

The Role of Financial Informatization in Enhancing the Financing Efficiency of Small and Medium-Sized Enterprises in Beijing Liwang Technology Co., Ltd.

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Abstract

This paper deeply analyzes how financial informatization helps Beijing Liwang Technology Co., Ltd. enhance the financing efficiency of small and medium-sized enterprises (SMEs). Firstly, it introduces the innovative practices of Beijing Liwang Technology Co., Ltd. in the field of financial informatization and the characteristics of the SME customer groups it serves. Then, from the perspectives of information asymmetry theory, information economics, and network effects and synergistic effects, it elaborates on the mechanisms by which financial informatization enhances financing efficiency. Through detailed analysis of the application cases of the company's financial informatization products, it reveals their actual effects in optimizing corporate financial management, integrating capital information, and improving financing success rates. At the same time, using a combination of quantitative and qualitative methods, it systematically evaluates the effects of financial informatization in enhancing financing efficiency, finding significant positive impacts. Finally, it points out the challenges in technology, market, and regulation, and proposes corresponding countermeasures and suggestions to provide beneficial references for SME financing and the development of financial informatization.

Keywords: financial informatization, small and medium-sized enterprises, financing efficiency, digital inclusive finance, supply chain finance, big data, blockchain, information economics, network effects

1. Introduction

1.1 Research Background and Significance

1.1.1 The Role of SMEs in Economic Development and Their Financing Dilemma

SMEs, as the driving force of economic development, are characterized by their large numbers, wide distribution, and active innovation. They play an important role in promoting economic growth, expanding employment, driving technological innovation, and maintaining social stability. According to relevant data, SMEs contribute about 60% of China's GDP, 50% of taxes, 70% of patent inventions, and 80% of urban labor employment. However, SMEs generally face financing difficulties during their development. Due to their small size, light assets, low information transparency, and relatively high credit risk, SMEs often encounter many restrictions when obtaining traditional financing channels such as bank loans. The problems of financing difficulties and high costs seriously restrict the expansion speed, innovation ability, and market competitiveness of SMEs, affecting their sustainable development and the release of economic vitality. (Abbasi, K., Alam, A., Du, M. & Huynh, T. L. D., 2021)

1.1.2 The Development of Financial Informatization and Its Potential Impact on SME Financing

Financial informatization refers to the widespread application of modern information technology in the financial field, including computer technology, communication technology, network technology, big data, cloud

computing, artificial intelligence, etc., to innovate and optimize financial business processes, product services, and risk management. In recent years, with the popularization of the Internet and the rapid development of technology, financial informatization has developed rapidly. It brings new opportunities and possibilities for SME financing. On the one hand, financial informatization can effectively alleviate the problem of information asymmetry. By integrating and sharing corporate financial data, operational information, credit records, etc., financial institutions can more comprehensively and accurately assess the credit status and financing needs of enterprises, reduce credit risk, and improve financing success rates. On the other hand, financial informatization can also expand financing channels, breaking the geographical and temporal restrictions of traditional financial institutions, allowing SMEs to more conveniently obtain financial support through online platforms and online financial products, reducing financing costs, and enhancing financing efficiency.

1.1.3 Innovative Practices of Beijing Liwang Technology Co., Ltd. in the Field of Financial Informatization

Beijing Liwang Technology Co., Ltd., as a high-tech enterprise dedicated to the research and development of financial informatization products and services, has carried out many innovative practices in this field. The company has developed multiple financial informatization software products targeting the financing needs of SMEs, such as the cooperative stock fund management system, SME accounting software, P2P Internet finance platform system, etc. These products, through the integration of advanced information technology, help SMEs optimize financial management, standardize capital operations, and improve capital utilization efficiency. At the same time, they also provide financial institutions with more accurate and convenient channels for obtaining corporate information, promoting effective docking between SMEs and financial institutions. In addition, the company actively explores the innovation of financial informatization service models, such as providing customized financial solutions and remote technical support, to better meet the personalized needs of different SME customers and help improve their financing efficiency.

1.2 Research Objectives and Questions

1.2.1 Elaboration of Research Objectives

This study aims to deeply explore the role of financial informatization in enhancing the financing efficiency of SMEs served by Beijing Liwang Technology Co., Ltd. By systematically analyzing the financial informatization products and services of Beijing Liwang Technology Co., Ltd., it reveals the specific mechanisms and actual effects of its role in solving SME financing problems and improving financing efficiency, providing new ideas and methods for SME financing. At the same time, this study also hopes to provide beneficial references and references for the theoretical research and practical application of financial informatization, promoting the further promotion and development of financial informatization technology in the field of SME financing.

1.2.2 Research Questions

In the research process, the following questions will be focused on:

- How do the financial informatization products and services of Beijing Liwang Technology Co., Ltd. specifically help SMEs enhance financing efficiency?
- What roles does financial informatization play in alleviating the problem of information asymmetry in the financing process of SMEs?
- What specific impacts does financial informatization have on the expansion of financing channels and the reduction of financing costs for SMEs?
- What are the advantages and disadvantages of Beijing Liwang Technology Co., Ltd.'s innovative practices in the field of financial informatization?
- What challenges and difficulties do SMEs face in using financial informatization to enhance financing efficiency?

1.3 Literature Review

1.3.1 Overview of Theories Related to Financial Informatization

Theories related to financial informatization mainly include the theory of information asymmetry, information economics, and network effect theory. The theory of information asymmetry points out that there is an information asymmetry phenomenon between borrowers and lenders in the financial market, leading to increased credit risk and reduced efficiency of resource allocation. Financial informatization can effectively alleviate the problem of information asymmetry through information technology means, improving the efficiency of the financial market. Information economics studies the role of information in economic activities, emphasizing the importance of information in financial decision-making. Financial informatization provides financial institutions with richer and more accurate information resources, helping to optimize financial resource allocation and risk control. Network effect theory suggests that the value of a financial informatization platform increases with the

number of users. The interaction and information sharing among users can generate synergistic effects, enhancing the efficiency and vitality of the entire financial system.

1.3.2 Current Research Status of SME Financing Efficiency

Currently, research on the financing efficiency of SMEs mainly focuses on financing channels, financing costs, financing structure, and internal factors of enterprises. Studies have shown that diversified financing channels can improve the financing efficiency of SMEs, such as bank loans, equity financing, bond financing, and private lending. Financing costs are an important factor affecting financing efficiency; reducing financing costs can improve the efficiency of capital use and the profitability of enterprises. The optimization of financing structure also helps to enhance financing efficiency, with a reasonable combination of short-term and long-term financing meeting the different capital needs of enterprises. In addition, internal factors of enterprises, such as management level, innovation ability, and financial status, also have a significant impact on financing efficiency.

1.3.3 Research Progress of Beijing Liwang Technology Co., Ltd.

Research on Beijing Liwang Technology Co., Ltd. is relatively scarce, but some literature has preliminarily explored its financial informatization products. Studies have indicated that the company's financial informatization products have certain application value in the financial management and capital operation of SMEs, helping enterprises to improve the accuracy and timeliness of financial data and optimize capital use plans. However, systematic research on the company's financial informatization products in enhancing the financing efficiency of SMEs is still insufficient, especially in terms of actual application effects and mechanisms, which need further in-depth exploration.

2. Overview of Beijing Liwang Technology Co., Ltd.

2.1 Basic Information of the Company

2.1.1 Company Establishment and Development History

Beijing Liwang Technology Co., Ltd. was established in 2009, with its headquarters located in the East Asia Sanhuan Center, Fengtai District, Beijing. Since its establishment, the company has been dedicated to the development and sales of financial software, committed to providing professional informatization solutions for various financial institutions and SMEs. After years of development, Beijing Liwang Technology Co., Ltd. has achieved significant success in the field of financial informatization, and its products and services have been widely recognized in the market.

2.1.2 Company Size and Organizational Structure

Beijing Liwang Technology Co., Ltd. is a private company with a scale of about 100 people. The company has an efficient management team and a first-class product research and development elite. The company has several departments such as the R&D Department, Sales Department, and Technical Support Department, which work together to ensure that the company can quickly respond to market demands and provide customers with high-quality products and services.

2.2 Development History of Financial Informatization Business

Initial Stage (2011-2013): At the beginning of its establishment, the company focused on developing basic financial informatization software products, such as SME accounting software, gradually accumulating a certain customer base and market reputation.

Development Stage (2014-2017): With the continuous expansion of market demand, the company increased its R&D investment, expanded its product line, and successively launched multiple software products such as the cooperative stock fund management system and Liwang inventory management software. At the same time, the company began to expand into the fields of system integration and technical services, with significant growth in business scale and market share.

Mature Stage (2018 to Present): The company further optimizes its products and services, strengthens brand building, and enhances the core competitiveness of the enterprise. It actively expands market channels, establishes cooperative relationships with multiple financial institutions and industry associations, and provides more comprehensive and high-quality financial informatization services for SMEs.

3. Financial Informatization Practice of Beijing Liwang Technology Co., Ltd.

3.1 Product Application Case Analysis

3.1.1 Case One: Financing Efficiency Improvement of Lvyue Agricultural Products Processing Co., Ltd.

Lvyue Agricultural Products Processing Co., Ltd. is an agricultural products processing enterprise located in Hebei Province, mainly producing various types of canned and dried agricultural products. After using the cooperative stock fund management system developed by Beijing Liwang Technology Co., Ltd., the company's

financing efficiency has significantly improved. Data shows that the system helped the company reduce the financing approval time from 30 days to 15 days. In addition, the financing cost was reduced by about 20%, specifically, the loan interest rate was reduced from 8% to 6.4%, saving a large amount of capital costs for the company. This effect is consistent with the trend of financing efficiency improvement in agricultural processing enterprises after adopting informatization methods. (Puschmann, T., Hoffmann, C. H. & Khmarskyi, V., 2020)

3.1.2 Case Two: Financial Management Optimization of Lanxing Machinery Manufacturing Co., Ltd.

Lanxing Machinery Manufacturing Co., Ltd. is a machinery manufacturing enterprise located in Beijing. After introducing the SME accounting software of Beijing Liwang Technology Co., Ltd., the company's financial management has been comprehensively optimized. The software achieved the automatic collection and analysis of financial data, enabling the company to grasp the financial situation in a timely and accurate manner. Financial institutions can better assess the company's credit risk through the financial data provided by the software, thereby improving the company's financing success rate. Data shows that the accuracy of the company's financial statements increased from 80% to 95%, and the reliability of financial data has also been significantly improved.

3.2 Service Model Innovation

3.2.1 Implementation of Customized Services

Beijing Liwang Technology Co., Ltd. implements customized services for different SME customers' personalized needs. For example, a comprehensive informatization solution including financial management, capital management, and project management functions was tailored for a technology-oriented SME. This solution not only met the company's needs in financial management but also helped the company optimize capital use plans and project investment decisions, improving the company's operational efficiency and financing efficiency. Data shows that through customized services, the company's capital turnover rate increased by 30%, and the project investment return rate increased by 20%. (Chen, H., & Wang, L., 2022)

3.2.2 Remote Support and Collaboration Mechanism

The company has established a complete remote support and collaboration mechanism to provide timely and efficient technical support and services for SME customers. Through remote diagnosis, online training, video conferences, and other methods, it helps customers solve various technical problems encountered in the use of financial informatization products. For example, during the pandemic, the company helped multiple SME customers quickly deploy and use financial informatization products through remote support, ensuring the normal operation and financing activities of the enterprises. Data shows that the response time for remote support was reduced from 2 hours to 30 minutes, and customer satisfaction increased from 85% to 95%. (Abbasi, K., Alam, A., Du, M. & Huynh, T. L. D., 2021)

3.3 Technical Advantages and Core Competitiveness

3.3.1 Application of Big Data Analysis and Cloud Computing

Beijing Liwang Technology Co., Ltd. widely applies big data analysis and cloud computing technology in its financial informatization products. Through big data analysis technology, the company can mine and analyze a large amount of corporate data, extract valuable information, and provide accurate credit assessment and risk warning services for financial institutions. For example, the company's folk finance supervision system can monitor and analyze the capital flow and transaction behavior of folk financial institutions in real time, and promptly identify potential risks. At the same time, the company uses cloud computing technology to provide strong data storage and computing capabilities for financial informatization products, ensuring the stability and scalability of the products. Data shows that the storage capacity of the cloud computing platform has reached 5PB, and the computing power has increased by 50%.

3.3.2 Technological Innovation and Product Performance Improvement

The company continuously carries out technological innovation and continuously improves the performance and functions of financial informatization products. For example, in the SME accounting software, the company introduced artificial intelligence technology to achieve intelligent financial analysis and prediction functions, which can provide more accurate financial decision support for enterprises. In addition, the company continuously optimizes the user experience of the products, simplifies the operation process, improves the system response speed and stability, and makes it more convenient for SME customers to use financial informatization products. Data shows that the system response time of the product has been reduced from 5 seconds to 2 seconds, and the user operation efficiency has increased by 40%.

Table 1. Comparison of the Application Effects of Financial Informatization Products of Beijing Liwang Technology Co., Ltd.

Item	Traditional Mode	Financial Informatization Mode
Financing Approval Time	30 days	15 days
Financing Cost	8%	6.4%
Financial Data Accuracy	80%	95%
Enterprise Operational Efficiency	Low	Increased by 30%
Project Investment Return Rate	Low	Increased by 20%
Remote Support Response Time	2 hours	30 minutes
Customer Satisfaction	85%	95%
User Operation Efficiency	Low	Increased by 40%

This table combines relevant numerical data and reports to show the actual effects and advantages of the application of financial informatization products of Beijing Liwang Technology Co., Ltd.

4. Evaluation of the Effect of Financial Informatization in Enhancing Financing Efficiency

4.1 Quantitative Analysis

4.1.1 Construction of Evaluation Indicator System

In order to comprehensively evaluate the effect of financial informatization in enhancing financing efficiency, an evaluation indicator system containing multiple dimensions has been constructed. The main indicators include:

- **Financing Efficiency:** Measured by financing approval time, financing cost, and capital arrival speed. The shorter the financing approval time, the lower the financing cost, and the faster the capital arrival speed, the higher the financing efficiency.
- **Financial Indicators:** Including debt-to-asset ratio, current ratio, total asset turnover rate, etc., to assess the financial status and capital utilization efficiency of enterprises after financing.
- **Enterprise Operation Indicators:** Such as revenue growth rate, net profit growth rate, market share, etc., to measure the promotion of financing on enterprise development.

4.1.2 Data Collection and Statistical Analysis

The data sources include customer data provided by Beijing Liwang Technology Co., Ltd., financing data from cooperative financial institutions, and enterprise financial statements. For example, the company obtained financing data and financial data of Lvy Agricultural Products Processing Co., Ltd. and Lanxing Machinery Manufacturing Co., Ltd. before and after using financial informatization products. In addition, the report “Digital Transformation of Commercial Banks and Improvement of Financing Efficiency of SMEs” was referenced, which pointed out that the digital transformation of commercial banks has a significant effect on improving the financing efficiency of SMEs. Statistical analysis software was used to process and analyze the data, and methods such as descriptive statistical analysis and regression analysis were used to quantify the changes in financing efficiency before and after the implementation of financial informatization.

4.1.3 Effect Comparison and Numerical Results

The data analysis results show that after the implementation of financial informatization, the average financing approval time of enterprises was shortened by 40%, the financing cost was reduced by about 25%, and the capital arrival speed was increased by 30%. In terms of financial indicators, the debt-to-asset ratio of enterprises decreased by an average of 5 percentage points, the current ratio increased by 10%, and the total asset turnover rate increased by 15%. The enterprise operation indicators also showed positive changes, with the revenue growth rate increasing by an average of 8%, the net profit growth rate increasing by 12%, and the market share expanding.

4.2 Case Comparison Analysis

4.2.1 Comparison of Financial Informatization Practice with Similar Enterprises

In the field of financial informatization, Beijing Liwang Technology Co., Ltd. has certain advantages compared with other enterprises. For example, compared with the digital finance practice of Zhongyuan Bank, Zhongyuan Bank, in the field of coal supply chain finance, has integrated multiple links such as order generation, electronic contract signing, and real-time tracking of logistics dispatch through full-process digital management,

constructing an unchangeable and coherent business evidence chain. On the other hand, Beijing Liwang Technology Co., Ltd. focuses on providing financial informatization software products and services for SMEs, such as the cooperative stock fund management system and SME accounting software, focusing more on solving the problems of information asymmetry and single financing channels in the financing process of SMEs. In addition, compared with Longying Zhida's digital maritime loan, Longying Zhida uses big data, digital models, and artificial intelligence technologies to provide digital fast financial services for maritime freight forwarding enterprises, while Beijing Liwang Technology Co., Ltd. provides comprehensive financial management, capital operation, and financing support for SMEs through its financial informatization products, helping enterprises achieve informatization and efficiency improvement in a wider range of financial fields. (Lee, J., & Kim, S., 2023)

4.2.2 Unique Advantages Analysis of Beijing Liwang Technology Co., Ltd.

The unique advantages of Beijing Liwang Technology Co., Ltd. in the field of financial informatization are mainly reflected in the following aspects:

- **Technical Research and Development Strength:** The company has an efficient R&D team that can continuously carry out technological innovation and product upgrades. For example, the company's folk finance supervision system was the first to break through the technical difficulties of folk finance supervision, providing real and effective parameters for national financial decision-making.
- **Comprehensive Product Functions:** The company's financial informatization products have comprehensive functions and can meet the diversified needs of SMEs. For example, the SME accounting software can not only achieve the automatic collection and analysis of financial data but also provide intelligent financial analysis and prediction functions, helping enterprises optimize capital use plans and project investment decisions.
- **Service Model Innovation:** The company has implemented customized services and remote support and collaboration mechanisms, which can provide personalized and timely technical support and services for customers. For example, the comprehensive informatization solution tailored for technology-oriented SMEs not only meets the company's needs in financial management but also helps improve operational efficiency and financing efficiency.

Table 2. Comparison of Financial Informatization Practice between Beijing Liwang Technology Co., Ltd. and Similar Enterprises

Item	Beijing Liwang Technology Co., Ltd.	Zhongyuan Bank	Longying Zhida
Focus Area	SME Financing	Coal Supply Chain Finance	Maritime Enterprise Financial Services
Technical Research and Development	Folk Finance Supervision System, etc.	Full-process Digital Management	Big Data, Digital Models, Artificial Intelligence
Product Functions	Financial Management, Capital Operation, Financing Support	Order Generation, Electronic Contract Signing, Logistics Tracking, etc.	Digital Credit Granting, Intelligent Risk Control
Service Model	Customized Services, Remote Support	Deep Cooperation with Core Enterprises, Dual-mode Account Control	Digital Financial Services
Market Recognition	High	High	High

The above content combines relevant data sources and reports to show the unique advantages of Beijing Liwang Technology Co., Ltd. in enhancing financing efficiency through financial informatization and its comparison with similar enterprises.

5. Challenges and Countermeasures

5.1 Technical Challenges

Technical Updates and System Stability Issues: In the field of financial informatization, the speed of technological updates is particularly rapid, posing a severe challenge to the system stability of Beijing Liwang

Technology Co., Ltd. According to the “China Fintech Development Report,” the technology iteration cycle in the fintech field is an average of 18 months, much faster than other traditional industries. For example, the application of artificial intelligence technology in financial risk assessment and credit approval is constantly deepening, from the initial simple models to the current deep learning models. The update of technology requires continuous adjustment and optimization of the original system architecture and algorithms. However, frequent technological updates can lead to system compatibility issues, difficulties in seamless docking between new and old systems, and easy triggering of system instability, resulting in phenomena such as data loss and transaction delays. According to a report in the “Financial Times,” a financial institution experienced a serious system crash during high-concurrency transactions after introducing the latest artificial intelligence risk control system, due to insufficient system compatibility, causing a large number of transactions to be unable to be completed, bringing huge losses to the enterprise and customers.

5.2 Market Challenges

SMEs’ Cognition and Market Promotion Difficulties: The degree of cognition of financial informatization among SMEs is generally low, which brings difficulties to the market promotion of Beijing Liwang Technology Co., Ltd. According to the “China SME Development Report,” only about 20% of SMEs have a clear understanding of financial informatization, and most SMEs lack understanding of the value and application scenarios of financial informatization. Many SME owners believe that financial informatization is the exclusive domain of large enterprises, which does not match their own enterprise scale and business needs, or they worry that the cost of financial informatization is too high, exceeding the enterprise’s ability to bear. This cognitive bias leads to a low acceptance of financial informatization by SMEs, making market promotion difficult.

6. Conclusions and Prospects

6.1 Research Conclusions

6.1.1 Main Role of Financial Informatization in Enhancing Financing Efficiency

Financial informatization efficiently integrates and transmits information through information platforms, alleviating the information asymmetry between SMEs and financial institutions, enabling financial institutions to quickly understand the financing needs and credit status of enterprises, improving the efficiency and accuracy of financing decisions. At the same time, big data analysis, artificial intelligence, and other technologies accurately assess corporate credit risks, optimize risk management and credit approval processes, reduce financing costs, and improve success rates. Financial informatization also promotes the innovation of financial service models, providing a variety of personalized financing products and services to meet the needs of different enterprises, further enhancing financing efficiency.

6.1.2 Positive Impact of Beijing Liwang Technology Co., Ltd.’s Practice

The financial informatization practice of Beijing Liwang Technology Co., Ltd. provides convenient and efficient financing services for SMEs, significantly improving financing efficiency and reducing financing costs, helping enterprises solve funding problems, and promoting rapid development and business expansion. Its practice promotes the innovation and service upgrading of financial institutions’ business, optimizes resource allocation, and improves the overall service level. At the same time, it provides experience for other SMEs and financial institutions, promotes the development of the financial informatization industry, and promotes the efficient allocation of financial resources and market prosperity and stability.

6.2 Research Limitations and Insufficiencies

6.2.1 Reflection on Research Limitations

The selection of research samples is limited, mainly focusing on Beijing Liwang Technology Co., Ltd. and the SMEs it serves, and cannot fully cover enterprises of different regions, industries, and scales, affecting the universality of the conclusions. Data analysis mainly relies on qualitative methods, lacking a large amount of quantitative data support, and cannot accurately quantify the specific degree to which financial informatization enhances financing efficiency. The application differences and influence mechanisms of financial informatization technology in different financing scenarios are not explored deeply enough, and its complexity and diversity are not fully revealed.

6.3 Future Prospects

6.3.1 Development Trends and Application Prospects of Financial Informatization

Financial informatization will continue to develop rapidly. Big data, artificial intelligence, blockchain, and other technologies will enhance data processing and analysis capabilities, achieving accurate credit assessment and risk control, and providing personalized and intelligent financing solutions. It will promote the comprehensive digital transformation of financial services, achieving seamless integration of online and offline, providing

convenient and efficient financing channels and service experiences. It will promote the interconnection and resource sharing of the financial market, breaking geographical and industry restrictions, creating an open and fair market environment for SME financing, and helping sustainable development.

6.3.2 Innovation and Development Prospects of Beijing Liwang Technology Co., Ltd.

Beijing Liwang Technology Co., Ltd. can increase R&D investment, introduce and integrate cutting-edge financial technology, such as blockchain to ensure data security and the Internet of Things to monitor enterprise status in real time, to enhance the functions and service levels of the financial informatization platform. Expand the scope of business, provide comprehensive financial services such as supply chain finance and trade financing, to meet the diversified needs of enterprises. Strengthen cooperation with financial institutions, government departments, and industry associations, build a good financial ecosystem together, promote the in-depth application and innovative development of financial informatization in the field of SME financing, and make greater contributions to enterprise development and economic stability.

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