Development of Financial Ecosystem of Industrial Chain Supported by Fintech in Big Data Environment

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Abstract: With the gradual improvement of SME financing strategies, the unique advantages of industrial chain finance in risk management are increasingly prominent. As the core of modern economy, finance is the lifeline of the real economy. Through the innovation of fintech, the independent research ability of core technology has been enhanced, and the quality of financial services and risk prevention ability have been improved. This paper analyzed the financial layout of M enterprise's industrial chain, and combined the application of fintech to build a scientific and targeted credit evaluation system. It can not only solve the financing problems of small and medium-sized enterprises, but also improve the overall quality of small and medium-sized enterprises. It can also make other enterprises realize their advantages and disadvantages, so as to provide useful reference for the development of other enterprises. In this paper, the analytic hierarchy process was used to establish the evaluation model. From the comprehensive perspective of M Company's credit rating, the credit score was 85.68, which was good AA. Therefore, the research experiment in this paper can provide support for SMEs' financing and promote the development of national economy from the perspective of dominant enterprises.

1. Introduction

Industrial chain finance originates from supply chain finance, while industrial chain finance provides all-round services for the whole industry chain, rather than upstream and downstream companies. After years of exploration, the suppliers of industrial chain financing are not only limited to financial institutions, but more enterprises begin to participate in industrial chain financing. With the application of new technologies, great changes have taken place in the financial industry. With the help of their own technology and huge user data, major enterprises have caused a great impact on the traditional financial industry.

Many scholars have done a lot of research on the development of industrial chain financial

ecosystem. Eg A found through the survey of an enterprise that the enterprise can enhance its financial stability when doing industrial chain financial business, but there were also problems such as the delay of capital payment and the lack of a perfect training mechanism for industrial chain financial knowledge [1]. Nabulsi NA has conducted an empirical study on 315 high-tech enterprises and believed that the integration of industrial chain finance can improve their financing performance [2]. Ge analyzed the full industrial chain financial model led by the bank, and proposed to establish a complete industrial chain service system, which can promote the scale expansion of the number of customers, thus promoting the enterprise information construction [3]. Moccia S tracked the whole industrial chain of cotton production in Xinjiang, tracked the flow of funds in the whole industrial chain finance, and evaluated its credit risk [4]. It can be found that the relevant researchers have deeply studied the industry chain finance, and discussed many aspects of the development of the industry chain financial ecosystem.

Fintech has enriched residents' investment and financial management methods and enhanced the competitiveness of social financial products. On the supply subject of supply chain finance, Kasthuri M believed that fintech can improve the financial value of the entire industrial chain and plays an irreplaceable role in payment settlement, inventory turnover, credit services, capital turnover and other fields [5]. The application of fintech is also an important topic in the financial field of the entire industrial chain. Xin L introduced the blockchain technology of fintech into the field of industrial chain finance and applied it to the practice of industrial chain finance [6]. Chunxiang A used fintech to study the supply chain financial credit risk of financial companies based on mortgage and reputation [7]. Fanari M analyzed the measures taken by a company to comprehensively carry out industrial chain finance, and also put forward suggestions on how to further develop industrial chain finance by using fintech to broaden the scope of industrial chain business [8]. Although many scholars have studied industrial chain finance with fintech, there are relatively few studies on the development of financial ecosystem of industrial chain assisted by fintech in the big data environment.

This paper selected M enterprise as the backbone enterprise of industrial chain finance, and used the method of analytic hierarchy process to comprehensively analyze its layout and effect. In this paper, its application in the industrial chain financial system was discussed in depth, as well as the research on the development of FinTech to help build the financial ecosystem of the industrial chain. The results of this study showed that the new way to solve the financing difficulties of SMEs was to build a standard evaluation system and improve the credit status of SMEs. At the same time, this paper provided some suggestions for the future development of enterprises, so as to provide reference for the development of other companies. Although many scholars have studied the development of the financial ecosystem of the industrial chain, there are relatively few studies on the development of the financial ecosystem of the industrial chain based on fintech in the big data environment.

2. Methods of Fintech to Help Build Industrial Chain Financial Ecosystem in Big Data Environment

2.1. Basic Theory of Industrial Chain Finance

Industrial chain concept

Industrial chain refers to the process in which one or more resources, to a certain extent, go through continuous transfer at multiple industry levels and finally reach consumers. In essence, it is a close enterprise group organization [9-10]. Enterprises have different economic and technological values. In the process of value creation, according to specific production logic and spatial distribution, a close chain connection is formed, which connects the value chain, enterprise chain,

supply chain and spatial chain, and achieves the balance of overall resources, as shown in Figure 1.
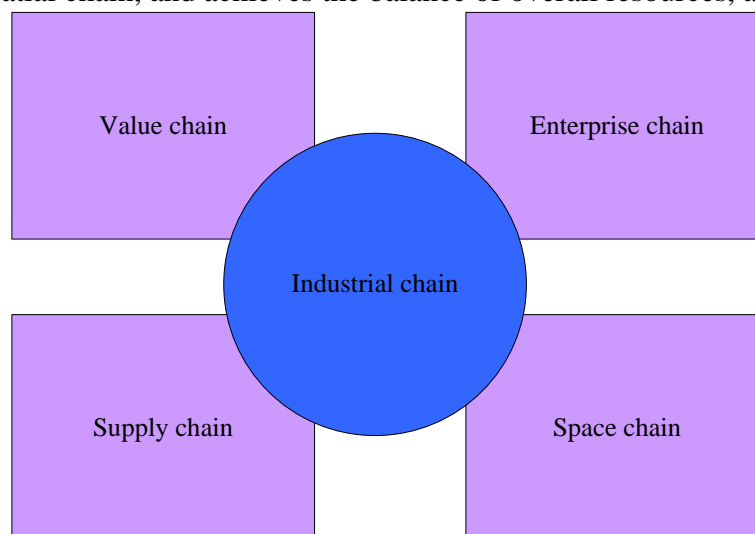

Figure 1. Enterprise value creation process

Concept of industrial chain finance

Industrial chain finance is developed from supply chain finance, and they are closely related [11]. In concept, the essence of the two is the same, both are based on credit, and through the transformation of the credit of core enterprises into the credit of downstream SMEs, so that their qualifications are recognized by financial institutions to obtain financing. The starting point of the two is the same, both are to help companies with business contacts, solve capital problems, and achieve balanced development of the industry [12]. Both of them have the same development core. They are based on core enterprises and seek credit through due diligence on customers. The biggest difference between supply chain finance and industrial chain finance is that they involve different industries, while industrial chain finance is a network composed of multiple supply chains. Therefore, industrial chain finance covers a wider range, provides more comprehensive financial services, and benefits more enterprises [13].

Financial characteristics of industrial chain

In the traditional financial management mode, loans of large companies are obtained by means of assets mortgage such as factories and land. Banks are based on balance sheets, income statements and cash flow statements. The bank conducts financial audit on it, but does not know its specific purpose and repayment method, thus causing a large non-performing loan risk [14-15].

Form of industrial chain financial products

At present, according to the different types of collateral, the industry chain finance can be divided into four categories: accounts receivable, prepayments, inventory and credit, as shown in Table 1.

Table 1. Forms of financial products in the industrial chain

Product category	financial products	Collateral	Leading enterprise
Accounts receivable	Factoring, accounts receivable financing, order financing, bill financing	Accounts receivable	Core enterprises
Prepayments	Confirmed warehouse financing, goods before bills business, letter of credit business, seller guaranteed buyer financing, etc	Cargo right	Core enterprises
Inventory	Financing of financing warehouse, standard warehouse receipt financing, spot pledge financing, floating financing, etc	stock	Logistics enterprises
Credit loan	Credit loan	nothing	E-commerce, core enterprise ERP, third-party service platform

2.2. Basic Mode of Industrial Chain Finance

Industrial chain financing mode with commercial banks as the main body

The supply chain financing mode with commercial banks as the main body is to find financing gaps from the outside of the industrial chain and provide financing services for commercial banks. In this mode, core enterprises and logistics companies play an important supporting role, and commercial banks bear all substantive risks. Its basic mode is shown in Figure 2.
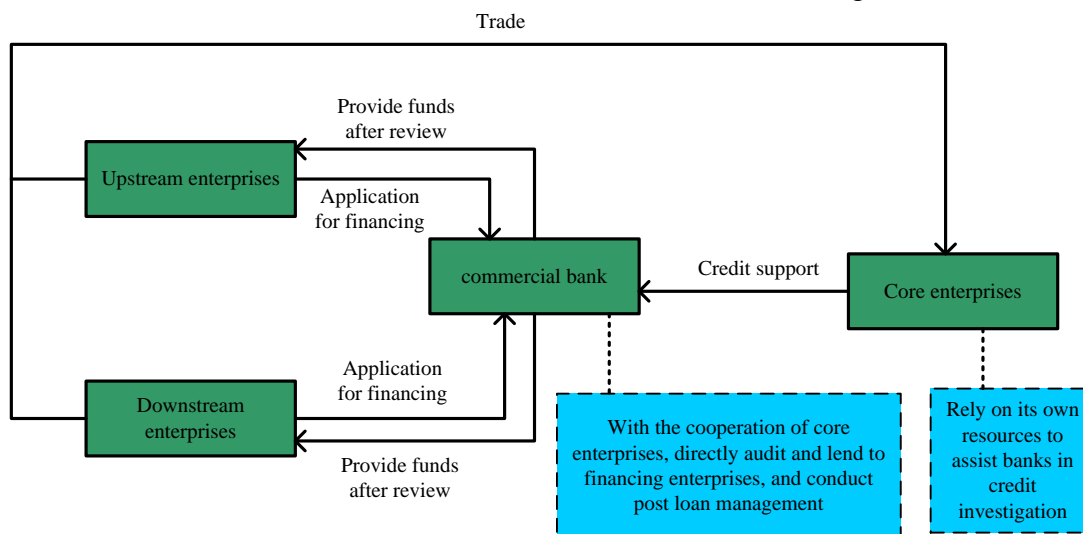

Figure 2. Commercial banks leading

Industrial chain financing mode dominated by logistics enterprises

As a key link in the entire industrial chain, logistics companies connect all links in the entire supply chain through freight transportation, thus forming a "1+N" supply chain financial system, as shown in Figure 3.
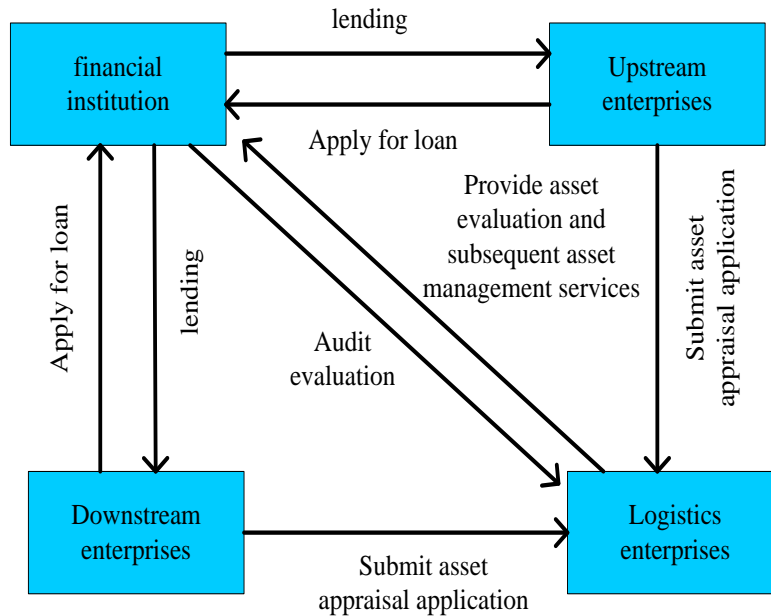

Figure 3. Leading by logistics enterprises

Industrial chain financing mode based on third-party transactions

Under the industrial chain financing mode dominated by the third-party trading platform, the third-party trading platform can also introduce customers to financial institutions. Compared with the traditional supply chain model, the third-party trading platform can cooperate with banks and other financial institutions to design financial products, and the substantive risk depends on each financial product, as shown in Figure 4.
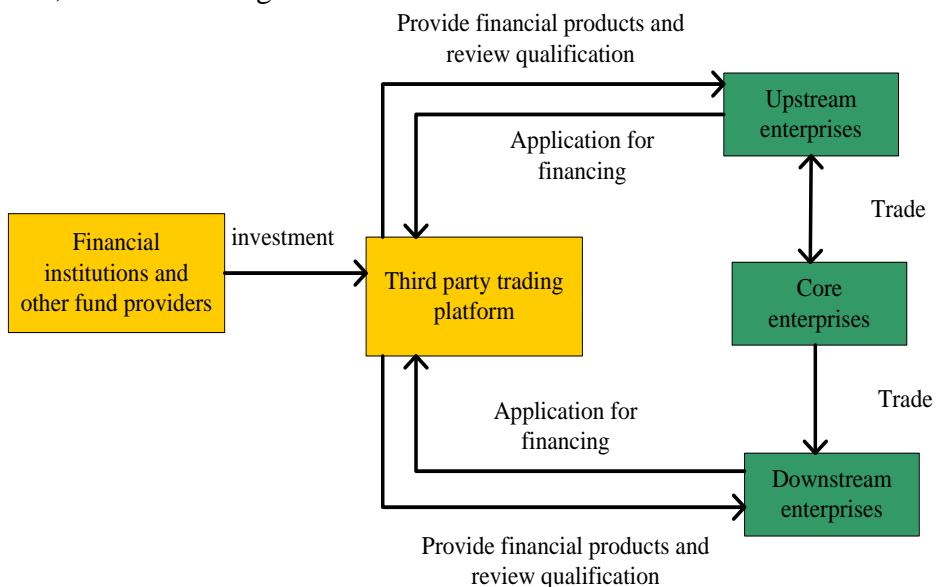
Figure 4. Third party trading platform leading

Industrial chain financing mode dominated by core companies

The core enterprise leading industry chain finance means that the core enterprise acts as an organization in the entire industry chain, connecting the companies that need financing with other fund providers, so as to bear the maximum risk, as shown in Figure 5.
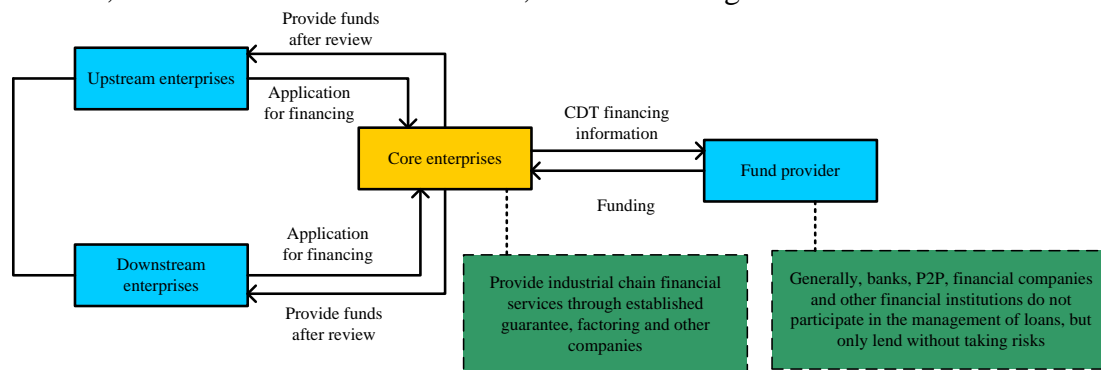

Figure 5. Leading by core enterprises

Through the comparison of the above three models, it can be seen that the core enterprise oriented model has significant advantages in information acquisition and collaboration of different enterprise visions. Compared with other institutions, core enterprises have more integration capabilities. They are easier to obtain funds from financial institutions, contact SMEs, and obtain information about customers and investors. Therefore, the financial model of the industrial chain led by the core enterprise is more accurate and efficient, which is more in line with the needs of customers.

2.3. Fintech Helps to Build Development of Financial Ecosystem of Industrial Chain

The constant innovation of fintech has promoted the development of the investment market and the economic development. The application of fintech provides new ideas for solving the investment and financing problems of SMEs. The first is to provide diversified financing channels and fast financing services for SMEs with the help of fintech. Second, it can use big data technology to carry out SME credit business. Fintech can better solve the investment and financing needs of enterprises, establish a credit system with relevant departments at a lower cost, and effectively evaluate it, so as to provide high-quality financial services for corresponding enterprises. Third, fintech can provide financial support for SMEs. Therefore, with the help of the application of fintech, the financing channels of SMEs have been widened and the financing costs have decreased, thus promoting the investment growth of physical projects.

Information asymmetry theory

This theory holds that there are certain differences in the quantity and quality of information that people engaged in market economic activities have, and information is the cornerstone of financial market operation. People with information advantages can make correct decisions better and have greater advantages in market operation. Because of information asymmetry, it would produce reverse selection, moral hazard, and uncertainty of credit activities, which would lead to the imbalance of capital supply and demand and become the culprit of market failure. To avoid the defects of information asymmetry, it must strengthen the responsibility of the government, play a guiding role, and establish a sound information transmission mechanism. Economic development should focus on the development and utilization of information resources, and vigorously develop

information services.

Theory of combination of industry and finance

The essence of the combination of industry and finance is the diversification strategy of enterprises, which should take into account both the related diversification and the unrelated diversification. The characteristic of association diversification is to provide special services for the main businesses of enterprise groups. The Group has effectively integrated the financial resources of the Company in the way of combination of industry and finance, so as to achieve the high utilization of the Group. It provides an effective service for the company's core business, thus enhancing the company's comprehensive economic benefits and enhancing the company's competitiveness.

Theory of financial ecosystem

Financial ecosystem refers to a value platform where financial institutions, logistics enterprises, production enterprises, governments and individuals participate in and promote the balanced allocation of financial resources. The "ecosystem" aims to provide more effective, comprehensive and personalized financial services for the economies of all countries, so as to achieve the goal of multi win. The ecosystem is a multi-dimensional system that includes subjects, carriers, elements, platforms and environments. It requires a large number of new technologies, accurately grasp the needs of customers, and form a multi-level network to provide services for various economies. At present, the construction of the financial ecosystem is mainly concentrated in the retail field. However, due to different opinions, insufficient investment time, capital and human resources, the development of the financial ecosystem of the entire industrial chain is relatively lacking.

3. Experiment on Development of Financial Ecosystem of Industrial Chain Supported by FinTech

3.1. Construction of Financial Ecosystem of Supply Chain

Introduction to Analytic Hierarchy Process

Analytic Hierarchy Process (AHP) is a new method for decision-making analysis of multi-objective complex problems, which is applicable to analysis cases where it is difficult to measure the decision results. It can be summarized as using mathematical thinking to quantify the collected data, and using the established analysis model to verify the obtained data. The operation process of specific cases can be summarized as in-depth analysis of problems when encountering complex problems. The problem can be divided into target layer, specification layer and indicator layer. During this period, an expert evaluation team should be established to score each level according to different standards and form a judgment matrix of standard level and index level. Finally, the weight of each indicator is determined through expert scoring, and on this basis, the relationship between each indicator and the target level is determined. Combined with the data of the actual case company, the final evaluation result is obtained.

Basic Theory and Characteristics of AHP

The advantage of AHP method is that it decomposes the problem into multiple levels, making the analysis process more organized. Finally, the decision-making method of the problem is summarized into several levels, forming a hierarchical structure model. In this model, each element is indispensable, and different levels are formed according to different attributes. The elements of the standard layer refer to the elements of the indicator layer, while the elements of the indicator layer subdivide and explain the elements of the standard layer, and their functions are interrelated. The hierarchy thus formed is called hierarchical hierarchy.

(1) Target layer

The goal level is the ultimate goal of the whole system. There is only one element in this level,

namely the analysis object, which is the predetermined goal of system analysis, namely the construction of the whole system.

(2) Standard floor

In the whole system, the standard layer is an intermediary, which is the key element to achieve goals, and also the guiding principle for decision-making. The research content of this paper is mainly about the impact factors and relevant standards that should be fully considered in the evaluation, and the importance and relevance of the target level should be fully considered in the selection of indicators.

(3) Indicator layer

The indicator level refers to the refinement of the indicators of the indicator level in order to achieve the intended purpose, under the premise of comprehensive consideration of various elements of the standard level. In the indicator layer, the selection of indicator factors cannot be too many, and it is better not to exceed 9, otherwise it would lead to duplication.

Advantages of AHP: First, it is systematic. AHP is a method to analyze the final goal. It uses multiple methods such as target decomposition, comparison and judgment, and comprehensive analysis to form a complete analysis system. It is an important analysis tool after mechanical analysis and statistical analysis. The second is operability, which synthesizes and subdivides multiple factors. In the analysis, users' intentions should be fully considered, and multiple experts should be used to score them, so as to improve the accuracy of weight and the effect of decision-making. The third is simplicity. The AHP theory is concise, the method is simple, the results are clear, and it is easy to operate. At the same time, A set of evaluation system of supply chain financial ecosystem is established.

Therefore, based on AHP theory, combined with the characteristics of SMEs, this paper selects representative and quantifiable factors from the standard level and indicator level, systematically combs them, and a set of evaluation system of supply chain financial ecosystem is established.

Establish an evaluation index system of supply chain financial ecology

The purpose of establishing the index system of supply chain financial ecology evaluation is to fully understand and evaluate the supply chain financial ecology. The financial ecosystem of supply chain includes small and medium-sized enterprises, logistics, banks and platforms, etc. The characteristic information of the financial ecosystem of supply chain is evaluated from the basic quality, solvency and profitability of enterprises; The debt capacity of the bank; Logistics distribution capability and comprehensive service capability of the platform.

Evaluation indicator setting

In essence, the evaluation index of supply chain financial ecosystem is to quantitatively analyze the company's operation, logistics operation, bank's capital circulation and platform operation, and finally get a comparable data, and then on this basis, determine the development capability of the supply chain financial ecosystem. Based on a great deal of research by scholars, and according to the current development situation and existing problems of supply chain financial ecology, this paper synthesizes and sorts out a large number of indicators. Finally, six aspects and nineteen indicators are selected, and an evaluation system of supply chain financial ecology is established. See Figure 6 for details.
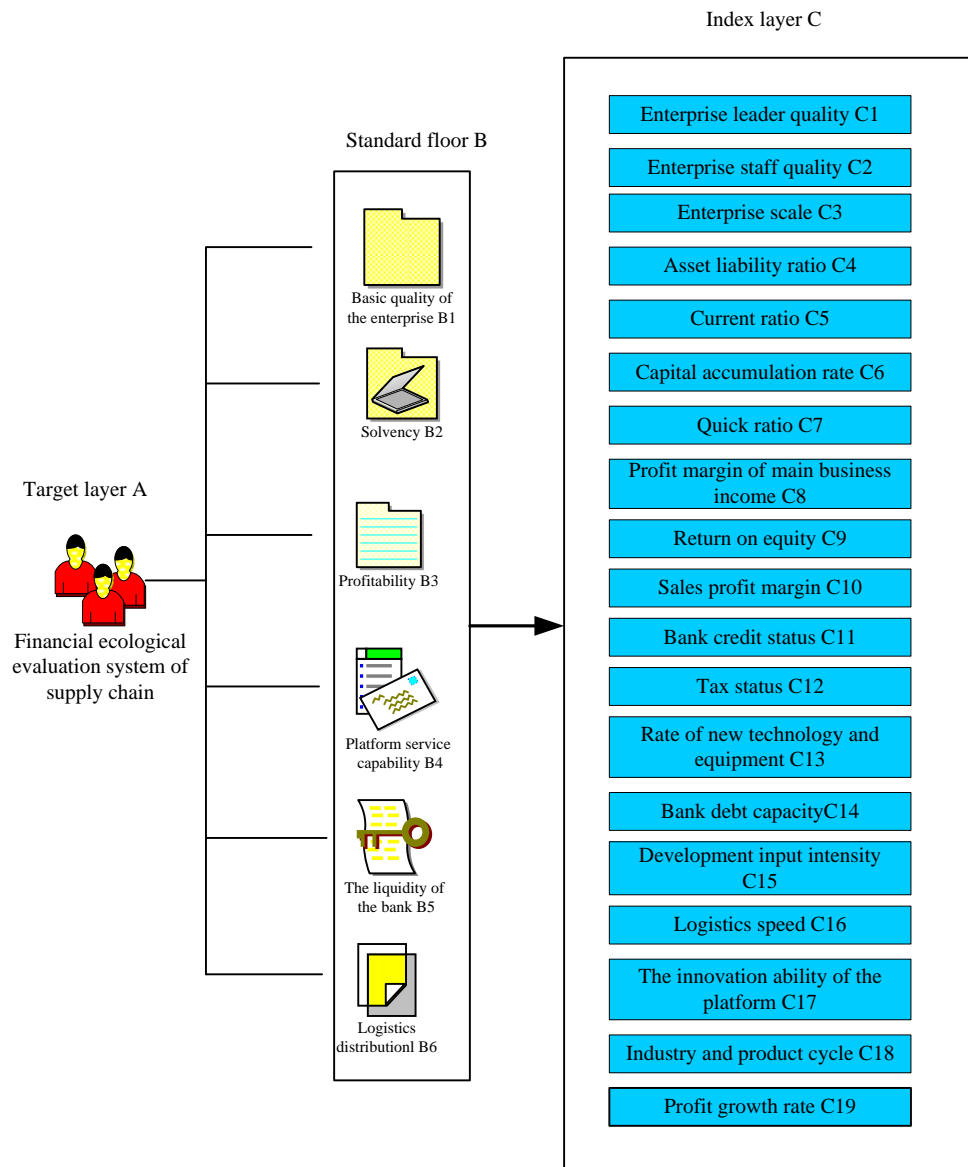
Index layer C

Standard floor B

Target layer A

| Basic quality of the enterprise B1 |
| Solvency B2 |
| Profitability B3 |
| Platform service capability B4 |
| The liquidity of the bank B5 |
| Logistics distributionl B6 |

Financial ecological evaluation system of supply chain

| Enterprise leader quality C1 |
| Enterprise staff quality C2 |
| Enterprise scale C3 |
| Asset liability ratio C4 |
| Current ratio C5 |
| Capital accumulation rate C6 |
| Quick ratio C7 |
| Profit margin of main business income C8 |
| Return on equity C9 |
| Sales profit margin C10 |
| Bank credit status C11 |
| Tax status C12 |
| Rate of new technology and equipment C13 |
| Bank debt capacityC14 |
| Development input intensity C15 |
| Logistics speed C16 |
| The innovation ability of the platform C17 |
| Industry and product cycle C18 |
| Profit growth rate C19 |

Figure 6. Financial Ecological Evaluation System of Supply Chain

Set the scoring range and standard of indicators

On this basis, the percentages are set according to the 19 small indicators of 6 categories divided by the indicator system. On this basis, combined with the current evaluation standards, the scoring range of each evaluation index is defined, and divided into different scoring ranges, and the corresponding evaluation system is prepared. When evaluating the credit of small and medium-sized enterprises, an expert group composed of several industry experts shall conduct a comprehensive evaluation of the financial data of the enterprise and other credit information of the company through the expert group, and on this basis, evaluate each indicator with reference to the scoring standard, so as to determine the final credit score and credit rating.

3.2. Steps of Constructing Supply Chain Financial Ecosystem by AHP

Establish pairwise comparison matrix

In order to compare the importance of a single standard, AHP introduces a scale to measure the

importance of each standard element. Through a large number of data experiments, it compare and analyze the differences between different scales and people's subjective evaluation of things, and draw a conclusion on the scale of 1-9. i and j are two different factors. When they are compared in pairs, i and j have no special meaning. They can be filled into the rows and columns of the comparison matrix from 1. A matrix represented by the scale a_{ij} is called double comparison matrix a.

$$a = \begin{Bmatrix} a_{11} & a_{12} \cdots a_{1n} \\ a_{21} & a_{22} \cdots a_{2n} \\ M & M & \cdots & M \\ a_{n1} & a_{n2} \cdots a_{nn} \end{Bmatrix} \tag{1}$$

The importance of the standard level and the target level is compared and judged, and expressed in numerical form, so as to construct a double comparison matrix of the comprehensive scoring index for the evaluation of the supply chain financial ecosystem. As shown in Table 2.

Table 2. Comprehensive scoring index of financial ecosystem of supply chain

Scale a_{ij}	definition
1	i. j equally important
3	i. j Same but slightly important
5	i. j The same is more important
7	i. j The same is very important
9	i. j The same is absolutely important
2,4,6,8	Scale value corresponding to the front and rear levels
reciprocal	i. Comparing j, the judgment value is $a_{jt} = 1/a_{ij}$

Calculate the weight of each index

On this basis, use the above two index matrices to calculate the corresponding feature vectors, and the final feature vector is the weight of the index.

(1) Finding the Sum of Two Matrices in Column Order

$$a_j : a_j = a_{1j} + a_{2j} + ... + a_{nj} \tag{2}$$

(2) Convert into two pairs of comparison matrices in order

The standard two pairs of comparison matrices b is to divide the addition of each element by the sum of the corresponding columns, and then combine the resulting divisions into a new matrix.

$$b = \begin{Bmatrix} b_{11} & b_{12} \cdots b_{1n} \\ b_{21} & b_{22} \cdots b_{2n} \\ M & M & \cdots & M \\ b_{n1} & b_{n2} \cdots b_{nn} \end{Bmatrix} \tag{3}$$

Among them, $b_{ij} = a_{ij} / a_j (i, j = 1,2,...,n)$

(3) Calculate the weight of each element under the same benchmark

Calculate the arithmetic mean of each row of matrix b in order, and the calculated mean is the weight of each factor under the same standard.

$$b_i = \frac{b_{i1} + b_{i2} + \cdots + b_{in}}{n} \tag{4}$$

Obviously, the sum of the average values of the columns of b is 1. Under the same criterion, the weighted sum of each factor is also 1. $\begin{Bmatrix} b_1 \\ b_2 \\ M \\ bn \end{Bmatrix}$ is the eigenvector under this criterion.

Compatibility test of double contrast matrix

Suppose A is a matrix of order n and a_{ij} is an element of A. If A has the following characteristics: $a_{ij} = 1, a_{ij} = 1/a_{ij}$, then A is called the inverse matrix. Especially when there are many comparison factors, it would become more complex, so some errors are allowed in the consistency check.

Consistency inspection consists of the following four parts:

(1) Calculating Weighting and Vectors

First, the attribute vector b must be multiplied by the double comparison matrix a, which must be checked for consistency, to obtain the weighted value and the vector c. The premise of finding the maximum eigenvalue λ_{max} is to assign the weight value and the vector c.

$$a = \begin{Bmatrix} a_{11} & a_{12} \cdots a_{1n} \\ a_{21} & a_{22} \cdots a_{2n} \\ M & M & \cdots & M \\ a_{n1} & a_{n2} \cdots a_{nn} \end{Bmatrix} \cdot \begin{Bmatrix} b_1 \\ b_2 \\ M \\ b_n \end{Bmatrix} = \begin{Bmatrix} c_1 \\ c_2 \\ M \\ c_n \end{Bmatrix} \tag{5}$$

(2) Calculate d_i value

Secondly, the value of d is calculated by the component of attribute vector b corresponding to each weighted sum vector c. The formula is as follows:

$$d_i = c_i / b_i \tag{6}$$

(3) Calculate the average value λ_{max} of d_i

Next, the average value of n d_i operations is calculated and expressed as follows:

$$\lambda_{max} = \frac{d_1 + d_1 + \cdots + d_1}{n} \qquad (7)$$

λ_{max} and n are used to determine the consistency of the check matrix. Because the characteristic root is determined by a_{ij}, if the difference between n and λ_{max} is large, the similarity of the matrix would be reduced. At the same time, the comparison with the corresponding criteria of λ_{max} cannot really reflect the weight of each factor under the same criteria. Therefore, a consistency test must be carried out on the evaluation matrix given by the credit evaluation institution to determine whether the evaluation matrix can truly reflect the reality.

(4) The consistency indicator CI is calculated by the following formula:

$$CT = (\lambda_{MAX} - n)(n-1) \qquad (8)$$

Among these parameters, the largest eigenvalue is the inverse matrix λ_{max}. N is the parameter of a pair of comparison matrices. If it is λ_{max}, CI=0, it means complete consistency. With the increase of CI, its compatibility decreases. In general, $CI \leq 0.1$ can be regarded as acceptable for the consistency of the matrix. If not, consistency check must be performed again.

At the same time, the consistency is also related to the dimension of the matrix. In a large dimension, the probability of inconsistency of the model increases, while in a small dimension, the consistency of the model decreases. Therefore, the correction value freedom index RI can be introduced, as shown in Table 3, to calculate the consistency ratio CR. The formula of CR is:

$$CR = CI / RI \qquad (9)$$

Table 3. Average random consistency test standard values

Dimension n	1	2	3	4	5	6	7	8	9
RI	0.01	0.03	0.56	0.98	1.14	1.26	1.34	1.42	1.47

Calculate the comprehensive weight of each index in the supply chain financial ecological evaluation system.

From the above calculation process, it can easily see that the indicators used in the credit evaluation system used in this paper are divided into two levels, assuming that the weight value of the overall indicator is:

$$b_{i1(1)} = (b_{1(1)}, b_{2(1)}, b_{3(1)}, b_{4(1)}, b_{5(1)})T \qquad (10)$$

Judgment of index level score

In the process of scoring 19 credit evaluation indicators, 5 experts were selected to participate. This paper uses the above experts to make a comprehensive evaluation of each index, and then uses AHP software to calculate and analyze. Finally, it judges whether each index is consistent, and gives different weights.

Determination of the score of financial ecosystem in supply chain

Score each index, and then multiply the score of each index by the weight of each index to get the score of each index, and the score of supply chain financial ecosystem is the comprehensive score of these 19 indexes, as shown in Table 4.

Table 4. Credit rating and corresponding scoring table

credit rating	Corresponding score	meaning
AAA	90-100	high
AA	80-90	higher
A	70-80	good
BBB	60-70	commonly
BB	50-60	Poor
B	40-50	difference
CCC	30-40	Very bad
CC	20-30	range
C	<20	No,

Conclusion of credit evaluation

The existing credit rating can be compared with the corresponding scoring table to judge its credit status, so as to provide valuable information for financial institutions and companies.

3.3. Risk Assessment of Financial Ecosystem in Supply Chain

This paper takes Polymer New Materials Co., Ltd. as an example, called M Company for short, which was founded in 2009 and has a registered capital of 8.9 million yuan.

Determination of index system weight

The median of comparison matrix is used for standardization, and AHP software is used for comparative analysis of the comprehensive evaluation index of supply chain financial ecosystem. The judgment matrix of each element in the upper layer of index layer is constructed, the consistency of the matrix is tested, and the weight of each index is obtained.

For this type of SMEs, their credit rating can be quantified according to the determined comprehensive weight of indicators, and compared with each score to obtain their credit rating. The results of these scores, on the one hand, can provide a reliable reference for enterprises in the use of credit, and can also promote the establishment of SME credit evaluation system and real marketization.
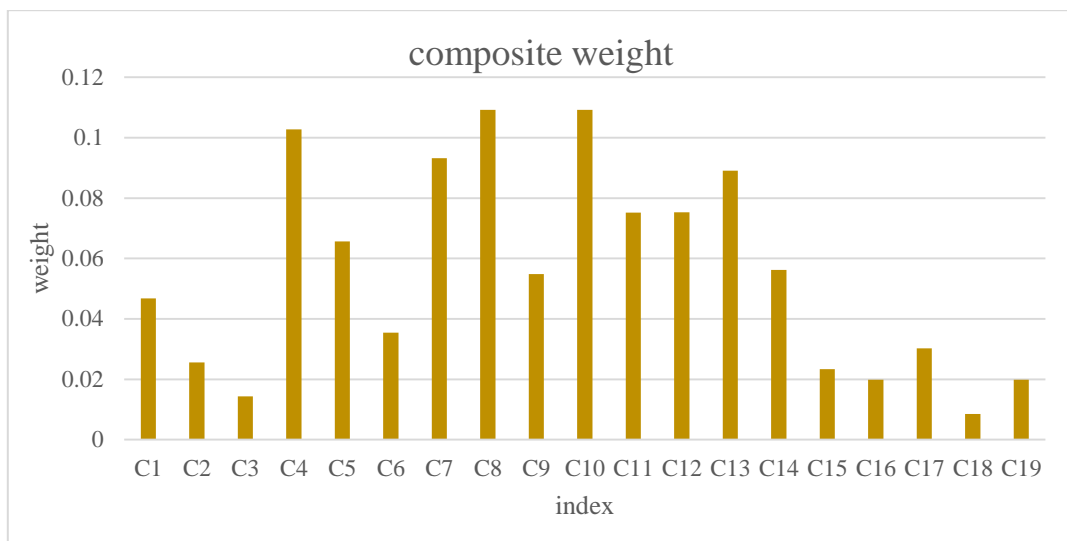
A. Composite weight
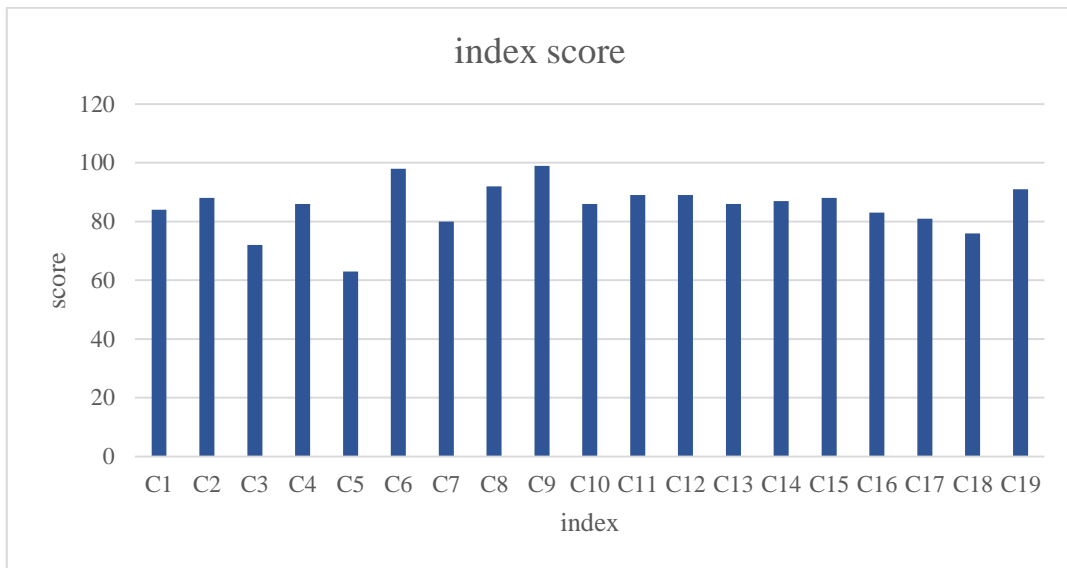
B. Index score
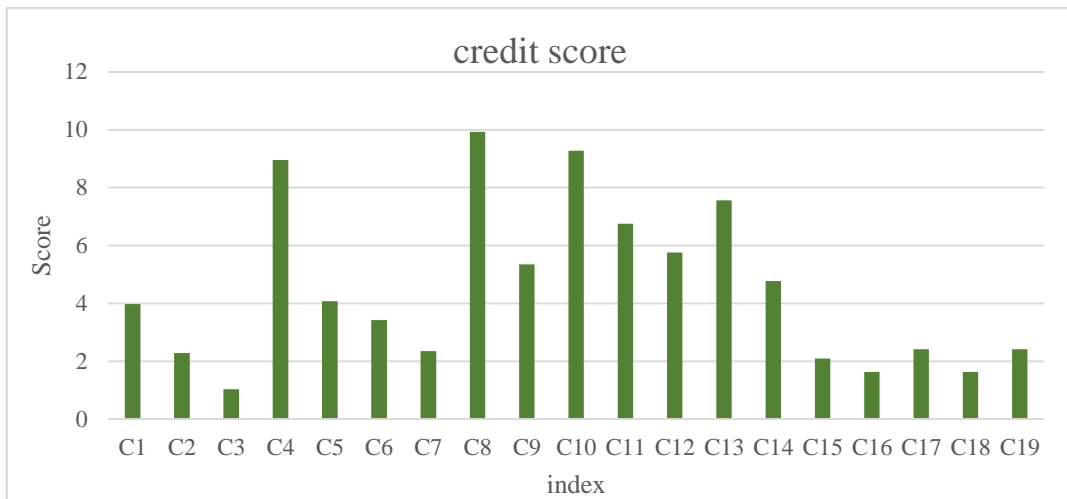
C. Credit score

Figure 7. Evaluation score of financial ecosystem of supply chain

As shown in Figure 7, the credit rating of the supply chain financial ecosystem is obtained by integrating the above indicators and comprehensive weights. On the whole, the comprehensive credit rating of the supply chain financial ecosystem is 85.68, which is a good AA grade.

Taking the evaluation of a supply chain financial ecosystem as an example, this paper briefly expounds the credit evaluation methods of such small and medium-sized enterprises. It is pointed out that in different enterprises, the setting of evaluation index weight, the setting of index and the determination of comprehensive weight should be adapted to local conditions, rather than copying them. With the continuous improvement of the evaluation of supply chain financial ecosystem, various existing supply chain financial ecosystems can be classified. On this basis, the AHP method is used to evaluate each supply chain financial ecosystem in detail, and the corresponding evaluation model is established.

4. Conclusions

The evaluation of financial ecosystem in supply chain is a huge project. This paper summarizes the characteristics of the evaluation index system of financial ecosystem in supply chain, including enterprise's own quality, profitability, solvency, platform innovation ability, logistics delivery speed and bank's liquidity, through the research of credit evaluation index and credit evaluation model. When selecting the model, we should start from three aspects: objectivity, operability and applicability, and use AHP method to establish the evaluation model. Finally, according to the weight of each index, combined with industry regulations, the final credit score of supply chain financial ecosystem is determined. This paper puts forward some solutions to the problems existing in the current credit evaluation system of small and medium-sized enterprises to ensure the smooth progress of credit evaluation, but there are still some defects in the article. In selecting credit indicators, several existing evaluation indicators from other countries and China were used for reference, and they were sorted out and modified in combination with the current characteristics, but there was a lack of specific theoretical basis. This paper only tested the credit model of a small and medium-sized enterprise, and did not deeply discuss whether the model can be applied to other industries, nor did it compare with the evaluation results of other models, which would make the next research direction.

Funding

Data Availability

Data sharing is not applicable to this article as no new data were created or analysed in this study.

Conflict of Interest

The author states that this article has no conflict of interest.

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