

# A Brief Discussion on the Relationship between Financial Innovation and Financial Risk Prevention based on the Subprime Crisis

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## Abstract

This paper first introduces the relevant concepts and characteristics of financial innovation and financial risk, takes the American subprime crisis as the research entry point, analyzes the financial innovation and the financial risk generated during the subprime crisis, and then considers how to grasp the relationship between financial innovation and financial risk prevention, and puts forward corresponding solutions in order to promote the healthy and sustainable development of the financial industry.

## Keywords

Financial Risk; Financial Innovation; Subprime Crisis.

## 1. Introduction

With the continuous development of global economic integration and science and technology, the financial industry has become an indispensable part of the national economy, which plays an important role in meeting the capital needs of enterprises, promoting the development of enterprises and stimulating social and economic vitality. As a concept of the financial industry, financial innovation is rich in content and has a huge system. Innovation means breaking the rules and bringing corresponding financial risks while driving financial development. How to prevent financial innovation risk is the focus of financial innovation should pay attention to, therefore, to study the relationship between financial risk and financial risk prevention has very important practical significance.

## 2. Theoretical Research on Related Concepts

### 2.1. Financial Innovation

#### 2.1.1. Concept of Financial Innovation

Financial innovation is to apply the concept of innovation to the financial industry, and it is a reform method of the financial market. It guarantees the maximum economic benefits, improves the operating efficiency of financial enterprises, and promotes the high-quality development of the financial industry by innovating the financial system, form and content mode. In the context of rapid social and economic development, financial innovation is very necessary, and actively carrying out financial innovation can improve user experience and enhance the advantages of enterprises in industry competition. Financial innovation in a broad sense can be divided into four categories: the innovation of financial instruments, the innovation of financial services, the innovation of financial markets and the innovation of financial systems.

#### 2.1.2. Characteristics of Financial Innovation

(1) Diversification of financial business

Since the reform and opening up of financial products, the business development of financial institutions has shown a diversified development trend, among which the mixed operation of silver and silver is the most prominent. At present, there is a trend of diversification in the global financial market. Most countries allow banking institutions to engage in securities, insurance and other businesses, and they can also try to form a "financial group" with other commercial banks to set up fund companies and insurance companies, so as to realize the cross-industry circulation of bank funds. Under the influence of diversification, banks have expressed their intention to carry out insurance business.

#### (2) Electronic financial transactions

Under the current wave of information age, modern financial transaction activities show strong convenience and timeliness. In order to meet the development trend of The Times, financial practitioners establish various stable, safe and efficient information financial service platforms according to the characteristics of the financial industry, such as electronic banking and mobile banking, etc. Consumers can carry out online transactions, investment, payment and other functions through smart phones and other channels, which not only facilitates users, but also makes their information exchange and fund circulation more convenient. It has also reduced the cost of financial institutions and injected vitality into the financial sector.

#### (3) Financial products are complicated

Driven by financial innovation, financial institutions actively carry out proprietary business and derivatives trading business to meet the investment and risk avoidance needs of different customers and reduce the risks of their own financial activities. The types of derivatives launched by commercial banks tend to be diversified, such as futures, options and other derivative instruments, exchange rates, interest rates and other structured notes that can be associated with stock indexes and other financial products. With the update and iteration of the above products, the risk management ability of commercial banks has been significantly improved, but the strong complexity of the structure of financial products has also laid hidden dangers for the occurrence of financial risks.

## 2.2. Financial Risks

### 2.2.1. Concept of Financial Risk

Financial risk refers to the risk related to finance, which may cause financial losses to enterprises or institutions, such as financial market risk, financial product risk, financial institution risk, etc. Financial risks not only affect the normal operation of financial business, but also damage the ability of finance to resist risks, and even threaten the security of finance and the economic development of the country.

### 2.2.2. Characteristics of Financial Risks

#### (1) Objectivity and universality

Financial risk is an objective phenomenon, it is not determined by human will. Financial risks are omnipresent, and there may be financial risks in any trading activity in any industry.

#### (2) Uncertainty

The influencing factors of financial risks are difficult to fully grasp in advance, and their consequences are also difficult to predict.

#### (3) Controllability

In financial activities, through the inspection and analysis of asset structure, profit status and other data, we can identify and prevent financial risks before they occur, resolve them in the process and remedy them afterwards.

## **2.3. Relationship between Financial Innovation and Financial Risk**

### **2.3.1. The Demand for Financial Risk Management Promotes Financial Innovation**

On the one hand, financial innovation provides more ways to avoid financial risks, avoid risks to the maximum extent and reduce losses. Participants in financial activities reduce risks by means of risk transfer, risk diversification and risk offset. On the other hand, the progress of financial innovation has improved the risk resistance ability of financial institutions. Through innovative financial institutions, they can fully dispatch available assets on the basis of ensuring asset liquidity and security to improve revenue.

### **2.3.2. Financial Innovation Will Generate New Financial Risks**

Financial innovation can disperse and transfer individual risks, but it cannot completely eliminate the whole risk. The reduction of financial risk is actually the transfer of risk from risk avoiders to risk appetizers, and it is restructured in a new way. In fact, the amount of risk is not reduced. In addition, financial innovation has increased the risk of industrial operation, and the homogenization of financial institutions has become more obvious, which has made the competition between them more intense and narrowed the traditional difference between deposit and loan rates. Finally, financial innovation creates more possibilities for financial speculation. Financial innovation has both advantages and disadvantages. The introduction of new financial products makes the market more liquid, but it also increases the possibility of speculation.

## **3. The Relationship between Financial Innovation and Financial Risk Prevention from the American Subprime Crisis**

In the financial innovation activities, people often only emphasize its benefits, but ignore its risks. The subprime mortgage crisis in the United States triggered a financial tsunami that spread all over the world. In 2007, the US subprime mortgage crisis broke out and deepened, and the subprime mortgage crisis spread from the US real estate credit market to other financial markets, causing great damage to the US financial market and the international financial market, the US economy and the global economy. In the process of the outbreak and escalation of the subprime crisis, financial innovation is considered to be one of the important reasons for the outbreak of the subprime crisis. Excessive innovation of financial instruments, excessive securitization, distortion of interest of credit rating agencies, innovation of accounting standards and asset management, relaxation of monetary policy supervision, and non-prudent housing mortgage loans have brought about the prosperity of the US real estate market, and also led to the US subprime mortgage crisis, which has hit the US real estate market, financial market and international market hard.

### **3.1. Major Financial Innovations in the Subprime Crisis**

#### **3.1.1. Multi-level Housing Mortgage Loan Product Innovation**

In the United States, home prices have been climbing after the recovery from the dotcom bubble. Under the influence of housing price "value guarantee", competitive pressure, profit incentive and other factors, real estate credit institutions have gradually relaxed the credit requirements for high-quality customers, and constantly innovate mortgage loan products to open up the subprime mortgage market. In the housing mortgage market in the United States, housing lenders will design various types of mortgages according to the credit level of the borrower, the most surprising of which is the subprime mortgage. Because a subprime mortgage is a loan with a second recourse to the collateral, the overall interest rate is higher than a prime mortgage. The relaxation of mortgage lending standards and the introduction of mortgage products gave those who could not afford to buy a home the opportunity to buy their own homes, which also

laid the foundation for the development and prosperity of the real estate market in the United States.

### **3.1.2. Asset Securitization**

The emergence of asset securitization has great practical significance, its purpose is to enhance the liquidity of assets and promote its wide application in the financial market. Asset securitization has generated a large amount of funds in the real estate market and has played a positive role in the development of real estate. Using the method of asset securitization, various types of assets can be securitized to form a set of asset securitization products based on mortgage-backed securities, asset-backed securities and other assets, and pass them to investors through the securities market. But in the United States, in order to get the maximum profit, people do everything possible to convert the debt that cannot be repaid in the short term into securities and then sell them to investors. In this way, all risky assets can be turned into securities.

### **3.1.3. Use of Financial Derivatives**

Financial derivatives can not only provide people with investment and financing opportunities, but also effectively resolve risks and avoid risks, and become an indispensable financial tool in modern financial markets. Financial derivatives are usually instruments that use a small amount of capital to make large-scale investments, and derivatives are often very complex and only professionals can understand them, which will undoubtedly increase the risk of the entire financial market and increase the occurrence of financial crises.

The subprime mortgage crisis in the United States in 2007 was due to the excessive use of leverage and the participation of a large number of financial institutions, resulting in a large number of capital chain breaks, resulting in a large number of banks unable to cope with bank runs, and ultimately leading to credit crisis and bankruptcy.

## **3.2. Financial Risks in the Subprime Crisis**

First of all, subprime mortgage is a kind of mortgage with high moral hazard, mainly used for low - and middle-income groups and groups without good credit history, it is difficult to resist systemic risk. Its interest rate structure will increase the credit risk in the later stage, especially in the floating interest rate stage, the borrower needs to repay by the benchmark interest rate + risk premium, thus increasing the repayment pressure. In this case, both the credit risk of the borrower and the institutional risk of the housing mortgage market will increase, and the loss it brings is much greater than that of the general consumer credit.

Secondly, real estate financial institutions transfer their default risk to the capital market through securitization, namely commercial banks, public funds, pension funds, etc. Due to the complexity of securitized products, many institutional investors lack a deep understanding of their pricing and rely on their credit ratings to make investment decisions. The result is that the credit rating of securitized products is too high, which leads to the unreasonable pursuit of institutional investors, which accumulates a lot of risks, resulting in the fragility of the market.

Finally, financial innovation activities divorced from the development of technology, resulting in the abuse of derivative financial products. In the environment of relatively slow development of science and technology, financial innovation activities are increasingly incompatible with the needs of technological development and economic development, and financial derivatives are still abused and become a means of speculation in today's society. In today's slow technological development, because people can not find new growth points in the real economy, a large number of excess funds are nowhere to be found, leading to a lot of subprime mortgage securitization, resulting in rising asset prices. In addition, the excessive use of financial derivatives will weaken the effectiveness of monetary policy, resulting in the spread of the subprime mortgage crisis.

## 4. How to Grasp the Relationship between Financial Innovation and Risk Prevention

The occurrence of the subprime mortgage crisis in the United States has brought people a lot of new knowledge about financial innovation. Financial innovation has played a role in promoting the development of finance, and financial risk has also promoted the development of finance to a certain extent. Financial innovation can both bring financial risks and avoid them. Therefore, financial innovation does not always have a positive impact on economic development. We should pay attention to financial risks in financial innovation and strengthen risk prevention in financial innovation. Financial innovation is a "double-edged sword", it can not only improve the efficiency of resource allocation, but also enrich financial products, but also bring huge financial risks to the financial market. In other words, financial innovation and risk prevention are like two opposites, attacking each other and helping each other. Without safeguards, financial innovation can spiral out of control. This requires us to strengthen financial innovation at the same time, strengthen risk control, accelerate financial innovation and risk prevention, and find a balance between the two.

### 4.1. It is Necessary to Start from the Essence of Serving the Real Economy and Avoid "Turning from Real to Virtual"

Judging from the causes and lessons of the current international financial crisis, all countries have realized that in order to prevent the bubble of the virtual economy, we must firmly grasp the solid foundation of the real economy. In order to effectively prevent and resolve financial risks, we must correctly understand and handle the relationship between financial innovation and the real economy. This requires that financial development should be based on serving the entity, correctly handle the relationship between finance and other industries, in order to support the real economy and guide capital to flow to the industrial field in a reasonable and orderly manner.

### 4.2. Deepen Reform of the Financial System and Improve the Efficiency of Financial Services

Reform is also a kind of innovation, which can break through the barriers of some systems and mechanisms and effectively prevent and resolve various accumulated risks and contradictions. The financial system has been gradually improved, financial productivity has been fully brought into play, and financial risks have been effectively resolved. Over the past decade, a series of landmark changes have taken place in China's financial field. On the whole, the overall strength and risk prevention ability of financial institutions have been significantly improved. However, there are still some structural contradictions and potential risks in our current financial system. Of course, in order to achieve this goal, we must properly handle the relationship between deepening reform and preventing risks, so that the market can play a decisive role to a greater extent, so that the operating efficiency of the financial system has been significantly improved.

### 4.3. The Institutional Cage Must Be Fastened So that Financial Risks are Fully Controlled

The speed of financial innovation is getting faster, new financial products are emerging in an endless stream, forms of financial behavior are becoming more and more complex, and financial risks are becoming more and more complex, leading to regulatory vacuum and regulatory constraints and other problems are becoming more and more prominent, and new requirements are put forward for the traditional regulatory system and macro-prudential management. Therefore, to achieve comprehensive supervision and strictly observe the bottom line of risk has become the top priority of current financial work. Therefore, the reform and improvement of the financial regulatory system must be accelerated to enhance the efficiency

of financial services to the real economy, so that financial risks can be comprehensively monitored. At the same time, it is necessary to tie down the cage of the system once again and set up the "firewall" to prevent it.

## 5. Conclusion

In the context of financial innovation, enterprises have countless opportunities, but they face greater challenges in terms of financial risks, including market reasons, interest rates, and the reasons for their own operations. Through the above analysis of the American subprime mortgage crisis, we further understand the relationship between financial risk and financial innovation, and clearly realize the importance of grasping the relationship between financial innovation and financial risk prevention. Therefore, we must attach great importance to the risks in the process of financial innovation activities, investigate the root causes of financial crisis, take good measures to prevent risks, and improve the ability to manage financial risks. Only in this way can financial innovation develop in the direction required by economic development and promote the sustainable and healthy development of the financial industry.

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