Scaling AI in the EU financial sector

1. AI deployment prospects and opportunities in the financial sector

1.1 State of play and future prospects

An industry speaker stated that the AI landscape has changed fundamentally in recent months with the release of more advanced models and agentic tools, significantly increasing the expected impact of AI on financial services in both the near and longer term. AI is no longer limited to incremental efficiency gains in operational functions but is beginning to reshape core activities and decision-making, including at senior management level. While adoption remains uneven across firms and subsectors, early adopters are likely to capture the greatest benefits, not only through cost savings but also through product innovation, making AI a key driver of competitiveness at both EU and global levels. The competitive race is no longer primarily about model capability, but about how effectively firms can organise around available models and agentic tools to redesign tasks and workflows.

A regulator also shared a positive perspective on the potential of AI. While an FCA survey of wholesale firms conducted in November 2024 still showed a relatively cautious adoption of AI due in particular to explainability and accountability concerns limiting more direct front-office use, the landscape has significantly changed since then. Back in November 2024, around 75% of firms were using AI, mainly for internal optimisation, cybersecurity and fraud detection, with adoption concentrated in back- and middle-office functions, and many firms were expecting AI to reach customer-facing and compliance functions within three years. It is likely that since then usage has significantly widened with enhanced model capabilities, coding capacities and the development of agentic models.

The regulator further emphasised that customer demand is likely to become an important driver of AI adoption. As users gain access to more advanced tools, their ability to process information and act on it may increase significantly, potentially challenging traditional regulatory approaches that disclosure should be focused on key information. Agentic tools could also facilitate low-friction switching between providers, with potential implications for existing business models.

A second industry speaker agreed that actual usage may already be more extensive than suggested by survey data and is likely to increase rapidly in the near term. While firms are at different stages of adoption, AI use has been expanding steadily over the past decade and is now accelerating. The financial sector is particularly well suited to AI given its data-rich, process-driven and highly regulated nature. Survey data indicates adoption rising from around 40% of global firms in 2024 to 54% in 2025, with further growth expected. Although most current use remains concentrated in back- and middle-office functions, it is gradually extending to front-office activities.

A third industry speaker considered that AI is already transforming financial services and generating tangible value for both firms and customers by improving productivity, customer experience, financial literacy and inclusion and is therefore becoming an increasingly important driver of competitiveness in the financial sector.

1.2 Key AI use cases in financial services

An industry representative illustrated the opportunities offered by AI through a range of use cases implemented in their firm, an online brokerage platform, where AI has been deployed across the organisation over the past three years. These applications are already delivering tangible benefits, including higher productivity, greater scalability, enhanced compliance in certain functions, improved customer experience and broader access to financial markets. This supports the platform's objective of opening global markets to a wider range of investors, with AI acting as a key enabler.

On the customer side, an AI-powered bot is used to handle around 75% of client queries end-to-end on a 24/7 basis, enabling faster response times, improved satisfaction and efficiency gains. These benefits, however, depend on strong controls, continuous monitoring and human oversight to mitigate risks such as inaccuracies, bias, discrimination and hallucinations. An AI tool is also used to provide investment-related insights, helping users better understand financial concepts, portfolio risks, market developments and analyst views. While not providing investment advice, it aims to empower users with reliable information within a controlled environment, overseen by financial professionals, and offer a more robust alternative to general-purpose AI tools currently available to the general public.

AI is also widely applied to internal operations in their firm. It is already used to generate around 50% of code, improving productivity and accelerating product development capability, with appropriate safeguards in place for cyber and digital operational resilience under DORA and for code reliability. AI also supports compliance functions, allowing for example to review marketing content against regulatory requirements across multiple jurisdictions. This allows a large proportion of materials to be approved rapidly based on predefined internal rules, with accuracy levels exceeding manual review, thereby enhancing both efficiency and scalability.

Another industry speaker added that AI also enables the creation of genuinely new data and information products, rather than simply accelerating existing processes, by integrating and analysing large volumes of unstructured data, such as news and corporate filings, to generate more advanced and timely analytics

than traditional statistical approaches. It also offers significant benefits for end users, with agentic AI tools able to distil complex information into tailored outputs that are easier to understand and use, as well as for regulators, by supporting more agile and effective regulatory approaches.

2. Challenges and risks

The panellists identified three main categories of risks and challenges associated with the use of AI in the financial sector: those related to technology itself, in particular underlying models; the amplification of market-wide and systemic risks; and firm-level challenges, including implementation, economic viability and operational constraints.

2.1 Technology and model-related risks

An official highlighted a range of model-and data-related risks associated with AI, including limited explainability, black-box behaviour, hallucinations, data-quality issues, as well as heightened cybersecurity risks and manipulation risks such as data poisoning and prompt injection (manipulation of training data and of AI system inputs).

A regulator also emphasised risks inherent to the technology itself, which, while not specific to financial services, are particularly relevant in this sector. These include lack of explainability, bias, discrimination, privacy concerns and questions of accountability regarding responsibility for AI-driven decisions. Mitigating measures may include maintaining human involvement in decision-making and ensuring transparency when interacting with AI systems. However, it is uncertain whether firms can always adequately understand, justify, govern and audit AI-driven outcomes.

An industry speaker acknowledged the reality of AI-related risks including accountability and adoption risks and the higher exposure to cyber-risks, but argued that such assessments are often affected by an inherent status quo bias. AI should be compared not with an idealised human decision-maker, but with actual human performance, particularly in repetitive tasks where human judgement may be inconsistent or unreliable, and where AI can deliver more consistent and higher-quality outcomes. This perspective is important when defining acceptable risk levels and designing appropriate control frameworks.

The industry speaker also challenged the assumption that a "human in the loop" necessarily improves outcomes, particularly for routine activities. In practice, humans may struggle to effectively oversee AI systems, as they are less likely to detect infrequent errors. Independent AI-based checks on AI systems can in fact provide higher-quality control while significantly improving productivity.

2.2 Market-wide and systemic risks

A regulator noted that AI may amplify existing financial stability risks, such as herding risks if firms rely on similar models, or interconnectedness and contagion effects. Concentration and third-party dependency risks along with competition concerns, particularly in the context of vendor lock-in must also be considered.

An official identified third-party dependence as the most significant current risk associated with AI, especially in the present geopolitical context. The high concentration of providers, largely located in the US, combined with the risk of trade restrictions, creates structural vulnerabilities, especially where vendor lock-in limits the ability to switch providers quickly. This may require targeted regulatory responses with adjustments to the existing EU framework. One question is whether AI providers should be considered critical third-party providers under DORA, given their growing systemic importance.

An industry speaker added that, at the macro level, a key emerging issue is the financial system's growing exposure to AI as an asset class. The rapid expansion of investment in AI infrastructure, reflected in large financing commitments and new funding structures linked to computing capacity, appears disproportionate to the current revenues of AI firms. This may create vulnerabilities in the way financial markets are financing and valuing the development of AI technologies, beyond those associated with their use.

2.3 Firm-level operational and business challenges

A regulator noted that a third category of risks relates to the use of AI for specific financial services and activities. For example, when AI is used to support investment advice or portfolio management, distinct challenges may arise at different stages, including onboarding or investment strategy selection.

An industry speaker highlighted that, beyond technical vulnerabilities, a key challenge at firm level is that AI does not yet consistently deliver the expected returns. While AI projects are highly capital intensive, revenue gains remain modest and productivity improvements are generally limited. There are also high abandonment rates at around 50% in AI projects in the financial sector. Although firms face strong competitive pressure to invest, AI initiatives are still quite experimental and uncertain. In addition, legacy technology and regulatory barriers are slowing adoption. Recent improvements in model capabilities are, however, expected to significantly accelerate deployment in the coming years and make AI projects more attractive. With the development of generative AI, applications are moving beyond supporting specific tasks and datasets such as AML, fraud detection or data processing, towards broader support functions and, ultimately, core business activities.

3. The EU regulatory approach to AI

3.1 The need to balance innovation and risk mitigation

An industry speaker stated that, while the risks of AI are real and must be properly managed, regulators should

also take into account the risk of firms not adopting AI. There will be a growing divide in competitiveness between jurisdictions that enable rapid AI adoption and those that lag behind. Regulation should therefore support, rather than hinder, innovation in this area provided it is implemented in a responsible manner. While the EU approach is strong in identifying and mitigating risks, it remains uncertain whether it will be applied in a way that also enables scaling. An excessive focus on risk avoidance may slow adoption and undermine competitiveness, even though AI diffusion cannot in practice be halted, as it is already spreading rapidly across the market.

This does not call into question the need for a risk-based approach, but rather how it is applied. A risk-based framework can support both control and innovation if it is implemented proportionately. The speaker illustrated this with their firm's approach, which classifies AI use cases according to their level of risk and applies governance, controls and monitoring proportionately. This allows low-risk applications to be deployed quickly, while applying stronger oversight where risks are higher. In this perspective, managing risks and enabling AI deployment are not contradictory, but can be pursued simultaneously. A further aspect to consider is that regulatory uncertainty is a major barrier to innovation. Firms need clarity and confidence that innovation is encouraged, pointing to the need for a better balance in the European framework between a supportive regulatory approach and effective risk management, with clear expectations on accountability.

An official broadly agreed with the need for a balanced regulatory approach supporting the responsible development and deployment of AI, while mitigating the related risks. Europe has a strong know how in developing regulatory responses, sometimes ahead of effective market development, which may come at the expense of competitiveness. By contrast, the US and China tend to favour a more liberal approach aimed at removing barriers to AI adoption. At the same time, there is a risk in underestimating AI-related risks in the pursuit of competitiveness. Neither extreme is optimal, and greater international coordination will be necessary to strike the right balance between innovation and risk management. More broadly, strengthening Europe's position in AI will require not only appropriate regulation, but also a broader strategy to enhance its attractiveness as a location for the development and deployment of AI in financial services.

A second industry speaker highlighted the critical importance of scale, both in terms of data and market infrastructure beyond regulation. Europe risks falling behind if it does not develop sufficiently integrated data ecosystems. Ultimately, while technological progress is inevitable, competitiveness will depend on the ability of jurisdictions to combine effective governance, scalable data infrastructures and a clear strategic framework defining what is permissible and where innovation can take place.

A regulator added that AI adoption is likely to continue irrespective of regulatory constraints, as it is driven not only by regulated firms but also by unregulated actors and customer demand. In this context, limiting AI use within the regulated sector would not necessarily reduce risks, but could instead shift activity outside the regulatory perimeter.

A third industry speaker considered that AI should be treated a general-purpose technology. While the risks are real, firms should have sufficient flexibility to determine how best to deploy it. This approach is likely to generate greater long-term productivity gains than highly prescriptive regulation focused on each step of the process.

3.2 Strengthening governance in an evolving digital ecosystem

An industry speaker argued that AI should be considered as the latest stage of a broader sequence of technological transformations in financial services, following in particular a decade of cloud migration that has laid the foundation for current AI developments. These earlier developments have already created new forms of dependencies and governance needs, reflected in frameworks such as DORA, which introduced contractual and operational requirements across financial and ICT supply chains and led to the identification of critical third-party providers. AI should therefore not be viewed in isolation, but as part of this evolving digital system, enhancing existing infrastructure with advanced analytical and decision-making capabilities.

The EU starts from a relatively strong position, with a robust regulatory framework - including GDPR, DORA and a wide range of conduct and operational rules - that provides a solid basis for scaling AI in a controlled environment. However, as AI interacts with new digital developments such as tokenisation and decentralised finance, the digitalised financial system is likely to become more complex and potentially riskier, requiring strengthened governance across multiple technological layers. At firm level, integrating AI also creates significant operational challenges. Firms must restructure fragmented data architectures, often organised around products or P&Ls, and invest in data standardisation and metadata to ensure interoperability and effective use of data across systems.

4. Policy approaches in the UK and Israel

4.1 The UK's policy approach to AI

A regulator explained that the UK approach to AI regulation is to rely on existing requirements as far as possible and to avoid introducing AI-specific rules unless clearly justified. At this stage, no such justification has been identified, and the current outcome-based, technologically neutral regulatory framework - covering areas such as market conduct, consumer protection, operational resilience and accountability - is considered broadly fit for purpose. These requirements apply regardless of the technology used, although their application may be challenged in some areas by AI. Accountability is potentially one such area.

Responsibility remains with individuals under the UK's senior managers regime, but this approach may be tested where AI systems behave in ways that differ from their intended design. While accountability would still rest with the responsible individual, how this framework will apply in practice in the case of AI systems remains an open question for both regulators and firms.

AI can also support regulatory objectives, including improved consumer outcomes and market integrity, if appropriately harnessed. Achieving this requires close engagement with firms through sandboxes and testing environments, as well as ensuring that relevant data is accessible so that firms and users can effectively leverage AI rather than allowing advantages to become concentrated among a limited number of players. In this context, the FCA is actively engaging with firms leading AI projects through sandboxes, data-sharing initiatives and live testing with firms, which are already revealing significant innovation across the sector.

4.2 Israel's policy approach to AI

A regulator noted that AI adoption in Israel remains relatively cautious. To accompany its development, a joint interagency task force was established in late 2022, bringing together financial regulators and policymakers to develop a coordinated approach to AI in financial services. The work focused on analysing key technological challenges, such as explainability, bias and governance, as well as risks arising from specific financial use cases, with the aim of developing pragmatic measures that both enable safe and responsible adoption and provide firms with clarity on risks and appropriate safeguards.

Like the UK, Israel follows a technologically neutral approach, integrating AI into existing financial regulation rather than adopting a horizontal framework such as the EU AI Act. A risk-based approach is also applied, but with greater flexibility than in the EU: the initial classification of AI use cases is largely left to firms, based on materiality for both clients and the institution, while regulators retain the ability to intervene where necessary.

This risk-based approach can be illustrated by the treatment of explainability, where a distinction is made between general explainability (understanding how a system operates) and specific explainability (being able to justify a particular outcome). While the former is generally expected, the latter may not always be feasible, particularly for more advanced AI systems. In such cases, the requirement for explainability should depend on legal obligations and the level of risk involved. Where full explanation of individual outcomes is not possible, alternative safeguards, such as enhanced monitoring or human oversight, can be applied. This approach allows regulators to balance the need for user protection with the practical limitations of AI systems, without unnecessarily restricting their use.

Wrap up

The Chair noted the rapid adoption of AI in the financial sector, contributing to enhance efficiencies and also the products and services offered to clients. New trends including the spread of generative AI and more recently the deployment of AI agents and the emergence of more powerful models are likely to provide significant opportunities in the financial sector. In assessing these opportunities, the comparison between AI and human performance should be based on actual rather than ideal human behaviour. There is however an inherent difficulty of predicting technological developments in such a rapidly evolving area.

The risks and vulnerabilities associated with the development of AI also need considering, in particular issues such as control and explainability in the use of AI systems and notably agentic systems, as well as the growing dependence of financial firms on a limited number of digital service providers, which raises concerns around concentration risk and vendor lock-in. The discussion also emphasised that regulatory requirements are not in themselves a barrier to AI adoption, but that the way in which they are applied, particularly in terms of proportionality, is a determining factor.