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Analysis of Internet Finance Models and their Impact on Commercial Banking: A Review from Chinese Financial Sector

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ABSTRACT

Internet technology has become a significant force in economic development, with its influence permeating the financial industry. The ability of internet enterprises to provide financial functions is key to their entry into the financial sector. This study examines internet finance models and representative cases from a financial function perspective, revealing how internet finance expands traditional financial boundaries, leading to rapid liability shifts, asset-side competition, and challenges in the payment sector for commercial banks. With evolving consumer financial behaviors, commercial banks must undergo reform to remain competitive.

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1. Introduction

During the market-oriented reform process, the financial sector's transformation has lagged. However, as the internet economy becomes a key driver of development, its influence on traditional sectors has gradually extended to finance. Internet finance, which combines financial services with internet and mobile communication technologies, has emerged as a new model in the digital age. This model facilitates capital circulation, payments, and acts as an intermediary for information. It has driven significant changes in the financial industry, pushing the boundaries of traditional finance. The impact of these changes on commercial banks is far more profound than the effects caused by economic fluctuations.

Both academia and industry have extensively explored the topic of internet finance and its influence on the transformation of commercial banks. The discussion largely revolves around three key aspects:

Defining the internet finance model: Researchers like Dong et al. (2020); Guo and Shen (2016); Ju and Zhang (2020) argued that the internet finance model is distinct from both the indirect financing provided by commercial banks and the direct financing from capital markets. This model primarily includes mobile banking and P2P financing.

The features of internet finance and its impact on commercial banks and the economy: According to Liao et al. (2020), internet finance is characterized by easy access to financial resources, relatively transparent transaction information, and the decentralization of resource allocation. These features make it different from traditional finance and lead to shifts such as the transfer of deposits from commercial banks, which in turn disrupt their profitability.

The rise of internet finance has accelerated financial disintermediation, promoted the marketization of interest rates, and effectively helped small and micro enterprises access financing. According to Zhong and Jiang (2021), internet finance is characterized by large amounts of information, low transaction costs, and high efficiency. Another area of focus in the

research is the strategies that commercial banks should adopt in response. Yang et al. (2023) argued that for banks with fewer branches, online banking is a more effective way to acquire new customers. DeYoung's research on U.S. banks suggests that branch density and online banking complement each other, and the adoption of online banking has a positive effect on banking performance. Du et al. (2021) proposed that banks should gradually take on roles such as "comprehensive financial managers" and "integrators of financial services."

However, existing research often overlooks the impact of changes in financial consumer behavior on the transformation of commercial banks. Financial consumers are the ultimate recipients of bank services and the final source of their profits. The challenge posed by internet finance to commercial banks arises precisely from its ability to rapidly engage financial consumers, thereby accelerating financial democratization and liberalization. Additionally, few studies have analyzed the development of internet finance from the perspective of financial functions, yet these functions are crucial to why internet companies have been able to cross into the financial sector. It is precisely through these financial functions that internet finance challenges commercial banks, and thus these functions are far more pivotal than the stability of financial institutions. These shifts in business models and industrial trends are having a more significant impact on commercial banks than traditional economic cycle variations.

2. Literature Review

Research on the rise of internet-based financial models shows that digital platforms have steadily altered the way commercial banks carry out their core financial functions. Early discussions described internet finance mainly as an extension of electronic banking, designed to simplify transactions and reduce operational friction (Lin et al., 2020). As digital systems evolved, however, scholars began viewing internet finance as a distinct financial ecosystem supported by online platforms, data-driven decision tools, and algorithmic credit assessment methods (Wen et al., 2021). These innovations have reduced banks' traditional advantage in accessing and processing financial information, an advantage historically central to their role as intermediaries in credit and deposit markets.

A growing body of work highlights how internet finance models—particularly peer-to-peer lending platforms, digital wallets, and third-party payment systems—alter the competitive landscape for banks. By offering rapid credit evaluation and low-cost service delivery, these platforms frequently attract customers who might otherwise rely on conventional banks (Broby, 2021). Consequently, banks are increasingly adopting their own digital infrastructures and integrating big data tools to preserve market share and improve internal operations. Studies suggest that banks that embrace digital transformation tend to achieve better cost efficiency, improved customer engagement, and enhanced product personalization(Shanti et al., 2023).

At the same time, the literature acknowledges that internet finance introduces new forms of risk. Data security challenges, algorithmic biases, and uncertainties in platform governance all pose complications for risk management within the banking system (Rasheed et al., 2021). Moreover, rapid flows of capital through online channels can create liquidity pressures, requiring banks to revise monitoring frameworks and stress-testing models. In response, recent studies emphasize cooperative approaches—such as bank-fintech partnerships, co-lending structures, and shared technological platforms—that aim to balance innovation with risk control (Ahmed, 2020).

Overall, the literature indicates that internet finance reshapes but does not eliminate the role of commercial banks. Instead, banks are compelled to reinterpret their financial functions credit allocation, liquidity management, and risk assessment—through a digital lens. The shift toward data-centric financial services has blurred traditional boundaries between technology firms and banks, making it essential to examine how these models influence operational processes, financial stability, and long-term competitiveness in the banking sector.

3. Research Methodology

This review follows a structured approach to examine how internet finance models influence the financial functions of commercial banks. The process began with identifying key themes in the field, including digital platforms, data-driven credit assessment, fintech–bank interaction, and emerging risk factors. Academic databases such as Scopus, Web of Science, Google Scholar, and ScienceDirect were used to locate relevant studies published over the past decade, ensuring that the review reflects current developments in digital finance.

Selected studies were then organized according to their contribution to three main areas:

(1) evolution of internet finance models,
(2) effects on banks' traditional financial functions, and
(3) risks, regulatory responses, and collaborative developments.

This thematic arrangement made it easier to compare findings across different countries and financial environments. The synthesis emphasizes points of agreement, emerging research gaps, and areas where further investigation is needed. The methodology does not involve primary data collection; instead, it relies solely on systematic analysis of existing literature to build a clear understanding of the topic.

4. Research Findings

4.1 Internet Finance Models and Typical Representatives from the Perspective of Financial Functions

In terms of internet finance models, academia generally shares a unified understanding of typical formats like internet payment, P2P lending, and crowdfunding. However, scholars use different criteria for classification. For example, Li Bo and Dong Liang categorize internet finance into three types: internet financial services, internet-based intermediation for financial services, and the extension of traditional financial services through the internet. On the other hand, Rasheed et al. (2022) divided it into two main categories: payment and disintermediation.

Since internet finance itself acts as a financial intermediary by providing financial functions, this paper will use Merton's six basic functions of the financial system as the analytical foundation. These functions include clearing and payment functions, funding and equity specialization functions, asset allocation functions, risk management functions, information provision functions, and solving incentive issues. This framework will be used to analyze and organize various internet finance models both domestically and internationally.

4.1.1 Asset Allocation Function

From the perspective of financial functions, the business models of internet finance both domestically and internationally primarily cover the following aspects, as shown in Table 1.

4.1.2 Capital Allocation Function

Online microloans, leveraging big data from e-commerce platforms, have become a major component of internet finance. Notable examples include Ant Financials' microloan services and Kabbage, which uses non-traditional credit data (e.g., social media activity) for lending decisions.

4.1.3 Payment and Clearing Function

The rise of third-party payment platforms has significantly impacted banks' intermediary businesses. Table 2 shows the fee comparison between traditional banking and third-party payments.

Table 1
Classification of Internet Finance Models Based on Financial Functions

Financial Function	Internet Finance Model	Key Examples
Asset Allocation	Online Banking	ING Direct, U Bank, Rakuten Bank
	Online Mutual Funds	Yue Bao (China)
	Online Securities	Low-commission platforms, One-Account Trading
	Wealth Management	Betterment, Sig Fig, Motif Investing
	Peer-to-Peer Lending (P2P)	Lending Club, Prosper, Zopa
	Crowdfunding	Kickstarter, Point Crowd
	Digital Asset Trading	Lufax, Share Post

Table 2
Impact of Third-Party Payments on Banking Fee Revenues

Payment Method	Traditional Bank Fees	Third-Party Payment Fees
POS Payments	0.34%–1.12%	0.2%–0.4%
Online Banking Payments	0.5%–1%	0.2%–0.4%
Bank Transfers	0%–1%	0.1%–0.4%
Utility Payments	Fixed fee per transaction	0.1%–0.3%
Fund Sales	0.5%–1%	0.2%–0.4%

The proliferation of mobile and internet payments reduces traditional banking fees, further challenging banks' revenue streams.

4.1.4 Risk Management Function

Online risk management primarily includes digital insurance and online credit scoring. Companies such as Ant Financial and China's National Internet Finance Credit Information System (NFCS) leverage big data to assess borrower creditworthiness.

4.2. The Impact of Internet Finance on Commercial Banks

Internet finance has reshaped the traditional banking landscape, affecting banks in three major areas: liabilities, assets, and payment services.

4.2.1 Liability-side Impact: Deposit Diversion

Since 2013, the growth rate of bank deposits has declined sharply due to the rise of internet-based financial products offering higher returns and convenience payment. Figure 1 illustrates changes in bank deposit balances from 2013 to 2014.

4.2.2 Asset-side Impact: Competition for SME and Consumer Loans

Small and medium-sized enterprises (SMEs) and individual borrowers, who traditionally faced challenges accessing bank loans, have turned to P2P lending and online credit services. Traditional banks, constrained by regulatory requirements and high costs, struggle to compete with the efficiency and accessibility of internet lending platforms.

4.2.3 Payment Services: Increased Competition from Digital Payments

As Table 2 highlights, third-party payment providers have reduced banking fees. The widespread adoption of digital wallets, mobile payments, and alternative financial services further erodes banks' traditional payment market share.

5. Conclusion and Recommendations

While commercial banks maintain advantages in credibility and risk control, evolving consumer behaviors and financial needs necessitate transformation. The stability of financial functions over institutions suggests that financial service delivery will continue to shift toward technology-driven platforms.

5.1. Adopting a Consumer-Centric Financial Service Model

Consumer financial behavior is undergoing a paradigm shift driven by the demand for convenience, mobile access, and personalized services. Banks must integrate financial services into consumers' daily activities to remain relevant.

5.2. Expanding Digital Banking and Omnichannel Services

With internet penetration increasing, traditional banks should develop omnichannel strategies to deliver seamless banking services across physical and digital platforms.

5.3. Deepening Collaboration with Internet Finance Platforms

Rather than competing directly, traditional banks can leverage internet platforms' big data capabilities to expand their customer base while maintaining risk control expertise.

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