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AI-Driven Disruption in Banking: OCBC's Bold Move Toward Digital Service Optimization

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ABSTRACT

Technology has become an integral part of almost all business activities, from operations to customer interactions. In this context, companies are required to transform in order to remain relevant and competitive. Digital transformation, through the use of artificial intelligence (AI), has become a strategic approach to improving efficiency, innovation, and service quality, particularly in the financial sector. This research is important because AI not only changes how financial institutions operate but also reshapes customer expectations and experiences. This study aims to explore how OCBC Bank implements its digital transformation strategy with an emphasis on the use of AI to optimise financial services. It uses qualitative methods with literature studies from several sources, such as scientific articles, theoretical books, OCBC Bank's annual reports, official publications from OCBC, and previous studies relevant to AI and digital transformation in the financial sector. The researcher found that OCBC Bank has been actively involved in the use of AI and is one of the first banks globally to implement Generative AI for all employees. OCBC also focuses on leveraging AI in three key functions: personalisation and customer service, operational efficiency, and risk mitigation. The implementation of AI has proven to drive operational efficiency, accelerate service processes, and significantly enhance the quality of interactions with customers.

Keywords: Digital transformation, Artifical intellegence, Financial service, Digital finance, Finance innovation.

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INTRODUCTION

Rapid technological developments have brought about major changes in all aspects of life and business. Technology has become an integral part of almost all business activities, from operations to customer interactions. In this context, companies are required to transform in order to remain relevant and competitive. Digital transformation is the process of integrating digital technology into all aspects of business operations, fundamentally changing how organisations operate and deliver value to customers (Adam et al., 2025). Digital transformation has become a strategic priority for companies across various sectors, including the banking industry.

The banking industry is currently facing significant challenges in terms of service, particularly due to the limitations of conventional systems such as slow manual processes, limited service hours, weakened security, and a lack of personalisation in interactions with customers. This situation reduces customer satisfaction levels and has the potential to diminish loyalty, ultimately weakening banks' competitiveness in an increasingly competitive environment (Raviteja, 2024). On the other hand, changes in customer behaviour, which now rely more heavily on digital services, are driving banks to innovate quickly and adapt their business models to more modern and responsive technologies. This is supported by previous research, which discusses the major transformation occurring in the financial sector, particularly banking, focusing on how large European banks are responding to the challenges and opportunities posed by the open banking phenomenon and the development of financial technology (FinTech). This journal concludes that the future of banking lies in the Invisible Bank model, which refers to banks that are increasingly less physically visible but increasingly stronger digitally (Stefanelli & Manta, 2023).

Changes in consumer behaviour, coupled with rapid advances in digital technology and increased expectations for speed, security and ease of service, require the banking industry to continue to adapt and innovate. Today's consumers are no longer satisfied with conventional, slow and impersonal banking services. In response to these challenges, one of the most transformative forms of innovation is the application of artificial intelligence (AI) technology in digital financial services (Noreen et al., 2023), which can improve operational efficiency while providing a more responsive and personalised service experience tailored to individual customer needs.

Artificial intelligence (AI) has emerged as one of the most transformative technologies in changing how financial services are provided and managed. AI helps automate processes, accelerate them, identify trends that humans cannot detect, enhance employee productivity by eliminating repetitive and time-consuming tasks, and protect both companies and clients (Wang, 2024). The rapid adaptation of AI is changing the financial market landscape (Para et al., 2025), with AI bringing capabilities that are transforming the way the best financial functions are provided. The use of AI is a form of strategic innovation to create added value and maintain competitive advantage amid increasingly fierce competition, including in the banking industry.

OCBC Bank is an active player in the banking industry that implements a digital transformation strategy based on artificial intelligence (AI). As one of the leading banks in Southeast Asia, OCBC has integrated digital technology into various lines of business, from internal operations to customer experience (Januarita, 2025). OCBC promotes the use of digital technology and improves credit processes to expand its service reach and strengthen the quality of its financing. OCBC was one of the first banks in Singapore to adopt AI, establishing an AI unit in 2018 that is now known as the Group Data Office (OCBC Annual Report, 2024). The bank has developed several initiatives, such as the use of AI chatbots (OCBC ChatBuddy), customer behaviour analysis, and automation of internal business processes. These innovations demonstrate that OCBC leverages artificial intelligence not merely as a tool but as the core of its service and business development strategy.

According to OCBC's 2024 annual report, over six million business decisions are supported by AI-based systems daily, including personalised product recommendations, risk management, and transaction anomaly detection. The results include a 50% increase in employee productivity, a 95% increase in account openings, and over a 30% improvement in fraud detection accuracy (OCBC Annual Report, 2024). This initiative is supported by significant investments in data infrastructure, such as the Red Hat OpenShift-based Enterprise Data Science Platform (EDSP), which facilitates the development of scalable and sustainable AI applications. EDSP enables OCBC to enhance performance in credit analysis, anti-money laundering (AML), and customer chatbot optimisation. EDSP also improves credit risk management processes with better insights into exposure and supports the Bank's overall Risk Management strategy (OCBC Press Release, 2022).

However, behind this transformation lie challenges in terms of technology adoption, human resource readiness, and data protection. Therefore, this study proposes a research question on *how OCBC Bank implements its strategy in adopting artificial intelligence (AI) as part of its digital transformation, as well as evaluating the extent to which this technology has succeeded in optimising the quality of financial services provided to customers*. Through this study, it is hoped that a comprehensive understanding of the implementation of artificial intelligence (AI) in the banking sector as one of the best practices in improving the quality of financial services can be obtained, as well as serving as a strategic reference for other financial institutions in facing the increasingly competitive digital era.

LİTERATURE REVIEW

Digital Transformation

In his publication with Didier Bonnet and Andrew McAfee, George Westerman states that digital transformation is not merely the adoption of technology, but also organisational and cultural change to improve company performance or reach (Westerman, George, Didier Bonnet, 2014). Digital transformation is an organisation-wide strategy aimed at leveraging digital technology to modernise core business processes and introduce new services. Its benefits include increased customer engagement, employee support, operational improvements, and enhanced business value (Pratt, 2024). Digital technology focuses more on the human aspect than on the technology itself, as this process changes how companies operate to be more customer-centric. This is supported by strong leadership, challenges in changing corporate culture, and the use of technology that empowers employees (Elfrida et al., 2024).

Successful digital transformation requires a structured strategy that encompasses technology, people, culture, and leadership. Transformation strategies include branch digitisation, enhancing customer experience through self-service, and integrating data analytics for personalised services (Latifah et al., 2024). Key strategies in digital transformation in the financial sector, particularly banking, include automation and reduction of physical branches, focusing on digital customers, adopting advanced technology, and shifting from traditional physical-based business models to data and technology-driven digital services.

Artificial Intelligence (AI)

The history of Artificial Intelligence (AI) actually began in the 1950s, when Alan Turing published a paper discussing the potential for machines to possess true intelligence. At that time, the term Artificial Intelligence began to be introduced, but there were no real applications or AI methods used until the late 1990s (KAUR et al., 2020). According to previous research, Artificial Intelligence (AI) is a branch of computer science focused on creating systems capable of performing tasks that typically require human intelligence, such as learning, decision-making, and pattern recognition (Mytnyk et al., 2023). AI is a digital technology used to create intelligent systems in banking, such as chatbots, robo-advisors, credit scoring, and digital security systems (Radenković et al., 2023). In finance, AI is used to provide automated services that mimic human interactions, perform data-based credit assessments, detect suspicious activities, and analyse financial trends predictively.

AI integration has transformed the way communication, customer service, recruitment, and asset management are conducted in the financial sector. For the successful implementation of artificial intelligence (AI), it is essential to have a clear understanding and acknowledge the impact of AI on the company, including recognising its role in supporting the company's objectives. AI is not intended to replace employees but rather serves as a complement that enhances their capabilities (Elfrida et al., 2024). Beyond customer service, AI can be a valuable tool in academic research and investment strategies, reducing reliance on human intuition in financial decisions, and providing rapid insights based on big data for regulators and market participants (Rehman et al., 2025).

According to previous research, optimising resource use makes banking operations more cost-effective and time-efficient, while providing responsive digital services that are secure and tailored to each customer's needs (Agustiawan, 2024). Thus, the application of AI in financial services does not replace the role of humans, but rather complements and strengthens employee capabilities and helps companies achieve their goals in a more strategic and targeted manner (Smit, 2024). Optimising financial services through AI not only improves service quality but also strengthens the competitiveness and resilience of the financial sector in the digital era.

Optimisation of Services in The Financial Sector

Financial services are all forms of economic activity related to money management, including banking, insurance, investment, and payment systems provided by financial institutions to individuals, businesses, or governments (Frederic S. Mishkin, 2017). Financial services are a series of activities provided by financial institutions that are now transforming through the concept of open banking, which involves sharing customer data between financial institutions via secure APIs. (Harris, 2025) (Finextra, 2023) (Bach, 2023).

Financial service optimisation is defined as the use of AI tools to enhance the customer experience, particularly in providing inclusive and personalised financial services to underserved communities (Nnenna Ijeoma Okeke et al., 2024). The objectives of optimisation in financial services include improving the speed and accuracy of risk analysis and fraud detection, enabling collaboration between financial institutions in AI model training without compromising customer data, supporting compliance with regulations, data protection, and cybersecurity, and delivering smarter and more responsive financial services to market dynamics (Oladele, 2025) (Hubbis, 2023).

METHOD

Research Subject

The subject of this research is OCBC Bank, The Oversea-Chinese Banking Corporation (OCBC) Bank is a Singaporean bank established in 1932 from the merger of three local banks, namely Chinese Commercial Bank (1912), Ho Hong Bank (1917), and Oversea-Chinese Bank (1919). Born during the global economic crisis (the Great Depression), OCBC was established to help the community overcome financial difficulties, both personally and in business. In 2008, Bank NISP Indonesia changed its name to Bank OCBC NISP to reflect the support of OCBC Singapore as the majority shareholder. Now the second-largest financial services group in Southeast Asia by assets and one of the highest-rated banks globally, with an Aa1 rating from Moody's, OCBC Bank and its subsidiaries offer a wide range of commercial banking, specialised financial services, and wealth management, including consumer banking, corporate banking, investment banking, private banking, and transaction services, as well as treasury services, insurance, asset management, and securities brokerage. The bank has over 630 branches and representative offices across 18 countries and regions. (OCBC Annual Report, 2024)

Data Collection

The method used in writing this article is qualitative analysis with data collection techniques in this study conducted through library research. Library research was conducted by reviewing various written sources relevant to the method being studied. The data sources collected were secondary data, which involved gathering information from several literature sources, such as scientific articles, theoretical books, OCBC Bank annual reports, digital banking industry research reports, official publications from OCBC and regulators, and previous studies relevant to AI and digital transformation in the financial sector. Through literature review, this study explores the strategies implemented by banks to adopt AI technology, the challenges faced, as well as its impact on customer experience and operational efficiency.

Data Analysis

The data analysis technique used is qualitative content analysis. The analysis process begins with data reduction, which involves selecting and filtering relevant information from various sources such as scientific journals, annual reports, news articles, and official company documents. Information that does not align with the research focus is eliminated to maintain data quality and consistency. Following this, the data is analysed in depth through the interpretation process, which involves understanding the context and meaning behind the collected data. The researcher interprets how AI-based strategies influence the optimisation of OCBC's financial services and how this reflects disruption in the traditional banking system. Finally, the conclusion stage is conducted, which involves formulating the main findings that answer the research questions and providing conceptual and practical implications of AI application in the banking sector. Through this stage, it is hoped that the research can provide a comprehensive understanding of the impact and direction of digital banking transformation, particularly in the context of OCBC Bank as a case study.

RESULTS AND FINDINGS

OCBC Digital Transformation Strategy

The digital transformation strategy emphasises the importance of digital platforms as the main foundation for various digital initiatives. These platforms encompass technology-enabled processes, data and analytics utilisation, effective solution delivery, and the development of flexible and customisable relational capabilities tailored to the company's needs. In formulating the digital transformation strategy, the author draws on Westerman's theory, which highlights business model transformation through the integration of digital technology across various aspects of OCBC's financial services. This transformation encompasses three main domains: Customer Experience, such as the development of mobile-based applications, chatbots, and 24/7 virtual service assistants; Operational Processes, such as the use of AI for automated fraud detection; and Business Model, such as creating new business models, new revenue streams, and new ways to reach the market.

AI as the Foundation of Future Financial Services OCBC Bank

The development of financial services at OCBC Bank is part of a digital transformation strategy that focuses on improving operational efficiency and customer experience. In the face of technological disruption, OCBC is actively adopting artificial intelligence (AI) to support banking services such as customer service automation, personalised financial offerings, and investment data analysis. The development of OCBC Bank's financial services refers to a series of innovations and digital technology integrations, particularly artificial intelligence. In this era of rapid digital transformation, artificial intelligence (AI) has become the main foundation for shaping future financial services, including the provision of more efficient, personalised, and data-driven financial products and services. This includes the digitalisation of customer service processes, the development of service applications, and the ease and speed of service.

In 2018, OCBC NISP Bank launched the ONe Mobile app to facilitate customers' banking needs. Approximately 90% of banking activities that are usually carried out at branch offices are targeted to be accessible through this app. Customers' adaptation to this technology is evident from the 40% increase in ONe Mobile transactions, which has also driven a 46% growth in fee-based income. In addition to transactions, customers are also beginning to use ONe Mobile for financial management, including opening online deposits. The growth in deposits opened through digital channels was recorded as 8 times faster than traditional channels, with a total increase of 62.75% compared to the previous period.

In 2024, based on its annual report, OCBC developed a new feature in OCBC Mobile called Financial Fitness Checkup Lite. Financial Fitness Checkup is a digital feature provided by OCBC Bank in the OCBC Mobile app, designed to help users assess their personal financial health independently and quickly. The lite version of this feature allows users to answer a series of simple questions related to income management, expenses, savings, investments, and protection. Based on the findings of the 2024 Financial Fitness Index (FFI), 80% of young people tend to spend money to keep up with their social lifestyle, up from 73% in the previous year. These findings emphasise the importance of improving financial literacy to encourage wise financial decision-making.

Integrating AI for Process Efficiency at OCBC Bank

OCBC Bank strategically integrates Artificial Intelligence (AI) technology into its core operational processes to improve the efficiency, accuracy, and scalability of its services. This integration is not only aimed at automating repetitive tasks but also at driving smarter, data-driven decision-making across various banking functions. OCBC Bank's application of AI in service process optimisation includes several features, such as the use of AI for fraud detection and prevention in mobile banking, chatbots and virtual assistants for customer service, and suspicious activity detection. Since 2016, OCBC Bank has implemented a fraud monitoring system that assigns a risk score to every online transaction. OCBC uses machine learning and AI technology in its transaction monitoring system to combat financial crime. This AI system processes various data, including banking products, customer profiles, and risk levels, to perform contextual and comprehensive analyses.

In optimising its services, OCBC Bank has taken strategic steps to expand the use of artificial intelligence technology, particularly generative AI, through the launch of OCBC GPT, a chatbot based on large language models (LLMs) such as ChatGPT (the launch followed a six-month trial period (April–September 2023) involving approximately 1,000 employees from various departments, including investment research, product management, and marketing. OCBC GPT is used to compile investment research reports, translate content into multiple languages, and draft responses to customers. As a result, employees' tasks can be completed 50% faster than before. The system is also operated in a secure and closed environment, ensuring that all data entered by OCBC employees is not shared with Microsoft or any external parties. This reflects OCBC's commitment to data security and confidentiality.

OCBC Bank to be AI-first with new AI unit

The application of artificial intelligence (AI) technology has become a key element in improving competitiveness and the quality of financial services in the digital era. Recognising the importance of this, OCBC Bank has taken a strategic step by creating AI-based products and services as part of its digital transformation. In 2018, OCBC Bank consistently continued its transformation in response to the dynamics of the banking industry and the rapidly evolving needs of its customers. These transformation efforts will continue to be strengthened to position OCBC Bank as an institution that transcends traditional banking roles, with the readiness to face future challenges through the use of digital technology. OCBC has formed an internal artificial intelligence (AI) unit. This initiative is part of the bank's digital transformation strategy to strengthen its technological capabilities and create a competitive edge in the digital age. The establishment of this special unit is led by Singaporean data scientist Ken Wong and initially consists of only three members. Ken Wong plans to double the team size within a year, in line with the increasing volume of AI projects to be implemented.

Ken Wong stated in an interview that OCBC has built a special internal facility for artificial intelligence research and development. This demonstrates the institution's commitment to innovation and exploring advanced technologies. Two key technologies in AI development are deep learning neural networks and graphics processing units (GPUs). The special unit is named AI Lab@TOV or AI Lab and operates under The Open Vault at OCBC (TOV), the bank's fintech and innovation division. AI Lab@TOV was established with the primary objective of developing AI capabilities internally and strategically. The

laboratory serves as a test-bed or initial testing ground for the latest AI technologies before they are implemented in the bank's main systems. AI Lab utilises OCBC's data sandbox and APIs, enabling the safe exploration of new concepts using anonymous customer data.

Furthermore, in 2025, OCBC Bank in Hong Kong launched an artificial intelligence (AI)-based stock advisory service called AI Oscar (OCBC Securities' Customer Artificial-Intelligence Radar). This service is designed to help customers identify and predict stock price movements more accurately and efficiently. AI Oscar uses deep learning algorithms that have been trained with historical data spanning over ten years, covering more than 4,000 stocks from major exchanges such as the Singapore Exchange (SGX), Hong Kong Exchange, NASDAQ, New York Stock Exchange, and NYSE American. The model is updated daily to remain relevant to current market conditions.

Through this system, OCBC customers receive stock trading ideas via email that have been analysed by AI. These recommendations include stocks that may not be widely known but have promising investment potential. This approach allows investors to consider broader market opportunities without having to manually analyse thousands of stocks. Customer feedback has been very positive since the launch of the service. According to an interview with Asian Banking and Finance, they view the information from AI Oscar as a valuable reference in investment decision-making. In addition to being available in Hong Kong, the service has also been implemented in Singapore and Macau, with plans to expand into other global markets such as the United States. Going forward, OCBC also plans to integrate AI Oscar features into their trading app, allowing customers to access recommendations more quickly and conveniently.

Fueling AI Growth Through Strategic Partnerships

Over the past few years, OCBC has established itself as a pioneer in the adoption of artificial intelligence (AI) at the enterprise level, particularly in generative AI (genAI) technology. By integrating genAI capabilities into various internal processes and customer-facing services, the bank has demonstrated a strategic and comprehensive approach to digital transformation. In the process of innovation and AI development, collaboration between companies has become a strategic necessity. Through cross-organisational synergy, companies can share resources, technological expertise, and access to more diverse data. Over the past few years, OCBC Bank has partnered with various companies to integrate AI technology into its operational processes and customer services.

Table 1. List of OCBC Collaboration Partners

No	Year	Collaboration Partners	Collaboration Objectives
1.	2024-2025	Ant International	Develop AI-based digital *credit* (Indonesia) and tokenised deposits for cross-border settlement efficiency (Singapore-Malaysia)
2.	2024	Cloudera	Building a data and generative AI platform to improve service efficiency, predictive analytics, and product personalisation for OCBC NISP
3.	2022	NTU Singapore (Nanyang Technological University)	AI research for data centre energy efficiency, data security (homomorphic encryption), and cyber resilience
4.	2017-2018	ThetaRay	Detecting suspicious transactions using AI and reducing false positives in monitoring financial crimes

No	Year	Collaboration Partners	Collaboration Objectives
5.	2018	Ondot	Enhancing the digital card user experience (digital card control) through AI-based mobile banking applications
6.	2018	EZMCOM	AI-based authentication and identity protection solutions on digital banking platforms
7.	2018	vPhrase	Automatic visualisation and explanation of analytical data in narrative form (Natural Language Generation)
8.	2017	BlackSwan Technologies	Automatic monitoring of entities within the financial network to prevent terrorism financing and money laundering
9.	2017	Silent Eight	Automating data processing in AI-based anti-money laundering (AML) systems

The Challenges of AI-based Digital Transformation at OCBC Bank

In its efforts to optimise AI-based financial services, OCBC NISP Bank will undoubtedly face a number of strategic, technical and social challenges that must be anticipated in order to ensure that AI implementation is effective, secure and sustainable. These challenges are not only related to technology, but also concern trust, regulation, and overall organisational readiness. The challenges faced are not merely reminders, but can be followed up on to maintain optimal use of artificial intelligence. The main challenge to be faced is related to data security and customer privacy. The greater the use of AI, the higher the risk of data leaks, misuse of personal information, and potential cyber attacks. Given that the financial industry stores highly sensitive data, strengthening AI-based security systems and complying with data protection regulations are absolutely necessary.

Second, OCBC also needs to address the challenge of customer trust in AI technology. Not all customers feel comfortable with decisions made entirely by artificial intelligence systems, especially for personal financial matters. Therefore, a hybrid approach that combines AI with a human touch is still necessary to maintain customer trust. Finally, OCBC will also face internal challenges related to the availability and competence of human resources (HR) in the field of AI. To support AI-based digital transformation, the company needs talent with specialised skills in data science, machine learning, and AI governance, which are currently still rare in Southeast Asia.

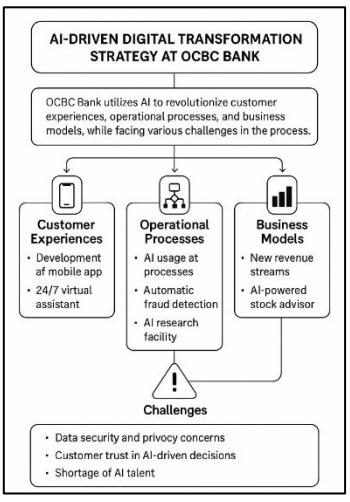

Figure 1. AI-Driven Digital Transformation Strategy

This image outlines OCBC Bank's strategy for digital transformation, which is heavily fuelled by artificial intelligence. The bank aims to improve three core areas: customer experience, internal operations, and business models. In terms of customer experience, OCBC is focusing on improving its mobile app and offering 24/7 virtual assistants to support users at any time. This reflects the bank's commitment to providing convenient and responsive services. In operational processes, AI is embedded in daily activities, particularly to automate fraud detection and support advanced research through specialised facilities. These efforts are designed to improve efficiency and security. In terms of business models, OCBC is exploring new ways to generate revenue, such as offering AI-based stock advisory services. This demonstrates the bank's efforts to remain innovative in a competitive market. However, this transformation journey has not been without its challenges. The bank faces issues such as maintaining data privacy, gaining customer trust in AI-generated decisions, and the continuing difficulty in finding skilled AI professionals.

Discussion

The results of the analysis of OCBC Bank's digital transformation strategy show that the integration of artificial intelligence (AI) is not merely a matter of technology adoption, but rather a comprehensive approach, with AI as its core foundation. This encompasses three main aspects: customer experience, operational process optimisation, and business model innovation. This finding aligns with the digital transformation approach outlined by Westerman (2011), which emphasises that effective digital transformation does not solely depend on technology adoption but also on organisational restructuring and the creation of new service value through digital innovation.

When compared to research by (Micheal, 2025), which focuses more on the use of AI and blockchain for fraud prevention in digital financial transformation, their primary focus is narrower, centring on security and compliance aspects. Although they emphasise the importance of behavioural analysis and real-time data processing to detect suspicious activities, their discussion does not cover how these technologies are applied comprehensively in business model development or user experience improvement, as OCBC has done.

Furthermore, this research is also reinforced by (Kollwitz, 2025), which highlights the convergence between AI and Robotic Process Automation (RPA) as the foundation for efficiency in the financial sector. Although the approach is more technical and operational, the context reinforces the findings of this study, particularly regarding how OCBC automates processes such as reporting, transaction monitoring, and internal content management through OCBC GPT. However, OCBC goes further by establishing an internal AI Lab as a strategic innovation centre, a step that has not been extensively detailed in the two comparative studies.

Compared to the two studies, OCBC's approach is more comprehensive. It not only targets operational efficiency and system security but also creates added value and demonstrates a more mature and contextual application. Thus, it can be concluded that OCBC's digital transformation strategy reflects best practices that combine technological innovation with customer service orientation and organisational readiness. This approach not only aligns with but also surpasses the frameworks presented in previous studies, offering a more mature and future-oriented integration model.

CONCLUSION

Artificial intelligence currently plays a strategic role in enhancing companies' capabilities in understanding consumer behaviour, processing large amounts of data, and providing more efficient, accurate, and personalised services. In the context of OCBC Bank, it is relevant to examine AI adoption strategies as an integral part of the digital transformation being implemented, while also evaluating the effectiveness of its implementation in optimising service quality, particularly in the financial services sector. The results indicate that OCBC Bank has implemented a comprehensive AI adoption strategy, positioning it as a key element in driving efficiency and innovation. Through initiatives such as

automated fraud detection, 24/7 chatbot services, and smart analytics for investment recommendations, the entire financial services ecosystem of the bank has become more responsive, personalised, and data-drivenPlease use 10-point font size. Please margin the text to the justified. Manuscripts should be 1.5 times spaced. Footnotes and endnotes are not accepted. All relevant information should be included in main text. Do not indent paragraphs; leave a space of one line between consecutive paragraphs.

This optimisation not only improves the customer experience, but also strengthens the institution's competitive advantage amid an ever-changing industry landscape. Initiatives such as OCBC GPT and AI Oscar reflect how AI can assist human activities in making faster and more accurate decisions, while opening up opportunities for new financial business model innovations. AI is expected to become a key partner in the development of adaptive and sustainable financial services. However, despite AI's extraordinary capabilities, the role of humans remains irreplaceable. AI is not intended to replace humans, but rather to empower and strengthen human capabilities in facing increasingly complex business challenges. Therefore, collaboration between humans and machines is an important foundation in creating a smart, inclusive, and sustainable future financial services ecosystem.

This finding has practical implications for managers and banking industry players to continue promoting AI integration and optimising the use of AI as part of their strategy to improve services and operational efficiency. However, this study has limitations in its scope, which focuses on only one institution, so the findings cannot be fully generalised to a broader context. For future research, it is recommended to expand the study to include several banks or other financial institutions and to explore ethical and regulatory aspects of AI implementation in greater depth.

Recommendations

Based on the findings of this study, strategic recommendations can be considered, both by OCBC and by other financial institutions undergoing digital transformation. OCBC is advised to continue to strengthen the development of artificial intelligence technology internally to stay in line with the rapid development, especially in terms of the utilisation of generative AI and predictive analytics. a service approach that combines the roles of technology and humans still needs to be maintained, considering that not all customers feel comfortable fully interacting with automated systems, especially in terms of personal financial decisions. Thirdly, it is important for OCBC to continue to encourage the improvement of digital financial literacy among customers, especially the younger generation, so that the use of features such as Financial Fitness Checkup can be maximised. Fourth, collaboration with external parties such as technology companies, fintech startups, and research institutions will be very useful to expand the scope of innovation and accelerate the development of new solutions. Finally, organisational readiness in terms of human resources and compliance with data protection regulations must remain a priority so that the digital transformation can take place safely, sustainably, and gain the trust of the public.

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