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# *International Trade Friction and International Business Risk Management Strategies*

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***Abstract:*** This paper focuses on how enterprises can build and strengthen their international business risk management framework in the context of international trade friction, aiming to provide practical guidance for enterprises to cope with the complex international environment. By analysing the core risks of policy risk, operational risk and exchange rate risk (currency fluctuation), the paper not only reveals the specific impact of these risks on business operations, but also innovatively proposes multi-dimensional management strategies, such as establishing a flexible supply chain system, strengthening the policy early warning mechanism, and applying financial derivatives to hedge against exchange rate risk. The study analyses the quantitative impact of international trade friction on firms' market power by using cross-industry firms' market performance data from 2015 to 2023. The results show that the friction coefficients are significantly negative, which clearly points out the weakening effect of trade friction on firms' market position, and provides a powerful data support for the business community and policy makers. Finally, the study suggests that enterprises should strengthen the construction of risk management teams, deepen the understanding of international rules, and use digital tools to improve the efficiency of risk identification and response, so as to participate in global competition in a more robust manner.

## 1. Introduction

Against the background of economic globalization, China's foreign trade has experienced unprecedented expansion and deepening. By actively participating in the international division of labour and cooperation, China has not only substantially increased its exports of goods and services, but has also effectively imported foreign capital and advanced technology and promoted the optimization and upgrading of its domestic industrial structure. At the same time, China is also continuously adjusting and improving its foreign trade policy to adapt to the new trend of global economic development and endeavour to play a more active role in the broader international market. The frequent occurrence of trade frictions not only affects the smooth conduct of international trade, but also has a far-reaching impact on the global economic pattern. Especially in the context of the

current global economy facing many uncertainties and challenges, how to effectively deal with the risks brought about by international trade frictions has become an important issue to be solved in the field of international business. As an indispensable link in the process of enterprises' globalization, the importance of international business risk management is becoming more and more prominent. When enterprises conduct cross-border operations, they not only have to face the complex and changing market environment, but also have to cope with the challenges of policies, laws, cultures and other aspects from different countries and regions. Therefore, it is of great significance to formulate scientific and reasonable international business risk management strategies to ensure the stable operation and sustainable development of enterprises.

The purpose of this paper is to discuss the international business risk management strategies in the context of international trade friction. Through an in-depth analysis of the causes and characteristics of international trade friction and its impact on international business activities, combined with the relevant theories and practical experience in international business risk management, a series of effective risk response strategies and measures are proposed. These strategies not only help enterprises effectively deal with various challenges in the current international trade environment, but also provide strong support and guarantee for the future internationalization development of enterprises. The research in this paper not only has important theoretical value, but also has certain practical significance. Through the research of this paper, it can provide useful references and lessons for governments and enterprises, promote the healthy development of international trade, and promote the prosperity and stability of the global economy. At the same time, this paper also hopes to provide researchers in the field of international business risk management with new ideas and perspectives, and to promote the continuous deepening and development of research in this field.

## 2. Related Works

With the deepening of global economic integration, international trade has become an important engine for world economic growth. However, behind the prosperity of international trade, trade friction, as an inevitable phenomenon in global economic cooperation and competition, has increasingly become the focus of attention of governments and enterprises. Grosse R et al. argue that the rise of China to a power comparable to the United States does not necessarily endanger globalization. Both the United States and China have a vested interest in maintaining an open economic order, and both countries are providing global public goods that incentivize the opening of the rest of the world's economy, for which he proposes a risk management framework [1]. Krolikowski P M et al. added commodity market frictions to a general equilibrium dynamic model with heterogeneous export producers and identical import retailers. They found that the easy-to-handle framework leaded to endogenously mismatched product varieties that reduced welfare, weakened the welfare response, increased the trade response to iceberg costs, and operated mainly through extensive profits [2]. Meanwhile, Nguyen H T T et al. adopted a positive organizational scholarship perspective to provide more contextualized insights into the impact of economic and political differences on foreign disinvestment. They argue that economic frictions will have a curvilinear (U-shaped) effect on foreign disinvestment, while political frictions will have a monotonic (positive) effect. Also, they compared the impact of differences in friction measures with differences in distance measures [3]. Ye M et al. used event analysis to study three Chinese listed textile and clothing companies representing the upstream, midstream, and downstream of the textile value chain. By tracking the Baidu Index trend of the keyword "trade war", they determined the "time window" of each landmark event. They studied the application of autoregressive distribution lag method to examine the impact of important milestone events during

the 2018 US China trade friction on the performance of these companies. As a result, it was found that the impact gradually weakened over time. In addition, compared to upstream companies, midstream and downstream companies suffered greater damage [4]. Singh D et al. proposed a comprehensive model of the risks faced by MNCs in different types of B2B (Business-to-Business) relationships. They argued that country differences affected the nature and extent of risks faced by MNCs in B2B relationships [5]. Akinci O et al. proposed a macroeconomic framework for both countries. This model features US financial intermediaries operating under financial friction holding risky assets across borders, which act as global intermediaries to assume foreign asset risks. In this situation, there is an exogenous increase in uncertainty unique to the United States [6].

Gereffi G believes that the unintended consequences of trade policies (restrictions and trade agreements) are amplified by the universality and organizational complexity of global value chains. He emphasized the dynamic interaction between global value chain oriented trade policies and corporate strategies, which often have counterintuitive effects on the upgrading outcomes of countries and companies involved in these global value chains. Although trade policies often provide impetus for adaptive restructuring of global value chains, strategic actions by businesses are crucial for changing the geographic and organizational characteristics of global value chains in ways that support their longevity [7]. Martin J et al. studied how stickiness in business relationships affected the overall trade impact of uncertainty. Firstly, they constructed a product level index of relationship stickiness using data on the duration of inter firm relationships, and then demonstrated how relationship stickiness affects trade dynamics to cope with uncertainty shocks. It was found that uncertain events can lead to a decrease in the overall establishment of new business relationships, and their impact varies depending on the level of stickiness. In markets characterized by high stickiness, uncertainty shocks mainly hinder investment in relationships between new companies. In contrast, for non viscous products, the adjustment of uncertainty impact mainly manifests as the destruction of existing relationships [8].

Although studies have explored the issue of international trade frictions from different perspectives, most of them lack a comprehensive framework to systematically analyze how these factors interact with each other and affect the overall operations of multinational corporations (MNCs). Moreover, some of the studies rely on data from specific industries or a small number of firms, and the generalizability and representativeness of their conclusions may be limited. In addition, the time span of the data may not be sufficient to fully reflect long-term trends and cyclical changes. Therefore, this paper adopts a dynamic analysis approach, taking into account the time-varying nature and uncertainty of the international trade environment, as well as the interactions and mutual influences between different factors, and simulates the risk evolution path and the effects of coping strategies under different scenarios by constructing a dynamic model or simulation system.

## 3. Methods

### 3.1. International Trade Friction

(1) The connotation of international trade friction

In international trade, due to differences in technology, resources, population, economic structure, history and other terms of trade, trade between countries often presents an unbalanced situation, when this situation has a large enough impact on a country's domestic industry, employment and economic development, international trade friction will occur [9]. International trade friction generally manifests itself in the form of anti-dumping measures, countervailing measures and safeguard measures imposed by one country on another. The causes of international trade friction are very complex, and the causes of international trade friction vary from different perspectives, and

from a practical point of view there are mainly the following perspectives:

1) Trade frictions arising from cost advantages of developing countries;

2) Trade frictions caused by balance of payments imbalances;

3) International trade frictions caused by developing countries' domestic industrial policies;

4) Trade frictions caused by imbalances in international income distribution;

5) International trade frictions due to national competition at the global level;

6) International trade disputes resulting from international political crises.

But in summary, it is all due to the uneven distribution of material power that friction events occur in international trade. This unequal distribution is not only reflected between countries, but also between different industries, enterprises, and even individuals, which is the deep-seated cause of international trade disputes and friction. This study distinguishes the types of international relations as shown in Table 1.

Table 1: Different types of international relations

| | | Identification | |
|---|---|---|---|
| | | Concordance | Disagreement |
| Material power | Relative imbalance or concentration | Hierarchical system | Empire |
| | Relative equilibrium or dispersion | Security community | Anarchy |

(2) Characteristics of International Trade Friction

1) Objectivity: International trade involves multiple links such as cross-border transportation, payment and settlement, and has a relatively long cycle, making it more susceptible to uncontrollable external factors such as natural disasters and currency exchange rate fluctuations. These risk factors are often beyond human control and difficult to completely avoid, reflecting the objectivity of international trade risks.

2) Dynamics: International trade is a global economic activity, and its risks are not limited to a single region, but run through the entire process of trade. From contract signing to goods delivery, payment settlement, and other stages, they may be affected by various factors such as geographical environment, traffic conditions, political stability, etc [10]. The constant changes in these factors make international trade risks dynamic, requiring enterprises to remain highly vigilant and respond flexibly in the trade process.

3) Relevance: In the context of economic globalization, the trade connections between countries around the world are becoming increasingly close, forming an interdependent and interdependent economic system. Therefore, any international trade risk does not exist in isolation, it often correlates with other factors in time and space, forming a chain reaction. This correlation requires enterprises to have a global perspective and comprehensively consider the impact of various factors when dealing with international trade risks.

4) Uncertainty: International trade risks contain a large number of uncertain and uncontrollable factors, especially sudden events such as natural disasters and accidents, whose occurrence time, location, and scale are difficult to accurately predict. This uncertainty increases the level of risk in international trade, making it difficult for companies to develop effective preventive measures in advance [11]. Therefore, enterprises need to reduce the losses caused by unknown risks by strengthening risk management and improving response capabilities.

### 3.2. Trade Status of Major International Trading Countries

When exploring the global international trade landscape, the current state of trade between the United States and China, as the most important economies, is of particular interest. The study will analyze in detail the current account deficit position of the United States over the period from 2019

to 2023 and briefly outline the composition of China's trade patterns. Since 2019, the United States, the world's leading trade deficit, has become a notable phenomenon in the international economy as its current account deficit has continued to widen. The current account primarily reflects the difference between a country's net exports of goods and services and its net investment income. During this period, the U.S. trade deficit stemmed mainly from a large deficit in merchandise trade, while trade in services and investment income showed some surplus, but this surplus could not fully offset the deficit in merchandise trade. The details are shown in Table 2.

Table 2: The size of the current account imbalance in the United States over the period 2019-2023

| Particular year | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|
| CA (in billions of US dollars) | -4802.3 | -4960.3 | -4834.9 | -51023.4 | -5260.1 |
| CA/GDP (%) | -2.2 | -2.2 | -2.3 | -2.3 | -2.4 |

As can be seen from Table 2, the United States has maintained a deficit in merchandise trade for a long time, and the size of the deficit has continued to expand. The main reasons for this include the strong domestic consumption in the United States and the continued growth in demand for imported goods; at the same time, the decline in the competitiveness of the United States manufacturing sector in certain areas has led to weak export growth. Consumer goods, automobiles, and asset-based goods are the main sources of the U.S. merchandise trade deficit. These areas rely heavily on imports, especially from countries such as China. The United States has a large number of investment assets abroad, and the investment income generated by these assets has brought the United States a sustained surplus. However, with changes in the global economic situation and in the international trade environment, the investment income surplus faces some uncertainty.

As one of the world's largest trading countries, China's trade modes are diverse and complex. China's trade modes mainly include general trade, processing trade and border trade. In recent years, with the adjustment of China's economic structure and the promotion of industrial upgrading, China's trade modes are undergoing profound changes. Table 3 shows the composition of China's sub-trade modes during 2015-2019.

Table 3: Composition of China by mode of trade during 2015-2019 (Unit: billions of US dollars, %)

| Particular year | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|
| Total exports | 22734.69 | 20976.32 | 22633.71 | 24866.82 | 24994.82 |
| General trade export value | 12147.92 | 12300.21 | 12412.21 | 14004.10 | 14444.07 |
| Proportion of general trade exports | 53.4% | 53.7% | 54.3% | 56.3% | 57.8% |
| Export value of processing trade | 7975.31 | 7153.31 | 7587.68 | 7970.43 | 7344.36 |
| Proportion of processing trade exports | 35.1% | 34.1% | 33.5% | 32.1% | 29.4% |
| Other trade export volume | 2611.47 | 2509.32 | 2745.83 | 2892.29 | 3196.39 |
| Proportion of other trade exports | 11.5% | 12.0% | 12.1% | 11.6% | 12.8% |

As the world's largest trade deficit country, the United States' current account deficit continued to expand from 2010 to 2019. As one of the world's largest trading nations, China's trade patterns are diverse and complex, undergoing profound transformation and upgrading. In the future, the interaction and competition between China and the United States in the field of trade will continue to have a profound impact on the global trade landscape.

### 3.3. Management Strategies of International Business Risks

(1) Risk quantitative analysis and assessment

Risk quantitative analysis and assessment is one of the important strategies for managing

international trade financing risks. Through the use of risk models and assessment tools, enterprises are able to quantitatively analyze financing risks and more accurately assess the potential impact and possibility. First of all, the use of risk models can help enterprises to scientifically analyze and predict the risk of international trade financing. The risk model quantifies and measures the risk components by establishing the correlation between various factors. For example, a currency risk model can predict the probability and magnitude of future exchange rate movements based on historical fluctuations in exchange rates and related factors, thus helping companies to formulate appropriate risk management strategies. Similarly, a credit risk model can assess the default risk of suppliers and buyers by taking into account factors such as their historical transaction records, financial conditions and market ratings.

Second, assessing the potential impact and likelihood of financing risks is a key step in the quantitative analysis of risk. By quantitatively analyzing risk, companies are able to gain a more comprehensive understanding of the potential impact of a risk event if it occurs, and to effectively assess trade processes and financial conditions. For example, when assessing currency risk, companies can calculate the loss of payment or profit impact of different exchange rate fluctuation scenarios and then decide whether to hedge or adjust their trading strategy. For credit risk, companies can estimate the loss caused by a risk event based on the possible loss of default and recovery rate, and set reasonable credit management measures and terms of trade accordingly.

(2) Emphasizing science and technology innovation

Since the 21st century, science and technology have become more and more important in all walks of life, science and technology is the first productive force. Scientific and technological innovation can promote industrial upgrading, the economic foundation determines the superstructure, promote the development of productive forces can make the economic foundation of national development more solid, which is the fundamental place of the country's strength and national strength. The increase in value added by science and technology innovation for products has enhanced China's position in the international arena, transformed primary products into premium products, increased China's economic income, and strengthened China's voice in international trade. Scientific and technological innovation can reduce China's dependence on foreign technology, break the technological monopoly of developed countries, scientific and technological autonomy can maximize the independence of the country, which is particularly important in the military industry, where the foundation of self-protection is located, and scientific and technological innovation can also be adjusted to the industrial structure, improve the environment, reduce energy consumption, reduce the cost of industrial products, and promote social harmony and stability. Technological breakthroughs can realize cost reduction, efficiency improvement, etc. Therefore, the state should pay attention to scientific and technological innovation, increase investment and help in policy.

(3) Improving the management mechanism, improve risk control ability

According to the status quo of international trade development, perfect supervision mechanism can help enterprises effectively control the risk factors existing in the process of trade activities, to ensure that the staff strictly abide by the system and the responsibility of the target, to complete the work task. With the continuous expansion of the scale of international trade, business activities have become more and more complex, therefore, only by strengthening the supervision of national trade activities, can we effectively improve the risk avoidance ability [12]. In addition, once irregularities are found, they should be stopped in time and the parties concerned should be given the necessary training in order to enhance the effectiveness of the supervision work of enterprises and lay a solid foundation for enterprise risk prevention.

(4) Increasing fund management

Import and export enterprises should pay more attention to international trade settlement

methods when conducting trade business, in order to grasp the latest settlement methods, and strengthen the exploration of additional business for enterprises, such as credit insurance trade financing business, to provide financial support for the development of enterprise business, which has a very positive significance for enterprise financing and can promote better development of enterprises. At the same time, enterprises should always pay attention to exchange rate changes, take diversified measures to control exchange rate risks, and avoid losses due to exchange rate fluctuations. Trading can be conducted under favorable exchange rate conditions for the enterprise, and exchange rate derivatives and other tools can be used to prevent exchange rate risks and safeguard the interests of the enterprise. In addition, it is necessary to strengthen the fund management of investment and financing, accounts receivable, inventory, and cash flow to ensure sufficient cash for the enterprise and avoid the breakage of the capital chain caused by the inability to collect accounts receivable in a timely manner or excessive inventory due to credit sales.

## 4. Results and Discussion

### 4.1. Global Friction Trade Data Survey

The trade friction data in this paper comes from the GTA (GlobalTradeAlert) database, which is a database dedicated to monitoring and documenting protectionist measures worldwide. It encompasses more than 300,000 records of trade practices since November 2008, covering 185 countries and territories across the globe and covering all types of trade discrimination and liberalization measures. The database is not based on officially reported data from economies, but rather on trade policy data collated from official websites and other official sources of information in individual countries and regions. Thus, it encompasses not only traditional import-control trade friction instruments, such as tariffs, anti-dumping, countervailing duties, technical barriers to trade, sanitary and phytosanitary measures, but also a wide range of trade interventions, such as export controls, State aid and subsidies, and localized purchasing. Given the diversification and sophistication of the means of trade friction in recent years, this data provides a more nuanced and comprehensive picture of trade friction among economies around the world.

The study categorizes all trade friction events counted by the GTA between 2015 and 2023 into four categories: import controls, export controls, behind-the-border measures, and other measures, and thus plots the share of these four categories of trade friction in different years between 2015 and 2023. This is shown in Figures 1 and 2.

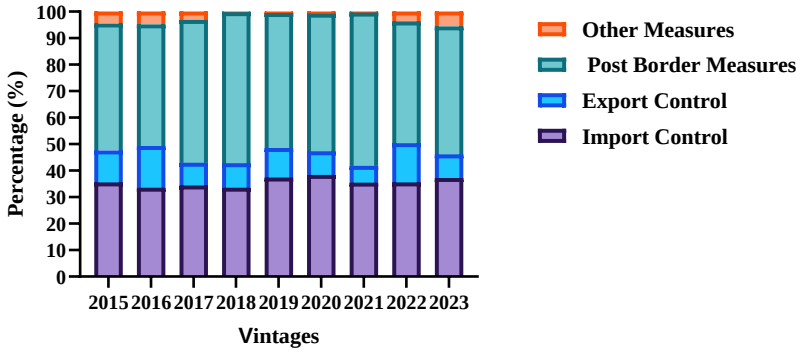


Figure 1: Changes in the share of different types of trade frictions globally over the period 2015-2023

Figure 1 reflects the changes in the proportion of different types of trade friction measures encountered by all countries. In general, trade friction on a global scale consists mainly of two types

of import control and behind-the-border measures; in terms of trends, behind-the-border measures are gradually replacing import control, which includes traditional measures such as anti-dumping, as the main type of trade friction.

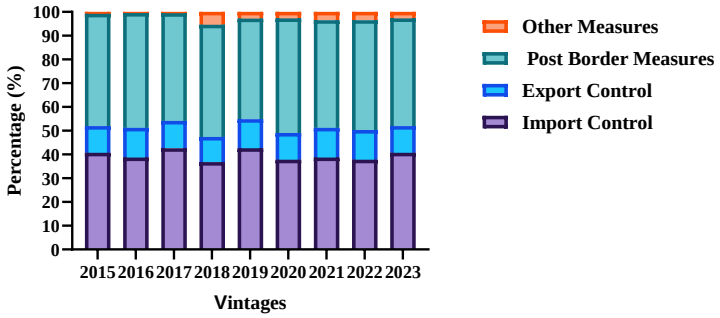


Figure 2: Changes in the share of different types of trade frictions suffered by China between 2015 and 2023

Figure 2 shows that China's exposure to trade frictions is similar to that of other countries, with import controls and behind-the-border measures also dominating China's exposure to trade frictions, and the share of behind-the-border measures is also increasing.

## 4.2. Impact of Trade Friction on Chinese Companies

Table 4: Characterization of descriptive statistics

| Variable | Variable description | Sample size | Mean value | Standard deviation | Minimum value | Minimum value |
|---|---|---|---|---|---|---|
| Comlerner | Enterprise Lerner Index | 52252 | 0.028 | 0.0299 | 0 | 0.7441 |
| Comshare | Enterprise market share | 54712 | 0.0347 | 0.028 | 0 | 0.3441 |
| Friction | Intensity of trade friction | 53497 | 0.0309 | 0.0289 | 0.0105 | 0.1802 |
| Size | Enterprise scale | 54712 | 22.0251 | 1.028 | 17.0143 | 28.1351 |
| ComD R | Enterprise asset liability ratio | 54712 | 0.0318 | 0.0347 | 0.0153 | 1.2991 |
| Tang | Enterprise asset structure | 52913 | 0.427 | 0.2357 | 0.0182 | 0.9261 |
| Tobin | Enterprise tobin q value | 53607 | 2.12 | 3.0309 | 0.6172 | 714.1081 |
| R OE | Return on equity | 52308 | 0.0367 | 0.127 | -187.98 | 2.1441 |
| Profit | Profit growth rate | 53119 | 0.0386 | 6.0299 | -869.0078 | 77.1532 |
| Sdebt | Short term debt ratio | 54712 | 0.0299 | 0.0241 | 0 | 0.1351 |
| Indstr | Industrial structure | 54712 | 48.0386 | 14.0309 | 6.0172 | 87.1171 |
| Innosup | Innovation support intensity | 54712 | 0.0386 | 0.0241 | 0 | 0.1712 |
| Market | Marketization index | 54126 | 9.0309 | 2.0347 | -0.547 | 11.1081 |
| HHI | Herfindahl index | 54712 | 0.026 | 0.0251 | 0.0172 | 1 |

This paper takes the listed companies in China's A-share market excluding the financial industry from 2015 to 2023 as the research object. According to the common practice of existing studies,

before the empirical analysis, this paper has done the following treatments to the data: (1) excluding the enterprises in the financial industry; (2) excluding the ST, *ST, PT, and delisted and rectified enterprises; and (3) excluding the missing data samples. In order to exclude the influence of extreme outliers on the results of the study, this paper shrinks the continuous variables up and down by 1%, and finally obtains 54,712 “company-year” observations. The specific data characteristics are shown in Table 4.

Based on the data in Table 4, the study carried out regression analysis and the results of the multiple fixed effects regression are presented in Table 5. Columns (1) and (3) show the effect of trade friction intensity on firms' market power when no control variables are added. It can be seen that trade friction intensity weakens the market power of listed firms at 1% significance level. To exclude the effect of noise, columns (2) and (4) demonstrate the effect of trade friction intensity on firms' market power after adding control variables.

Table 5: Basic regression results

| Variable | Comlerner | Comlerner | Comshare | Comshare |
|---|---|---|---|---|
| Freiction | -0.0008 | -0.0006 | -0.0004 | -0.0005 |
| $R^2$ | 0.15738 | 0.2167 | 0.6724 | 0.7914 |
| Cluster | Yes | Yes | Yes | Yes |
| Year | Control | Control | Control | Control |

The results of the study show that the coefficients of Friction are -0.0006 and -0.0005 respectively, and both are significant at the 1% level. This can indicate that the negative shock of US-China trade friction can weaken the market power of Chinese firms. The reason for this is that the increase in the intensity of trade friction between China and the United States implies an increase in uncertainty in the economy. On the one hand, this will lead to Chinese enterprises facing restrictions in the export market, which will reduce their export opportunities and thus lower their market share and power; on the other hand, this will also lead to higher prices of imported raw materials or increased tariffs, which will increase the production costs of enterprises, making Chinese enterprises less competitive in the international market and affecting their market power.

## 5. Conclusion

Through the in-depth study of international trade friction and international business risk management strategies, this paper proposes international business risk management strategies covering a variety of aspects, including strengthening international cooperation and dialogue, promoting trade diversification and transformation and upgrading, perfecting the risk management mechanism, innovating risk response means and cultivating risk management professionals. These strategies are interrelated and mutually reinforcing, and together constitute an effective framework for enterprises to cope with international trade friction risks. Through the implementation of these strategies, enterprises can enhance their competitiveness and risk-resistant ability in international trade, and guarantee their stable operation and sustainable development. In addition, this paper also emphasizes several aspects that enterprises should focus on in international business risk management. The first is to closely monitor the dynamics of international trade policies and adjust business strategies in a timely manner to cope with the risks brought by policy changes; secondly, we need to strengthen internal management to ensure compliance and efficiency of trade processes, and reduce operational risks; thirdly, it is necessary to flexibly utilize risk management tools, such as forward foreign exchange contracts, to effectively manage financial risks such as exchange rates; the fourth is to attach importance to the cultivation and introduction of risk management professionals, providing strong talent support for enterprise risk management.

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