AI in the financial sector: trends, challenges and policy approach

1. Expected impact from AI and generative AI in the financial sector

1.1 AI uptake in the financial sector

The Chair stated that the use of AI by fintechs and incumbent financial firms is increasing and can contribute to enhancing efficiency and offering better products. Further uptake of AI can be expected due to the increase of analytical capacity and computing power and new generations of AI such as generative AI.

An industry representative noted that AI and advanced analytics in general have been growing in recent years. In the speaker's bank the number of full time employees (FTEs), projects and budget dedicated to data and AI have tripled in the last five years. This concerns most areas of the bank. Fairly sophisticated models can be found for customer identification for opening an account. AI and algorithms are also used in most commercial activities, as well as market-making, fraud and anti money laundering (AML) activities. The uptake of AI for risk assessment, for example for granting credits, is slower given the high risk nature of AI use in this case.

A policy-maker agreed that the EU financial sector is already largely using AI for different tasks, such as risk management, fraud detection, customer service and investment analysis. The use of AI is expected to rapidly increase in all areas and activities of finance. Generative AI has made the public more aware of the development of AI recently, but it has been an ongoing trend for many years in the financial sector.

Another industry representative observed that the level of AI adoption and the sophistication of AI-based systems used varies across financial sectors, but increasingly larger players are engaged in the adoption of AI systems to a certain degree. The large players in the banking sector have adopted AI slightly faster than insurance. Differences depend for example on whether the companies are already involved in dealing with the implementation of other technologies that take up their innovation capacity or new regulations.

1.2 Prospects of generative AI

An industry representative noted that only around 3% of AI projects in their bank are based on language-focused applications at present, due to the complexity of language data and its interpretation. However, the advent of generative AI and large language models (LLMs) have captured the structure of language, allowing any application based on language to be built. LLMs understand and interpret human language, which paves the way for revolutionary applications in customer interaction and internal process optimisation. These innovations are happening at a very high speed and

could be quite transformative for the financial industry in the coming years.

A second industry representative agreed that generative AI can bring many changes because of its conversational element and the fact that it can generate content. Industry leaders are now experimenting with AI due to the interest in generative AI, which has made them realize better the potential of AI. The speaker's firm for example, a provider of financial intelligence and analytical tools, has launched a tool that allows analysts to ask highly complex questions and get a rapid response based on the analysis of multiple datasets. Credit memos can now be created in seconds, which would previously have taken hours. Early warning systems can also be put in place in commercial real estate thanks to AI.

The industry representative observed that the level of sophistication of AI-based systems that companies use and their ability to leverage generative AI often depend upon the experience that they already have with AI. Those that have no structured AI team find it harder to catch up with innovation because of the scarcity and cost of resources. Having access to robust data and a sufficient volume of data is also essential.

1.3 Expected impacts of AI

An official noted that Silicon Valley technology and venture capital firms anticipate that as many as 80% of current job functions could potentially be automated away with AI. That concerns mostly repetitive functions, but the novelty with generative AI is that it has the ability to impact knowledge workers such as legal functions or consulting, which have been relatively sheltered from previous waves of automation. There could be significant shifts in workforce deployment in as little as five years due to the impact of AI. Financial companies need to plan for workforce development and transition in many functions beyond operations and technology, including risk, finance, HR, legal, compliance and internal audit. Regulators could also find significant gains from AI in their capabilities for monitoring, testing, surveillance and horizontal reviews. Generative AI could be helpful for example in compiling the results of various compliance reports and testing results and data gained from market surveillance.

The official added that the integration of various new and emerging technologies with AI holds the potential to markedly enhance capabilities, foster developments, and transform work processes. A combination of generative AI with other technologies such as cloud, Web3, blockchain and satellite internet could have transformational impacts that may open the way to further changes as other new technologies emerge and are combined.

An industry representative observed that generative AI has accelerated AI developments but the change in the

market is not yet transformational. There is a great deal of interest and work taking place around AI in the industry, but there are currently not that many live commercial projects. The focus at present is also mainly on cost savings and efficiencies, rather than on new growth opportunities. The fast pace of AI innovation compounded by further intersectional opportunities offered by other technologies such as quantum computing, which is expected to be a major driver of AI in the future should change this, but how generative AI applications will evolve is difficult to anticipate. Generative AI is still at a very early stage, so collective work will be needed to monitor developments and identify possible needs for guardrails. Education will also be needed within firms to learn to use generative AI and better understand its implications.

2. Challenges and risks from AI

A public representative highlighted the main challenges from AI that need to be addressed by the public authorities. The first challenge for regulators is the speed of innovation. AI is not new, but it is difficult to say whether the financial services sector has reached a tipping point with AI and machine learning, because as technology continues to advance, many new applications and innovative products are continuing to appear.

The second challenge that regulators are facing is addressing a variety of customer protection issues related to AI use. Data security and privacy is always going to be the main factor when drafting any technology-related legislation, and financial institutions need to put a strong emphasis on that when dealing with private data. A second aspect is the need to ensure that a consistent framework is in place to ensure consumer protection with quite variable levels of understanding of AI and trust in technology across European member states. Issues to address include the appropriate management of customer data by financial institutions and digital and AI literacy, which needs to be improved in order to bolster consumer trust. A third aspect is the necessity of maintaining human oversight and ensuring continuous human involvement in the development and use of these innovations.

An official emphasized the new risks associated with generative AI, including disinformation and deep fakes. AI combined with other technologies however has the potential to enhance risk management capability, which may contribute to mitigating technological risks. Blockchain for example can be used to provide digital watermarks to identify that the information comes from a verifiable source.

3. Objectives of the EU AI Act and future priorities

3.1 Objectives of the EU AI Act

The Chair stated that the AI Act is a cross-sectoral and risk-based legislation aiming to protect fundamental rights with AI use and to support the uptake and fair development of AI in the EU. In combination with the Data Act, the Data Governance Act and the Financial Data Access (FiDA) framework, the aim is also to provide a safe environment for the use and sharing of data.

A policy-maker explained that the Parliament and the Council have come to a political agreement on the AI Act proposal in December 2023. The AI Act is currently being finalised. The objective is for it to be adopted before the end of the current political cycle, meaning that it will become applicable from summer 2026. Once the AI Act is in force then the EU will be the first major jurisdiction to have a comprehensive framework for the use of AI.

The AI Act complements the EU strategy for data set out in the Data Act and the Data Governance Act, which tackles issues such as access to data and provides a governance framework for data. Data is the basis for AI, so having an adequate data policy is essential. The FiDA framework will contribute to this, because FiDA supports the sharing of financial data and will therefore increase data availability. The AI Act adopts a risk based approach and will provide for specific requirements for activities identified as being high-risk. In the financial sector notably two activities are concerned, namely credit scoring and credit worthiness assessments, and also risk assessments and pricing for health and life insurance. Those activities will be subject to additional requirements under the AI Act, even if they concern processes that were put into place before the AI Act was enacted. Other, non-high risk, activities will be subject to transparency requirements, which will also contribute to improving industry knowledge and citizens' trust about AI.

3.2 Expected impact of the AI Act

An industry representative noted that the developments related to AI can be difficult to grasp for users, given the speed at which they are happening, therefore risk mitigation is needed. The AI Act is welcome in this regard, but care must be taken that the regulation should not impede transformations in the financial sector or limit the full leveraging of AI, otherwise there will be profound consequences for Europe and its financial sector in terms of competitiveness.

The industry representative supported the risk-based approach of the AI Act and highlighted some aspects of the text that still need to be fine-tuned. A reference is made to bias, but bias can be described in many different ways, so will have to be defined more precisely. With the advent of ChatGPT some controls for general purpose systems were also introduced in the legislation, regardless of their use, which goes against the initial risk-based philosophy of the law. The text moreover mandates transparency obligations, ensuring users are duly informed about the use of AI in technology-based systems they interact with. This should contribute to fostering trust, but developing AI literacy is also needed, because it is a very complex and fast evolving area. A greater understanding is needed around how AI can be leveraged and controlled so that Europe can become a leader in this space.

A second industry representative considered that the clarification brought by the AI Act about the requirements that will apply to AI is very important. Market players

were very cautious previously about investing in AI systems, which hindered innovation. The questions are now around implementation of the regulation and how balance can be maintained in practice between risk mitigation and innovation. Innovation must not be discouraged, otherwise AI implementation will focus more on efficiency and job reduction than on generating new opportunities.

A public representative noted that the AI Act aims to tackle the main challenges posed by AI in terms of transparency, accountability and fairness. Fairness in particular is important to ensure sufficient competitiveness in the technology-driven financial ecosystem.

3.3 Future priorities concerning AI policy

A public representative stated that when speaking about AI and the different European data frameworks, the assumption is that more data can be made available and that the data market can be extended. The EU data framework should ensure that the data market opens more opportunities for everyone. This is essential in particular for smaller players and newcomers in order to maintain a sufficient level of competition.

A policy-maker detailed that the Commission's first priority for the next European political cycle is to properly implement the AI Act, which includes providing support to startups and small and medium sized enterprises (SMEs) for implementing the legislation. Market developments are being closely monitored. The overall intention is to regulate innovative developments, but not to hinder innovation. A predictable and reliable framework will allow market participants to plan their investments and manage operations.

The Chair agreed that fostering innovation is important, while maintaining safety and customer protection. This is the goal which will be pursued by the European Supervisory Authorities (ESAs) in the implementation of this legislation.

4. Policy approach to AI in the US and at the international level

An official considered that an ex-ante approach is needed for AI, with jurisdictions working collaboratively together to ensure that the benefits of AI are available for all jurisdictions, as opposed to there being divergence among jurisdictions which could spur an arms race. The same objective should be pursued in other areas related to technology such as cloud computing. A balance is needed around access versus protectionism at the international level. There is also a question about how to combine a cross sectoral regulatory approach to AI and more functional applications for example for financial services.

It is critical that there is an ethical framework for AI. In October 2023 the Biden administration released an executive order on AI which directed a whole of government approach to analysing and understanding the impacts of AI and providing guidance. Each agency has a rolling set of deadlines to produce its deliverables. A key deliverable for the financial services sector is the

best practices report from the US Treasury for financial institutions, which is due to be released on 28 March 2024.

Regulators in the US have also spent much time assessing how financial institutions are developing and deploying AI, particularly since AI is a continuation of existing technological developments like machine learning, robotic process automation, natural language processing and big data analytics. A request for information from the US prudential regulators in 2021 focused on ensuring understanding of how financial institutions were deploying AI and considering it, not only across business lines, but how it was also being used for risk management and other operational processes. US prudential regulators are working with each of the supervised institutions on their governance risk and control frameworks and the deployment of AI.

The Securities and Exchange Commission (SEC) recently put out a proposal on the use of predictive data analytics by SEC registrants. Although some feedback indicated that it was overly prescriptive and may hinder the responsible use of AI, this proposal is tackling important risks such as bias. It is vital to ensure that when supervised entities are deploying AI there is no bias that impacts access to products and services.

The Commodity Futures Trading Commission (CFTC) also recently made a request for comment on the use of AI by its registrants, which include banks, asset managers, exchanges and clearing houses. The CFTC is keen to understand how its registrants will be deploying AI, particularly in markets, trading and other use cases. There is significant concern about the possible use of AI for market manipulation and it is important to evaluate this risk in a factual way. Financial firms are still reluctant to deploying AI in a client-facing manner, so very strict governance and risk management is needed to make this possible.