### Exploring Innovative Promotion Models for Financial Products Based on Big Data Analysis

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*Abstract:* In the era of big data, financial products are constantly innovating, which directly triggers a significant transformation in the traditional financial industry and demonstrates high innovation value. Currently, it is essential to utilize big data analytics to analyze and enhance the innovation and resource allocation efficiency of financial products. There is also hope to optimize the innovation promotion model of financial products and address various crisis issues faced during the rapid development of internet finance. This paper explores the opportunities and challenges of financial product innovation in the context of big data analytics and studies the development approach of innovation promotion models. Furthermore, it investigates the specific innovation promotion model for short-term trading products in internet finance under the background of big data technology.

### **1. Introduction**

Currently, big data technology is thriving and has opened up new paths for the innovation and promotion of financial products in the financial industry, playing a crucial role in the future development of the financial industry. Among the various emerging innovative models for financial products, the utilization of big data analytics technology can meet the requirements for financial product innovation and solve many challenges arising from the rapid development of financial products.

# **2.** Opportunities and Challenges of Financial Product Innovation in the Context of Big Data Analytics

In the era of big data, big data analytics technology possesses significant technical advantages, presenting both opportunities and challenges for innovation in financial products. Let's first discuss the opportunities. With the support of big data technology, scattered personal, corporate, government, and internet data can be effectively processed, making financial product innovation easier. By delving into the content of big data technology, financial products can achieve precision marketing, ensuring online transactions and banking operations based on a higher value of traditional product innovation, leading to the emergence of numerous internet financial products and establishing an innovative development system for comprehensive financial service products to

meet the needs of financial product services. [1]

However, financial product innovation also faces many challenges in the context of big data era, with user privacy being a primary concern. Although big data technology facilitates the processing of massive data and promotes transactions, it also poses issues such as information leakage, which may create difficulties related to adverse correlations and potential legal violations during transactions. The field of finance and the development of related industry application-oriented talents also face challenges, requiring a transformation towards cultivating technology-oriented or innovative talents to effectively enhance the innovation and quality of talent development in the financial industry. Additionally, there may be challenges related to data asymmetry, resulting from the massive data processing in large databases, which can hinder the development of innovation in financial product innovation.

## **3.** Creating an Innovative Promotion Model for Financial Product Innovation in the Context of Big Data Analytics

In the pursuit of innovation in financial products using big data analytics, it is necessary to enhance both work efficiency and effectiveness. Therefore, in the process of creating an innovative promotion model, it is crucial to plan reasonably, ensure rational correlations of financial products within the industry, and meet specific technological requirements. In this regard, having "big" data alone is not enough; it is also important to pursue data that is "effective." The gradual integration of data into the financial sector as a significant production factor should be ensured, along with the deep exploration and utilization of massive data, improved data processing capabilities, and the realization of data's effective value addition. Furthermore, it is essential to explore new approaches to achieve dual improvements in efficiency and benefits, ensuring greater economic benefits from financial products and conducting innovative work based on low cost and high efficiency to meet the value requirements of financial product output.

Traditionally, financial product innovation promotion models are constrained by financial errors that arise during the formation process. Failure to address these errors promptly may lead to various issues in the era of big data. Therefore, this article proposes three main points for the innovative promotion model of financial products in the context of big data analytics:

### 3.1 Update and enhance the precision of big data

In the process of promoting innovative models for financial products, continuous updates and improvements in the precision of big data are required. This involves optimizing the use recommendations and planning by combining individual data analysis with corporate financing behaviors and wealth management, ensuring the effective reinforcement of the innovative promotion model for financial products.[2]

### **3.2 Legally and compliantly acquire big data resources**

It is essential to legally and compliantly acquire big data resources, ensuring scientific analysis of internal data information of financial products in the context of financial innovation, while also implementing appropriate confidentiality measures to avoid information leakage that may undermine the credit value of financial products. This step requires careful consideration of the legal and compliant acquisition of big data resources to ensure the effective enhancement of confidentiality in financial products supported by big data technology, ultimately leading to natural improvements in product quality and reputation.

### 3.3 Establish insurance mechanisms for financial products

Setting up insurance mechanisms for financial products and developing applied innovative talents based on various functional contents within financial products are essential. This ensures that financial products have a sound insurance mechanism as a foundation. It should be noted that with a certain level of talent reserve, the innovative development model of financial products can be made more secure, thereby bringing higher economic benefits to the financial industry.

### 4. Innovative Promotion Model for Short-term Trading Products in Internet Finance under the Background of Big Data Technology

In the current financial industry, short-term trading products in internet finance are gaining popularity as emerging products in the 21st century. From a timeline perspective, short-term trading products are fundamentally different from the operational models of traditional commercial banks, as they exhibit distinct characteristics and principles of short-term trading behavior. Hence, it is essential to create an innovative promotion model for financial products based on the aforementioned content. The following analysis mainly focuses on the fundamental features, principles of transaction behavior, and practical application of innovative promotion models for this emerging financial product.

### **4.1 Characteristics and Principles of Transaction Behavior for Internet Finance Short-term Trading Products**

#### **4.1.1** Characteristics of transaction behavior for internet finance short-term trading products

In internet finance short-term trading products, the transaction behavior exhibits distinct characteristics. The following five points will be analyzed:

First, the most important parts of these products are subscription and sale. Both aspects adhere to the same principle, primarily based on the analysis of the basic subscription process in internet finance short-term trading. This ensures that customers purchase the target financial products and optimizes the selling process, thereby facilitating smooth and successful transactions. The fundamental principles to be adhered to in this process are prioritizing price, total volume, and time, which is similar to stock trading behavior.

Second, customers have autonomy in the process of internet finance short-term trading behavior. This behavior can be sustained but also exhibits a certain degree of dispersion, and it can also erupt instantaneously. Customers inevitably possess absolute initiative when participating in internet finance short-term trading. They primarily operate based on their own intentions during the process of purchasing and selling products. Utilizing big data, they analyze the dispersed and eruptive behavior of data information and classify products into several parts for individual analysis.

Third, internet finance short-term trading products can be settled through full or partial delivery. In the selling process, the analysis of subscription is mainly based on the absence of fixed requirements for the buyer, aiming to ensure the successful acquisition of the overall share. If the product is categorized as full delivery, it is necessary to analyze the nature of the transaction behavior by considering the partial delivery form and determining if the customer voluntarily participates in the trading activities of the short-term financial product.

Fourth, there is a time limit for internet finance short-term trading products during the innovation and promotion process. The short-term trading time limit is T+1 day, which means that successful subscriptions need to be sold on the second working day to meet the technical standards of short-term trading.[3]

Fifth, the success of internet finance short-term trading products depends on various influencing factors, with a relatively high probability of successful subscription and sale. It is also associated with multiple factors, such as the current loan interest rate of banks, which is linked to the product and can be influenced by the price level. With the support of big data analytics, determining the success of short-term trading behavior requires the creation of linear correlation analysis charts. The analysis process is not linearly correlated.

### 4.1.2 Principles of Transaction Behavior for Internet Finance Short-term Trading Products

The principles of transaction behavior for internet finance short-term trading products can be summarized as follows:

First, these products exhibit irrational characteristics as they face various challenges in maximizing expected profit realization. With the support of big data analytics, the short-term trading behavior of financial products on the internet is not a rational behavior but rather displays more prominent irrational characteristics. Through the analysis of actual processes, it can be understood that internet finance platforms experience a significant number of applications for sale within a short period, and this behavioral trend is quite apparent. In the analysis of short-term trading, it is necessary to understand the content of the purchase application phase under this context and analyze the stage issues based on probability comparisons while maintaining irrational characteristics. However, from the perspective of the purpose of product trading behavior, there may be blind followers who excessively pursue the maximization of expected total profits. Caution should be exercised to prevent any potential risks.

Second, in the field of internet finance, the specific transaction behavior of short-term trading products relies on customer reputation in the big data analytics platform. It combines customer data to expand the potential consumer base for the product in the near future, aiming to eliminate various unfavorable factors as much as possible.

Third, it is essential to analyze the international macroeconomic impact based on the analysis of the domestic macroeconomic level. Under the background of big data analytics technology and a positive outlook, the transaction behavior of financial short-term trading products can be established. International macroeconomics plays a considerable role in influencing internet finance short-term trading behavior, although certain transaction behaviors can also be disregarded.

Fourth, achieving diversified development in the transaction path of internet finance short-term trading products largely depends on the ultimate purpose of the transaction behavior. Combining the pursuit of profit along two paths, understanding the intermediate positions, and avoiding intermediate profit losses. Based on a clear understanding of the original intention of short-term trading, considerations should be given to the interests generated by the transaction behavior.

Fifth, it is necessary to emphasize the immediate benefits of the transaction behavior and analyze the key points of short-term behavior in short-term trading based on the lack of long-term planning. Through big data analytics, understanding the profit points and seeking actions for benefit realization to ensure the selection of short-term profitable projects as investment targets. In most cases, comprehensive considerations of long-term planning should be taken into account for short-term trading.

### 4.2 Innovative Promotion Models for Internet Finance Short-Term Trading Products

In the context of internet informatization and big data analytics, there is a need to enrich and optimize the innovative promotion models for financial short-term trading products. This article proposes three suggestions:

### 4.2.1 Enhance the rationality of short-term trading behavior comprehensively

Comprehensive application of big data analytics technology is necessary to analyze the potential risks of financial short-term trading products. Specifically, it is important to establish a profit-based neutral trap and analyze the key points for improving the success probability of financial products in the purchase and sale process. Analyzing the intermediary behavior in short-term trading based on the short-term level is essential to ensure that customers can quickly pursue their interests, enhance customer trust, and effectively influence their original behavioral intentions. Alongside emphasizing the improvement of customer behavior rationality, the selection of financial short-term trading should also involve a thorough understanding of the products and market trends to selectively accept short-term trading products and understand their trading behavior.

### 4.2.2 Enhance the capacity of financial short-term trading

Analyzing the purchase probability and sale probability of short-term trading financial products based on the international macroeconomic level is crucial to ensure their mutual compatibility in terms of probability performance. Under the support of big data technology, it is necessary to choose advantageous short-term trading products based on financial product placement, achieving incremental investment, which is highly beneficial for the national macroeconomic development. However, in the process of deeply evaluating the insufficiency of advantageous market products, it is necessary to enhance the reliability of their placement, which will have a positive impact on the capacity of financial short-term trading. Additionally, creating operation logs for financial short-term trading products and accurately collecting user operation data through operation log data collection systems, combined with application technology tracking, can establish a mechanism for optimizing subsequent products and provide rich operational data support, including access data, visitor data, duration of stay, page views, etc. Analyzing various page statistics data and statistical operational behaviors ensures the real-time value of operational log data reflecting user behavior. This data can be analyzed and processed to understand user habits, preferences, and detect abnormal behaviors, contributing to the construction of a big data risk control system. Specifically, it utilizes app data collection, combines real-time computing components to process and analyze business-required metrics, ensures that all data is merged and directly used in place, and resolves the data collection issues of the app. For example, analyzing the problem of excessive data volume and addressing the issue of data loss in case of network interruptions or weak signals to avoid unnecessary losses. Lastly, understanding the complex collection environment by establishing H5 interfaces in the native interface of the collection end, primarily analyzing page conversion methods and the obtained data content, as well as analyzing the differences between the two. This approach is highly beneficial for optimizing the trading behavior of financial short-term trading products.

### **4.2.3** Consider the future development direction of internet finance short-term trading products from multiple perspectives

It is important to consider the current internet finance product market from multiple perspectives and analyze the long-term development of financial short-term trading products. By focusing on user short-term trading to maximize benefits, comprehensive planning and strengthened execution can be achieved. In the process of analyzing the domestic and international macroeconomic development situation comprehensively, it is important to collect quantitative macroeconomic data through effective channels and continuously improve the feasibility of plan implementation. Specifically, analyzing the success probabilities of purchase and sale based on the success rate of internet platform transactions for financial products can refer to the controllable operation mechanism established for domestic and international internet finance products' financial and

economic forms. It is crucial to analyze the timing of purchase and sale, ensuring that the trading behavior of financial short-term trading products presents a positive correlation based on shares and success probabilities in the innovative promotion models. The more trading behavior occurs in financial short-term trading products, the higher the probability of successful transactions. Therefore, to a certain extent, long-term trading behavior of financial short-term trading should be considered to enhance its trading benefits and efficiency. It is important to guarantee the average daily data call volume of the system reaches at least one million times by implementing system authentication and entering the credit link. Currently, all the performance indicators of big data analysis in internet finance short-term trading products are excellent and can meet the sales requirements. Hence, continuous system expansion must be achieved to further meet customer usage requirements and establish a SaaS system. In the SaaS system, the trading behavior system should also be continuously improved. Combining the content of the credit function, comprehensive optimization of system authentication should be realized, meeting the requirements of real-time calculation and interaction mechanism, establishing a scoring card based on machine learning models to meet credit requirements, and the entire process should be completed within 3 seconds, significantly improving efficiency.

### **5.** Conclusion

In the era of big data, the promotion models for financial product trading behavior need continuous innovation. It is important to utilize big data analytics technology to gain a deeper understanding of the organizational structure and changes in financial products. This article proposes innovative promotion models for financial product trading behavior based on big data analytics. The aim is to align with the current national financial product marketing and trading strategies, create favorable conditions for the effective implementation of common policies in the financial industry, and enhance the overall operational development of the financial industry.

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