Call for papers

Artificial Intelligence in Banking and Capital Markets

Conference Jointly Organized by
University of Rome ''La Sapienza''
Joint Research Centre of the European Commission

Rome, December 11th–12th, 2023
Faculty of Economics, Sapienza University
Via del Castro Laurenziano, 9 - Rome

Keynote address by

Nobel Prize Laureate Michael Spence (Stanford)

Policy Round Table

Conference Organizers:
Marina Brogi, Sapienza University
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Conference Overview

The Artificial Intelligence in Banking and Capital Markets Conference is aimed at providing a setting where academics and practitioners, especially regulators and supervisors can exchange views and discuss emerging issues addressed in top academic research.

Artificial Intelligence is expected to become a fundamental part of any business operations, and it is difficult to envisage an industry that will remain unaffected. The financial sector is very interested in Artificial Intelligence because of its several opportunities in applications, especially those related to machine learning methodologies.

The financial sector is one of the industrial sectors mostly impacted by this technological revolution in the last period. Indeed, machine learning applications in financial institutions span consumer interactions to risk management, compliance, and credit underwriting, and they, too, have massive amounts of data in recent years due to operational digitization and regulatory reporting requirements. Having access to enormous volumes of data has turned into a competitive advantage for firms, and machine learning is the vehicle for doing so. However, using these new technologies in the financial industry is a highly sensitive subject, as companies operating in this area are more closely examined by regulators for the risks they must face.

Machine learning will transform the way businesses operate, enabling them to capitalize on cost-cutting, productivity-boosting, and risk- management options. For many years, banks have used Artificial Intelligence, albeit initially just for a few highly specialized applications. They have only just understood the full potential of these breakthroughs, which has resulted in a considerable rise in investment in this field. Along with increasing their technological investments, banks are seeking strategic mergers, acquisitions, and partnerships to scale up their efforts.

Industry and academic research are currently examining all possible applications in banking and finance: it turns out that the range of tasks that can be performed more efficiently with these new technologies is extremely broad, encompassing nearly all operations, from customer experience enhancement to more effective management and compliance.

Environmental, Social, and Governance (ESG) issues can be viewed as another area in the financial sector that is recently being investigated with Artificial Intelligence and Machine Learning approaches.

Financial Institutions are progressively requesting more information on the ESG performance to companies to foster sustainable funding. FIs may mitigate credit, market, and reputation risks while maintaining confidence with their customers and shareholders by better understanding and measuring the sustainability and societal impact of every investment in a company. Similarly, regulators and investors increasingly demand that banks allocate loans to "sustainable" borrowers and ultimately support sustainable growth, including ESG concerns into credit risk assessment is the next frontier for credit risk management.

Indeed, there are some attempts to adopt machine learning methods to find a link between ESG scores and company performance for allocating financial resources to the more sustainable oriented firms, in line with the European goals on sustainable development.

Furthermore, there is an ESG data challenge that financial institutions are trying to overcome with the application of specific machine learning techniques (i.e., Natural Language Processing to extract information from official documents disclosed by companies).

The specific goal of this conference is to identify those areas of policy concern that have been neglected and could be addressed by researchers and policymakers, and how those kinds of information are perceived by stakeholders and investors.

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Authors of the selected papers will come from different international universities and institutions. The conference will provide participants with high-level international networking opportunities.

We welcome research, both theoretical and empirical, in all aspects of Banking and Capital Markets, including but not limited to the following topics:

- AI-Driven ESG Integration in Investment Strategies
    - How AI technologies are enhancing ESG data integration into investment decision-making.
    - Quantitative models and algorithms for ESG portfolio optimization.

- Ethical Considerations in AI-Enhanced Finance
    - Ethical challenges and dilemmas in AI-driven ESG investing.
    - Strategies for ensuring responsible AI adoption in the financial sector.

- Natural Language Processing (NLP) for ESG Analysis
    - NLP techniques for sentiment analysis in ESG-related news and reports.
    - AI-driven tools for evaluating corporate ESG disclosures and narratives.

- ESG Data Quality and AI
    - AI solutions for improving the quality and reliability of ESG data.
    - Data cleansing, validation, and standardization in ESG reporting using AI.

- AI and Sustainable Asset Valuation
    - AI models for assessing the long-term financial value of sustainable assets.
    - ESG risk assessment and AI-driven valuation methodologies.

- AI-Powered ESG Rating Agencies
    - The role of AI in the development of ESG rating and scoring systems.
    - Comparing and evaluating different AI-based ESG rating approaches.

- Algorithmic Trading and ESG
    - AI-driven trading strategies incorporating ESG criteria.
    - Risk and return implications of algorithmic ESG trading.

- AI and Green Finance
    - Financing renewable energy projects and sustainable initiatives using AI.
    - AI-driven impact investing and green bonds.

- AI-Enhanced Climate Risk Assessment
    - AI modeling for climate risk stress testing in financial institutions.
    - Incorporating climate-related financial disclosures into risk assessments.

- ESG Reporting and Transparency with AI
    - Automation of ESG reporting processes using AI.
    - Blockchain and AI for enhancing ESG data transparency.

- Responsible AI in Finance
    - Ensuring fairness, transparency, and accountability in AI-powered finance.
    - Regulatory frameworks and guidelines for AI adoption in finance and ESG.

- AI and Corporate Social Responsibility (CSR)
    - AI-driven analysis of CSR initiatives and their impact on financial performance.
    - Linking CSR strategies to ESG investing through AI analytics.

- AI and Social Impact Bonds
    - Leveraging AI in the creation and evaluation of social impact bond projects.
    - Measuring and reporting social outcomes using AI.

- AI in ESG Engagement and Proxy Voting
    - AI tools for engaging with companies on ESG issues.
    - Proxy voting recommendations and ESG shareholder activism powered by AI.

- AI-Enabled Financial Regulation for ESG Compliance
    - Regulatory technology (RegTech) and AI solutions for ESG compliance.
    - Reporting and auditing ESG-related financial information with AI.

We will also consider papers on:

- Systemic risk measurement

- Risk mitigation policies

- Corporate governance practices

- Lending and bank business models

- Bank resolution procedures and the future of too big too fail

Publication Opportunities

Finance Research Letters (A Anvur, IF: 10.4):
International Review of Financial Analysis (A Anvur, IF: 8.2):
Risk Management Magazine

Submission Deadline: November 1st, 2023

Blind Review: Please ensure that author names and affiliations are removed from the manuscript.
Review Process: All submissions will undergo a rigorous peer-review process. Authors will be notified of acceptance/rejection by **November 15th, 2023**
Submission: Submit your paper to nfb.conference2023@gmail.com

We look forward to receiving your valuable contributions and welcoming you to the Conference!