Research on I-M Model of Supply Chain Risk Path Identification

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Abstract. Through literature analysis and expert interviews, 15 factors affecting the development of the supply chain finance industry were identified, and the ISM method was used to construct a hierarchical structure chart of the factors, so as to analyze the relationship between the upper and lower levels of the factors and the factors affecting the development of the supply chain finance, and then MICMAC was used to further analyze the driving force and dependence of the 15 factors. The results show that market price instability, market demand instability, improper behavior and cash flow fracture are the outermost influencing factors, which are highly dependent and vulnerable to other factors; However, the failure to adopt new production technologies, the unhealthy operation of enterprises, and the low business ability of enterprises are the deepest and most fundamental factors that affect the stability of supply chain finance. They are the innermost factors that drive the development of supply chain finance. This study takes the influencing factors of the development of the entire supply chain finance industry in China as the research object, and the research results have certain universality and dependence. When China's supply chain finance is faced with development problems related to this study, it can provide the basis for reflection and solutions.

Key words: supply chain finance; Influencing factors; Explain the structural model; Cross influence matrix multiplication.

1. Introduction

With the deepening and development of information technology, the global attention to supply chain has risen to a new level. The development of supply chain can help reduce the purchase cost, inventory cost and sales cost of enterprises, and improve the production and sales capacity of enterprises. As an important financing mode for enterprises, supply chain finance can improve enterprise capital flow from the perspective of supply chain by closely linking upstream and downstream enterprises with core enterprises. Therefore, it is particularly important to identify the supply chain financial risk factors and clarify the supply chain financial risk path under the changing environment. It is of positive significance for upstream and downstream enterprises to study the financial risks of supply chain and put forward corresponding measures, but at present, there are no few studies on this aspect. In the study of supply chain financial risk, Wang et al. [1] introduced the mixed-frequency data sampling method into the SVQR model framework, proposed the MIDAS-SVQR model framework, and proposed a new and more accurate measurement method for the risk caused by the fluctuation of the value of the pledge. In addition, Cheng et al. [2] analyzed the supply chain financial risks of commercial banks based on the Logistic model from the perspective of financial technology, and concluded that the generation of supply chain financial risks will inhibit the company's ability to earn profits, and the company's ability to earn profits is related to its capital and capital appreciation ability, which directly affects the company's solvency. For the credit risk in the supply chain financial risk, Qian et al. [3] adopted a dynamic mutation particle swarm optimization algorithm (DPSO) and AdaBoost algorithm to co-optimize and integrate SVM based on the feature selection of the supply chain financial credit risk evaluation indicators, and established the Adaboost-DPSO-SVM model. The model is applied to the supply chain financial credit risk assessment of China's new energy automobile industry. The experimental results show that the established model has better classification and recognition performance than other evaluation models. Similarly, in the study of credit risk brought by asset securitization, Bao et al. [4] compared the risk dispersion and control of the case by analyzing the transaction structure and product design; Secondly, based on the financial data before and after the securitization, the impact of asset securitization on the company's credit risk is judged through the change of Z value, and the implementation effect of the special plan is analyzed in detail. The rational selection of basic assets, the use of credit enhancement measures and the use of supply chain transaction structure can play a certain role in promoting the prevention of credit risk of the securitization project. In the study of supply chain financial risk in agriculture, Sun et al. [5] built an evaluation model of agricultural

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supply chain risk based on GA-BP neural network model, and verified the proposed risk evaluation model using case analysis method. The results show that using BP neural network optimized by genetic algorithm to evaluate agricultural supply chain financial risk can accelerate the convergence speed of BP neural network, At the same time, it can avoid the problem that BP neural network is prone to produce local minimum, and improve the prediction speed and accuracy. Yuan et al. The default probability of the retailer is calculated. On this basis, the expected return of all parties, the optimal initial order quantity of the retailer and the optimal option purchase quantity, the optimal revenue sharing proportion of the distributor, and the range of revenue sharing proportion that can be referenced under the premise of risk aversion of the lower side of the bank are analyzed in depth. A numerical example is constructed to discuss the impact of key parameters such as option exercise price, revenue-sharing ratio and bank pledge rate on risk control

To sum up, previous studies have carried out a lot of analysis and discussion on such aspects as credit risk and risk measurement of supply chain finance, and put forward new and effective opinions and methods. However, the research on supply chain risk path identification is insufficient, and the understanding of supply chain risk factors is still unclear. This paper intends to build a supply chain financial risk evaluation index system from four dimensions, aiming to use MICMAC method to judge the dependence and driving force of relevant factors, and use ISM model to complete the construction of a directed graph of the path identification level of supply chain financial risk, thus providing a research basis for risk visualization. On this basis, MICMAC is used to classify risk factors and identify the risk level of the evaluation index. This study organically combines the two methods， The research on supply chain financial risk has a complete system, and the use of selected indicators to classify and judge risks is helpful to clarify the path of supply chain financial risk.

2. Construction of supply chain risk indicator system

2.1 Market risk

The adjustment of government policies and changes in market wind direction will lead to changes in market prices and financial exchange rates, and changes in consumer spending preferences will lead to changes in market demand, which will lead to the occurrence of supply chain financial risks. Fluctuations in market prices and financial exchange rates can lead to fluctuations in the price of the pledged property over a certain period of time, affecting the liquidity of the pledged property. If commodity prices fall significantly and the loan amount exceeds the value of the collateral, this will have a negative impact on the operation of the lending enterprise. In the market, consumer preferences are influenced by many factors. Consumer demand for a certain product can change unpredictably. If a large number of consumers suddenly enjoy and pursue it, it may lead to a significant increase in the profits of sales enterprises. On the contrary, the demand for commodities ignored by consumers has declined, and corporate profits have decreased or even suffered losses. This will have a significant impact on the debt and financial situation of enterprises, and consumer behavior is difficult to predict, resulting in significant uncertainty.

To sum up, in terms of market risk, the selected indicators are divided into: market price instability (A1), financial exchange rate instability (A2), and market demand instability (A3).

2.2 Operational risk

The supply chain is composed of several upstream and downstream enterprises. The links between enterprises, the endogenous environment of enterprises, the exogenous conditions of enterprises, and the operational errors at all stages will have an impact on the supply chain financial system. Upstream and downstream enterprises rarely contact financial institutions, and the information asymmetry between them will lead to mistakes in decision-making and affect the supply chain. At present, most enterprises have extensive management, slow upgrading of underlying equipment, low degree of informatization automation, and the need for too many manual operations will lead to errors in various scenarios. In addition, too many artificial misconduct may lead to enterprise losses caused by subjective behavior, such as high-level corruption, employee embezzlement of enterprise assets, etc. Moreover, at present, the core enterprises do not supervise the whole supply chain in a timely manner, and cannot make correct decision feedback quickly and accurately for the changes at a certain stage and the situation they are facing.

To sum up, the indicators selected in terms of operational risk are divided into: information asymmetry (B1), failure to adopt new production technology (B2), improper behavior (B3), and untimely supervision (B4).

2.3 Financial risk

In the supply chain financial system, it is necessary to introduce a large number of financial assets, which will inevitably be accompanied by corresponding financial risks. Supply chain enterprises provide financing services for small and medium-sized enterprises in the chain, resulting in large-scale prepayment and accounts receivable stacking. When large-scale prepayments and receivables have problems or will have liquidity problems, they will face the breeding of financial risks. While providing financial services, supply chain enterprises have a significant demand for external capital absorption. It is necessary to maintain the development of financial business through rolling debt financing. The expansion of business scale is accompanied by the improvement of leverage, which will restrict the subsequent refinancing business. The high leverage and high debt business model will further exacerbate the outbreak of supply chain financial risks. The operational cash flow has a poor ability to cover corporate debt. The subsequent operation and debt repayment of enterprises depend on external financing, further expanding the financing pressure. If the

financing channel is blocked, it will further lead to loopholes in the operation of enterprises, and even lead to the occurrence of capital chain fracture. To sum up, in terms of financial risk, the indicators selected include: decreased asset liquidity (C1), high debt financing pressure (C2), cash flow fracture (C3), and unhealthy enterprise operation (C4).

2.4 Credit risk

The credit level of a supply chain enterprise can also reflect the risk level of the enterprise to a certain extent. If an enterprise cannot complete the work required by the supply chain as scheduled, the lack of business level will affect the flow of the entire supply chain. The weaker the business ability of an enterprise, the higher the level of risk faced by the supply chain. Under the current legal system, the legality of enterprises also has a profound impact on supply chain finance. If the enterprise's goods channel is smuggling, it will be fined and confiscated by the management department, which will drag down the entire upstream and downstream enterprises. The moral level of an enterprise is closely linked to the quality of individuals. The lower the personal quality and the lower the moral level, the poorer the ability of the enterprise under their control to perform the contract. Therefore, the lower the moral level is also a potential risk. In the face of debt, the willingness and ability of enterprises to repay debt also determines the stability of the supply chain under pressure. If enterprises evade debt, it will bring incalculable losses to the entire supply chain.

To sum up, the indicators selected in terms of credit risk are: low business ability of enterprises (D1), illegal operation of enterprises (D2), poor performance ability of enterprises (D3), and weak willingness and ability of enterprises to repay debts (D4).

According to the above, the supply chain risk indicator system is shown in Table 1:

Table 1 Supply chain risk indicator system

Secondary indicators	Tertiary indicators	Indicator description	Ref
Market risk (A)	Market price instability (A1)	Goods with large price fluctuations that are not suitable for disposal as collateral are easy to cause the loan amount to be greater than the value of the goods, resulting in greater risks	[7]
	Financial exchange rate instability (A2)	The financial exchange rate changes with many factors, and the market is unstable, thus the financial exchange rate is unstable	[7]
	Unstable market demand (A3)	The demand of users is diversified and personalized, so the demand is more difficult to predict and the uncertainty is increasing	[7]
Operational risk (B)	Asymmetric information (B1)	There are often information barriers in supply chain finance, which make it difficult for financial institutions to control risks. Therefore, it is difficult for financing enterprises to obtain credit endorsements, thus affecting the benefits distributed by various entities	[8]
	No new production technology (B2)	The degree of informatization is low, and still remains in the manual operation stage, which is prone to operational errors and losses	[8]
	Misconduct (B3)	There may be risks of collusion between employees, misappropriation of corporate interests, illegal operation and profit	[9]
	Untimely supervision (B4)	At present, most enterprises have extensive management and are unable to conduct real-time and effective supervision on all stages of the supply chain	[9]
Financial risk (C)	Decrease in asset liquidity (C1)	Enterprises provide financing services for downstream enterprises, and excessive accumulation of accounts receivable significantly reduces the liquidity of assets and weakens the ability to resist risks	[10]
	High debt financing pressure (C2)	While providing financial services, supply chain enterprises have a large demand for external funds. They maintain the development of financial business through the rolling of debt financing. The high leverage and heavy debt business model will aggravate the exposure of supply chain financial risks	[10]
	Cash flow break (C3)	A large number of advances and credit sales business led to a large outflow of enterprise funds, and the recovery period was delayed, which was not conducive to the accumulation of liquidity	[10]
	Unhealthy business operation	The enterprise's own operating condition is poor, and there is a hidden danger	[11]

	(C4)	of capital chain fracture	
Credit risk (D)	Low business capability of enterprises (D1)	The ability of enterprises to complete their own goals and tasks is weak	[11]
	illegal operation of enterprises (D2)	The enterprise does not have the legal operation qualification under the current legal system	[12]
	Poor performance ability of enterprises (D3)	The lower the quality of the enterprise subject, the higher the moral hazard	[13]
	Weak willingness and ability of enterprises to repay debts (D4)	Enterprises have weak enthusiasm and repayment ability to undertake and complete repayment in the face of debt	[13]

3. ISM Method

Interpretative Structural Modeling Method (ISM) was proposed by Professor Warfield JN. It is a scientific analysis method widely used in system engineering. Due to the different logical relations formed between various factors, a systematic structure is formed, and this kind of logical structure is usually explained and characterized by the model with directional graph, while the ISM model is applied to establish a systematic and logical hierarchical structure model. The ISM model analyzes the direct interaction between different factors by screening the main factors that affect the core problem, and analyzes the direct interaction relationship between different factors by the way of grid diagram. Through the hard relationship between the factors, the accessibility matrix is established according to the mutual influence relationship of the factors, and then reflects the logical relationship between the factors. Because of the strength of the relationship between the factors, only representative factors are retained in the model, The reachability matrix is reduced and processed hierarchically, and finally the multi-level ladder structure model is obtained. ISM model is often used for qualitative analysis of factors with logical relations, which can transform complex logical relations into simple and easy-to-understand hierarchical relations. The basic steps of ISM are as follows[14]:

STEP1: Convert the concept system into adjacency matrix A. That is, raw data is provided to convert it into adjacency matrix. In the specific process, two basic points need to be paid attention to: (1) determine the factor set by the key issues; (2) compare the direct cause-and-effect-oriented relationship between two factors and establish the adjacency matrix.

STEP2: Calculate the reachability matrix. Let I be the identity matrix of the same order as A. According to the adjacency matrix A obtained in the first step, the reachability matrix M can be obtained by performing the following Boolean operations: $(A+I)^{k-1} \neq (A+I)^{k}=(A+I)^{k+1}=M$ The reachability matrix describes whether there is a connection path between one element and another element (regardless of the length).

STEP3: Calculate 'reachable set and antecedent set'. Define two sets R (Si) and A (Si). R (Si): The set of all elements that can be reached from Si is called the reachable set. A (Si): The set of all elements that may reach Si is called the antecedent set.

STEP4: Make hierarchical directed graph based on reachability matrix. Use R (Si) and A (Si) to find the R (Si)} A (Si) set. R (Si)} A (Si) is that the element Si can reach and can reach Si; All feature sets. If R (Si)=A (Si)=R (Si), then the elements in the set of R (Si) are the highest level of all elements. According to this method, the highest level in the directed graph can be excluded from the reachability matrix after it is determined. Then calculate the highest level of the remaining elements in the same way, so as to find out the different levels of each element in the system.

STEP5: Establish a hierarchy chart. After finding out the level of each element according to STEP4, put the first level element at the lowest level and the second level element above it until all the elements are put on the corresponding level, and then use the form of directed graph to represent the hierarchical relationship of the entire system elements. This is the visual display of the adjacency matrix of the original data.

4. MICMAC Method

The cross influence matrix multiplication method (MICMAC) applies the principle of matrix multiplication. The basic idea of the method is that if element *i* has a direct impact on element k and element *k* has a direct impact on element *j*, the factors that affect element *i* can also directly act on element *j*, so there is an indirect influence relationship between element *i* and element *j*. The purpose of using MICMAC analysis is to divide all relevant indicators into four categories, and propose corresponding countermeasures and research results based on this.

The basic steps of MICMAC analysis are as follows[15]:

STEP 1: Calculate the dependence and drive of each factor according to the reachability matrix. (1) The driving force of the factor can be obtained by calculating the number of influencing factors whose matrix element is 1 in the *i-th* row of the influencing factor F_i in the matrix, that is, driving force $D_i=\sum f_i$; (2) The dependence of factors can be obtained by calculating the number of influencing factors whose matrix element is 1 in the *i-th* column of the influencing factor F_i in the matrix, Dependency $R_j=\sum f_j$。

STEP2: Visualize the calculation results in the coordinate map. Dependency is expressed in abscissa, and driving force is expressed in ordinate. The greater the driving force, the greater the influence of this factor on other factors; The greater the dependence, the greater the dependence of this influencing factor on other influencing factors. Statistical results of driving force and dependence.

5. Result

5.1 Data collection

There may be direct correlation between various influencing factors of supply chain finance. We have invited 8 experts in relevant fields. According to the principle of assigning values to directly related influencing factors, the adjacency matrix between influencing factors is obtained. The calculation results of the adjacency matrix are shown in Table 2:

Table 2 Adjacency matrix

	A1	A2	A3	B1	B2	B3	B4	C1	C2	C3	C4	D1	D2	D3	D4
A1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
A2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
B2	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0
B3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B4	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0
C1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
C2	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0
C3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C4	1	0	0	1	0	1	0	0	1	0	0	1	0	0	0
D1	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
D2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
D3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
D4	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0

5.2 ISM analysis

Based on the adjacency matrix constructed in 5.1, the intermediate results obtained by substituting it into the spsspro software are as follows.

Intermediate result 1: reachability matrix is shown in Table 3

Table 3 Reachability Matrix

	A1	A2	A3	B1	B2	B3	B4	C1	C2	C3	C4	D1	D2	D3	D4
A1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
A2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
A3	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
B1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
B2	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1
B3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
B4	0	0	0	0	0	1	1	1	1	1	0	0	1	1	1
C1	0	0	0	0	0	1	1	1	1	1	0	0	1	1	1
C2	0	0	0	0	0	1	1	1	1	1	0	0	1	1	1
C3	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
C4	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
D1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1
D2	0	0	0	0	0	1	1	1	1	1	0	0	1	1	1
D3	0	0	0	0	0	1	1	1	1	1	0	0	1	1	1
D4	0	0	0	0	0	1	1	1	1	1	0	0	1	1	1

Based on the intermediate results, the ISM level directed graph is shown in Figure 1.

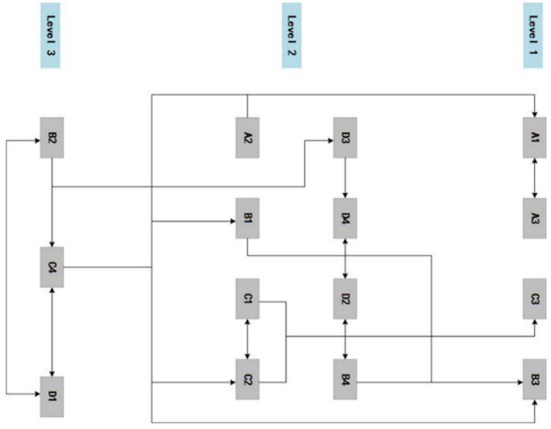

Figure 1 ISM diagram

The most important influencing factors: According to Figure 1, the influencing factors for L1 are four factors, namely, market price instability (A1), market demand instability (A3), improper behavior (B3), and cash flow disruption (C3). They are the most superficial and direct factors that affect the stability of supply chain finance, and they are also the ultimate goal of systematic analysis. The risks caused by this layer of factors are mainly addressed by intervening in the influencing factors at the middle and bottom layers. The lowest influencing factors: from Figure 1, the influencing factors at L3 are not adopting new production technology (B2), unhealthy business operation (C4), and low business ability (D1). They are the deepest and most fundamental factors affecting the financial stability of the supply chain, including unstable financial exchange rate (A2), asymmetric information (B1), untimely supervision (B4), reduced asset liquidity (C1), high debt financing pressure (C2), and illegal business operation (D2) Poor performance ability of enterprises (D3), weak willingness and ability to repay debts (D4) are the first factors to consider. Other influencing factors between the top and bottom: the influencing factors at L2 are the intermediate factors affecting the financial stability of the supply chain. Financial exchange rate instability (A2), information

asymmetry (B1), untimely supervision (B4), reduced asset liquidity (C1), high debt financing pressure (C2), illegal operation of enterprises (D2), poor performance ability of enterprises (D3), and weak willingness and ability of enterprises to repay debts (D4). Although these factors are not at the bottom of the system, they are obstacles that need to be solved independently, and are also factors that affect the key role of supply chain finance in maintaining stability.

5.3 MICMAC analysis

Based on the reachability matrix of ISM intermediate result 1, and in combination with Section 4 constructed in this paper, the driving force and dependency of each index are calculated, MICMAC analysis results are shown in Figure 2:

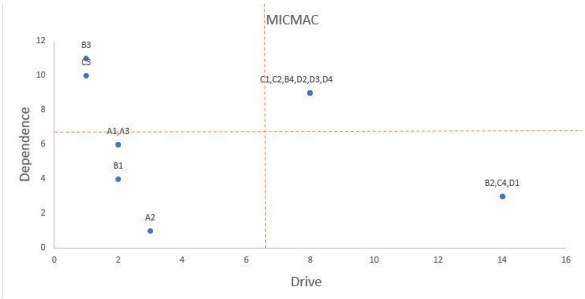

Figure 2 MICMAC diagram

According to the calculation results in Table 3 of the reachability matrix, the value of the quadrant division is 6.73, which is the average value of the driving force and correlation, and is considered as the boundary value of the divided quadrant. According to the driving force and dependency coordinate visualization results of each influencing factor, it is sequentially divided into four quadrants, as shown in Figure 3.

According to the driving force and dependency value in Figure 3, all influencing factors are divided into different quadrants. It is found that the factors affecting the financial stability of the supply chain can be classified into four influencing factors, including spontaneous factors, dependent factors, independent factors, and connecting factors. MICMAC analysis is conducted on the factors affecting supply chain finance.

Spontaneous factors include market price instability (A1), financial exchange rate instability (A2), market demand instability (A3), and information asymmetry (B1), which are in the third quadrant. It has certain driving force, but also has certain dependence.

Dependent factors include: not adopting new production technology (B2), unhealthy business operation (C4), and low business ability (D1), which are in the fourth quadrant. Compared with the driving force, these influencing factors are highly dependent, that is, they are easily affected by other factors. Therefore, for the influencing factors in this quadrant, we can strengthen the control of the influencing factors that can affect them to make the factors in this quadrant in a benign state, so as to ensure Stability of supply chain finance.

Independent factors include misconduct (B3) and cash flow disruption (C3), which are in the second quadrant. Compared with dependence, these factors have higher driving force. It can be considered as the source of the financial stability of the supply chain. It is not only difficult to control it through other factors, but also a series of "butterfly effects" will appear once these factors are destroyed. Therefore, attention should be paid to them.

The connecting factors include: untimely supervision (B4), reduced asset liquidity (C1), high debt financing pressure (C2), illegal operation of enterprises (D2), poor performance ability of enterprises (D3), and weak willingness and ability of enterprises to repay debts (D4).

6. Conclusion

This study, through the establishment of the Interpretative Structure Model (ISM) and the Cross-Impact Matrix Multiplication Method (MICMAC)[16], combed the hierarchical relationship between various influencing factors and the internal mechanism of the supply chain financial risk, and discussed the dependence and driving force of each influencing factor. Through the above analysis, it is found that the new production technology (B2) is not adopted, the business operation is not healthy (C4), and the business ability of the enterprise is low (D1). It is the most direct and superficial influencing factor that affects the financial risk of the supply chain. In this layer, the dependence and driving force of the three are the same. These problems can be solved by solving other influencing factors. Failure to adopt new production technology (B2), unhealthy business operation (C4) and low business ability (D1) are the most basic and fundamental factors affecting the financial stability of the supply chain, and these three factors have strong driving force. The research results are scientific and universal, for the supply chain financial risk, this study can be used as a reference to find the cause and effect of risk factors, and can clarify part of the path of risk factors, providing certain application value for solving practical problems and have certain application and guidance value for solving supply chain financial risks.

References

1. Wang Liukai, Zhang Xiaobo, Wang Weiqing, Liu Cheng. A new method for measuring the risk value of supply chain financial collateral based on MIDAS-SVQR [J /OL]. China Management Science: 1-13 [2022-12-17]
2. Chen Xiaoxian, He Shan. Research on the measurement of supply chain financial risk of commercial banks - based on the perspective of financial technology [J]. Journal of Southwest University for Nationalities (Humanities and Social Sciences Edition), 2022,43 (07): 123-128
3. Qian Wuyong, Zhang Haonan. Research on supply chain financial credit risk evaluation based on Adaboost-DPSO-SVM model [J]. Industrial Technology and Economics, 2022,41 (03): 72-79

4. Bao Xinzhong, Chen Baitong, Pan Zhaoxin. Research on product credit risk of supply chain financial asset securitization - case analysis based on QYSJ-ABS and RXZL-ABS [J]. Financial Theory and Practice, 2022 (02): 1-9
5. Sun Zhongye, Xu Xiaoyan. Research on the financial risk assessment of agricultural supply chain - based on GA-BP neural network model [J]. Technical Economics and Management Research, 2021 (08): 78-82
6. Jin Xiangshu, Yuan Wenyan, Wu Jun, Li Jian, Wang Yajing. Research on supply chain financial risk control based on revenue-sharing and two-way option contract [J]. China Management Science, 2020,28 (01): 68-78
7. Yan Junhong, Xu Xiangqin. Analysis of SME financing model based on supply chain finance [J]. Shanghai Finance, 2007, No.319 (02): 14-16
8. Lou Feipeng. The development of supply chain finance under the Internet financial environment - based on the perspective of information asymmetry [J]. Southwest Finance, 2017, No.426 (01): 10-13+20
9. Peng Lu. Research on the amplification effect of financial moral hazard in agricultural supply chain [J]. Financial Research, 2018, No.454 (04): 88-103
10. Li Shanshan. Research on SME financing from the perspective of supply chain finance [J]. Journal of Suzhou University (Philosophy and Social Sciences Edition), 2012,33 (06): 130-137
11. Hu Haiqing, Zhang Lang, Zhang Daohong. Credit risk assessment of small and medium-sized enterprises from the perspective of supply chain finance: a comparative study based on SVM and BP neural network [J]. Management Review, 2012,24 (11): 70-80
12. Zhang Yu. China's bank supply chain financial risk management and exploration - based on game analysis [J]. Technical Economy and Management Research, 2018, No.258 (01): 72-76
13. Zhao Yajuan, Yang Xisun, Liu Xinbao. Supply chain finance and the improvement of SMEs' credit capacity [J]. Financial Theory and Practice, 2009, No.363 (10): 46-51
14. Zhu Lin, Lu Benfu. A simple method for interpreting structural models [J]. Systems Engineering and Electronic Technology, 2004 (12): 1815-1817+1891
15. Zhou Xianhua, Pan Hongting, Shen Yunfei. Risk factor evaluation of PPP mode of underground integrated pipe gallery - based on ISM-MICMAC model [J]. Friends of Accounting, 2017, No.565 (13): 59-64
16. Mei Jianming, Zhang Kuan. ISM-MICMAC Study on Factors Influencing Reasonable Risk Sharing of PPP Projects [J]. Journal of Central South University for Nationalities (Humanities and Social Sciences Edition), 2021,41 (01): 132-140