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# Research on the Impact of Supply Chain Finance on Enterprises' ESG Performance

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**Abstract:** With the continuous increase in global attention to Environmental, Social, and Governance (ESG) issues, an enterprise's ESG performance has become an important indicator for measuring its comprehensive competitiveness. As an innovative financial model that integrates the industrial chain and financial resources, supply chain finance not only improves the capital liquidity and resource allocation efficiency of enterprises but also plays a positive role in promoting the sustainable development of enterprises. Based on the operational characteristics and internal mechanisms of supply chain finance, this paper systematically analyzes its impact pathways on enterprises' ESG performance, aiming to provide theoretical support and practical references for enterprises to improve their sustainable development strategies and for the government to optimize policy-making.

**Keywords:** Supply chain finance; ESG performance; Enterprise management

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## 1. Introduction

Against the backdrop of accelerating globalization and deepening sustainable development concepts, an enterprise's competitive advantage is not only reflected in its internal operating efficiency but also closely related to its position and responsibilities within the supply chain system. Supply chain finance, as an innovative financial model that integrates logistics, information flow, and capital flow, has become an important tool for enterprises to optimize resource allocation, improve operating efficiency, and enhance risk-resistance capabilities. At the same time, Environmental, Social, and Governance (ESG) have gradually become key indicators for measuring an enterprise's comprehensive performance and sustainable development capabilities [1].

Currently, China is in a crucial stage of high-quality economic development. The guiding role of the ESG concept in enterprise operations is becoming increasingly prominent, prompting enterprises to pay more attention to fulfilling social responsibilities and choosing green development paths while pursuing economic benefits. Excellent ESG performance not only helps to enhance an enterprise's reputation and social recognition but also strengthens its financing capabilities and market competitiveness, serving as an important support for enterprises to achieve long-term value creation [2].

In this context, more and more enterprises are incorporating ESG into their core strategic plans and promoting its integration into the entire process of operation and management. Exploring the impact of supply chain finance on enterprises' ESG performance not only has important theoretical research value but also provides practical references and path guidance for the government to improve the policy system and for enterprises to promote sustainable development practices.

## 2. Overview of supply chain finance

### 2.1. Definition of supply chain finance

Supply chain finance refers to the coordinated management of financial institutions, core enterprises, or third-party platforms around the upstream and downstream enterprises of a supply chain in terms of goods flow, capital flow, and information flow, providing systematic and customized financial service solutions, relying on the core enterprise of the supply chain. This model is based on the credit guarantee of the core enterprise. By effectively controlling the real trade background, it transforms the risk exposure of a single enterprise in traditional finance into the overall management of the risks of all participants in the entire supply chain system, achieving effective risk diversification and control [3].

The core goal of supply chain finance is to improve the overall capital allocation efficiency of the supply chain, enhance the liquidity and transparency of the operation process, and thus improve the stability and competitiveness of the supply chain system [4]. In short, supply chain finance does not merely provide financing support to a single enterprise. Instead, relying on the credit advantages of the core enterprise, it integrates the resources of the industrial chain and offers a package of comprehensive financial services to upstream and downstream small and medium-sized enterprises, including financing, settlement, credit assessment, accounts receivable management, warehouse financing, order financing, etc., to promote the coordinated development and sustainable operation of the supply chain system [5].

### 2.2. Main characteristics of supply chain finance

#### 2.2.1. Controllable risk

Supply chain finance uses the credit of the core enterprise as a fulcrum. Relying on its stable trading relationships and operating capabilities, it effectively reduces the default risk faced by financial institutions during the credit-granting process. By participating in the capital flow and logistics of each link of the supply chain, financial institutions can have a more comprehensive understanding of the trading background and credit status of enterprises, realizing a transformation from traditional single-risk control to systematic risk management [6].

#### 2.2.2. Transparent information

Supported by digital platforms, supply chain finance enables the sharing of information among the upstream and downstream of the supply chain. With the help of the business data mastered by the core enterprise, financial institutions can obtain real-time information on the order fulfillment status, inventory turnover rate, and transaction records of small and medium-sized enterprises, thereby improving the accuracy of credit assessment and the scientific nature of financing decisions [7].

### 2.2.3. Based on real trade background

Supply chain finance emphasizes that all financing activities must be based on real transactions [8]. Financial institutions ensure that financing behaviors have a clear trade background and capital use purpose by reviewing purchase orders, invoices, logistics documents, etc., and establish a "self-liquidating" financing mechanism to reduce the risk of financial fraud and ensure the predictability of closed-loop capital operation and repayment sources [9].

### 2.2.4. Stable cooperative relationship

Core enterprises usually have strong bargaining and control power over their upstream and downstream supply chain enterprises. Within the supply chain system, member enterprises establish stable relationships based on long-term cooperation and benefit-sharing, which provides a continuous and reliable basis for risk assessment by financial institutions and enhances the continuity and stability of financial services [10].

### 2.2.5. Shift in credit-granting logic

Compared with the credit-granting logic of traditional finance, which focuses on enterprise financial statements, supply chain finance pays more attention to the credit transmission mechanism in the transaction chain. Financial institutions usually grant credit to core enterprises, and then the core enterprises extend their credit to upstream and downstream enterprises, achieving indirect credit-granting to small and medium-sized enterprises. This simplifies the risk control process, improves financing efficiency, and reduces credit risk exposure.

### 2.2.6. Meeting multi-level financing needs

Supply chain finance can cover the diversified financing needs of enterprises in various links, from raw material procurement, production and processing, logistics and warehousing to sales and payment collection. Its financial products are rich in variety and flexible in form, capable of providing customized services to enterprises and alleviating practical problems such as difficult and expensive financing [11].

### 2.2.7. Closed-loop capital operation

Supply chain finance emphasizes the full-process controllability and traceability of capital flows. Through the unified management of capital flow, logistics, and information flow, it realizes closed-loop control of links such as financing applications, capital disbursement, and recovery. Financial institutions strengthen post-loan management through item-by-item review and dynamic supervision, effectively preventing systematic risks and achieving pre-emptive risk management.

## 2.3. Functions of supply chain finance

As a product of the deep integration of modern financial services and supply chain management, the value of supply chain finance is not only reflected in alleviating enterprise financing difficulties but also in promoting the overall optimization and upgrading of the supply chain. Its main functions can be elaborated from the following four aspects [12].

### 2.3.1. Optimizing capital flow efficiency

Supply chain finance helps enterprises convert idle assets into working capital through tools such as accounts receivable financing and inventory pledge, alleviating the capital pressure in each link. Enterprises can extend payment terms through credit purchases while accelerating the collection of accounts receivable, shortening the turnover cycle, and improving operating efficiency. Compared with traditional financing, supply chain finance focuses on the overall liquidity and coordination of the supply chain, promoting inventory structure optimization, order response acceleration, and data-driven dynamic management, achieving precise capital allocation and maximizing the use efficiency.

#### 2.3.2. Reducing financing costs

Relying on information sharing and digital technology, supply chain finance effectively alleviates the problems of "difficult and expensive financing" for small and medium-sized enterprises. Financial institutions reduce information asymmetry and risk premiums with the credit endorsement of core enterprises and data-based risk control. At the same time, diverse financing products such as order financing and warehouse receipt financing can accurately match enterprise needs, avoiding financing mismatches. The introduction of digital platforms also simplifies processes, reduces costs, and improves efficiency.

#### 2.3.3. Enhancing supply chain stability

Supply chain finance provides financial guarantees for small and medium-sized enterprises, enhancing the performance capabilities of each link and reducing the risk of supply chain disruptions. Relying on the credit transmission and coordination mechanism of core enterprises, it achieves risk-sharing and improves the overall resilience. Information sharing and transparent management improve response speed and scheduling efficiency, promoting the establishment of long-term and stable cooperative relationships between upstream and downstream enterprises and enhancing the internal stability of the supply chain structure.

#### 2.3.4. Improving enterprises' comprehensive competitiveness

Supply chain finance provides flexible financial support, improving enterprises' capital security and market response capabilities, enhancing customer satisfaction and delivery efficiency. Enterprises can concentrate resources on innovation, market expansion, and brand building, strengthening their core competitiveness. At the same time, through a stable financial cooperation mechanism, enterprises can achieve resource sharing and complementary advantages, improving their bargaining power and strategic position in the supply chain and facilitating high-quality development and sustainable operation.

## 3. Impact of supply chain finance on enterprises' ESG performance

Against the backdrop of the increasingly strengthened "Dual-carbon" strategy and high-quality development orientation, ESG has become an important indicator for measuring an enterprise's comprehensive competitiveness. As a bridge connecting all parties in the industrial chain and financial resources, supply chain finance not only improves the resource allocation efficiency of enterprises but also profoundly affects environmental performance, social responsibility, and governance levels [13].

### 3.1. Promoting the improvement of environmental performance

Supply chain finance guides enterprises to adopt environmentally friendly raw materials and low-carbon production methods through the green credit mechanism. Financial institutions can implement incentives such as preferential interest rates and green credit lines for green enterprises, promoting green procurement, energy conservation, emission reduction, and constructing a sustainable supply chain. At the same time, the environmental risk assessment mechanism prompts enterprises to improve compliance systems and reduce the risk of environmental violations. In addition, green financing helps enterprises accelerate technological innovation and energy-saving transformations, and the information disclosure mechanism improves the efficiency of environmental risk identification and response, overall enhancing the green management levels of enterprises and their upstream and downstream partners.

### 3.2. Strengthening the fulfillment of corporate social responsibility

Supply chain finance provides financing channels such as accounts receivable and prepayment financing for small and medium-sized enterprises, alleviating financial strain, protecting employees' rights and interests, and promoting employment stability. Financial institutions are also gradually incorporating social responsibility evaluations, covering aspects such as labor treatment and supply chain compliance, into their due diligence investigations, strengthening corporate responsibility constraints. At the same time, enterprises tend to choose partners with strong responsibility-fulfilling capabilities, driving a responsibility-oriented cooperation mechanism. Through methods such as issuing social responsibility bonds and establishing sustainable funds, capital further flows into public welfare fields such as education, healthcare, and poverty alleviation, expanding the social influence of enterprises.

### 3.3. Optimizing the corporate governance structure

Supply chain finance improves enterprises' financial transparency and risk management capabilities, promoting the improvement of their internal financial control, budgeting, and audit mechanisms. The requirements for financing information disclosure also prompt management to improve governance efficiency and transparency. To meet risk control standards, enterprises need to strengthen internal control construction and improve their governance structures, forming a modern management system.

In addition, enterprises with strong governance capabilities are more likely to obtain financial support and cooperation preferences, forming a "reverse screening" mechanism that drives the synchronous improvement of the governance levels of the entire supply chain. The continuous supervision of financial institutions also strengthens the compliance and governance stability of enterprises.

In summary, supply chain finance is not only a financing innovation but also a financial means to promote enterprises to fulfill their ESG responsibilities and achieve sustainable development. Through its green incentive, responsibility-oriented, and information-transparent systems, it is increasingly becoming an important support for enterprises to achieve the coordinated improvement of the environment, society, and governance.

## 4. Conclusion

This paper systematically explores the impact mechanism of supply chain finance on enterprises' ESG performance. The research shows that supply chain finance not only helps to optimize enterprise capital flow, improve operating efficiency, and enhance competitiveness but also plays a significant role in promoting environmental performance, fulfilling social responsibilities, and optimizing corporate governance. Through its green incentive mechanism, information-sharing, and transparent governance system, it guides enterprises to accelerate their sustainable development transformation and helps to build a responsible and resilient supply chain system.

To further unleash the potential of supply chain finance in enhancing ESG performance, the following suggestions are put forward: At the enterprise level, deepen the strategic deployment of supply chain finance. Enterprises should actively introduce the concept of supply chain finance, incorporate it into their strategies and operation systems, and improve their collaborative management capabilities with upstream and downstream enterprises. By integrating financial resources, they can optimize the supply chain structure, enhance resource integration and environmental management capabilities, and form an internal driving force for sustainable development [14]. At the risk control level, improve the ESG-oriented supply chain management mechanism. Enterprises should establish an ESG-oriented risk assessment and control system, pay attention to risks related to environmental compliance, social responsibility fulfillment, and governance structure, achieve the dual improvement of supply chain stability and corporate responsibilities, and promote the coordinated integration of business goals and sustainable development goals.

At the policy and financial support level, promote institutional innovation and diverse financial supply. The government and financial institutions should strengthen top-level design and improve the policy framework for green supply chain finance. Encourage the innovation of financial products, promote the implementation of green credit, responsible investment, and ESG evaluation tools, and guide financial resources to gather towards environmentally friendly and socially responsible enterprises, providing institutional and financial support for the improvement of enterprises' ESG performance [15].

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## Disclosure statement

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