References-AI-Finance

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1 Annotated References and Resources for AI in Finance

I've done a quick literature search for publications, conferences, and other resources for the application of Artificial Intelligence (AI) tools and techniques to finance.

1.1 Publications and Whitepapers

Let's examine a few meta-analysis-type papers and other sources, such as whitepapers and reports, and then examine specific technical content.

- Roy P, Ghose B, Singh PK, Tyagi PK, Vasudevan A. Artificial Intelligence and Finance: A bibliometric review on the Trends, Influences, and Research Directions. F1000Res. 2025 Jan 23;14:122. doi: 10.12688/f1000research.160959.1. PMID: 39911727; PMCID: PMC11795023. This bibliometric study analyzes over 600 peer-reviewed articles to map the evolution of AI applications in finance. Using the Theory-Context-Characteristics-Methodology (TCCM) framework, it identifies major research themes: risk management, market efficiency, financial innovation, and ethical AI. Key theoretical foundations include the Efficient Market Hypothesis, Behavioral Finance, and Agency Theory. The study examines practical applications in algorithmic trading, fraud detection, credit risk assessment, insurance, and ESG investing. It reviews empirical, experimental, simulation, and mixed-methods research while highlighting gaps in interdisciplinary approaches and ethical considerations. This article evaluates the academic landscape and practical challenges in AI-driven finance.

- Vuković, D.B., Dekpo-Adza, S. & Matović, S. AI integration in financial services: a systematic review of trends and regulatory challenges. Humanit Soc Sci Commun 12, 562 (2025). https://doi.org/10.1057/s41599-025-04850-8. The integration of Artificial Intelligence (AI) into financial services represents a developmental shift in the industry, presenting unprecedented opportunities and challenges. This scientometric review examines the evolution of AI in finance from 1989 to 2024, analyzing its pivotal applications in credit scoring, fraud detection, digital insurance, robo-advisory services, and financial inclusion. The analysis reveals significant trends, particularly the growing adoption of machine learning, natural language processing, and blockchain technologies in reshaping financial operations and decision-making processes. The review addresses critical regulatory and ethical challenges, emphasizing the imperative for explainable AI (XAI) and robust governance frameworks to ensure transparency, fairness, and accountability in AI-driven systems. Despite rapid advancements, persistent gaps remain, the most notable of which is the lack of standardized frameworks for AI implementation across financial sectors. The findings support the need for a balanced approach that promotes innovation while addressing ethical, regulatory, and societal concerns. This comprehensive synthesis maps the trajectory of AI in finance, identifies key areas for future

research, and recommends interdisciplinary collaboration to advance responsible and sustainable AI integration within the financial ecosystem.

- [Artificial Intelligence in Financial Services (2025) World Economic Forum Whitepaper](). This white paper offers an overview of AI's transformative impact on financial services, based on industry roundtables and research. It describes how AI automates and enhances work in banking, insurance, capital markets, and payments, with firms projected to invest $97 billion by 2027. The report highlights use cases like customer service automation, fraud detection, and risk management, discussing the shift from efficiency to revenue growth strategies. It also addresses challenges like data transparency, privacy, cybersecurity, and regulatory gaps, emphasizing the need for industry collaboration for responsible AI deployment.

- [Sean Shun Cao, Wei Jiang, Lijun (Gillian) Lei, Qing (Clara) Zhou. (2024) Applied AI for finance and accounting: Alternative data and opportunities, Pacific-Basin Finance Journal, 84: 102307. https://doi.org/10.1016/j.pacfin.2024.102307](). Big data and artificial intelligence (AI) have transformed the finance industry by altering the way data and information are generated, processed, and incorporated into decision-making processes. Data and information have emerged as a new class of assets, facilitating efficient contracting and risk-sharing among corporate stakeholders. Researchers have also increasingly embraced machine learning and AI analytics tools, which enable them to exploit empirical evidence to an extent that far surpasses traditional methodologies. In this review article, prepared for a special issue on Artificial Intelligence (AI) and Finance in the Pacific-Basin Finance Journal, we aim to provide a summary of the evolving landscape of AI applications in finance and accounting research and project future avenues of exploration. Given the burgeoning mass of literature in this field, it would be unproductive to attempt an exhaustive catalogue of these studies. Instead, our goal is to offer a structured framework for categorizing current research and guiding future studies. We stress the importance of blending financial domain expertise with state-of-the-art data analytics skills. This fusion is essential for researchers and professionals to harness the opportunities offered by data and analytical tools to better comprehend and influence our financial system.

- [Artificial Intelligence and its Impact on Financial Markets and Financial Stability, International Monetary Fund, 2024](). IMF Financial Counsellor Tobias Adrian argues that AI, especially generative AI, is rapidly advancing and will significantly impact financial markets by enhancing efficiency, processing unstructured data, and potentially transforming trading practices. While AI offers productivity gains, cost savings, improved regulatory compliance, and deeper liquidity for quantitative investors, it also poses risks to financial stability by potentially increasing market volatility and interconnectedness, necessitating reevaluation of margin requirements, circuit breakers, and central counterparty resilience. The IMF stresses the need for updated supervisory frameworks, better monitoring of nonbank entities and AI service-provider interdependencies, and investment in sup-tech to counter emerging cyber threats. Lastly, the IMF is integrating AI considerations into its upcoming Global Financial Stability Report and capacity-building initiatives to assist member countries with AI-related challenges and opportunities in finance.

- [Artificial Intelligence in Financial Services, United States Treasury, 2024](). The U.S. Department of the Treasury's whitepaper examines how financial firms utilize AI—from traditional machine learning to generative models—to improve underwriting, trading, risk management, compliance, customer service, and operational efficiency. Based on 103 stakeholder submissions, the report emphasizes AI's capabilities to enhance decision-making, broaden financial

inclusion through alternative data, and streamline back-office tasks while highlighting the need for substantial data, computing power, and third-party expertise. It cautions that AI can magnify existing risks, including bias, "black-box" opacity, data privacy issues, and "hallucinations," potentially centralizing market power among large model providers and increasing systemic vulnerabilities. To address these issues, contributors recommend clearer data standards, improved privacy safeguards (including re-evaluation of GLBA's opt-out framework), enhanced third-party risk management, and uniform consumer-protection oversight for banks and nonbanks. The report advocates for aligning AI definitions, updating regulatory frameworks, promoting interagency and public-private collaboration, and prioritizing explainability and fairness in model development to balance innovation with necessary safeguards for responsible AI deployment in financial services.

- Buchanan, Bonnie. (2019). Artificial intelligence in finance. Alan Turing Institute. Zenodo. http://doi.org/10.5281/zenodo.2612537. Artificial Intelligence (AI) is rapidly transforming financial services by using machine learning (ML) and deep learning (DL) to process large amounts of data, enhancing credit risk assessment, algorithmic trading, fraud detection, robo-advisory, and customer service through chatbots. Advances in computing power, data availability, and specialized hardware have accelerated the shift from rule-based systems to ML models that can model nonlinear relationships and reveal hidden patterns in financial data. Although the U.S. initially led AI investment, China has become a major player, increasing competition among global fintech hubs. In banking and capital markets, AI tools automate anomaly detection and real-time scoring, while insurance, real estate, and corporate finance benefit from automation and predictive analytics. The report highlights the difference between ML's predictive focus and traditional econometric methods' emphasis on statistical inference, noting trade-offs in interpretability. It also discusses early quantum computing efforts as a potential enabler for tasks like portfolio optimization. Recognizing challenges such as algorithmic bias, "black box" risks, cybersecurity vulnerabilities, and systemic stability concerns, the report urges updated regulations, robust validation techniques, and international collaboration. Ultimately, it stresses the need for balanced innovation and safeguards to harness AI's potential while managing risks in the financial sector.

1.2 Conferences Featuring AI Applications in Finance

- ICAIF (ACM International Conference on AI in Finance). Location: Singapore between 15 and 18 November 2025. Premier conference dedicated to AI in finance, featuring research on trading, risk, ethics, explainability, and more. Proceedings published by ACM. Proceedings from 2024 conference.
- AI for Finance. Location: Paris, France; Dates: November 24-26, 2025. Europe's largest AI-in-finance event, covering trading, risk management, fraud detection, and regulatory tech.
- World Summit AI. Location: Amsterdam, Netherlands; Dates: October 8-9, 2025. Global AI event with tracks on generative AI, scaling AI startups, and AI in finance.
- FinovateFall Location: New York City, USA; Dates: September 8-10, 2025. Large fintech innovation event showcasing AI for banking, payments, lending, and wealth management.
- AI in Financial Services. Location: London, UK; Dates: September 16-17, 2025. Focused on AI integration in banking, investments, insurance, and compliance with expert panels and case studies.
- Ai4 2025. Location: Las Vegas, Nevada, USA; August 11-13, 2025. Cross-industry AI event with dedicated finance tracks on trading, compliance, risk, and customer experience.

- [AI in Finance and Accounting Summit](). Location: Virtual; Dates: April 9, 2025. For CFOs and finance professionals, focusing on AI in governance, risk, automation, and workforce adaptation.
- [AI and Future of Finance Conference (Georgia Tech)](). Location: Georgia Tech Scheller College of Business, Atlanta, USA; Dates: March 20-21, 2025. Academic and industry leaders discuss LLMs, generative AI, and practical challenges in financial services.
- [AI in Finance Conference (Columbia Business School)](). Location: New York City, USA; Dates: June 10-11, 2024. Panels on automation, investments, capital markets, asset management, and regulatory considerations.

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