

The Hidden Risk: AI Without Governance Is the Next Financial Crisis

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Abstract- Artificial Intelligence (AI) has been revolutionizing the global financial system with its various applications, such as predictive analytics, automated trading, credit scoring, fraud detection, and algorithmic risk management. These innovations increase operational efficiency and market responsiveness, but they create a new category of vulnerability at systemic level that can lead to systemic financial instability, in the absence of adequate governance structures. This article explores the threat posed by AI systems, which, if not properly managed and controlled, could be a catalyst for the next financial crisis. The study examines the potential effects of opaque algorithms, over-automated systems, biased decision-making, data manipulation and co-ordinated AI systems within financial infrastructures on increasing volatility and diminishing accountability of institutions. Previous research shows that AI systems can amplify contagion effects, exacerbate speculative trading, and provide false trading signals without transparency, ethical regulation and regulation coordination (Danielsson & Uthemann, 2025; Singh et al., 2025). Moreover, as predictive AI models gain traction in the banking and investment industry, there are governance risks regarding explainability, cybersecurity, accountability, and centralizing technological power (Feldman & Stein, 2022; Fritz-Morgenthal et al., 2022). The article also reviews the governance lessons learned from the 2008 financial crisis, and highlights the fact that many of these issues are repeating themselves in the AI-powered financial ecosystems (Kathy, 2025; Goldin & Vogel, 2010). Furthermore, the study assesses ongoing international policy and regulatory responses, as well as financial institutions' and regulators' AI governance frameworks. The results indicate that the following elements are essential for good AI governance: clear algorithms, rules for responsible use of AI, cooperation between nations' regulations, ongoing auditing processes, and structures that put humans in the driver's seat. If these protections are not in place, AI could become a new threat to the financial system, rather than just a financial innovation tool, potentially threatening global markets. The article summarizes and explains that governance needs to keep up with the technological innovation if AI is not to be a threat to financial stability.

Keywords: Artificial Intelligence, AI Governance, Financial Crisis, Systemic Risk, Algorithmic Accountability, Financial Stability, Risk Management, Predictive Analytics, Regulatory Frameworks,

I. INTRODUCTION

1.1 Artificial Intelligence's (AI) Quick Evolution in Financial Systems

In the global financial landscape, artificial intelligence has emerged as one of the most transformative technologies; capable of reshaping the industry's future. Artificial Intelligence (AI) has proved to be one of the most influential technologies in the global financial landscape, poised to revolutionize the future of the industry. AI-powered tools are being used by financial institutions more and more in fields such as credit scoring, fraud prevention, algorithmic trading, automating customer service, portfolio management, and predictive risk assessment. Operational efficiency, speed in decision making and better forecasting capabilities have been enhanced in banking and investment sector by integrating machine learning and advanced data analytics (Vyas, 2025). AI technologies are now integral to financial systems and can influence the behavior of financial markets around the world, as well as how these systems operate. AI's swift and rapid uptake has also transformed the financial competitive landscape and innovation. Businesses can use predictive algorithms to analyze large data sets of market information in real-time, which allows them to make quicker decisions on market changes and consumer demands (Yanney, 2025). Khalid and Shahzad (2025) found that financial distress and market instability can be predicted by AI-based predictive systems which are able to capture the patterns before the full emergence of the event. This trend towards intelligent systems highlights the increasing role of AI in today's financial governance and economic management.

1.2 New Systemic Financial Risks are Caused by the Emergence of AI

AI's impact on financial markets presents a novel financial risk type, apart from the conventional financial risks. Unlike traditional financial instruments, AI systems are continually learning, adapting, and making sophisticated decisions, with low levels of human involvement. This versatility helps to boost efficiency, but also adds to uncertainty and unpredictability in financial ecosystems (Zekos, 2021). The rise of automated trading systems, algorithmic lending platforms and AI-driven investment models could all combine to generate a synchronized market activity that could help to speed up financial instability in times of economic strain. Based on this, the vulnerabilities are even greater because of the linkages created between the global financial markets. The speed and magnitude of financial shock spreading through highly interconnected systems can be much faster and larger when the shocks are transmitted across institutions and markets via AI systems, creating faster and more intense economic contagion (Goldin & Vogel, 2010). In this sense, problems in any one algorithmic system can cause widespread problems which can affect several of the sectors at once.

1.3 Governance Failures and Lessons Learnt from Financial Crises in the Past

Throughout the world's history of financial crises, technological innovation has proven to have dire economic repercussions if not supported by solid governance. The global financial crisis of 2008 showed that a lack of oversight, too much risk taking and poor regulatory co-ordination led to a failure of the system to protect international financial markets. Kathy (2025) states that other governance lapses seen in the financial systems during the 2008 crisis are coming back with AI-based financial systems, such as transparency issues and inadequate regulatory readiness. The emphasis in this work of Goldin and Vogel (2010) is on the increasing globalisation and interdependency of systemic risks in modern economies, and the need for coordinated governance structures that are able to react to new technological risks. But AI technology is advancing at a brisk pace, before which comprehensive regulations have been lagging. There are still a number of governments and

financial institutions that are not ready to monitor complexity and scale of AI-powered decision-making processes (Leslie & Perini, 2024).

Moreover, with the advent of generative AI and autonomous decision-making systems, there are new cybersecurity and misinformation threats in digital financial spaces. Hlatshwayo (2025) mentions that algorithmic systems embedded in interwoven public and financial infrastructures can be used as a target for cyberattacks, manipulations, and malicious use. Inadequately governed, these vulnerabilities could have a significant impact on the confidence of the market and financial stability.

1.4 The Need to Implement Responsible AI Governance in Financial Markets

As AI enters the financial landscape in a more sophisticated and complex way, there is a greater need for an approach to governance that is responsible and can provide trade-offs between innovation and systemic protection. The financial sector has come to the realization that it needs to institute explainable, reliable and ethically-informed systems for AI to mitigate new risks (Fritz-Morgenthal et al., 2022). For effective AI governance, it is crucial to have open and transparent algorithms, human oversight systems, ongoing monitoring processes, and accountability frameworks.

AI has the potential to have a significant impact on financial resilience and risk prediction, but it will not be sufficient without good governance frameworks. In the absence of proper regulation, AI could turn from a financial innovator to a financial disruptor, warning Singh et al. (2025) that it could lead to a large-scale financial crisis. As a result, AI-gov-ffr relationship is critical for the global financial markets' stability protection.

Table 1: Key Themes and Research Foundations in AI Governance and Financial Risk

Theme	Description	Key Scholarly Insights	Supporting References
Expansion of AI in	AI technologies	AI improves efficiency,	Vyas (2025);

Finance	are increasingly integrated into banking, investment management, fraud detection, and financial forecasting.	predictive analysis, and real-time decision-making in financial systems.	Khalid & Shahzad (2025)
AI-Driven Financial Transformation	Financial institutions rely on AI for automated operations and predictive governance systems.	AI enhances organizational responsiveness and operational performance in global markets.	Yanney (2025)
Emerging Systemic Risks	AI introduces interconnected algorithmic risks capable of destabilizing markets.	Automated systems may amplify volatility, synchronized reactions, and contagion effects.	Danielsson & Uthemann (2025); Goldin & Vogel (2010)
Governance Deficiencies	Regulatory systems remain underdeveloped relative to rapid AI innovation.	Weak governance structures create transparency and accountability gaps.	Feldman & Stein (2022); Leslie & Perini (2024)
Algorithmic Opacity	Many AI systems function as black-box models with limited explainability.	Lack of explainability weakens institutional trust and oversight.	Fritz-Morgenthal et al. (2022); Zekos (2021)
Ethical and Regulatory Concerns	AI systems raise concerns regarding fairness, bias, and accountability.	Responsible governance frameworks are necessary for ethical AI deployment.	Chhillar & Aguilera (2022); Cheatham et al. (2019)
Global Governance	International AI	Cross-border coordination	Keller et al. (2023);

Challenges	governance remains fragmented across jurisdictions.	is necessary for financial stability and systemic risk reduction.	Videgaray et al. (2024)
Cybersecurity Vulnerabilities	AI-driven systems increase exposure to digital attacks and financial manipulation.	Weak cybersecurity governance threatens institutional and market stability.	Hlatshwayo (2025); Leslie & Perini (2024)

II. LITERATURE REVIEW

2.1 Financial Systems are Undergoing Transformation with Artificial Intelligence

The financial system has been heavily influenced by the introduction of AI, changing its structure and operations in the world's financial markets. The algorithmic trading, predictive analytics, automated credit assessment, fraud detection, and customer relationship management are the areas where AI technologies are getting increasingly utilized in algorithmic trading. AI has been found to enhance the efficiency, speed, and decision-making ability in financial institutions by quickly analysing complex and large amounts of data (Vyas, 2025). The finance industry has thus become one of the biggest users of AI technologies, which is used for predictive forecasting and real-time information.

However, with the improvement of AI systems, there are also growing concerns about the ability of these systems to operate reliably and be well-governed. During times of financial stress, AI systems can also contribute to market volatility, as they make quick, automated decisions, and synchronize their trading strategies (Danielsson and Uthemann, 2025). With the growing integration of AI into financial systems, there is a growing need to explore its potential impact on the sustainability of financial systems over time.

2.2 AI can be Used to Detect Systemic Financial Risks and Mitigate Them

One of the prevailing research topics in the current literature is the AI technologies and systemic financial risks. Systemic risk is the risk that the

failure of an institution, technology or segment of a market can lead to a general instability in the financial system. Globalization and interwoven financial networks have led to a greater sense of vulnerability among financial systems, claims Goldin and Vogel (2010), as crises have spread rapidly through international markets. The risks could be amplified by interconnected and very automated AI-driven financial systems.

Danielsson and Uthemann (2025) stress that AI systems can be a catalyst for financial crises via feedback mechanisms, through correlated algorithmic behavior, and market reactions. Concurrently running automated trading models with the same institutions can potentially behave in the same manner when market signals are given, resulting in sudden liquidity shortages, asset bubbles or market crashes. The authors propose that AI could exacerbate financial contagion effects by causing markets to react quicker than humans can manage. The authors imply that AI could increase financial contagion effects, as it can cause markets to react faster than they can be managed by humans.

2.3 The Governance and Regulatory Aspects of AI
Controlling AI has turned into one of the urgent issues in present-day financial regulation. The literature has been highly repetitive in its assertion that the development of the regulatory frameworks to handle the risks of technological innovations has lagged behind those of AI innovations. In recent years, financial institutions are increasingly using AI systems without a proper governance framework in place that focuses on transparency, accountability, and ethical responsibility (Feldman & Stein, 2022). This governance lapse makes it unclear who is liable, if anyone, and how they will be regulated or overseen.

2.4 Taking lessons from the Past Financial Crises
The current debates around AI governance often make references to past crises in financial governance and the lessons learned from them. Past financial crises often serve as a litmus test for past governance failures in the management of AI and its impact on society. Kathy (2025) believes that the failure to sufficiently regulate, coordinate regulation and management, and over-trust in the complexity of

financial instruments were key issues in the fall of the global financial markets in 2008. In many similar ways, the same is beginning to happen in AI-powered financial systems, where institutions are more and more entrenched in opaque algorithmic systems, where they do not fully understand the system effects.

Goldin and Vogel (2010) point out that systemic risks in today's world are connected, technologically complex and interdependent. Under crisis conditions, financial systems are especially prone to fast contagion effects, because of these characteristics. These vulnerabilities could be exacerbated by AI technologies that can streamline decision-making in the event of a market upheaval and limit human interaction.

The literature thus indicates that there is still a lot to learn from past crises in relation to the debates in the present surrounding the governance of AI. Prevention of future financial instability caused by AI requires proactively regulating the technology, holding institutions accountable, and ensuring cooperation among countries (Danielsson & Uthemann, 2025; Feldman & Stein, 2022). If governance is not in place, the greater usage of AI could lead to many of the failures in governance and financial systems that have resulted in previous failures.

III. METHODOLOGY

3.1 Research Design

The study aimed to explore and illuminate hidden risks of the governance failures of artificial intelligence (AI) in the global financial system, through qualitative and exploratory research. The qualitative approach would seem adequate given the nature of the study is qualitative and aimed at understanding complex relationships between AI technologies, governance, and systemic financial risks and regulatory challenges. Exploratory research allows for the study of new objects of research in which empirical data is scarce, such as the emergence of phenomena like that of financial crises. Exploratory research is used to investigate new phenomena that have emerged where there is little empirical data, for example, a poorly governed AI system can trigger future financial crises (McGee, 2024).

The conceptual and analytical framework used in this study is based on the financial governance, systemic risk theory, AI ethics and regulatory policy analysis. In the existing literature, there are financial risks associated with AI that can be analyzed from a technological, institutional, legal and economic perspective. The literature indicates that financial risks associated with AI can be approached from an interdisciplinary perspective and are multidimensional (Chhillar & Aguilera, 2022). This implies that the research design selected will be helpful for a thorough assessment of the role that governance shortcomings can play in causing instability within financial ecosystems driven by AI.

3.2 Research Approach

In the present study secondary data research method was used. Most of the research was based on academic articles, policy reports, journal publications, governance research and financial risk analyses on Artificial Intelligence and financial systems. The value of secondary methods in the emerging technological studies is especially attractive as they enable the researcher(s) to combine the pieces of the puzzle and find common conceptual themes that emerge in various research projects (Feldman & Stein, 2022).

The study followed the thematic analysis method, which is used to analyze the key issues related to AI governance and financial instability. Opacity of algorithms, systemic financial risk, explainable AI, regulatory fragmentation, cybersecurity vulnerabilities and ethical accountability were discussed with critical perspective and the evidence from the selected literature. This allowed for the conceptual linkages of weak governance mechanisms and the potential for an AI-driven financial crisis to be made in the study.

3.3 Sources of Data collection

The sources of data in this study are only secondary and scholarly sources which relate to the issue of AI governance, financial risk management and systemic financial stability. The references chosen were peer-reviewed publications in journals, international policy analyses, governance reports, conference proceedings, legal studies and institutional research publications. The choice of these sources was made

as they offered authoritative writings on the part of AI in financial systems and governance issues arising from new technologies.

The research involved literature which discussed financial risk management, governance, algorithmic accountability, financial crisis and global reactions for the case of AI. To build comparative insights into systemic governance failures, sources talking about lessons learnt from past financial crises were included as well (Goldin & Vogel, 2010, Kathy, 2025). Furthermore, policy analyses on international AI governance and financial regulation were analysed, to gain insight into existing policies and new governance models (Keller et al., 2023; Videgaray et al., 2024).

3.4 There are no Specific Inclusion/Exclusion Criteria

The literature selected in the study has been applied specific inclusion criteria to ensure the relevance and reliability of the literature. The sources had to be relevant to at least one of the following topics: Artificial Intelligence in financial systems, AI governance, systemic financial risk, financial crisis prediction, explanations of AI, governance of cybersecurity, and regulatory policy frameworks. A preference was put on publications published in the last decade (from 2019 to 2025) to ensure that the study would reflect the latest developments in the field of AI technologies and governance debates.

The research did not include studies unrelated to the study. Only sources where the AI engineering, technical aspects, were discussed without governance, ethics, and/or financial aspects were analysed. In the same way, work not directly related with the financial systems or the regulation of policy was not seen relevant with the study aims.

3.5 The reliability and validity of the study was checked

In order to ensure reliability and validity the study used the authoritative and peer-reviewed scholarly works from the reputable academic journals, institutional publications and policy research platforms. Several points of view of the scholars were used to support the analytical process and to reduce the interpretative bias. Results were also compared across author reports to enhance the reliability of the

conclusions about governance of AI and financial instability.

In order to enhance the validity of the study, literature that was directly related to the study objectives were selected. The study's specific approach of studying the literature on AI governance, systemic risk, and financial crisis allowed for the literature analysis to remain relevant to the central research problem. Moreover, the theoretical and policy-based research enabled the depth and relevance of the study keeping in mind the concepts.

3.6 Ethical Considerations

This study was conducted in an ethical manner using the correct sources for secondary data and ensuring all sources of scholarly research used in the analysis were cited. The research did not involve any human participants, financial records or primary survey data were not used that we know of. So, there was no participant consent, privacy or institutional ethical approval issues related to the study.

In addition, the study was conducted with academic integrity by ensuring that the interpretations and discussion was done on content of literature without manipulating data and showing wrong result/s from the study. All the work involved in the research process has been done with proper referencing/ citing practices which would ensure intellectual accountability and transparency.

IV. RESULTS

4.1 Adopting AI In Financial Decisions Is Becoming More And More Common

The results of this research indicate that AI has a significant presence in today's financial landscape, from algorithmic trading to fraud detection, from credit assessment to portfolio management, and predictive risk management. The AI-powered tools that the reviewed literature consistently shows are being adopted by financial institutions to boost their operational efficiency, speed up decision-making and increase the accuracy of their forecasts are becoming more common. AI tech tools consistently shown in the literature as being adopted by financial institutions to boost operational efficiency, speed up decision-making and increase accuracy of their

forecasts are becoming more common. Today, AI-powered predictive systems are prevalent in the financial sector for analyzing large amounts of data and for predicting potential economic risks before they are visible or measurable using more traditional methods of analysis.

Khalid and Shahzad (2025) discovered that the predictive models based on artificial intelligence (AI) can boost the financial institutions' capacity to identify early warning signs of market instability and financial distress. Likewise, Yanney (2025) claimed that AI governance systems play a role in enhancing financial governance within a company by helping institutions to adapt to the new risks emerging in the world. The outcomes of these discoveries show the significance of AI technologies in the present financial management frameworks.

The findings however, also show that reliance on AI has decreased the need for human involvement in key financial decision-making processes. There are several studies that indicate a dependency of financial institutions on automated systems without knowing how they work within the institutions' internal operations (Zekos, 2021). This increasing dependence on autonomous technologies has led to new governance issues with regard to accountability, transparency and institutional management.

4.2 The Opacity and Deficiencies of Algorithms and Government

The reviewed literature has identified numerous reasons for the concern about algorithmic opacity in the AI-driven financial systems. The reviewed literature has revealed that the opacity of algorithms in the AI-driven financial systems is a major concern. The results demonstrate that many of the advanced AI models are "black-box" models where it can be hard to interpret, monitor, and explain the decision-making process. The authors of Fritz-Morgenthal et al. (2022) argue that low levels of explainability diminish the trust in institutions and the regulatory authority, as financial institutions do not always have answers to explain and justify decisions made with the help of AI.

The results also suggest that many financial institutions do not have adequate governance systems to address the risks of AI technology that is more complex. Feldman and Stein (2022) identified that the governance of AI in finance remains largely undeveloped with aspects of accountability, ethical compliance and transparency needs to be explored further. This governance deficiency can raise the risk that problematic algorithmic practices could go undetected, and only be identified when they start to cause harm at scale or when they become operationally and financially damaging.

Cheatham et al. (2019) also found governance issues that stem from biased AI systems, ineffective surveillance and oversight, and lack of organizational controls. The examined studies illustrate that poorly managed AI systems can generate discriminatory results, inaccurate forecasts, and unethical financial practices that can have a negative impact on the trust of the market. The results underscore the important need for a more robust governance framework that can guarantee responsible implementation of AI in financial systems.

4.3 AI as a systemic financial risk source will be covered

The study found that, if left unchecked, AI technologies could help lead to systemic financial instability. In times of economic turmoil, AI can worsen financial crises by exacerbating simultaneously occurring market responses, as well as speeding up automated reactions, according to Danielsson and Uthemann (2025). The interdependence of these financial AI systems raises the risk of disruptions having a chain reaction impact on financial markets around the world.

The literature reviewed also suggests that algorithmic trading systems can be a source of excessive market volatility due to their high-frequency trading and the tendency to trade with similar strategies and timeframes. As explained by Singh et al. (2025), there could be a number of institutions with the same AI model who respond to market signals at the same time, which could generate feedback effects that can destabilize financial systems. This synchronised behaviour leads to a greater extent to systemic

vulnerability, and less room for human action during financial crises.

Table 2: Summary of Major Findings on AI Governance and Financial Crisis Risks

Major Finding	Observed Impact on Financial Systems	Governance Implication	Supporting References
Increased AI Dependence	Financial institutions increasingly automate critical financial decisions.	Reduced human oversight may increase operational vulnerability.	Vyas (2025); Yanney (2025)
Algorithmic Opacity	Black-box AI systems limit transparency and explainability.	Weak accountability and limited regulatory supervision.	Fritz-Morgenthal et al. (2022); Feldman & Stein (2022)
Systemic Financial Risk Amplification	AI systems may intensify market volatility and contagion effects.	Synchronized algorithmic responses increase systemic instability.	Danielsson & Uthemann (2025); Singh et al. (2025)
Data Integrity Risks	AI systems rely heavily on data quality and reliability.	Biased or flawed data may distort financial predictions.	Bloch (2025); Cheatham et al. (2019)
Cybersecurity Threats	AI-driven infrastructures face rising cyber and digital manipulation risks.	Strong cybersecurity governance frameworks are required.	Hlatshwayo (2025); McGee (2024)
Regulatory Fragmentation	AI governance frameworks differ significantly across countries.	Lack of international coordination weakens systemic protection.	Keller et al. (2023); Videgaray et al. (2024)
Governance Lessons from 2008	Weak oversight patterns	Proactive regulation and	Kathy (2025); Goldin &

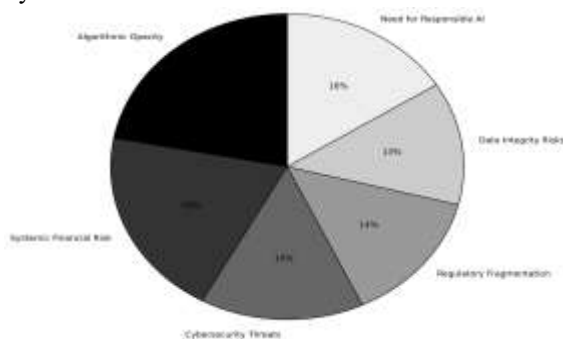
Crisis	resemble failures observed during previous crises.	transparency are essential.	Vogel (2010)
Need for Responsible AI	Ethical and explainable AI systems improve institutional trust and resilience.	Governance structures must prioritize accountability and monitoring.	Chhillar & Aguilera (2022); Fritz-Morgenthal et al. (2022)

4.4 International Governance Fragmentation

The findings show that the field of AI governance is still a fragmented one, with various countries and regulatory frameworks. Although some parts of the world have established an AI governance framework, many countries do not have robust AI governance mechanisms to effectively cope with systemic financial risks posed by AI. Keller et al. (2023) discovered that the EU has embraced a relatively advanced risk-based regulatory strategy which focuses on transparency, accountability and ethical considerations in the use of AI.

The results also show, though, that coordination – despite the global nature of financial systems with respect to international governance is limited. Videgaray et al. (2024) suggest that single national regulations might be inadequate due to the interdependent global financial systems in which AI technologies are used. Governance gaps can thus occur when they are not properly supervised, because of regulatory inconsistencies, and the result is the deployment of high-risk AI systems.

Fig 1: Major AI Governance Risks in Financial Systems



V. DISCUSSION

5.1 Artificial Intelligence in Financial Systems has a dual nature

This study's results show that AI is both a transformative opportunity and a major threat to systems found in current financial world. AI technologies on the one hand help to improve the operational efficiency, to make a faster financial forecast, to detect frauds and to strengthen the capability of predictive risk management. In today's dynamic financial landscape, AI systems are becoming more commonplace to help analyse intricate data and enhance decision-making processes for financial institutions (Vyas, 2025). In addition, Khalid and Shahzad (2025) notes that AI-powered predictive models can also help organizations to anticipate potential financial instability before crises actually hit, further enhancing the capacity of organizations to prevent financial crises.

5.2 How Algorithms Became Opaque and the Accountability Decade has arrived

Algorithm opacity is one of the most salient and important issues that have arisen from this research. The results show that a large number of AI systems are similar to a “black-box” system, meaning that it is hard to interpret or explain the steps that the system is taking to make decisions. The opacity also raises serious issues of accountability as the institutions might not know how these AI systems make predictions, investment decisions or risk assessment (Fritz-Morgenthal et al., 2022). The results are in line with the prevailing discourse in the governance field, which underscores the need for explainable and trustworthy AI systems. For explainability to be an essential aspect of ethical governance for AI, Chhillar and Aguilera (2022) contend, institutions need to be held accountable for decisions generated by autonomous technologies. AI systems, if deployed without transparency mechanisms, can lead to regulatory noncompliance, loss of trust in the market and responsibility of organisations.

5.3 Educators will discover the best ways to prevent governance failures and learn from the lessons of the 2008 financial crisis

The conclusions of this study show that there are notable parallels between AI governance issues

today, and the governance problems that led to the 2008 global financial crisis. Kathy (2025) suggests that the failure to have effective oversight, the overuse of complex finance products and fragmentation in the regulation of financial markets were some of the primary contributors to the failure of the 2008 market crash. The same dynamic is now starting to play out in AI-powered financial systems, as institutions more and more begin to implement technologies that have a lack of transparency and accountability.

In addition, the study points out that regulatory institutions frequently don't catch up with the technology. How to govern AI is still poorly understood, as policy makers are often more attuned to react to the changing technology than to plan it. (Leslie and Perini 2024) This reactive-governance approach raises the odds that financial regulators may miss out on spotting major crises driven by systemic risks that have arisen from AI.

5.4 Data Integrity, Bias and Financial Predictions that are false

The results also highlight that the quality of data and biases in algorithms are significant challenges in AI systems in financial applications. It is crucial to have large datasets in order to train and make decisions with AI technologies. But tainted, incomplete or biased data can result in misforecasts that can mislead and impact financial market and institutional decision making (Bloch, 2025).

The conversation implies that such incorrect AI-generated content can cause insidious system risks as companies tend to rely on the system's predictions as truth and fact. In practice, AI systems will have similar limitations as the data they are based on. Cheatham et al. (2019) point out that skewed data can lead to discriminatory financial results, and inaccurate forecasting models. These issues could have a detrimental impact on credit allocation, investment decisions and risk management strategies.

5.5 New and existing vulnerabilities in technology and the Internet for cybersecurity threats

Additionally, the discussion highlights a significant challenge of the relationship between the failure of AI governance and cybersecurity risks. The results

show that AI-based banking systems are becoming even more susceptible to cyberattacks and data manipulation, algorithmic exploitation and digital misinformation campaigns. According to Hlatshwayo (2025) governance issues in interwoven algorithmic infrastructures can lead to significant security risks and erode trust in and security of the financial system on a larger scale.

The discussion emphasises thus, that it is essential to make cybersecurity governance a part of the regulation of AI in financial systems. To safeguard financial infrastructures, constant monitoring, flexible security policies and co-operative international reactions are needed which are able to cope with technologically sophisticated threats.

5.6 International and Coordinated AI Governance is a necessity

The study results soundly back the case for insufficient national regulation that could be effective in controlling financial systemic risks arising from AI. Financial systems are global, and AI technologies are becoming more and more intertwined in the financial markets. This may lead to regulatory gaps and disparities in governance at the global level, undermining financial stability, which is in turn impacting on the resilience of the financial sector (Videgaray et al., 2024).

International coordination is highlighted as key for setting principles and guidelines for AI governance which should be transparent, accountable, ethically compliant and systemic risk management. Keller et al. (2023) emphasise the EU's work towards the adoption of risk-based AI regulatory frameworks to tackle financial vulnerabilities linked to technologies that are autonomous. These efforts represent some positive movement but according to the results indicate that it is a limited one towards global harmonisation.

Future financial stability implications include: Future financial stability implications are:

The discussion of the findings shows that the effectiveness of the governance frameworks of AI will be a key to the stability of global financial systems in the future. The use of AI technologies has great potential to bolster financial forecasting, be it

risk management or to boost economic efficiency. If not properly supervised, however, these same technologies can be a catalyst for financial disruption, on a large scale.

The study proves that the main risk factor in the AI-powered financial system is governance failures. The lack of transparency in these mechanisms, the inadequate regulations, cybersecurity weaknesses, unequal algorithms and over-automation all raise the risk of financial systemic exposures. How financial crises could be even more sudden and virulent than before, as could be unmanaged AI systems, is the argument made by Danielsson and Uthemann (2025).

VI. CONCLUSION

6.1 This is a summary of the Study

In this study, the hidden dangers of the rapid rise in the use of AI in the financial sector without proper governance were explored. While AI technologies have the potential to revolutionize financial forecasting, risk management, fraud detection, and automated decision-making, they could also introduce new systemic vulnerabilities that could lead to future financial crises. The research found that governance is weak, there is little oversight, algorithms are opaque, there are vulnerabilities in cybersecurity and there is an excessive dependence on automated systems, which makes global financial markets more vulnerable to instability.

The results show that AI has revolutionized financial operations, making it faster, more efficient, and more predictive in financial institutions (Vyas, 2025). Today, AI-driven systems can be used to power investments, credit assessment, forecasting the market, and even automated trading in the financial sector. AI tools have the potential to greatly enhance the capacity of organizations to detect early warning signs of financial trouble and address potential market risks as they arise, as highlighted by Khalid and Shahzad (2025).

6.2 AI Governance: A Key enabler for Financial Stability

The study has identified that, contrary to expectations, the governance framework will play a more important role than technology itself in

determining the nature of the financial system's impact on AI, whether positive or negative. The findings reveal the potential for compounded risks presented by poorly regulated Artificial Intelligence applications, such as their algorithms syncing, markets auto-monitoring, financial forecasts becoming inaccurate, and security problems within cyberspace (Danielsson & Uthemann, 2025). These risks have the potential to be severe, particularly given the high level of interdependence and rapid transmission of shocks between institutions and between countries in global financial markets.

The study also raises concerns about the potential for a decrease in human decision-making and supervision within financial institutions when relying too heavily on AI-generated content. While there are benefits to automated systems, over-dependence can also be a challenge, as there can be hidden vulnerabilities in systems if organizations don't challenge their underlying assumptions or limitation in the algorithmic models, as Zekos (2021) highlights. To ensure the financial security and stability of the system, there is a need for responsible AI governance to be transparent, explainable and continuously monitored with human supervision.

6.3 The experience of the previous financial crises

It uncovered some remarkable parallels between the problems that have led to the world's crises in the past and those we are facing in governability today with AI. Kathy (2025) suggests that a lack of oversight, regulatory fragmentation and over-optimism on “complicated” products such as financial derivatives played a part in the 2008 financial crisis. Such governance issues are now emerging in financial AI ecosystems due to the rapid spread of the use of these state-of-the-art technologies but the lack of adequate accountability systems in place.

Goldin and Vogel (2010) consider the three characteristics of systemic risk in modern economies to be interconnectedness, complexity and fast contagion effects. According to the study, AI technologies can enhance these characteristics by helping to accelerate financial decision-making processes and by interlinking automated systems across various markets around the globe. AI could

therefore, potentially exacerbate the crisis, which is faster and more volatile than previous financial crises, if it is not managed properly.

The findings of this research suggest that knowing about the failures of governance in the past is important. It is crucial that AI technologies are regulated, held accountable, coordinated on a global level and continually monitored to prevent the re-occurrence of the systemic failures that have been observed in past financial crises.

6.4 The need to have responsible and coordinated AI governance

A key finding of this research is the need for concerted international efforts to achieve effective governance of AI. Financial systems are inherently global and disparate regulations may not be sufficient to address global threats of AI technologies. Videgaray et al. (2024) emphasize the need for international cooperation to establish governance frameworks that can help reduce the risks posed by AI systems to the financial system.

The study found that efforts have been made towards establishing a risk-based regulatory framework, particularly in the European Union, that emphasizes transparency, accountability, and responsible use of AI (Keller et al., 2023). Yet, fragmentation of governance is a growing phenomenon at the global level, with many countries not having complete governance over AI. This lack of consistency opens up the doors for regulatory loopholes, allowing the use of potentially dangerous AI systems without adequate regulation.

Additionally, as generative AI technologies rapidly evolve, issues of cybersecurity, misinformation and digital financial manipulation are growing concerns (Leslie & Perini, 2024). The study concludes with an appeal for the governance mechanisms to evolve continually as the technological threats change and for them to maintain the financial strength in the increasingly digital economy.

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