



# ISSUES AND PERSPECTIVES OF AI APPLICATIONS

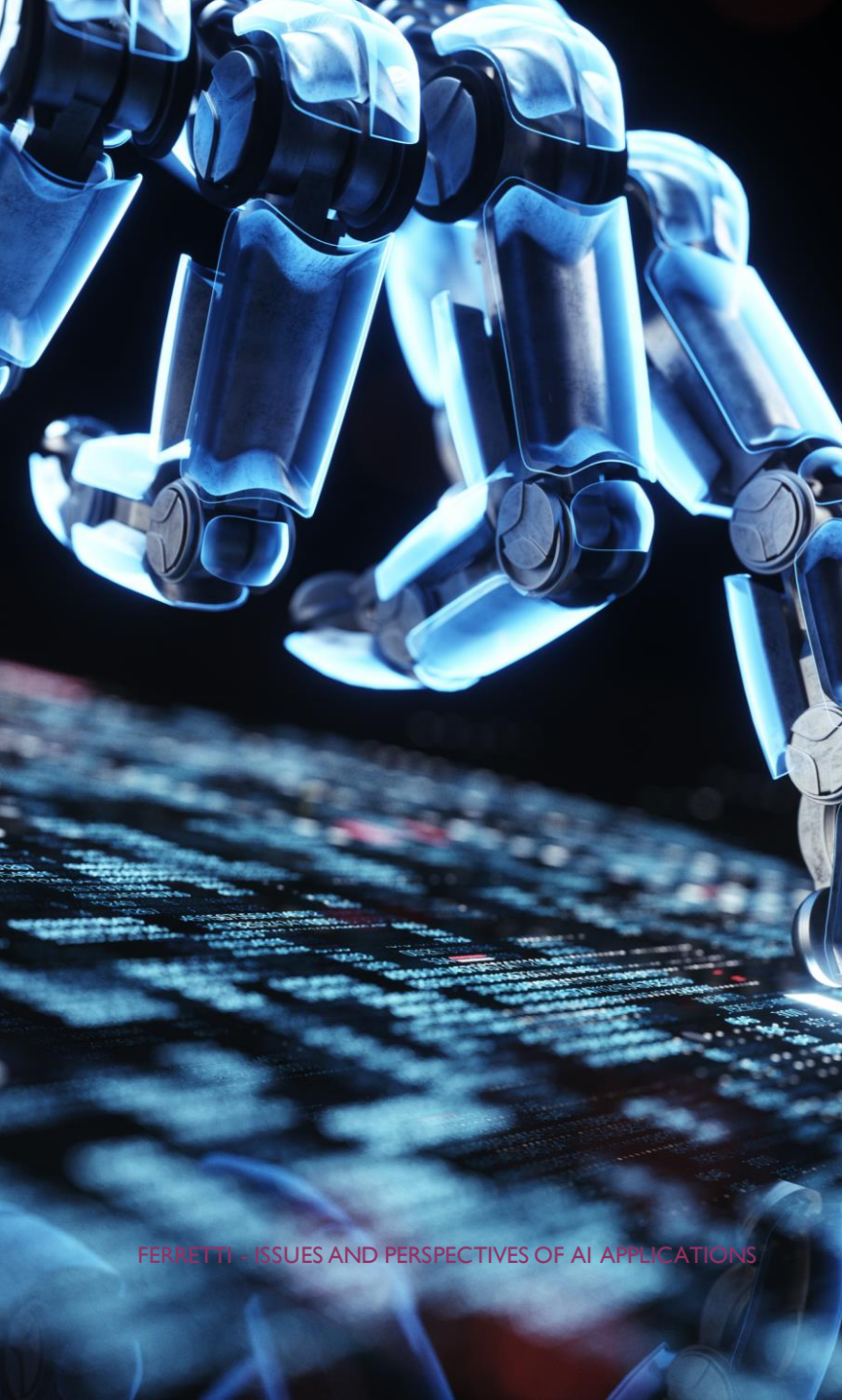
IN THE FINANCIAL SYSTEM

## Roberto Ferretti

President of the European Society for Banking and Financial Law  
Adjunct Professor of Business and Digital Law at Ca' Foscari University of Venice  
Senior Partner at Annunziata & Conso, Milan - Rome

Contribution to the Banking Law Conference “The influence of European and comparative banking law in Romania”  
organized by the Faculty of Law of the West University of Timisoara and AEDBF Romania in the framework of the Law Colloquia of the National Bank of Romania

22 March 2024



## AGENDA

1. The questions
2. Ex-ante perspective. The application of the AI Act to the financial system
3. Ex-ante perspective (cont'd). The interplay between the AI Act and the DORA
4. Ex-ante perspective (cont'd). AI and systemic risks
5. Ex-post perspective. The approach of the EU legislator to AI civil liability
6. Conclusions

# I. THE QUESTIONS

# THE STARTING ASSUMPTION AND THE QUESTIONS

## The starting assumption

- The EU legislator has adopted a two-layer cross-sectoral approach to AI
  - **Ex-ante regulation** of AI systems (proposal for the **AI Act**, COM(2021) 206 final) and
  - Rules on **ex-post redress** in case of civil liability deriving from the use of AI systems (proposals for **directives on AI-related liability**, COM(2022) 495 final and COM(2022) 496 final)

The questions we will try to answer based on the text of the AI Act approved by the EU Parliament on 13 March 2024

- Which provisions of the AI Act apply to financial AI?
- What are the regulatory techniques for coordinating the AI Act and sectoral financial regulations?
- What are the implications of the regulatory approach adopted by the AI Act and the proposal for the directives on AI civil liability for the financial system?



## 2. EX-ANTE PERSPECTIVE. THE APPLICATION OF THE AI ACT TO THE FINANCIAL SYSTEM



# THE AI ACT

## The purpose and the scope of application of the AI Act

- The AI Act is
  - A **horizontal regulation**, aiming to regulate AI systems in every sector of the European internal market
  - A **risk-based regulation**, since it aims to minimise the risks arising from the manufacturing, deployment and use of AI systems
- It is **not a holistic regulation** because it mainly targets the **protection of personal fundamental rights**

## The divergent approaches to “financial AI” inside and outside the AI Act



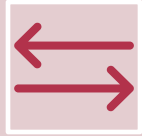
# THE AI ACT IN FINANCE: DIRECT APPLICATION TO HIGH-RISK SYSTEMS AND INTERPLAY WITH SECTORAL RULES

High-risk “financial AI” under Annex III of the AI Act

- AI systems intended to be used to evaluate the creditworthiness of natural persons or establish their credit score, with the exception of AI systems used for the purpose of detecting financial fraud (5(b))
- AI systems intended to be used for risk assessment and pricing in relation to natural persons in the case of life and health insurance (5(c))

Incorporation by reference of sectoral rules on governance and risk management

- *“Union financial services law includes internal governance and risk-management rules and requirements which are applicable to regulated financial institutions in the course of provision of those services, including when they make use of AI systems” (Recital 158)*



Equivalence clauses



Integration clauses



Derogation clauses

# THE AI IN FINANCE: INTERPLAY WITH SECTORAL REGULATION



# THE AI IN FINANCE: THE SUPERVISION OF HIGH-RISK SYSTEMS

- “In order to ensure coherent application and enforcement of the obligations under this Regulation and relevant rules and requirements of the Union financial services legal acts, the competent authorities for the supervision and enforcement of those legal acts [...] should be designated, within their respective competences, as competent authorities for the purpose of supervising the implementation of this Regulation, including for market surveillance activities, as regards AI systems provided or used by regulated and supervised financial institutions unless Member States decide to designate another authority to fulfil these market surveillance tasks” (Recital 158)

# THE AI IN FINANCE: THE SUPERVISION OF HIGH-RISK SYSTEMS (CONT'D)

- “For high-risk AI systems placed on the market, put into service, or used by financial institutions regulated by Union financial services law, **the market surveillance authority for the purposes of this Regulation shall be the relevant national authority responsible for the financial supervision of those institutions** under that legislation in so far as the placing on the market, putting into service, or the use of the AI system is in direct connection with the provision of those financial services” (Article 74(6))

# THE AI IN FINANCE: THE SUPERVISION OF HIGH-RISK SYSTEMS (CONT'D)

- “By way of **derogation** from paragraph 6, in appropriate circumstances, and provided that coordination is ensured, another relevant authority may be identified by the Member State as market surveillance authority for the purposes of this Regulation.
- National market surveillance authorities supervising regulated credit institutions [...], which are participating in the Single Supervisory Mechanism [...], should report, without delay, to the European Central Bank any information identified in the course of their market surveillance activities that may be of potential interest for the prudential supervisory tasks of the European Central Bank [...]” (Article 74(7); see also the ECB opinion on AI Act, 2021)



# THE AI ACT IN FINANCE: THE RULES FOR NON-HIGH-RISK SYSTEMS RELEVANT FOR FINANCIAL AI

- Article 4 – AI Literacy
  - “Providers and deployers of AI systems shall take measures to ensure, to their best extent, a sufficient level of AI literacy of their staff and other persons dealing with the operation and use of AI systems on their behalf, taking into account their technical knowledge, experience, education and training and the context the AI systems are to be used in, and considering the persons or groups of persons on whom the AI systems are to be used”
  - See also Recital 45 of DORA
- Article 50 – Transparency obligations for providers and users of certain AI systems
  - “Providers shall ensure that AI systems intended to interact directly with natural persons are designed and developed in such a way that the natural persons concerned are informed that they are interacting with an AI system, unless this is obvious from the point of view of a natural person who is reasonably well-informed, observant and circumspect, taking into account the circumstances and the context of use”
- Article 4a, dropped in the approved text and providing for general principles on:
  - Non-exclusivity of automated decision-making AI systems
  - Sustainability of AI systems

## THE AI IN FINANCE: AN INDIRECT “DRAG-ALONG” EFFECT OF THE AI ACT PROVISIONS ON HIGH-RISK SYSTEMS?

- It seems reasonable to predict that the use of the same foundation models for different tasks (e.g., credit scoring and IRB models) could cause a spontaneous alignment of non-high-risk systems to the requirements set by the AI Act for high-risk systems (see the *EBA Discussion Paper on Machine Learning for IRB Models* of 11 November 2021 (EBA/DP/2021/04))





# 3. EX-ANTE PERSPECTIVE (CONT'D). THE INTERPLAY OF THE AI ACT AND THE DORA



# THE COMPLEX INTERPLAY OF THE AI ACT AND THE DORA

## Definition of ICT risks

- Art. 2(5) DORA defines “**ICT risk** as any reasonably identifiable circumstance in relation to the use of network and information systems which, if materialized, may compromise the security of the network and information systems, of any technology-dependent tool or process, of operations and processes, or of the provision of services by producing adverse effects in the digital or physical environment”
- The definition **includes AI-dependent risks**

## Market-based regulatory model of DORA

- Corporate governance (the Board’s duties)
- Contractual integration for greater transparency
- Supervision of third-party critical providers

As seen, this market-based approach inspires the EU legislation on banking and financial services, including the DORA, and differs from the fundamental-rights approach of the AI Act

This may cause fragmentation issues

22/03/2024

16

## 4. EX-ANTE PERSPECTIVE (CONT'D). AI AND SYSTEMIC RISKS

FERRETTI - ISSUES AND PERSPECTIVES OF AI APPLICATIONS



	Bid (Qty)	Ask (Qty)	Chg
18591 (1)	18590 (2)	18591 (1)	-60 -0.322%
18590 (1)	18585 (2)	18588 (1)	-70 -0.375%
			111 -0.598%

# AI AND SYSTEMIC RISK: FROM MICRO TO MACRO RISK PREVENTION

- Standardised AI models are frequently trained on similar data streams, which could produce herding and uniformity of predictions and behaviour in financial markets
- AI is transforming both the financial system and the way in which that system is regulated and supervised, creating new sources of systemic risk
- Starting in 2020, the European Systemic Risk Board acknowledged that technology-driven financial systemic risk (or “systemic cyber risk”) creates threats that “*require further work by macroprudential authorities*” (see ESRB, *Systemic Cyber Risk*, February 2020, and *Mitigating Systemic Cyber Risk*, January 2022)
- A field open to research — and still largely understudied — is the relationship between the conduct of business regulations in AI (as the AI Act) and the macro-prudential regulation



## 5. EX-POST PERSPECTIVE. THE APPROACH OF THE EU LEGISLATOR TO AI CIVIL LIABILITY



# AI RISK AND CIVIL LIABILITY

- Neither the AI Act nor the DORA provide status recognition, procedural rights (e.g. to seek redress), nor complaint mechanisms (i.e. right to an effective remedy and a fair trial) for victims of harm caused by AI systems
- Within financial markets, civil liability operates both as a compensatory device and as a deterrent against violations of the standards of conduct set by the legislator for financial markets agents and entities
- The application of general civil liability rules and mechanisms to AI-related harms is challenging due to the inherent features of AI systems:
  - Autonomous
  - Opaque
  - Characterised by a complex value chain

# THE 2022 REFORM PROPOSALS ON AI-RELATED CIVIL LIABILITY

Proposal for a directive on liability for defective products (COM(2022) 495 final)

- Financial Institutions (users) or end clients can seek compensation from the AI system provider or from any manufacturer that integrates an AI system into another product when AI systems are defective and cause physical harm, property damage or data loss

Proposal for a directive on adapting non-contractual civil liability rules to AI (COM(2022) 496 final)

- It provides for a stricter civil liability regime (e.g., a presumption of a causal link in case of fault) for high-risk AI
- Financial Institutions (users) or end clients can seek redress from producers of credit and health & life insurance scoring systems
- End clients can seek redress from financial institutions (users) of credit and health & life insurance scoring systems

# THE MISSING PIECE OF LIABILITY OF FINANCIAL USERS OF LOW-RISK AI SYSTEMS

- The proposed directives place greater emphasis on producers' liability
- As an exception, the proposal for the AI Liability Directive provides for the liability of financial institutions using high-risk AI systems only
- As seen, under the DORA the board has monitoring and oversight duties, and the breach of such duties can form the grounds for a liability claim, provided that the following (and similar) questions are answered:
  - When is a monitoring activity conducted negligently?
  - What is the monitoring standard that financial users must prove to prove their diligence?
  - How should their liability be matched with the manufacturers'?
  - How should the human-machine interaction be designed?
- AI literacy requirements under the AI Act can be the first source of a new diligence standard for AI users



# THE PROBLEMATIC “INSURANCE SOLUTION”

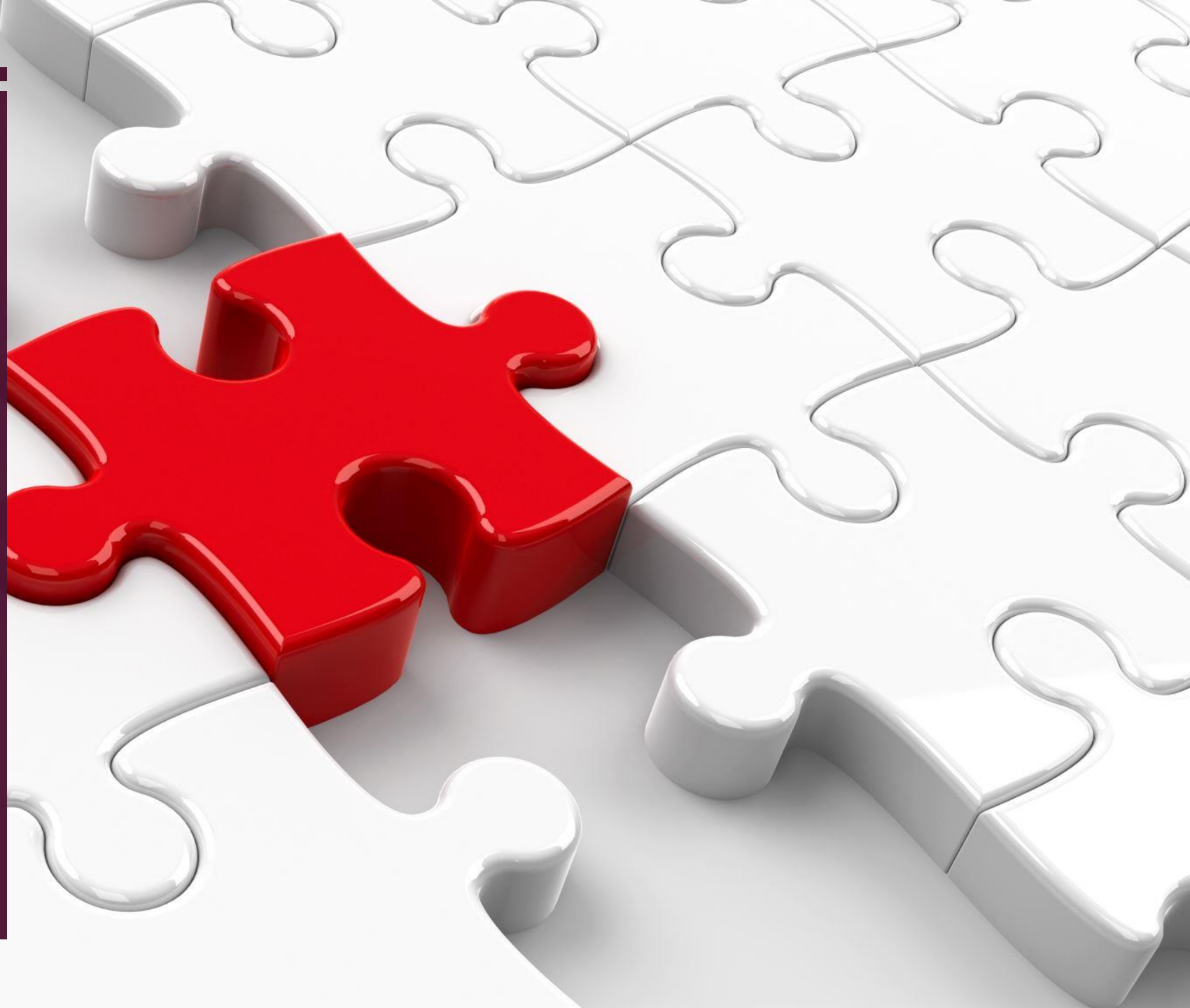
- In 2017, the European Parliament put forward the proposal of using insurance to tackle the issue of cyber-related civil liability
  - *“Uncertainty regarding risks should not make insurance premiums prohibitively high and thereby an obstacle to research and innovation”*
  - *“The Commission should work closely with the insurance sector to see how data and innovative models can be used to create insurance policies that offer adequate coverage for an affordable price”*
- EIOPA launched in September 2022 a consultation on two supervisory statements on exclusions in insurance products related to systemic events (EIOPA-22-288) and the management of non-affirmative cyber underwriting exposures (EIOPA-22-290), which may restrict the insurability of cyber risks
- What effective viability of the option of substituting civil liability solutions with insurance policies?

22/03/2024

23

## 6. CONCLUSIONS

FERRETTI - ISSUES AND PERSPECTIVES OF AI APPLICATIONS



# CONCLUSIONS



The EU regulatory framework on financial AI is fragmented from both an ex-ante and an ex-post perspective (focus on high-risk systems, lack of coordination with DORA and macro-prudential oversight, etc.)



Such fragmentation could hinder financial innovation in the EU and cause regulatory arbitrage



A market-based regulatory approach could be a point of contact between the EU and the US and help them find common regulatory solutions

*“There are many ways to understand technology: one of them is to conceive of it in terms of good design and ethical governance. I think that is the best approach”*

*(Luciano Floridi, Etica dell'intelligenza artificiale. Sviluppi, opportunità, sfide, Milan, 2022)*





---

# THANK YOU FOR YOUR ATTENTION AND YOUR QUESTIONS

AND THANKS TO PROFESSOR  
ANTONELLA SCIARRONE  
ALIBRANDI FOR HER HELP IN  
PREPARING THIS PRESENTATION

