



The Influence of Digital Finance on the Marketing Management of Commercial Banks under the Support of Mobile Social Network

Can Huang ^a, Jun Yao ^b, Wencun Wang ^c and Di Zhao ^{a*}

^a Lyceum of the Philippines University, Muralla St, Intramuros, Manila, 1002 Metro Manila, Philippines.

^b Zhangzhou Institute of Technology, Zhangzhou City, 363000, China.

^c Agricultural Bank of China, Liaocheng Branch, Liaocheng City, 252000, China.

Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

The business model, application technology, and service scene of digital financial marketing business management of commercial banks should be transformed into digital form, and a digital and mobile digital financial marketing product service model should be formed to improve the marketing management effect. This should be done against the backdrop of digital finance and mobile social networks. This paper first discusses the fundamentals of commercial bank marketing management and the digital financial model of mobile social networks to examine the impact of digital and mobile marketing management on commercial banks. Second, it is suggested that mobile social networks and digital finance work together to better serve the needs of commercial

*Corresponding author: Email: zhao.di@lpunetwork.edu.ph;

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banks' marketing services and operations. To that end, a mechanism model of digital finance for commercial banks' marketing management is implemented with the aid of mobile social networks. Finally, this paper examines the frequency with which commercial banks sell their service platforms to clients through the mobile social networks and the activities of digital finance in this area. According to the findings, commercial banks' mobile digital financial marketing has a low service rate but a significant number of active users. Mobile social networks and digital financial marketing tools that push financial products in accordance with consumer preferences can increase the effectiveness of marketing management.

Keywords: Digital finance; mobile social network; commercial bank; marketing management; user activity.

1. INTRODUCTION

Digital technology and mobile social networks' growth and acceptance have allowed for the first time on a wide scale for the liberation of digital financial services from the constraints of physical outlets [1]. Since 2020, the sudden epidemic has also sped up the process of financial digitalization, which has evolved into the fundamental capability of many licensed institutions, including banks, insurance companies, and consumer finance companies to serve more customers and offer non-contact financial services [2]. The regulatory agencies have frequently released regulations at the policy level to support financial technology and digital transformation [3]. The Financial Science and Technology Development Plan (2022-2025) proposes to improve digital and intelligent marketing capabilities, use big data, cross-media analysis and reasoning technologies, activate enterprise data assets according to laws and regulations, gain insight into customer behavior preferences and real financial needs, intelligently push financial products, and provide financial management knowledge and service information that customers want and need on the basis of respecting consumers' wishes and protecting their legitimate rights and interests [4, 5].

Regarding the study of the effects of digital finance on commercial banks, Chang et al. (2023) used financial data from both digital finance and commercial banks in China [6] to analyze the effects of digital finance on commercial banks. They discovered that, from the perspectives of both operation and environment, digital finance promoted the growth of commercial banks. According to Lu et al. (2022), the commercial banks' marketing operations can benefit from the digital financial business model [7] by raising the calibre of the bank's goods and services, attracting more potential clients, and increasing revenues. Using information from more than

6,000 commercial banks in Europe and America [8], Li et al. (2021) examined the impact of digital finance on the marketing effectiveness of commercial banks. According to the study's findings, commercial banks can innovate their digital businesses and maintain their marketing effectiveness over the long run by using digital finance. From the standpoint of the application of digital technology to commercial banks, Ahmad et al. (2021) investigated the risks of commercial bank digital growth and discussed the root causes and traits of these risks [9]. The load structure of commercial banks will unavoidably change as a result of the financial industry becoming more technologically advanced and computerized according to RAMLI et al. [10]. The debt structure and marketing strategies of commercial banks have changed as a result of the comparatively low percentage of resident deposits in commercial banks, the high level of interbank liabilities, and the rapid development of digital finance.

The effect of digital finance on commercial banks has been more thoroughly discussed in the study that has already been done. The digital financial model has clear benefits over the conventional financial model. Through mobile social networks, commercial banks have direct access to consumer behavior data and preferences. Using this data, banks may more effectively focus their marketing campaigns, boosting customer happiness and engagement. However, as mobile internet and digital banking continue to advance, commercial banks' marketing strategies are running into obstacles. Commercial banks, according to some experts, are dealing with issues like changing customer acquisition strategies, entry and retention strategies, service model changes, scale growth, and value creation strategies. These issues result from the rapid technological advancement and changes in the overall environment. As a result, people's lifestyles have changed, and banks' conventional

business models have been unable to adapt to these changes. In the global development trend, the application of social network has brought about great changes, and the application of digital marketing in banking has begun, and it shows a trend of continuous expansion of scale application. Additionally, there are still risks in the marketing management of commercial banks despite the growing popularity of mobile apps and the transformation of the digital financial model. Based on the foregoing discussion, this paper will continue combining the marketing theory of commercial banks with specific empirical analysis to explore the impact of digital finance on the marketing management of commercial banks within the mobile social network.

2. RESEARCH METHODS AND MATERIALS

2.1 Basic Concepts of Marketing Management of Commercial Banks

The ultimate objective of commercial bank marketing, according to the idea of marketing, is to "meet the wants and desires" [11,12]. The ability of the exchange process to be carried out smoothly depends on how well the values and products developed by marketers meet the needs of customers and the level of exchange process management [13]. Social regulations and management processes are used to meet the needs and desires of both parties through commodity exchange. Table 1 displays how various commercial banks' marketing strategies vary from one another.

Combining the four different commercial bank marketing concepts in Table 1 [14], it is clear that commercial banks are moving away from the general marketing strategy of "market demand and social interests" in favor of the marketing method of "product promotion." The marketing objective of commercial banks is to advance social interests while advancing their own interests by meeting customer needs. The marketing management process for commercial banks is depicted in Fig. 1.

The process of marketing management for commercial banks is broken down into six steps in Fig. 1 under the internal management and external environment of commercial banks: marketing environment, marketing market, marketing combination design, marketing activity management, marketing effect evaluation, and marketing management control. Commercial banks' marketing environments have an impact

on their strategic choices and business models. The internal environment of banks and the exterior marketing environment make up the majority of the marketing environment for commercial banks. Commercial banks' ability to provide marketing services is impacted by their external marketing environment. It suggests that the effectiveness of marketing management is correlated with the standard of the banking marketing environment. Market structure analysis and customer analysis are the two fundamental components of marketing market analysis [15].

2.2 Digital Finance Model of Mobile Social Network

Information and communication technology (ICT) is primarily introduced into the financial industry by commercial banks, including account processing, payment and settlement, product design, retail terminals, automated teller machines, bank cards, smart cards, and business processing. Electronic money, mobile banking, and online banking are currently available. It might be superseded by P2P and other funding modes, though, as a result of the diversification of financing channels, particularly the growth of P2P (Peer-to-Peer) financing modalities [16]. The mobile social network's digital financial commercial banking concept is depicted in Fig. 2.

Commercial banks gradually roll up payment platforms in local areas, as shown in Fig. 2, under the mobile social network's digital financial mode. Commercial banks also conduct marketing business operations and information exchange with mobile social customers through third-party payment platforms, in addition to direct information exchange and business exchange with mobile social customers through physical terminals, internet terminals, and mobile social network terminals [17].

2.3 The Mechanism of Digital Finance on Marketing Management of Commercial Banks Supported by Mobile Social Network

The emergence of digital finance corrects the flaws in state-owned bank credit, increases the scope of credit funds, and increases credit funds' accessibility. Digital finance has cut the entry barrier for investment, improved investor services, and satiated social customers' money needs in the context of mobile social networks. Mobile social networks and digital finance are therefore

better able to match the demands of commercial banks' marketing services and business [18]. The mechanism of digital finance on the marketing administration of commercial banks assisted by mobile social networks is shown in Fig. 3.

Table 1. The difference of marketing concepts of different commercial banks

Marketing Concept of Commercial Banks	Emphasis	Marketing Model
Production-oriented marketing concept	Emphasis on product development and service quality improvement	Self-centered marketing model of banks
Promotion-oriented marketing concept	Emphasis on product promotion	Marketing model centered on bank self and product development
Customer-oriented marketing concept	Emphasis on customer needs	Market-oriented, implement the overall long-term development marketing model
Social-oriented marketing concept	Emphasis on social responsibility	Marketing mode of obtaining profits and social benefits on the premise of meeting customer needs

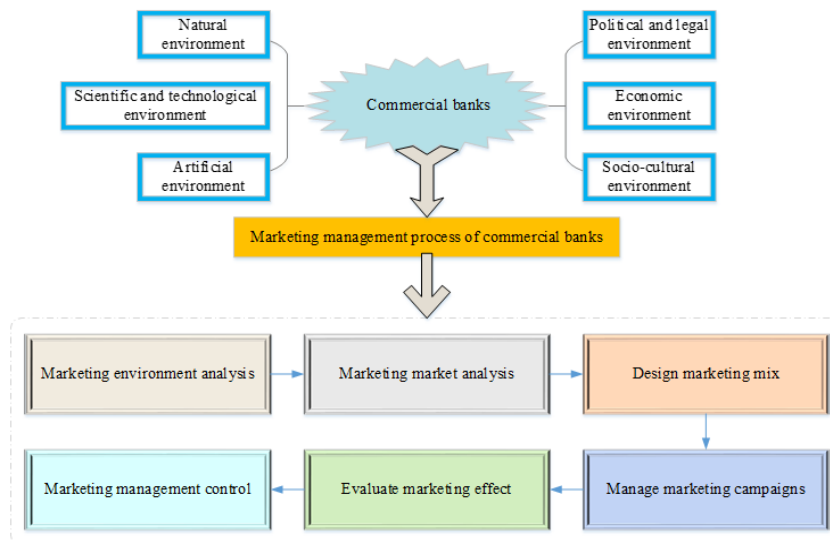


Fig. 1. The process of marketing management of commercial banks

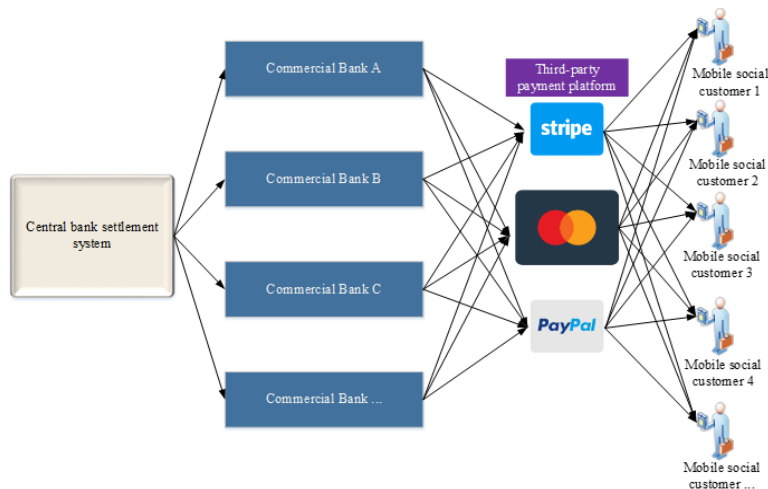


Fig. 2. Digital finance commercial bank model of mobile social network

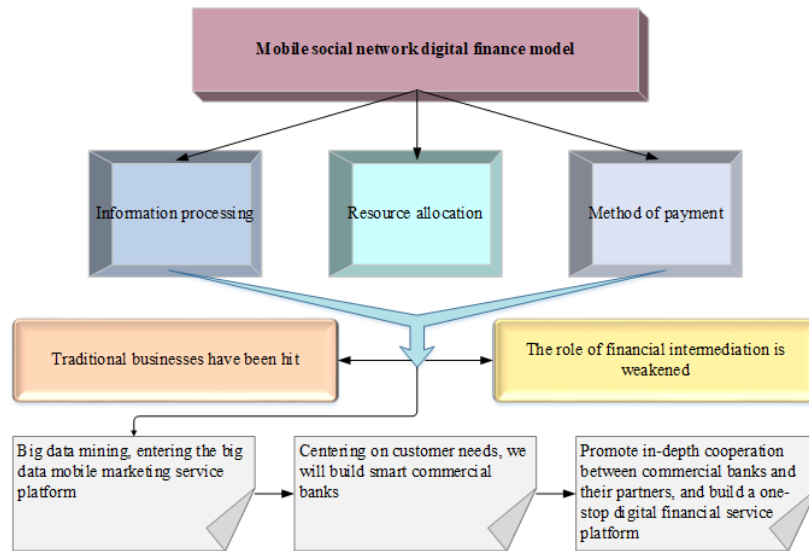


Fig. 3. The mechanism of digital finance on marketing management of commercial banks supported by mobile social network

For commercial banks, digital finance offers non-contact marketing options in Fig. 3. By obtaining bank credit and using their own commercial credit, commercial banks send out welcoming signals to other clients and cooperative banks. The demand for acquiring commercial credit has decreased as a result of the emergence of digital finance on mobile social networks, which has decreased the difficulty of granting bank credit and the requirement for transferring signals [19].

In this paper, Fixed Effects Model (FEM) is used to study the influence of digital finance on the marketing management of commercial banks supported by mobile social networks [20], and the specific expression of the empirical model is shown in equation 1:

$$ROA_{ij} = \beta_0 + \beta_1 FDI_{ij} + \beta_2 X_{ij} + \varepsilon_{ij} \quad (1)$$

ROA_{ij} represents the return on total assets of commercial bank marketing;

FDI_{ij} stands for digital financial development index;

X_{ij} refers to the customer size index of commercial banks under the mobile social network;

β_0 denotes the intercept;

β_1 indicates the correlation coefficient between independent variables and control variables;

ε_{ij} means random error.

3. RESULTS ANALYSIS

3.1 Analysis on the Activity of Digital Finance to Marketing Customers of Commercial Banks Supported by Mobile Social Networks

Since 2022, APP(Application) of major commercial banks has become the main carrier of digital finance and marketing management of commercial banks due to the pace of digital finance transformation supported by mobile social networks. The number of commercial mobile banking users in China in 2022 is taken as an example in this part, along with four indicators: sticky user scale, average daily startup and use, store word-of-mouth score, and product function experience [21]. Fig. 4 depicts how mobile social networks are used by the digital finance industry to sell to consumers of commercial banks.

According to Fig. 4, the six state-owned joint-stock commercial banks had an average monthly active user base of more than 74.7 million in 2022, while the Industrial and Commercial Bank of China had an average monthly active user base of more than 100 million, placing top with a score of 96.88. In terms of monthly active users and platform version, China Merchants Bank is inferior to China Construction Bank, but its users are well-respected. The ability of APP to acquire

customers and customer activity, however, fell short of expectations. The scores of other mobile apps are below 3.5, except for China Merchants Bank and Bank of Communications, whose APP scores are above 4.5. This, combined with the low service rate of commercial banks' mobile digital financial marketing, results in the low frequency of use of online digital financial

services [22, 23]. The main causes of the low ability of digital financial marketing management in mobile terminals of commercial banks are the low investment in online marketing, the lack of sufficient breadth in digital financial marketing, and users' inability to establish sufficient trust, which results in the low conversion rate of mobile users in digital financial marketing management.

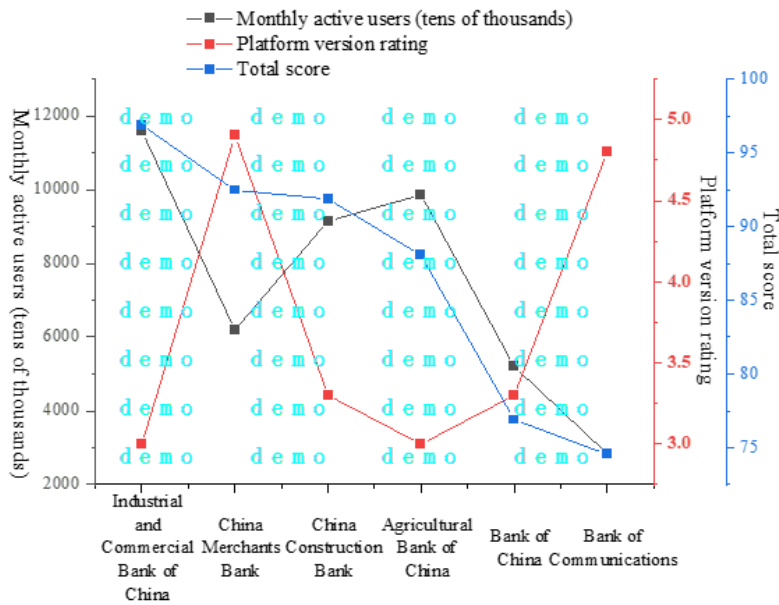


Fig. 4. The activity of digital finance in marketing customers of commercial banks supported by mobile social networks

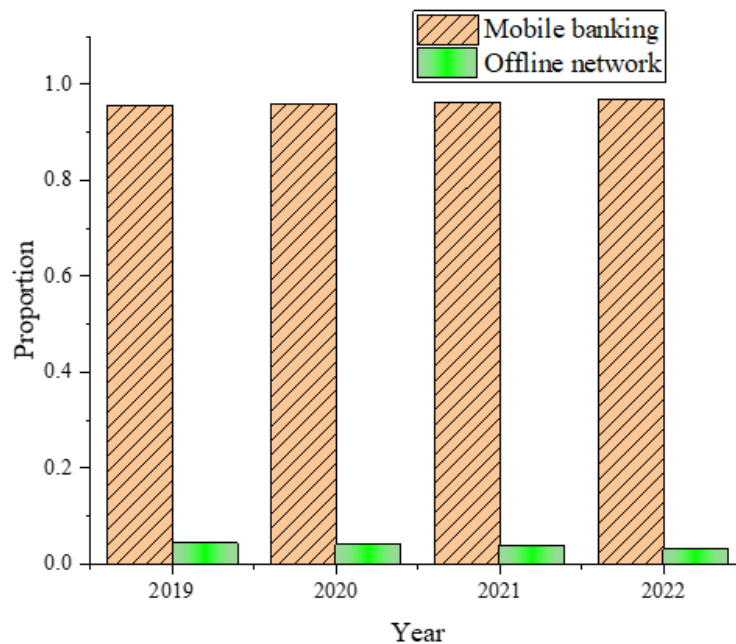


Fig. 5. Frequency statistics of digital finance on commercial bank marketing service platform supported by mobile social network

3.2 The Influence of Digital Finance on the Marketing service Model of Commercial Banks Supported by Mobile Social Networks

The usage patterns of commercial banks' trading platforms from 2019 to 2022 are used as examples in this section [24]. The frequency statistics of the commercial banks' mobile social network-supported digital finance marketing service platforms are shown in Fig. 5.

According to Fig. 5, by the end of 2022, clients conducted more mobile financial digital marketing transactions than they did in 2019—mobile marketing transactions accounted for 97.00% of all such transactions. The usage of offline outlets is gradually decreasing as users are more attracted to use the marketing management channel on mobile devices. There has been a tremendous improvement in network marketing interaction management and service informationization [25]. Mobile social networks that support digital financial marketing products enable financial products to be pushed in accordance with customer preferences, quickly identify those preferences in terms of products, increase customer stickiness, and boost the effectiveness of marketing management [26]. As a result, the mobile social network's financial digital platform has shown to be effective and is well-liked by users.

4. CONCLUSION

Since 2022, APP of major commercial banks has become the main carrier of digital finance and marketing management of commercial banks due to the acceleration of digital finance transformation supported by mobile social networks. This paper uses the number of user activities of commercial mobile banking in China in 2022 as a sample to analyze the customer activity of digital finance in commercial bank marketing with the help of mobile social network. It finds that while the number of user activities is high, the service rate of mobile digital finance marketing in commercial banks is low. The number of commercial bank trading platforms from 2019 to 2022 were used as samples to examine the impact of digital finance on the marketing service model of commercial banks supported by mobile social networks. It is discovered that the number of digital financial marketing transactions carried out by customers on the mobile side is higher than that in 2019 and the proportion of mobile marketing transactions

on the mobile side is 97.00%. Mobile social networks that support digital financial marketing tools can push financial products in accordance with consumer preferences and increase marketing management effectiveness. Through the application of digital marketing in the banking industry, we can promote the strategic transformation of banking institutions, identify the market positioning, clarify the direction of resource allocation, promote business innovation, enhance risk control ability, reduce management and operation costs, and provide brand-new communication channels and marketing means, so as to comprehensively enhance the market competitiveness of banking enterprises, promote growth, maximize value and better serve the society and the masses. Digital finance enabled by a mobile network is not the only way of operation, nevertheless, under the marketing management strategy of commercial banks. To create a new commercial bank marketing operation model, it is crucial for commercial banks to select a strategy that is appropriate for digital finance marketing.

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of manuscripts.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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