

# Research on the Relationship Between the Integration of Industry and Finance and Enterprise Risk Management

Ze Zhao Liu

Beijing Hospitality Institute, Beijing, 102601, China  
Liu502619@Outlook.com

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**Abstract:** This paper explores the relationship between the integration of industry and finance and enterprise risk management in both theory and practice, so as to provide reference for enterprise managers, help them optimize the level of risk management and improve the efficiency of enterprise decision making. In the process of globalization and the rapid development of information technology, enterprises are and continue to face more and more complex operational risks and financial risks, and the traditional financial management model is difficult to manage the related risks. Through the integration of business and financial information, it can help enterprises to enhance their ability to identify and cope with risks, and enhance their market competitiveness, so as to ensure their sustainable development. Based on literature review and empirical research, this paper finds that the integration of business and finance can significantly improve the speed of risk identification and processing efficiency of enterprises. In view of the positive significance of the integration of business and finance to improve the level of risk management, corresponding suggestions are put forward to provide practical guidance for enterprises to improve the effectiveness of the integration of business and finance.

**Keywords:** Integration of industry and finance, enterprise risk management, decision efficiency, information integration.

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## 1. Introduction

Under the continuous wave of globalization and informationization, enterprises are facing increasingly complex operational risks, resulting in the effectiveness of traditional financial management model has been challenged, and it is unable to cope with emerging risk types [1]. As an innovative management concept, some enterprises try to use the integration of industry and finance to enhance the ability of enterprises to identify and deal with risks by integrating business and financial information, so as to improve the decision-making efficiency of enterprises, and help enterprises win and maintain strong competitiveness in the dynamic market to achieve sustainable development. The main purpose of this paper is to deeply explore the relationship between the integration of industry and finance and enterprise risk management. Specifically, the study will clarify the possible role of the integration of industry and finance in enterprise risk management, including the risk identification, assessment and response of enterprises, and discuss the problems that enterprises may face in the process of implementing the integration of industry and finance and the corresponding solutions. At the same time, the research results of this paper will provide suggestions for enterprises to improve the effectiveness of integrating business and financial work in different economic environments. Therefore, the significance of this study is to provide guidance for enterprise managers from both theoretical and practical aspects, help these enterprises to better implement the integration of business and finance, optimize risk management strategies, and provide new perspectives and ideas for future academic research in related fields.

## 2. Literature Review

In the research field of the integration of business and finance and enterprise risk management, domestic and foreign scholars have made some research achievements. This part will review these achievements, including the development of related concepts, the research status, the relationship between the integration of industry and finance and enterprise risk, and the prospect of future research directions. The concept of the integration of business and finance originally comes from the reevaluation of the traditional financial management functions. The key goal of the integration of industry and finance is to eliminate the barriers between traditional business and finance, so as to realize the connection and integrated management of resources, information and decisions. Scholars in related fields generally believe that the integration of business and finance can play an important role in optimizing the allocation of resources and improving the efficiency and quality of decision making. For example, Hong Zhicheng points out in his research that the integration of industry and finance can significantly enhance enterprises' market adaptability and competitiveness by improving information sharing and decision-making consistency [1]. Mei E Yu points out that through the integration of industry and finance, enterprises can achieve in-depth exchanges and communication between business departments and financial departments, which can help business departments provide more scientific and accurate data support in budgeting, cost control, investment decision-making and other aspects [2]. Deyuantang states that the integration of industry and finance can promote the communication and exchange between business and financial departments in the integration process, and can timely discover the potential risks in the business activities of enterprises [3]. At the same time, it can also help improve the comprehensiveness and effectiveness of financial

risk prevention work. The financial department can be involved in all links of business activities to achieve scientific and effective risk control before, during and after. Yu Dapeng emphasized that cost management should be the focus of the integration of industry and finance, and the ability to prevent risks should be constantly improved to ensure the rational allocation and optimal utilization of resources [4].

Internationally, Schaltegger and Burritt emphasize that the integration of industry and finance is the key to promote the sustainable development strategy of enterprises, which enables enterprises to strengthen their commitment to environmental and social responsibilities while maintaining economic benefits [5]. Their research shows that enterprises that implement the integration of business and finance perform better in terms of environmental protection and social contribution, which not only improves the public image of enterprises, but also brings long-term economic benefits to enterprises.

Enterprise risk management (ERM) refers to the process by which a company systematically identifies, assesses, monitors and controls internal and external risks in order to ensure the safety of its assets and profitability. COSO defines the framework of enterprise risk management, emphasizing the importance of strategy setting, goal setting, incident identification, risk assessment, risk response, control activities, information and communication, and supervision of these components [6]. With the accelerating change of the business environment, the traditional risk management methods are faced with many challenges. Lee and Rhee pointed out that with the rapid development of technology and increasing market uncertainty, enterprises need to adopt more dynamic and integrated risk management strategies to cope with these changes [7]. Their research suggests that enterprises should shift from traditional risk management methods to more flexible and predictive risk management models in order to cope with the increasingly complex global economic environment.

Domestic and foreign research shows that the integration of industry and finance can effectively enhance the risk management capability of enterprises by improving the transparency of information and the relevance of decision making. Wiengarten et al. found in their research that the integration of business and financial information can help enterprises identify and evaluate potential risks more accurately, so as to make preparations for risk response in advance [8]. In addition, the integration of business and financial information can also help enterprises quickly adjust strategies when risks occur and maintain business continuity and stability. For example, by integrating financial and business data, companies can respond more quickly to market changes and effectively manage external risks such as exchange rate fluctuations and changes in raw material prices. Such integration not only improves the speed of a company's response to risks, but also enhances its overall resilience.

Although studies have explored the relationship between the integration of business and finance and enterprise risk management from various perspectives, more research is needed on how to implement the integration of business and finance in different industries and enterprises of different sizes, as well as its impact on the management of specific risk types (such as network security risk, market risk, etc.). Future research should further explore the effects of financial integration in emerging markets and dynamic environments, and how technological innovation can support its in-depth

implementation. In addition, in view of technological advances, especially in the areas of information technology and data analytics, future research should focus on how these technologies contribute to the realization of financial integration, as well as specific applications of these technologies to improve the efficiency and effectiveness of risk management.

### 3. Empirical Research

This paper adopts the method of empirical research, and will collect the implementation of the integration of industry and finance and the level of risk management from enterprises of different industries and sizes through authoritative official channels, including official websites or interviews, so as to analyze the actual effect of the integration of industry and finance on improving risk management ability. In order to further study the relationship between the integration of industry and finance and enterprise risk management, quantitative and qualitative data are comprehensively used. The core variables are as follows:

#### 3.1. Core Variables

The degree of integration of business and financial (explanatory variable): quantifies the breadth and depth of the integration of business and financial information. Specific indicators include the frequency of use of shared information systems, the frequency of cross-functional meetings, and the degree of synergy between business and financial departments in the decision-making process.

Risk management Efficiency (explained variable): Measures how quickly and accurately an organization identifies, assesses, and responds to risks. Specific indicators include risk response time and accuracy of risk assessment.

Firm size: one of the control variables, the size of the firms that control the study variables is roughly the same, because the size may have an impact on the effectiveness of the integration of industry and finance to improve the risk management ability. It is determined by the number of employees and annual revenue.

Industry type: Another control variable, the firms that control the study variable are in the same industry because the practice and risk management effect of business and finance integration may be different among the firms.

The results show that there is a significant positive correlation between the degree of industry-finance integration and the efficiency of risk management. Specifically, the higher the degree of integration of industry and finance, the faster the speed of identifying and responding to market and operational risks, and the higher the accuracy of risk management.

According to the results of questionnaires and interviews, the vast majority (about 80%) of companies said that the integration of business and finance significantly improved their risk management ability, which was significantly reflected in the improvement of risk identification ability and response speed. Specifically, the average risk identification time of these enterprises was shortened by 25% and the risk response speed was increased by 35% through the implementation of the integration of industry and finance. At the same time, about 80 percent of companies reported that the integration of business and finance had improved the accuracy of their risk assessments, especially in managing financial and operational risks.

### 3.2. Sample Selection and Data Sources

In view of the above variables, this paper has collected the relevant variable data of 30 Chinese enterprises represented by Huawei that have implemented industry finance integration strategy and 30 enterprises that have not implemented industry finance integration strategy. When comparing the explained variables of different enterprises at the same time point, the data used strictly controlled that the enterprise size and industry type of the samples were close to the same. The sample data came from the official website of enterprises and data collected through emails and field visits.

### 3.3. Model Construction and Research Results

The model constructed by the research is as follows:

$$E = \alpha + \beta_1 * D1 + \beta_2 * D2 + \text{Control} + e$$

E (efficiency) in the model stands for the efficiency of risk management of the explained variable, D1 stands for explanatory variable 1- frequency of use of the shared information system, and D2 stands for explanatory variable 2- the degree of collaboration between the business and the finance department in the decision-making process. Control stands for the control variable. e stands for the deviation of the model (error), and  $\alpha$  is the constant term (intercept).

**Table 1.** Regression results

	Coefficients	Standard Error	t Stat	P-value
Intercept	15.1565	8.2801	1.8305	0.0778
D1	8.2280	2.7013	-3.0459	0.0050
D2	3.9945	1.6992	2.3508	0.0260

The regression results show that both  $\beta_1$  and  $\beta_2$  are positive and the P-values for D1 and D2 are less than 0.05 at the 95% confidence level. This indicates that explanatory variable 1 -- the frequency of using shared information systems and explanatory variable 2 -- the degree of cooperation between business and finance departments in the decision-making process have significant effects on the risk management efficiency of explained variables and have a positive correlation. In other words, the higher the frequency of using the shared information system, the higher the degree of cooperation between the business and the financial department in the decision-making process, and the higher the risk management efficiency of the enterprise

## 4. Conclusions and Recommendations

Through in-depth analysis of the impact of the integration of industry and finance on enterprise risk management, this study found that the integration of industry and finance plays an important role in improving the level of risk management,

which is embodied in improving the speed of risk identification, assessment accuracy and response efficiency. In particular, through the case study of Huawei and other enterprises, we find that the integration of industry and finance not only optimizes the decision-making process, but also improves the adaptability of enterprises to market changes, so as to maintain competitive advantages in the complex and changeable economic environment.

In view of the significant advantages and positive significance of the integration of industry and finance, it is suggested that enterprises strengthen the practice of business and finance integration, and promote the collaboration and information sharing between finance and business departments by means of maximum training and increasing technical input. At the same time, enterprises should regularly evaluate the implementation effect of the integration of business and finance, and timely adjust the risk management strategy to cope with the rapid changes in the market, so as to ensure the sustainable development of enterprises and maintain a leading position in the fierce market competition.

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