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MACROECONOMIC PERSPECTIVE ON CONSTRUCTING FINANCIAL VULNERABILITY INDICATOR IN CHINA

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Abstract. This paper attempts to develop a financial vulnerability indicator for China as a barometer for the state of financial vulnerability in the Chinese financial market, possibly for real-time application. Twelve variables from different sectors are utilised to extract a common vulnerability component using a dynamic approximate factor model. Through the implementation of a Markov-switching Bayesian vector autoregression (MSBVAR) model, the empirical results indicate that a high-vulnerability episode is associated with substantially lower economic activity, but a low-vulnerability episode does not incur substantial changes in economic activity. Notably, the constructed indicator can serve as a real-time early warning system to signify vulnerabilities in the Chinese financial market.

Keywords: financial vulnerability indicator, financial crises, early warning system, dynamic factor model, Markov-switching model, China.

JEL Classification: C11, E17, G01, G17.

Introduction

Since 1995, economic development in China has been blessed with a remarkable acceleration of double-digit growth; except for the slowdown in 2014 due to the global economic meltdown, the average has been annual growth of 16 percent. Because of its evolution into an open economy, China was only marginally affected by the Asian financial crisis in 1997, the United States (US) dotcom bubble burst in 2001 and the hard hit from the subprime mortgage crisis in 2008. The sustainability of such rapid growth before the crisis was obstructed due to capital flight and the sudden collapse of external markets followed by the threat of deflationary pressure towards the end of 2008 (Yu, 2010).

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The economic recovery from the global financial crisis was hastened following the expansionary fiscal and monetary policy responses by the Chinese government coupled with a shift to property investment as an attractive destination for the high-domestic-saving nation of China. The removal of credit restrictions and relaxed property lending led to a sudden upsurge in real estate investment, averaging approximately a 39 percent growth rate in real estate investment value from 2007 to 2014. As a result of demand-led property price hikes, a property bubble began to inflate in some major cities, accompanied by a worsening in average credit quality, which led to fears of vulnerability to an asset price bubble, as Japan experienced in the 1980s (International Monetary Fund [IMF], 2010). After years of property booming, the low commodity demand from China triggered the global economic meltdown in 2013 through stock market and commodity bubbles. Nevertheless, the Chinese economy sailed through the meltdown with its strong domestic consumption, particularly in real estate investment.

China's economic growth dependence on exports and investment, particularly in the property market, has elevated its financial vulnerabilities from possible external shocks like the global financial crisis and global economic meltdown. Both China's President Hu Jintao and its Premier Wen Jiabao also raised concerns about the unsustainability of China's rapid economic growth due to the high contribution of exports and investment to the gross domestic product (GDP) but with a low share of domestic consumption. To tackle such phenomena, the government of China is pushing an effort to shift to consumption-driven economic growth in rebalancing the country's economy. The transition from debt-financed investment to consumption would ensure sustainable economic growth in an environment of much-reduced vulnerability (IMF, 2018).

In the midst of financial reform and transition in policy focus, China faces potential vulnerabilities common to an evolving financial system. Despite the implementation of cooling measures, property prices in China have remained unsustainable while excessive credit expansion still exists, hitting an all-time high credit-to-GDP ratio of 256.3 percent in 2017 (IMF, 2018). A report by the International Monetary Fund (IMF, 2016) served as a warning regarding China's high credit expansion leading to amplified economic and financial risks. Lying beneath the credit expansion due to financial integration, the proliferation of shadow credit products, reflected by the volume-to-GDP ratio hitting 58 percent in 2015, may also represent substantial vulnerabilities to the financial system as half of the products contain significantly elevated default risk and potentially less manageable spill-over effects (IMF, 2016). On top of that, challenges and vulnerabilities remain a threat to financial and economic sustainability in China, posed by the increasing imbalances stemming from the current economic growth path.

Pertaining to these issues, Cecchetti, Mohanty and Zampolli (2011) claimed that despite the huge contribution of debt to economic development, debt could also bring about an economic slump. Historically, credit crunches and asset price busts represent more severe downturns, typically about 10 times and 15 times, respectively, as compared to other downturns (Claessens & Kose, 2013). Credit crunches and asset price busts would affect the real economy through further credit impairments and a weak outlook on large price dislocations by financial institutions, bringing about a more severe contraction in real economic activity.