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Risks in China's Financial Market for Derivatives at the Post- Sub-prime Mortgage Period and the Prevention

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Abstract

Since the US sub-prime mortgage crisis, especially at the post-sub-prime mortgage crisis period, financial derivatives are always the focus of attentions. Frequently-happened astonishing events associated with financial derivatives trade trigger out people's focuses and rethinking on big risks in financial market for derivatives. This paper tries to analyze the relationship between sub-prime mortgage crisis and risks in financial market for derivatives, advances risks in China's financial market for derivatives at the post-sub-prime mortgage crisis period, and probe into the countermeasures for preventing risks of financial derivatives.

Keywords: Post-sub-prime mortgage crisis period, Financial market for derivatives, Risk prevention

1. The relationship between sub-prime mortgage crisis and risks in financial market for derivatives

1.1 Causes for risks of financial derivatives

Financial derivative, in nature, is a kind of financial contract. Its value is determined by one or more basic assets or indexes. Basic contracts include future, forward, swap, and option. Derivatives also include the structured financial tool that has one or more features of basic contract. The objective reasons for risks of financial derivatives are the liberalization of finance, the externalization of financial operations, and the modernization of financial technologies. The more important inner reasons are the problems in investment institutions, including the coordination, the cooperation, and the management. The trading subjects in financial market for derivatives include financial institutions, non-financial institutions, and residents. They participate into the financial market for derivatives for risk avoidance or investment. The diversification and complexity of trading subjects make trading subjects face different credit grades. The opacity and asymmetry of information may cause the asymmetry of credit. Meanwhile, trading subjects hold different goals. They manage to deal with risks to different degrees. Therefore, the risk of credit may happen at any time in the financial market for derivatives. Besides, the leveraged, virtual, and complex derivatives make the holders face higher market risks, operation risks, and even legal risks. These risks can cause large losses, which may make holders break the contracts. The chain effect of credit risk may hurt other trading subjects or even the whole financial market.

1.2 The relationship between sub-prime mortgage crisis and risks in financial market for derivatives

The sub-prime mortgage crisis is a crisis of derivatives. More exactly, it is a risk of over-the-counter derivatives. In recent years, lots of hedge fund investors rush into the financial market for derivatives. The large investment demand causes the decrease of price, which does not match up with the higher risk. Besides, the use of leverage enlarges the market fluctuation of this kind of product and magnifies the risks by many times. Many hedge funds adopt the "credit arbitrage" strategy. Supported by credits, hedge fudges actualize hedging by exchanging credits by means of buying sub-prime mortgage derivatives. Risks are enlarged further.

All financial rings closely connect with each other in America and even in the world. The chain effect of sub-prime mortgage crisis influences the real estate market, the mortgage loan market, and the financial market for derivatives.

The sub-prime mortgage crisis decreases market's ability of bearing risks. It popularizes in the whole credit market quickly. As a result, the credit spread rises sharply. Re- financing in market tends to be more difficult. A vicious circle comes into being. Recently, the RMB appreciation and the universal fluidity dominated by high trade balance cause the rise of domestic asset price and the possibility of bubble risks. The weak supervision over domestic financial market for derivatives may lead to a national financial crisis, similar to the sub-prime mortgage crisis. On one hand, derivatives investors share profits from sub-prime mortgages. On the other hand, they are the ultimate bearer on the risk chain.

2. The risks in China's financial market for derivatives at the post-sub-prime mortgage crisis period

Since Mar. 2009, a series events, including Dow-Jones Index falling below 7000, and worsening eastern European economy, cause new discussions about the sub-prime mortgage crisis in the world. This paper agrees that present conditions are not similar to the Asian financial crisis in 1997. So, here we adopt the "post-sub-prime mortgage crisis period" to describe present economic conditions.

2.1 Risks caused by the complicated design of financial derivatives

Many people agree that the sub-prime mortgage crisis is caused partly by complicated product design, which can satisfy market needs on one hand. On the other hand, it can cause complex pricing. Financial derivatives are mainly over-the-counter. Complicated product design creates spaces for pricing, which makes supervision more difficult. In general, transaction on exchange is regulated by the exchange. Over-the-counter transaction is non-standard and non-transparency, which is free from regulatory system. In emerging market where regulations are weak, complicated products turn into institutions' tools for robbing more profits. In addition, complicated product design enhances the information asymmetry between shareholders and corporate employees, which causes the more serious agency problem. It means higher requirements for corporate governance. Complex pricing and manipulating may increase the costs of supervision. Meanwhile, transaction directions and quantities in the financial market are unclear. As a result, the supervision is an absence.

2.2 Risks caused by financial derivatives' transaction way

Financial derivative transaction adopts the leverage way in general. Transaction amount is far larger than the delivery amount, enlarging the credit risk. Meanwhile, trans-period transaction and high market fluidity enhance the uncertainty of future asset price. Risks are greater than traditional financial product. In a speculation transaction, once the trader fails to judge the market rightly, plus the imperfect internal risk management measures, it will lead to considerable losses. In perspective of exterior environment, financial derivatives are products from financial liberalization. Its creative speed should be faster than financial market development and financial supervision improvement. The structure of financial derivatives is more complicated. It is more difficult to distinguish all financial tools clearly.

2.3 Risks caused by the invalidation of financial institutions' incentive restraint mechanism

Because financial derivatives belong to out-the-balance business, they are not displayed in banks' balance sheet. Banks merely disclose limited information. Regulatory institutions can not get sufficient and exact information about financial institutions' operations and investments in derivatives. Once problems appear, it is hard to adopt effective countermeasures in time. Because there is not a common liquidity system for financial derivatives and transactions are not transparent, the government can not know the transaction scale and position distribution of financial derivatives. Once a crisis happens, the government will not estimate the influences of crisis for a long period.

2.4 Risks caused by over-speculation and lagged-behind supervision

The government almost does not interfere with the design of financial derivatives. The government supposes transaction parties can understand the structure and the risks of financial derivatives. So, the transaction is market behavior. It is not necessary to participate in for the government. Under this circumstance, innovations of financial derivatives stray away from fundamental economic principles. Firstly, underlying products for credit derivatives betray the principle of "repayable" banks' loans. It does not emphasize on the payment in the cash flow but pay more attentions to the appreciation of mortgages. Secondly, the structure of derivatives is too complicated. Underlying products' risks tend to be hidden in designs. It betrays the principle of "informing customers about financial risks completely". Thirdly, regulatory institutions do not set limits on derivatives' leverage rates. It amplifies risks to a great degree, surpassing market participators' bearing.

3. Measures for preventing risks in China's financial market for derivatives at the post-sub-prime mortgage period

3.1 Financial derivatives' design innovation should be step by step

First of all, the structure of derivatives should be developed from simple to complex, and the risks from lower to higher. Combine the world universal mode with China's special market environment. Product innovation serves for market's general development. All designs should be demonstrated completely and follow legal regulations. Technologically, designed products can be controlled. In operation, timely supervision is necessary. In emergency, there is preparedness.

Then, it can ensure the safe and orderly development of financial market for derivatives. Secondly, in order to promote the healthy development of financial market for derivatives, we should perfect relevant laws and regulations and build a favorable legal environment on one hand. On the other hand, we should make up transaction rules and standards for financial derivatives. Educate market investors and popularize relevant specialized knowledge concerning financial derivatives. Build a transaction regulatory mechanism for financial derivatives and prevent financial risks.

3.2 Financial institutions build perfect internal control mechanism and improve the risk-management ability

Because financial derivatives have complex operations and hidden cash flow, the key for controlling derivatives' transaction risks lies in financial institutions building a perfect internal control mechanism and risk-management system. The fundamental reason for the bankruptcy of England Barings Banks is that there are serious defects in its internal control mechanism for derivatives transaction. Therefore, regulatory institutions should ask commercial banks build a perfect internal control mechanism and risk-management system, emphasizing on self-risk-management. Help, guide, and supervise financial institutions to build perfect business operation standards, risk management system, and report and information disclosure system in order to prevent credit risks, market risks, fluidity risks, operation risks, and legal risks. By this way, it can control risks of derivatives under a reasonable limit, which is in accordance with the world trend that all countries' regulatory institutions emphasize on financial institutions' self risk-management system and procedures.

3.3 Build and perfect a trinity regulatory management system including government regulation, industrial self-discipline, and exchange supervision

First of all, the top management level should understand that transactions aim at decreasing and separating risks, enlarging profitability, improving business efficiency, and deepening financial development. Build a "from macro to micro" control system properly. Regulate the type of transaction, transaction amount, and limits on principals. Select and use financial derivatives' type carefully. Secondly, strengthen the internal control and control transaction procedures strictly. Separate the operational right, the settlement right, and the regulatory right. Empower businesses clearly. Punish illegal transactions seriously. Thirdly, set special risk-management and regulatory department and record, confirm, and evaluate traders' transactions. Evaluate, estimate, and prevent financial derivatives' credit risks, market risks, fluidity risks, liquidity risks, operational risks, and legal risks in transactions. The department should report to the decision-making level directly, informing relevant market conditions and corporate transactions.

3.4 Emphasize on international cooperation of financial supervision and strengthen trans-national supervision on financial institutions

Financial globalization is equal to financial risks' globalization. The continuous fluctuation of world financial market impacts people's expects for domestic financial market, increasing domestic financial market's risks. China's financial institutions and regulatory agencies should prevent world financial risks carefully, enhance the supervision over the flow of trans-national capitals, and promote the financial opening-up steadily and orderly. In order to prevent and solve world financial risks, it is necessary to strengthen world cooperation of financial supervision. The financial supervision's world coordination and cooperation mechanism mainly includes information exchange, policy integration, crisis management, cooperation targets, and associated actions. For example, in order to control the popularization of sub-prime mortgage crisis, the Federal Reserve associates with main national central banks to invest in financial system, improving the market fluidity, and resulting in a positive adjustment of world stock market. China has already joined International Monetary Fund (IMF), World Bank, International Organization of Securities Commissions (IOSCO), and International Association of Insurance Supervisors (IAIS) and signed memorandum of understanding finance with many countries and regions, which turn into a positive basis for strengthening the world cooperation of financial supervision.

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