Looking Towards the Future : Artificial Intelligence in Myanmar's Banking Sector

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This paper examines the transformative potential of Artificial Intelligence integration to advance workplace efficiency and customer experience within Myanmar's financial landscape. Leveraging both qualitative and quantitative methodologies, this study adopted a mixed-methods approach, incorporating 206 survey responses from routine banking consumers, C-suite level expert interviews from six major financial institutions, and a comprehensive literature review to holistically assess the developmental pace of AI integration within Myanmar's financial ecosystem. As a pioneering study on AI integration within Myanmar's geopolitical context, this study delivers a novel perspective on Myanmar's progress in modernizing its banking infrastructure in the post-COVID era. Regression analysis and interview insights revealed the lack of positive sentiments regarding customer service, with 73% of respondents dissatisfied with efficiency and accessibility, identifying systemic inefficiencies within customer service workflows in Burmese banks. To address these critical hindrances, NLP chatbots and AI-powered credit risk analysis systems were identified as the most tangible and promising solutions for the Myanmar market. Despite substantial institutional constraints such as extreme currency depreciation, the flight of human capital, and the lack of technological infrastructure, many Burmese banks have already begun experimenting with AI mechanisms, particularly in rudimentary customer service applications. Given these insights, this study recommends that Myanmar's banking sector adopt a multi-pronged, modular AI integration strategy—initiating with customer service and credit risk assessment applications—while making gradual investments in digital infrastructure, regulatory modernization, and human capital development.

Introduction

The nature of banking is undergoing rapid reform with the introduction of Artificial Intelligence algorithms which provide 24/7 chatbot services and streamline KYC and Credit Rating processes. Estimates highlight that Artificial Intelligence will add 1 trillion dollars of value to the Banking Sector globally and Banks are projected to spend up to 300 billion dollars in AI investments by 2030. However, for a developing country such as Myanmar, lacking qualified human capital and spending power to invest in this new technology, the unique challenges and dynamics AI integration will bring to its financial sector remain unclear,

This study aims to gauge the pace of AI Integration occurring within Myanmar banks and pinpoint the methodologies major Burmese banks have employed in relation to Artificial Intelligence integration in their front-end, middle-end, and back-end systems. Notably, it aims to identify systemic inefficiencies within current Burmese Banking workflows and S.O.Ps and assess emerging prospects of automation for greater efficiency. In this study, the research question that will be further explored is: "How can Burmese Banks leverage Artificial Intelligence to improve workflow efficiency and customer experience?" This paper aims to act as a pilot study to gauge Myanmar's readiness for Artificial Intelligence in its banking sectors and analyze the current customer needs and perspective on Banks' workplace efficiency. This study employs a mixed methodology consisting of a thorough literature review, interviews, and an additional survey.

Critically, this study provides updated insights on Myanmar's digitalization progress and its comparison to neighboring countries with similar economies, a topic little explored in academia in the post-Covid era. The findings in this study also pinpoint the processes that hinge efficiency among banking firms in Myanmar and provide data on AI tech that is being implemented among said institutions to address these challenges. The findings in this study provide crucial customer perspectives regarding AI implementation and workplace efficiency of Burmese Banks and present critical challenges banks face in successful AI integration mechanisms for Myanmar's legislative bodies.

The findings in this study provide crucial data for Banks who are actively seeking customer feedback regarding efficiency of their workflow processes, identifying key areas for operational improvement in addition to consumer perspective on their willingness to deal with AI when engaging in banking services. For researchers and academics, the research study provides updated insights regarding Myanmar's digital banking progress, a little explored area in academia in the post COVID era. For policy

makers and governments, findings present potential regulatory reforms that can catalyze AI adoption while ensuring financial stability that would accelerate modernization of Myanmar's financial system. Most importantly, for Burmese consumers, AI-driven banking solutions provide a promising avenue towards securer, personalized, efficient and accessible financial services.

This study proceeds in the following order: Section 2 provides a thorough outline of the methodology employed in this study, detailing the survey and interview design, participant selection criteria, methods of data collection, and more. Section 3 will provide a holistic literature review exploring different AI mechanisms used in banking, front-end, back-end, and middle-end processes that can be automated, as well as the approaches different nations have adopted to integrate artificial intelligence within their banking systems. Subsequently, Section 4 provides key accounts from the interviews and surveys conducted, offering detailed industry insights on the current status of AI implementation within Myanmar and key consumer preferences and opinions regarding automation and current banking processes. Section 5 will offer extracted discussions and implications from the study and highlight key findings and Section 6 will address notable limitations. At the culmination of this study, section 7 will offer a conclusion and provide informed recommendations for AI strategies for policymakers and banks that are viable for implementation concerning Myanmar's conditions.

Literature Review

Studies on Artificial Intelligence for improved customer experience stressed the importance of AI chatbots, which can provide 24/7 assistance and personalized attention to customers[1]. Additionally, through leveraging chatbots on mobile banking platforms, banks gain new sales opportunities that otherwise would not exist[2]. They also lessen the workload for call centers and increase communication between banks and customers[3].

To improve workplace efficiency, AI models can automate the credit-scoring process, reducing the workload of loan officers[4]. AI Algorithms can help prevent banking fraud by analyzing customer behavior, purchasing habits, and location to establish security mechanisms[5]. Furthermore, Banks can employ AI to help remain in compliance with imposed regulations and receive alerts for internal loopholes and frauds[6]

Banks need human resources training so employees can understand the results generated by their AI tools (Nguyen, 2021)[7]. Good quality data matters in all cases where AI is being deployed. Bhattacharya and Sinha (2022)[1] demonstrated that AI-enabled chatbots and fraud detection systems in Indian banks significantly improved customer satisfaction and loyalty by reducing response times and enhancing security. Edunjobi and Odejide (2024)[4] highlighted using AI in credit scoring to create a fairer and more inclusive lending environment, improving trust among borrowers by eliminating subjective judgments in loan approvals. Tulcanaza-Prieto et al. (2023)[5] reported that AI-driven personalized banking experiences led to greater brand loyalty, as customers felt that their needs were better understood and addressed.

Leveraging the SERVQUAL framework, this research evaluated current AI tools available in the banking sector on five characteristics, Reliability, Responsiveness, Assurance, Empathy, and Tangibles, to identify the impact integration each tool has on service quality and customer experience. The SERVQUAL framework is a model published by researchers Parasuraman, Zeithaml, and Berry that aids businesses in measuring the quality of their services along five dimensions that represent service quality. Built on the expectancy disconfirmation paradigm, SERVQUAL defines service quality as the extent to which consumers' pre-consumption expectations of quality are confirmed or disconfirmed by their actual perceptions of the service experience. Utilizing findings organized from this framework, the researcher derived its recommendations on commendable solutions for Myanmar's banking sector.

All the studies reviewed offered various possibilities for AI integration in banking. However, Edunjobi and Odejide (2024)[4] emphasize the automation of the credit scoring process AI models can provide, while Tulcanaza-Prieto (2023)[5] highlighted how AI can provide qualified feedback on customer sentiments by analyzing customer surveys, emails, and social media interaction. Furthermore, Aziz (2023)[8] focused on the strong potential AI models have in helping prevent banking fraud. The literature review utilized a thematic approach, organizing the central findings around key findings such as Corporate Governance, Financial Regulation, Credit Risk Assessment, and Customer Experience (refer to Table 1).

Methodology

The purpose of the study is to understand the potential for AI Integration in Myanmar's Private Banks to improve customer experience and workplace efficiency and gain a comprehensive understanding of Myanmar's AI readiness. This research study employs a mixed methodology approach that consists of a thorough literature review and empirical data. This choice is justified by the need to gain qualitative and quantitative insights to gain a comprehensive understanding of the perceived need for AI integration and identify potential gaps to do so from both customer's and banks' perspectives. The targeted population for this study includes all major private banks in Myanmar (KBZ Bank, AYA Bank, CB Bank, Yoma, A Bank, etc.) and their regular customers. To ensure the interview sample was representative of Myanmar's banking sector, the researcher recruited interviewees in managerial positions in six leading banks and associated fintech companies working in their respective institutions' H.R. and Fintech departments that would provide relevant insights to the research question. Additionally, MDs, CEOs,

Table 1 Selected Literature Review

Study	Theme	Methods	Country / Market	Factors/ Dimensions/ Variables	Findings
1. Edunjobi and Odejide (2024)[4]	Theoretical Frameworks in AI for credit risk assessment for improved efficiency and accuracy in Banking	Qualitative	Canada (Developed Country)	1. Credit Risk Assessment 2. Machine learning 3. Ethical Concerns	1. AI models can automate the credit scoring process assigning a numerical value to a borrower's creditworthiness expediting the loan application process and reducing workload for loan officers. 2. With AI powered insights, institutions can offer personalized loan products with interest rates that better reflect the specific risk profile of the borrower fostering a fairer and more inclusive lending environment. 3. Complex machine learning models can make it difficult to understand the rationale behind a particular person which can limit user trust in the models and raise concerns about fairness.
2 Bhattacharya and Sinha (2022)[1]	AI integration for Improved Customer Service	Qualitative	India (Developing Country)	1. Chatbots 2. Quality Data 3. IT Infrastructure 4. Skilled human resources	1. If a person uses a Chatbot for assistance in customer services, they are likely to use Chatbot for recommendations regarding offers and discounts. 2. Poor quality data can cause misleading in cases of fraud detection 3. OCR (Optical Character Recognition) integrated with AI processes onboarding material in a faster and more efficient manner reducing the time required to open a bank account for customers.
3 Tulcanaza-Prieto (2023)[5]	AI enabled Customer Experience	Qualitative	Ecuador (Developing Country)	1. Integration into mobile banking apps. 2. Personalized content and messages	1. AI can provide qualified feedback on customer sentiments by analyzing customer surveys, emails, and social media interactions 2. AI can be harnessed to prevent credit card fraud and money laundering as algorithms can analyze customer behavior, location of user, purchasing habits, etc to establish mechanisms and schemes of security in all purchases. 3. AI enabled customer experiences promote Brand loyalty 4. AI-enabled customer experiences are affected positively by customer perception factors at least at the 5% level of significance.
4. Nguyen (2021)[7]	The association between AI and Corporate Governance in the banking sector in ASEAN	Qualitative	ASEAN (Developing region)	1. Corporate Governance	1. Banks often employ Natural Language Processing based products to aid them in customer service and document search. 2. By better customer understanding through AI integration, financial institutions can mitigate risk, reduce cost, and increase revenues. 3. Banks need to train and develop their human resources so they can understand their tools and results generated by AI applications.
5. Kyaw (2019)[2]	Opportunities and Challenges of FINTECH in Myanmar's Banking Sector	Qualitative	Myanmar (Developing Country)	1. Cyber-Security 2. Core Banking Infrastructure	1. With AI, Myanmar Banks can move beyond just FAQs to better service digital customers with chatbots and interactive content. 2. As the customer masses move towards the digital space, Myanmar Banks will have a hard time replicating the sales opportunity they have on the console. AI Chatbots can increase their sales opportunities on their banking platforms. 3. For the latest and most technological advances to be integrated, Banks may need to rely on third party providers to their banking system which can lead to increasing security threats.
6. Cedersund (2023)[6]	AI Integration in Modern Banking Systems	Qualitative	Developed countries	1. Financial Regulation 2. Competition with non bank fintechs	1. AI can help banks conform to imposed regulations by overseeing internal systems and alerting of internal loopholes and frauds. 2. Banks are facing increased competition from non-traditional channels from FinTech and Online lenders who face less stringent regulations. 3. Today's customers have been accustomed to the service standards set by consumer internet companies and now anticipate a similar level of consistency, convenience,and personalization from their financial-services institutions.
7. Kamal (2021)[9]	AI Architecture in Smart Banking Systems	Qualitative	Developed Countries	1. Machine Learning 2. Applicability	1. With AI as opposed to advanced analytics, feedback loops are automated so conclusions are being tested and assessed automatically as opposed to being reviewed by humans who then make decisions 2. AI deployment can be complicated in use cases where decisions are wide ranging, take time to implement and time elapses before results are apparent. 3. AI can provide more personalized products for Banking Customers
8 Umamaheswari (2023)[10]	The Role of Artificial Intelligence in Core Banking	Qualitative	India (Developing Country)	1. Smart Wallets 2. Robo-advisors	1. AI integration into Smart Wallets can provide customers with new services like bus bookings, event tickets, utility payments etc. 2. Robo-advisers can give personalized attention to customers with stocks or bonds to buy or sell irrespective of their appetite. 3. Certain AI programs on laptops can carry out repetitive responsibilities for Banks that range from automatic programs to statistics requests from external auditors.
9. Boustani (2021)[3]	The Impact of Artificial Intelligence on Banking Clients and Employees in Lebanon	Qualitative	Lebanon (Developing Country)	1.Consumer Behavior 2. Fluctuations in Banking Jobs	1. AI helps distinguish lenders between high risk and low risk applicants for those who do not have a significant credit history 2. Bank customers do not accept automated and human customer service equally. 3. Chatbots improve communication between Banks and Clients while reducing call center workload
10. Aziz (2023)[8]	Integrating Deep Learning and AI into the Banking Compliance Framework.	Qualitative	Developed Countries	1. Fraud Detection 2. Regulatory Compliance	1. Deep learning utilizes neural networks to model and process complex data sets that might be imperceptible to other algorithms or humans. 2. Waiting in long queues to report suspicious financial activity can be discouraging for customers and AI chatbots provide an expedited solution to this. 3. Natural Language Processing can automate the KYC process by analyzing textual information in customer documents, digital communication, and social media activity.

CTOs, and COOs in executive positions driving the strategic direction of these organizations were also included.

Primary data collection was conducted through two main methods: surveys and interviews. Surveys will be designed and released online to regular banking customers to collect data on user preferences and customer perspectives. Furthermore, the holistic literature review will provide foundational insights on different existing AI technologies, different strategies financial institutions are taking worldwide to automate front-end, back-end, and middle-end processes, and the different departments in which automation is occurring. Although several of the reviewed studies do not directly address the Myanmar market, they do provide essential applicable insight gathered from other developing markets around the world that share similar market conditions to Myanmar. The quantitative data gathered provide customer perception on banking processes and the willingness of the Myanmar consumers to use AI.

The interviews with executives from central Burmese private banks are essential to gaining key insight into specific pain points and areas in their current workflow where AI could offer the most significant benefits and gauge their current level of AI preparedness. The instruments used in this study will consist of surveys and interviews. The surveys will contain only close-ended, multiple-choice questions that will allow us to identify apparent trends and user preferences. The survey questionnaires were also constructed using the TAM (Technology Acceptance Model) and the Diffusion of Innovations framework as guiding frameworks. The Technology Acceptance Model is an information systems theory that posits that perceived usefulness and the perceived ease of use affect how users come to adopt a technology, and the Diffusion of Innovations Theory examines how new technologies spread within a social system considering factors such as how information is disseminated about the technology and the characteristics of the innovation itself and the social system the technology is distributed in. Through guided questions based on the amalgamation of these two frameworks, the survey questions assessed the perceived usefulness and ease of use of AI in banking, customer attitudes toward AI adoption, factors influencing AI adoption as well as perceived attitudes toward different current banking services to identify gaps on where AI deployment can improve existing services. An initial pretesting phase was implemented to test the clarity of the questions and that they were uniformly interpreted with a pilot survey distributed to a small sample of 10 participants that consisted of long-term bank customers and individuals with varying levels of digital banking experiences that represented the target survey population. They were then asked to complete the survey and provide feedback on the questions' clarity, relevance, and wording. Based on this input, adjustments were made to ensure that the final questionnaire had response options that covered the full range of answers, eliminated ambiguous or overly technical terms for simplicity, and aligned with the study objectives with irrelevant or redundant questions removed to maintain focus. Response options were provided using the Likert Scale with corresponding responses from 1-5 to provide an established scale for measuring customer experience in various areas.

The interview guides will be designed to explore the banks' long-term vision for Artificial Intelligence integration, their current level of AI preparedness, current opportunities, and specific pain points in their workflow that AI can address. The interviews will be conducted through Zoobe and recorded for later review purposes with consent. Detailed notes will be taken during the interview to record important details. Together, these sources allow for a thorough analysis to formulate well-informed recommendations for AI implementation strategies that are suitable for the Myanmar Market.

The chosen approach is a mixed methodology that combines a thorough literature review, surveys, interviews, and data analysis to provide a rigorous and holistic approach to exploring the potential of AI integration in Myanmar's Banking Industry for improved customer service and workplace efficiency. Additionally, the selection of participants, data collection methods, and data analysis methods are justified based on our research objectives, and ethical considerations are also addressed to protect the participants' rights and consent in every step of the process. Furthermore, method triangulation is employed, and as the study utilizes both quantitative and qualitative data collection through surveys and interviews, the validity and reliability of our results are ensured. Collectively, this methodology provides a rigorous and holistic approach to identify valuable insights into the potential of AI integration in Myanmar's banking sector for improved services and efficiency.

Interviews

The interviews' main stakeholders were executives working in Myanmar's large commercial banks who had in-depth experience in the HR and Customer Experience or Product Development and Digital Banking departments of their respective banks, as well as Board Members who are steering the future direction of said financial institutions.

Myanmar's banking sector comprises approximately 27 banks, including state-owned and private institutions. Of these, 10 are recognized as major private banks, accounting for a significant share of market operations and customer engagement. For this study, the "major" designation was based on the following criteria: Market share in terms of customer base and asset size, active involvement in digital banking services and financial technology initiatives, and influence on industry trends, as evidenced by media coverage and public financial reports. The study included interviews with executives from six of these major banks and one associated fintech institution (e.g., KBZ Bank, Yoma Bank, AYA Bank), representing 60% of the major private banks in Myanmar. This coverage ensures that the findings

reflect a substantial portion of the market while acknowledging limitations in capturing perspectives from the remaining institutions.

The interview sample consisted of executives from six major financial institutions focusing on managerial and leadership roles in departments such as HR, FinTech, and digital banking. While this approach provided valuable insights into strategic decision-making, it may have introduced selection bias, as the perspectives of mid-level staff and operational employees—who directly interact with customers and implement AI solutions—were not included. Additionally, the reliance on executives from six institutions may not fully represent the views of all major banks in Myanmar, as the total number of private banks in the country is substantially more significant. This limitation potentially skews the findings towards the experiences and challenges of the selected institutions.

The roles selected for the interviews included managing directors, chief executive officers, chief distribution officers, chief technological officers, chief business officers, and senior product managers. The meetings were conducted via the online meeting platform Google Meets, where interviewees were asked open-ended questions such as their opinions on how particular workflow processes in their bank can be streamlined, as well as the challenges they foresee in integrating AI into their banks. Additionally, to uphold ethical standards, the interviewees were informed before the meetings that their participation was voluntary and that their answers would be confidential.

For the interviews, participants were selected using purposive sampling to ensure the inclusion of individuals with in-depth knowledge and experience in Myanmar's banking sector. This included executives in managerial roles, such as Chief Technological Officers, Managing Directors, and Senior Product Managers, from six central Burmese banks and fintechs. These participants were chosen for their ability to provide valuable insights into AI integration challenges and opportunities, ensuring the data's relevance and depth.

The interviewees initiated and arranged meeting times to accommodate their busy schedules and the existing time zone differences between the researcher and the interviewees. The interviews were conducted one-on-one with ten senior banking executives from Kanbawza Bank, Yoma Bank, Ayeyarwaddy Bank, Ayearwaddy Farmer's Development Bank, Myanmar Citizen's Bank, and Wave Money between July 30th and August 24th, 2024, which provided ample time to collect comprehensive and reliable data.

When discussing challenges hindering efficiency and customer service among professionals working in managerial and leadership teams across six different major Burmese banks and fintech firms (AYA, Kanbawza, Ayeyarwaddy Farmers Development, Yoma, Myanmar Citizens Bank, and Wave Money), almost all interviewees cited the legacy system as a significant issue. Additionally, P1 stated that customers often face a delay when filing a complaint or a request due to the sheer number of departments involved. It highlighted that most banks outsource their customer response services to outside call centers, which almost always lack the immediate ability to fix any issue on the spot. Unintuitive UI/UX banking user interfaces were also cited as another challenge in providing excellent customer service. Lastly, the manual nature of their workflow and regulatory restrictions, such as e-signatures not being accepted by the Central Bank, were mentioned as delays in their workflow.

All interviewees stated that their firms received customer inquiries from various channels, such as social media, call centers, and agents. However, P3 noted that in light of the recent banking crisis, in-person visits to file complaints have been more common, and P1 added that those who come from physical channels like bank visits usually inquire about traditional banking services. In contrast, those seeking help with mobile banking and digital wallet services usually use online channels like chats or phone calls. Handling these inquiries, P3 stated the need for better omnichannel integration and to fix the front-end system to organize these inputs better, and P2 suggested the need for a more robust cx measure to determine the effectiveness of their SOPs.

Executives from major Burmese banks noted that AI-powered credit risk assessment tools offer transparent and unbiased evaluations of loan eligibility. This was echoed in the interviews, where respondents emphasized the benefits of AI in fostering fairness and reducing human bias in decision-making. For instance, P3 highlighted that AI-based credit scoring systems are already piloted to streamline the loan process, ensuring consistency and reducing perceived favoritism.

Discussing repetitive tasks that must be handled in their daily workflow, a common burden presented among the interviewees was the KYC and onboarding processes, as well as the procedural regulatory reporting documents that must be submitted to the Central Bank of Myanmar bi-weekly. Additionally, P1 stated that these redundant tasks are exacerbated by the fact that they are still required to be done through paper. Furthermore, P3 identified the account reconciliation process as another time-consuming task due to the sheer amount of channels customer inputs come from and the poor organization of this data, making addressing these complaints take longer.

Regarding AI-powered solutions, all of the interviewees' firms reported that they were in some exploration and pilot testing stages, with a few firms already in the implementation stage. AYA Bank is reported to have already been utilizing artificial intelligence to automate its KYC process and funnel customer queries and customer touchpoint feedback. Yoma is pilot-running a credit scoring system that employs machine learning to analyze customer behavior, while its sister company, Wave Money, is exploring AI integration in transaction monitoring to detect financial fraud. P5 stated that KBZ is exploring AI-powered back office and business intelligence tools, while

Table 2 Selected Interview Verbatims

It is a pleasure and an honor to connect with you. As an econ enthusiast deeply interested in FinTech and banking, I have been particularly inspired by your leadership and accomplishments. Your work in [specific achievement or role], as well as your roles in [other relevant positions], have been nothing short of remarkable. Your efforts in [specific contribution or impact] are truly awe-inspiring and a rare feat in Myanmar's banking sector.
My name is Nobel Aung, and I am currently working on a research publication focused on the potential of AI integration in Myanmar's banking sector. The study aims to explore how AI can enhance workflow efficiency and improve customer experience. Given your extensive experience and expertise in the financial sector, I believe your insights would be incredibly valuable.
Would you be open to a brief 20-minute online meeting to share your insights on some questions I have, either this week or next? I assure you that our conversation will be strictly confidential and used solely for academic purposes. I understand that your time is valuable, so if you're unable to meet, I completely understand. However, I would be truly grateful for the opportunity and would be happy to schedule the interview at your earliest convenience.
I am eager to learn from your experience and insights!

Questions	**Verbatims** ***(P1, Managerial / Leadership Role, Bank, Age)***	**Dimensions**
1. What are the currentbiggest challenges your bank currently faces in terms of workflow efficiency and customer experience?	*"Customers often face delays when addressing issues such as account complaints. The process typicallyspans 4-5 working days due to the involvement of multiple internal departments. Regulatory requirements often mandate physical signatures, as digital signatures are not universally accepted. For instance, in Myanmar, bank accounts cannot be opened using e-signatures." (P1, Male, Leadership Role, A Bank) "A lot of Myanmar banks struggle due to the legacy system that has been implemented since the 90s. They have not actually innovated the system because changing will cause them to lose money, hire new employees or lose some employees." (P2, Male, Managerial, AYA Bank)*	*Regulatory Mandates Legacy Systems Numerous Departments*
2. What is currently your standard operating procedure for handling customer inquiries? What is your opinion on this process? Can it be improved?	*"Our bank handles customer inquiries through multiple channels: Customer Care Center, Relationship Managers at the Business Development Center, Facebook managers, and branch visits. Customers often bypass the Customer Care Center and contact the manager who sold them the product directly. They are coming in from too many platforms and all the data is disorganized and takes a lot of time for the back end office to get to. Because of this, customer care is not functioning as effectively as it should." (P3, Male, Managerial, Yoma Bank)* *"For each of our channels, we employ a different standard operation procedure but they are all typically organized into three main steps. First : we make sure of the clarity of the complaint to ensure all information that is given by the customer is received clearly and properly. Next, we address the complaint in a timely order and make sure that it is addressed not too long ago from the time of the initial message. Finally, at the end the customer receives sufficient information on how it can be addressed." (P5, Male, Leadership Role, KBZ Bank)* *"Yes I think the current S.O.Ps we've implemented are effective, but the main key improvements could be on having a more robust cx measure. Currently we don't have a very quantitative approach when measuring customer satisfaction." (P2, Male, Managerial, AYA Bank)* *"We employ a ticketing system with different softwares for different inquiries. However, we should work on omni channel integration and fix the front end inquiry system so data is more properly organized so we can sort out inquiries faster. One particular innovation that I think can deeply help with this would be AI powered chatbots that are localized in Burmese with a built-in workflow." (P3, Male, Managerial, Yoma Bank)*	*Extreme quantity of Customer inquiry channels. Customer Care Center Relationship Managers Social Media Managers Ticketing System*
3. How do most customer inquiries come into your bank these days? Is it through physical inquiries? Calls? Messenger? etc	*"For traditional banking services, customers typically visit physical branches. However, for mobile banking services, inquiries usually come from online channels, such as phone calls or chats."(P1, Male, Age, Leadership Role at A Bank)* *"These days, the majority of the inquiries or complaint come in person in highlight of recent crises, but before, there was a mix" (P3, Male, Managerial, Yoma Bank)* *"There is a mix of different channels whether it is through phone, social media, or agents. As for challenges, you must remember that the amount of customers that we serve are in the millions, not a few thousands. So it is hard for us to service all of them at the time. Even if only 5% or 1% reaches out to us at once, we become overloaded." (P6, Male, Leadership Role, Myanmar Citizens Bank)*	*Branch Visits Online Channels*
4. Currently, what are some of the most repetitive/ time consuming tasks that you handle within your bank and how do you handle them?	"Currently, some of our most repetitive tasks include KYC and the onboarding process, as well as evaluating loan applications. Additionally, we still need to send weekly and biweekly reports to the Central Bank of Myanmar (CBM) which is still done manually through paper." (P1, Male, Leadership Role, A Bank) "Account reconciliation, regulatory reporting, and handling customer inquiries. When incorrect payments occur, initially, product managers need to validate these discrepancies. Following that, the operation teams are responsible for reallocating the funds to their correct accounts. This process currently takes longer than it should as the customer input comes in from too many channels, making it cumbersome to find and address the complaint." (P3, Male, 27, Managerial, Yoma Bank) "Paperwork, I sign documents every day and every time I have to use a paper stamp and a pen. These are remnants of the legacy systems that we still have." (P2, Managerial, AYA Bank)	KYC Process, Regulatory Reporting to Central Bank, Account Reconciliation. Reviewing Loan Applications Paperwork
5. Are there any specific AI technologies currently being implemented at your bank right now?	"There are certain mechanisms we are considering, such as chatbots, employee onboarding, customer onboarding, and customer segmentation. However, these are still in the discussion stage."(P1, Male, Leadership Role, A Bank) "In terms of AI, we are piloting things around transaction monitoring. When we track financial transactions with a graph, it actually turns out to form an extremely complex web. When you want to track a transaction, it goes down all the way to that level. Being able to predict customer behavior is important. Would the customer likely do this or not? Being able to tell this is important to detect financial fraud" (P7, Male, Leadership Role, Wave Money) "Yes. We are pilot-running a credit-scoring system that uses machine learning. We will look at your history with the algorithms examining things like your daily closing balance and looking at the data, we will be able to learn certain things about our customers such as: do they use Yoma Bank as their main bank ? Are there loans that the customers have taken on at Yoma bank or at other banks? Through these predictive algorithms, we assess the credit score, and we score them into different brackets with different limits and different loans." (P3, Male, Managerial, Yoma Bank) "We have various uses for AI in our operations. We use it for collecting customer queries, to sort all the customer touchpoint feedback so we are able to easily collect and funnel them to different customer processes. We also use it for kyc processes for the onboarding process of customers." "P2, Male, Managerial, AYA Bank)	Chatbots, Credit-Scoring Systems, Customer Segmentation Transaction Monitoring

6. Are there any specific AI technologies (e.g., chatbots, machine learning) that you believe would be particularly beneficial for your bank?	"Currently, I think AI-related tech that enhance customer experience specifically, such as NLP-enabled AI chatbots, would be the most efficient, realistic, and beneficial for our bank." (P3, Male, Managerial, Yoma Bank) "Personalized marketing-related AI technologies would allow us to create tailored marketing campaigns by analyzing historical data, such as interbank transfers, salary deposits, and transfer patterns, and would be particularly advantageous for us. (P3, Male, 27, Managerial, Yoma Bank) "Robo-advisory services like AI-driven wealth management and portfolio management, could be very beneficial and can provide customers with sophisticated, automated financial advice." (P3, Male, Managerial, Yoma Bank) "AI algorithms that will help with regulatory compliance and rules would be greatly beneficial.. Right now, the process of overseeing compliance is very manual. Of course, we are always making sure to follow compliance but whenever there is a human element, we are always prone to human error. Although we can make small mistakes in other areas, our exposure is extremely big if mistakes happen with compliance. If we can have automated AI algorithms doing this detection for us, our chance of these mistakes become minimized."(P6, Male, Leadership Role, Myanmar Citizens Bank) "A Credit Risk Analysis tool powered by AI would be greatly beneficial as that would streamline our process of giving loans significantly." (P5, Male, Leadership Role, KBZ Bank)	NLP enabled Chatbots, Personalized Marketing, Robo Advisory
7. What are the biggest challenges you foresee in integrating AI into your bank's operations?	"We lack tech resources and human capital, and this is exacerbated by the fact that many skilled professionals have fled the country in recent years." (P1, Male, Leadership Role, A Bank,) "In the AI field, there are very few talents in Myanmar who have actual experience working with AI. They have some knowledge of it and may be enthusiasts, but they don't actually have any technical experience building models. Actually, it's almost non-existent. So, we are forced to rely on international corporations for solutions" (P6, Male, Leadership Role, Myanmar Citizens Bank) "Another significant struggle is the extreme depreciation of the Burmese kyat, which has caused our costs to rise approximately three times higher than before. Many technology solutions from other countries require payment in dollars, making it particularly difficult for us to finance new AI solutions."(P1, Male, Leadership Role, A Bank,) "Myanmar's internet infrastructure is still developing and not yet advanced. As the banking system becomes more systematized and the Central Bank of Myanmar (CBM) moves towards digital payments, the current infrastructure presents a challenge for effective AI integration." (P3, Male, Managerial, 27,Yoma Bank) "The process to gain regulatory approval with the Central Bank of Myanmar is quite slow and complicated. The regulatory environment is very manual, and it often takes months to get approvals for new processes." (P3, Male, Managerial, 27,Yoma Bank) "The cost of implementing something is quite significant. So are Burmese banks ready today to invest heavily on AI when they know the roi may not be there for a few years? The second one would be the complexity of integration when it comes to inter-bank related transactions. Today, in Myanmar, integration in the area of inter-bank related transactions is not as clear and easy as it is in other countries." (P5, Male, Leadership Role, KBZ Bank)	Human Capital, Extreme Depreciation of the Burmese Kyat Lack of Tech Resources Underdeveloped internet infrastructure Manual and Slow Regulatory process Interbank Transfers
8. What concerns do you have regarding the potential impact of AI on your bank's workforce?	"If we use AI, productivity and customer service will likely increase, benefiting the entire industry. However, AI will not replace our workforce. Instead, individuals who effectively utilize AI will likely outperform those who do not. Over the next 10-20 years, the key concern will be ensuring that our workforce adapts to and leverages AI technology to remain competitive." (P1, Male, Leadership Role, A Bank) "I think it will greatly empower our workforce. Globally, there is a concern about losing jobs in that regard, but from my perspective, We see AI as a tool that will further empower us rather than take away our jobs." (P4, Male, Managerial, AYA Bank) "There has been an ongoing "AI Scare" but I don't think there has been companies that have completely laid off their task or have gone all AI yet. However, there has been an intersection between AI and humans and actually it's where people embrace AI to make their daily tasks more efficient. The people that are utilizing AI to their benefit, their skills almost get repurposed. That will be the key impact, we will become more efficient." (P7, Male, Leadership Role, Wave Money)	*Increased Productivity, Personalized Services Employee Empowerment*
9. Looking ahead, how do you see AI transforming the banking sector in Myanmar? (Industry Trends)	"If we use AI, productivity and customer service will likely increase and create more job opportunities by enabling new roles and functions. By analyzing notifications, spending habits, and other data, AI will also allow us to provide tailored services to customers in Myanmar." (P1, Male, Leadership Role, A Bank) "With deep analysis of our customer behavior data with AI, we will be able to roll out personalized marketing campaigns and products that are beneficial for both customers and us banks." (P3, Male, Managerial, Yoma Bank) "I think AI will allow us to greatly improve in Fraud Detection. Currently, we need to detect financial fraud manually, by checking CCTV, ATM histories, transactions, etc. Due to this, we aren't able to protect financial fraud that occurs to our customers proactively, we can only do it reactively. With AI the process of detecting unusual behavior will be exponentially faster and we will be able to block off suspicious accounts instantly." (P3, Male, Managerial, Yoma Bank) "I think our banking system will improve greatly by the next decade or so. In terms of financial technology, Myanmar is not so far behind. There aren't very many countries with e-wallet systems as robust as ours. With AI, I think our branch network will become a lot more robust and our employees will be developing very quickly." (P5, Male, Leadership Role, KBZ Bank)	Personalized Banking products Improved Efficiency Better Fraud Detection

A Bank is reportedly exploring chatbots, employee onboarding, customer onboarding, and customer segmentation mechanisms.

Myanmar Citizens Bank is also exploring customer service chatbots that would provide Burmese real-time responses.

When asked to identify the most significant challenges their firms face in integrating more AI technology into their operations, they all cited the lack of human capital and technological resources as a severe issue. Additionally, the extreme currency depreciation of Kyat has also made it harder for banks to finance new AI solutions as their costs have risen by almost 300% compared to before. Finally, the long and arduous process of gaining regulatory approval was another challenge that was cited, and it was brought to light that it often takes banks months to get approvals for new processes.

However, the outlook on how AI will impact the workforce was optimistic, as was the outlook for the impact AI will have on the Burmese Banking sector. All interviewees demonstrated a belief that AI innovations would empower their workforce and

allow their team to conduct more meaningful work. Additionally, interviewees expressed confidence that with AI, Burmese Banks can become more productive and improve their operations, allowing them to provide better-personalized services and greater fraud detection. Additionally, P5 also stated that Myanmar is not as far behind as many assume regarding financial technology pointing out that there are not many countries with similar e-wallet systems as robust as Burmese digital wallets like KBZ Pay. The optimistic outlook of stakeholders on AI's potential to streamline banking operations finds support in Bhattacharya and Sinha (2022)[1], who highlighted the role of AI in improving customer service and operational efficiency in Indian banks, a market comparable to Myanmar in terms of challenges.

Hypothesis Development

Based on insights from the literature review and interviews, several hypotheses are proposed to explore the potential of AI integration in Myanmar's banking sector. The literature highlights that AI-powered solutions, such as chatbots and automated transaction monitoring, can enhance customer satisfaction and streamline workflow efficiency[1,4]. Similarly, interview responses suggest that integrating these technologies could address longstanding inefficiencies, such as long wait times and inconsistent customer service. Therefore, the first hypothesis (H1) posits that:

H1: AI-powered solutions can improve customer satisfaction and workflow efficiency in Myanmar's banks. Furthermore, prior research indicates that AI tools like credit risk assessment and fraud detection systems can build consumer trust by providing transparency and reducing biases in decision-making processes[5,7]). This aligns with interview findings emphasizing the importance of trust in fostering customer loyalty. Thus, the second hypothesis (H2) states that:

H2: Automated credit risk assessment and transaction monitoring can improve trust between consumers and banks.

Additionally, while customers in emerging markets are increasingly open to adopting AI for basic banking tasks, they often prefer human interaction for complex financial matters[2,3]). Interviews revealed similar preferences, with respondents noting hesitancy toward relying entirely on AI. Accordingly, the third hypothesis (H3) proposes that: **H3: Myanmar's customers are ready to adopt AI for basic banking tasks but prefer human interaction for complex issues.** Finally, both the literature and interviews consistently identify challenges such as regulatory delays, limited human capital, and inadequate digital infrastructure as significant barriers to AI adoption[6,7]). Therefore, the fourth hypothesis (H4) posits that

H4: Lack of infrastructure, regulatory challenges, and limited human capital are major barriers to AI adoption.

These hypotheses will be tested through the survey to validate their relevance and implications for AI integration.

Survey

The primary stakeholders of the survey were long-term customers of major Burmese banks who had extensive experience in different banking processes. Before full deployment, the survey was pilot-tested with a small sample of 10 banking customers to ensure clarity, cultural relevance, and alignment with the study objectives. The 10 participants represented the target population, including long-term bank customers and individuals with varying levels of digital banking experience. These participants completed the survey and provided feedback on the questions' clarity, relevance, and wording. Based on their input, adjustments were made to ensure the questions were clearly understood by rephrasing ambiguous or overly technical terms for simplicity. Response options were expanded to cover the full range of possible answers, preventing participants from being forced into limited categories. Additionally, questions were aligned with the study objectives by removing irrelevant or redundant items to maintain focus and ensure the survey's effectiveness.

The survey conducted for this study included responses from 206 participants, all of whom were long-term customers of major Burmese banks. These participants were selected for their extensive experience with banking processes such as onboarding, loan applications, and customer inquiries. They provided valuable insights into customer perspectives on current banking workflows and AI integration. The participants were distributed a set of close-ended multiple choice questions centered on customer satisfaction and opinion regarding AI integration into their financial services. The names and emails were not collected in the Google forms during the survey distribution to maintain the confidentiality of all participants, and participants were informed that participation is entirely voluntary before sending out the surveys. Ensuring the collection of a robust data set, the survey was distributed between August 4th and August 30th, 2024, to provide ample time for enough participants to answer the questions.

The customer survey also contains potential biases. The survey targeted long-term bank customers who likely are more familiar with banking processes and digital tools, which may not reflect the views of newer or less experienced customers. Furthermore, as the survey was conducted online, it may have excluded individuals with limited digital access or literacy, resulting in an overrepresentation of more digitally inclined respondents. Potentially creating a nonresponse bias, this limits the generalizability of findings to the broader customer base, especially in a country where digital penetration is uneven.

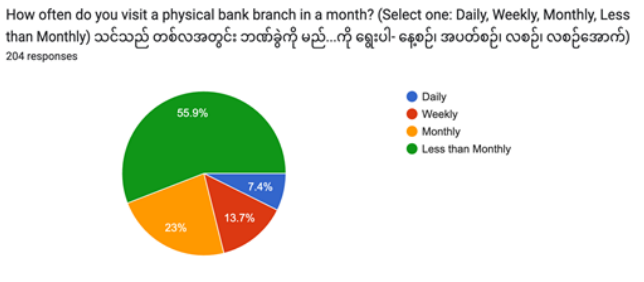


Fig. 1

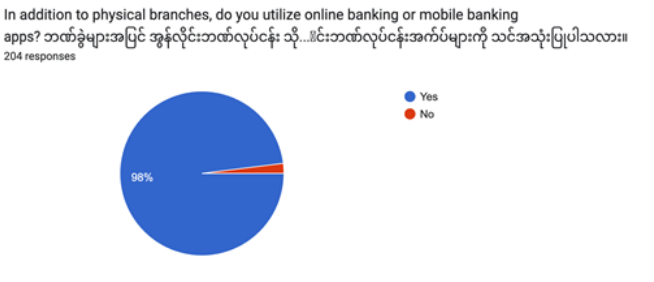


Fig. 2

Results and Findings

After distribution of the survey from August 4th until August 30th, the data was cross checked for logical inconsistencies and outliers, further examining detected anomalies to determine whether they were genuine or were due to errors. To allow for a greater precise descriptive analysis of trends and preferences across the surveyed population, regresion anlaysis was conducted to examine the relationship between key variables such as openness towards AI enabled banking services and customer satifaction. Correlation analysis was further perfomred to indicate potential association between key variables. These statistical methods were finally employed to condcut hypothesis testing aiming to validate assumptions and uncover patterns in the data, which were then synthesized into actionable recommendations for stakeholders in Myanmar's banking sector.

Findings and analysis from the survey

Based on the survey findings, the author analyzes the responses from the participants.

Signaling a shift towards digital banking and remote services, only 21.4% of those surveyed reported conducting physical branch visits on a daily or weekly basis, and the remainder reported making such visits on a monthly or less than monthly basis. This suggested the heavy reliance of mobile banking and internet payment services by the surveyed consumers, highlighting the importance of improving these services as they have become customers' main source of touchpoint with the banks.

Although over 55% of those surveyed reported going to the bank on a less than monthly basis, over 98% of all surveyees reported utilizing online banking or mobile banking apps. This confirmed a significant shift towards digital banking and reduced branch visits among users and reaffirmed the need for banks to prioritize the reliability, user experience and efficiency of their digital services.

Customer perception regarding speed of services for Burmese banks was neutral as the plurality of surveyed chose "neutral" for satisfaction regarding the speed of their respective banks' services. Furthermore, 18.6% stated that they were dissatisfied with the speed of their banks' services, while 36.8% chose to be satisfied. Additionally, 2.9% started being very dissatisfied and a mere 1.5% chose very satisfied. This showcased that although Burmese Banks are generally meeting the minimum expectations in service speed and efficiency, they also do not find them particularly praiseworthy with very few positive sentiments.

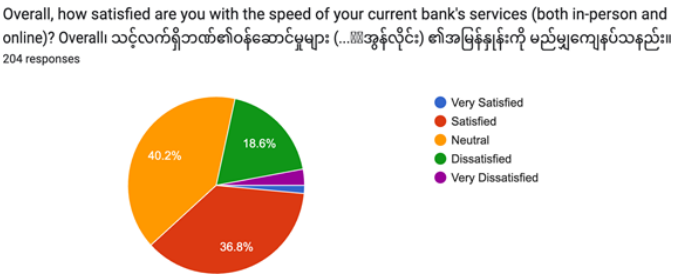


Fig. 3

Regarding opinion towards efficiency of opening a new bank account, 50% stated that they were neutral while 29.4% reported to be satisfied, indicating that the customer onboarding S.O.Ps put into place are perceived as effective and efficient by the majority of banking customers. However, 14.7% reported being very dissatisfied still and an additional 3.4% started being very dissatisfied with the process.

A great bulk of customers surveyed had zero prior experience in applying for loans, but among those that did, only a mere 5.9% reported being satisfied with the process. 31.9% stated

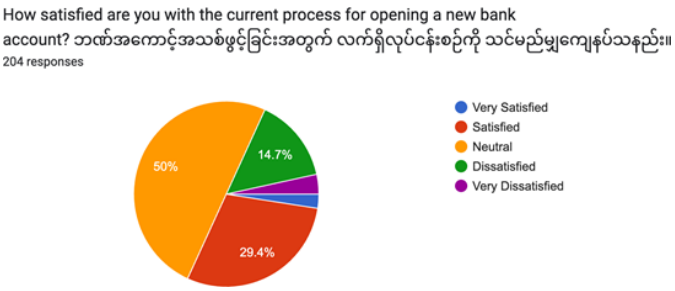


Fig. 4

Table 3 Survey Questionnaire Response

Hi! My name is Nobel, an 11th grade student conducting a research study on how Burmese banks can leverage Artificial Intelligence to shorten workflow and improve customer experience. This research aims to determine the impact and effectiveness of AI technologies in the banking sector, as well as to understand the challenges faced and the factors influencing the successful integration of AI. I kindly request your participation in this survey, which is for academic purposes. Your insights will be invaluable to my study. I assure you that your responses will remain confidential and secure. Thank you for your time and assistance !

Questions	Response Options	Results (in %)
How often do you visit a physical bank branch in a month? (Select one: Daily, Weekly, Monthly, Less than Monthly)	1. Daily 2. Weekly 3. Monthly 4. Less than Monthly	7.4% 13.7% 23% 55.9%
In addition to physical branches, do you utilize online banking or mobile banking apps? (Select one: Yes, No)	1. Yes 2. No	98% 2%
Overall, how satisfied are you with the speed of your current bank's services (both in-person and online)? (Select from 1-5 likert scale where 1-Very Dissatisfied and 5- Very Satisfied)	1. Very Dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very Satisfied	2.9% 18.4% 40.2% 36.8% 1.5%
How satisfied are you with the current process for opening a new bank account? (Select from 1-5 likert scale where 1-Very Dissatisfied and 5- Very Satisfied)	1. Very Dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very Satisfied	3.4% 14.7% 50% 29.4% 2.5%
How satisfied are you with the current process for applying for a loan? (Select from 1-5 likert scale where 1-Very Dissatisfied and 5- Very Satisfied)	1. Very Satisfied 2. Satisfied 3. Neutral 4. Dissatisfied 5. Very Dissatisfied 6. I have never applied for a loan	0.5% 5.9% 31.9% 9.8% 3.9% 48%
How often do you experience long wait times when contacting your bank's customer service department (by phone or online)? (Select one: Never, Rarely,Sometimes, Often, Very Often)	1. Never 2. Rarely 3. Sometimes 4. Often 5. Very Often	3.9% 13.7% 44.1% 22.5% 15.7%
Would you be comfortable using an AI assistant to answer basic banking questions (e.g., account balance, recent transactions)? (Select one: Yes, No, Unsure)	1. Yes 2. No 3. Unsure	41.7% 18.6% 39.7%
How important is it to you for your bank to provide real-time fraud alerts and notifications? (Select from 1-5 likert scale where 1-Very Unimportant and 5- Very Important)	1. Very Unimportant 2. Unimportant 3. Neutral 4. Important 5. Very Important	0% 1.5% 3% 12.7% 82.8%
When dealing with complex financial matters, would you prefer to speak with a human representative or would you be open to using an AI-powered financial advisor (with human oversight)? (Select one: Human Representative, AI Advisor with Human Oversight, Unsure)	Human Representative AI Advisor with Human Oversight Unsure	61.8% 25.5% 12.7%
How likely are you to switch banks if they offered faster and more efficient services powered by AI technology? (Select from 1-5 likert scale where 1-Very Unlikely and 5- Very Likely)	1. Very Unlikely 2. Unlikely 3. Neutral 4. Likely 5. Very Likely	0.5% 6.9%23.5% 48.5% 20.6%
Would you trust an AI system to personalize your banking experience (e.g., recommend financial products, identify potential fraud)? (Select from 1-5 likert scale where 1-Very Unlikely and 5- Very Likely)	1. Very Uncomfortable 2. Uncomfortable 3. Neutral 4. Comfortable 5. Very Comfortable	2.9% 16.7% 0% 66.2% 14.2%

their feelings were neutral, and 9.8 percent chose dissatisfied and while the remaining 3.9% chose very dissatisfied. Out of all surveyed, not a single response indicated that they were very satisfied with the loan application process at the respective banks they use. The fact that 48% of all those surveyed had never applied for a loan suggests that there is a limited awareness or understanding of loan offerings in the market and suggests a low penetration of loan products among the surveyed population. Furthermore, the satisfaction rate of 5.9% is alarmingly low, highlighting that the loan application process is a major pain point for the minority of customers who have had exposure to it.

44.1% reported sometimes experiencing long wait times when contacting their respective banks' customer service departments and 22.5% and 15.7 of those surveyed indicated experiencing long wait times often and very often respectively. With over 82.3% of respondents reporting long wait times, this sug-

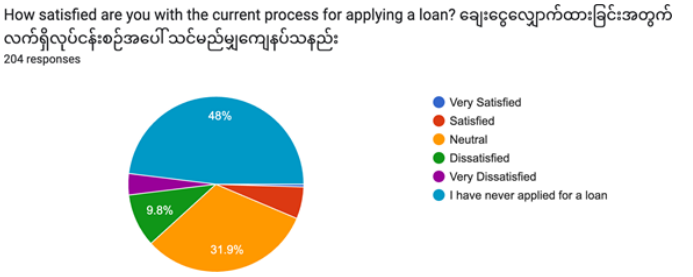
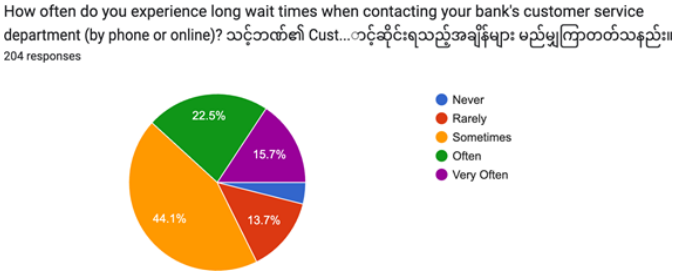


Fig. 5



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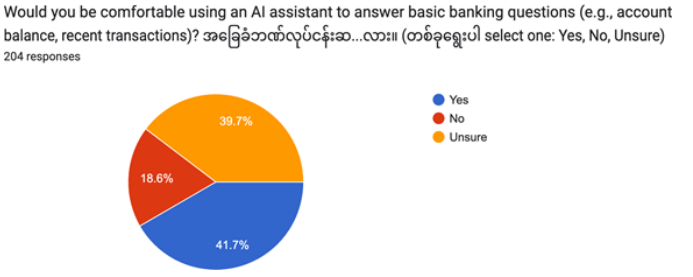

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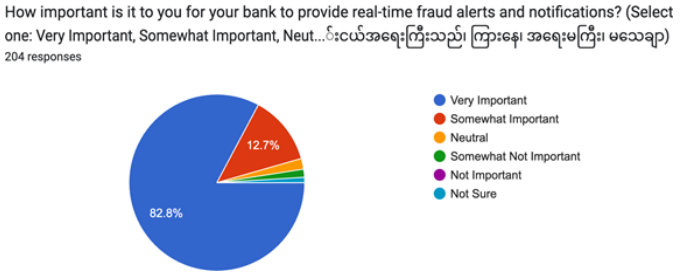

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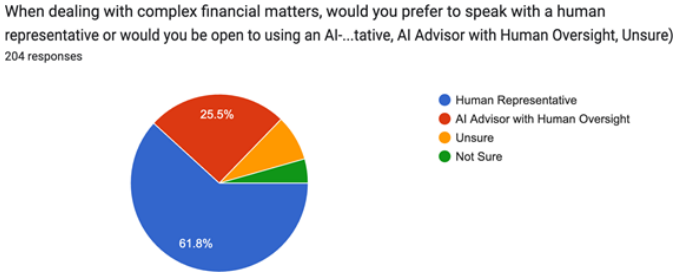

Fig. 9

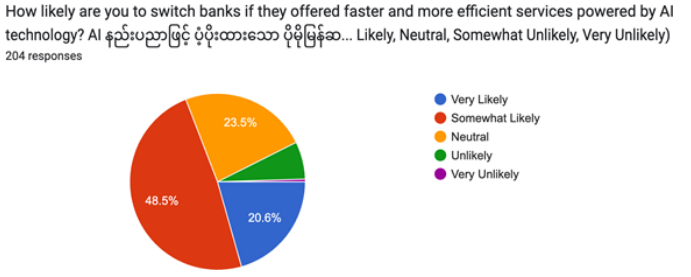

Fig. 10

gests systemic inefficiencies in customer service workflows in Burmese banks. Additionally, the 22% and 15% that experience long wait times often or very often suggest that the current existing workflows lack scalability and responsiveness during high demand periods. This highlighted the possibility of automated routine inquiries as well as real time assistance through chatbots powered by AI as possible feasible solutions towards these issues.

39.7% were unsure when asked if they would be comfortable using an AI assistant to answer basic banking questions indicating the lack of trust that exists between banks and consumers and between consumers and technology due to a lack of digital and financial literacy.

An overwhelming majority of customers (82.8%) reported receiving real time fraud alerts and notifications as being very important. The recent "Kyar Pyant" digital scams, a thriving multi billion dollar fraud industry until recently, based in Myanmar's ethnically armed regions, could have had an impact on this heavy emphasis.This highlighted a very important area for banks where AI deployment can be pursued that would deeply improve customer experience while utilizing resources effectively.

Burmese customers still appear to lack faith in AI technology and the majority (61.8%) of surveyed customers still reported that they would prefer to speak to a human representative when dealing with complex financial matters, indicating that for the Burmese user base, banking is still an extremely human activity. This highlighted that a gradual integration of AI services would be better suited to build user confidence over time instead of an immediate plunge into AI services. The lack of trust in AI solutions among customers, as seen in survey results, parallels findings by Tulcanaza-Prieto et al. (2023), who observed similar skepticism in Ecuadorian banking markets due to low digital literacy.

Customers perceived the need of AI integration as somewhat important as 48.5%, the plurality of those surveyed stated that they are somewhat likely to switch banks if a different insti-

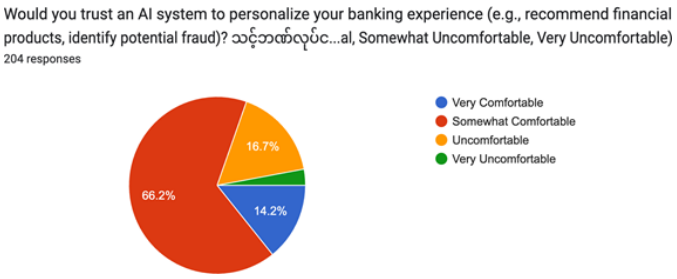

Fig. 11

tution offered faster and more efficient services powered by AI. This showcased that there is strong consumer interest in improvements in services through AI, and the willingness to switch banks for enhanced services reflect that there is strong demand for enhanced service efficiency highlighting how AI based adoptions can provide a competitive edge towards financial institutions in Myanmar.

The trust in AI systems among banking consumers in Myanmar still somewhat appeared weak as the majority (66.2%) stated being only somewhat comfortable with an AI system personalizing their banking experience. Moreover, The survey revealed that 82.8% of respondents considered real-time fraud alerts and notifications as "very important." This underscores customers' desire for enhanced security measures, which automated transaction monitoring systems can provide. By proactively identifying and addressing fraudulent activities, these algorithms have the potential to improve consumer trust.

Correlation and Regression Analysis

To explore the relationships between variables identified in the survey, correlation and regression analyses were conducted. These analyses aimed to validate the hypotheses and identify significant predictors of trust and comfort in AI technologies. Data was cleaned by replacing missing values with the mean for consistency, ensuring statistical validity. The cleaned dataset included proportions for key survey variables such as trust in AI, comfort with AI assistants, fraud alert importance, and likelihood to switch banks.

Correlation Analysis

The Pearson correlation coefficient was used to determine the strength and direction of linear relationships between the variables. The results are summarized in the Table 4 below:

Comfort with AI Assistants: A strong negative correlation (-0.85) was observed. However, the p-value of 0.15 indicates this relationship is not statistically significant, likely due to the small sample size. Fraud Alert Importance and Trust in AI: A weak negative correlation (-0.13) was observed with a high p-value (0.87), suggesting little to no meaningful relationship between these variables in the current dataset. Comfort with AI and Likeliness to switch to AI-assisted bank: A weak-to-moderate positive correlation (0.30) was observed with a very low p-value (1.31×10), suggesting that higher comfort with AI is significantly associated with a greater likelihood of switching to an AI-assisted bank. Frequency of Bank Visits and Satisfaction with Banking Speed: A weak positive correlation (0.13) was observed with a p-value of 0.068, suggesting that more frequent bank visits are modestly associated with higher satisfaction with banking speed, though this relationship is not statistically significant.

Regression Analysis

To validate the four hypotheses, correlation and regression analyses were conducted using survey data. Key variables such as trust in AI, comfort with AI assistants, fraud alert importance, and likelihood to switch banks were analyzed. Missing values were handled by replacing them with the mean for consistency, and all variables were standardized to ensure compatibility. The analysis was mapped to the four hypotheses for clarity (Table 5).

Hypotheses and Analytical Approach

1. **H1: AI-powered solutions can improve customer satisfaction and workflow efficiency in Myanmar's banks.**

   • **Variable Mapping:** Service satisfaction (predictor) and likelihood to switch banks (outcome).

   •**Analysis:** Correlation between dissatisfaction with service speed and likelihood to switch banks.

   •Correlation analysis shows a negative relationship between dissatisfaction with service speed and likelihood to switch banks, indicating that AI solutions could improve customer satisfaction. However, further analysis is needed to confirm the strength of this relationship.

2. **H2: Automated credit risk assessment and transaction monitoring can improve trust between consumers and banks.**

   •**Variable Mapping:** Fraud alert importance (predictor) and trust in AI (outcome).

   •**Analysis:** Regression model testing trust in AI as predicted by fraud alert importance.

Table 4 Correlation Summary Table

Variable Pair	Correlation Coefficient (r)	p-value	Interpretation
Trust in AI and Comfort with AI Assistants	-0.85	0.15	Strong negative relationship; not statistically significant due to small sample size.
Fraud Alert Importance and Trust in AI	-0.13	0.87	Weak negative relationship; suggests little to no linear relationship.
Comfort with AI and Likeliness to switch to AI assisted bank	0.2985334	$1.30993E^{-5}$	Moderate positive relationship, indicating that higher comfort with AI is somewhat associated with a greater likelihood of switching.
Frequency of Bank Visits and satisfaction speed	0.127348872	0.068137595	Frequency of Bank Visits shows a weak positive relationship with satisfaction with banking speed though this association is not statistically significant.

Table 5 Regression Summary Table

Model	R-squared	Coefficient	p-value	Interpretation
Trust in AI $\sim$ Fraud Alert Importance	0.016	-0.092	0.87	Fraud alert importance does not significantly predict trust in AI.
Comfort with AI $\sim$ Trust in AI	0.724	-0.316	0.15	Trust in AI shows a moderately strong relationship with comfort, though not statistically significant.
Comfort with AI $\sim$ Likeliness to switch to AI assisted bank	0.0891	0.3423	$1.30993E^{-5}$	A linear regression model showed that comfort with AI significantly predicted the likelihood of switching to an AI-assisted bank (β = 0.3423, $p < .001$). Although the relationship was positive, comfort with AI explained only 8.9% of the variance in switching likelihood, suggesting the importance of other factors.
Frequency of Bank Visits $\sim$ Satisfaction with Banking Speed	0.0162	0.112	0.068137595	Frequency of Bank Visits shows a weak positive relationship with satisfaction with banking speed, though not statistically significant.

• Regression results indicate that fraud alert importance does not significantly predict trust in AI. This suggests that other factors may play a more critical role in building trust.

3. **H3: Myanmar's customers are ready to adopt AI for basic banking tasks but prefer human interaction for complex issues.**

•**Variable Mapping:** Comfort with AI assistants (outcome) and trust in AI (predictor).

•**Analysis:** Regression model testing comfort with AI as predicted by trust in AI.

• The moderately high R-squared value (0.724) suggests that trust in AI influences comfort with AI assistants, but the relationship is not statistically significant due to the small sample size.

4. **H4: Lack of infrastructure, regulatory challenges, and limited human capital are major barriers to AI adoption.**

•**Variable Mapping:** Interview insights validated against survey findings.

•**Analysis:** Qualitative themes cross-referenced with survey trends.

•Survey responses and interviews consistently highlight infrastructure and regulatory challenges, validating this hypothesis through qualitative and quantitative evidence.

Overall, the summary Table 6 for hypothesis testing indicates potential relationships between key variables but highlights the need for further research with larger sample sizes to establish statistical significance. While the regression analysis provides preliminary insights, it also underscores the complexity of customer trust and comfort in adopting AI technologies. Future studies should incorporate additional variables, such as demographic and socio-economic factors, to refine the analysis and better address the hypotheses.

Discussion

After gaining preliminary insight into numerous banking-related AI technologies from the literature review, customer perspective from the distributed surveys, and industry insight from interviews with 10 banking professionals working in managerial and leadership roles across different Burmese Banks and associated fintech firms, the researcher categorized the major findings into 7 common themes. Through information gathered in said methodologies, this framework was developed to identify hindrances in customer experience and workplace efficiency, the AI powered solutions that can address these issues, the challenges in integrating said issues, the solutions that are already being implemented fully or at the pilot testing stage, and their overall impact.

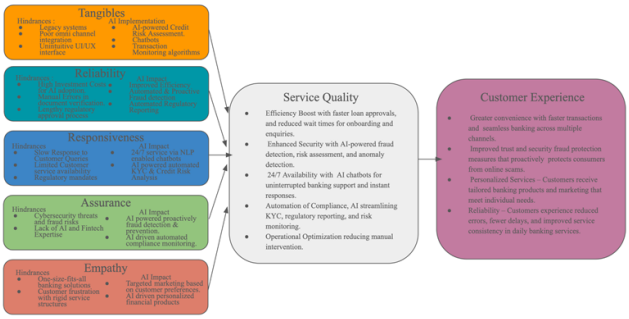

Fig. 12 Framework for AI Integration in Myanmar's Banking Sector: Challenges, Solutions, and Impacts (adapted from SERVQUAL framework)

Stakeholders:

The main stakeholders affected by the implications of AI integration in the banking sector are customers and businesses utilizing banking services, as well as the banks and their workforce. With the potential benefits AI-powered solutions can bring, banking services such as onboarding and loan application processes can be remarkably streamlined to significantly improve the customer experience for consumers and the efficiency of the bank's workforce.

Customer Perceptions and Cultural Barriers

Although open to AI for basic banking uses, survey participants hesitated about fully adopting AI solutions for complex financial services. This reluctance can be attributed to low digital literacy levels and a general lack of exposure to advanced technological tools in Myanmar. While survey participants expressed hesitation about fully adopting AI, studies like Cedersund (2023)[6] indicate that early adopters in developed countries have shown significantly higher trust in AI-driven banking. This disparity highlights the socio-economic and cultural differences that influence customer perceptions, suggesting that there exists not just a technological challenge in adopting AI services in Myanmar's financial sector but also a socio-cultural one, as customers still perceive AI as an unfamiliar and intimidating concept.

Repetitive and time-consuming internal workflow processes :

The main processes that were identified by banking executives working in managerial and leadership positions among the top Burmese Banking firms as the most inefficient and repetitive were the KYC due diligence process to onboard a new customer, standard regulatory reporting procedures to the Central Bank of Myanmar, loan applications, paperwork, and account reconcilia-

Table 6 Hypothesis testing Summary Table

Hypothesis	Findings	Supported/ Not Supported	Implications
H1: AI-powered solutions can improve customer satisfaction and workflow efficiency in Myanmar's banks.	Survey responses show dissatisfaction with service speed (18.6% dissatisfied) and long wait times. AI tools like chatbots are highlighted in interviews as a solution.	***Partially Supported***	AI solutions like chatbots and automated systems have potential but require gradual implementation to address trust and literacy gaps.
H2: Automated credit risk assessment and transaction monitoring can improve trust between consumers and banks.	82.8% of respondents value fraud alerts as "very important." Interviews highlight AI's role in reducing bias and enhancing transparency.	***Supported***	AI can build trust through transparent and unbiased decision-making processes.
H3: Myanmar's customers are ready to adopt AI for basic banking tasks but prefer human interaction for complex issues.	41.7% of survey respondents are comfortable with AI for basic queries, but 61.8% prefer human representatives for complex matters.	***Partially Supported***	AI implementation should begin with basic services while maintaining human interaction for complex tasks.
H4: Lack of infrastructure, regulatory challenges, and limited human capital are major barriers to AI adoption.	Interviews consistently cite currency deflation, regulatory delays, and a shortage of skilled professionals as key barriers.	***Supported***	Targeted investments in infrastructure, policy reforms, and training programs are essential for successful AI integration.

tion processes. KYC, which refers to "Know Your Customer," is the required due diligence process financial institutions must conduct before onboarding a new customer. Account reconciliation is correcting incorrect payments sent in the wrong amount or to the wrong account. Furthermore, the regular biweekly reports to the Central Bank were also identified as another time-consuming routine. These tasks were all identified as inefficient due to their manual nature. Another factor that is stated to be a hindrance is that e-signatures are still not recognized in Myanmar, and the majority of documents still require to be signed on paper.

Hindrances towards improving customer experience:

Factors and elements that are exacerbating repetitive and time-consuming internal workflow processes were identified under this theme. One major issue pointed out by nearly all individual interviewees is the effects of the legacy system, which is where many outdated and unproductive workflow processes are still put in place due to fear of change. The study finds that legacy systems hinder efficiency, which aligns with Nguyen (2021), who emphasized the impact of outdated banking systems on operational delays in ASEAN countries. This reference reinforces the relevance of legacy systems as a challenge in Myanmar's banking sector. Furthermore, poor omnichannel integration and data filtering make it harder for employees to sort and respond to customer data, delaying the customer response time for complaints and inquiries.Additionally, as customer service inquiries are often outsourced to third-party call centers, first-party responders to customer complaints almost always cannot fix the issue on the spot. Due to this, inquiries for tasks have to be reported from department to department, delaying the process of addressing customer issues. Lastly, interviewees regularly working on their respective mobile banking applications reported that their apps still contain poor UI/UX interfaces that are not intuitive for customers to utilize, presenting another hindrance to improving customer experience.

AI-powered Solutions:

Potential AI-powered solutions to address said hindrances to customer experience and workplace efficiency were gathered from the literature review and interview processes. Automated algorithms that carry out document analysis and customer I.D verification processes integrated with facial recognition and optical character recognition would streamline the onboarding process for both banks and customers, which was one identified solution to the lengthy and redundant onboarding process. An automated machine learning powered credit risk anlaysis system

provide strong viability twoards expediting the loan approval process. If implemented, natural language processing-powered chatbots in Burmese would address customers' long wait times to receive responses to inquiries. Additionally, machine learning algorithms in transaction monitoring would also be able to detect patterns and unusual activities that may indicate potential financial fraud.

AI technologies already in testing or implementation: Of the recommended AI-powered solutions, chatbots, transaction monitoring tools, and credit risk analysis tools are already in testing or pilot stage implementation.

Challenges:

Identified through the literature review and the interviews, the first is the lack of human capital and technological resources, with Myanmar experiencing a severe brain drain due to a significant amount of young talent moving to foreign countries in the post-COVID era. Finally, the regulatory procedure to get approval for new implementations is lengthy, often taking months, if not longer, to get approval. In addition, Myanmar's extreme currency depreciation raises the costs of Burmese Banks to acquire these technologies by up to 300% as payment has to be made through utilizing foreign currencies.

Actionable Recommendations :

For Banks:

Adopting a multi phase investment strategy investing in AI solutions that can be initially be implemented in smaller independent components and upgrading these processes over time such as :

- **AI NLP powered chatbots** for basic customer inquiries, accessible in Burmese and English initially starting with FAQs and expanding capabilities for more complex queries and integrating with live customer support or CRM tools at a later poi

- **Fraud Detection systems** that utilize AI models to monitor transactions and flag unusual activity starting with a specific type of transaction like mobile banking transactions then expanding to gradually include cross-border payments, credit card transactions and more.

- **Piloting Credit Risk Assessments models** starting with initial deployment to monitor small scale personal loans and later upscaling to expand towards corporate business loans and complex credit portfolios.

For Policymakers:

Implementing a phased regulatory and infrastructure development approach that enables AI adoption in banking while balancing oversight, efficiency, and financial sector stability, such as:

- **Streamlining Regulatory Approval for AI Integration:** Establishing clear guidelines, reducing bureaucratic delays, and creating a regulatory sandbox where banks can test AI solutions in a controlled environment before full implementation.

- **Recognizing E-Signatures to Support Digital Transformation:** Advocating for the **legal recognition of digital signatures** to allow financial institutions to digitize contracts, approvals, and documentation.

- **Incentivizing AI Investment and Digital Infrastructure Development:** Offering tax incentives or grants for banks investing in AI-powered automation, cybersecurity, and data management improvements

- **Encouraging Cross-Sector Collaboration for AI Talent Development:** Supporting partnerships between banks, universities, and tech institutions to enhance Myanmar's AI workforce and reduce reliance on foreign expertise

Impact:

If integrated, these technologies provide the avenue to provide better personalized financial products, as well as a more robust customer service system that is functional 24/7, decreasing Burmese Banks' dependency on call centers. Additionally, for said institutions, implementing AI algorithms would allow them to create personalized marketing campaigns based on individual customer behavior, automate their onboarding and credit risk application process, and improve the efficiency of their front-end, middle-end, and back-end operations. This would allow customers to receive faster service when creating a bank account and applying for loans. Banks could also allocate fewer human resources to offer those services.

With AI-powered transaction monitoring mechanisms, financial fraud could be detected proactively rather than reactive while alleviating human employees' need to detect suspicious activity manually. By further automating the credit risk assessment process, banks improve user trust among consumers, promoting transparency and ensuring unbiased customer treatment.

With proper integration, these solutions hold a promising avenue toward Myanmar's existing banking future: NLP chatbots that establish a robust service system, Tailored marketing campaigns individualized depending on customer data, automated onboarding and credit risk assessments, and streamlined back, middle and front-end operations.

This improvement would enable customers to receive faster service when opening bank accounts and applying for loans, while banks could allocate fewer human resources to these tasks.

Limitations

There are several restrictions to the study that should be acknowledged. First, the research was conducted within a specific geographical context focusing only on the banking industry in Myanmar. Recognizing this limited geographical context, it is important to note that the findings or recommendations made from this study may not apply to other geographic regions with different market conditions that differ in digital banking capabilities. Additionally, the sample size of this study was relatively small only interviewing representatives from a few of the biggest banks in Myanmar restricting the applicability of the findings to other institutions. Furthermore, due to the dynamic nature of the financial sector in Myanmar with volatile changes in legislature, market conditions, and political stability, the findings could be rendered less applicable or relevant at different times.

Additionally, due to the recent banking and political crisis in Myanmar, the public trust in Burmese Banks has been tainted, which could have had implications on customer perceptions in the survey. The challenges posed by the crisis could also affect the tangibility of the provided solutions in the study.

Moreover, customer perceptions regarding AI services could be affected by the response bias, where participants might have chosen an option that was perceived as the socially acceptable response rather than their honest opinion. The researcher also encountered a severe lack of data during the literature review state of the research on Artificial Intelligence in the Burmese financial sector; as a result, nearly all insights on current algorithms and AI technologies currently being tested in Burmese Banks came from the conducted interviews. Finally, the surveys conducted in this study could also have been affected by the sampling bias, and future studies should factor in geographic region in Myanmar, age, education, and other relevant factors to obtain more representative insights on customer perception. Furthermore, this study did not take into account the implications cultural factors might play towards customer attitude towards these new implementations. Future studies should examine additional factors such as demographic influences and cross regional differences to refine our understanding of AI adoption in banking.

In addition, due to the lack of financial and digital literacy in Myanmar, many consumers see banking as a human activity and the survey indicated that many would prefer to still take financial advice from a human individual instead. Future studies should further study how cultural implications and financial literacy in Myanmar could affect the implementation of AI powered customer solutions. This study took a broad approach examining the impact various AI integrations could have on improving customer experience and workplace efficiency in Myanmar.

Conclusion

The primary aim of this study was to investigate the potential and feasibility of AI integration in Burmese Banks for improved customer satisfaction and efficiency in front-end, middle, and back-end workflow processes. The focus was on identifying the banking processes that were most inefficient among Burmese banks from both the customers' and banks' perspectives, identifying gaps for AI integration to streamline and automate these processes, and examining the feasibility of these solutions.

After a comprehensive analysis of the findings, the customer inquiry process was identified as among the most time-consuming processes for customers, highlighting the potential of AI-powered chatbots to provide instant responses in Burmese. Furthermore, through regression analysis, the survey data indicated a moderately strong relationship between trust in AI and comfort with AI assistants, though the relationship was not statistically significant as the sample size limited it. The survey data additionally indicated a cautious yet growing openness to AI-driven banking. Customers consistently still preferred human interactions for complex financial matters but were willing to engage with AI for basic banking tasks and fraud alerts.

Further findings underlined that many Burmese Banks were already running and testing these AI-powered solutions, such as credit risk assessment tools, automated KYC onboarding mechanisms, transaction monitoring, and custom chatbots. However, major roadblocks were identified for banks' immediate major investment in artificial intelligence, including but not limited to the major talent shortage, extreme currency depreciation, and underdeveloped internet infrastructure.

Survey results highlighted that while Burmese consumers still prefer human support for complex financial matters, they are open to adopting essential AI services like chatbots for basic banking activities. Burmese consumers also emphasized receiving real-time fraud alerts, potentially due to the rise in Facebook frauds and "Kyar Pyant," a multi-billion dollar online money fraud industry centered in Myanmar's regions ruled by ethnic armed militias.

These findings suggest that while heavy investment in AI might not be immediately beneficial, initial essential integration in customer service applications and fraud detection mechanisms would be both advantageous and feasible since these are already being tested. Burmese Banks should continue the explo-

ration and implementation of these technologies. Furthermore, an incremental approach towards AI investment, starting with cost-effective solutions tailored to address specific pain points and focusing on modular, scalable AI solutions, can lay a solid groundwork for Burmese Banks for greater integration in the future when infrastructure and talent ability improves. However, it is important to note that since this study was limited by its geographical focus on Myanmar, these findings may not be fully generalizable for other regions.

Synthesizing these insights, AI integration into Myanmar's banking sectors presents a promising avenue toward the future of financial services—streamlining workflows, personalizing financial products, promoting financial inclusivity, and strengthening trust.

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