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THE ROLE OF ARTIFICIAL INTELLIGENCE IN FINANCIAL SERVICES PROVIDED BY BANKS

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ABSTRACT

Artificial intelligence (AI) is steadily reshaping financial services by making operations more automated and strongly driven by data. Tools such as machine learning, natural language processing (NLP), predictive analysis, and robotic process automation (RPA) allow banks and other financial organisations to perform tasks faster, reduce errors, control risks, and improve the way they interact with customers. These technologies are commonly applied in areas such as identifying fraudulent transactions, assessing creditworthiness, and providing investment-related guidance.

AI also supports regulatory activities through Reg Tech applications and helps widen access to financial services through Robo-advisory platforms, thereby encouraging innovation and financial inclusion. However, along with these advantages, several challenges remain, particularly concerns about data protection, ethical use of intelligent systems, and limited transparency in algorithm-based decisions. This study focuses on understanding the effect of AI on operational performance, customer experience, and governance practices, while also discussing the opportunities, limitations, and future scope of AI in achieving sustainable digital transformation in the financial sector.

Keywords:

Artificial Intelligence, Machine Learning, Predictive Analytics, Natural Language Processing, Robotic Process Automation, FinTech, Reg Tech, Risk Control, Financial Inclusion, Ethical Use of AI, Data Protection, Digital Change.

CHAPTER 01

INTRODUCTION

1.1 INTRODUCTION

Artificial Intelligence (AI) has gradually become a major influence on the functioning of modern financial systems. Unlike earlier digital tools that mainly improved speed and efficiency, AI allows systems to learn from data, analyse information, and support decision-making that earlier depended largely on human judgement. Since financial institutions work extensively with data, risk evaluation, regulatory requirements, and customer interaction, they have become early adopters of AI-based systems. With improvements in computing capacity, automation, and real-time data handling, AI has moved beyond a supporting role and now acts as a strategic resource that affects growth, competition, and long-term stability in the financial sector.

Earlier, banks and financial organisations relied heavily on manual documentation, centralised procedures, physical verification, and direct interaction with customers. Although these methods were effective in the past, they often led to delays, limited scalability, and higher chances of human error. As markets expanded and customer expectations increased, traditional approaches proved inadequate. AI emerged as a practical response by enabling institutions to process large volumes of data, automate routine activities, forecast outcomes, and design more flexible service structures. At present, AI functions more as an intelligent support system rather than a simple software addition.

The impact of AI is clearly visible in customer-related services. Digital banks, fintech firms, insurance providers, and investment companies increasingly rely on chatbots, virtual assistants, robo-advisors, and self-service platforms. These applications operate continuously, reduce dependency on physical branches, and offer customised services that enhance user convenience. This reflects a shift from transaction-focused banking to experience-oriented financial services, where customer satisfaction plays a central role. As a result, financial services are moving away from uniform processes toward more personalised and technology-enabled solutions.

AI has also transformed internal operations within financial institutions. Key functions such as fraud identification, credit evaluation, risk assessment, investment analysis, and compliance monitoring are now supported by intelligent systems. These systems can process large datasets quickly, detect unusual patterns, and assist in consistent decision-making. This reduces dependence on intuition alone and indicates a structural change in how financial institutions manage operations.

One of the most significant uses of AI is in risk management. Earlier fraud detection systems often responded only after problems had occurred. AI enables continuous monitoring of transactions and helps identify suspicious behaviour at an early stage. Machine learning models analyse transaction patterns and flag high-risk activities, helping institutions reduce losses and build customer confidence.

AI also plays an important role in regulatory compliance, commonly referred to as Regulatory Technology or RegTech. As financial systems become more digital, regulators demand greater transparency and accountability. AI-based compliance tools assist in automating documentation checks, transaction monitoring, regulatory reporting, and sanctions screening. These tools reduce manual effort, improve accuracy, and make auditing easier, thereby supporting good governance along with operational efficiency.

Despite these advantages, the use of AI in finance raises several concerns. One major issue relates to limited transparency in algorithm-based decisions, often described as “black-box” systems. When decision processes are unclear, questions arise about fairness and accountability. For instance, automated loan assessment models may unintentionally reflect bias present in historical data. This has increased the demand for ethical and explainable AI systems that can clearly justify their outcomes.

AI has also influenced employment patterns in the financial sector. While repetitive tasks such as data entry and routine customer queries are increasingly automated, new roles are emerging in data analytics, cybersecurity, and system supervision. AI is therefore viewed more as a tool that supports human work rather than completely replacing it. However, concerns about job security and skill relevance remain, making employee training and reskilling essential.

Studies further indicate that AI adoption varies across regions and institutions. Developed economies with strong digital infrastructure and regulatory clarity tend to adopt AI more effectively. In contrast, emerging economies often face challenges such as skill shortages, cost limitations, and lower awareness levels. These differences influence public perception, ranging from trust and acceptance to fear and uncertainty.

From a broader viewpoint, AI should be understood as a socio-technical system rather than just a technological tool. Its success depends on the interaction between technology, organisational preparedness, regulatory support, ethical standards, and stakeholder trust. The impact of AI is shaped by how responsibly it is implemented and governed.

In this context, the present research focuses on stakeholder perception of AI in financial services. Customer acceptance plays a crucial role in determining whether AI-based systems succeed. Concerns related to privacy or automated decision-making may slow adoption, whereas positive experiences can encourage innovation and inclusion. Therefore, this study examines awareness levels, perceived benefits, concerns, and overall attitudes toward AI-enabled financial services.

Overall, AI represents both opportunity and challenge within the financial sector. While it enhances efficiency, service quality, and risk control, it also raises ethical and governance issues that require careful management. By linking theory with user perception, this study aims to support sustainable and responsible digital finance.

1.2 Research Problem

Financial institutions are increasingly using Artificial Intelligence to improve efficiency, customer service, and risk control. However, despite rapid technological development, limited real-world evidence exists on how customers actually understand and perceive AI-based financial services. Many users are familiar only with visible applications such as chatbots, while they remain unaware of AI's role in areas like credit assessment, fraud analysis, and risk evaluation.

At the same time, concerns related to data privacy, ethical use of AI, and potential job displacement continue to grow. There is also uncertainty regarding whether financial institutions are adequately prepared to address regulatory and ethical challenges linked to AI adoption. These issues highlight the need for research that focuses on customer perception and institutional readiness. This study attempts to address these gaps by analysing user views, institutional preparedness, and the overall impact of AI on financial services.

1.3 Research Questions

1. What are the major areas in which Artificial Intelligence is applied within financial institutions?
2. How aware are customers of AI-based financial services?
3. Does the use of AI improve efficiency, accuracy, and customer satisfaction in financial services?
4. What are the key challenges faced in adopting AI in the financial sector?
5. How well prepared are financial institutions to address the ethical and regulatory concerns related to AI?
6. How do customers perceive the overall impact of AI on financial institutions?

1.4 Research Objectives

1. To identify key applications of AI in financial institutions and examine their role in improving efficiency, accuracy, and customer satisfaction.
2. To study the benefits and challenges of AI adoption in finance, with particular focus on data privacy, ethical issues, and regulatory compliance.
3. To analyse how AI-driven innovations influence the performance, competitiveness, and long-term sustainability of financial institutions in the digital age.

1.5 Significance of the Study

This study is important as it offers a customer-focused view of how AI is influencing financial services. It helps explain the effect of AI on service efficiency, accuracy, and customer satisfaction. The findings can assist financial institutions in improving AI strategies, strengthening data protection practices, and developing ethical guidelines.

The study is also useful for regulators and policymakers in designing appropriate frameworks for responsible AI adoption. Academically, it contributes to existing research by providing practical evidence on the role of AI in financial services.

1.6 Description of the Research Work(type)

This research examines the role and impact of Artificial Intelligence in the financial services offered by financial institutions. The study focuses on understanding customer awareness, usage patterns, perceptions, and satisfaction related to AI-enabled services such as chatbots, fraud identification systems, loan processing mechanisms, and digital financial platforms. Primary data were collected using a structured questionnaire, and the responses were analysed through percentage analysis. The study seeks to assess both the advantages and limitations of AI adoption, including its influence on operational efficiency, ethical considerations, and employment-related effects.

a) Methodology

The study adopts a descriptive research design, as it aims to describe existing conditions and customer perceptions regarding the use of AI in financial services. A quantitative research approach is primarily used to analyse responses obtained from individuals who actively use financial services. This approach helps in identifying patterns, opinions, and behavioural trends related to the implementation of AI within financial institutions.

b) Sampling Method

A convenience sampling technique was adopted for the study, where respondents were chosen based on ease of access and their willingness to participate. The sample consisted of 30 respondents belonging to different educational and occupational backgrounds. This method enabled effective data collection within a limited period of time.

c) Data Collection Methods and Instruments

Primary data were gathered through a structured questionnaire circulated using online platforms. The questionnaire included multiple-choice and Likert-scale questions covering areas such as awareness, usage, perceived benefits, risks, and overall opinions regarding AI in financial institutions. Secondary

data were collected from journals, research articles, books, and online sources to support the theoretical framework of the study. The collected responses were analysed using percentage analysis and presented in the form of charts along with suitable interpretations.

CHAPTER 02

LITERATURE REVIEW

The academic discussion on Artificial Intelligence (AI) in financial services has evolved gradually over several decades, in line with technological progress, increased institutional adoption, and changing societal expectations. Studies in this field draw from multiple perspectives, including technology, organisational studies, behavioural science, regulation, and socio-economic analysis. This diversity of viewpoints highlights that AI adoption in finance is not a simple technological upgrade, but a complex and multi-layered process. Most scholars agree that AI goes beyond basic automation and has a significant influence on how financial institutions operate, manage risks, deliver services, and build trust among users.

Foundational and Conceptual Studies

Initial academic studies viewed AI mainly as a decision-support tool designed to help financial professionals analyse information more effectively than traditional human-led approaches. Early research focused on expert systems, rule-based models, and predictive techniques that assisted analysts, traders, and risk managers in improving decision quality. Scholars such as Pau (1991) demonstrated that AI-based systems could enhance forecasting accuracy, currency management, and strategic decision-making when compared to conventional mathematical methods. These early studies established AI as a potential organisational capability rather than merely an experimental technology.

With improvements in computing power and data availability, research gradually moved from conceptual discussions to practical implementation. Scholars began to examine how algorithms learn over time, how efficiently models perform, and how real-time computing could support faster financial decisions. During this stage, literature emphasised that the strength of AI lies not only in automating tasks, but also in identifying behavioural patterns, adapting to new data, and generating insights that traditional information systems were unable to produce.

AI and the Digital Transformation of Finance

A substantial body of research identifies AI as a key driver of digital transformation in financial institutions. With the expansion of digital banking and platform-based financial services, AI has become central to organisational redesign, business model development, and customer relationship management. Studies consistently report that AI improves operational efficiency, shortens processing time, reduces administrative workload, and enhances the quality of data analysis. Technologies such as machine

learning and advanced analytics have significantly strengthened functions like credit evaluation, investment forecasting, loan approval processes, and customer segmentation.

Researchers also highlight the visible impact of AI through applications such as robo-advisors, intelligent customer service systems, automated lending platforms, biometric security solutions, and algorithmic trading tools. These developments represent a clear shift from branch-based banking toward digital, interface-driven service delivery. Literature often describes this transformation as a movement away from institution-focused banking toward intelligent, connected, and experience-oriented financial ecosystems.

AI in Risk Management and Fraud Detection

Risk management is one of the most extensively studied areas within AI-finance research. As financial fraud, cybercrime, and money laundering activities have grown more complex, traditional monitoring systems have struggled to respond effectively. Scholars explain that AI-based solutions enable a proactive approach by continuously analysing transaction data and detecting unusual patterns. Techniques such as behavioural analysis, anomaly detection, and predictive scoring allow financial institutions to identify risks early and take preventive action before losses become significant.

Research further indicates that AI contributes to financial stability by reducing fraud-related losses and safeguarding institutional reputation. In addition, AI improves stress testing, asset valuation, and risk-based capital planning, helping institutions make more informed and resilient financial decisions.

Customer Experience and Personalised Services

Another important stream of literature examines how AI influences customer experience in financial services. Researchers note that AI enables institutions to shift from reactive service models to more personalised and predictive engagement. Intelligent systems support customised banking services, context-based financial advice, and tailored product recommendations. Studies also suggest that AI-driven tools such as chatbots and virtual assistants enhance financial inclusion by providing affordable, round-the-clock services that reach customers across different regions and income levels.

However, some studies present a critical view. While AI improves convenience and speed, it may reduce personal interaction for customers who prefer human contact. Excessive reliance on automation can sometimes feel impersonal, leading to emotional disengagement. This suggests that the success of AI in improving customer experience depends largely on how well technology aligns with user expectations and preferences.

AI in Compliance and Regulatory Technology (RegTech)

An expanding area of research focuses on the use of AI in regulatory compliance, commonly referred to as Regulatory Technology or RegTech. Financial institutions face growing regulatory demands related to reporting accuracy, anti-money laundering measures, audit requirements, and transparency. Studies show that AI-driven compliance systems help automate monitoring processes, improve data accuracy, and reduce the time and cost involved in regulatory reporting. These systems support stronger governance by minimising errors and improving accountability.

At the same time, researchers caution that automated compliance decisions may lack clarity and can be difficult to explain to regulators. As a result, many scholars recommend a balanced approach in which AI performs large-scale data analysis, while final judgement and interpretation remain under human control.

Ethical Issues, Transparency, and Accountability

As AI becomes more widely used in finance, ethical concerns have gained increasing attention in academic literature. Researchers warn that AI systems trained on historical data may unintentionally reproduce existing social biases, resulting in unfair outcomes in areas such as lending and credit assessment. Literature on ethical AI highlights the need for transparency, explainable decision models, and fairness in system design. Scholars advocate regular system audits, ethical oversight mechanisms, and stakeholder involvement to ensure responsible use of AI.

From a governance perspective, ethical failures can weaken trust, lead to regulatory penalties, and damage institutional reputation. Therefore, ethical AI is increasingly viewed as a necessity for long-term sustainability rather than a voluntary choice.

Workforce Impact and Organisational Change

Research also explores how AI adoption affects employment and organisational structures. While automation reduces the need for repetitive administrative tasks, it increases demand for skills related to data analysis, cybersecurity, and system supervision. Studies suggest that organisations investing in employee reskilling and encouraging human–AI collaboration experience smoother transitions and better use of technology. In contrast, limited training and preparation often result in resistance and underutilisation of AI systems.

User Trust and Adoption Behaviour

Several studies examine how public trust and perception influence AI adoption. Concerns related to data privacy, security, and reduced human interaction can slow acceptance, while benefits such as convenience, accuracy, and speed encourage usage. Behavioural research consistently identifies trust as

a critical factor linking AI capability with actual adoption, reinforcing the importance of studying customer perception.

Theoretical Frameworks Supporting AI Adoption

To explain patterns of AI adoption, scholars frequently apply models such as the Technology Acceptance Model (TAM), Unified Theory of Acceptance and Use of Technology (UTAUT), Technology–Organisation–Environment (TOE) framework, and Diffusion of Innovation Theory. These frameworks emphasise factors such as perceived usefulness, ease of use, trust, organisational preparedness, and environmental support. Together, they show that AI adoption depends not only on technology, but also on human behaviour and organisational capability.

Regional Differences in AI Adoption

Research indicates that AI adoption varies significantly across regions. Developed economies often implement advanced AI applications such as algorithmic trading and robo-wealth management, while emerging economies focus more on digital payments, basic automation, and mobile-based financial services. Differences in digital literacy, infrastructure quality, and trust levels strongly influence how AI is perceived and adopted, making regional analysis particularly important.

Research Gaps

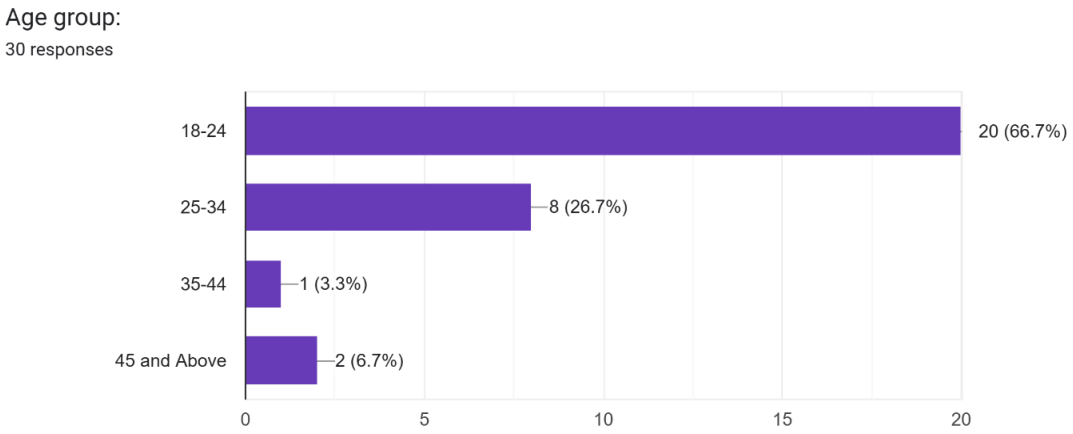
Despite extensive academic attention, several gaps remain in the existing literature. Much of the research focuses on technological efficiency and institutional adoption, while customer perception and lived experience receive comparatively less attention. Social and psychological factors such as trust, fear, exclusion, and comfort are especially underexplored in emerging economies. Additionally, institutional preparedness related to ethical governance, transparency, and workforce reskilling requires further investigation. These gaps highlight the need for perception-based studies that examine how users understand and respond to AI in financial services.

Overall, existing literature presents AI as a powerful yet complex force in financial services. While it enhances efficiency, personalisation, and regulatory oversight, it also introduces ethical, governance, and behavioural challenges. Scholars generally agree that technological capability alone does not guarantee success. Instead, effective AI adoption depends on trust, preparedness, and responsible implementation. Building on this foundation, the present study focuses on user perception to provide insights that support financial institutions, regulators, and policymakers in developing sustainable and inclusive AI-driven financial systems.

CHAPTER 03

DATA ANALYSIS AND INTERPRETATION

1. Age group

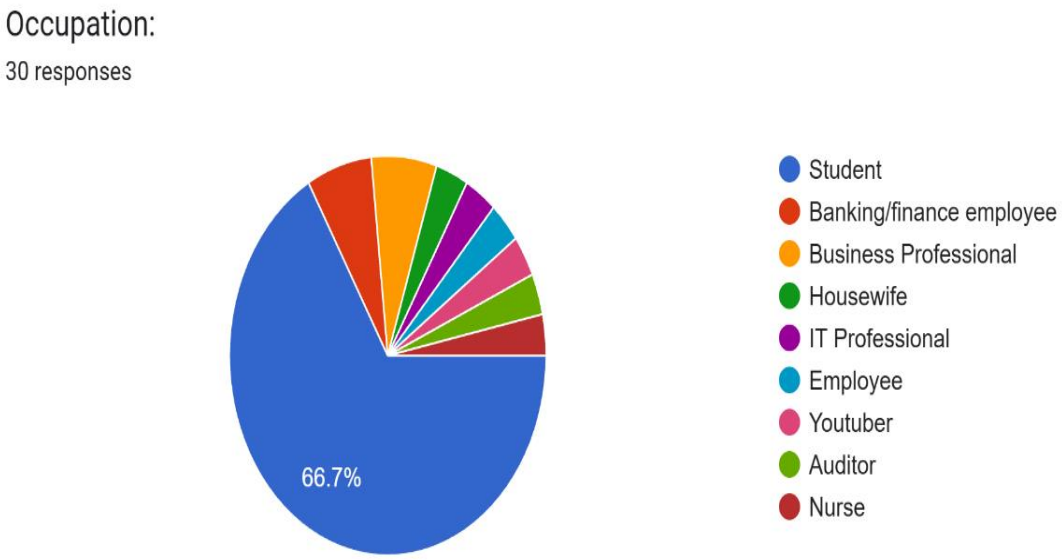


Interpretation:

The survey results indicate that most respondents belong to younger age groups, mainly between 18 to 24 and 25-34 years. This shows that the sample largely consists of individuals who are comfortable with digital technology, quick to adapt to new systems, and regularly use online platforms for their financial activities. Younger participants generally rely more on mobile banking applications, digital wallets, online transactions, and fintech services when compared to older age groups. As a result, their responses are influenced by frequent interaction and familiarity with digital financial tools.

From an analytical perspective, this age composition suggests that the study findings primarily represent the views of individuals who are actively engaged in digital adoption. These respondents are more likely to display openness toward AI based services, lower levels of technological hesitation, and higher expectations related to service speed, convenience, and personalisation. The age pattern observed also supports the diffusion of innovation theory, which proposes that early adopters are often younger, better informed, and more willing to experiment with new technologies. Therefore, the demographics structure of the sample strengthens the relevance of the study, as younger users are more likely to notice AI applications in financial institutions and provide detailed opinions.

2. Occupation

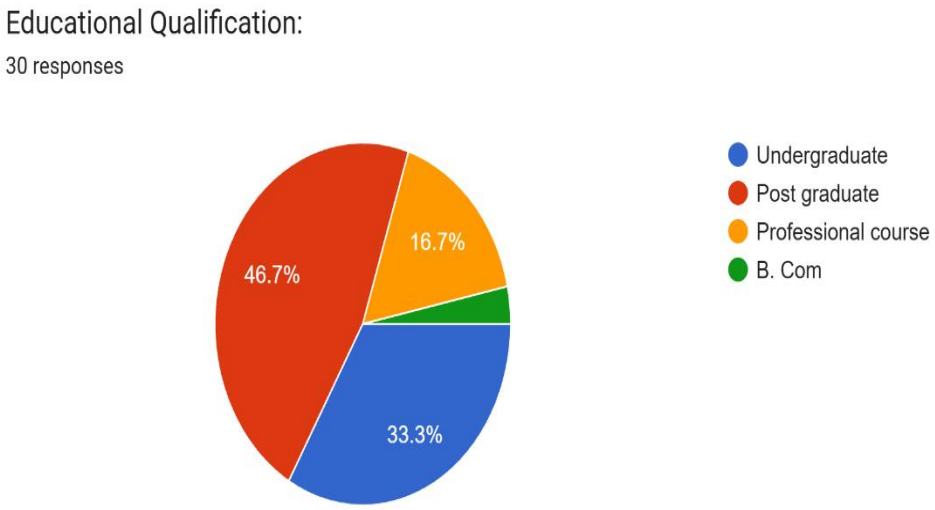


Interpretation:

The occupational distribution shows 66.7% of respondents are students, meaning the findings are largely influenced by viewpoints formed through academic exposure rather than extensive professional experience. Students are generally more open tp adopting new technologies and may hold favourable opinions about AI due to classroom discussions, academic learning, and regular use of digital tools in education. Although participation from banking professionals and corporate employees is relatively limited, it does contribute a degree of practical understanding to the study.

However, the low representation from other occupational groups such as homemakers, IT professionals, and healthcare workers suggests that perceptions from a wider working population are not fully reflected. This imbalance in occupational representation may lead to a positive bias towards AI acceptance, as students are less likely to have experienced real-world challenges related to automation, job changes, or regulatory pressures.

3. Educational qualification

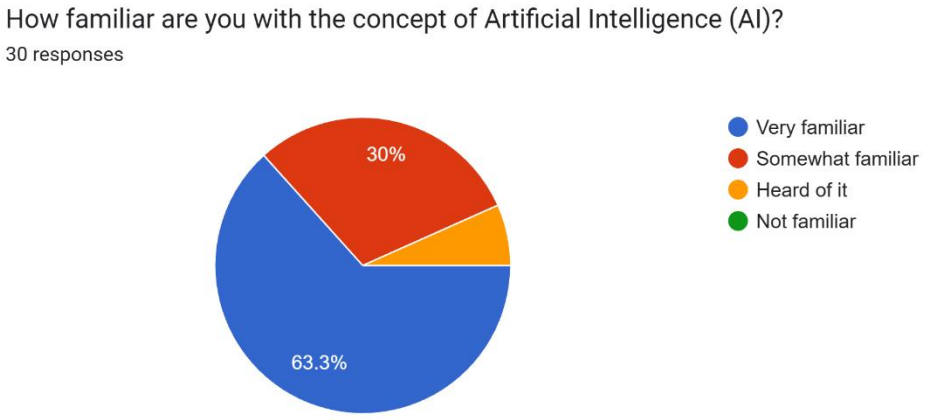


Interpretation:

The educational background of the respondents shows that most of them have completed undergraduate or postgraduate studies. This means that the sample includes people who are fairly informed and are familiar with technology based financial systems through their studies or work. People with higher education usually have better digital awareness and are more open to using new financial technologies. Because of this, respondents are more likely to notice AI features such as automated customer service, credit or risk checking, and fraud detection, even if they understand them mainly through everyday use rather than technical knowledge.

Education helps individuals understand how AI works and why financial institutions use it. As a result, their opinions are based more on logical thinking than fear of technology. This shows that AI adoption depends not only on access to technology but also on the user's readiness to understand it. While these respondents recognise the benefits of efficiency, they are also aware of concerns such as data privacy and reduced human interaction.

4. How familiar are you with the concept of Artificial Intelligence (AI)?

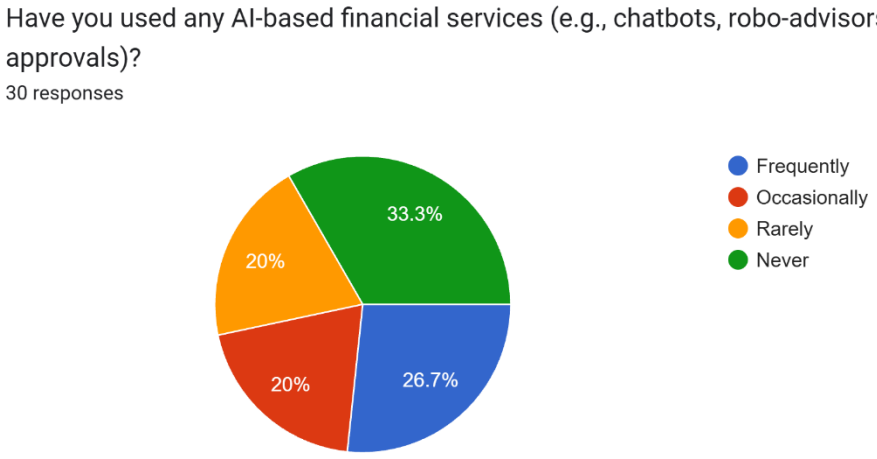


Interpretation:

The results indicate that a large share of respondents is aware of the use of AI in financial institutions. This reflects the growing presence of AI driven features in everyday banking activities such as chatbot based assistance, quick responses to customer queries, automated loan status updates, and fraud related alerts. Such awareness can be linked to spread digital exposure, rapid growth of fintech services, and the increasing use of smartphones for accessing financial services.

From a simple analysis, the high level of awareness shows that AI is no longer hidden in the background but is clearly visible and directly used by customers. People are more likely to accept technology when they can see it in their daily activities. In this way, awareness becomes the first step toward using AI based services. However, knowing that AI exists does not always mean that users fully understand how it works or what its long -term effects are. Many respondents may notice AI features without clearly knowing their purpose or impact. As a result, their opinions and satisfactions may be based only on basic usage rather than proper understanding. This shows the importance of educating users more about AI so they can make informed and confident decisions.

5. Have you used any AI-based financial services (e.g., chatbots, robo-advisors, automated loan approvals)?

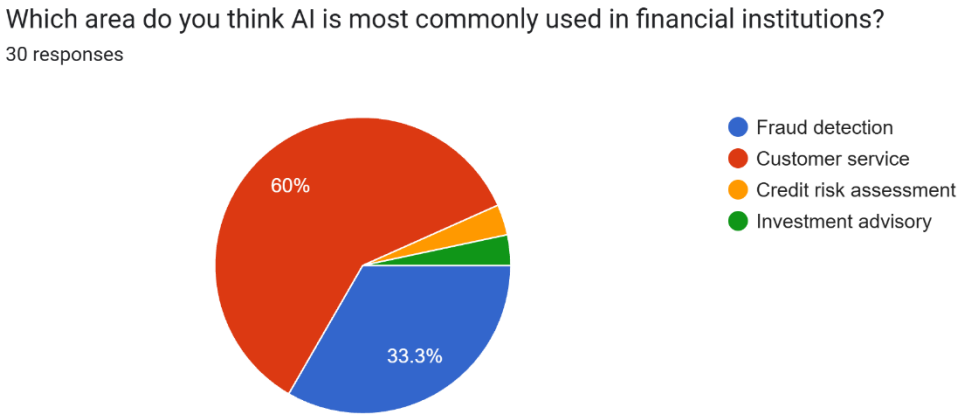


Interpretation:

Even though awareness of AI is relatively high, the variation in usage indicates a clear gap between awareness and actual adoption. While 26.7% of respondents regularly use AI enabled services such as digital wallets, chatbots, and automated loan facilities, about 33.3% reported that they have never used these tools. This group of non -users maybe influenced by factors such as lack of trust, low necessity, discomfort with digital systems, or limited exposure to AI based platforms.

The remaining 40% of respondents who use these services occasionally or not so frequently suggest a gradual but cautious pattern of adoption. These differences in usage behaviour highlight that awareness alone is not sufficient to drive adoption. Practical considerations such as reliability, data privacy, easy access, and user confidence play an important role in determining usage decisions. Therefore, financial institutions need to focus on improving user education, simplifying digital interfaces, and building trust to encourage wider adoption of AI enabled services.

6. Which area do you think AI is most commonly used in financial institutions?

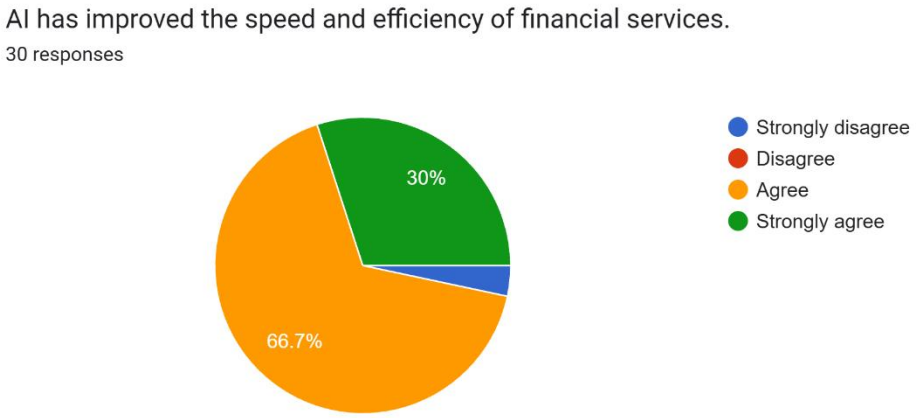


Interpretation:

Most respondents mainly associate AI with chatbots and customer support systems, highlighting the strong visibility of AI in customer facing interactions. This suggests that user perceptions are largely shaped by direct experiences with service interfaces rather than awareness of backend systems. About one third of the respondents also recognised the role of AI in fraud detection, indicating some understanding of its function in monitoring and preventing suspicious activities.

However, relatively few respondents identified AI application in areas such as risk assessment, credit scoring, or advisory analytics. This shows that many users are not fully aware of the extent to which AI supports critical decision- making processes within financial institutions. The gap between AI's actual operational role and what customers visibly experience points to a clear knowledge disconnect. Addressing this gap requires greater efforts in educating users about financial technologies, which can help build more informed trust and acceptance.

7. AI has improved the speed and efficiency of financial services.

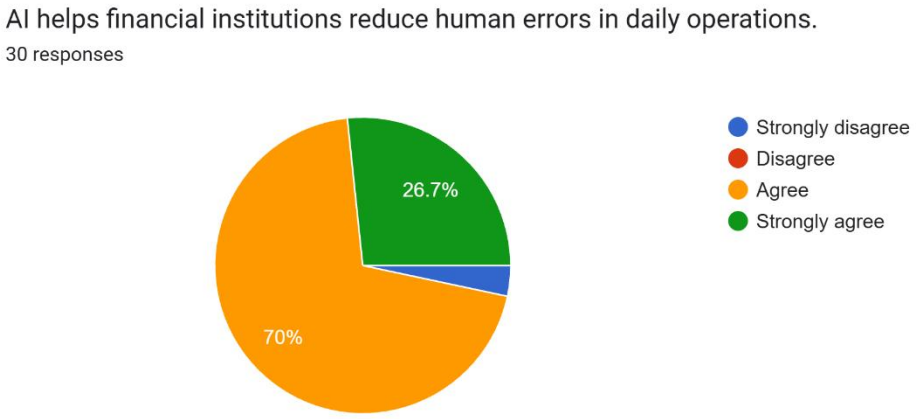


Interpretation:

The very high level of agreement, at 96.7% clearly indicates that users strongly recognise the benefits of AI in financial services. Features such as faster customer support, quicker verification processes, instant fund transfers, and reduced approval time contribute significantly to this positive perception. The almost complete absence of disagreement suggests that users show little resistance to the efficiency gains brought by automation.

Respondents are likely linking everyday experiences such as digital banking platforms, online payment systems, automated replies, and smart processing tools with improved service efficiency. This highlights that AI has successfully created a strong impression of usability and convenience, which in turn reinforces consumer acceptance of AI enabled financial services.

8. AI helps financial institutions reduce human errors in daily operations.

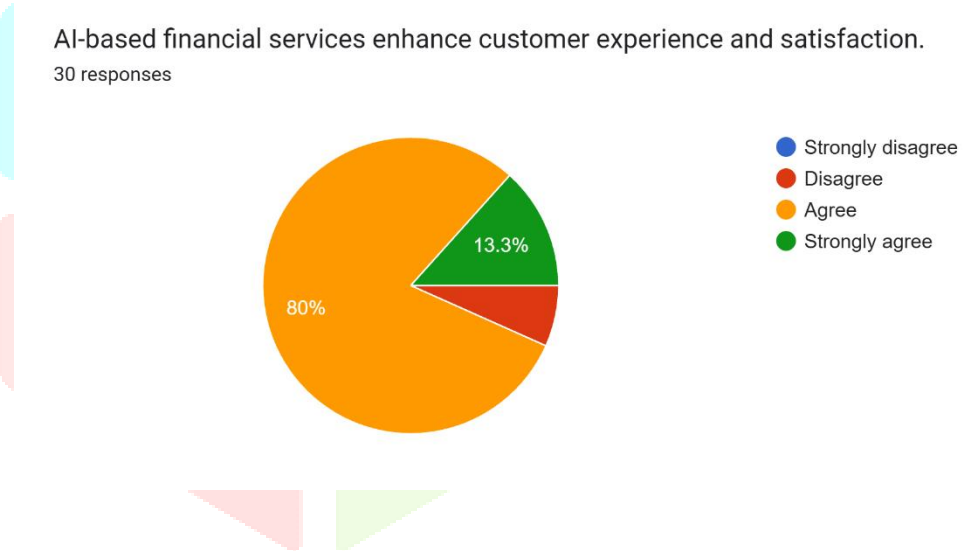


Interpretation:

An equally high proportion of respondents at 96.7%, believe that the use of AI helps reduce human errors, highlighting strong confidence in the accuracy and reliability of automated systems. Participants appear to trust machine- based calculations, uniform documentation processes, and automated verification checks. This perception supports theoretical views that AI minimises issues such as human fatigue, inconsistency, and subjective judgement.

The very low level of disagreement indicates growing acceptance of a shift in responsibility from human operators to automated systems within financial institutions. It also reflects confidence that Ai contributes to improved compliance standards, more accurate audits, and greater reliability in financial transactions.

9. AI-based financial services enhance customer experience and satisfaction.

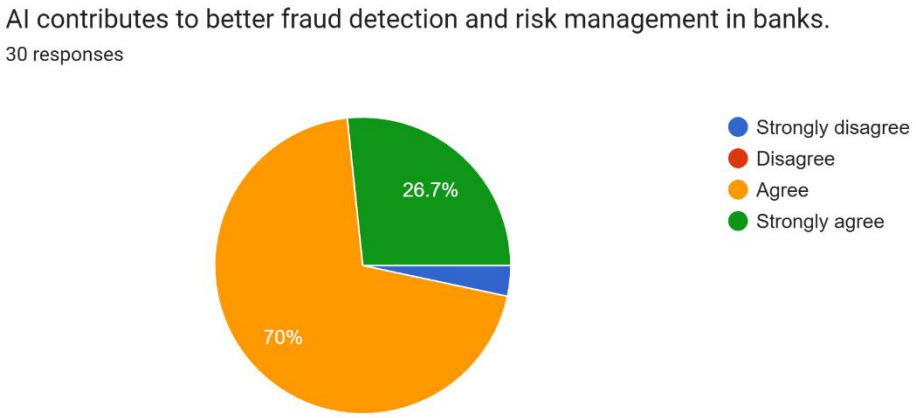


Interpretation:

The findings shows that most respondents have a positive opinion of AI because it improves customer experience in financial services. AI tools such as digital assistants, automated help systems, instant transactions, and personalised account information have made banking faster and more convenient. Customers especially value 24/7 service availability, as it reduces the need to visit bank branches for routine work.

The results also indicate that customers prefer speed, convenience, and independence which AI based systems provide easily. Many users see AI as an important part of how banks interact with customers, not just as a background support tool. However, this positive view maybe influenced by the fact that most respondents are young and comfortable with technology. This means banks must continuously upgrade their systems to meet rising customer expectations and maintain satisfaction.

10. AI contributes to better fraud detection and risk management in banks.

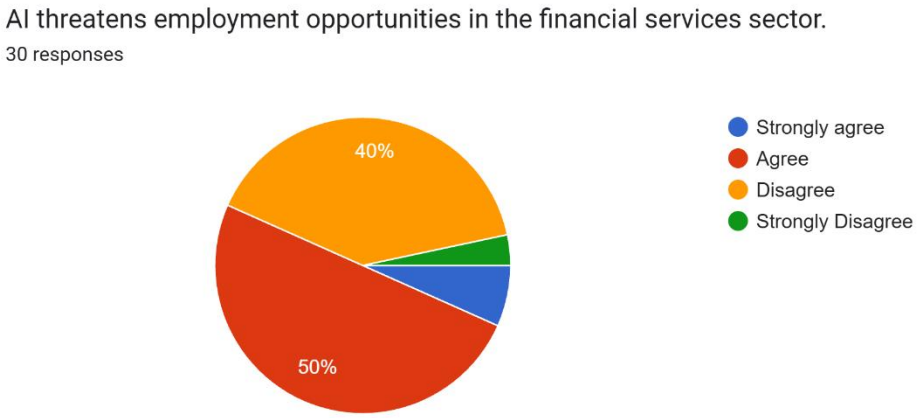


Interpretation:

The responses shows that most respondents strongly trust AI as an important tool for protecting financial systems from security threats, Users see AI as a central part of security systems rather than just a supporting feature. They are aware of common digital risks such as phishing, identity theft, and unauthorised account access, which explains why they value AI's ability to detect unusual activity, identify suspicious behaviour, verify users, and send timely alerts.

The findings also indicate that respondents believe AI is more effective than humans in monitoring security because it works faster, analyses data accurately and can handle large amounts of information at the same time. This belief matches current industry practices where AI and data analytics are widely used to prevent fraud. The high level of trust in AI based security shows a growing reliance on technology for protection, indicating a shift from human control to system- based supervision. However, this trust also creates higher expectations, meaning financial institutions must continue investing in advanced cyber security, risk analysis, and ethical safeguards.

11. AI threatens employment opportunities in the financial services sector.

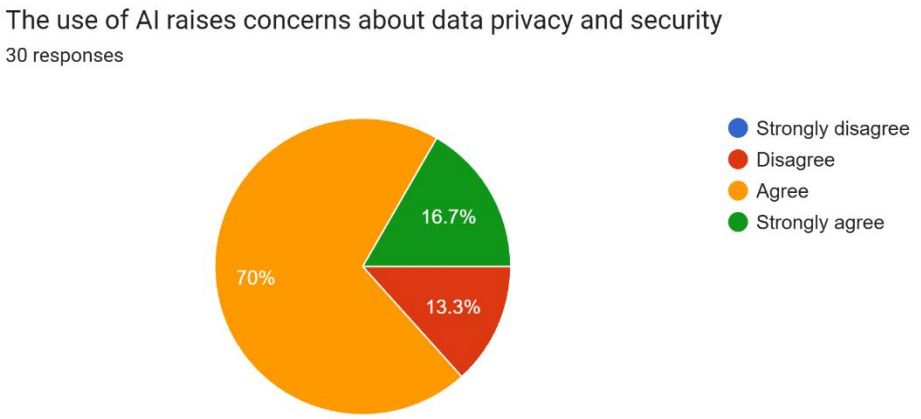


Interpretation:

The responses show that there is uncertainty among respondents about the impact of AI on employment. Those who believe AI is a risk are aware that automation can replace routine clerical work, reduce manual checking roles, and change existing work processes in financial institutions. This reflects the growing use of AI in areas such as back-office operations, loan processing, customer support, and compliance, which raises concerns about job losses.

However, a significant number of respondents disagree with this view and believe that AI will transform jobs rather than eliminate them. They feel that AI can create new technology-based roles, support cooperation between humans and machines, and improve productivity. The divided opinion shows that public views on AI and employment are still developing. Overall, the findings highlight the need for financial institutions to focus on reskilling, adaptability, and redefining job roles to reduce job-related fears and support workforce transition.

12. The use of AI raises concerns about data privacy and security

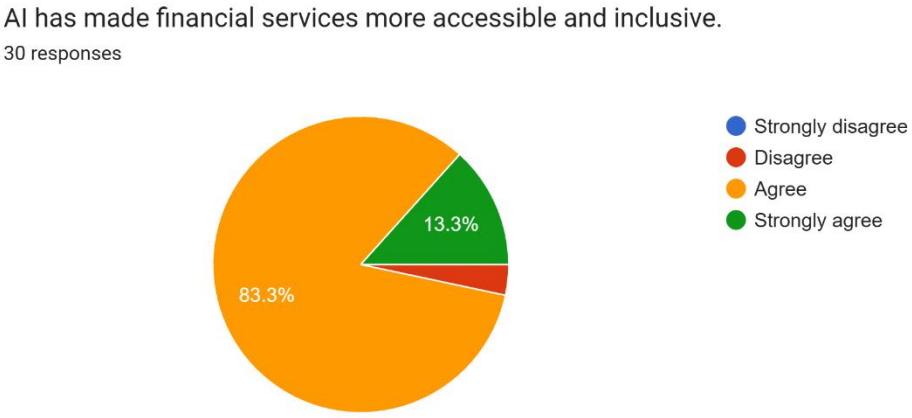


Interpretation:

The results show that a very large number of respondents are concerned about privacy and data security, which means their trust in AI is careful and conditional. Respondents understand that AI systems handle large amounts of personal and financial data, including sensitive information and user behaviour. This makes them worry about risks such as data misuse, cyberattacks, and unethical monitoring. These concerns reflect increasing public awareness about data ownership, consent, and transparency in digital financial systems.

Although users enjoy the convenience of AI based financial services, they remain unsure about how their data is collected, stored, and used. News about data breaches, cybercrime and identity theft further strengthens this concern. Respondents expect strong laws, strict regulation, and clear responsibility from financial institutions. An important contradiction is visible. That is, users rely on AI for better security but at the same time distrust systems that control their data. Therefore, banks must improve data protection, follow ethical practices, and build user trust to ensure safe and responsible AI use.

13. AI has made financial services more accessible and inclusive.



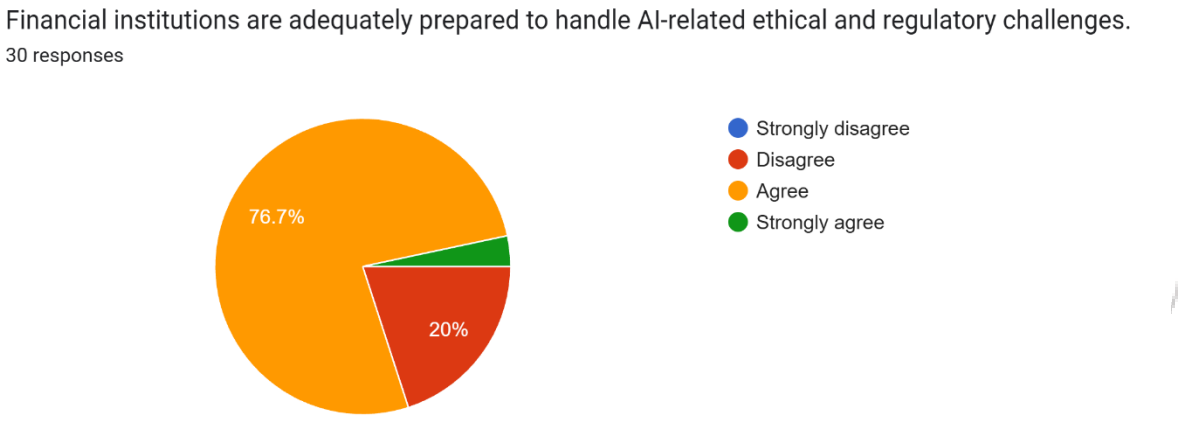
Interpretation:

The responses show that most respondents view AI as an important driver of financial inclusion. AI based tools such as mobile banking, UPI payments, automated onboarding, remote KYC, and chatbots help reduce barriers related to location, income, and complex procedures. These tools make it easier for rural users, first time customers, and busy individuals to access financial services without visiting bank branches.

Respondents also see AI as more than a technical upgrade, viewing it as a way to widen participation in financial systems that were earlier limited to privileged groups. This positive view is likely influenced by their personal experiences with UPI payments and instant digital services.

However, this perception should be interpreted carefully as most respondents are educated and comfortable with technology. It is still unclear whether people with low digital literacy or limited access experience the same benefits. Therefore, further research is needed to assess AI's real impact on marginalised populations.

14. Financial institutions are adequately prepared to handle AI-related ethical and regulatory challenges.

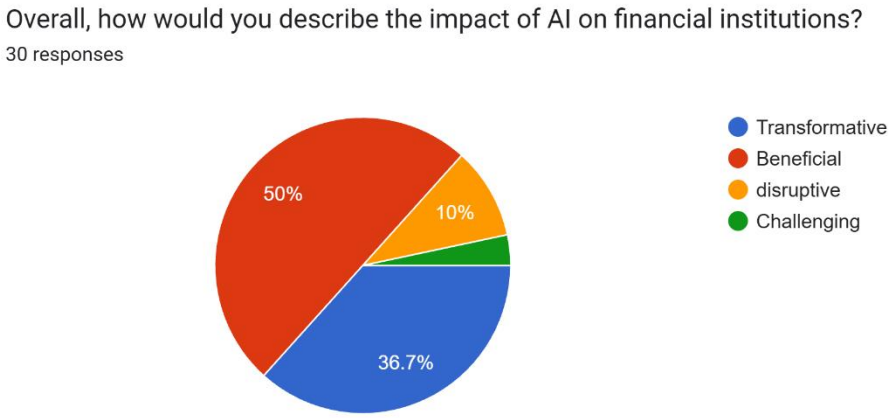


Interpretation:

The responses show a cautious but positive view of how financial institutions are prepared to govern AI. Many respondents appear to base their confidence on visible efforts such as cybersecurity policies, regulatory updates, biometric security features, and compliance systems. However, the presence of disagreement from about 20% of respondents indicates continued concern about whether banks are fully prepared to manage deeper ethical issues like bias, data privacy, AI decision-making, and accountability.

This mixed response suggests a moderate level of trust that is not unconditional. Respondents seem to recognise that institutions are still developing their governance frameworks and that regulatory understanding of AI is evolving. While banks are seen as moving in the right direction, the public clearly expects ongoing improvements, greater transparency, skill development, stronger policies, and independent oversight. Overall, the findings highlight that effective AI governance must progress alongside technological advancement to maintain public trust.

15. Overall, how would you describe the impact of AI on financial institutions?



Interpretation:

The overall responses suggest that respondents mostly see AI as a positive influence in the financial sector. Nearly half of the participants believe AI is useful, mainly because it improves work speed, makes services easier to access, helps control fraud, increases convenience, and improves customer satisfaction. In addition, 36.7% of respondents view AI as transformative, indicating that they believe AI is going beyond small improvements and is changing how financial institutions make decisions, interact with customers, design products, and deliver services.

Only a limited number of respondents describe AI as disruptive or challenging. This view reflects the understanding that fast technological change can disturb existing work systems and create uncertainty for some users. However, the very small level of negative opinion shows that positive attitudes towards AI are much stronger than fear or resistance. This positive outlook may be influenced by the respondents' profile, as many are young, familiar with digital technology, and open to future-oriented changes.

Taken together, these responses confirm that AI is seen as strategically important for the future of financial services. Respondents recognise AI as both a practical tool currently supporting operations and a powerful force shaping long-term industry change. At the same time, the presence of minor concerns indicates that potential issues related to disruption, ethical responsibility, and workforce impact must be managed carefully to maintain AI's positive role.

CHAPTER 04

CONCLUSION

The study clearly shows that Artificial Intelligence has moved beyond being a supporting digital tool and has become a major force driving change within financial institutions. The findings reveal that AI is no longer viewed only as a convenience feature, but as a core element influencing service delivery, decision-making processes, and overall operational efficiency. Respondents, especially younger and academically exposed individuals, displayed strong familiarity with AI-based financial services, indicating a clear shift in expectations toward faster, automated, and smooth financial experiences. For this group, instant responses and digital efficiency are now considered basic service requirements rather than added advantages.

One of the key outcomes of the study is the noticeable improvement in operational performance linked to AI adoption. Respondents consistently associated AI with quicker service delivery, fewer manual errors, improved accuracy, and more efficient workflows. These perceptions confirm that AI has strengthened both front-end customer services and back-end functions such as fraud detection, compliance monitoring, and risk assessment. The close alignment between user experience and operational benefits suggests that AI has been successfully integrated into everyday financial processes, enhancing the effectiveness of institutional operations.

At the same time, the study highlights important concerns that accompany technological advancement. While respondents appreciate efficiency, personalisation, and wider access, they also expressed worries about job displacement and the decline of traditional roles in financial institutions. These concerns reflect uncertainty about the future of employment and the changing nature of careers in an increasingly automated financial environment. In addition, apprehensions related to data security, surveillance, and misuse of personal information indicate that user trust depends heavily on transparency, accountability, and strong protective measures. This shows that technological progress must be carefully governed rather than implemented without oversight.

The findings also indicate that AI has contributed to greater accessibility and inclusion in banking services by reducing barriers related to time, distance, paperwork, and physical presence. Respondents agreed that digital platforms and automated systems have made financial services easier to access, particularly for individuals who previously found traditional banking systems difficult to navigate. This positions AI not only as a tool for efficiency but also as a facilitator of broader financial participation and modernisation.

However, perceptions regarding institutional readiness remain cautious. Although respondents acknowledged that financial institutions have introduced security measures and regulatory practices, there is concern about whether these efforts are sufficient to address emerging ethical challenges and

rapidly evolving technological risks. This suggests the need for continuous improvement in governance structures, monitoring systems, and ethical standards, ensuring that regulation develops alongside technological innovation.

In conclusion, the study indicates that AI is largely viewed as beneficial, progressive, and transformative rather than disruptive or harmful. When applied responsibly, the advantages of AI- such as improved efficiency, accessibility, and security- appear to outweigh its challenges. However, the long-term success of AI adoption will depend on how effectively financial institutions manage ethical responsibilities, protect employment transitions, safeguard user data, and maintain public trust. Therefore, AI should not be pursued as an isolated technological initiative, but as a strategic development approach that balances innovation with human welfare, institutional strength, and regulatory maturity, ensuring that financial transformation supports wider societal goals.

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QUESTIONNAIRE

1. **Age group:**
   ☐ 18–24 ☐ 25–34 ☐ 35–44 ☐ 45 and above

2. **Occupation:**
   ☐ Student ☐ Banking/Finance Employee ☐ Business Professional ☐ Other

3. **Educational Qualification:**
   ☐ Undergraduate ☐ Postgraduate ☐ Professional Course ☐ Other

4. **How familiar are you with the concept of Artificial Intelligence (AI)?**
   ☐ Very familiar ☐ Somewhat familiar ☐ Heard of it ☐ Not familiar

5. **Have you used any AI-based financial services (e.g., chatbots, robo-advisors, automated loan approvals)?**
   ☐ Frequently ☐ Occasionally ☐ Rarely ☐ Never

6. **Which area do you think AI is most commonly used in financial institutions?**
   ☐ Fraud detection ☐ Customer service ☐ Credit risk assessment ☐ Investment advisory

7. **AI has improved the speed and efficiency of financial services.**
   ☐ Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree

8. **AI helps financial institutions reduce human errors in daily operations.**
   ☐ Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree

9. **AI-based financial services enhance customer experience and satisfaction.**
   ☐ Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree

10. **AI contributes to better fraud detection and risk management in banks.**
    ☐ Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree

11. **AI threatens employment opportunities in the financial services sector.**
☐ Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree

12. **The use of AI raises concerns about data privacy and security.**
☐ Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree

13. **AI has made financial services more accessible and inclusive.**
☐ Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree

14. **Financial institutions are adequately prepared to handle AI-related ethical and regulatory challenges.**
☐ Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree

15. **Overall, how would you describe the impact of AI on financial institutions?**
☐ Highly positive ☐ Positive ☐ Negative ☐ Highly negative