

# A Finance Logistics Management Platform Based on Collaboration Management

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**Abstract:** In order to solve problems such as low-efficiency in resource allocation, difficulty in headquarters integrated management, high-risk in finance, and inaccuracy of information sharing. On the basis of collaborative management theory and information technology, a centralized standardization of information system of finance logistics as a management platform is presented in this paper. Standardization of business processes and uniform control of headquarter are realized, needs of business operations as well as logistics management are effectively met, and the objective of using information technology to promote the meticulous management is achieved in the real life deployment.

**Keywords:** finance logistics; collaborative management; information system

## 1 Introduction

Finance logistics transforms the concept of "combination of logistics, capital flow and information flow" into reality, thus, to some extent, solving the financial problems in the supply chain, despite remaining some problems. At present, some problems, including poor supply chain system management, low finance logistics service efficiency, high financial risk, uneasily guaranteed timeliness and accuracy of information sharing, hinder the further development of finance logistics business. This writer believes that by combining the integration and coordination of the supply chain, the collaboration management method largely solves the above problems, reduces risks, strengthens control, thereby ensuring the good operation of a supply chain.

Financial service is indispensable to the development of modern logistics. Finance logistics resulting from combination of financial service and logistics service can not only enhance the service ability and operating profits of the third-party logistics enterprises, but also can assist enterprises in expanding financing channels, lowering financing costs, raising capital utilization, and improving their integrated services. Meanwhile, it can provide new ideas and methods for the business innovation and profit increases of financial institutions.

The remaining of this paper is organized as follows. In section 2, we analyze the finance logistics. In section 3, we present the design detail of the proposed finance logistics management platform. Section 4 gives a case study and some conclusion is drawn in section 5.

## **2 Finance Logistics**

### **2.1 Business model of finance logistics**

Finance logistics, that is, organic combination of finance service and logistics service, mainly means that the third-party logistics enterprises provide a new business combining finance service and logistics service in the supply chain. It mainly includes: logistics, distribution processing, financing, evaluation, supervision, asset disposal, and financial consultation, etc.

At present, China's business models of finance logistics mainly fall into two categories: one category is inventory-based finance logistics model, including the pledge by warehouse receipts and inventory pledge business models; the other category is trade contract based business model of finance logistics, including the accounts receivable financing and order financing. [7]

The main models of China Shipping Logistics Co.,Ltd. described in this document include the pledge by warehouse receipts, commodity finance cabin, full process business, and future cargo right). Pledge by warehouse receipts: With warehouse receipt as a subject matter, the cargo owner enterprise stores its pledged goods in the warehouse of the logistics enterprise, and applies to the bank for loan by means of a warehouse receipt (list of pledged goods). According to the value of pledged goods and other related factors, the bank will offer a certain proportion of line of credit. Full process business: The logistics company conducts the full-process monitoring and supervision on the whole transport and storage of pledged goods, thus delivering the full-process and seamless dynamic supervision.

### **2.2 Supervision models of finance logistics**

Local supervision: A logistics company uses its self-owned/self-run warehouses nationwide to store pledged goods of financing enterprises. This model applies to the business of pledge by warehouse receipts and future cargo right.

Output supervision: A logistics company directly sends professional supervision personnel to the warehouse or site of the supervision enterprise to supervise the products pledged to the bank on the scene. This model applies to the business of pledge by warehouse receipts and future cargo right. This is the currently main supervision model of China Shipping Logistics Co.,Ltd. in the finance logistics business.

In-transit supervision: A logistics company directly participates in the procurement or sales and transport of goods of financing customers, extends the supervision scope

to the place of receipt/delivery and brings the goods transport link into the supervision scope. This model applies to the full process business and commodity finance cabin business.

### **3 Design of a Finance Logistics Management Platform Based on Collaboration Management**

#### **3.1 Modeling of of Finance Logistics Management Platform Based on Collaboration Management**

The finance logistics management platform based on collaboration management is mainly embodied in the information collaboration and various data collaboration and sharing of financial institutions, third-party logistics enterprises and supply chain enterprises. The four finance logistics business models, i.e., the pledge by warehouse receipts, commodity finance cabin, full process business, and future cargo right, basically deliver the collaboration in terms of personnel, information, process and application. (A) Information collaboration of financial service institutions, logistics enterprises and supply chain enterprises: Through bank information interface and logistics information interface, logistics enterprises can connect financial service institutions and supply chain enterprises. Thus, enterprises can continuously grasp the supply chain logistics information and logistics enterprise can communicate the finance and fund information involved in business with the banks. The construction of such information system platform is able to deliver information sharing and reduce financial risks, to a great extent. Inside the logistics enterprises, the HQs control and classified modules should also deliver collaboration management, and the HQs supervise and manage the operation process of each module from a strategic management perspective, and enjoys the full management authority. (B) Data collaboration sharing: IM E-mail, report center, basic data, etc. deliver the corresponding collaboration. The finance system interface and Web service management achieve application collaboration. Meanwhile, data can be shared among financial institutions, the third-party logistics enterprises and supply chain enterprises on an collaborative basis.

#### **3.2 Technical characteristics of Finance Logistics Management Platform Based on Collaboration Management**

There are four design characteristics of the proposed finance logistics management platform.

(1) Platformization and modularization:

With platformized design and application layering technology, this management platform reduces the coupling factor between system and module, enhances the

stability and expandability of systems, improves the operating efficiency of systems and lowers the operational risk on the basis of modularization.

(2) High performance

With multithread programming, high-speed caching, load balancing, fast queue mechanism and other technologies, this platform is able to respond to concurrent access of a large number of customers, while reducing the occupancy of system resources.

(3) High security and reliability:

Through authority management at various levels, this platform separates system operation authority from its data access authority, and ensures the access security of different role data of system. The system network security is guaranteed by network construction mode and system firewall. It can provide 24-hour uninterrupted services throughout the year for enterprises to participate in finance logistics and offer them timely and accurate information.

(4) Flexibility:

Using the standard XML format, it is convenient to interface with the external system and provide the detailed desirable query conditions through information retrieval and is easy to fast search. According to the requirements of enterprises participating in finance logistics, the system can conduct module restructuring and process reconstruction, and support different roles in owning different modules and operation authority.

## 4 An Application Case Study

China Shipping Logistics Co.,Ltd. is a large state-owned enterprise directly under China Shipping (Group) Company, which specializes in comprehensive logistics. It is one of the first 5A logistics enterprises, and the first transport enterprises with national level-1 road transport qualifications in China. It has set up eight regional companies in northern China, north China, Shandong, east China, Fujian, south China, Hainan, and central and western China respectively, with scores of service outlets covering main medium and large cities in China. Since August 2009, this company has begun finance logistics business, and applied the collaboration management methods to its operation successfully. So far, it has built partnerships with about 10 financial institutions, including ICBC, SPDB, Bank of Communications, ABC, Shenzhen Development Bank, CEB and China CITIC Bank, and started businesses. It has completed nearly 2,000 finance logistics projects and supervised the goods worth hundreds of Yuan in relation to financing. The achievements have played a great role in developing this company's businesses, lowering financial risks, improving efficiency, sharing information, creating and increasing enterprise profits. This platform is composed of 10 function modules, including finance logistics, customer management, credit control, price management, import and export of ocean shipping, contract management, business settlement and finance system interfaces.

## 5 Conclusion

Finance logistics management platform is not only an important platform for a logistics companies to carry out finance logistics business, but also acts as a technical guarantee for them to improve service efficiency. At present, logistics enterprises are confronted with poor management, great financial risks, low resources allocation efficiency, difficultly guaranteed timeliness and accuracy of data sharing. In this research, the centralized management model ensures that the HQs can strictly control the operation of their subordinate branches. The practical application case indicates that the platform can increase the operation efficiency, reduce financial risks, simplify and standardize the actual operation procedure, promote the information sharing among different organizations and systems, and improve the synergy level within enterprises. Therefore, this management platform can be further promoted in other logistics companies to enhance the overall operation level and promote its overall competitiveness in international and domestic finance logistics markets.

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