10.18686/memf.v2i3.4538

Research on Improving Financing Efficiency of Micro and Small Enterprises with the Support of FinTech

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Abstract: In recent years, FinTech has rapidly developed and gained widespread attention worldwide. By applying big data, artificial intelligence, blockchain, and other technologies, FinTech provides new solutions for the financing of micro and small enterprises (MSEs). This paper aims to explore how FinTech improves the financing efficiency of MSEs, analyze its specific application scenarios, and propose corresponding policy recommendations.

Keywords: Micro and Small Enterprises; FinTech; Financing; Efficiency

Introduction

Micro and small enterprises (MSEs) are vital to economic development, and their status directly impacts social employment and economic stability. However, due to their small scale, high risk, and lack of collateral, MSEs often face financing difficulties in the traditional financial system. The rise of FinTech offers new ideas and tools to address this issue. This paper analyzes the application of FinTech in MSE financing and explores the mechanisms and effects of improving financing efficiency.

1. Definition and Application of FinTech

FinTech refers to the integration of emerging technologies with financial services to innovate and optimize financial products and services. Specifically, FinTech includes the application of technologies such as big data analytics, artificial intelligence, blockchain, and cloud computing in the financial sector. These technologies significantly enhance the efficiency and quality of financial services by optimizing financial processes, improving data processing capabilities, and refining risk management methods.

For instance, Ant Financial has successfully digitized its payment business through its Alipay platform and expanded into various financial services. Ant Financial uses big data and AI technologies to develop intelligent investment products and credit assessment systems, making it easier for users to invest and for MSEs to obtain loans.

By collecting and analyzing massive amounts of data in real time, financial institutions can conduct more accurate credit assessments and risk management. For example, JD Finance uses the extensive transaction data accumulated on its e-commerce platform to establish a comprehensive credit scoring system. This big data-based credit evaluation model can reflect a company's operating conditions and credit levels in real-time, improving the accuracy and efficiency of loan approvals. A typical case is Ant Financial's MYbank, which uses AI algorithms to analyze and predict MSEs' operating data, achieving automated loan approval. Specifically, MYbank's "310" loan service, which entails a 3-minute application, 1-second loan disbursement, and 0 manual intervention, significantly shortens the time for MSEs to obtain loans and improves financing efficiency.

Blockchain technology, with its decentralized, immutable, and transparent characteristics, is also widely applied in FinTech. JD Finance's supply chain financial services are a prime example. By recording transaction data in the supply chain on the blockchain, the authenticity and transparency of the data are ensured. This approach not only reduces credit risk but also accelerates capital turnover, effectively solving the financing difficulties of MSEs in the supply chain.

2. Mechanisms by Which FinTech Improves Financing Efficiency of MSEs

2.1 Big Data Analytics and Credit Evaluation

One core aspect of FinTech lies in big data analytics and credit evaluation, both of which play crucial roles in improving the financing efficiency of MSEs. Traditional credit evaluation methods often rely on financial statements, collateral, and historical credit records of enterprises, which have significant limitations for MSEs with severe information asymmetry. FinTech, through big data technology, breaks this information bottleneck, achieving more comprehensive, dynamic, and accurate credit evaluations.

Big data analytics transform the sources and types of data. Instead of limited traditional financial data, big data technology can integrate multi-dimensional data, including transaction records, supply chain information, social media activities, and customer reviews. These data are not only extensive but also timely, reflecting the enterprise's operating conditions in real-time. Advanced algorithms and models process and analyze these massive data sets to establish precise credit scoring systems. Unlike traditional credit evaluations, which rely on manual reviews, big data analytics use machine learning and AI algorithms to automatically process and analyze data, uncover complex correlations and potential risks among the data.

2.2 Artificial Intelligence and Automated Approval

AI and automated approval processes in FinTech are crucial for enhancing MSEs' financing efficiency. Traditional loan approval processes typically involve extensive manual operations, from document preparation and data review to risk assessment and final disbursement, making the process cumbersome and time-consuming. The application of AI and automation technology significantly simplifies these processes, improving both efficiency and accuracy.

AI can quickly extract valuable information from large volumes of unstructured data through natural language processing and data mining technologies, automatically organizing and analyzing the financial status and operating data of enterprises. AI's machine learning algorithms provide precise evaluations of enterprise credit and risk by training on large historical data sets to learn and discover implicit relationships among data, dynamically adjusting the credit evaluation model. This allows AI systems to more accurately assess the credit status of enterprises and update and optimize models in real-time, enhancing evaluation flexibility and precision. For example, MYbank's intelligent risk control system predicts future operational risks by analyzing the trading behaviors and fund flow patterns of MSEs, making more accurate loan decisions.

Automated approval, another significant AI application, enables seamless connection across various stages of the loan approval process, substantially shortening approval time. In an automated approval system, loan applications submitted by enterprises enter the system in real-time, automatically triggering data reviews, risk assessments, and credit scoring processes. This entire process is executed by computer systems without manual intervention, greatly enhancing approval efficiency.

2.3 Blockchain and Supply Chain Finance

Blockchain technology's application in FinTech, particularly in supply chain finance, significantly improves MSEs' financing efficiency. Traditional supply chain finance models often suffer from information asymmetry and trust issues, which are major barriers to financing efficiency. Blockchain technology addresses these problems with its decentralized, immutable, and transparent nature, fundamentally optimizing the operation mode of supply chain finance.

Blockchain uses distributed ledger technology to record transaction data at each stage of the supply chain, ensuring data integrity and transparency. All participants can view and verify the data in real-time, reducing information asymmetry and enhancing mutual trust. Additionally, once data is recorded on the blockchain, it cannot be altered or deleted, providing a reliable data foundation for financial institutions. Blockchain technology also simplifies the operational processes of supply chain finance, improving capital turnover efficiency. Traditionally, enterprises applying for loans need to provide a large amount of paperwork and undergo cumbersome review processes, which are time-consuming and labor-intensive. In a blockchain system, transaction data are automatically recorded and updated, allowing financial institutions to directly base credit evaluations and loan approvals on these data, eliminating many intermediate steps. The application of blockchain smart contracts further achieves automated loan execution and management, enabling rapid and accurate capital flows to enterprises. For example, Ping An Group's FinTech platform uses blockchain and smart contract technology to achieve full-process digitization and automation of supply chain finance, significantly shortening loan approval and disbursement times.

Moreover, blockchain's transparency enhances the supervision and risk control capabilities of supply chain finance. In a blockchain system, all transaction records are publicly transparent, allowing regulatory agencies to monitor the operations of supply chain finance in real-time, promptly identifying and addressing potential risks. Financial institutions can also conduct more accurate risk management and control based on transparent data, reducing the occurrence of bad loans. This transparency and traceability improve the safety and stability of the entire supply chain finance system, providing strong support for the healthy development of MSEs.

2.4 Online Platforms and Convenient Services

FinTech's online platforms and convenient services, through digital technology and internet applications, significantly improve the financing efficiency of MSEs. FinTech companies build online financing platforms, offering an efficient and convenient financing pathway, changing the financing ecosystem of MSEs. By leveraging internet technology, MSEs can access online financing platforms anytime and anywhere via computers or mobile devices to submit loan applications. This seamless digital connection eliminates geographical and time

constraints, allowing enterprises to avoid tedious face-to-face meetings and paperwork submissions at banks. For example, Ant Financial's Ant Credit Pay and MYbank, through their mobile applications, provide MSEs with one-stop loan application and management services. Business owners only need to enter basic information and upload necessary documents on the platform to complete the loan application, greatly simplifying the process.

Online platforms also use big data and AI technology to enhance the speed and accuracy of loan approvals. Traditional financial institutions' loan approvals typically involve multi-level manual reviews, which are time-consuming and error-prone. Online platforms use automated systems to quickly process and analyze vast amounts of data, conducting precise credit evaluations and risk management. For example, JD Finance uses its extensive e-commerce data combined with intelligent algorithms to analyze sales, inventory, and customer reviews, rapidly completing credit evaluations and making loan decisions. This data-driven automated approval process shortens approval time and increases the scientific and impartial nature of decisions.

Additionally, online platforms provide comprehensive financial support through highly integrated digital services. Traditional financial services often focus on single loan products, while online platforms can integrate various financial services to meet the diverse needs of MSEs. For example, besides offering short-term loans, online platforms can provide supply chain finance, accounts receivable financing, insurance, and wealth management services. This one-stop service not only facilitates enterprises' financial management but also optimizes capital allocation, improving capital utilization efficiency.

It is worth mentioning that online platforms enhance trust between enterprises and financial institutions through data transparency and interactivity. In the traditional financial system, information asymmetry often leads financial institutions to lack a comprehensive understanding of MSEs' credit status, resulting in cautious lending. Online platforms enable real-time data sharing and transparent operations, allowing financial institutions to better grasp enterprises' operating conditions and reduce risks associated with information asymmetry. For example, Ping An Bank's online financial platform monitors enterprises' cash flows and operating data in real-time, providing dynamic credit evaluations and risk warning services, enhancing trust and cooperation between both parties.

3. Conclusion

FinTech, through big data, AI, blockchain, and other technologies, provides new solutions for MSE financing and effectively improves financing efficiency. However, while enjoying the convenience brought by FinTech, we also need to pay attention to the potential risks and challenges. In the future, only by ensuring data privacy and security, reducing technological risks, and improving regulatory frameworks can FinTech better assist the development of MSEs. In summary, FinTech provides innovative solutions to MSEs' financing difficulties, improves financing efficiency, promotes the healthy development of MSEs, and drives overall economic stability and prosperity.

References

[1] Wenxue Zhou, Jinyue Qian, Jingjing Wang. The Impact of FinTech on Micro and Small Enterprises' Credit Efficiency—Based on the Mediating Effect of Bank Competition and Business Management Level [J]. New Finance, 2023(9):37-44.

[2] Wei Yu, Ying Qin. Research on the Financing Model of Micro and Small Enterprises under the Background of Internet Finance [J]. Enterprise Economy, 2014(12):4.

[3] Chun Chen, Bowen Xiao. Research on the Impact of FinTech on the Financing Efficiency of SMEs [J]. Science and Economy, 2023, 36(2):61-65.