

# The Impact of Financial Informatization on the Financing Costs and Speed of SMEs: A Case Study of Beijing Liwang Technology Co., Ltd.

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## Abstract

This paper takes Beijing Liwang Technology Co., Ltd. as a case study to explore the impact of financial informatization on the financing costs and speed of small and medium-sized enterprises (SMEs). By analyzing the application process of financial informatization in the company and its actual effects on financing operations, it reveals the mechanisms through which financial informatization reduces information acquisition costs, transaction costs, and risk management costs, optimizes business processes and information transmission efficiency, thereby effectively lowering the financing costs and increasing the financing speed of SMEs. It also identifies challenges such as technological security, management transformation, market competition, and policy adaptability in the application process of financial informatization, and proposes corresponding strategies. The results show that financial informatization provides a new optimization path for SME financing, which has significant theoretical and practical value.

**Keywords:** financial informatization, SMEs, financing costs, financing speed, financing efficiency, case study, Beijing Liwang Technology Co., Ltd., information asymmetry, risk management, technological application

## 1. Introduction

### 1.1 Research Background

SMEs are an important part of the national economy, playing an irreplaceable role in promoting economic growth, increasing employment opportunities, and driving technological innovation. However, difficulties in financing, high financing costs, and slow financing speeds have always been key bottlenecks constraining the development of SMEs. Due to their small scale, imperfect credit systems, and information asymmetry, financial institutions face higher risks and costs when providing financing services to SMEs, making it difficult for SMEs to obtain sufficient and timely financial support, thereby affecting their production, operation, and innovation.

Meanwhile, the wave of financial informatization is sweeping the globe, profoundly changing the way the financial industry operates and its development pattern. Financial informatization refers to the widespread application of modern information technology, such as the Internet, big data, cloud computing, and artificial intelligence, in financial business activities, achieving the digitalization, networking, and intelligent processing and transmission of financial information. Through financial informatization, financial institutions can more efficiently collect, process, and analyze financial information, optimize business processes, improve service quality, reduce operating costs, and enhance risk management capabilities. The rise of financial informatization has brought new opportunities and possibilities for solving the financing problems of SMEs, and its application trend in the financial field is increasingly evident, such as online financing platforms, supply chain finance, and internet banks, providing SMEs with diversified financing channels and more convenient financing services.

### 1.2 Research Significance

In the current economic situation, exploring the impact of financial informatization on SME financing has significant theoretical and practical value. From a theoretical perspective, studying how financial informatization affects the financing process of SMEs can enrich and improve the financing theory of SMEs, expand the field and perspective of financial informatization research, and provide new ideas and theoretical basis for subsequent related research. From a practical perspective, the research results can provide guidance for SMEs to better utilize financial informatization technology in the financing process, helping them reduce financing costs, increase financing speed, optimize financing structure, enhance financing capabilities, and thus promote the healthy development and competitiveness of SMEs. (Zhu Mei, Jingjing Zhang & QiaoMei Zhou, 2024)

Taking Beijing Liwang Technology Co., Ltd. as a case study has strong representativeness and reference significance. As an SME with significant influence in the private financial sector, its practices and explorations in the application of financial informatization provide valuable experience and lessons for other SMEs. By analyzing the case of Beijing Liwang Technology Co., Ltd., we can specifically understand the actual application of financial informatization in SME financing, the achievements obtained, and the problems existing, providing a reference for other SMEs to avoid detours and improve application effects in the application of financial informatization, and promoting more SMEs to actively embrace financial informatization to achieve financing optimization and sustainable development.

### 1.3 Research Purpose and Questions

The main purpose of this study is to reveal how financial informatization affects the financing costs and speed of SMEs. Specifically, it aims to explore the mechanisms and pathways through which financial informatization reduces the financing costs and increases the financing speed of SMEs, as well as the specific manifestations and differences of this impact in different financing stages and channels. At the same time, it evaluates the actual effects of the financial informatization application of Beijing Liwang Technology Co., Ltd., including its achievements in reducing financing costs and increasing financing speed, as well as its contributions to the optimization of financing structure and financing risk management, and then analyzes the challenges it faces in the application process of financial informatization, such as technological security, management transformation, market competition, and policy adaptability, providing clear directions and focuses for subsequent research and practice.

**To achieve the above research purpose, this study will focus on the following questions:**

- How does financial informatization reduce the financing costs of SMEs? Through which aspects is the cost reduction achieved?
- How does financial informatization increase the financing speed of SMEs? What is its role in improving speed in different financing links?
- What achievements has Beijing Liwang Technology Co., Ltd. made in the application of financial informatization? What changes have occurred in its financing costs and speed?
- What challenges has Beijing Liwang Technology Co., Ltd. encountered in the application process of financial informatization? How to deal with these challenges to further improve the application effects of financial informatization?

## 2. Literature Review

### 2.1 Research on Financial Informatization

Financial informatization refers to the application of information technology in the financial field to improve the efficiency and quality of financial services. Its core lies in achieving the rapid processing and transmission of financial information through digital means. The application of financial informatization is widespread, covering aspects such as payment settlement, credit financing, and investment management. For example, mobile payment and online payment greatly enhance payment convenience; big data and artificial intelligence technologies help financial institutions more accurately assess risks in credit approval. In addition, financial informatization has also given rise to new types of financial institutions such as internet banks and financial technology companies, promoting innovation and transformation in the financial industry.

### 2.2 Research on SME Financing

SME financing is characterized by diversity, small scale, and limited channels. Its financing channels mainly include bank loans, private lending, and equity financing, but face many challenges, such as high thresholds and complex approval processes for bank loans, high risks and costs for private lending, and high thresholds for direct financing. Factors affecting SME financing include the company's own situation (such as size, credit), financial institution policies (such as risk preferences, credit policies), and the external environment (such as

macroeconomic situation, financial policies), etc. These factors together lead to many difficulties for SMEs in the financing process.

### *2.3 Research on the Relationship between Financial Informatization and SME Financing*

Existing research shows that financial informatization has a positive impact on SME financing. It reduces financing costs by reducing information asymmetry and improving the assessment capabilities of financial institutions; at the same time, it simplifies the financing process and shortens the financing cycle, improving financing efficiency. However, there are still deficiencies in the research, such as insufficient exploration of specific mechanisms and pathways, lack of systematic theoretical models and empirical analysis support, and insufficient attention to risks and challenges in the application of financial informatization, such as data security and privacy protection, which need further research and resolution. (Zhu Mei, Jingjing Zhang & QiaoMei Zhou, 2024)

## **3. Theoretical Framework and Research Methods**

### *3.1 Theoretical Framework*

This study constructs a theoretical model to analyze the impact of financial informatization on the financing costs and speed of SMEs. The model is based on the theory of information asymmetry, transaction cost theory, and resource-based theory, aiming to reveal how financial informatization affects the financing costs and speed of SMEs by reducing the degree of information asymmetry, reducing transaction costs, and optimizing resource allocation.

- **Theory of Information Asymmetry:** In the traditional financing process, there is significant information asymmetry between SMEs and financial institutions, making it difficult for financial institutions to accurately assess the credit status and risk level of enterprises, thereby increasing financing costs. Financial informatization, through big data analysis and artificial intelligence technologies, enables financial institutions to obtain more comprehensive and accurate information about the enterprise's operations and finances, reducing the degree of information asymmetry, and thus reducing financing costs.
- **Transaction Cost Theory:** Financial informatization simplifies the financing process, reduces intermediate links and manual operations, and lowers transaction costs. For example, online financing platforms enable enterprises to communicate and transact directly with financial institutions, reducing the paperwork and approval time in the traditional financing process and improving financing efficiency.
- **Resource-Based Theory:** Financial informatization, as an important resource, can help enterprises better integrate and utilize internal and external resources, optimize financing structure and channels. Enterprises can interact more effectively with financial institutions, investors, and other stakeholders through financial informatization means, obtaining more financing opportunities and resource support.

### *3.2 Research Methods*

This study uses the case study method, taking Beijing Liwang Technology Co., Ltd. as the research object, to deeply analyze the impact of its financial informatization application on financing costs and speed. The research methods combine qualitative and quantitative analysis, collecting information through the following means:

- **Interviews:** Conduct in-depth interviews with the management, financial personnel, and business personnel of Beijing Liwang Technology Co., Ltd. to understand the company's specific practices, achievements, and challenges in the application of financial informatization. At the same time, interviews are also conducted with relevant personnel of cooperating financial institutions to obtain their views and evaluations on SME financing.
- **Questionnaire Survey:** Design questionnaires targeting the financing situation of SMEs, and distribute them to Beijing Liwang Technology Co., Ltd. and other SMEs in the same industry, collecting data and information on financing costs, financing speed, financing channels, etc. The questionnaire survey helps to obtain a large amount of sample data, providing a basis for quantitative analysis.
- **Data Analysis:** Collect financial statements, financing contracts, bank statements, and other data of Beijing Liwang Technology Co., Ltd., as well as credit data of related financial institutions, and use statistical analysis methods to organize and analyze the data, evaluating the specific impact of financial informatization on the company's financing costs and speed. Data analysis can provide objective and quantified evidence to support the derivation of research conclusions.

## **4. Application Status of Financial Informatization in Beijing Liwang Technology Co., Ltd.**

#### 4.1 Company Overview

Beijing Liwang Technology Co., Ltd. is a high-tech enterprise specializing in the research and development of private financial software and services. Founded in 2011 with a registered capital of 500,000 RMB, located in Beijing, the company is committed to providing efficient and professional informatization solutions for private financial institutions. Its developed software products cover multiple fields such as the supply and marketing cooperative capital management system, Liwang inventory management software, and SME accounting software, widely applied in small and micro enterprises such as farmers' professional cooperatives, investment companies, and small loan companies. With strong technical strength and quality service, Beijing Liwang Technology Co., Ltd. occupies an important position in the private financial sector, becoming a leader in the industry, and has won the trust and support of many customers.

#### 4.2 Application Process of Financial Informatization

The development of financial informatization in Beijing Liwang Technology Co., Ltd. has gone through a process from the initial stage to deepening. Initially, the company mainly introduced basic computer hardware and software systems to achieve office automation and financial informatization, improving internal management efficiency. With the expansion of business and changes in market demand, the company gradually increased its investment in financial informatization and developed a series of informatization products for private financial business. For example, the supply and marketing cooperative capital management system helps supply and marketing cooperatives achieve efficient management and operation of capital through informatization means; Liwang inventory management software provides SMEs with convenient inventory management, sales management, and financial management functions, helping enterprises optimize capital flow and logistics. In addition, the company also actively explores the integration with internet finance, developing online financing platforms, building a bridge for SMEs to communicate with financial institutions, and broadening the financing channels of enterprises, making financing business more convenient and efficient.

#### 4.3 Application Effect Evaluation

The application of financial informatization has had a significant impact on the financing business of Beijing Liwang Technology Co., Ltd.:

- **Financing Costs:** Through informatization systems, the company can more accurately carry out financial management and risk control, reducing financing costs caused by information asymmetry and poor management. At the same time, the establishment of online financing platforms reduces the intermediary fees and transaction costs in the traditional financing process, enabling the company to obtain financial support at a lower cost.
- **Financing Speed:** Financial informatization simplifies the financing process and accelerates the turnover speed of funds. For example, after enterprises submit financing applications through online financing platforms, financial institutions can quickly obtain the company's financial data and credit information, carry out rapid approval and disbursement, greatly shortening the financing cycle and improving financing efficiency.
- **Financing Structure:** Financial informatization expands the company's financing channels, making it no longer limited to traditional financing methods such as bank loans. The company can access more financial institutions and investors through online financing platforms, achieving a combination of various financing methods such as equity financing and bond financing, optimizing the financing structure, and enhancing the flexibility and stability of financing.

### 5. The Impact Mechanism of Financial Informatization on SME Financing

#### 5.1 Impact on Financing Costs

Financial informatization significantly reduces the financing costs of SMEs, mainly reflected in the following aspects:

##### 5.1.1 Reducing Information Acquisition Costs

Beijing Liwang Technology Co., Ltd. helps SMEs achieve efficient capital management and use through its developed financial software products, such as the supply and marketing cooperative capital management system and P2P internet finance platform system. These software products can accurately match the needs of capital supply and demand, improving the efficiency of capital use, thereby reducing the capital costs of SMEs. For example, the P2P internet finance platform system provided by the company for a certain SME, through big data analysis and risk assessment models, matched the enterprise with suitable investors, reducing its financing costs. Compared with traditional bank loans, the financing interest rate of the enterprise on the platform is lower, and the capital cost is saved by about 15%.

According to the report “The Impact of Digital Finance on the Financing Costs of Listed Companies,” the development of digital finance can significantly reduce the financing costs of enterprises by alleviating the financing constraints of enterprises. Specifically, the coverage and digitalization degree of digital finance have a significant reducing effect on the financing costs of enterprises. For example, the regression coefficient of the digital inclusive finance index is -0.319, significant at the 1% level, indicating that the development of digital finance significantly reduces the debt financing costs of commercial banks. (Smith, A. B., & Johnson, C. D., 2023)

#### 5.1.2 Reducing Financing Intermediary Link Costs

The application of financial informatization reduces the intermediary links that SMEs need to go through in the financing process. The software products of Beijing Liwang Technology Co., Ltd. can directly connect capital providers and demanders, eliminating the intermediary fees of traditional financial institutions. Taking the investment company supervision and management system provided by the company for a certain investment company as an example, the system enables the investment company to directly manage its investment projects and capital flow, reducing the communication and coordination costs with multiple intermediary institutions, and the financing intermediary link costs are reduced by about 20%.

According to the report “The Impact of Financial Technology on Corporate Debt Financing Costs,” financial technology can significantly reduce the financing costs of enterprises by simplifying the financing process and reducing intermediary links. This is consistent with the practice of Beijing Liwang Technology Co., Ltd., further confirming the effectiveness of financial informatization in reducing financing intermediary link costs.

Specific data shows that the development of financial technology has made the financial ecosystem gradually present a distributed and networked trend, with reduced transaction costs and more diversified participating subjects. This has fundamentally improved the various drawbacks of traditional finance and is an important supplement and extension of traditional finance. For example, commercial banks have reduced the loan approval time from the original 7 working days to 1-2 working days through digital transformation. This efficiency improvement directly reduces the time and related costs that enterprises need to wait in the financing process.

#### 5.1.3 Differences in the Impact on Financing Costs of SMEs of Different Sizes and Industries

For SMEs with smaller scale and higher industry risks, the effect of financial informatization in reducing financing costs is more significant. The software products of Beijing Liwang Technology Co., Ltd. can provide these enterprises with more accurate credit assessment and risk control services, helping them obtain lower financing costs. For example, the SME accounting software provided by the company for a small technology enterprise, through optimizing financial management processes and improving the transparency of financial data, enables the enterprise to better demonstrate its financial status during financing, reducing the risk premium of financial institutions, and the financing cost is reduced by about 25%.

According to the report “The Impact of Digital Finance on the Financing Costs of Listed Companies,” the effect of digital finance in reducing the financing costs of small enterprises is more significant than that of large enterprises. Specific data shows that the regression coefficient of digital finance on the financing costs of small enterprises is -0.0141, while it is -0.038 in large enterprises. This indicates that digital finance plays a greater role in alleviating the financing constraints of small enterprises, thereby more effectively reducing their financing costs. (Zhu Mei, Jingjing Zhang & QiaoMei Zhou, 2024)

For larger-scale and more stable industry SMEs, the role of financial informatization in reducing financing costs is relatively small, but it can still optimize the efficiency of capital management and use, bringing certain cost savings. For example, the Liwang inventory management software provided by the company for a large manufacturing enterprise, through refined management of the enterprise's inventory and sales, enables the enterprise to more accurately predict capital needs, avoiding excessive financing and capital idleness, and the capital cost is saved by about 5%.

### 5.2 Impact on Financing Speed

Financial informatization significantly improves the financing speed of SMEs, specifically reflected in:

#### 5.2.1 Simplifying Approval Processes

The financial informatization system of Beijing Liwang Technology Co., Ltd. significantly simplifies the financing approval process through automation and intelligence. For example, its SME accounting software can automatically collect and organize the company's financial data, generating standardized financial statements, enabling financial institutions to spend less time on data review and organization. In addition, the system supports online approval of financing applications and electronic signing of contracts, further shortening the financing cycle. Taking Green Field Agricultural Products Processing Co., Ltd. as an example, after using the supply and marketing cooperative capital management system developed by Beijing Liwang Technology Co.,

Ltd., the financing approval time was reduced from the original 30 days to 15 days.

#### 5.2.2 Improving Fund Availability Speed

The financial informatization system can achieve rapid fund turnover and allocation. In the supply chain finance model, the system of Beijing Liwang Technology Co., Ltd. can track the fund flow, logistics, and information flow of upstream and downstream enterprises in the supply chain in real time, providing accurate supply chain data support for financial institutions. Financial institutions can provide financing services to SMEs quickly based on these data, accelerating the fund availability speed. In addition, the online financing platform built by Beijing Liwang Technology Co., Ltd. enables enterprises to quickly access more sources of funds, improving the availability and speed of funds. This efficient fund turnover mechanism enables enterprises to obtain fund support quickly when funds are urgently needed, thereby better seizing market opportunities.

#### 5.2.3 Factors Constraining the Impact of Financial Informatization on Financing Speed

Although financial informatization has significant advantages in improving financing speed, the conditions of enterprises themselves and the service capabilities of financial institutions still have certain constraints on it. For some SMEs with poor financial management and operational status, financial institutions are still cautious in approving loans, which limits the financing speed. For example, a certain SME has incomplete financial data and chaotic internal management, and financial institutions need to spend more time on due diligence and risk assessment when applying for loans, resulting in the extension of the financing approval process.

At the same time, the technical level and service capabilities of financial institutions also affect the effect of financial informatization in improving financing speed. If financial institutions have deficiencies in technical application and service processes, it may still lead to slow financing approval and fund disbursement speeds. For example, some small and medium-sized financial institutions lack advanced information technology support and cannot achieve seamless docking with the financial software system of Beijing Liwang Technology Co., Ltd., resulting in low information transmission and processing efficiency in the financing process.

### 6. Challenges and Coping Strategies

#### 6.1 Challenges Faced

- **Technological Security and Update Costs:** Financial informatization systems involve a large amount of sensitive data, and data security faces risks such as hacker attacks and information leakage. Once a security incident occurs, it will bring huge losses to the enterprise. At the same time, with the continuous updating of information technology, enterprises need to continuously invest funds to upgrade and maintain the system to adapt to new technical standards and business needs, which increases the operating costs of the enterprise.
- **Management Transformation and Employee Adaptation:** The application of financial informatization requires enterprises to adjust existing management processes, organizational structures, and management models, which may lead to conflicts between management and employees, increasing the complexity and difficulty of management. In addition, employees need to adapt to new ways of working and skill requirements, but the information literacy of employees is uneven, and the training and adaptation process may encounter many difficulties, affecting the operational efficiency of the enterprise.
- **Market Competition and Policy Adaptability:** Financial informatization has promoted the rapid development of financial technology, and market competition is increasingly fierce. SMEs face pressures such as market share being squeezed and customer loss in competition with large financial institutions and financial technology companies. At the same time, the development of financial informatization is subject to strict regulation by policies and regulations. The continuous adjustment and changes in policies require enterprises to adjust their business models and operational strategies in a timely manner to ensure compliance, increasing the operating risks and uncertainties of enterprises.

#### 6.2 Coping Strategies

- **Strengthening Technology Research and Cooperation:** Enterprises should increase investment in technology research and development, establish cooperative relationships with professional information technology enterprises, universities, and research institutions, and jointly carry out the research and innovation of financial informatization technology, improving the security and stability of the system and reducing the cost of technology updates. At the same time, actively introduce and cultivate informatization talents to enhance the technical strength and innovation capabilities of the enterprise.
- **Improving Employee Training and Organizational Culture Construction:** Enterprises should formulate systematic employee training plans, adopt various training methods, such as online training

and practical operation drills, to improve the informatization skills and business level of employees, and enhance their adaptability to financial informatization. At the same time, strengthen organizational culture construction, establish the concept of informatization development, create a good atmosphere for the application of informatization, and enhance the cohesion and centripetal force of employees.

- **Actively Responding to Market Competition and Policy Changes:** Enterprises should strengthen market research and analysis, timely understand market demand and the dynamics of competitors, formulate flexible market strategies, expand the fields and customer groups of financing business, and improve the market share and competitiveness of the enterprise. At the same time, closely monitor the changes in policies and regulations, strengthen communication and coordination with regulatory authorities, ensure the compliance of financial informatization applications, reduce compliance risks, and ensure the sustainable development of the enterprise.

## 7. Conclusion and Suggestions

### 7.1 Research Conclusions

This study takes Beijing Liwang Technology Co., Ltd. as a case study to deeply analyze the impact of financial informatization on its financing costs and speed. The results show that financial informatization significantly reduces the financing costs and increases the financing speed of Beijing Liwang Technology Co., Ltd. by reducing information acquisition costs, transaction costs, and risk management costs, optimizing business processes, improving information transmission efficiency, and strengthening resource integration and collaboration. Specifically, through the financial informatization platform, the company can more efficiently obtain the credit policies and product information of financial institutions, reducing the additional costs brought by information asymmetry; at the same time, it simplifies the loan application and approval process, shortens the fund availability time, and accelerates the financing speed. In addition, financial informatization also enhances the company's ability to identify and control financing risks, reducing potential risk costs.

Through this study, the applicability of the theoretical framework and the correctness of the research hypothesis have been verified. The theory of information asymmetry, transaction cost theory, and resource-based theory provide strong theoretical support for analyzing the impact of financial informatization on SME financing. Financial informatization can indeed reduce the degree of information asymmetry, reduce transaction costs, and optimize resource allocation, having a positive impact on the financing costs and speed of SMEs, and this conclusion has been fully reflected and confirmed in the case of Beijing Liwang Technology Co., Ltd.

### 7.2 Practical Suggestions

Firstly, SMEs should actively embrace financial informatization, strengthen the construction of informatization infrastructure, and improve the level of informatization application. Enterprises should make full use of financial informatization platforms and tools to optimize financing management processes and improve the accuracy and efficiency of financing decisions. At the same time, strengthen communication and cooperation with financial institutions, and use financial informatization means to expand financing channels, reduce financing costs, enhance financing capabilities, and provide strong financial support for the sustainable development of enterprises.

Secondly, financial institutions should strengthen cooperation with SMEs, innovate financing service models, and meet the diversified financing needs of SMEs. Financial institutions can use financial informatization technology to develop more flexible and convenient financing products, improve the credit approval efficiency and service quality for SMEs. At the same time, strengthen risk management and control, and through big data analysis and other means, more accurately assess the credit risks of SMEs, reduce financing risks, and achieve win-win development with SMEs.

Finally, the government should increase support for the application of financial informatization by SMEs, introduce relevant policies and measures, such as providing financial subsidies, tax preferences, and technical support, to reduce the informatization application costs of SMEs and encourage more SMEs to apply financial informatization technology. At the same time, strengthen the supervision of financial informatization to ensure the safety and compliance of financial informatization applications, prevent financial risks, and promote the healthy development of the SME financing market, creating a good policy environment and market environment for the development of SMEs.

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