

Can AI be a game changer for banking and insurance?

1. Extent of transformation due to AI use

1.1 Adoption of AI in the banking and insurance sectors

A regulator observed that AI (artificial intelligence) adoption is increasing across the insurance sector and throughout the value chain. Not all insurers are using AI throughout the entire value chain, so there are a variety of use cases. According to an EIOPA study, 50% of non-life insurers and 25% of life insurers are using AI in Europe.

An official explained that AI use in UK banking is accelerating. Although it is still difficult to know whether AI is reaching a tipping point in the sector, it is clear that AI usage is increasing. Competitive pressures and leadership interest are likely to drive its use further, due to the fear of being left behind. According to a recent Bank of England survey, 75% of firms are already using AI and another 10% are planning to adopt it in some form over the next couple of years. The most dynamic area of growth is in the use of complex foundation models, currently used by 17% of firms. Use of third-party AI tools has grown significantly, rising from 17% to 33% over two years.

An industry representative noted that there are differences in the speed at which countries are adopting AI in the financial sector. The UK leads the way in Europe, followed by Germany and France, but all lag behind the US. An international AI Index shows that only two of the top 10 AI-mature banks are European. The current wave of AI adoption driven by generative AI is expected to be faster than that of traditional AI systems because generative AI is significantly more accessible.

Another industry representative commented that the current phase is about the practical implementation of AI and how it can enhance individuals' abilities within a team, moving beyond the initial hype and testing phase.

The Chair observed that supervisors are also on a learning curve in their usage of AI and are beginning to use AI tools in their daily work.

1.2 Main use cases

A regulator explained that AI use in the insurance sector initially focused on automating simple processes such as document handling, but there are now applications in a variety of areas including product development, sales, underwriting, claims management and fraud detection. Use cases vary widely among firms however, and many are still experimenting with several use cases.

An official stated that present applications of AI in the UK banking sector are largely in anti-money laundering (AML), data analytics, fraud detection and cybersecurity. Going forward, firms are increasingly considering applying

AI in customer-facing services to improve user experience. Use of AI for decision-making in an autonomous way is rare; only 2% of use cases involve AI making decisions without human input. However, in over 50% of cases AI is used to support decision-making by humans.

An industry representative observed that there are differences in the maturity of AI use between the insurance and banking sectors in Europe, as well as between regions. Insurers are generally ahead in customer-oriented applications, offering personalised services and improving customer interaction. In contrast, banks still focus more on optimising back-office processes, reducing costs and using chatbots. Currently, AI is primarily used for cost reduction in the banking sector, but future applications will likely be broader, including hyper-personalisation, risk management and anticipatory strategies. For example, AI enables proactive risk management, potentially allowing firms to manage risks before they fully materialise.

A second industry representative agreed that AI adoption in banking is more mature in some areas such as fraud detection and credit risk modelling, where the regulatory framework is more established. In these areas, traditional models are used. More advanced models are often more difficult to use for decision-making because of the lack of transparency, but they are used to challenge and compare results. When results differ, the final decision is made by human experts following further investigations. AI is also used internally by banks for operational efficiency, including internal document or information search via chatbots. Client-facing tools are used to support pricing decisions made by experts. Use of generative AI remains limited due to regulatory uncertainty, but natural language processing (NLP) tools are widely employed. The speaker's bank is also engaged in many internal proof-of-concept projects, reflecting a growing openness to innovation within the banking environment. Clients are increasingly interested in AI and the internal culture is now more supportive of experimentation and innovation than it was a decade ago.

A third industry representative referenced a recent Harvard Business Review article about the transformation brought about by AI at Moody's Analytics to illustrate use cases of AI. There, AI is used both internally and externally to enhance efficiency and decision-making. One such application of AI for efficiency, developed in 2017, uses optical character recognition (OCR) to read and standardise financial statements for use in credit assessments, thereby reducing the need for manual data entry. This can enable bank lending to customers who do not have an official rating. Another AI product, Research Assistant, which was launched in 2024, leverages the firm's vast archive of PDF documents to enable clients to conduct analyses, such as identifying rating changes or

comparing research on specific companies. A recently launched AI agent also supports processes in the financial crime and know your customer (KYC) space. The agent reduces false positives and speeds up decisions by automating screening processes, while leaving the final judgement to human analysts. AI agents (agentic AI) are likely to be the next phase of AI applications, helping to speed up decisions by collating data and analytics and helping analysts make faster and more effective decisions, without replacing these analysts.

1.3 Impact of AI on banking and insurance activities

An industry representative suggested that AI will eventually lead to a significant transformation of banking and insurance activities, but that this evolution is still at an early stage. Another aspect to consider is that, in the future, generative and traditional AI will interact, together with agentic AI models autonomously defining and executing tasks, which will further drive transformation.

A second industry representative agreed that AI has the potential to transform financial services across multiple dimensions such as decision-making, insight extraction and fraud detection, using techniques such as NLP and predictive analytics. AI can also support rapid prototyping by assisting coders, thereby accelerating the development and testing of new ideas. These trends are expected to continue. A recent Harvard Business School study demonstrates the far-reaching potential impacts of AI in terms of enhancing performance and teamwork. Individuals using AI can perform at the same level as entire teams without AI and AI-enhanced teams clearly outperform those without. This is primarily driven by the ability of AI to break down functional silos, enabling team members to view problems through multiple lenses and mental models, compare them, and identify new synergies, rather than focusing on their areas of expertise. AI will also make individual contributors much more effective. This will transform the way financial institutions deliver services in the future, speeding up delivery and enabling them to offer more customised, insightful products using available data.

A third industry representative remarked that the current stage of AI adoption is comparable to the 'dawn of the internet', when services that were previously only accessible in person or by telephone started to appear online. AI will have a significant impact, but this will take some time. Currently, AI applications are still very much focused on efficiency.

2. Drivers and challenges of AI adoption

2.1 Drivers

An industry representative referenced a global survey of 550 risk and compliance professionals conducted at the end of 2023 about the adoption of AI. This survey highlighted the importance of data quality and data management maturity for AI adoption. Firms with robust data governance are at the forefront of AI adoption. Empowering staff to experiment with AI is another factor

that can contribute to successful implementation, since AI is difficult to plan centrally. Some of the most impactful innovations arise from initiatives led at operational level. A culture that encourages innovation and enables employees to take the initiative is critical to success.

A second industry representative agreed that robust data governance is essential for effective AI, since AI is only as good as the data it relies on. Proper stewardship of data and ensuring data quality are foundational requirements for the successful adoption of AI.

A third industry representative emphasised that robust data management and governance and cloud adoption are essential factors for AI adoption. The digital ecosystem, including data centres and foundation model providers, is more developed in the US than in Europe. The US is also ahead on investment in AI, the number of data scientists working in the financial industry and the competitiveness of the regulatory environment. All these factors need to be considered when assessing how to drive further adoption of AI. Generative AI is also likely to be an important catalyst for AI adoption. Unlike traditional AI, which required specialist mathematical knowledge, generative AI tools can be used by non-experts. This has led to broader and more rapid adoption at an individual and organisational level. Firms not using AI risk being left behind.

Beyond data management and generative AI, key drivers of AI adoption include access to talent, sustainable energy use, and trust, the industry speaker remarked. Trust is central to AI adoption. Just as people trust their car to function without knowing how every component works, users need to trust AI systems. Building that trust requires reliable systems and clear accountability. Trust, combined with high-quality data, will enable the scale up of AI across the financial sector.

2.2 Challenges

An official reported that only about half of the firms surveyed were comfortable with having only a partial understanding of the models they use, which could be a barrier to further adoption. The Chair observed that the social acceptance of AI remains a critical issue that may impact its adoption.

A regulator highlighted that data quality challenges are particularly acute in the insurance sector due to legacy systems. The companies that are able to address these challenges and have access to quality data are likely to be the most successful in leveraging the potential of AI.

An industry representative outlined several challenges hindering AI adoption in the banking sector. Regulatory fragmentation means that global banks face uncertainty when dealing with cross-border data, particularly with regard to data privacy laws and other data requirements. These issues complicate the use of customer data for AI training. Banks are unsure how to utilise the data properly, which reduces the scope of data used. Additionally, while significant progress has been made in the explainability of traditional AI models, generative AI presents novel challenges in terms of explainability and performance measurement due to the subjective nature of evaluating language outputs, for example in terms of style or tonality. Regulatory frameworks are needed to

enable a consistent measurement of the explainability and performance of generative AI models.

Talent acquisition is also a concern, as the skills needed to develop AI systems are constantly evolving, and banks are competing with other industries for AI professionals. These other industries can use state-of-the-art models more easily due to lighter regulation, whereas banks must use more mature models. To retain top talent, banks must provide opportunities for innovation, experimentation and intellectual stimulation.

Another industry representative noted that generative AI also introduces new infrastructure and governance challenges.

3. Actions needed to support AI innovation

3.1 Policy framework

An official stated that regulation can address innovation in two ways. One is to provide upfront regulatory clarity to encourage investment in innovative technologies and applications, as firms need clear rules to invest. The other way is to allow innovation to evolve, since it is difficult to anticipate how things will develop. In this latter case, risks must be monitored and flexible frameworks used to manage them. Opinions among market stakeholders on the best course of action are usually evenly split. The Bank of England tends to put more weight on the second approach, which enables it to remain responsive to new developments and emerging threats. It relies on existing tools, such as model risk management and cybersecurity frameworks, to monitor risks, viewing AI primarily as an input that can be effectively managed within these established frameworks.

A regulator noted that, while existing frameworks such as Solvency II cover IT applications in the insurance sector, they do not fully address the unique risks posed by AI. The AI Act is therefore necessary to address specific issues related to the use of AI, such as discrimination, explainability and transparency. Implementing the AI Act requirements is challenging, particularly the demand for explainability, which is inherently difficult with advanced AI systems. Additionally, the AI Act is a horizontal regulation that was not specifically designed for banks and insurance companies. Some definitions and the classification of commonly used techniques in the insurance sector, such as generalised linear models, still need to be clarified under the AI Act. It is also unclear whether these models should be classified as high or normal risk. In addition, while achieving harmonised standards is necessary for preserving a level playing field in Europe, global alignment would be ideal.

The Chair noted that, at the international level, an application paper on the supervision of artificial intelligence was drafted in the fintech forum of the International Association of Insurance Supervisors (IAIS).

An industry representative stated that large-scale AI adoption in the banking and insurance sectors relies on the availability of clear and agile regulatory frameworks

that can keep pace with rapid technological developments. This is particularly important given the fast-evolving nature of solutions offered by hyperscalers, large language model (LLM) providers and emerging innovations such as agentic AI. To tackle the risks posed by AI, regulation must seek to impose homogeneous practices but avoid excessive standardisation. Premature standardisation risks hindering innovation. Instead, standards should be defined once the most effective innovations have gained market traction. A principles-based, risk-based approach, such as that of the AI Act, is preferable, but must be applied consistently across EU member states to prevent fragmentation that could slow AI adoption. Certain regulatory measures, such as GDPR, may also require adjustments to facilitate responsible data reuse in particular.

A second industry representative agreed that technology, and AI in particular, is moving too fast for a prescriptive regulation to be successful in controlling risks in an effective way. Effective innovation requires flexible regulatory approaches. Supervisors should focus on verifying whether firms understand and manage their risks, using frameworks such as NIST or ISO 42001. Companies that can articulate their risk management strategies will be better positioned to innovate responsibly. Shared understanding between regulators and industry is also key to sustaining progress.

A third industry representative noted that regulatory clarity and alignment are essential to support the adoption of AI in the European banking sector, particularly given the large size and complexity of many EU-based banks and insurance firms. A recent survey indicates that medium-sized institutions, including fintech and regtech firms, have been among the main beneficiaries of AI, likely due to their greater agility. In contrast, larger banks often face significant challenges stemming from differing regulatory interpretations across jurisdictions, which can create obstacles to adoption. Even where individual regulators show openness to AI, inconsistent application of rules across countries undermines the ability of multinational institutions to move forward with confidence.

3.2 Cooperation between industry, public authorities and tech providers

An official emphasised that for an adaptive approach to AI policy to be successful, it is essential for regulators to be sufficiently nimble and monitor market developments closely through continuous engagement with industry and market surveys. To this end, an AI Consortium has recently been launched in the UK, bringing together regulators and firms to monitor AI developments, assess risks and identify regulatory barriers. The consortium's objective is to support safe innovation without stifling progress.

A regulator noted that financial firms and supervisors are learning in parallel. Effective communication between industry and regulators is crucial. Industry and regulators must collaborate on the AI framework in particular to determine how AI systems used in the insurance sector should be categorised and managed under the new rules.

An industry representative agreed that greater collaboration is needed between financial institutions, regulators and technology firms, notably those providing foundation and LLMs. Open-source models often do not provide sufficient transparency regarding the data on which they are trained, adding to the complexity, but this can be clarified through more detailed discussions with tech providers.

4. Wrap up

The Chair summarised that fostering innovation requires accepting a certain level of risk, including room for mistakes. Striking the right balance between encouraging innovation and managing risk is essential. AI adoption in the banking and insurance sectors has clearly moved beyond the initial hype, with concrete progress now visible. Compared to six months ago, developments are tangible, especially in the insurance sector, which is advancing faster than banking. This is unsurprising given

insurance's data-driven nature and the central role of data in effective AI deployment.

To evolve from hype to full-scale maturity and broader adoption, several conditions must be met. A key need is for homogeneous, although not necessarily standardised, regulation that provides the flexibility to innovate while ensuring coherence. High-quality, reliable data and robust infrastructures are also crucial. At the same time, the environmental sustainability of AI, particularly its energy consumption, remains a relevant concern.

Talent is another critical enabler. With the right skills in place, the industry can better integrate AI across operations. If the elements of data quality, infrastructure, regulatory frameworks, sustainability and talent align, the expectation is that, in the next six months, the sector will progress well beyond the hype, moving towards greater competitiveness and, ideally, greater global coordination in AI deployment.