Economic Analysis of Information Transmit Mechanism in the Electronic Supply Chain Finance Service

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Abstract. As many finance services are made through supply chain system, it needs the stability and accuracy in information transmit process. Supply chain finance service online should be built on the system, including open API, basic database, and progress standardization. The paper focuses on related processes on the SCM platform. Then it discusses how to strengthen the determination of legal rights and responsibilities and provides business scenario of planning electronic warehouse receipt. It shows that the information transmit mechanism can get the economic profit with the help of system.

1. Introduction
Information transmit mechanism plays an important part in the electronic supply chain finance business. Based on the system, traditional receipt data can update its business model. Among all kinds of information, the warehouse receipts are considered as a key. In order to realize efficient integration of warehouse receipt data, the system platform can combine financial data with transmission data, which can realize millisecond level data transfer and verification. Closely involved in system platform function, it realizes overall business docking relying on efficient network transmission speed. Then it compares the return rate under different asset classes by means of RICI. Based on the comparison, it aims to find a useful way for institutional investors. Then it proves the social security will get more beating inflation and more benefits from the fluctuating business [1].

The docking of bulk commodity platform is of critical importance rely on the database deployment among the participants' systems. At present, cloud storage is a common data storage mode of electronic warehouse receipts. Through the cloud storage and transmission of warehouse receipts data, the data security needs between platforms can be met. And the data analysis in cross platform will be carried out by using cloud computing resources, which contains effectively mining the value of related operation warehouse receipts [5]. They will help to realize multi-layer data levels of physical layer transmission layer and application layer. And the research on the ICT mechanism can be divided into two planetary parts. In the mechanism, two transmission members build the analysis on the kinematic and static characteristics. It uses the power flow in function and make full use of the analytical equations. Based on the demonstration styles, it helps to examine and to identify the value of the related results [2].

2. Information transmit mechanism in Supply chain Finance practice
There are lots of information in the supply chain, so we should choose key information set of the service to discuss. As the supply chain financial business is based on electronic warehouse receipt, it needs to rely on the construction of the ecosystem of bulk commodities [4]. And it has gradually expanded the scope of the system platform from point to area.
2.1. Improve the construction of commodity ecosystem
Due to the large scale, frequency fluctuation, upstream and downstream account periods of the funds required for bulk commodities, more explicit requirements are put forward for the development of supply chain financial business. The investors need to provide more diversified personalized fund combination in combination with the characteristics of bulk commodities.

2.2. Definition of paper-made warehouse receipt
As a new business model, bulk commodities need a certain time for business promotion and implementation to maintain the positive interaction between upstream fund side. Especially, it plays important part in intermediate warehouse side and downstream enterprises. For upstream enterprises, if they adopt the VMI business model, the electronic warehouse receipt will be the voucher for picking up the goods right. It combines the mechanism in the vehicular infrastructure and studies the potential of vehicular networks and discusses the challenges under the efficient communication, which needs to be point out the real determination. Then it tries to connect the time-critical and data-intensive tasks with the help of traditional terms such as IT resources, safe storage and application services [3].

Then, it needs to pay attention to the process management of in transit, in stock and out of stock. At this time, electronic waybill and electronic warehouse receipt will be effectively integrated to achieve effective transfer of business data. For warehousing enterprises, we need to upgrade of warehouse management system (WMS) and matching hardware equipment transformation [6].

The development of digital technology (Internet of things, big data, blockchain, artificial intelligence) and digital economy provide soil and nutrients for supply chain transformation. Technology empowers the transformation of digital supply chain and adopts modern technology, which is a part of the transformation of upgrading strategy in enterprises and industries. The cloud data of e-warehouse receipt can effectively ensure the fluency in the process of business promotion, strengthen the business association attribute and realize the integration. In light of collaboration of time dimension, it will show advantages in regional dimension, quantity dimension and industry dimension of data.

Figure 1. Basic information transit in the digital supply chain platform
![Figure 1](image)

There are some key controlling points in the installation and deployment of IOT equipment such as monitoring, weighing, etc., which can achieve hardware equipment data reading and business data verification. It will help to ensure the authenticity of electronic warehouse receipt data. This process is inseparable from strict warehouse operation management and full responsibility distribution to ensure the effective promotion of business. For the downstream financing enterprises, it is necessary to combine its own factors such as procurement frequency, production process and payment cycle, etc. In this situation, it will help to realize the online operation of financing business and communicate with business personnel in detail to ensure the safety of CFCA credit operation.

Relying on the construction of bulk commodity ecosystem, more participants can be integrated, including the insurer, the disposal party and the quality inspection party. The insurer can plan the insurance products based on the electronic warehouse receipt, which set the warehouse property insurance. In transit transportation line, it will also add the personnel liability insurance to avoid the risk
of the electronic warehouse receipt. The disposer can realize the effective integration of the electronic warehouse receipt price through the price fluctuation system. What’s more, the quality inspector can match the quality inspection scheme according to the requirements of the fund and the warehouse can ensure the quality of the bulk commodities with inspection in speed and sampling integrity.

2.3. Strengthen the determination of legal rights and responsibilities of electronic warehouse receipts
First of all, the paper-made warehouse receipt has a clear legal definition in the property law. Traditional bill pledge business needs the paper-made warehouse receipt as the voucher of effective pledge endorsement. It means it will mainly meet the demand of property right confirmation at the legal level. On this basis, the rights and interests of paper warehouse receipts can be gradually extended to the security effect of electronic warehouse receipts in the process of pledge, including liens, pledge and property security rights, etc.

![Figure 2. Open API of digital supply chain](image)

Secondly, based on the combination of legal efficiency of paper warehouse receipts and electronic warehouse receipts, the state-owned futures exchanges have carried out systematic extension and business expansion, including former 3 main Futures Exchange. Even though three exchanges have put forward strict regulations and requirements for warehouse delivery, but they don’t contain all the kinds of goods now. There exists lots of basic needs in the non-standardization in other bulk commodities, especially in the formulated disputes on the nature and effectiveness of warehouse receipts pledge. It will help to formulate avoiding strategies to reduce the risk of warehouse receipt business. According to the property law, traditional documents are generally paper documents, which need to be signed or sealed by the warehouse before taking effect.

As a digital asset, electronic documents currently lack a certain recognition mechanism at the legal level. According to the business logic of electronic warehouse receipts, there are key timestamps in proving effect at the technical level. According to the current court cases in some transformation of digital warehouse, the legal effect of electronic documents is gradually recognized that it can effectively guarantee the timeliness and realize the electronic proof attribute of warehouse receipt. However, it is still necessary to improve the contract law from the national legal level and gradually realize the legalization. If the rationalization of electronic warehouse receipts develops, the effectiveness of warehouse receipts will get the further in the handover process through the recognition of legal legislation and regulations. In this way, all participants in the commodity ecosystem can maintain their legitimate rights and interests through legal effectiveness, which will realize evidence push and data preservation. In order to improve the quality of business promotion, it should reduce the risk of commodity supply chain services.

2.4. Develop standardization of electronic warehouse receipt industry
At present, the bulk commodity related electronic documents are still lack of national and industrial level logistics standards. It is in the lack of data fields and the difficulty of system docking data sorting. This is mainly due to the difference of data dictionary. Although electronic warehouse receipt data can be expanded, it is necessary to pay attention to the effective combination of electronic warehouse receipt
and electronic waybill in a process. So as to make the electronic warehouse receipt, it needs to conform to the docking standard and effectively improve the document docking.

In the process of research on the industry standards of electronic warehouse receipts, the application scenarios of electronic standardization can be discussed step by step from the business scenarios. They will be divided into electronic warehouse receipts, electronic waybills and electronic invoices. In combination with the requirements of national development and reform commission for standardization project initiation, the whole industry will pay attention to the combination of industry standards and actual business scenarios. It will help to maintain the application scope and business logic of industry standards in depth, which can attach importance to the related deployment of warehouse receipt standardization, transportation standardization and digital warehouse standardization. By improving the popularization, application efficiency of digital supply chain standards will be firmly built.

Figure 3. Main partner to build standardization of SCM platform

The standardization of logistics industry can be divided into four aspects, including supply chain infrastructure, logistics information, process standards and logistics services. Through correlation analysis, there are reverse relationships between the increment of logistics standards and the increment of the total cost of social logistics. As the popularization and increase of logistics standardization, it can effectively reduce logistics costs and improve operation efficiency, ensuring service level. In this process, the bulk commodity application scenario needs to strengthen the popularization of e-warehouse receipt standardization, check, implement and clarify the standard fields of data dictionary. It will help to realize the effectiveness and expansion of business docking and ensure the construction of e-warehouse receipt standard system. So as to ensure the wide applicability and business diversity of e-warehouse receipt standards, the platform should actively mobilize the participation of fund parties, including warehouse parties, regulators, insurance parties and financing parties. In the aspects of standardization of electronic warehouse receipt industry, it needs to be jointly promoted by the state, industry associations, core enterprises. In order to ensure the efficient connection of business scenarios, it will help to realize the effective deployment of electronic warehouse receipt standards and promote the construction of warehouse receipt standardization.

2.5. Business scenario of planning electronic warehouse receipt

Generally, the practice of e-warehouse receipt supply chain service cannot be separated from reasonable business scenario design. It needs to take into account the degree of informatization of participants, cost planning, platform construction, risk assessment and other factors. In terms of scenarios, it’s necessary to make further research on problems in the perspective of supply chain integration. Starting from the links of raw material purchase, distribution, storage, processing, distribution and use, it can effectively integrate electronic warehouse receipt, electronic contract and electronic waybill. What’s more, it will realize the effective interaction of transportation both in storage and in transit, which not only realizes the convergence of business logic, but also maintains the reduction of business risk.
The block chain technology is introduced to synchronize information obtained digital system platform, and it can not be tampered with, so as to ensure the rights and interests of all parties. The introduction of the Internet of things technology, through the transformation and upgrading of the Internet of things technology of certification warehouse, real-time access to the storage status information of goods, help the bank to do a good job in supervision, ensure the safety of bank funds, reduce risk.

The double market marking mechanism is set up, which is double market marking price from B2B net so as to ensure the safe price line of warehouse receipt pledge.

In addition to the preliminary evaluation in the early stage, all the other links have realized online operation and accelerated the financing progress. It has made online application for financing, online warehouse receipt review and certification, online warehouse receipt financing pledge and release of pledge and other operations.

It has effectively increased credit to introduce more bank cooperation in the later stage.

Secondly, the electronic warehouse receipt needs to integrate the data information under each business scenario in a timely manner. In the lists of key lists in the electronic warehouse receipt, it includes the goods data, financial data, scenario abnormal data, external price data, and corporate public opinion data. Under the mode of automatic data management mechanism, the docking of goods acceptance, goods transaction, pledge financing and other businesses. It can be seen in the following figure.

As a kind of digital assets, electronic warehouse receipts need to meet different kinds of parties. After the scenario is set, business transition period should be reserved for the participating enterprises to realize the switch from paper documents to electronic documents. During the parallel period, attentions need to focus on the preservation of electronic inventory vouchers in order to achieve business continuity and effectiveness. The business scenario can be implemented. And the service quality can be improved through the corresponding business consistency and joint verification.

3. Economic analysis of the information transmit mechanism

Technological progress leads to output improvement of decision. In the process of production and operation, information transmit mechanism can be added into system building. In industrial enterprises, there will be a series of strategic or tactical decisions in order to achieve the predetermined production
and operation goals. Decision making will be as the main factor in the digital supply chain process. How to make the right decision is a problem in IT plan, including the people, finance, material, supply, production and marketing. Every link and every level of related area will contain operation activities. For enterprises with high management efficiency, decision-making errors will cause more serious losses. Business decision-making is related to the quality of decision-makers, as well as the timeliness, accuracy, comprehensiveness of information and the quality of decision-making analysis.

Firstly, high level decision-making is to solve the major strategic and long-term problems such as the overall business direction of the enterprise, which are closely related to the external environment. Secondly, middle level decision-making is to ensure that the task will be completed within a certain period of time after the strategic decision-making. Thirdly, grass-roots decision-making is to solve the specific problems in daily business. Decision-making runs through the whole process of production and management. Whether the decision-making is successful or not is related to the success or failure of the enterprise. Therefore, it is the core issue of management.

For the upper 3 levels, the mechanism will help to reduce communication costs at different levels. And the enterprises with high management level or correct decision-making will further improve economic benefits. The information provided by economic analysis is scientifically absorbed, screened and used by various accounting data. Based on the mechanism, it will be combined with various non quantitative factors to corroborate and supplement each other.

4. Conclusion
Based on the electronic supply chain finance service, information transmit mechanism will help to make judgments, issue instructions and improve the decision-making levels. It is useful to measure, compare and study various feasible schemes. And it will be necessary to develop the advantages of information transmit mechanism and avoid the disadvantages. Therefore, the transmit mechanism of information in the electronic supply chain finance is so important to help the leaders to make decisions.

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