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Conversational AI for Personalized Financial  
Advice in the BFSI Sector

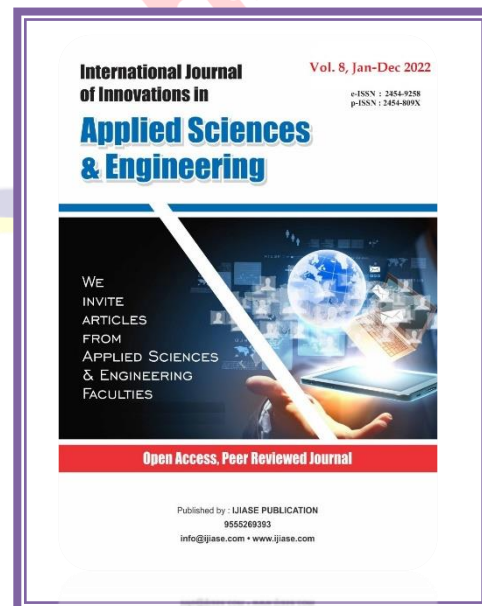
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### ABSTRACT

In the context of emerging markets, where human intervention and infrastructure concerns are prevalent, the adoption of artificial intelligence (AI) in banking services faces unique challenges. However, this paper aims to highlight the immense potential of AI in these markets, and propose strategies for leveraging AI in banking services to create personalized experiences, taking into account the specific challenges of these markets. This optimistic view is based on the understanding that AI can overcome the prevalent human intervention and infrastructure concerns, and revolutionize banking services in emerging markets.

The authors adopted an exploratory, inductive approach, conducting in-depth interviews and thematic analysis. They interviewed 36 financial experts, analysing their insights to develop a framework for personalized banking experiences.

The paper identifies five key themes. The first theme underscores the significance of AI-mediated banking and the skills required for its operation. The second theme, crucially, highlights the need for user awareness of AI-mediated banking, promoting transparency and trust. The third theme addresses promoting AI-driven interfaces among managers and employees. The fourth theme emphasizes the necessity of human intervention due to users' demographic patterns. The fifth theme discusses the potential for personalized AI-mediated banking services.

The paper emphasizes the crucial role of managers in recognizing and delivering quality service to users. While it underscores the relevance of AI and human intervention in banking services, it does not provide a detailed process for achieving seamless, personalized banking experiences. However, managers are empowered and encouraged to take the lead in developing a banking ecosystem integrating AI to offer seamless user experiences, thereby taking the banking services to the next level.

### INTRODUCTION

Artificial intelligence (AI)-mediated banking services have gained prominence due to the demand for quick, responsive banking and the need for world-class services driven by global isomorphism (Tuzovic et al., 2021). AI integration in banking has notably reduced operational costs, enhancing efficiency by 1.6 times. Given the shift towards personalized services, the role of AI

in banking is increasingly significant (Hajro et al., 2021). Recent reports, including those by Nielsen and Payne and Rucker (2022), reveal that approximately 80% of banking services are digitized, with customers expecting further digital enhancements. AI integration in banking provides numerous advantages, such as tracking financial patterns and promptly addressing user needs, fostering greater independence and a more

personalized banking experience (Mogaji & Nguyen, 2022).

Recent studies (Borau, 2021; Rahman et al., 2021; Ravikumar et al., 2021) have illuminated the transformative role of AI in revolutionizing banking services. By harnessing the power of machine learning and blockchain technologies, AI has not only eradicated service bottlenecks and eliminated service queues, but also elevated the fluidity and dynamism of banking processes (Korezionswki, 2017). Unlike traditional models confined to banking hours, AI paves the way for continuous service access (Abdulquadri et al., 2021). Financial experts champion digital banking due to the personalized experiences enabled by AI, which is a testament to its potential to amplify customer satisfaction (Borau et al., 2021).

Despite its revolutionary impact, the integration of AI in banking is not without its challenges. While AI presents many advantages, it also has notable limitations (Battisti et al., 2021). Emerging markets, in particular, grapple with unique challenges due to diverse user demographics and limited technical literacy, leading to issues such as digital theft, fraud, and money laundering (Roberts-Lombard and Petzer, 2021). Consequently, the credibility and legitimacy

of AI in banking services are being questioned, underscoring the pressing need for further research and development (Mazzarolo and Mainardes, 2021).

While existing literature extensively examines the efficacy of AI-driven banking services, it primarily focuses on developed markets. In contrast, our research uniquely hones in on the role of AI in emerging markets and the specific challenges these markets face (Dingz et al., 2022). Scholars like Mogaji and Nguyen (2022) and Abdulquadri et al. (2021) acknowledge AI's relevance but also highlight issues of trust and privacy invasion. This paper addresses these gaps by exploring the critical challenges of AI integration in banking services in emerging markets and emphasizing the necessity of human intervention.

Our study seeks to contribute to academic knowledge by proposing a practical framework for AI-mediated banking that enhances personalized experiences. Grounded in service-dominant logic, consumption values, and AI attributes, we investigate expert perspectives on the future positioning of AI in banking (Kumar et al., 2021). This qualitative research, based on 36 in-depth interviews, underscores the strategic

importance of AI in banking while recognizing the need for human intervention to tailor services to specific geolocations and demographics.

Our findings indicate that AI significantly influences banking services, driving a technological revolution in the industry. However, integrating AI must consider geographic and demographic factors to strengthen personalized banking experiences. This study contributes theoretically by enhancing the understanding of AI in banking and extending previous research primarily focused on developed markets (Jang et al., 2021; Mogaji et al., 2020; Riikinen et al., 2018). Importantly, our research underscores the crucial role of human intervention in AI-mediated banking, highlighting the need for a balanced approach that combines the strengths of AI with the unique insights and empathy of human bankers.

### **LITERATURE REVIEW**

#### **AI-Driven Banking Services and Customer Experience in Emerging Markets**

This literature review examines the impact of AI-driven banking services on customer experience, particularly within emerging

markets. Detailed discussions of specific aspects follow in subsequent sections.

#### **AI in Banking Services**

The concept of banking services has evolved significantly from its traditional form. Historically, even in physical branches, banks had minimal reliance on technology, with human beings providing most of the support (Xu et al., 2020). The introduction of reliable ATMs marked the beginning of a shift in dynamics, further accelerated by technological advancements in banking systems. Recently, the incorporation of AI technologies has markedly transformed banking services, altering how they are perceived and delivered. Traditional banking functions such as fund transfers, chequebook requests, and passbook updates were once handled manually (Fernandes & Pinto, 2019). Today, users can independently manage these tasks, a convenience facilitated by AI advancements. Consequently, banks now heavily depend on AI-driven services to meet user preferences (Payne et al., 2021).

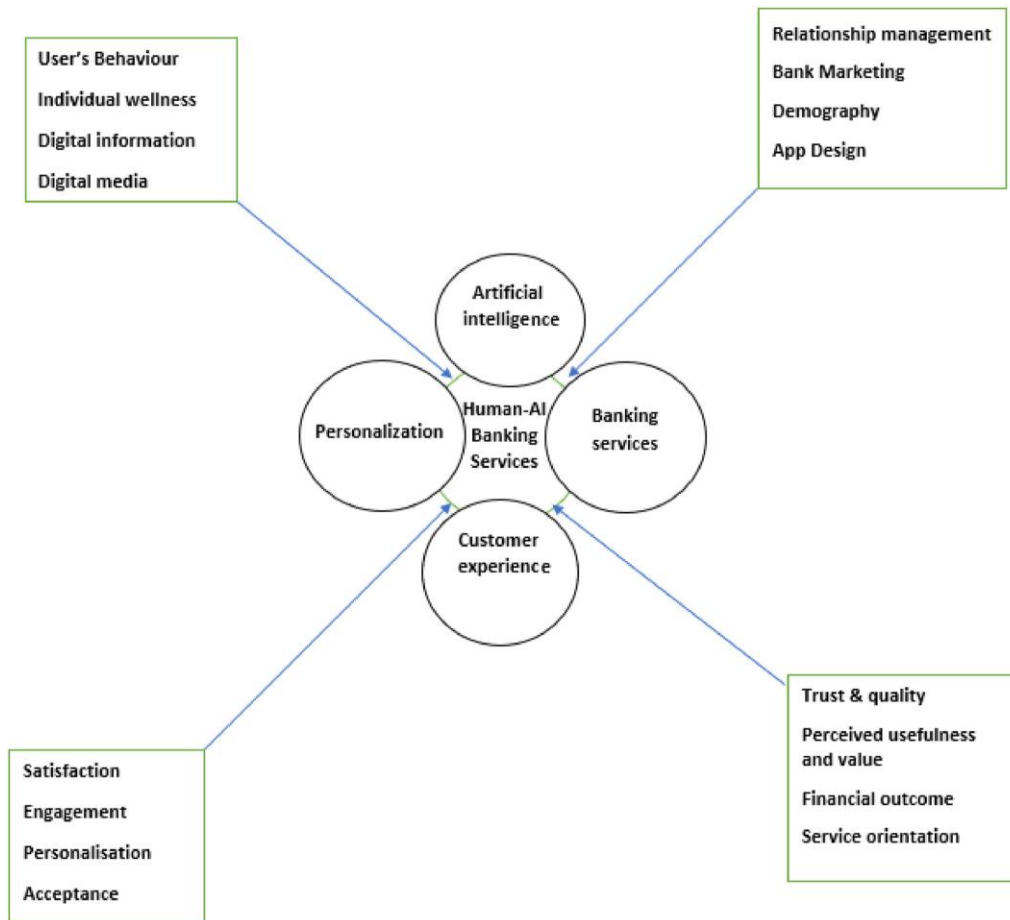
#### **Unique Features of AI-Driven Banking Services**

AI-driven banking services offer specific and unique advantages. Banks integrate AI-enabled software with their existing

Enterprise Resource Planning (ERP) systems (Hentzen et al., 2021). This integration benefits banks in several ways. Intelligent algorithms enable AI to create personalized banking experiences for each user (Rajaobelina & Ricard, 2021), strengthening the relationship between the bank and its customers. Personalized services not only help users perform relevant banking functions but also aim to enhance their overall banking experience. These AI enablers typically operate through official banking applications. As users interact with AI-enabled services, the AI learns and adapts to their banking needs, preparing personalized metrics and tailored service offerings (Hajro et al., 2021).

### **Applications of AI in Banking Services**

The applications of AI in banking are vast and varied (Camacho et al., 2022; Lee & Chen, 2022; Liu & Tao, 2022). Historically, banks have had limited reliance on technology, with human intervention being predominant. However, given the limitations of human support, innovative technologies have been introduced to banking services (Salem et al., 2019). The role of AI in banking is transformative, benefiting both banks and users. Personalized services save users time and enhance convenience (Jain et al., 2017). AI also improves service quality by minimizing delays, bottlenecks, and human errors (Marshall et al., 2013). Due to their foundation in advanced programming languages and non-volatile nature, AI enablers allow banks to provide high-quality services consistently.



Source(s): Proposed by authors

Figure 1: Literature Review

### AI IN BANKING SERVICES: OPPORTUNITIES AND CHALLENGES

Implementing AI in banking services is not only vital but also holds immense potential. While enhanced AI-enabled banking services are expected to significantly improve quality and customer experience (Holmlund et al., 2021), recent studies also shed light on several challenges. Unlike traditional banking methods, AI-driven services rely heavily on algorithms (Jain et al., 2022).

These services involve complex programming and machine-learning languages (Akhter et al., 2020), necessitating expertise that is sometimes scarce within banks. The lack of technological skills can negatively impact user experience (Griggs & Randsell, 1987; Van Esch & Stewart Black, 2021). In emerging markets, the diverse demographics of users make implementing AI-centric services particularly challenging and confusing due to the technical nature of

these applications (Bock & Wolter, 2020). Furthermore, many banking applications are in English, which can be a barrier for some users (Acikgoz & Vega, 2022).

Research indicates that South Asian markets are especially susceptible to digital theft and fraud. The rural culture and diverse user base in these regions contribute to the discomfort of using banking applications (Patel & Patel, 2018). During the pandemic, digital fraud was notably high in India. Successful navigation of AI tools requires a good command of English and primary technological literacy, which many users need help with. These factors undermine the effectiveness of AI-enabled banking services, leading to confusion and technology anxiety among users (Trivedi, 2019).

### **Trust and Security Concerns**

Traditional banking services were time-consuming but relied on human involvement, which fostered trust (Mogaji, 2018). In emerging markets, people still prefer human interaction for transactions. However, the high technical demands of AI services have caused significant issues (Misuraca & Van Noordt, 2020). While AI tools offer unique advantages, they have yet to communicate their relevance to users effectively. Both

users and managers need relevant technical skills; with these, AI-driven services can positively impact banks (Dwivedi et al., 2021b). Digital theft remains a significant concern, making users vulnerable. Although AI holds promise for banking services (Misuraca & Nordt, 2020), the associated issues require serious attention (Zherdetska et al., 2021). The challenge is making AI-driven banking services trustworthy and reliable, a challenge that can be overcome with the right strategies and measures in place.

### **Strategic Alteration and Ethical Considerations**

Existing literature highlights the revolutionary potential of AI in banking. AI has been recognized as a future enabler (Xue et al., 2011), strengthening banking services and benefiting many users (Mogaji, 2018). Despite this, the success of AI in banking is complex. While some users benefit, others experience technology anxiety, and concerns about digital theft and ethical issues persist (Camacho et al., 2022). AI's potential is substantial, but its negative aspects must be addressed to maintain its reputation within the banking sector. This calls for strategic alteration and ethical considerations, a responsibility that all stakeholders in the banking sector must actively engage in.

There are two main perspectives on AI in banking. Astha and Hermann (2021) argue that AI is revolutionary and beneficial, enhancing efficiency through technology-driven services. On the other hand, Fernandez (2019) and other critics highlight ethical concerns, privacy invasion, and the fallacies of automation. Current debates highlight these issues but offer few solutions. As we advance technologically, we must recognize AI's potential and pitfalls in banking (Kumar et al., 2021). AI's high standards can yield successful outcomes if implemented intelligently (Sestino & Mauro, 2021).

### **THEORETICAL FRAMEWORK AND FUTURE DIRECTIONS**

The theoretical foundation of this discussion is based on service-dominant logic, emphasizing the co-creation of value through actor coordination (Tran et al., 2021) and the theory of consumption value, which helps understand behaviours towards consumption (Sheth et al., 1991). Understanding and effectively deploying AI is essential for co-creating value in banking services (Mogaji et al., 2021). A conceptual framework can aid in understanding user preferences and the consumption of AI-driven financial services,

emphasizing value creation (Riikkinen et al., 2018).

The existing literature has broadly discussed AI's relevance in financial services, indicating the need for banks to market AI-driven services effectively. Despite growing acceptance, AI's success in banking remains debatable, with concerns about digital fraud, lack of trained personnel, and inadequate interfaces (Dahl et al., 2021). Addressing these issues is essential for strategically regulating AI-driven banking. Bank managers, policymakers, and personnel must understand AI's relevance to effectively manage its use (Hartwig et al., 2021).

Banking services are undergoing a revolution with continuous technological changes and AI-based upgrades. Consumers now expect seamless payment gateways, quick transactions, and robust services. However, challenges like transactional issues, privacy concerns, and technological complexities persist. To meet these challenges, responsive banking and adequate technology allocation are critical. Despite AI's crucial role, it requires proper implementation and strategic use to be truly effective (Font et al., 2021). Therefore, positioning AI effectively within banking services and introducing



personalized services are essential for future success.

## **METHODOLOGY**

### **Explorative and Inductive Qualitative Research Design**

Our study, employing an inductive and explorative research design, delved deeply into the role of AI in the banking sector and the marketing of related services. This approach, capturing experts' insights through qualitative research methods, was particularly suitable for our purpose as it effectively captures the meanings and interpretations associated with specific practices (Marshall et al., 2013).

Recognizing the dearth of research on AI applications in banking, our study embarked on a unique journey to fill this gap. We sought to understand how AI elevates consumer experiences, conducting expert interviews to explore the antecedents, outcomes, and moderators of AI-driven services within an emerging market context.

Our research questions, designed to extract meaningful data, focused on the attributes of AI, service-dominant logic, and theories of consumption values (Zeithaml et al., 2019). This process revealed new antecedents, outcomes, moderators, and mediators, which

supported the development of our research propositions and the creation of an integrated framework for AI-driven personalized banking services (Table 1).

Theme	Key study	Aim	Methodology	Key findings	Contribution of our study
AI in banking services	Rahman et al. (2021)	Relevance of AI inclusion in banking services, the crucial role of AI assistants and chatbots	Quantitative approach (SEM)	AI in banking services play a fundamental role; by providing service satisfaction Chatbots are essential and primarily function as a latent variable	The study was conducted in a developed nation, a context where modern banking originated. Our paper emphasizes the ongoing relevance of human intervention in the banking sector.
	Lee and Chen (2022)	Effectiveness of banking applications and efficacies of AI-based financial mechanism	Logistic regression and experiment	Financial ease of services was reached from banking applications, as people preferred daily financial transactions through apps	While the authors emphasized the relevance of AI applications using a logit model, we focus on the crucial strategies needed to implement AI effectively.
	Rajaobelin a and Ricard (2021)	Utilising the benefits of AI in strengthening the BFSI services	Conceptual article	BFSI services were strengthened through AI applications; an increase in downloads was the primary criterion for inclusion	We agree that consumers prefer using these applications; however, the issue persists due to the demographics of the users, which we address. Additionally, we emphasize the importance of training, development, and awareness among users. As a conceptual paper, further justification was necessary, which our results have highlighted.
	Camacho et al. (2022)	Role of AI in aligning banking and other financial services through a single AI-centric channel	Conceptual article	Consumer demography-centric strategies are recommended; employees were asked to be highly trained with advanced services	We agree that consumers prefer using these applications; however, the issue persists due to the demographics of the users, which we address. Additionally, we emphasize the importance of training, development, and awareness among users. As a conceptual paper, further justification was necessary, which our results have highlighted.

Our paper's primary objective is not only to shed light on the strategic implications of AI-driven services in the banking industry but also to equip the industry with a practical framework for their implementation. This underscores the immediate relevance and importance of our findings.

### **SAMPLE AND CONTEXT**

Our study focused on emerging markets, leveraging the expertise of fintech advisors, financial consultants, and bank managers primarily from South Asian countries such as India, Bangladesh, and Sri Lanka. These professionals were known for their international expertise and global understanding. Participants were recruited via LinkedIn by filtering their skills and expertise, and we also sought referrals from these participants. The target participants were professional experts in managerial roles within the banking industry, responsible for administration, consultation, technological upgrades, marketing, and digital transformation involving AI.

Our sample, a testament to the diversity of the banking industry, encompassed professionals such as bank managers, financial consultants, service designers, and developers from various organizations, departments, and

banks. This rich mix of participants, including managers employed in banks, financial service companies, and policymakers, ensured a comprehensive and well-rounded perspective, instilling confidence in the validity of our study. We made substantial efforts to reach out to various managers across nations to ensure a multi-country strategy in our research.

Our participant selection process was rigorous and meticulous. We initially communicated with participants through individual networks using purposive and snowball sampling, ensuring we reached professionals with diverse backgrounds and experiences. We conducted in-depth expert interviews with stakeholders from diverse backgrounds aligned with the research focus. Prospective participants were primarily chosen through LinkedIn, explicitly targeting those involved in banks' digital transformation strategies. In total, 75 prospective participants were contacted via email and provided comprehensive guidelines regarding the research context before participating in the online interviews. Ultimately, the sample consisted of 36 interviewees willing to contribute to our study, selected based on their expertise,

experience, and relevance to the research topic.

Renowned scholars such as Marshall and Huberman support using a sample size between 20 and 50 to provide reliable and valid conclusions (Van Esch et al., 2013; Marshall et al., 2013). This range is considered optimal for qualitative research as it allows for in-depth analysis and the emergence of rich themes and patterns. Table 2 presents the demographic information of the participants. Our data covered a range of banking and finance experts, with 50% from a core banking background, 33% from a financial advisor background, and 17% as financial consultants.

### **Data Collection**

We followed a pilot approach with a designed questionnaire and initially discarded eight industry experts. We used semi-structured interviews, which are highly recommended for developing themes and clarifying concepts (Van Esch et al., 2013). Initial questions helped build rapport with the interviewees, develop a preliminary understanding of the concepts, and capture novel ideas. This data collection approach enabled the interviewees to express

themselves freely (Flick, 2002), helping us explore new dimensions in our study.

The pilot approach allowed us to refine the questions and restructure their sequence to improve the interview flow. The pilot interviewees, who were selected based on their expertise and relevance to the research topic, did not identify any errors in the protocol but provided valuable feedback on the flow and structure. After considering this feedback, we made the necessary changes to the interview guidelines for the final data collection stage (Annexure). Their contribution was instrumental in shaping the final version of the interview guidelines, highlighting the iterative nature of our research process.

Due to the COVID-19 pandemic, we conducted our interviews via Zoom, with equal participation from all authors in this phase of the study. Each interview began with a brief description of our study and the ethical standards we followed, including verbal consent for recording. Participants agreed to have the interviews recorded and transcribed for future use.

To build rapport and develop a preliminary understanding of the concepts, we initially asked participants general questions and

addressed any queries they had. We then proceeded with the primary interview, guided by questions designed to facilitate relevant discussions on AI and banking. Since incorporating AI in banking service design is a relatively new phenomenon, understanding its inclusion requires emerging themes and insights into behavioural perspectives. We included probing questions to elicit detailed opinions from the interviewees.

The interviews were conducted without researcher bias, ensuring that preconceived knowledge did not influence the responses. However, we occasionally needed to steer the conversation back to the research focus to avoid digressions. This allowed us to pursue relevant issues effectively (Cornelissen & Thrope, 2001). In some instances, additional questions were necessary to clarify points or illustrate examples based on the interviewees' experiences. This approach helped build upon the concepts derived from their expert opinions. Each interview lasted between 45 and 60 minutes, followed by transcription using Microsoft Office Scripts. The transcripts were then saved for analysis.

### **Data Analysis**

We employed exploratory thematic analysis to identify emerging themes from the

interviews, a systematic method for analyzing data from recorded communication (Braun, 2022; Cumming et al., 2021). The process began with multiple readings of the interview transcripts (Farinloye et al., 2019), then grouping the data using NVivo and qualitative data analysis (QDA) software for better insights.

Understanding the strategic perspectives was crucial. To strengthen the analysis and develop the rationale, we adhered to the guidelines suggested by Braun and Clarke (2006). We used NVivo software to identify themes and patterns in the data analysis process.

Prolonged discussions among the authors led to creating a codebook and an initial framework to aid the coding process. These discussions helped identify relationships between concepts and categories. Initial concepts from the literature were used to create the categories, with selective coding assisting in deciphering the fundamental themes. The themes were compared with existing literature to provide unique insights into our current research. The coding and framework were aligned with the research objectives. The final themes and sub-themes were shared among all authors for feedback,

which informed the final design and alignment with the study objectives.

### **DATA CREDIBILITY AND AUTHENTICITY**

We took several steps to ensure the credibility of our data:

1. Ethical Compliance: We adhered to the ethical requirements of the author's affiliated institution, including obtaining permission and maintaining confidentiality (Mogaji et al., 2021).
2. Verification: We double-checked the participants' responsibilities to confirm they provided accurate job-related information, verified through LinkedIn and their company websites.
3. Engagement Regulation: Participants were asked to ensure they were willing to disclose necessary information about their ongoing projects.
4. Peer Debriefing: We debriefed our peers during data analysis to ensure transparency and relevance in the analysis process (Hashimov, 2014). We also provided detailed quotes from participants to support each code.

5. Member Checking: Transcripts were shared with participants to ensure credibility, a "member check" (Merriam, 2002).

The credibility of our dataset was evaluated using the four-dimension criteria (FDC) proposed by Forero et al. (2018), which include credibility, dependability, confirmability, and transferability. An interview guide was developed and tested in a pilot study with seven respondents from India's banking sector to assess the quality of the questions. The study underwent a rigorous research process with multiple iterations to maintain an audit trail, ensuring dependability. Data from experts across domains such as policymaking, banking, and business consulting, including AI experts, contributed to developing a comprehensive framework.

### **FINDINGS**

The inductive technique and qualitative data analysis revealed three major themes related to understanding personalized service and well-being through human-AI-driven banking services from an emerging market perspective. Including AI in banking services is a relatively new and unique phenomenon, with the banking sector continuously upgrading its technology (Table 3). Based on

expert opinions, we identified five dominant themes:

1. Developing AI-driven banking operational competencies for employees.
2. Real-time awareness of AI-driven services among consumers.
3. An AI-driven, user-friendly interface.
4. User diversity and real-time management of trust and privacy concerns with adequate human intervention.
5. Enhancement of the personalized service experience.

The detailed analysis based on experts' opinions is presented below.

### **Developing AI-Driven Banking Operational Competencies for Employees**

Unlike in developed nations, where AI and machine learning algorithms are already widely implemented, the banking mechanisms in emerging countries differ significantly. While AI-enabled banking represents a revolutionary shift, it necessitates a deeper understanding within these contexts. Emerging nations, predominantly characterized by manual banking services with minimal software usage, face distinct challenges. However, the

transition to an AI-enabled banking system can bring significant benefits, such as improved efficiency, enhanced customer service, and reduced operational costs. Managers in these regions acknowledge that banking services involve minimal technology in clerical and tactical tasks. Consequently, preparing for this transition demands extensive training and development.

Currently, banking managers are dedicated to training their workforce to enhance customer service. According to a CFO in the insurance and banking sector, "We are witnessing a revolution in our banking system. Even in an emerging country like ours, we have diverse user groups. Some prefer technology interactions, while others do not. Our key challenge is preparing our workforce to serve these users better."

In banks, managers play a crucial role as strategic decision-makers. They are not just preparing the workforce for the adoption of AI tools like chatbots and AI assistants, but also fostering a culture of continuous learning and improvement. Traditionally, even employees have been uncomfortable with technology-driven banking. Managers create an AI-centric vision among employees, emphasizing that functional knowledge is essential. Thus, they are not just

preparing the workforce to improve user experiences, but also inspiring them to embrace the changes brought by AI in banking.

A consultant in the BFSI sector highlighted, "We have received numerous complaints about digital frauds. Users were initially unaware of OTP (one-time password), user IDs, and NEFT (National et al.), and even our employees' faced challenges. Therefore, we train and motivate our employees to be future-ready."

Experts recognize the transformative potential of systematic AI banking, understanding that developing an AI-centric ecosystem can provide unique and enhanced banking experiences for users. However, establishing such a system takes time and effort. Managers encourage employees to train in advanced banking tools to become more proficient. During discussions, the quality of service remains a top priority, necessitating constant learning and training. Through their managerial skills, managers promote an AI-centric banking culture and integrate a new banking ecosystem within their organizations to better serve users.

### **Real-Time Awareness for AI-driven Services Amongst Consumers**

In the past, banking systems in emerging nations were primarily manual. Customers had to visit bank branches even for minor transactions, often facing long queues, service delays, and other manual bottlenecks. Managers noted that while some demographics know AI-driven banking, others do not. Given the situational uncertainties, the relevance of AI-enabled banking is paramount, but comprehensive user education is essential.

Traditionally, users visited banks for tasks like passbook renewals or chequebook requests. Today, many of these services can be handled via banking applications, with AI automating several processes. This shift requires raising awareness among users, and bank employees actively encourage customers to utilize these technologies.

### **AI as an Enabler**

AI streamlines banking mechanisms, tracking necessary transactions and enhancing user experience by preventing service bottlenecks. However, awareness remains challenging, particularly in rural areas where technology adoption could be faster. Managers acknowledge that urban



areas have more readily embraced AI, but rural areas present significant challenges. Regular campaigns are conducted to educate users on the benefits of AI-enabled banking, resulting in a growing number of users adopting these services.

### **User Education Campaigns**

Banks hold weekly campaigns to educate users about AI-enabled banking to bridge the knowledge gap. These initiatives have led to a significant increase in the adoption of banking applications as users begin to appreciate the technology's time-saving benefits.

### **AI-Driven Interfaces**

AI-driven interfaces are crucial for modern banking. Experts trust these interfaces to provide a platform for seamless transactions. Bank managers emphasize the need for continuous upgrades to these interfaces to keep them user-friendly. Tutorials are provided to help users navigate these systems, which helps reduce transaction delays and unnecessary visits to bank branches.

### **Human Intervention and Trust**

Despite AI's advantages, human intervention remains necessary to address critical user

queries and provide personalized assistance. The diverse user demographics in emerging markets mean that not everyone can quickly adapt to automated systems. Thus, human support is integrated with AI services to ensure smooth operations and user education. During the pandemic, human intervention was particularly crucial in maintaining banking functions.

Managers highlight the importance of combining human intervention with AI to help users effectively understand and use AI-driven services. This approach ensures that even those less familiar with technology can benefit from AI advancements in banking.

### **Personalized Human Intervention in AI-Driven Banking**

Experts emphasize the benefits of personalized human intervention in banking. Data reveals that personalizing this intervention is crucial. Through in-house ERP software that treats each customer as a unique segment, banking executives can monitor users' banking activities, providing deeper insights into their behaviours.

### **Personalized Assistance and Fraud Detection**

Human intervention via in-house ERP helps better understand user patterns. For instance,

an executive can proactively offer assistance if a customer struggles with certain transactions.

"Human intervention through in-house ERP helps to understand their pattern better. The AI can give necessary service reminders, and the AI can understand their pattern. Suppose someone is trying to do certain transactions but failing to do so. So, our executive can reach out to them and provide necessary solutions." (Manager, bank)

Human intervention also aids in fraud detection. If unfamiliar activities are tracked based on the user's priority location, the bank can immediately inform the customer, helping to prevent fraud.

"Human intervention also helps to identify them. According to the priority location, if any other activities get tracked, we immediately inform them about the unfamiliar activities, which helps us to detect the fraudulent activities." (Advisor, finance)

Digital piracy is a growing concern in emerging markets. Despite the preference for AI-enabled banking during the pandemic, digital fraud increased significantly. Combining human intervention with systematic AI banking can help identify fraudulent activities. While AI has significant benefits, its technical limitations make human intervention essential. Personalized assistance from banking executives enhances the user experience, especially for those uncomfortable with technology.

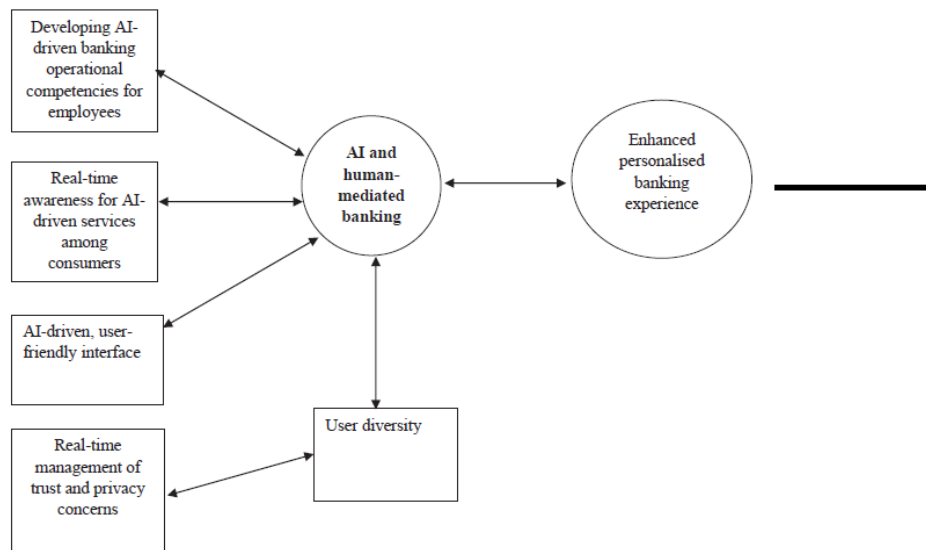


Figure 2: Conceptual model for an AI-powered financial service powered by humans

### **Enhancement of the Personalized Banking Service Experience**

Previously, users had to visit bank branches frequently, often enduring long queues, which negatively impacted their service experience. Systematic AI banking has revolutionized this dynamic. Regular human intervention and guidance from bank managers have made banking more accessible and user-friendly.

Today, users can complete their banking transactions from home using AI-enabled services, significantly reducing the need for branch visits. AI service assistants, chatbots, and AI navigation tools provide substantial guidance, making banking more convenient and personalized.

"Ultimately, banking services should help a user address financial confusion. Earlier users had visited branches frequently for minimal services. However, they can complete the necessary banking works."  
(Consultant, fintech)

"Our AI bots are intelligent enough to guide them during a financial transaction. They even can request chequebooks through the app. Inclusion of advanced enablers has enhanced their service experience."  
(Manager, bank)

### **AI-Driven Applications and User Experience**

AI-driven banking applications offer intelligent features such as navigation and gesture recognition, which benefit users significantly. Chatbots and service assistants are crucial in guiding users through their daily financial needs and enhancing the banking experience. Managers recognize the importance of these AI enablers and encourage their use.

"According to the experts, AI-driven banking applications have several intelligent characteristics (navigation, gestures) that benefit users. The inclusion of chatbots and service assistants is highly significant. These tools provide substantial guidance to the users and help them fulfil their daily financial needs."

By incorporating AI navigation and gestures, banking applications offer a more personalized and efficient service. These enablers help users track their transactions and other financial activities, making banking more accessible and enjoyable. Bank managers promote these new features to improve the user experience in emerging markets, ensuring customers receive technological and human support.

"Since the dynamics are different in an emerging market, the users can enjoy the services through human intervention and trained banking professionals."

## **CONCLUSION**

This research, which delved into expert opinions on personalized banking services and the integration of human-AI-driven banking, provides practical insights for managers in the rapidly evolving digital banking sector. The study contributes theoretically by proposing a framework that underscores the importance of emphasizing personalized banking integrated with human intervention in banking services. Key areas of exploration included presumptions about personalized banking services, AI's impact on banking, human interventions, and the strategic roles of marketing managers in AI adoption.

Our findings, which include [specific key findings], offer valuable insights for the banking industry, especially in emerging economies facing similar challenges with AI-driven banking services. We recommend future quantitative research to empirically investigate AI-driven banking and AI-mediated personalized banking services, considering the moderating role of human

intervention. Additionally, exploring trust and privacy concerns in AI-driven banking using consumption values theory could further enhance the formulation of personalized banking services. Comparative studies between digital banking and AI-driven banking services are also suggested to broaden understanding.

Like any research endeavour, this study has limitations that warrant consideration. For instance, generalizing our findings beyond AI-driven banking in emerging markets or to other financial services in developed nations, such as insurance and investment, may not be appropriate due to the study's specific focus. Moreover, the COVID-19 pandemic may have influenced consumer perceptions of AI-mediated banking services differently in various regions. Therefore, future research should continue to build theoretical frameworks for personalized banking mediated through AI, accommodating diverse global contexts and evolving consumer behaviours.

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