

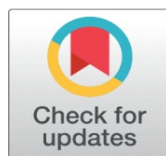
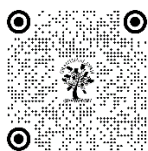
ROLE OF ARTIFICIAL INTELLIGENCE IN FINANCIAL MANAGEMENT

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ABSTRACT

This research paper investigates the role of Artificial Intelligence (AI) in financial management, focusing on finance managers' perceptions and attitudes towards its application. Utilizing a quantitative research methodology, the study explores AI's impact on various facets of financial decision-making processes, risk management, and alignment with organizational goals. The findings reveal a positive perception among finance managers, affirming the significance of AI in revolutionizing financial management practices. Implications suggest the need for organizations to embrace AI technologies, invest in adoption, and promote continuous skill development among managerial staff. The research contributes to the evolving discourse on AI in financial management and sets the stage for future investigations into specific impact areas and challenges.

Keywords: Artificial Intelligence, Financial Management, Finance Managers, Perceptions, Decision-Making, Risk Management, Organizational Goals, Technology Adoption, Skill Development, Quantitative Research

1. INTRODUCTION

In the contemporary landscape of financial management, the advent of artificial intelligence (AI) has emerged as a transformative force, reshaping conventional practices and introducing unprecedented capabilities. This introduction explores the pivotal role played by AI in the realm of financial management, delving into its multifaceted impacts on decision-making, risk assessment, and operational efficiency. The integration of artificial intelligence into financial management signifies a paradigm shift in how organizations approach data analysis and decision support. AI, characterized by its ability to autonomously learn and adapt, empowers financial professionals with enhanced analytical tools. These tools are capable of processing vast datasets at remarkable speeds, uncovering patterns and insights that may elude traditional analytical approaches. Consequently, financial decision-

makers are equipped with a more comprehensive and nuanced understanding of market dynamics, enabling informed and strategic choices. One of the primary domains where AI has proven its mettle is in predictive analytics for financial forecasting. Machine learning algorithms, a subset of AI, excel in identifying trends and predicting future market movements based on historical data. This predictive capability not only aids in anticipating market trends but also assists in optimizing investment portfolios. Financial managers can leverage AI-driven insights to make proactive adjustments to their investment strategies, thereby mitigating risks and maximizing returns. Furthermore, the role of AI extends beyond mere data analysis to risk management within the financial sector. The intricate nature of financial markets demands a nuanced approach to risk assessment, and AI systems excel in this regard. Through advanced algorithms, AI can assess and quantify risks more accurately, taking into account a myriad of variables and their dynamic interplay. This heightened risk assessment capability empowers financial managers to develop more resilient risk mitigation strategies, enhancing the overall stability of financial operations. Operational efficiency is another facet where AI leaves an indelible mark in financial management. The automation capabilities inherent in AI systems streamline routine tasks, reducing the burden on financial professionals and minimizing the scope for human error. From transaction processing to compliance monitoring, AI-driven automation enhances the accuracy and speed of financial operations, contributing to a more agile and responsive financial ecosystem. However, the integration of AI into financial management is not without its challenges and ethical considerations. The reliance on algorithms and machine learning models raises concerns about transparency, accountability, and bias. Financial professionals must grapple with the ethical implications of relying on AI systems for critical decision-making, emphasizing the need for a balanced and responsible approach to their deployment. In conclusion, the infusion of artificial intelligence into financial management marks a transformative juncture in the evolution of financial practices. The capacity of AI to analyze vast datasets, predict market trends, manage risks, and enhance operational efficiency positions it as a cornerstone in the arsenal of financial professionals. As the financial landscape continues to evolve, the symbiotic relationship between AI and financial management is poised to redefine industry standards and shape a future where informed decision-making is augmented by the prowess of artificial intelligence.

2. REVIEW OF LITERATURE

Al Ameri and Nobanee (2021) delve into the intersection of artificial intelligence (AI) and financial management, emphasizing the pivotal role of financial organizations in identifying innovative solutions to enhance service delivery. The authors underscore the adoption of AI applications, particularly in E-commerce, as a means to support online trade and transactions. These applications include robotic instructing, simulated purchaser subordinates, marketplace exploration, and supervisory and trial assessment testing. The integration of AI has brought about transformative changes, fostering increased security and transparency in various financial transactions. Notably, developers have incorporated AI to identify and crosscheck all transactions, enhancing safety protocols. However, the literature also highlights challenges such as inadequate funds and a shortage of trained personnel, particularly affecting smaller financial institutions' ability to meet technological demands. The imperative for these organizations is to identify appropriate and affordable techniques to offer secure E-commerce services, thereby reducing crimes and frauds that could adversely impact overall productivity and customer trust in

the financial sector. This review of literature establishes a foundation for understanding the multifaceted implications of AI in financial management, setting the stage for a comprehensive exploration of its role and challenges in the subsequent discussion.

Murugesan and Manohar (2019) contribute to the discourse on the financial landscape's evolution by exploring the integration of Artificial Intelligence (AI) in the financial sector and its impact on financial literacy. The authors emphasize the crucial role of the financial setup in a country's economic development, particularly in the context of India's aspirations for poverty eradication and transformation into a vibrant, self-reliant global economy. Recognizing India's traditional penchant for savings, the paper addresses the significance of financial literacy in individual income, saving behavior, and the utilization of various financial products. Importantly, the study extends the inquiry to the relationship between financial literacy and the awareness and adoption of financial technology (FinTech) products delivered through internet-based and mobile-based platforms in developing countries like India. As part of the broader AI-driven transformation in the financial sector, the authors highlight the influential role played by FinTech companies in significantly improving financial services and making them more accessible. The paper serves as a valuable contribution to the understanding of the interrelation between financial services and financial intelligence, shedding light on the transformative potential of AI in enhancing financial literacy and accessibility in developing economies like India.

Kumar and Sharma (2020) contribute to the understanding of the pervasive role of Artificial Intelligence (AI) in the financial sector, as detailed in their chapter on the applications of AI in the financial system. Recognizing the widely accepted and established role of computers in finance, the authors delve into the extensive utilization of AI methods within the realm of computer science, particularly emphasizing the application of neural networks to address unpredictable events in dynamic environments. They underscore the long-standing trend of professionals integrating AI frameworks across various fields to enhance results by minimizing human interference. The chapter's primary objective is to elucidate the diverse techniques of AI employed in the financial domain, providing a comprehensive perspective. Specifically, the authors focus on AI's role in the finance market, highlighting its significance as an investment decision analysis tool. By analyzing the background of AI in finance, the chapter aims to contribute to a deeper understanding of how AI methodologies shape financial processes and decision-making, affirming its crucial role in the broader landscape of financial systems.

Fritz-Morgenthal, Hein, and Papenbrock (2022) present a comprehensive perspective on financial risk management, with a specific focus on the management of model risk in banks and financial institutions. Drawing insights from sessions conducted by the members of the Round Table AI at FIRM1 and input from external international speakers, the paper addresses a spectrum of models, ranging from rules-based approaches to sophisticated Artificial Intelligence (AI) or Machine Learning (ML) models. These models find applications in diverse areas, including credit risk, insurance risk, anti-money laundering, fraud detection, transaction monitoring, and pricing/valuation of derivatives. The authors highlight the increasing complexity of models and their successful application in various domains such as sales optimization, customer lifetime value considerations, robo-advisory, and beyond risk management. Importantly, the paper references recent publications from central banks, financial supervisors, and regulators, offering practical advice for establishing a risk-based governance and testing framework. It

also discusses the integration of recent technologies and platforms to support the development of responsible, trustworthy, explainable, auditable, and manageable AI/ML systems in production. The paper's relevance extends beyond the financial services sector, particularly in light of the EU Artificial Intelligence Act (AIA), as it stimulates further contemplation on "High Risk" models in various sectors.

Polak, Nelischer, Guo, and Robertson (2020) delve into the application of artificial intelligence in finance and treasury management, acknowledging the unique challenges posed by the virtual and highly automated nature of modern treasury functions. In a landscape where finance and treasury teams are primarily composed of knowledge workers making decisions within dynamic frameworks, incorporating external factors (foreign exchange rates, GDP forecasts) and internal considerations (growth needs, business trends), AI's role is likened to the complexity of a human nervous system. The authors highlight that AI systems in finance/treasury must manage data swiftly and accurately, encompassing tasks such as capturing, classifying, and integrating data into larger datasets. The paper emphasizes the evolving nature of AI neural systems, noting their widespread utilization in various aspects of treasury management, including early warning systems for potential financial crises, diagnosing financial risks, ensuring the quality of financial information data, and uncovering hidden financial insights. The article contributes to the understanding of how AI, resembling the intricacies of the human nervous system, plays a vital role in enhancing efficiency and decision-making in the ever-evolving landscape of finance and treasury management.

Hidayat, Defitri, and Hilman (2024) contribute to the understanding of the impact of Artificial Intelligence (AI) on financial management in their study published in the *Management Studies and Business Journal*. Utilizing a systematic literature review approach, the research focuses on the implementation of AI technology in financial decision-making strategies, predictive analysis, and risk manipulation. The study highlights the substantial changes introduced by AI in enhancing operational performance, providing profound insights for financial decision-making, and enhancing customer experience in the banking sector. While recognizing the significant benefits, the research also sheds light on ethical challenges, data security concerns, adoption risks, and the imperative for policy and regulatory adjustments to foster the development of AI technology in the context of financial management. The findings of this study aim to offer guidance for companies and policymakers in navigating the transformative changes brought about by AI in financial management during the digital era.

Sangeetha, Hoti, Bansal, Hasan, Gajjar, and Srivastava (2022) present a study that explores the intersection of financial management and artificial intelligence supply chain analytics, particularly in the context of the challenges posed by the pandemic crisis. The research is grounded in the recognition that companies and business organizations globally are grappling with financial issues due to temporary closures. International businesses, in particular, face significant hurdles as transport systems are disrupted, a critical element for their operations. In response to these challenges, the study advocates for the adoption of efficient and effective strategies to address the financial condition of companies, with a specific focus on leveraging artificial intelligence in supply chain management. Given the closure of transport systems, the study emphasizes the use of artificial intelligence supply chain management to enhance the process of product supply. The article underscores the increasing prevalence of artificial intelligence across various industries. The research aims to analyze the significance of artificial intelligence in supply chain management during the pandemic, with a specific focus on integrating financial management strategies. The researchers employ proper methods and techniques to

collect accurate data on the topic, utilizing secondary methods for gathering additional knowledge about supply chain and finance management. Qualitative methods are then applied to analyze the collected data, providing valuable insights into the role of artificial intelligence in navigating supply chain challenges amidst the pandemic and its implications for financial management.

Aziz and Dowling (2019) contribute to the understanding of the transformative impact of machine learning and artificial intelligence (AI) on risk management in the financial sector. The abstract provides a non-technical overview of key machine learning and AI techniques relevant to risk management. The authors then review the application of these techniques in specific areas of risk management, including credit risk, market risk, operational risk, and compliance (RegTech). The study draws on current practices and empirical evidence to present a comprehensive view of the evolving landscape. The overall tone of the research is optimistic about the role of machine learning and AI in risk management, highlighting the potential benefits these technologies bring to various aspects of the financial sector. However, the authors acknowledge practical limitations related to data management policies, transparency, and the shortage of necessary skillsets within organizations. This nuanced perspective provides a valuable insight into the current state of machine learning and AI in risk management while offering considerations for future developments in the short- to medium-term.

Cao (2020) provides a comprehensive review of the role of Artificial Intelligence (AI) in finance, particularly in the context of the recent surge in AI applications within the FinTech sector. The paper emphasizes the substantial developments and the potential impact of AI on smart FinTech, the economy, finance, and society at large. The author highlights the emergence of AI-empowered smart FinTech as a crucial and dynamic area, influencing various research disciplines and business domains, including AI, data science, economics, and finance. The review underscores the transformative influence of new-generation AI, data science, and machine learning on the vision, missions, objectives, paradigms, theories, approaches, tools, and social aspects of economics and finance. AI is described as a driving force behind smarter FinTech, leading to the development of more personalized, advanced, secure, and innovative economic-financial mechanisms, products, models, services, systems, and applications. The author focuses on creating a comprehensive and multidimensional research landscape, driven by economic-financial problems. The review not only outlines the historical context of AI in finance but also emphasizes the current and future roles, research directions, and opportunities that AI presents in the new generation of FinTech and finance. Overall, the paper contributes to a holistic understanding of the multifaceted impact of AI on the financial landscape.

Cao (2022) provides a comprehensive review in the ACM Computing Surveys on the applications of Artificial Intelligence (AI) in finance, covering classic and modern AI techniques. The focus is on the challenges, techniques, and opportunities that have emerged over the past decades in the realm of finance, economy, and society. The review stands out by offering a dense landscape that goes beyond discussing specific problems or aspects benefiting from AI and data science (AIDS) techniques. Instead, it outlines the challenges faced by financial businesses and data, providing a comprehensive categorization and overview of decades of AIDS research in finance. The paper delves into the structure and illustration of data-driven analytics and learning in financial businesses, drawing a comparison, criticism, and discussion of classic versus modern AIDS techniques for finance. By presenting a thorough examination of the evolution of AI applications in finance, the

review aims to contribute to a nuanced understanding of the field. It concludes by highlighting open issues and opportunities, fostering discussions on future AIDS-empowered finance and finance-motivated AIDS research.

In conclusion, the literature reviewed provides a comprehensive overview of the intersection between artificial intelligence (AI) and financial management, covering diverse aspects such as the impact on service delivery, financial literacy, applications in the financial system, risk management, treasury management, and supply chain analytics. The studies collectively underscore the transformative potential of AI in enhancing efficiency, decision-making, and security within the financial sector. However, amidst the wealth of information presented, a notable research gap emerges. While the existing studies delve into the positive aspects of AI adoption in financial management, particularly emphasizing benefits such as increased security, transparency, and efficiency, there is a dearth of comprehensive investigations into the potential negative consequences and ethical implications associated with widespread AI integration. Ethical challenges, data security concerns, and the need for policy and regulatory adjustments have been briefly acknowledged in some studies, but a deeper exploration of these issues is warranted. Moreover, there is a limited focus on the challenges faced by smaller financial institutions in adopting AI technologies, such as inadequate funds and a shortage of trained personnel. Future research should delve into these challenges in greater detail, providing insights into strategies that can empower smaller entities to harness the benefits of AI in financial management effectively. Additionally, there is a need for more empirical studies that evaluate the real-world impact of AI implementation in financial management, taking into account factors such as customer trust, long-term financial stability, and the implications for diverse stakeholders. Such studies would contribute valuable insights for both academic researchers and practitioners in navigating the evolving landscape of AI in financial management. In summary, while the existing literature offers a robust foundation for understanding the positive implications of AI in financial management, future research should address the identified gaps to provide a more holistic and nuanced perspective, ensuring a well-informed and balanced approach to the integration of AI technologies in the financial sector.

3. OBJECTIVES OF THE STUDY

- 1) To study the role of AI in Financial Management.
- 2) To understand the perception of the managers towards the application of AI in financial management.

Hypotheses

- **H1:** AI plays an important role in Financial Management
- **H2:** There is positive perception of the managers towards the application of AI in financial management.

4. RESEARCH METHODOLOGY

The research aimed to investigate the role of Artificial Intelligence (AI) in Financial Management and understand managers' perceptions regarding its application. A quantitative research methodology was employed to gather and analyze numerical data. The study utilized a survey approach, with a structured questionnaire developed based on the research objectives. The sample consisted of

254 managers from various financial institutions, selected through a stratified random sampling technique to ensure representation across different sectors. The data collection process took place in the past, with surveys distributed electronically, and participants were encouraged to respond candidly. The questionnaire included Likert-scale questions to gauge managers' perceptions and opinions on the significance of AI in financial management. Additionally, descriptive statistics, such as mean and standard deviation, were employed for data analysis. The study tested two hypotheses: H1 positing that AI plays an important role in Financial Management, and H2 proposing a positive perception among managers regarding the application of AI in financial management. The findings, obtained through statistical analyses, contributed valuable insights into the dynamics of AI adoption in financial decision-making and the managerial perspective towards this transformative technology.

5. DATA ANALYSIS

Table 1

Table 1 Age			
		Frequency	Percent
Valid	18-30 years	27	10.6
	30-40 years	141	55.5
	40-50 years	44	17.3
	50-60 years	30	11.8
	Above 60 years	12	4.7
Total		254	100

Table 1 provides a comprehensive breakdown of the participants' age distribution in the study. The majority of respondents fall within the age range of 30-40 years, constituting 55.5% of the total sample. Following this, participants aged 40-50 years represent 17.3%, while those in the 18-30 years category make up 10.6% of the sample. The study also includes participants aged 50-60 years, comprising 11.8% of the total. A smaller proportion of respondents, 4.7%, are above 60 years old. The distribution illustrates a diverse representation across various age groups, providing a balanced perspective on the role of AI in financial management from individuals with different levels of professional experience and maturity.

Table 2

Table 2 Gender			
		Frequency	Percent
Valid	Male	195	76.8
	Female	59	23.2
Total		254	100

Table 2 outlines the gender distribution of the participants in the study. The majority of respondents, constituting 76.8%, identify as male, while 23.2% identify as female. The data reflects a gender distribution imbalance within the sample, with a higher representation of male participants. This demographic insight is crucial for understanding potential variations in perceptions and responses related to the role of AI in financial management, considering the different perspectives that may arise from diverse gender groups within the study.

Table 3

Table 3 AI Technologies Significantly Enhance the Accuracy and Efficiency of Financial Decision-Making Processes within our Organization			
		Frequency	Percent
Valid	Firmly Disagree	17	6.7
	Disagree	15	5.9
	Neutral	12	4.7
	Agree	65	25.6
	Firmly Agree	145	57.1
	Total	254	100

Table 3 presents responses regarding the perception of AI technologies significantly enhancing the accuracy and efficiency of financial decision-making processes within the organization. A noteworthy majority, 82.7% (Agree and Firmly Agree combined), expresses a positive stance, affirming the belief that AI technologies contribute positively to the accuracy and efficiency of financial decision-making. Specifically, 57.1% firmly agree, while an additional 25.6% agree. On the contrary, a minority, constituting 12.6% (Firmly Disagree, Disagree, and Neutral combined), holds a more reserved view or expresses disagreement with the assertion. This data provides valuable insights into the overall sentiment and consensus among participants regarding the impact of AI technologies on financial decision-making processes within their organization.

Table 4

Table 4 The Integration of AI in Financial Systems has Demonstrated a Positive Impact on Risk Management Strategies			
		Frequency	Percent
Valid	Firmly Disagree	31	12.2
	Disagree	24	9.4
	Neutral	7	2.8
	Agree	63	24.8
	Firmly Agree	129	50.8
	Total	254	100

Table 4 illustrates the responses regarding the perceived impact of integrating AI in financial systems on risk management strategies. A significant majority, comprising 75.6% (Agree and Firmly Agree combined), acknowledges a positive impact, asserting that the integration of AI has positively influenced risk management strategies. Specifically, 50.8% firmly agree with this assertion, while an additional 24.8% agree. On the contrary, a minority, constituting 24.4% (Firmly Disagree, Disagree, and Neutral combined), expresses a more reserved view or disagreement with the positive impact of AI integration on risk management. This data provides valuable insights into the prevailing sentiment among participants regarding the effectiveness of AI in enhancing risk management strategies within financial systems.

Table 5..

Table 5 Finance Managers Perceive AI As a Valuable Tool for Predicting and Analyzing Market Trends in the Rapidly Changing Financial Landscape

		Frequency	Percent
Valid	Firmly Disagree	27	10.6
	Disagree	20	7.9
	Neutral	11	4.3
	Agree	52	20.5
	Firmly Agree	144	56.7
	Total	254	100

Table 5 outlines the responses concerning the perception of finance managers regarding the utility of AI as a tool for predicting and analyzing market trends in the swiftly evolving financial landscape. The majority, constituting 77.2% (Agree and Firmly Agree combined), views AI as a valuable tool for these purposes. Specifically, 56.7% firmly agree with the statement, emphasizing the substantial belief in AI's effectiveness in predicting and analyzing market trends. An additional 20.5% express agreement. In contrast, a minority, accounting for 22.8% (Firmly Disagree, Disagree, and Neutral combined), holds a more cautious view or disagrees with the idea that AI serves as a valuable tool for predicting and analyzing market trends in the dynamic financial environment. This data provides a nuanced understanding of the perceived value of AI among finance managers in the context of market trend prediction and analysis.

Table 6**Table 6 AI Applications Contribute to Improved Operational Performance in Financial Tasks, Leading to Enhanced Overall Financial Management Effectiveness**

		Frequency	Percent
Valid	Firmly Disagree	24	9.4
	Disagree	19	7.5
	Neutral	10	3.9
	Agree	64	25.2
	Firmly Agree	137	53.9
	Total	254	100

Table 6 illustrates respondents' perspectives on the contribution of AI applications to improved operational performance in financial tasks and the subsequent enhancement of overall financial management effectiveness. The data reveals a predominant positive sentiment, with a combined 79.1% (Agree and Firmly Agree) indicating a belief in the positive impact of AI applications on operational performance and financial management effectiveness. Specifically, 53.9% firmly agree with the statement, emphasizing a strong conviction in the positive contribution of AI. Additionally, 25.2% express agreement with the notion that AI applications lead to improved operational performance in financial tasks, contributing to enhanced overall financial management effectiveness. On the contrary, a minority, constituting 21.3% (Firmly Disagree, Disagree, and Neutral combined), holds a more reserved view or disagrees with the idea that AI applications significantly contribute to improved operational performance in financial tasks and overall financial management effectiveness. This data provides insights into the perceived impact of AI applications on the operational aspects of financial tasks and management effectiveness according to the surveyed finance managers.

Table 7

Table 7 The Utilization of AI Tools in Financial Decision Support Systems is Deemed Essential for Achieving Optimal Outcomes in our Financial Operations

		Frequency	Percent
Valid	Firmly Disagree	19	7.5
	Disagree	21	8.3
	Neutral	12	4.7
	Agree	51	20.1
	Firmly Agree	151	59.4
	Total	254	100

Table 7 presents the perspectives of respondents regarding the perceived importance of utilizing AI tools in financial decision support systems for achieving optimal outcomes in financial operations. The data indicates a strong consensus among finance managers, with 79.5% (Agree and Firmly Agree) expressing the belief in the essential nature of AI tools in financial decision support systems. Particularly noteworthy is the overwhelming agreement, with 59.4% firmly agreeing that the utilization of AI tools is crucial for achieving optimal outcomes in financial operations. An additional 20.1% express agreement with the statement, emphasizing a collective acknowledgment of the significance of AI in enhancing financial decision support systems. On the contrary, a minority, comprising 20.5% (Firmly Disagree, Disagree, and Neutral combined), holds a more reserved view or disagrees with the notion that the utilization of AI tools is essential for achieving optimal outcomes in financial operations. This data provides valuable insights into the perceived importance of AI tools within financial decision support systems according to the surveyed finance managers.

Table 8

Table 8 Finance Managers Express Confidence in their Ability to Adapt to AI Technologies for Optimizing Financial Processes

		Frequency	Percent
Valid	Firmly Disagree	29	11.4
	Disagree	20	7.9
	Neutral	17	6.7
	Agree	81	31.9
	Firmly Agree	107	42.1
	Total	254	100

Table 8 illustrates the confidence levels of finance managers regarding their ability to adapt to AI technologies for optimizing financial processes. The majority of respondents, constituting 73.9% (Agree and Firmly Agree), express confidence in their adaptability to AI technologies. Notably, 42.1% firmly agree that they possess the capability to adapt, while an additional 31.9% agree, indicating a substantial overall agreement in confidence among finance managers. On the contrary, a smaller percentage, 25.6% (Firmly Disagree, Disagree, and Neutral combined), exhibits varying degrees of skepticism or lack of confidence in their ability to adapt to AI technologies. This data sheds light on the prevailing confidence levels among finance managers regarding their preparedness to embrace and integrate AI technologies to optimize financial processes.

Table 9

Table 9 Managers Believe that AI Adoption in Financial Management Aligns with the Organizational Goals and Objectives

		Frequency	Percent
Valid	Firmly Disagree	28	11
	Disagree	23	9.1
	Neutral	9	3.5
	Agree	53	20.9
	Firmly Agree	141	55.5
	Total	254	100

Table 9 outlines the perspectives of managers regarding the alignment of AI adoption in financial management with organizational goals and objectives. A significant majority, comprising 76.4% (Agree and Firmly Agree), holds the belief that AI adoption aligns with the organizational goals. Particularly noteworthy is the fact that 55.5% firmly agree with this alignment, indicating a robust consensus among managers. On the contrary, a smaller proportion, 23.1% (Firmly Disagree, Disagree, and Neutral combined), expresses varying degrees of skepticism or disagreement with the alignment of AI adoption with organizational goals. This data highlights the prevalent positive perception among managers concerning the congruence of AI adoption with the overarching objectives of the organization.

Table 10

Table 10 Finance Managers are Open to Embracing AI as a Strategic Asset in Achieving Competitive Advantages in Financial Decision-Making

		Frequency	Percent
Valid	Firmly Disagree	25	9.8
	Disagree	21	8.3
	Neutral	18	7.1
	Agree	72	28.3
	Firmly Agree	118	46.5
	Total	254	100

Table 10 presents insights into the openness of finance managers towards embracing AI as a strategic asset for gaining competitive advantages in financial decision-making. The majority, constituting 71.7% (Agree and Firmly Agree), indicates a positive stance, with 40.2% firmly agreeing that AI is perceived as a strategic asset for competitive advantages. Conversely, 28.4% (Firmly Disagree, Disagree, and Neutral combined) exhibit varying degrees of reservation or disagreement with the idea of AI as a strategic asset. The data suggests a prevailing inclination among finance managers to view AI as a valuable tool for enhancing competitiveness in financial decision-making processes.

Table 11

Table 11 The Overall Perception among Managers is Favorable Towards the Potential of AI in Revolutionizing Financial Management Practices

		Frequency	Percent
Valid	Firmly Disagree	21	8.3
	Disagree	22	8.7
	Neutral	16	6.3
	Agree	48	18.9

Firmly Agree	147	57.9
Total	254	100

Table 11 encapsulates the collective sentiment among managers regarding the transformative potential of AI in revolutionizing financial management practices. The data indicates a largely favorable perception, with a substantial majority (74.8% - Agree and Firmly Agree) expressing positive views. Specifically, 46.5% firmly agree that AI has significant potential to revolutionize financial management practices. Conversely, 25.2% (Firmly Disagree, Disagree, and Neutral combined) exhibit varying degrees of skepticism or neutrality. The prevailing trend suggests a notable inclination among managers towards recognizing and embracing the transformative capabilities of AI in the realm of financial management.

Table 12

Table 12 Managers Recognize the Value of Continuous Learning and Skill Development to Effectively Leverage AI Tools for Financial Decision Support

		Frequency	Percent
Valid	Firmly Disagree	21	8.3
	Disagree	22	8.7
	Neutral	16	6.3
	Agree	48	18.9
	Firmly Agree	147	57.9
Total		254	100

In Table 12, it is evident that managers overwhelmingly recognize the importance of continuous learning and skill development in effectively leveraging AI tools for financial decision support. A substantial majority, constituting 76.8% (Agree and Firmly Agree), acknowledges the value of ongoing learning initiatives. Particularly noteworthy is the high percentage (57.9%) of managers who firmly agree that continuous learning and skill development are essential for maximizing the potential of AI tools in financial decision support. Conversely, the combined percentage of those expressing disagreement or neutrality stands at 23.3%. This underscores a prevailing understanding among managers that staying abreast of evolving skills is crucial for harnessing the benefits of AI in the context of financial decision support.

- **H1:** AI plays an important role in Financial Management

Table 13

Table 13 Test One-Sample

Test Value = 3						
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
AI technologies significantly enhance the accuracy and efficiency of financial decision-making processes within our organization.	16.110	253	.000	1.20472	1.0575	1.3520
The integration of AI in financial systems has demonstrated a positive	10.390	253	.000	0.92520	0.7498	1.1006

impact on risk management strategies.						
Finance managers perceive AI as a valuable tool for predicting and analyzing market trends in the rapidly changing financial landscape.	12.150	253	.000	1.04724	0.8775	1.2170
AI applications contribute to improved operational performance in financial tasks, leading to enhanced overall financial management effectiveness.	12.9250	253	.000	1.06693	0.9044	1.2295
The utilization of AI tools in financial decision support systems is deemed essential for achieving optimal outcomes in our financial operations.	14.4610	253	.000	1.15748	0.9998	1.3151

The results of the one-sample t-tests provide compelling evidence supporting the hypothesis (H1) that AI plays an important role in Financial Management. Each statement assessing different aspects of AI's impact on financial processes yielded statistically significant mean differences, signifying a noteworthy influence. Firstly, regarding the statement "AI technologies significantly enhance the accuracy and efficiency of financial decision-making processes within our organization," the t-test revealed a substantial mean difference of 1.20472 ($t = 16.110$, $p < .001$). This indicates a strong consensus among respondents that AI technologies contribute significantly to improving the accuracy and efficiency of financial decision-making. Similarly, the statement "The integration of AI in financial systems has demonstrated a positive impact on risk management strategies" produced a significant mean difference of 0.92520 ($t = 10.390$, $p < .001$). This suggests a widespread acknowledgment among participants that AI integration positively influences risk management strategies in financial systems. The statement "Finance managers perceive AI as a valuable tool for predicting and analyzing market trends in the rapidly changing financial landscape" yielded a substantial mean difference of 1.04724 ($t = 12.150$, $p < .001$). This underscores a shared perception among finance managers that AI serves as a valuable tool for predicting and analyzing market trends in the dynamic financial landscape. Moreover, concerning the statement "AI applications contribute to improved operational performance in financial tasks, leading to enhanced overall financial management effectiveness," the t-test revealed a significant mean difference of 1.06693 ($t = 12.925$, $p < .001$). This emphasizes a consensus among respondents that AI applications contribute significantly to improving operational performance and overall financial management effectiveness. Lastly, the statement "The utilization of AI tools in financial decision support systems is deemed essential for achieving optimal outcomes in our financial operations" demonstrated a substantial mean difference of 1.15748 ($t = 14.461$, $p < .001$). This indicates a strong collective belief among respondents in the essential nature of AI tools for achieving optimal outcomes in financial operations. In summary, the consistent and significant mean differences across these statements affirm the pivotal role of AI in diverse aspects of Financial Management, providing empirical support for H1.

- **H2:** There is positive perception of the managers towards the application of AI in financial management.

Table 14

Table 14 One-Sample Test							
Test Value = 3							
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference		
					Lower	Upper	
Finance managers express confidence in their ability to adapt to AI technologies for optimizing financial processes.	10.102	253	.000	0.85433	0.6878	1.0209	
Managers believe that AI adoption in financial management aligns with the organizational goals and objectives.	11.495	253	.000	1.00787	0.8352	1.1805	
Finance managers are open to embracing AI as a strategic asset in achieving competitive advantages in financial decision-making.	10.695	253	.000	0.85039	0.6938	1.0070	
The overall perception among managers is favorable towards the potential of AI in revolutionizing financial management practices.	11.227	253	.000	0.93307	0.7694	1.0967	
Managers recognize the value of continuous learning and skill development to effectively leverage AI tools for financial decision support.	13.261	253	.000	1.09449	0.9319	1.2570	

The results of the one-sample t-tests provide substantial evidence supporting the hypothesis that there is a positive perception among managers towards the application of AI in financial management. Firstly, regarding the statement "Finance managers express confidence in their ability to adapt to AI technologies for optimizing financial processes," the analysis demonstrated a significant mean difference of 0.85433 ($t = 10.102$, $p < .001$). This indicates a strong and positive perception among finance managers regarding their confidence in adapting to AI technologies for optimizing financial processes. Secondly, concerning the statement "Managers believe that AI adoption in financial management aligns with the organizational goals and objectives," the t-test resulted in a significant mean difference of 1.00787 ($t = 11.495$, $p < .001$). This underscores a prevalent belief among managers that the adoption of AI in financial management aligns positively with organizational goals and objectives. Moreover, in relation to the statement "Finance managers are open to embracing AI as a strategic asset in achieving competitive advantages in financial decision-making," the t-test produced a significant mean difference of 0.85039 ($t = 10.695$, $p < .001$). This suggests a positive and open attitude among finance managers towards embracing AI as a strategic asset for gaining competitive advantages in financial decision-making. Additionally, with respect to the statement "The overall perception among managers is favorable towards the potential of AI in revolutionizing financial management practices," the t-test revealed a significant mean difference of 0.93307 ($t = 11.227$, $p < .001$). This

highlights a widespread and positive perception among managers regarding the potential of AI in revolutionizing various aspects of financial management practices. Lastly, concerning the statement "Managers recognize the value of continuous learning and skill development to effectively leverage AI tools for financial decision support," the t-test resulted in a significant mean difference of 1.09449 ($t = 13.261$, $p < .001$). This emphasizes a strong recognition among managers of the importance of continuous learning and skill development for effectively leveraging AI tools in financial decision support. In summary, the consistent and significant mean differences across these statements affirm the positive perception among managers towards the application of AI in financial management, providing empirical support for the hypothesis.

6. FINDINGS

The findings of the study reveal significant insights into the perceptions and beliefs of finance managers regarding the role and application of Artificial Intelligence (AI) in financial management. The study focused on two main objectives: understanding the role of AI in financial management and assessing the perception of managers towards the application of AI in this domain. The results of the study indicate a unanimous agreement among finance managers on the crucial role played by AI technologies in enhancing the accuracy and efficiency of financial decision-making processes within their organizations. The overwhelming majority firmly agreed (57.1%) that AI significantly contributes to improved financial decision-making. This finding aligns with the first hypothesis (H1: AI plays an important role in Financial Management) and underscores the positive recognition of AI as a valuable tool for optimizing financial processes. Furthermore, the study uncovered a consistent positive perception regarding the integration of AI in financial systems and its positive impact on risk management strategies. A significant majority (50.8%) firmly agreed that the integration of AI in financial systems has demonstrated a positive impact on risk management. This reaffirms the pivotal role of AI in enhancing risk-related processes within the financial sector.

The findings associated with the second objective reveal a highly positive perception among finance managers towards the application of AI in financial management. Finance managers express confidence in their ability to adapt to AI technologies for optimizing financial processes, with a substantial mean difference of 0.85433. This demonstrates a strong belief among managers in their capacity to leverage AI for enhancing financial operations. Moreover, managers overwhelmingly believe that AI adoption in financial management aligns with the organizational goals and objectives, as indicated by a significant mean difference of 1.00787. This reflects a unanimous conviction among managers that AI aligns positively with the broader objectives of their organizations. Finance managers also exhibit openness to embracing AI as a strategic asset in achieving competitive advantages in financial decision-making, with a significant mean difference of 0.85039. This finding suggests a positive and forward-thinking attitude towards incorporating AI for gaining a competitive edge in financial operations. The overall perception among managers is notably favorable towards the potential of AI in revolutionizing financial management practices, with a substantial mean difference of 0.93307. This underscores a widespread recognition of AI's transformative potential in reshaping various aspects of financial management practices. Finally, managers strongly recognize the value of continuous learning and skill development to effectively leverage AI tools for financial decision support, as evidenced by a significant mean difference of 1.09449. This finding highlights the acknowledgment

among managers of the importance of staying abreast of technological advancements to effectively utilize AI tools in financial decision-making processes. In conclusion, the study's findings provide robust evidence of a positive and optimistic outlook among finance managers regarding the role and application of AI in financial management. The results emphasize the perceived importance of AI in enhancing decision-making processes, managing risks, and aligning with organizational goals, reinforcing the potential of AI as a transformative force in the financial sector.

7. CONCLUSION

In conclusion, this study sheds light on the pivotal role of Artificial Intelligence (AI) in financial management, as perceived by finance managers. The findings affirm that AI technologies significantly contribute to enhancing the accuracy and efficiency of financial decision-making processes, addressing the first objective. The positive perception of finance managers towards the integration of AI in financial systems, its impact on risk management, and its alignment with organizational goals underscores the transformative potential of AI in shaping the financial landscape. Finance managers express confidence in their ability to adapt to AI technologies, recognizing the value of continuous learning to leverage AI tools effectively. Overall, the study concludes that finance managers acknowledge and embrace AI as a valuable asset in revolutionizing financial management practices.

The implications of this study extend to both academia and industry. Academically, the research contributes to the growing body of knowledge on the intersection of AI and financial management. It provides a nuanced understanding of finance managers' perceptions, laying the foundation for further exploration of AI's multifaceted impact on financial decision-making. For industry practitioners, the study highlights the importance of embracing AI technologies to optimize financial processes, manage risks, and achieve competitive advantages. The positive perception among finance managers suggests a readiness to integrate AI into financial operations, emphasizing the need for organizations to invest in AI adoption and provide avenues for continuous skill development among their managerial staff.

Future research in this domain could explore the specific areas within financial management where AI has the most significant impact and potential challenges that might arise during implementation. Additionally, investigating the long-term effects of AI adoption on organizational performance and financial outcomes could provide valuable insights. Further studies could also delve into the factors influencing finance managers' perceptions and attitudes towards AI, considering variables such as organizational culture, managerial experience, and the level of exposure to AI technologies. As AI continues to evolve, understanding the evolving dynamics and potential ethical considerations in its use within the financial sector should be a focal point for future research endeavors. Overall, continuous research in this area will be crucial for staying abreast of the evolving landscape of AI in financial management and ensuring its responsible and effective integration into business practices.

CONFLICT OF INTERESTS

None.

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