WEP Warwick Evans Publishing

International Journal of Global Economics and Management

ISSN: 3005-9690 (Print), ISSN: 3005-8090 (Online)
Volume 10, Number 8, Year 2026
DOI: https://doi.org/10.62051/ijgem.v10n8.06

China Merchants Bank's Digital Transformation Journey

Yuyan Wei

China-ASEAN School of Economics, Guangxi University, Nanning, Guangxi, China

ABSTRACT

This case study uses the background of China Merchants Bank's digital transformation from 2018 to 2025. It describes the bank's strategic practice of using MAU as the North Star metric and promoting "three shifts" (from customers to users, from bank cards to App, from transaction thinking to customer journey). The case focuses on the dilemma faced by the head of retail finance when MAU growth hit a bottleneck and management disagreed on whether to adjust the North Star metric. The case data comes from CMB's annual reports and public sources.

KEYWORDS

China Merchants Bank; Digital Transformation; Fintech; MAU; AUM; Value Bank

1. INTRODUCTION

In December 2024, Chen Fang, General Manager of Retail Finance, saw a budget guideline suggesting changing the North Star metric from MAU to AUM and cutting tech investment growth from 15% to 8%. Six years earlier, CMB had adopted MAU as the North Star, driving a strategic shift. MAU grew from 81 million in 2018 to 123 million by 2024, but growth slowed to single digits and even dipped in Q3 2025. Meanwhile, AUM jumped from 6.8 trillion to 16.6 trillion yuan, growing at 13.6% CAGR. Some argued MAU had peaked and the bank should focus on value; others insisted MAU remained a competitive moat. Chen had to decide his stance in three days [1].

2. TRANSFORMATION BACKGROUND

2.1. Industry Changes: The Traditional Growth Model Fails

Around 2018, China's banking industry was undergoing profound change. Interest rate liberalisation continued to compress net interest margins, undermining the traditional reliance on deposit-loan spreads. Third-party payment platforms such as Alipay and WeChat Pay rose rapidly, not only diverting banks' payment and settlement business but also occupying customers' financial entry points through high-frequency lifestyle scenarios. At the same time, financial disintermediation accelerated, as high-quality companies turned to bond issuance or equity financing. New regulatory policies, including the new asset management rules, restricted off-balance-sheet expansion, making deposits and capital increasingly scarce.

Customer behaviour was also changing irreversibly. The spread of mobile internet meant that younger generations preferred to handle all financial transactions through their smartphones. They were no longer content with standardised products; they expected personalised, tailored services, and their loyalty to any single bank declined significantly. Under these multiple pressures, the old model of growth driven by balance-sheet expansion was no longer viable. Banks had to find new sources of profit and new competitive advantages.

Content from this work may be used under the terms of CC BY-NC 4.0 licence (https://creativecommons.org/licenses/by-nc/4.0/).
Published by Warwick Evans Publishing.

2.2. CMB's Dilemma: The Old Path Blocked

By the end of 2018, CMB reported total assets of 6.75 trillion yuan, net profit of 80.56 billion yuan, and a non-performing loan ratio of 1.36%. These figures looked strong, but management was deeply uneasy [1].

First, deposit growth was weak. In 2018, deposits grew by only 8.28%, while loans increased by 10.32%, pushing up funding costs. In an era of interest rate liberalisation, securing low-cost deposits became increasingly difficult.

Second, customer behaviour had shifted permanently. More and more customers avoided physical branches and conducted banking through their phones. Young people were particularly accustomed to using Alipay and WeChat, and banks' direct relationships with customers were being intermediated by these third-party platforms. President Tian Huiyu admitted: "Over the past decade, traditional financial institutions have witnessed fintech completely reshaping the retail business, from payments to deposits, loans, and wealth management. Banks' roles as fund intermediaries and information intermediaries have been deeply shaken."

Third, the traditional "scale wins" strategy no longer worked. Under tighter capital constraints and stricter regulation, simply expanding the balance sheet could not deliver profit growth. Management realised that sticking to the old path might lead to a decoupling of scale and profit.

Fourth, fintech companies had redefined service standards. Companies like Ant Financial and WeBank offered superior customer experiences and agile iteration, raising customer expectations for second-level responses, personalised recommendations, and seamless integration with daily life. Chairman Li Jianhong stressed: "The key to technology leadership is to achieve a comprehensive renewal of the business model through fintech."

A core question confronted the bank: where should it go next?

2.3. Strategic Judgement: Leaping from 1.0 to 3.0

In the 2018 annual report, President Tian Huiyu proposed that Chinese banking was moving through three stages. Stage 1.0 was the "scale wins" era, driven by asset expansion. Stage 2.0 was the "excellence in structure and quality" era, where customer mix and asset quality determined profitability. Stage 3.0 was the "new business model" era, in which technological revolution would fundamentally reshape banks' business models.

He argued that a digital, intelligent, and open Bank 3.0 era was arriving. It would completely change service models, marketing, risk control, operations, and ultimately the growth trajectory. Whether banks liked it or not, the technological revolution would exponentially increase productivity and transform production methods and business models.

Based on this diagnosis, CMB defined its transformation direction: shift from serving only "customers" to serving all "users"; move from relying on "bank cards" to cultivating the "App" as the primary interface; and change from "transaction thinking" to "customer journey" thinking. That same year, the board raised the allocation for the Fintech Innovation Project Fund from "1% of pre-tax profit" to "1% of operating income", demonstrating serious commitment with tangible resources. MAU (Monthly Active Users) was established as the "North Star metric" to steer the entire digital transformation.

3. STRATEGIC FRAMEWORK AND ORGANIZATIONAL SUPPORT

3.1. The Three Shifts

From customers to users: Traditional banks defined customers as account holders. CMB expanded this boundary to include non-account users who could register and use the App without holding a card. This created a larger internet-style funnel for future conversion. MAU was chosen because it measured this expanded user base, not just existing customers [2].

From bank cards to Apps: A bank card is a limited product, while an App is a platform that can host banking, lifestyle, and third-party services. In 2018, CMB introduced fully cardless branches, where customers used the App for authentication. This signalled that the App, not the card, would be the primary interface. Data showed that 27% and 44% of traffic on the two Apps came from non-financial scenarios, confirming the platform strategy.

From transaction thinking to customer journey: Traditional banks focused on selling individual products. CMB shifted to understanding the entire customer journey from need identification to service completion. It built a digital middle platform that aggregated customer data, transaction records, and behaviour traces. Algorithms identified intentions, predicted needs, and recommended personalised products in real time. This moved service from standardised to personalised, and from reactive to proactive.

These three shifts were interlinked and formed the strategic foundation for the entire transformation.

3.2. Organisational Support

To make these shifts work, CMB introduced three key organisational changes.

First, it set up an independent fintech innovation incubation platform with a fault-tolerant culture that encouraged experimentation. The board allocated 1% of operating income (over 2 billion yuan annually) to fund innovative projects. By end-2018, 931 projects had been submitted and 304 launched, serving as a testing ground.

Second, it established a network operation centre at head office level. This was not a passive call centre, but an active customer engagement unit that used data analytics to reach customers through digital channels. By year-end, it directly managed 3.86 million retail customers online. Their AUM grew 17.84% year-on-year, compared with 10.35% for the overall retail base, proving the value of proactive online operation.

Third, it formed cross-functional agile teams that brought IT and business staff together. This broke down traditional silos and reduced product iteration cycles from months to weeks or even days. By the end of 2018, 53 business areas had adopted this agile model.

These organisational supports enabled the strategic shifts to be implemented effectively.

4. IMPLEMENTATION PATH: SEVEN YEARS OF PRACTICE GUIDED BY MAU

4.1. Technology Investment and Infrastructure Construction

The smooth progress of digital transformation required solid technical support. Since 2018, CMB had continuously increased its resource investment in technology, demonstrating its firm commitment to digital transformation through actual capital spending [3].

In terms of technology investment, CMB maintained sustained growth. In 2018, the bank's information technology investment reached 6.502 billion yuan, a year-on-year increase of 35.17%, accounting for 2.78% of operating income. This investment scale was at the leading level among joint-stock commercial banks at that time. By 2023, technology investment had further increased to 14.126 billion yuan, with the revenue share rising to 4.59%. In 2024, despite overall industry pressure, CMB still maintained a high investment level of 13.350 billion yuan, accounting for 4.37% of revenue. Years of sustained high-intensity investment laid a solid financial foundation for its digital transformation.

Significant breakthroughs were achieved in cloud architecture construction. In 2018, CMB initially built a hybrid cloud infrastructure and accelerated the construction of cloud computing platforms and distributed transaction cloud platforms. The total deployment of X86 servers that year reached 2.71 times the amount at the end of the previous year, and one-third of applications had been migrated to the cloud architecture. The distributed transaction cloud platform's peak processing capacity reached 32,000 transactions per second, leading the banking industry. By 2023, CMB had taken the lead in completing the "full cloud migration of systems," and this project won the first prize of the Financial Technology Development Award from the People's Bank of China. The overall availability of cloud services exceeded 99.999%, supporting on-demand application expansion with minute-level elastic scaling capabilities.

The data middle platform and its capabilities were also continuously improved. In 2018, CMB's data lake capacity continued to expand, with data entering the lake growing by 53.91% from the previous year. At the same time, a big data processing platform was built, integrating customer data from 9 dimensions with the customer as the core, forming 17,000 data items and gradually building a unified customer view. By 2024, big data services covered 63% of the bank's employees, and data had become an important support for employees' business analysis work.

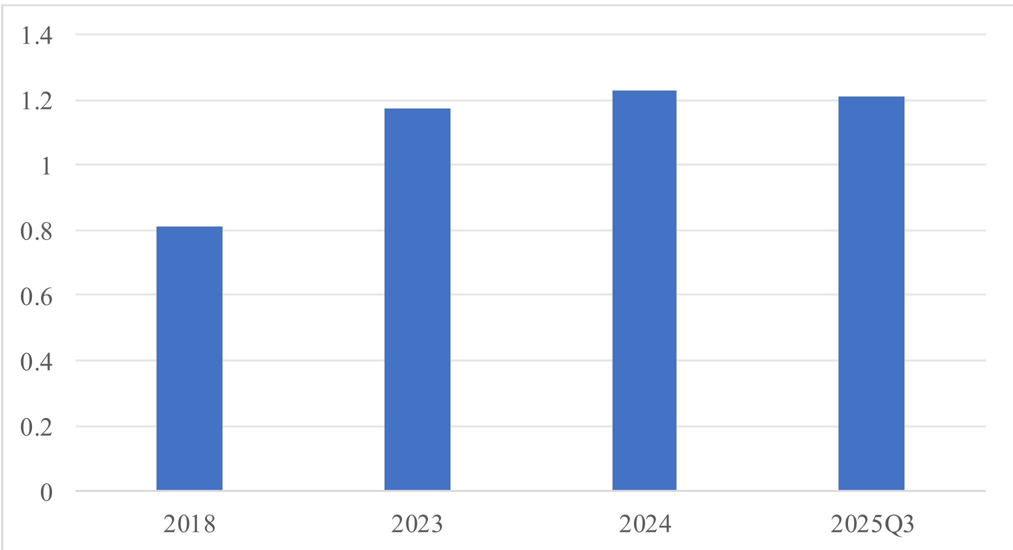

Figure 1. MAU Growth of CMB's Two Major Apps, 2018–2024 (in 100 million users)

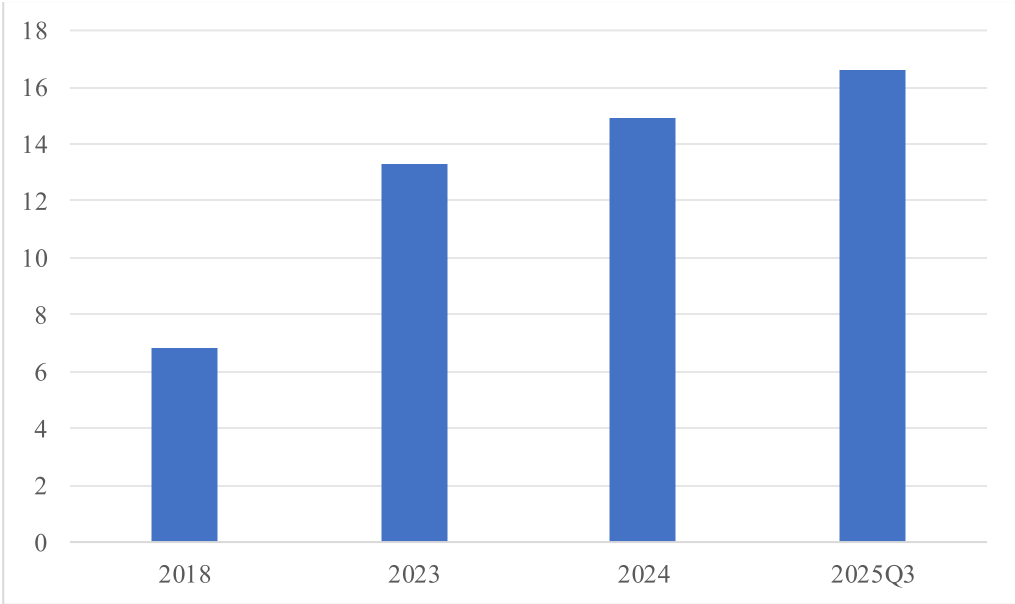

Figure 2. AUM Growth of CMB's Retail Customers, 2018–2025 (in trillion yuan)

4.2. Retail Digital Transformation: The Strategic Position of the Two Major Apps

Retail business was not only CMB's core pillar but also a key area for its digital transformation. Since 2018, CMB had used the two major Apps, "CMB China" and "Pocket Life," as the main platforms to comprehensively promote the digital operation and upgrading of retail business.

CMB used MAU as the core metric to drive the overall transformation. In 2018, the bank formally proposed MAU as the "North Star" metric, promoting comprehensive digital transformation in business models, organizational structures, and other aspects. That year, the combined monthly active users of the two Apps exceeded 81 million, a year-on-year increase of 47.24%. Among them, the CMB China App had 41.508 million monthly active users, and the Pocket Life App had 39.5387 million. Of the traffic on the two Apps, 27.11% and 44.21% respectively came from non-financial services, showing initial success in online scenario construction and external scenario expansion.

CMB insisted on iterative App optimization to continuously improve user experience. In 2018, CMB launched CMB China App version 7.0, building a fintech ecosystem around three directions: "connection," "operation," and "intelligence." Important upgrades were made in modules such as income and expense tracking, city services, fund sections, user communities, and intelligent services. At the same time, Pocket Life App 7.0 focused on high-frequency lifestyle consumption scenarios, upgrading around quality of life and promoting the transformation of the credit card industry. In 2023, the CMB China App further integrated artificial intelligence, intelligent customer service, and remote advisory capabilities, newly launching the intelligent wealth assistant "Xiao Zhao," which could provide one-stop wealth management services including asset analysis, product recommendations, market interpretation, and return tracking.

Digital customer acquisition channels achieved notable results. In 2018, CMB's online acquisition of debit cards accounted for 17.89% of total debit card acquisitions, and online acquisition of credit cards accounted for 61.21%. By building 1,726 retail customer label portraits, customer marketing touch frequency increased by 6.56 times, and the marketing success rate reached 17.42%, initially achieving "personalized" precision marketing. By 2023, the proportion of small and micro loan approvals and disbursements through online channels reached 66.74% of total channels, an increase of 7.13 percentage points year-on-year.

The user scale of the two major Apps steadily expanded, and the user base continued to consolidate. After years of operation, the combined monthly active users of the two Apps grew from 81 million in 2018 to 117 million in 2023, and further to 123 million in 2024. By the end of the third quarter of 2025, the CMB China App had 83.6367 million monthly active users, and the Pocket Life App had 37.0852 million, with the total still at a relatively high level of 121 million.

4.3. Corporate Banking Digitalization: From Transaction Banking to Industrial Internet

While advancing retail digital transformation, CMB also accelerated digital exploration in the corporate banking area, expanding services from traditional credit business to the industrial internet level.

CMB actively built a corporate mobile service system and launched a corporate App platform. In August 2018, CMB formally launched the enterprise-level mobile service platform "CMB Corporate App," focusing on customer acquisition and in-depth operation for small and medium-sized enterprises. Within less than six months of its launch, the platform had reached 533,900 corporate customers, with 205,500 monthly active customers. By the end of 2024, monthly active corporate customers on the corporate finance online channel increased to 1,949,400, a year-on-year growth of 14.88%.

In supply chain finance and industrial internet, CMB made forward-looking arrangements. In 2018, CMB proactively laid out industrial internet-related businesses, launched supply chain finance innovation pilots, participated in the Guangdong-Hong Kong-Macao Greater Bay Area trade finance blockchain platform led by the central bank, and executed the industry's first multi-level accounts receivable transfer financing transaction. As the exclusive partner bank for a leading petrochemical company's industrial internet phase I project, CMB provided its e-commerce platform with the "Cloud Bill" B2B account integrated solution. At the same time, CMB cooperated with a leading construction industry enterprise to build an industrial internet collaboration platform based on blockchain technology, focusing on providing supply chain financing services under centralized procurement for group member companies [4].

The bill business also achieved digital upgrades. In 2018, CMB completed the construction of the "Bill Butler" platform, becoming the first among large and medium-sized domestic banks to offer one-stop comprehensive bill services to enterprises. CMB also took the lead in launching the "online discount" product with dual-terminal access through online banking and mobile App, breaking the time and space limitations of traditional discount business. The online bill discount volume for that period reached 205.88 billion yuan, of which small, medium, and micro enterprises accounted for 88.44%. By 2023, the number of bill service customers reached 159,700, a year-on-year increase of 11.38%.

Relying on treasury management cloud services, CMB helped enterprises with their digital transformation. CMB continuously optimized its treasury management platform, launched CBSmini, a fund management system for small and medium-sized enterprises, and provided treasury management services to more than 2,000 group customers. By the end of 2024, the number of corporate customers using treasury management cloud services reached 615,200, a year-on-year increase of 28.81%.

4.4. Technology-Enabled Risk Control: Digital Risk Management System

Technology not only drove business growth but also reshaped risk management models. CMB applied big data, artificial intelligence, and other technologies deeply across the entire risk identification, warning, and resolution process.

Retail smart risk control. In 2018, retail finance monitored more than 4,000 variables across multiple dimensions including customer devices, environments, and transaction counterparts, achieving millisecond-level risk decision-making and billion-level data computing capabilities to prevent fraud risks, covering nearly 2 billion retail financial transactions throughout the year. In 2023, the "Libra" system protected transaction security, effectively helping customers block telecom fraud and reducing the rate of non-cardholder counterfeit and fraudulent use to 0.1 per 10 million.

Corporate smart early warning. Wholesale finance built a risk big data platform, integrating 15 types of external data and three years of internal transaction data, establishing corporate customer relationship graphs and an intelligent early warning system. In 2018, within nine months of going live, the corporate customer intelligent early warning system achieved a 73.05% accuracy rate in identifying potentially risky corporate customers. In 2023, the intelligent early warning coverage rate for "all businesses" both on and off the balance sheet reached 100%.

Credit process digitalization. By continuously optimizing the online credit review process, by 2018, 80% of bond credit rating models were processed automatically online, and review efficiency improved by 30% compared to offline processes. In 2023, the online risk control platform issued 303.56 billion yuan in new corporate loans, a year-on-year increase of 53.58%. Inclusive mortgage loans were reduced from an average of one month to 2.7 days.

In 2023, CMB built a smart risk control engine, comprehensively applying internal and external data to continuously improve digital risk control capabilities and efficiency. In 2024, it accelerated the construction of the Group Risk Management System (GRS), creating a full-process risk management platform for corporate asset businesses, with intelligent early warning covering all on- and off-balance-sheet businesses.

From technology investment to retail transformation, from corporate banking digitalization to risk control system reshaping, CMB spent seven years building a complete digital transformation implementation path. The core logic of this path was clear: use MAU as the guide to acquire user traffic, use Apps as the carrier to build user relationships, use data as the driver to enhance service capabilities, and ultimately convert user value into sustained AUM growth.

5. TRANSFORMATION RESULTS AND PERFORMANCE

5.1. Dual Drivers: MAU and AUM

MAU grew from 81 million in 2018 to 123 million in 2024, a compound annual growth rate of 7.2%. AUM expanded from 6.8 trillion yuan to 16.6 trillion yuan by Q3 2025, a CAGR of 13.6%. The high-end customer base also grew steadily: Golden Sunflower customers (monthly average assets above 500,000 yuan) reached 5.78 million, and private banking customers (above 10 million yuan) reached 191,400. Technology investment increased substantially, and technical milestones included the "One Move" financial large language model, the first open-source 10-billion-parameter model in banking, applied in over 120 scenarios. AI-driven automation replaced more than 17,000 full-time equivalents in 2023 and saved 26 million labour hours in 2024. Financial performance remained solid despite heavy investment: net profit was 80.56 billion yuan in 2018, 146.60 billion in 2023, and 148.39 billion in 2024, with ROAE at 14.49%, among the best in the industry.

5.2. User Structure and Activity Optimisation

By end-2024, users under 35 accounted for 43.6% of total app users, up nearly 12 percentage points from 2018. The core 25–30 age group more than doubled from 12.7 million to 31.2 million. Highly active users (15+ days per month) rose from 18.5% to 31.2%. Average session length doubled from 3.2 to 6.8 minutes, and daily opens increased from 1.3 to 2.4. Time spent on wealth management modules grew from 22% to 47% of total session time. Among Golden Sunflower customers, the proportion making their first wealth product purchase via the App rose from 18.7% to 54.3%; for private banking customers, 41% used the App for asset allocation, up from 12% in 2019. User retention extended from 18 months to 31 months, and 12-month retention among young users climbed from 41% to 67%. These trends show that CMB was moving from traffic acquisition towards deep user engagement.

5.3. Product Penetration and Cross-Selling

The average number of products held per retail customer increased from 2.1 to 3.4. The share of customers holding three or more product types (wealth management, funds, insurance) more than doubled from 12.6% to 28.9%. Customers with five or more products grew from under 500,000 to 1.87 million. Among high-end segments, Golden Sunflower customers held 5.9 products on average (up from 3.8), and private banking customers 8.1 (up from 5.2). Intelligent recommendation systems drove 37.6% of first-time wealth management purchases (up from 8.3% in 2019), with a conversion rate of 24.3%, far exceeding the 6.8% of traditional push methods. In 2024, algorithm-driven sales reached 312 billion yuan, accounting for 43% of total App wealth management sales.

Cross-selling also boosted stickiness: customers with 3+ products had 4.2 times the per-capita AUM, 2.7 times the monthly activity, and only one-third the churn rate (7.2% vs 21.5%) of those with fewer products. Asset allocation diversified: deposits fell from 62% to 47% of total retail assets, while wealth products, funds, insurance, and trusts rose to 53%. The share of credit card users who opened a wealth account via the App increased from 14% to 38%, and their average first purchase amount was 23,000 yuan, higher than the 12,000 yuan for direct registrants. Five-year customer lifetime value rose from 3,400 yuan to 6,100 yuan, a 79% increase, with cross-selling contributing about 60% of the gain.5. Challenges and Outlook

Despite its achievements, CMB faced several significant challenges. Net interest margin narrowed continuously from 2.57% in 2018 to 1.98% in 2024, reaching 1.94% in Q4 2024, due to falling loan yields and rising deposit costs. MAU growth slowed from 47% in 2018 to single digits and even declined slightly in Q3 2025, making it harder for the North Star metric to drive transformation. Conversion from MAU to AUM remained suboptimal, as many users only used basic services and young active users contributed limited assets. Technology investment, exceeding 10 billion yuan annually, was difficult to translate into measurable returns, and some projects took years to pay off. Talent was also a constraint, with only 10,650 R&D staff (9.14% of total) and persistent gaps between technical and business teams. Data silos across retail, corporate, and credit card businesses still prevented a unified customer view, hindering precision marketing and risk control. Risk pressures stayed elevated, with real estate NPL at 4.74%, consumer credit NPL at 1.54%, and related watch-list and overdue ratios rising. These were common issues for traditional banks in digital transformation, and how CMB addressed them would shape its future competitiveness.

6. CONCLUSION

The case of China Merchants Bank's digital transformation from 2018 to 2025 offers valuable insights into how a traditional commercial bank can navigate the challenges of the fintech era. By adopting MAU as the North Star metric and implementing the three strategic shifts, CMB successfully transformed its business model from a product-centric bank to a user-centric digital platform.

Over the seven-year period, the bank achieved significant results. MAU grew from 81 million to 123 million, while AUM expanded from 6.8 trillion to 16.6 trillion yuan. The user base became younger and more engaged, product penetration increased substantially, and technology capabilities reached industry-leading levels. These achievements demonstrate that the MAU-driven strategy was effective in building a large and active user base, which in turn laid a solid foundation for value conversion.

However, the case also reveals the limits of a pure traffic-focused approach. As MAU growth plateaued and conversion to AUM remained suboptimal, the bank faced a critical choice: continue pursuing user scale, or shift towards deeper value management. This dilemma reflects a broader tension in digital transformation between short-term user acquisition and long-term profitability.

Looking ahead, CMB's experience suggests that the next phase of transformation will require a more balanced approach. Rather than treating MAU and AUM as opposing metrics, the bank may need to find ways to integrate them into a coherent framework that drives both user engagement and asset growth. Maintaining technology investment while improving return on investment, breaking down data silos, developing interdisciplinary talent, and managing emerging risks will be equally important.

Ultimately, the case shows that digital transformation is not a one-time project but an ongoing process of adaptation. The bank that successfully navigates this process will be the one that remains customer-focused, data-driven, and strategically flexible in the face of continuous change. For CMB, the journey from "Fintech Bank" to "Value Bank" is still unfolding, and its next decisions will determine whether it can sustain its competitive edge in the years to come.

REFERENCES

[1] Zhang, X. Y. (2023). Research on the practice and effect of retail business digital transformation of China Merchants Bank (Master's thesis, Shihezi University). https://doi.org/10.27332/d.cnki.gshzu.2023.000068

[2] Chang, F. Y. (2023). Research on the path and performance of retail business digital transformation of China Merchants Bank from the perspective of strategic change (Master's thesis, Inner Mongolia University of Finance and Economics). https://doi.org/10.27797/d.cnki.gnmgc.2023.000351

[3] Ma, R. (2024). Research on the implementation path of retail business digital transformation of China Merchants Bank driven by fintech (Master's thesis, Hebei GEO University). https://doi.org/10.27752/d.cnki.gsjzj.2024.000195

[4] Li, Y. (2025). Research on innovation of commercial bank service model empowered by FinTech-A case study of China Merchants Bank's digital transformation path. Forum on Research and Innovation Management, 3(10). https://doi.org/10.70711/FRIM.V3I10.7513