International
Capital
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Association

ICMA Response to IOSCO Consultation Report "Artificial Intelligence in Capital Markets: Use Cases, Risks and Challenges"

11 April 2025

Introduction

ICMA welcomes the opportunity to comment publicly on IOSCO's consultation report "Artificial Intelligence in Capital Markets: Use Cases, Risks and Challenges". The International Capital Market Association (ICMA) is the trade association for the international capital market with over 610 member firms from 70 jurisdictions globally, including issuers, banks, asset managers, central banks, infrastructure providers and law firms. It performs a crucial central role in the market by providing industry-driven standards and recommendations for issuance, trading and settlement in international fixed income and related instruments. ICMA liaises closely with regulatory and governmental authorities, both at the national and supranational level, to help to ensure that financial regulation promotes the efficiency and cost effectiveness of the capital market. ICMA prioritises three core fixed income market areas – primary; secondary; repo and collateral; with cross-cutting themes of sustainable finance and fintech & digitalisation.

ICMA values the work IOSCO is doing to provide more public intelligence on the use of artificial intelligence (AI) in capital markets. This response reflects the views of ICMA's AI in Capital Markets (AICM) working group, comprising over 55 firms that operate in the debt capital markets. Members of the AICM working group are at various stages of their AI trajectory, and include issuers, banks, investors, infrastructure providers and law firms. ICMA also distributed the 2024 IOSCO AMCC AI Survey to its AICM working group members. We have, in addition, encouraged all our members across all market sectors, who are part of this extensive group of individuals to respond to IOSCO bilaterally on behalf of their own organisation. We hope this will extend the depth of responses from the capital market industry.

Key findings

In general, ICMA members are aligned with the key findings of the report, including that benefits and risks of AI in financial services are highly dependent on the type of AI technology used, how it is developed and for what purpose. We have reiterated this observation in our recent consultation responses to the European Commission and FCA, recognising that much of the AI technology in existence has already operated under regulatory frameworks without need for further requirements, with the exception of newer, specific AI techniques that could raise additional risks and might need further consideration by the regulator. For example, ICMA members have identified several aspects of AI use that warrant retaining a "*human in the loop*" and autonomy over final decision making to avoid outcomes with negative financial consequences (eg credit allocation, trading strategies, etc).

ICMA also agrees that, in some cases, the terminology used to discuss AI has not always been clear, and certain terms have been used to cover a multitude of different aspects of AI with distinctive and different qualities. In general, ICMA references the OECD definition of AI, that understands it to be a machine-based system that, for explicit or implicit objectives, infers from the input it receives how to generate outputs.[1] This definition, based on the OECD AI principles, extends

[1] See OECD *explanatory memorandum*, 5 March 2024

to include machine learning (ML) and other techniques such as natural language processing (NLP), large language models (LLM's) and generative AI (Gen AI). As highlighted by IOSCO, boundaries between the different categories of AI can be blurry and lack general consensus in the industry. For example, like IOSCO, ICMA has also used the term "recent advancements" in AI (or alike) in its consultation responses, for example to describe Gen AI and General Purpose AI systems, amongst others.[2] ICMA remains available to assist with any efforts made to address these challenges, such as defining a set of boundaries to clarify some of the terminology, to work towards a more productive and consistent global dialogue on the topic.

Areas for further consideration

One area which warrants further clarification are the roles of survey respondents and roundtable attendees held by IOSCO. This would bring further insight into the conclusions that were drawn, such as findings that suggest Gen AI and LLM's were being used in algorithmic trading.[3] ICMA members have not experienced this application of Gen AI and LLM's, and so further information on who is utilising this technology and more details on the exact methodology would be of interest. It may also help to build a more complete picture as to why, and where, there is a potential knowledge gap concerning the use of AI, as seen in the significant lack of responses to the questions concerning data and model type. For example, in instances where respondent roles were further removed from an AI team internally, it could indicate that information on AI model implementation was not being distributed amongst the organisation more broadly. In ICMA's recent FCA consultation response, the AICM reiterated the importance of encouraging a general duty of understanding and responsibility for AI use across the firm.[4]

Findings, such as the top use case for AI being in Anti-Money Laundering and Counter Terrorist Financing, reflect the key areas of interest of IOSCO's membership and therefore the global financial services regulators.[5] Whilst this use case is a critical cross-cutting theme, ICMA's AICM working group focus is on the AI applications involved in the lifecycle of debt securities, for example the use of AI to prevent settlement fails. In future reports, it may be useful to expand further on the exact methodologies implemented (eg model technique, type, provider, in-house or third party) in each use case specifically, to see where certain applications of AI technology are being applied across multiple subject areas in financial services.

ICMA members note that models, such as LLM's and others used in Gen AI systems, can require significant computational resources and energy consumption in both their training and usage. This has implications for the carbon footprints and the ESG goals of specific financial market participants utilising these types of AI systems. Likewise, IOSCO also highlights the large amounts of memory required to store LLM's, and the subsequent contribution AI usage might make to environmental risks.[6] Further exploration on this topic would be of particular interest to the debt capital markets industry, due to the cross-cutting theme of ESG.

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[2] IOSCO, *Artificial Intelligence in Capital Markets: Use Cases, Risks, and Challenges,* page 11-12.
[3] Ibid, page 19
[4] *ICMA Response FCA consultation*, Question 2
[5] IOSCO, *Artificial Intelligence in Capital Markets: Use Cases, Risks, and Challenges*, page 21
[6] Ibid, page 37, footnote 54

ICMA members reinforce the importance of access to, and good quality, data for effective AI applications. Members note the potential risks raised by IOSCO in synthetic data, increased demand, and uniformity in sources. In ICMA's response to the 2024 European Commission consultation on AI, the EU Data Hub was brought to the attention of members, as a potential resource for the training of AI models.[7] This provides firms with access to synthetic supervisory data for the purpose of testing new solutions and training AI/ML models. It was noted in our response that there remain preconceptions around the use of synthetic data in capital markets, such as to what extent it compares to the results from real data. This may be useful for IOSCO to consider as the role of data in AI-related risks develops.

Additionally, ICMA members reiterate that as a prerequisite to developing AI models, financial industry participants need to have solid data governance procedures in place detailing what data is fed in, who owns the data, how associated IP rights are respected (eg measures in place to prevent copyright infringement in the data used to train AI models and their outputs), and which permissions exist to make changes to the data during its lifecycle.

In ICMA's recent response to the FCA consultation on current and future uses of AI, members highlighted that further clarity would be beneficial on the role of third-party providers that service the financial services industry but are not subject to the same level of regulation.[8] These firms can provide AI services to market participants and therefore operate, in part, within the capital markets. ICMA members note that most technology providers are not directly regulated by IOSCO members, and that IOSCO members share similar concerns regarding the various access routes into financial services that could introduce additional risk to the industry.[9]

It may also be beneficial for IOSCO to consider establishing a set of minimum general principles governing AI. Regulatory initiatives such as ESMA's 2024 guidance to firms using AI in investment services, as well as the EU AI Act, HKSAR's policy statement on responsible AI in the financial sector, alongside the publication of the FCA and Bank of England's strategic approaches to AI, provide an opportunity for IOSCO to further reflect on common themes and facilitate convergence at an international level between regulators in the financial sector. [10]

Conclusion

To conclude, members of ICMA's AI in Capital Markets working group encourage innovation in the debt capital markets, whilst also promoting the responsible use of AI applications as an equal consideration. ICMA looks forward to future reports on the topic by IOSCO and remains at IOSCO's disposal for consultation or contribution on any additional tools, considerations or recommendations IOSCO considers for their members.

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[7] *ICMA Response, European Commission consultation*, Question 18
[8] *ICMA Response, FCA consultation*, Question 4
[9] IOSCO, *Artificial Intelligence in Capital Markets: Use Cases, Risks, and Challenges,* page 41-42.
[10] ESMA, *ESMA provides guidance to firms using artificial intelligence in investment services*, 30 May 2024
HKSAR policy statement, *responsible AI in the financial sector, 28 October 2024*
UK Government, *Implementing the UK's AI regulatory principles: initial guidance for regulators*, 6 February 2024
UK Government, *Regulators' strategic approaches to AI*, 1 May 2024: Bank of England response and FCA response

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