

Dynamic analysis of stock market among USA, China and Taiwan before and after subprime mortgage crisis

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ABSTRACT

This article investigates before and after the subprime mortgage crisis, the interrelationships of stock market among United States (US), Chinese (Shanghai and Shenzhen), and the Taiwan. Using Granger causality test, cointegration, vector error correction mode (VECM), and impulse response function to analyze this issue, we get the results as following : (1) Subprime mortgage crisis on the other three countries before the U.S. stock market has a leading position in the stock market, but after the sub-prime turmoil, the United States and the other three were to change its lead lag relationship.(2)All of these countries regardless of the subprime mortgage crisis before and after the national stock markets are long cointegration trends. (3)Using the vector error correction model analysis showed that only in Taiwan by the impact of the subprime mortgage crisis the most significant change. Before the Subprime mortgage crisis with its own former one and the former two by the United States ,the former two and the former one of Shenzhen of the negative impact, but after Subprime mortgage crisis of the whole stock market affected Taiwan. (4) As for the analysis of impulse response, changing one standard deviation of each variable has the largest impulse at the first period, and then gradually decreases, and the U.S. stock market movements will affect in Shanghai, Shenzhen and Taiwan, and the Taiwan stock market by storm by the United States prior to the impact of higher level, after the storm to a greater extent by the Shanghai stock market shocks.

Keywords : subprime mortgage crisis、 granger causality test、 cointegration、 vector error correction model、 impulse response function

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