



Research on Data-driven Financial Product Innovation

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Abstract: The background of data-driven financial product innovation research is undergoing a profound change, which is both an inevitable choice for the financial industry to adapt to the development of the big data era and an important driving force to promote financial product innovation. With the continuous progress of technology and in-depth research, data-driven financial product innovation is expected to bring broader development space and richer innovation results for the financial industry.

Keywords: data-driven, financial products, innovation research

1. Introduction

1.1 Research background

With the rapid development of information technology and the arrival of the big data era, data has become one of the core drivers of innovation in the financial industry. Especially in the field of financial product innovation, the data-driven approach is gradually replacing the traditional experience-driven and intuition-driven, and has become an important force driving financial product innovation.

The research background of financial product innovation is undergoing profound changes. In the past, the design and innovation of financial products mainly relied on the experience of experts and market intuition, but this approach often lacked scientificity and precision, and it was difficult to cope with the complex and changing financial market environment. And with the wide application of big data technology and the improvement of data analysis capability, financial institutions can acquire and analyze market data in a more comprehensive and in-depth manner, so as to more accurately grasp the market trends and customer needs, and provide strong support for the innovation of financial products.

Data-driven financial product innovation research has emerged based on this background of change. It emphasizes data-based in-depth analysis of the financial market through advanced technologies such as data mining and machine learning to explore market potential and discover new investment opportunities. At the same time, the data-driven approach can also help financial institutions better understand customer needs and behavioral patterns, providing the possibility of personalized and customized financial product innovation.

In addition, data-driven financial product innovation research faces some challenges and problems. How to effectively acquire and integrate massive data, how to ensure the accuracy and reliability of data, and how to deal with the privacy and security of data are all important topics that need to be further researched and solved.

1.2 Research significance

The research significance of data-driven financial product innovation is far-reaching and extensive. With the rapid development of science and technology and the advancement of the wave of digitization, data has become the core driving force of innovation and development in the financial field. Data-driven financial product innovation research not only helps to improve the service efficiency and quality of the financial industry, but also can play an important role in risk control, market prediction, product design and other aspects.

First, data-driven financial product innovation research can enhance the personalized level of financial services. Through the collection, analysis and mining of a large amount of data, financial institutions can gain a deeper understanding of customers' consumption habits, risk preferences and investment needs, so as to provide customers with more accurate and personalized financial products and services. This not only enhances customer satisfaction and loyalty, but also brings more business opportunities and profit growth points for financial institutions.

Second, data-driven financial product innovation research helps optimize the allocation of resources in the financial market. Through real-time monitoring and analysis of market data, financial institutions can more accurately grasp the supply and demand relationship and price dynamics of the market, so as to formulate more reasonable investment strategies

and risk management measures. This not only reduces the systemic risk of the financial market, but also promotes the optimal allocation and efficient use of financial resources.

In addition, data-driven financial product innovation research can also promote technological innovation and digital transformation in the financial industry. In the digital era, data has become the core asset and competitive advantage of financial institutions. Through in-depth mining and application of data, financial institutions can continuously launch new financial products and services to enhance their core competitiveness and market competitiveness. At the same time, this can also promote the overall scientific and technological innovation and digital transformation of the financial industry, injecting new momentum into the sustainable development of the financial industry.

In summary, data-driven financial product innovation research is of great significance in enhancing the level of financial services, optimizing resource allocation, and promoting technological innovation. With the continuous development of data technology and the expansion of the scope of application, data-driven financial product innovation research will become one of the important directions for the innovative development of the financial industry.

2. Current status of financial product development

With the rapid development of information technology, data has become the core driving force for innovation in the financial industry. Data-driven financial product innovation has not only changed the model of traditional financial services, but also brought unprecedented convenience and opportunities to consumers and enterprises.

Through big data analytics and machine learning technologies, financial institutions are able to gain a deeper understanding of consumers' needs and behaviors, thus providing them with more personalized financial products. For example, based on a user's consumption habits, credit history and risk tolerance, they can recommend the most appropriate financial products, loan programs or insurance products. With the help of advanced algorithms and models, intelligent investment advisors are able to provide investors with personalized asset allocation advice to maximize the value of their assets. This service model not only lowers the investment threshold, but also improves investment efficiency. By utilizing big data and artificial intelligence technology, financial institutions can more accurately identify and assess risks, thereby developing more effective risk management strategies. In addition, through the analysis of historical data, it is also possible to predict future market trends, providing strong support for investment decisions.

With the continuous development of blockchain, artificial intelligence and other technologies, fintech innovation has become increasingly active. These new technologies provide a broader space for financial product innovation, such as smart contracts and decentralized finance. Data-driven financial product innovation is changing the pattern and model of the traditional financial industry, bringing more opportunities and value to consumers and businesses. In the future, as technology continues to advance and the market continues to develop, this trend of innovation will become more pronounced and deeper.

3. Problems encountered in the development of financial products

3.1 Insufficient regulation and risk accumulation

The development of financial products is one of the core driving forces of the modern financial market, but while it is booming, it has also encountered a series of challenges and problems. As financial products continue to innovate and become more complex, the regulatory system often struggles to keep pace with them, resulting in some high-risk products entering the market without adequate regulation. This regulatory lag not only increases the systemic risk of the market, but may also jeopardize the interests of investors. For example, certain complex derivative products may be traded without transparency and adequate disclosure of information, making it difficult for investors to accurately assess their risks. In the long run, this lack of regulation may lead to the accumulation of risks in the financial system and ultimately lead to a financial crisis.

3.2 Technological Innovation and Data Security

The development of financial products is closely linked to technological innovation, especially the application of advanced technologies such as big data and artificial intelligence. However, while these technologies bring convenience and efficiency, they also bring challenges of data security and privacy protection. The development of financial products requires the handling of a large amount of personal information and financial data, and how to ensure the security and privacy of such data has become an urgent issue. In addition, as technology continues to advance, new types of cyberattacks and fraudulent methods are emerging, posing a serious threat to the security and stability of financial products.

3.3 Market access and fair competition

The rapid development of financial products also raises issues of market access and fair competition. On the one

hand, some emerging financial products and services may face many obstacles in market access, limiting the space for their development and innovation. On the other hand, some financial products that have already occupied a dominant position in the market may maintain their position through unfair means, jeopardizing fair competition in the market. These problems not only affect the healthy development of financial products, but also hinder the innovation and vitality of the financial market. While the development of financial products has contributed to the prosperity of financial markets, it also faces problems such as inadequate regulation, challenges posed by technological innovation, and market access and fair competition. Solving these problems requires the joint efforts of governments, financial institutions and investors to strengthen measures in various aspects such as regulation, technological innovation and market competition.

4. Research on data-driven financial product innovation

4.1 Strengthening Internal Supervision

By strengthening internal supervision, we can effectively promote the research of financial product innovation under data-driven. First of all, strengthening internal supervision can ensure that financial institutions follow strict norms and standards in the process of data collection, processing and analysis to ensure the accuracy and reliability of data. This is crucial for financial product innovation, as product designs based on incorrect or incomplete data often lead to failure or risk.

Second, strengthening internal regulation also promotes cooperation and information sharing among financial institutions. By jointly formulating and implementing regulatory policies, financial institutions can establish a more transparent and fair market environment and reduce the risk of information asymmetry. Such cooperation and information sharing can help promote innovation in financial products, as the knowledge and experience of different institutions can be drawn upon and integrated with each other, resulting in more innovative ideas and approaches.

In addition, strengthening internal regulation can also improve the risk management capabilities of financial institutions. Risk management and control are crucial in the process of data-driven financial product innovation. By strengthening internal supervision, financial institutions can identify and assess potential risks in a timely manner and take effective measures to control and prevent them. This helps safeguard the stability and sustainability of financial products and lays a solid foundation for the long-term development of financial institutions.

In order to ensure the stability and healthy development of the financial market, it has become imperative to strengthen internal supervision. Internal regulation is not only an important safeguard for financial product innovation, but also an important means to protect consumer rights and prevent financial risks. In the data-driven context, internal supervision also needs to keep pace with the times and adopt more intelligent and efficient supervision methods to ensure the compliance and soundness of financial products.

Establish a sound regulatory system for financial product innovation, clarify the approval process, risk assessment and follow-up regulatory requirements for innovative products, and ensure that innovative activities are carried out within a compliant framework. Utilizing advanced technologies such as big data and artificial intelligence to improve the level of intelligence in supervision, realize real-time monitoring and early warning of financial product innovation activities, and identify and deal with potential risks in a timely manner. Establish an information-sharing mechanism between regulators to break down information silos and improve regulatory efficiency and accuracy. Increase the cultivation and introduction of supervisory talents, and establish a supervisory team with high professionalism and rich practical experience to provide solid supervisory guarantee for financial product innovation.

Data-driven financial product innovation has brought new opportunities and challenges to the financial market. While promoting innovation, internal supervision must be strengthened to ensure the compliance and soundness of innovation activities and provide strong guarantee for the healthy development of the financial market.

4.2 Enhance security management skills

By improving security management skills, we can effectively promote the research of data-driven financial product innovation. With the rapid development of financial technology, data has become the core driving force for financial product innovation and optimization. However, at the same time, the issues of data security and privacy protection have become increasingly prominent. Therefore, strengthening security management skills is not only an enhancement of individual capabilities, but also a necessary guarantee for the healthy development of the entire financial industry.

In the study of data-driven financial product innovation, we need to improve security management skills from multiple aspects. First, it is necessary to enhance the awareness of data security, clarify the importance and sensitivity of data security, and recognize that any data leakage or misuse may cause great losses to financial products and institutions. Second, it is necessary to enhance data security protection skills, including data encryption, access control, security auditing and other

aspects, to ensure the security of data during storage, transmission and processing. In addition, data privacy protection skills should be enhanced to follow relevant laws and regulations and privacy policies to ensure the legitimate use of user data.

By enhancing these security management skills, we can provide a solid guarantee for data-driven financial product innovation research. On the one hand, we can more confidently use data resources for financial product innovation and optimization, giving full play to the role of data in decision-making and risk management. On the other hand, we can also enhance customers' trust in financial products, improve customer satisfaction and loyalty, and thus promote the sustainable development of financial business.

In conclusion, improving security management skills is one of the keys to promote data-driven financial product innovation research. We should continuously strengthen the training of security management skills of individuals and teams, improve the level of data security and privacy protection of the entire financial industry, and provide strong support for the innovation and development of financial products.

4.3 Innovate and standardize the regulatory system

The research on data-driven financial product innovation can be effectively promoted through the innovation and standardization of the regulatory system. The innovation of the regulatory system is crucial in this process, which can not only provide strong support for the innovation of financial products, but also ensure the compliance and risk control of the innovation process.

First of all, the innovation of the regulatory system means that we need to improve and perfect the traditional regulatory model. The traditional regulatory model may be too rigid and cumbersome to adapt to the fast-changing financial market and constantly innovative financial products. There is therefore a need to improve the efficiency and accuracy of regulation through the introduction of advanced technological tools, such as big data analytics and artificial intelligence. There is also a need to establish a more flexible and adaptable regulatory mechanism to better respond to changes and challenges in the financial market. Second, data-driven research on financial product innovation is an important trend for the future. With the continuous development of big data technology, market data can be mined and analyzed more deeply to discover new business opportunities and innovations. Financial product innovation can not only improve the efficiency and competitiveness of the financial market, but also provide consumers with more diversified and personalized financial services. However, financial product innovation also faces certain risks and challenges, such as market risk, credit risk and technology risk. Therefore, while promoting financial product innovation, we also need to strengthen risk management and control to ensure the robustness and sustainability of the innovation process. Finally, the innovation and standardization regulatory system and data-driven financial product innovation research are mutually reinforcing. On the one hand, innovative and standardized regulatory system can provide a more stable and secure environment for financial product innovation; on the other hand, financial product innovation can also promote the continuous improvement and innovation of the regulatory system. By strengthening the mutual cooperation and coordination between regulation and innovation, we can jointly promote the healthy development and innovative progress of the financial market.

5. Summary

With the deepening development of data-driven financial product innovation, the issue of data privacy and security will receive increasing attention. Financial institutions need to strengthen the protection of user data and ensure the legal and compliant use of data. Financial institutions will engage in deeper cross-border cooperation with technology companies and Internet companies to jointly promote financial product innovation. This integration will bring more innovation opportunities and development space for the financial industry. With the continuous development of financial product innovation, the regulatory authorities will strengthen the supervision of the financial market and formulate more perfect policies and regulations to ensure the healthy and stable development of the financial market.

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