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# The Application Of Artificial Intellegence In Mitigation Of Financial Investment Risk and The Future Challanges Faced : A Systematic Literature Review

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**Abstract**

**Objectives & Objects:**
This study aims to examine the application of AI in reducing financial investment risk and to explore the challenges that arise related to its application.
**Methods:**
SLR approach was chosen because it allows for a structured and comprehensive synthesis of findings in relevant scientific articles published between 2022 and 2025, resulting in a comprehensive and up-to-date understanding of the research topic.
**Results & Conclusions:**
The results of this article reveal that the application of AI as a form of innovation has an important role in minimizing financial risk. AI can improve operational efficiency through expertise in fast data processing and analysis, thus saving time and manpower. In addition, artificial intelligence supports more precise decision-making in financial risk management, so that it can ultimately improve financial performance and minimize potential losses.
**Limitations:**
This study is limited by the relatively limited number of current references, which reflects that this research topic is still considered new and is in the process of development. This limitation also shows that the available literature is still developing, so that this study contributes to filling the gap in existing knowledge and becomes a basis for further research in similar fields.
**Implications:**
By implementing AI, financial institutions can identify risks more accurately and faster. The application of AI does provide many benefits in the financial sector because it can be used as a tool to mitigate financial risks faced by companies, but the benefits of utilizing AI are inseparable from the future challenges that are likely to be faced. The hands faced such as the need for adequate regulation, proper data protection, cybersecurity assurance, and a summary of technology among professionals.
**Keywords: Artificial Intelligence, Financial Risk, Challenges**

**Abstrak**

**Tujuan & obyek:**
Studi ini bertujuan untuk menguji penerapan Kecerdasan Buatan (AI) dalam mengurangi risiko investasi finansial dan untuk mengeksplorasi tantangan yang muncul terkait dengan penerapannya.
**Metode:**
Pendekatan Tinjauan Literatur Sistematis (SLR) dipilih karena memungkinkan sintesis yang terstruktur dan menyeluruh dari temuan-temuan dalam artikel ilmiah relevan yang diterbitkan antara tahun 2022 dan 2025, sehingga menghasilkan pemahaman yang komprehensif dan terkini mengenai topik penelitian.
**Hasil & Simpulan :**
Hasil artikel ini mengungkapkan penerapan kecerdasan buatan (AI) sebagai bentuk inovasi memiliki peran penting untuk meminimalisie risiko keuangan. AI bisa meningkatkan efisiensi operasional melalui keahlian dalam proses dan analisis data secara cepat, sehingga bisa menghemat waktu serta penggunaan tenaga kerja. Selain itu, kecerdasan buatan mendukung dalam pengambilan keputusan yang lebih tepat dalam pengelolaan risiko keuangan, sehingga akhirnya mampu meningkatkan kinerja keuangan serta potensi kerugian dapat diminimalisir.
**Keterbatasan:**
Studi ini dibatasi oleh jumlah referensi terkini yang relatif terbatas, yang mencerminkan bahwa topik penelitian ini masih dianggap sebagai hal yang baru dan tengah berada dalam proses pengembangan. Keterbatasan ini juga menunjukkan bahwa literatur yang tersedia masih berkembang, sehingga kajian hal ini memberikan kontribusi dalam menutup kekosongan pengetahuan yang ada dan menjadi landasan bagi penelitian lebih lanjut di bidang yang sejenis.
**Implikasi:**
Penerapan AI memang banyak memberikan manfaat dalam sektor keuangan karena dapat dijadikan sebagai alat untuk memitigasi risiko keuangan yang dihadapi perusahaan, namun keuntungan dari pemanfaatan AI ini tidak terlepas dari tantangan masa depan yang kemungkingan akan dihadapi.Tantangan yang dihadapi seperti kebutuhan akan regulasi yang memadai, perlindungan data yang tepat, risiko keamanan siber, dan kesenjangan dalam keterampilan teknologi di kalangan profesional keuangan.

**Kata kunci: Kecerdasan Buatan, Risiko Keuangan, Tantangan**

## 1. Introduction

In the era of increasingly advanced globalization, the role and development of information and communication technology have become inseparable. A technology that is currently most highlighted is Artificial Intelligence (AI) technology. AI is a form of computing technology that exhibits elements of human intelligence and includes a range of related technologies like data extraction, machine learning, natural language understanding, and recognition of speech and images, as well as sentiment analysis.

(Seethamraju & Hecimovic, 2020). The rapid development of technology cannot be avoided, but we must be able to utilize it as much as possible to make our work easier. Advancements in artificial intelligence are being widely applied across various industries, including the financial sector in many countries. The Big Four have invested millions of dollars into AI to improve audit efficiency and quality.For example, KPMG has begun using IBM Watson's deep learning technology to review bank credit documents related to its commercial mortgage loan portfolio. Deloitte is working with Kiva Systems to implement AI in the analysis of contracts, leases, and invoices. Likewise, PwC employs Halo, a machine learning-based tool, to analyze journal entries and identify potential problems. It is predicted that by 2025, AI will be involved in 30 percent of corporate audits, signaling a major shift in the auditing industry. Despite this trend, businesses in Australia are reportedly lagging in adopting AI and similar technologies. (Seethamraju & Hecimovic, 2020). In addition to making the work done by the financial sector easier, the application of AI can also minimize the risks that may be faced in the Company's business processes. This is as conveyed by Rachmawati (2024) who explains risk as a potential event, which can be anticipated and cannot be anticipated (unanticipated) which has a negative effect. When an event is full of uncertainty, it can cause a risk of loss. Companies must have alternative actions and mitigation to respond to the risks that may be faced by the company.

In the financial sector, AI can significantly improve data analysis and decision-making. By utilizing machine learning algorithms, financial institutions can examine patterns within historical data and make more accurate predictions about market behavior and customer risk profiles. This allows institutions to respond to market changes more quickly and effectively, while reducing the risk of financial losses. In addition, AI also helps in identifying new investment opportunities that may not be detected through traditional analysis. By leveraging AI, banks and financial institutions can improve their operational efficiency and provide better services to customers. Therefore, the application of AI in finance not only improves institutional performance but also provides added value to customers (Pratiwi, et all (2025).

The application of AI-based predictive models has proven effective in helping financial institutions identify and measure risk more accurately. In this context, many large banks have begun using machine learning algorithms to analyze customer transaction data to detect suspicious patterns that could indicate potential fraud or credit default (Zhao, 2024). For example, a study shows that banks that implement AI-based predictive models can reduce fraud rates by up to 30% compared to traditional methods (Marshella, et al., 2023). The significance of implementing AI in the financial sector has prompted the author to explore this topic, particularly focusing on how AI can help mitigate risks within financial activities. Based on this focus, the research question developed for this study is: RQ1: How is artificial intelligence applied in mitigating financial investment risks, and what future challenges might arise?

## 2. Theory

### *Unified Theory of Acceptance and Use of Technology 2*

UTAUT explains how users behave towards information technology. UTAUT is intended to gain an understanding of how users act towards the introduction of new technology. This technology acceptance model is structured into seven main components related to intention and use.All of these factors influence the interest in utilization (behavioral intention) and user behavior (use behavior) in determining the use of a system or technology.UTAUT2 theory provides a powerful framework for understanding the factors that influence individuals' acceptance and use of technology. However, in the context of implementing artificial intelligence (AI), various risks and challenges such as data security, ethics, technological complexity, and infrastructure limitations act as external factors that can moderate or mediate the relationship between the variables in UTAUT2 and the intention or behavior of using AI.

### *Financial Investment Risk*

Rachmawati (2024) explains risk as a potential event, which can be anticipated and cannot be anticipated (unanticipated) which has a negative effect. When an event is full of uncertainty, it can cause a risk of loss. The company must have alternative actions and mitigation to respond to the risks that the company may face. Financial risk is the possibility of loss or failure in financial activities caused by various factors, both from within (internal) and outside (external) the organization or individual. Understanding and managing financial risk is important to maintain financial stability, both for individuals, companies, and financial institutions. Usually done through risk analysis, investment diversification, insurance, or the use of derivative instruments.

### *Artificial Intelligence*

Artificial intelligence, or AI, refers to the simulation of human intelligence through programmed systems capable of performing tasks comparable to those done by humans(Sulistyowati et al., 2023). This technology involves computing methods that create artificial intelligence. Another definition states that artificial intelligence is a computer method that is able to carry out tasks that are usually done by humans automatically. This is related to the ability to perform intelligent actions that are automated. artificial intelligence can be interpreted as the implementation of human intelligence in a scientific method pattern that involves collecting information and making decisions with an approach that is almost the same as humans, but through machine or computer media. (Sulistyowati et al., 2023)

## 3. Research Method

The Systematic Literature Review (SLR) approach is employed in this study as it offers a comprehensive framework that enables researchers to develop a deep understanding of the research topic by methodically and systematically gathering, organizing, and evaluating existing literature.In implementing this method, researchers conducted a systematic review of journal articles following the procedures set by

Kitchenham (2009). The object of this research is the application of artificial intelligence to financial investment risk mitigation is the main topic in this study. The planning stage is the initial step in carrying out SLR research. According to Wiliana et al. (2024) there are several stages that must be carried out:

**a. Research Question**

The purpose of this writing is to provide a comprehensive overview of the application of AI to financial investment risk mitigation. To increase its effectiveness, research questions are prepared that support the contents of this paper: RQ1: How is artificial intelligence applied in mitigating financial investment risks, and what future challenges might arise?

**b. Search Process**

At this stage, researchers search for articles that are relevant to the research questions asked.

**c. Inclusion and Exclusion Criteria**

This process involves establishing criteria for selecting articles, which include :

- Inclusion Criteria: (1) Articles published between 2022–2025, (2) Focus on AI applications in financial risk, (3) Written in English or Bahasa Indonesiaand (4) Full-text availability.
- Exclusion Criteria: (1) Publications that are not peer-reviewed,(2) Studies unrelated to financial risk, (3) Articles focusing solely on AI in other sectors (e.g., healthcare, education) and (4) Duplicate or incomplete records

From the procedures outlined above, a total of 45 articles have been identified. Of these, only 15 articles are in accordance with the first research question (RQ). Articles that do not meet these criteria are not considered for further analysis because they are not relevant or cannot be used in answering the research question.

## 4. Results and Discussion

### *4.1 Result*

Application of Artificial Intelligence in Mitigating Financial Investment Risks Summary addressing RQ1: How is artificial intelligence applied in reducing financial investment risks, and what future challenges may arise?

Table 1. Summary of article analysis

| No | Researcher | Title | Methodology | Findings |
|---|---|---|---|---|
| 1 | Nurul Ilahi dan I Nyoman Budiono (2024) | Penerapan AI Sebagai Inovasi Di Era Disrupsi Dalam Mengurangi | Literature study with descriptive analysis of secondary sources | The implementation of AI in financial risk management has great potential to change the way companies manage |

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| | | Risiko Keuangan | | risk. AI can optimize investment portfolios, predict market movements, detect fraud, and manage operational risk. In addition, AI can also enhance efficiency and effectiveness of financial systems by automating business processes, improving real-time risk monitoring, and identifying new opportunities. |
| 2 | Nuraziza dan Wahyu (2024) | Studi Literatur : Integrasi Artificial Intelligence (AI) Dalam Manajemen Keuangan (Tantangan Dan Kepatuhan Regulasi) | Literature study | Utilization of artificial intelligence in financial management brings benefits in the form of more accurate forecasting, portfolio optimization, and efficiency in risk management. However, the central role of regulatory compliance in maintaining the stability and integrity of the financial system cannot be ignored. |
| 3 | Ela Yuli Pratiwi, Alifa Zuriyatul Haq, Zaky Dextra Daufa (2025) | Ai Dalam Manajemen Risiko Untuk Membangun Keputusan Keuangan Yang Lebih Baik : Systematic Literature Review | Systematic literature review | AI has become an essential resource in risk management in the financial sector, helping institutions analyze data and make better decisions. The main problem faced by financial institutions is the uncertainty in risk assessment that can affect their stability and profitability. The results |

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| | | | | of the study show that the utilization of machine learning algorithms and big data analysis can improve the accuracy of risk predictions, as well as provide deeper insights for decision making in financial institutions. |
| 4 | Xuemei Li, et all (2023) | AI Applications In Finance: A Survey | Literature survey | This study emphasizes the significance of AI in finance by employing supervised and deep learning techniques. |
| 5 | Rahayu dan Chifni (2023) | Penerapan AI Sebagai Inovasi Di Era Disrupsi Dalam Mengurangi Risiko Lembaga Keuangan Mikro Syariah | Literature study with qualitative approach and descriptive analysis | This study concludes that the banking sector, especially Islamic microfinance institutions, needs to optimize the use of AI as a competitive strategy. AI plays a role in risk management by helping to solve various problems, so that it can increase revenue and reduce potential losses. |
| 6 | Dedi Efendi, Jefri Ria Saputra dan Moch Fahmi Andreanto (2024) | Memanfaatkan Teknologi Dalam Manajemen Investasi: Peluang Dan Tantangan. | Literature study | The study found that technology can provide significant opportunities to improve efficiency, accuracy, and speed in the investment decision-making process. The implementation of artificial intelligence and big data analytics can assist in detecting intricate market patterns and trends, while blockchain technology can increase |

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| | | | | transparency and security in investment transactions. Challenges include the need for adequate regulation, proper data protection, cybersecurity risks, and gaps in technology skills among financial professionals. |
| 7 | Dinesh (2022) | AI-Driven Risk Management in Cybersecurity: A Predictive Analytics Approach to Threat Mitigation | Case study with predictive analytics approach using machine learning | This research proposes an AI-based predictive analytics approach to identify and mitigate potential cyber threats, focusing on the use of machine learning algorithms and big data analytics. |
| 8 | Jahin, Saleh, Anik and Mridha (2025) | AI in Supply Chain Risk Assessment: A Systematic Literature Review and Bibliometric Analysis | SLR and bibliometric analysis | This research performs a systematic review and bibliometric analysis on the use of AI in assessing supply chain risks, highlighting techniques such as Random Forest and XGBoost to improve accuracy in risk mitigation. |
| 9 | Li, et all (2024) | Leveraging artificial intelligence for enhanced risk management in financial services: Current applications and future prospects | Comprehensive analysis of AI applications in financial services | This study examines the use of AI in managing risks within financial services, highlighting its ability to enhance the accuracy of credit risk evaluations and fraud detection. |
| 10 | Paolo Giudici, Mattia Centurelli, | Artificial Intelligence risk measurement | Literature study and development of AI-based risk | This article proposes an AI risk measurement framework with a focus |

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| | Stefano Turchetta (2024) | | measurement models | on the principles of sustainability, accuracy, fairness, and explainability, and its application in the financial sector. |
| 11 | Campos, et all (2025) | A Frontier AI Risk Management Framework: Bridging the Gap Between Current AI Practices and Established Risk Management | Development of a comprehensive AI risk management framework | This article presents an AI risk management framework that combines traditional risk management principles with techniques specific to AI. |
| 12 | Rufeng Leng (2024) | Exploring AI's Role in Enhancing Risk Assessment Models in Financial Quantitative Trading | Exploratory study on the role of AI in financial quantitative trading | This study examines AI algorithms in market risk management, including volatility prediction, portfolio optimization, stress testing, and sentiment analysis. |
| 13 | Hajj and Jamil (2023) | Unveiling the Influence of Artificial Intelligence and Machine Learning on Financial Markets: A Comprehensive Analysis of AI Applications in Trading, Risk Management, and Financial Operations | A comprehensive overview of the use of AI and machine learning in the financial markets sector. | This research presents a comprehensive analysis of the application of AI and machine learning in trading, risk management, and financial operations. |
| 14 | Yarlagadda, et all (2024) | Artificial Intelligence in Investment Decision Making | Literature review | This article discusses the impact of AI on investment decision making and risk |

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| | | and Risk Management | | management, with a focus on practical applications and the challenges faced. |
| 15 | Sasmita Zahara & Murtanto Murtanto (2023) | Pemanfaatan Kecerdasan Buatan dalam Analisis Return dan Risiko pada Saham LQ45 | Quantitative approach with comparative analysis between conventional methods and AI | This study compares the effectiveness of conventional and AI methods in predicting the return and risk of LQ45 stocks on the BEI during the period 2019–2023. The results show that AI excels in the speed and capacity of big data management as well as increasing prediction accuracy. |

From the procedures outlined above, a total of 45 articles have been identified. Of these, only 15 articles are in accordance with the first research question (RQ). Articles that do not meet these criteria are not considered for further analysis because they are not relevant or cannot be used in answering the research question.From the results of 15 studies that the author summarized, there are research gaps that can be found, namely: 1) Current research uses more literature review methods. There are still few studies that use empirical data, especially in the field of financial institutions in Indonesia. Quantitative research or in-depth case studies on the topic of AI implementation in banks or financial institutions are still limited, 2) There is still limited research that discusses real-time monitoring and evaluation of the effectiveness of AI systems after implementation. This is very important in assessing the risks that arise after AI integration, such as model drift or data bias, and 3) Research that focuses on the Islamic financial sector is still limited (only the 5th article), even though this sector has unique characteristics such as the prohibition of usury, non-conventional risks, and the principle of justice. It is necessary to develop an AI model that is in accordance with sharia principles. Then the future trend in the topic of the application of AI to this risk is still relevant to study because the faster the development of technology, the use of AI in the financial sector also requires special attention and the need for more in-depth and sustainable research.

In the UTAUT, it is explained how users behave towards information technology. All of these factors influence the interest in utilization (behavioral intention) and user behavior (use behavior) in determining the use of systems or technologies. The application of new technologies, in this case the application of AI (Artificial Intelligence) to the financial sector, is very important and provides various benefits. In the financial

sector itself, the application of AI is used to analyze data quickly and accurately, and provide recommendations or predictions that can help make better decisions. One example is the use of AI in stock trading. AI can analyze market data and predict stock price movements more accurately than humans. This can help investors or traders in making smarter stock buying and selling decisions. In addition, artificial intelligence can also be used in fraud detection in financial transactions. AI can analyze suspicious transaction patterns and provide early warnings to authorities so that the risk of fraud can be minimized.

According to Illahi and Budiono (2024), the types of artificial intelligence used to reduce financial risk are ML, NLP, and neural networks.

1. Machine learning is the most widely used form of AI for minimizing financial risk. Through machine learning algorithms, systems can examine historical data and detect patterns that help forecast potential financial risks. For instance, it can be applied to recognize fraudulent behavior or unusual market movements.
2. NLP, a branch of AI focused on interpreting and processing human language, is useful in financial settings for analyzing texts such as financial statements or user feedback on social media. By processing this information, systems can assess market sentiment and uncover key insights that may influence financial risk.
3. Neural networks, which are AI models modeled after the structure of the human brain, are capable of analyzing complex, non-linear data to assess financial risks. In practice, they can be employed to forecast credit risk by examining a customer's historical financial data (Li et al., 2023).

The application of AI in reducing financial risk, AI can be used to analyze suspicious transaction patterns and customer behavior. By studying historical data, AI can identify fraud patterns that are undetectable by humans. For example, AI systems can detect unusual transactions, suspicious credit card usage, or other fraudulent activities. Sulistyowati, et al (2023) stated that another function of artificial intelligence is risk management, which can help Islamic microfinance institutions to minimize problems and optimize income. In addition, Dedi, et al (2024) also stated that technology can provide significant opportunities to improve efficiency, accuracy, and speed in the investment decision-making process. The use of artificial intelligence and big data analysis can help identify complex market patterns and trends, while blockchain technology can increase transparency and security in investment transactions.

The benefits of implementing AI as an innovation to reduce financial risk are that AI can improve operational efficiency by processing and analyzing data quickly, saving time and human resources. AI can also help make better decisions in financial risk management. This can optimize financial performance and reduce losses. By implementing AI, financial institutions can identify risks more accurately and faster. This can improve operational efficiency and reduce human error that can lead to

financial risk. AI has brought significant benefits to financial management, including (Fernández, 2019):

a. Chatbots and virtual assistants
By integrating chatbots and virtual assistants in the financial sector, institutions can improve operational efficiency, provide better service to customers, and improve understanding of customer preferences through better data analysis.

b. Customization of end products and services
By using artificial intelligence and data analysis, financial institutions can provide services that not only meet customer needs, but also create unique experiences that suit their individual preferences. Overall, customisation of end products and services through the use of AI plays a key role in improving the quality of financial services and building closer relationships with customers.

c. Control of AML and fraud prevention
AI enables greater data analysis and integration with new sources of information, thereby detecting patterns or anomalies that are difficult to find manually. This reduces the number of false positives, making fraud and AML control faster and more accurate without causing excessive inconvenience to customers. Thus, the presence of AI increases efficiency in maintaining transaction security and reducing financial risks associated with illegal activities.

d. Credit Scoring
Enhanced analytical capabilities can lead to more accurate credit evaluations and a faster loan approval process. Moreover, incorporating unstructured data allows for the identification of more creditworthy individuals, especially benefiting emerging financial institutions or those operating in information-scarce markets.In other words, the presence of AI helps expand access to financial services in a faster and more efficient manner, while increasing the accuracy of assessing customer credit.

e. Regulatory compliance
The greater analytical capacity of artificial intelligence tools makes it easier to meet certain regulatory requirements, such as risk management and reporting obligations. In addition, AI can also help in monitoring regulatory changes, ensuring that financial institutions always comply with the latest regulations. Thus, the presence of AI not only increases efficiency in meeting regulatory requirements, but also helps financial institutions to stay in line with the ever-evolving regulatory changes.
The application of AI offers the ability to process and analyze large amounts of data quickly, enabling better and more informed decision-making. With more accurate information about customer risk profiles, banks can design loan products that better suit market needs. This not only strengthens customer satisfaction levels, but also contributes to increasing the bank's overall revenue. For example, financial institutions that are able to identify low-risk market segments can offer more competitive interest rates, attract more customers and increase their market share. In addition, strategic

decisions based on strong data allow banks to be more proactive in managing their portfolios, reducing the possibility of future losses (Pratiwi, et all (2025). Utilization of AI in financial management brings benefits in the form of more accurate forecasting, portfolio optimization, and efficiency in risk management. However, the central role of regulatory compliance in maintaining the stability and integrity of the financial system cannot be ignored (Nuraziza and Wahyu, 2024)

### *4.2 Discussion*

The application of AI (Artificial Intelligence) does provide many benefits in the financial sector because it can be used as a tool to mitigate financial risks faced by companies, but the benefits of utilizing AI are inseparable from the future challenges that may be faced from the use of this AI. As stated in the research of Illahi and Budiono (2024), Artificial Intelligence (AI) is a technological innovation that supports the reduction of financial risks in the disruption era. AI enables rapid and precise analysis of financial risks, allowing companies to respond promptly and make well-informed decisions. AI is able to process data and detect patterns that allow for more detailed financial risk analysis and better management. Although AI offers great potential, its application also faces challenges, such as data privacy and security, AI model reliability, and bias and unfairness that may arise in AI-based decision making. The challenges faced in implementing AI as an innovation to reduce financial risk are ensuring data security and privacy so that it is not misused or hacked by irresponsible parties. And the existence of unstructured data can be a challenge in the AI analysis process, and also although AI has strong analytical capabilities, there are still limitations in terms of understanding context and rapid changes in the financial environment. AI can also make mistakes if not managed properly. An example of the application of AI in the financial sector is credit scoring where AI can analyze financial data and customer behavior to determine creditworthiness and appropriate interest rates. AI can also predict the possibility of default and take preventive action. Then there is fraud detection, AI that can detect fraud or irregularities in financial data using techniques such as pattern analysis and provide warnings or block suspicious transactions. Then there is regulatory compliance, AI that can help in complying with applicable regulations such as anti-money laundering and automate the verification process. And finally, AI can provide fast and easy services to customers through channels such as mobile applications or virtual assistants that can answer customer questions and offer products that suit customer needs and preferences. Thus, AI can help financial institutions in making the right decisions to minimize losses. (Illahi and Budiono (2024)

Efffendi, et all (2024), The study found that technology can provide significant opportunities to improve efficiency, accuracy, and speed in the investment decision-making process. The use of artificial intelligence and big data analytics can help identify complex market patterns and trends, while blockchain technology can increase transparency and security in investment transactions. Challenges include the need for

adequate regulation, proper data protection, cybersecurity risks, and gaps in technology skills among financial professionals.

Nuraziza and Wahyu (2024) highlight several obstacles in the adoption of artificial intelligence, one of which is the lack of clear regulations. Financial regulatory frameworks often struggle to keep pace with the swift evolution of AI technologies, leading to ambiguity for financial institutions aiming to leverage AI. Another issue involves unequal access AI implementation in financial services may disproportionately benefit large organizations with ample resources, potentially marginalizing smaller entities. While AI offers significant potential for enhancing data-driven financial decision-making, it also brings heightened concerns around data privacy and security due to the increasing volume and sensitivity of the data being handled. Challenges in this case include (Martinello, 2022):

a. Data Leakage Risk

The use of AI in financial management increases the potential risk of data leaks that can harm companies and customers.

b. Consumer Privacy

Understanding and complying with consumer privacy regulations such as GDPR is a challenge in itself in the use of AI.

c. Algorithmic Bias

AI algorithms used in financial decision making are not always free from bias. Algorithmic bias can lead to inequities in decision-making and needs to be addressed in the financial context.

d. Gender and Racial Bias

Algorithms can reinforce gender and racial bias in credit, investment, and risk assessment decisions.

## 5. Conclusion

This study aims to examine the application of AI in reducing financial investment risk and to explore the challenges that arise related to its application.SLR approach was used to synthesize findings from relevant scientific articles published between 2022 and 2025.

UTAUT explains how users behave towards information technology. All of these factors influence the interest in utilization (behavioral intention) and user behavior (use behavior) in determining the use of systems or technologies. The application of new technologies, in this case the application of AI (Artificial Intelligence) to the financial sector, is very important and provides various benefits. The application of AI as an innovation to reduce financial risk is that artificial intelligence can increase operational efficiency by processing and analyzing data quickly, saving time and human resources. AI can also help make better decisions in financial risk management. This can optimize financial performance and reduce losses. By implementing AI, financial institutions can identify risks more accurately and faster. The application of AI (Artificial Intelligence) does provide many benefits in the financial sector because it can be used

as a tool to mitigate financial risks faced by companies, but the benefits of utilizing AI are inseparable from future challenges that may be faced from the use of AI. The challenges faced include the need for adequate regulation, proper data protection, cybersecurity risks, and gaps in technological skills among financial professionals. This study is limited by the relatively limited number of current references, which reflects that this research topic is still considered new and is in the process of development. This limitation also shows that the available literature is still developing, so that this study contributes to filling the gap in existing knowledge and becomes a basis for further research in similar fields.

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