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The Research of the Regional Financial Risk Early-Warning Model Integrating the Regression of Lagging Factors

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Abstract

This paper make the explained variables our financial stress index consist of the synchronous variables financial systemic risk, and make the explanatory variables the macroeconomic variable, currency credit variable, asset price variable and the macroeconomic variable of correlative economic powers, then use stepwise regression method to establish the financial systemic risk best predict equation, thus set up the reasonable and practical financial systemic risk early-warning index system; besides, use the best prediction equations predicts the financial systemic risk status in 2011. The predicted results show that Chinese financial systemic risk is on the rise in the first three quarters and higher than the peak of 2008; financial systemic risk start to decline since the fourth quarter.

Keywords: Financial systemic risk; the optimum forecast equation; early-warning index system.

1. Introduction.

Financial security is the core of the national economic security, and ensuring financial security that is the core of financial risk prevention and control. Financial risk early-warning mainly analyses and forecasts the possibility of the financial assets loss and the damage of the financial system in the financial operation process.

But what the financial risk really terrible is that it not only influences the current, it will also produce the subsequent effect in the after-operation. And the current domestic and foreign research seldom considers that these factors will have a lagging effect in financial risk.

So, based on the research about the factors which have the hysteresis effect in financial risk both at home and abroad, this paper restudies the issue, ensure the hysteresis factors which have significant influence in financial risk. This paper aims to put forward a kind of early-warning model considering the hysteresis factors, raise the connection between the financial risk and hysteresis factors, make the model researched from the analysis of hysteresis factors, and improve the accuracy of forecasting the financial risk.

2. Regional financial risk factors

2.1 Regional financial risk factors analysis.

Regional financial risk that not only influenced by the external factors, but also be restricted by specific economic environments and market structure in this area. Imbalance development in regional economy and finance will make the financial risk having a strong regional characteristic. Otherwise, the resistance ability to local risk of regional finance is weaker; the local financial turmoil could trigger regional financial crisis and even national financial crisis.

However, financial risk factors operate with an obvious lag. Regional financial crisis would produce a lagging effect of impact and influence to the whole financial system and the substantial economy.

So the article chooses the factors which produce a lagging effect to the regional financial to have index analysis, and based on this to construct a regional financial risk early-warning model integrating lagging factors' return.

2.2 Regional financial risk factors' index design.

Regional financial crisis exists diffusivity, the regional financial crisis would cause wholesale financial crisis, even the global financial crisis. This financial crisis caused by America's subprime crisis evolves from part to entire word, transmits from the developed countries to the emerging market countries and developing countries, and spreads from the financial territory to the substantial economy territory.

Economic growth has enormous influence to the financial crisis, and we often use economic monetized degree to measure a country's economic development level.

According to our country's commonly used method at present, namely using the method M2 (generalized currency)/GDP to show the economic monetized index. We could calculation the result as following:

Table 1. Chinese economic monetized index

Year	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	
Economic Monetized Index(96)	36.1	40.8	46.0	48.9	51.8	57.8	54.5	61.4	64.1	62.2	
Economic Currency Growth (%)	13.1	12.7	6.3	5.9	11.6	-5.7	12.7	4.4	-3.0		
Year	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Economic Monetized Index(96)	64.6	82.5	89.5	95.4	100.7	100.4	103.9	112.1	122.2	132.1	146.1
Economic Currency Growth (%)	3.9	27.7	8.5	6.6	5.6	-0.3	3.5	7.9	9.0	8.1	10.6