to AI following the Government's publication of its pro-innovation strategy in February of this year. The Government's principles-based, sector-led approach to AI is welcome; the FCA is a **technology-agnostic, principles-based and outcomes-focused regulator**. We are focused on how firms can safely and responsibly adopt the technology as well as understanding what impact AI innovations are having on consumers and markets. This includes close scrutiny of the systems and processes firms have in place to ensure our regulatory expectations are met.

The Prime Minister has set out that the future of AI *is safe AI*. A clear understanding of the risks will be critical to this ambition. Our response sets out that an **evidence-based view**, one that balances both the benefits and risks of AI, will ensure a proportionate and effective approach to the use of AI in financial services.

We will prioritise understanding current deployment strategies within the firms we regulate, so that they - and we - can clearly identify risks and mitigate them. This will include a third edition of our machine learning survey, published jointly with the Bank of England.

Our supervisory work, as well as research undertaken through the Digital Regulation Cooperation Forum (DRCF), underlines how the speed, scale and complexity of AI may require modified approaches to firm risk management and governance. Regulation will have to adapt as well. In particular, the complexity of AI models may require a greater focus on the testing, validation and explainability of AI models as well as strong accountability principles, reinforced by corporate cultures operating with **openness and transparency**. We are considering how best to address these issues.

AI should not be considered in isolation; a safe approach to adoption requires consideration of **wider technology trends**. The UK's digital infrastructure, resilience, cybersecurity, quantum computing and data must all be considered. Understanding these shifts is a priority for the FCA. As such, our response maintains a broad focus on technology and data, in particular our policy work on BigTech and our regulatory framework for Critical Third Parties (CTPs). Our work with firms suggests that there is a growing urgency to take a more proactive approach to outsourced risks, cybersecurity and resilience.

We support the Government's **pro-innovation** approach to AI, including its commitment to fund a pilot of AI & Digital Hub delivered by DRCF member regulators. Our work **on innovation and our secondary competitiveness and growth objective** provides a clear path for us to foster technological exploration. Our TechSprints, Regulatory Sandbox and other FCA Innovation Services ensure that a diversity of perspectives and solutions are considered. We want to create an environment where new technology propositions can be tested safely and responsibly, with access to a suite of tools to collaborate and develop proof of concepts, including providing access to high-quality synthetic data.

Data and digital plays a key role in the FCA strategy. We **continue to evolve and invest in our ability to meet the challenges and opportunities** of the future. This includes our new digital hub in Leeds and the recruitment of over 75 data scientists. We are exploring how we can use AI in the pursuit of our objectives. It has already transformed the speed with which we can monitor and tackle scam websites, money laundering and sanctions breaches, as well as supporting the work of the Supervision Hub. I am excited about the future, and the plans we have to harness technology and data to manage the responsibilities Parliament has given us.

Cross-border standards on technology and data will greatly benefit the UK's financial services industry and the consumers it serves. We welcome the Government's approach to fostering **close international cooperation**, set out in the AI White Paper, the Atlantic Declaration and at the AI Safety Summit. We are already committed to international cooperation on financial services regulation, taking leading roles at the International Organization of Securities Commissions, chairing the Global Financial Innovation Network and supporting the Government in securing international agreements on financial services. We will continue to collaborate with key domestic and international regulators on issues related to data, technology and what this means for regulation.

I look forward to working with Government, the Bank of England, members of the DRCF, industry and civil society, both domestic and international, to developing a framework for AI that is safe, responsible, proportionate and pro-innovation.

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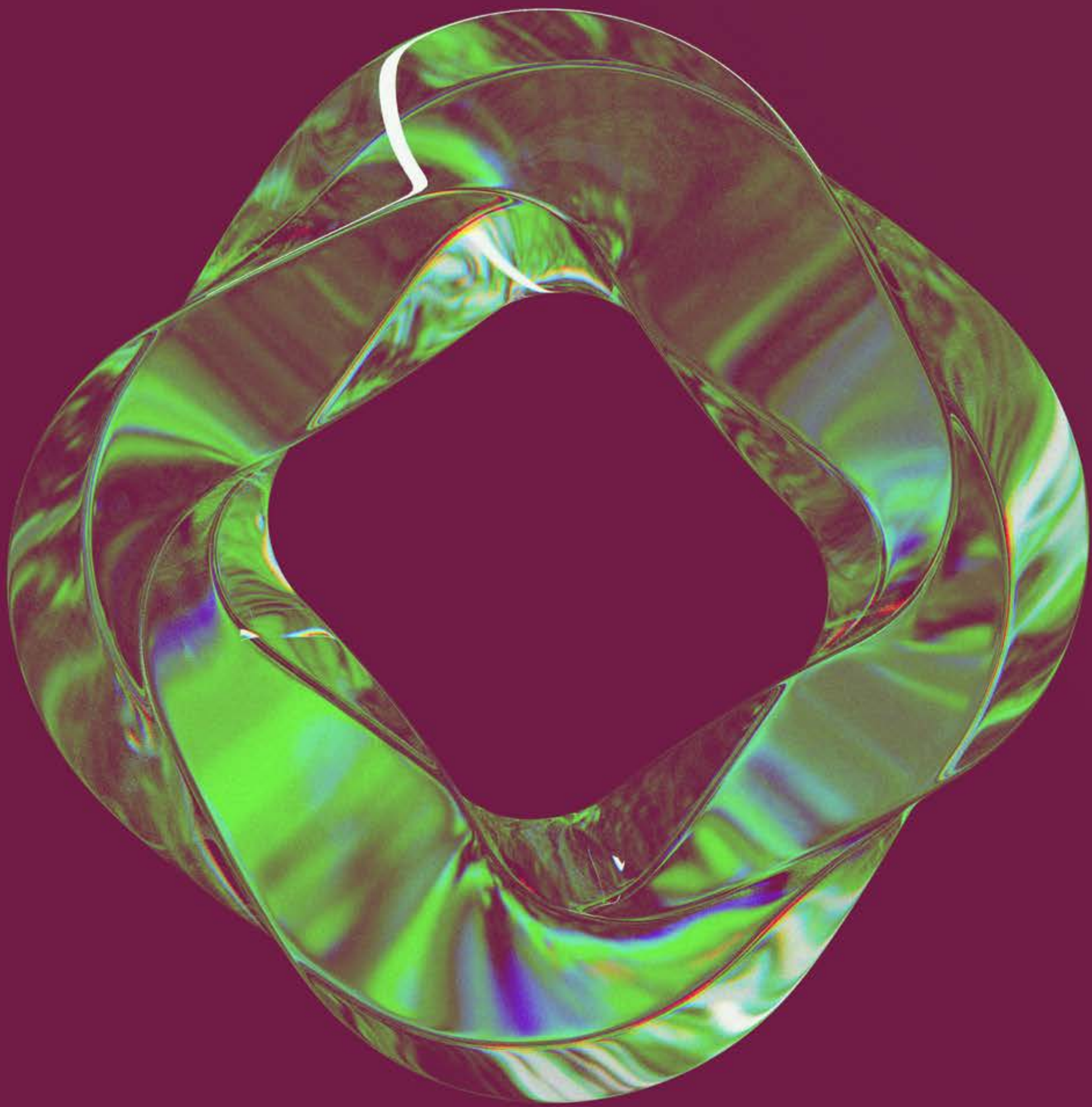
The FCA's approach to AI



1. The role of the FCA and its objectives

1.1 The FCA regulates financial services firms and financial markets in the UK. Our strategic objective is to ensure relevant markets function well. Our operational objectives are to:

- secure an appropriate degree of protection for consumers,
- protect and enhance the integrity of the UK financial system, and
- promote effective competition in the interests of consumers.

1.2 We also have a secondary objective to facilitate the international competitiveness of the UK economy and its growth in the medium to long term, subject to alignment with international standards.

1.3 As a financial services regulator, we have an important role in the continued success and competitiveness of the UK financial services markets and their contribution to the UK economy. This extends to the role of technology, including AI, in UK financial markets.

2. What we have done so far

Our work on AI

2.1 We welcome the Government's publication of **A Pro-Innovation Approach to AI Regulation: Government Response** and **Implementing the UK's AI Regulatory Principles: Initial Guidance for Regulators**, including the five principles to guide the regulation of AI. The FCA has published a number of documents in relation to its approach to AI. Jointly with the Bank of England we have published: the **AI Discussion Paper (AI DP) (2022)**, the **Feedback Statement (2023)**, the **AI Public-Private Forum (AIPPF) Final Report (2022)**, and the **2019** & **2022** machine learning surveys. This is in addition to the close collaboration with the ICO, CMA and Ofcom through the **DRCF**.

2.2 In the AI DP, we explored the potential benefits and risks of the use of AI in financial services in the context of our statutory objectives in relation to consumer protection, competition, and market integrity. The AI DP also considers how existing regulatory requirements apply to the use of AI in financial services and invites responses on how we, as a sectoral regulator, could further promote the beneficial and safe adoption of AI in financial services.

2.3 As the views summarised in the Feedback Statement demonstrate, the approach outlined in the AI DP was welcomed by our stakeholders. Respondents to the AI DP are generally supportive of a technology-agnostic, principles-based and outcomes-focused approach to the regulation of the use of AI in UK financial services.

2.4 We will continue to closely monitor the adoption of AI across UK financial markets to identify material changes that impact on consumers and markets. This includes keeping under review if amendments to the existing regulatory regime are needed. In addition, we will continue to monitor the potential macro effects that AI can have on financial markets, such as, for example, cybersecurity, financial stability, interconnectedness, data concerns or market integrity.

3. Our existing approach

3.1 We want to promote the safe and responsible use of AI in UK financial markets and leverage AI in a way that drives beneficial innovation. The FCA sees beneficial innovation as a vital component of effective competition. When competition works well, consumers benefit from lower costs and prices, higher service standards and quality, and increased access to financial services. As well as providing novel and inventive solutions to meet consumers' needs, innovation can enable start-ups to enter the market and challenge incumbents, while driving incumbents to compete harder to retain customers. Technological innovation can also reduce operating costs, improve efficiency, and more effectively manage risk. The **FCA actively supports beneficial innovation**, through the Regulatory Sandbox, Digital Sandbox, our TechSprints and other innovation advisory services.

Our approach to regulation and supervision

3.2 Our rules, regulations and core principles do not usually mandate or prohibit specific technologies. Rather, our regulatory approach is to identify and mitigate risks to our objectives, including from regulated firms' reliance on different technologies, and the harms these could potentially create for consumers and financial markets. In practice, this means that when we consider regulated firms' use of any given technology, such as AI, blockchain, cloud infrastructure etc., we objectively assess the risks and any adverse implications for our objectives and the regulatory outcomes we are seeking. This includes considering the impact the use of technologies can have at the level of the market.

3.3 The principle of proportionality also informs our thinking and approach to AI, including any potential future regulatory interventions. This is one of the regulatory principles under the Financial Services and Markets Act 2000 (FSMA) that the FCA must have regard to when discharging its general functions, including making rules - namely, that a burden or restriction imposed on a person or activity should be proportionate to the expected benefits.

3.4 A more outcomes-focused approach also gives firms greater flexibility to adapt and innovate. Outcomes-based regulation can be applied more easily to technological change and market developments than detailed and prescriptive rules. This means consumers are better protected from new and emerging harms. Firms can also innovate to find new ways of serving their customers without prescriptive requirements designed for a different situation getting in the way.

3.5 Many risks related to AI are not necessarily unique to AI itself and can therefore be mitigated within existing legislative and/or regulatory frameworks. Under our outcomes -based approach, we already have a number of frameworks in place which are relevant to firms' safe use of AI. Chapter 4 of the AI DP provided an overview of some of the key legal requirements and guidance considered most relevant to mitigating the risks associated with the use of AI in UK financial services and markets. This is set out in more detail below.

The Government's AI principles

3.6 The Government has identified the following five principles as key when it comes to the regulation of AI in the UK: 1) safety, security, robustness; 2) appropriate transparency and explainability; 3) fairness; 4) accountability and governance; and 5) contestability and redress.[1]

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1 We have addressed these in a slightly different order for ease of outlining some of the key FCA regimes upfront.

3.7 These are defined and explained in the Government's White Paper AI Regulation: A Pro-innovation Approach (including the Consultation Outcome), with the Initial Guidance for Regulators containing guidance on how to implement the principles within regulators' respective domains. The subsections below outline at a high level how some of the key elements of our existing regulatory framework map to each of these principles (noting that this is not exhaustive).

Safety, security, robustness

3.8 Under this principle "AI systems should function in a robust, secure and safe way throughout the AI life cycle, and risks should be continually identified, addressed and managed".

3.9 There are a range of high-level principles-based rules, as well as more detailed rules and guidance, that will be relevant to a firm's safe, secure and robust use of AI systems in the delivery of UK financial services.

3.10 For example, the FCA's Principles for Business provide a general statement of the fundamental obligations of firms and other persons to whom they apply. Under the Principles, firms must conduct their business with due skill, care and diligence (Principle 2) and take reasonable care to organise and control their affairs responsibly, effectively and with adequate risk management systems (Principle 3).

3.11 Various of the FCA's Threshold Conditions (which represent the minimum conditions to be satisfied by firms with a Part 4A permission) are also relevant. In particular, the requirement that a firm's business model must be suitable - which includes consideration of whether the business model is compatible with the firm's affairs being conducted in a sound and prudent manner, as well as consideration of the interests of consumers and the integrity of the UK financial system.

3.12 In addition to these high-level, overarching requirements, there are more specific rules and guidance relating to systems and controls under the Senior Management Arrangements, Systems and Controls (SYSC) sourcebook which apply to different categories of firms. These include provisions related to risk controls under SYSC 7 as well as general organisational requirements under SYSC 4, including requirements for relevant firms to have sound security mechanisms in place relating to data, as well as requirements related to business continuity under SYSC 4.1.

Operational resilience, outsourcing and critical third parties (CTPs)

3.13 The FCA's work on operational resilience, outsourcing and CTPs is also of particular relevance to the 'safety, security, robustness' principle. The requirements under SYSC 15A (Operational Resilience) aim to ensure relevant firms are able to respond to, recover, learn from and prevent future operational disruptions.

3.14 In particular, firms are required to ensure their Important Business Services (IBSs) remain within Impact Tolerance (IToLs) under severe but plausible (SBP) scenarios. The requirements under SYSC 15A would include a firm's use of AI where it supports an IBS.[2]

3.15 SYSC 8 and SYSC 13 (in respect of insurers) contain specific rules and guidance on outsourcing, including in relation to operational risk. The requirements that apply will depend on the type of firm and nature of the function being outsourced (e.g. whether it is considered critical or important, is material outsourcing, or involves important operational functions). For example, SYSC 8 requires relevant firms to take reasonable steps to avoid undue operational risks when outsourcing critical functions. See also the FCA's 'Guidance for firms outsourcing to the 'cloud' and other third-party IT services' (FG 16/5).

3.16 For more information on our approach to outsourcing and operational resilience see here.

3.17 A core element of our regulatory approach to third party risks and outsourcing is also considering the role played by critical third-party providers to the financial sector. The Bank, PRA and FCA are currently assessing their approach to Critical Third Parties (CTPs), which has included publishing a Consultation Paper - "Operational resilience: Critical third parties to the UK financial sector" (CP26/23). The aim of the proposed requirements and expectations is to manage the potential risks to the stability of, or confidence in, the UK financial system that may arise due to a failure in, or disruption to, the services that a CTP provides to financial firms or Financial Market Infrastructures (FMIs). Although this regime is not specific to AI, the concept of services a CTP provides is broad enough to encompass considerations around the systemic use of a common AI model (e.g. data bias, model robustness). The adoption of AI may lead to the emergence of third-party providers of AI services who are critical to the financial sector. If that were to be the case, these systemic AI providers could come within scope of the proposed regime for CTPs, if they were designated by HM Treasury.

2 IBSs are those services that if disrupted could (1) cause intolerable levels of harm to the firms' consumers or clients; or (2) pose a risk to the soundness, stability or resilience of the UK financial system or the orderly operation of the financial markets

3.18 Relatedly, we are concerned about the competition risks that could arise from the concentration of third-party technology services, such as cloud services and AI model development, among Big Tech firms. It may enable them to enter partnerships with financial services firms on a 'take-it-or-leave-it' basis, with incumbent financial services firms having little bargaining power on the terms of the partnerships with Big Tech firms, affecting competition in downstream financial services markets. We have highlighted this in the response to our Call For Input on the data asymmetry between Big Tech and traditional financial services firms.

3.19 We are engaging with the Competition and Markets Authority on their market investigation into cloud services. We also note the publication of the CMA's review into AI Foundation Models, including their Update Paper, and are engaging in joint consumer research on generative AI with the CMA through the DRCF.

Fairness

3.20 Under this principle "AI systems should not undermine the legal rights of individuals or organisations, discriminate unfairly against individuals or create unfair market outcomes. Actors involved in all stage of the AI lifecycle should consider descriptions of fairness that are appropriate to a system's use, outcomes and the application of relevant law".

3.21 The AI lifecycle, including AI fairness, is discussed in more detail in the Final Report of the AI Public Private Forum (AIPPF). Whilst the Final AIPPF report does not represent the views of the FCA or the Bank of England, it provides a useful summary of considerations relevant to AI fairness.

3.22 The FCA's regulatory approach to consumer protection is particularly relevant to fairness in the use of safe AI systems by firms and is based on a combination of the FCA's Principles for Businesses, other high-level rules, detailed rules and guidance, including the Consumer Duty.

3.23 The Consumer Duty came into effect for new and existing products and services in July 2023 (and comes into effect for 'closed' products and services in July 2024). It requires firms to play a greater and more proactive role in delivering good outcomes for retail customers, including (in some circumstances) those who are not direct clients of the firm. Firms are required to act in good faith, avoid causing foreseeable harm, and enable and support retail customers to pursue their financial objectives.

3.24 Under the Consumer Duty there are a number of requirements, including for firms to design products and services that meet the needs of their target customers and provide fair value, communicate in a way that meets the information needs of customers, and provide support that meets the needs of customers. The Duty also addresses discrimination harms by requiring firms to take account of the different needs of their customers, including those with characteristics of vulnerability and those with protected characteristics.

3.25 AI can also provide opportunities. For example, deployed effectively, AI chatbots have the ability to help customers understand products or services. However, AI can also raise risks for consumers, and firms should consider their obligations under the Consumer Duty. For example, if firms look to make use of AI in risk assessments, some customers will do better than others and some, depending on their individual circumstances or risk factors, might even be excluded from the market.

3.26 We have been clear that we do not want to see firms reducing access to appropriate products or services to consumers ([PS22/9]) and have highlighted that firms using AI technologies in a way that embeds or amplifies bias, leading to worse outcomes for some groups of consumers, might not be acting in good faith for their consumers, unless differences in outcome can be justified objectively ([FG22/5]). The ethical use of AI and data is important and there are societal impacts to be considered.

3.27 Other Principles for Business are also relevant. For example, Principle 8 on managing conflicts of interests and Principle 9 on the suitability of advice and discretionary decisions will be important for firms to consider. Where firms are not conducting retail market business and the Consumer Duty does not apply, firms need to pay due regard to the interests of their customers and treat them fairly (Principle 6) and communicate information in a way that is clear, fair and not misleading (Principle 7).

3.28 The **Guidance for firms on the fair treatment of vulnerable customers** also sits under our Principles for Businesses. The Guidance is outcomes-focused. It sets out what firms should be doing to treat customers in vulnerable circumstances fairly, with the aim that vulnerable consumers experience outcomes as good as those for other consumers. The Guidance is technology-agnostic and applies to all firms subject to the Principles, including those using AI or data solutions within their services. For example, the Guidance expects firms to take vulnerable consumers into account at all stages of the product and service design process, including idea generation, development, testing, launch and review, and to consider the potential positive and negative impact of a product or service on a consumer in vulnerable circumstances.

3.29 This includes where the product or service is heavily reliant on an AI or data solution. The Guidance sets out that firms should implement processes to evaluate where they have not met the needs of vulnerable consumers so that they can make improvements. This includes having quality assurance processes in place to highlight areas where products or services unintentionally cause harm to customers in vulnerable circumstances.

3.30 Various of the FCA's Threshold Conditions are also relevant to fairness in the use of AI by firms, including those pertaining to a firm's suitability and business model, both of which incorporate consideration of the interests of consumers. There are also more specific rules and guidance across various chapters of the FCA Handbook related to consumer protection, which will have a bearing on firms' safe and responsible use of AI.

3.31 Where firms use AI systems that process personal data, they will also need to consider obligations under data protection legislation, including the UK General Data Protection Regulation (UK GDPR) and the Data Protection Act 2018. The Information Commissioner's Office (ICO) has responsibility for overseeing compliance with data protection requirements and has produced helpful Guidance on AI and Data Protection to clarify how the law should be interpreted and applied in this area.

3.32 In particular, the Guidance considers how to interpret and uphold the key data protection principle on fairness (requiring all processing of personal data to be fair and not lead to unfair outcomes) in the context of AI systems. This includes reference to the safeguards on automated decision making under Article 22 UK GDPR, which provides data subjects with the right not to be subject to decisions based solely on automated processing, including profiling, which produce legal or similarly significant effects.[3]

3.33 The firms we regulate will also be subject to the Equality Act 2010, including the prohibition on discrimination on the basis of protected characteristics, which is the responsibility of the Equality and Human Rights Commission (EHRC) (or to relevant equalities legislation in Northern Ireland which is the responsibility of the Equality Commission for Northern Ireland).

Appropriate transparency and explainability

3.34 Under this principle "AI systems should be appropriately transparent and explainable".

3 We note the Data Protection and Digital Information Bill (currently at committee stage in the House of Lords) proposes changes to the data protection regime, including Article 22.

3.35 Whilst our regulatory framework does not specifically address the transparency or explainability of AI systems, there are a number of high-level requirements and principles under our approach to consumer protection, which are relevant to the information firms provide to consumers, and which may be relevant to firms using AI safely and responsively in the delivery of financial services.

3.36 In particular, there is a cross-cutting obligation under the Consumer Duty to act in good faith, which is characterised by honesty, fair and open dealing with retail consumers (see PRIN 2A.2.2R). Related rules under the Consumer Duty on consumer understanding refer to meeting the information needs of retail customers and equipping them to make decisions that are effective, timely and properly informed. Principle 7, in instances where the Consumer Duty does not apply, requires firms to pay due regard to the information needs of clients and communicate with them in a way that is clear, fair and not misleading.

3.37 As part of ensuring the processing of personal data is fair and transparent under the UK GDPR, data controllers must provide data subjects with certain information about their processing activities, including the existence of automated decision-making and profiling (Articles 13 and 14, UK GDPR). Where decisions producing legal or similarly significant effects are being taken, this must include meaningful information about the logic involved in the decision, as well as the significance and the envisaged consequences of such processing for the data subject.

Accountability and governance

3.38 Under this principle "governance measures should be put in place to ensure effective oversight of the supply and use of AI systems, with clear lines of accountability established across the AI life cycle".

3.39 The FCA's regulatory framework contains a range of rules and guidance pertaining to firms' governance and accountability arrangements, which will be relevant to firms using AI safely and responsibly as part of their business models. This existing framework comprises high-level rules and principles, including certain of the FCA's high-level Threshold Conditions and the Principles for Business (see in particular, Principle 3 on Management and Control). The SYSC sourcebook also contains a range of more specific provisions on systems and controls and firms' governance processes and accountability arrangements. In particular, under SYSC 4.1.1R '[a] firm must have robust governance arrangements, which include a clear organisational structure with well defined, transparent and consistent lines of responsibility, effective processes to identify, manage, monitor, and report the risks it is or might be exposed to, and internal control mechanisms, including sound administrative and accounting procedures and effective control and safeguard arrangements for information processing systems'.

3.40 The Senior Managers and Certification Regime (SM&CR) emphasises senior management accountability and is relevant to the safe and responsible use of AI. In the AI DP, the FCA and the Bank explicitly sought feedback on whether there should be a dedicated Senior Manager responsible for AI within firms. Respondents highlighted that existing firm governance structures (and regulatory frameworks such as the SM&CR) are sufficient to address AI risks, which was outlined in the AI Feedback Statement. In PRA-authorised SM&CR banking and insurance firms and FCA-authorised Enhanced SM&CR firms (but not Core or Limited Scope SM&CR firms), technology systems are normally under the responsibility of SMF24 (Chief Operations function). Separately, the SMF4 (Chief Risk function) normally has responsibility for overall management of the risk controls of a firm, including the setting and managing of its risk exposures. These dual-regulated firms and solo-regulated Enhanced SM&CR firms must also ensure that one or more of their Senior Management Function (SMF) managers have overall responsibility for each of the activities, business areas, and management functions of the firm, to the extent that responsibility is not already covered by one of the other SMFs. That means any use of AI in relation to an activity, business area, or management function of a firm would fall within the scope of a SMF manager's responsibilities.

3.41 In addition, all Senior Managers in SM&CR firms (including solo-regulated Core and Limited Scope firms) are required to have a Statement of Responsibilities. This sets out what they are responsible for within the business. They are also subject to the Senior Manager Conduct Rules, including requiring Senior Managers to take reasonable steps to ensure that the business of the firm, for which they are responsible, is effectively controlled. These additional features of the SM&CR framework support the safe and responsible use of AI within firms.

3.42 We are reviewing the SM&CR and published a DP in March 2023. We plan to publish a CP in June 2024.

3.43 In addition to this, under the Consumer Duty, firms are required to ensure that their obligation to act to deliver good outcomes for retail customers is reflected in their strategies, governance and leadership. Firms are also encouraged to nominate a Board Champion during implementation of the Consumer Duty. At least annually, a firm's board, or equivalent governing body, should review and approve an assessment, evidenced with data, of whether the firm is delivering good outcomes for its customers and, where it is not delivering good outcomes, detail an action plan to remedy this. The first annual report is due on 31 July 2024. This additional layer of reporting and oversight by a firm's board might also include consideration of current or future use of AI technologies where it might impact retail consumer outcomes or assist in monitoring and evaluating those outcomes.

Contestability and redress

3.44 Under this principle "where appropriate, users, impacted third parties and actors in the AI life cycle should be able to contest an AI decision or outcome that is harmful or creates material risk of harms."

3.45 Firms that use AI as part of their business operations remain responsible for ensuring compliance with our rules, including in relation to consumer protection. Where a firm's use of AI results in a breach of our rules (e.g. because an AI system produces decisions or outcomes which cause consumer harm), there are a range of mechanisms through which firms can be held accountable and through which consumers can get redress.

3.46 In particular, under our rules, firms are required to maintain their own complaints handling procedures to ensure that complaints are handled fairly and promptly. This would include complaints about AI decisions concerning the provision of, or failure to provide, a financial service. Chapter 1 of the 'Dispute Resolution: Complaints' Sourcebook (DISP) contains rules and guidance detailing how firms should deal with complaints. Where consumers are dissatisfied with the results of a firm's internal investigation, they can refer the matter free of charge to the Financial Ombudsman Service for an independent review, which can award redress in appropriate cases. Depending on the nature of a breach, redress may also be available through voluntary or mandatory firm-led redress schemes and the Financial Services Compensation Scheme (FSCS).

3.47 In addition, as set out above, data subjects have the right not to be subject to automated decisions under Article 22 UK GDPR which produce legal or similarly significant effects. Where there are exceptions to this, safeguards must be put in place, including the right to contest automated decisions.

The FCA as a user of AI

3.48 Continuing to improve how we use data and technology is helping us become a more innovative, assertive and adaptive regulator and will allow us to achieve the strategy laid out in our Data Strategy (2022) towards becoming a digital and data led regulator.

3.49 Our Advanced Analytics unit at the FCA is using AI to develop additional tools to protect consumers and markets. This unit has, among other things, developed tools to monitor scam websites as well as an in-house synthetic data tool for Sanctions Screening Testing that has transformed our assessment of firms' sanctions name screening systems.

3.50 Synthetic data has the potential to contribute to beneficial and responsible innovation in financial services and help address important financial services public policy issues, such as financial crime and fraud. The FCA has set up the Synthetic Data Expert Group, which recently published a report on synthetic data applications to provide unique insights on the use cases, opportunities and challenges this technology poses.

3.51 Machine learning has been critical for us in our fight against online scams. We have developed tools that are able to detect, review and triage potential scam websites, which we use to proactively monitor and identify them. This work has resulted in an increase in firm warnings of 33.5% from 2021-2022 (1,410 in 2021 to 1882 in 2022), despite a decrease in the number of total reports received.

3.52 Financial trading strategies are evolving rapidly, becoming more complex, supported by advanced analytics, machine learning and AI. Trade surveillance strategies need to evolve to keep pace with these developments, to help monitor evolving market dynamics and detect ever more complex forms of market abuse. Market surveillance technologists face barriers to entry and challenges around development such as the need for large, high quality trading datasets to test models. The FCA wants to support industry in developing AI surveillance tools for markets. Therefore, we are hosting a TechSprint, whereby trade surveillance specialists will be able to develop and test their AI-powered surveillance solutions using the FCA's extensive trading datasets on our Digital Sandbox platform.

3.53 The FCA is particularly interested in how AI can help identify more complex types of market abuse that are currently difficult to detect, such as cross-market manipulation, improve the accuracy of market abuse detection more generally and ultimately transform market abuse surveillance by incorporating anomaly detection.

Data analytics capabilities

3.54 We were encouraged as part of this update to include an explanation of our current capability to address AI as compared with our assessment of what is required, and the actions we are taking to ensure we have the right structures and skills in place.

3.55 Government, firms and the public we serve expect us to be a leading technical expert on matters relating to financial services. This means we are committed to building our capabilities when it comes to data and technology, including AI.

3.56 In 2021, the FCA appointed its first ever Chief Data, Information and Intelligence Officer to lead the newly created Data, Technology and Innovation (DTI) division, bringing together our existing innovation and technology functions into one place, and enhancing our ability to tackle challenges posed by emerging technology.

3.57 Since 2021, the DTI function has recruited a diverse range of colleagues with technical skillsets, including data science, AI, data governance, digital product development, cloud architecture, engineering, and more. DTI leads our response to emerging technological developments in areas such as quantum computing, AI and blockchain, supports the FCA's own data and tech capability development, and delivers world-class innovation services.

3.58 Our Regulatory and Digital Sandboxes support firms, allowing them to test and refine new ideas and products in a controlled environment, enhancing innovation across financial services markets. These services have been replicated by regulators across the globe (see, for example, the **DRCF's Quantum Technologies Insights Paper**). The division runs an Emerging Technology Hub which identifies critical and emerging technology trends affecting financial services over the medium and long term. This work supports our AI work, especially the adjacent technologies to AI (**such as quantum computing**), ensuring our approach is holistic and can monitor their evolution over time, as well as their potential impact on consumers and markets.

4. What we plan to do in the next 12 months

Continuing to further our understanding of AI deployment in UK financial markets

4.1 We want to make sure that any potential future regulatory adaptations are proportionate to the risks, whilst creating a framework for beneficial innovation. This requires us to work from a strong empirical basis. Our first priority therefore is to continue to build an in-depth understanding of how AI is deployed in UK financial markets. This approach ensures that any potential future regulatory interventions are not only effective but also proportionate and pro-innovation. It also ensures that we can respond promptly from a supervisory perspective to any emerging issues at specific firms.

4.2 The FCA is currently involved in diagnostic work on the deployment of AI across UK financial markets. We are also re-running a third edition of the machine learning survey, jointly with the Bank of England, as well as collaborating with the Payment Services Regulator (PSR) to consider AI across systems areas. Being proactive in gaining insights and intelligence on the impact AI is having on UK financial markets allows us to respond to developments with speed and agility.

Building on existing foundations

4.3 The existing regulatory framework covers firms' use of technology, including AI. As set out above, the existing framework, in so far as it applies to firms using AI, aligns with and supports the Government's AI principles in many ways. However, we continue to closely monitor the situation and may actively consider future regulatory adaptations if needed.

4.4 Recent developments, such as the rapid rise of Large Language Models (LLMs), for example, put resilience at the heart of what we do. This makes regulatory regimes, such as those relating to operational resilience, outsourcing and critical third parties even more central to our analysis. These regimes will have increasing relevance to firms' safe and responsible use of AI and we will feed in lessons from our better understanding of AI deployment in UK financial markets into our ongoing policy work in these areas.

Collaboration

4.5 Collaboration matters more than ever - not just to build the empirical understanding and intelligence but also as a way to create consensus on best practice and potential future regulatory work. This is why we continue to collaborate closely with the Bank of England, PSR, and with other regulators through the DRCF membership. It also involves close engagement with regulated firms, civil society, academia and our international peers.

International

4.6 We routinely collaborate with partners domestically and internationally, including on AI. Given recent developments (such as the AI Safety Summit and the G7 Leaders' Statement on the Hiroshima AI Process and recent Ministerial Declaration), we have further prioritised our international engagement on AI. Respondents to our AI DP made the same point, highlighting the need for global alignment and standardisation on how best to regulate AI. This is why the FCA is closely involved in the work of the International Organization of Securities Commissions (IOSCO), including the AI working group, and supports the work of the Financial Stability Board (FSB). The FCA is also a core participant in other multilateral forums on AI, including the Organisation for Economic Co-operation and Development (OECD), the Global Financial Innovation Network (GFIN) and the G7.

Testing for beneficial AI

4.7 We recognise that with greater use of AI by market participants the technology's impact on consumers and markets is likely to increase. This is true as much for its risks as it is for its benefits. We are working with DRCF member regulators to deliver the pilot AI and Digital Hub. The FCA also runs the Digital Sandbox which allows for the testing of technology via synthetic data, and the Regulatory Sandbox, for which the FCA is the global pioneer. Both services have supported a range of AI applications to date.

4.8 To ensure that AI is used in a way that is safe and responsible, we are assessing opportunities to pilot new types of regulatory engagement as well as environments in which the design and impact of AI on consumers and markets can be tested and assessed without harm materialising. This includes exploring changes to our innovation services that could enable the testing, design, governance and impact of AI technologies in UK financial markets within an AI Sandbox.

Our own use of AI

4.9 AI is not just changing markets but also the way we regulate. Advanced models can help identify fraud and bad actors, for example. We use web scraping and social media tools that are able to detect, review and triage potential scam websites. We plan to invest more into these technologies to proactively monitor markets, including for market surveillance purposes. We are currently exploring potential further use cases involving Natural Language Processing to aid triage decisions, assessing AI to generate synthetic data or using LLMs to analyse and summarise text.

Looking towards the future

4.10 In order to understand AI and how it might evolve, we need to be forward-looking and to collaborate with a diverse set of stakeholders to identify potential novel risks and opportunities. We also need to look beyond AI and understand other technological developments, how they might interact and the potential interdependencies that could arise. The FCA takes a proactive approach to understanding emerging technologies, and their potential impact, as a part of our Emerging Technology Research Hub. For example, as part of the DRCF Horizon Scanning & Emerging Technologies workstream in 2024-2025, we will conduct research on deepfakes and simulated content following engagement with stakeholders.

4.11 We also published a response to our Call For Input on the data asymmetry between Big Tech and traditional financial services firms and have set out several next steps.

4.12 As an important technology trend, we have been actively monitoring advancements in quantum computing and examining the potential benefits for industry and consumers while also considering the impact of the inherent security risks. Our collaboration with the World Economic Forum demonstrates our inclusive, global approach and our commitment to working with regulatory bodies and industry stakeholders to understand and mitigate technological risks.

Conclusions

4.13 AI can make a significant contribution to economic growth, capital market efficiencies, improve consumer outcomes as well as good regulation. This requires a strong regulatory framework that adapts, evolves and responds to the new challenges and risks that technology brings. We believe that we have the right foundations, collaboration and supervision in place. Continuing to ensure the safe and responsible deployment of AI in UK financial markets in the interests of consumers and the markets we regulate, is a priority for the FCA.

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