Monetary Policy Instruments and Bank Risks in China

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ABSTRACT
The authors use a panel data regression model to examine the effects of main monetary policy instruments on commercial bank risks in China from 1998 to 2011. The interest rate has a positive effect on bank risk while the interest rate margin, the reserve requirement ratio and open market operation have a negative effect. Among the three monetary policy instruments, the reserve requirement ratio has the greatest effect on bank risk, the interest rate (the interest rate margin) the second largest and the open market operation the weakest. Their findings provide guidance to the monetary authority and regulatory authorities in monetary policy and banking regulation in China.

Keywords: Bank Risks, Interest Rate, Interest Rate Margin, Monetary Policy, Open Market Operation, Reserve Requirement Ratio

1. INTRODUCTION
After the burst of the dotcom bubble, many central banks have adopted a low interest rate regime over an extended period to ward off recession. Persistently low real interest rates can fueled a boom in asset prices and securitized credit and lead financial institutions to take on increasing risk (Nicolò et al., 2010). It is likely that banks’ risks will be increased. Although it is difficult to state that monetary policy has been the main cause of the 2008 international financial crisis, it could have contributed to its build-up. Thus, how monetary policy affects bank risks has become a hot issue and a focal point of the debate in both academic circle and practice circle, especially after the 2008 international financial crisis. (Ma & Sun, 2010; Chang, 2010).

The theoretical research in the literature suggests several channels that monetary policy (mainly interest rate) affects bank risks. First, interest rate policy of the central bank affects the bank’s risks through asset valuation, business income, and cash flows, and the interest margin (Adrian & Shin, 2009; Borio & Zhu, 2008). Second, monetary policy affects bank risks through portfolio reallocation and risk transfer. As a result, the risk of the bank’s investment portfolio and asset pricing will be
affected. More importantly, the effect of monetary policy changes on bank risks may not be uniform across time, banking systems, or individual banks (Nicolò et al., 2010).

The empirical research shows some conflicting findings. First, loose monetary policy leads to an increase in bank risk and tight monetary policy can prevent the accumulation of bank risk (Angela & Peydró, 2010; Ioannidou et al., 2009; Delis & Kouretas, 2011; Yu & He, 2011), while others (Lucchetta, 2007; Tan & Su, 2011) indicate that loose monetary policy may reduce bank risks and tight monetary policy may increase bank risks. Interestingly, Thakor (1996), Jiménez et al. (2009) and Martha et al. (2010) document an uncertain effect of monetary policy on bank risks. The interest rate has a smaller impact on the risky assets of the banks with more capital, but a bigger effect on the banks with more business outside statement. Different banks can make the heterogeneous reaction on monetary policy shocks, and banks with high capital adequacy rate and income diversification perform more radical in taking risk.

In China, the objective of the monetary policy is to maintain the stability of the value of the currency and thereby promote economic growth. To achieve the objective, China utilizes synthetically and extensively the administrative monetary policy instrument (mainly reserve requirement ratio) and market-oriented monetary policy instruments (mainly the interest rate and open market operation). The time series of reserve requirement ratio, interest rate and open market operation are reported in Table 1. During 1998-2011, the People’s Bank of China (China’s Central Bank) had raised or decreased the 1-year benchmark deposit rate for twenty-two times continually with fifteen times since 2007 (six times in 2007, four times in 2008, two times in 2010 and three times in 2011). At the end of 2011, the 1-year benchmark deposit rate is 3.50 percent. RMB open market operation resumed trading on May 26, 1998, and expanded the scale gradually. In particular, since 2006, turnover of trading of T-Bond in total (spot trading and repo. trading included) had been lifted continually from 1063.35 billion Yuan in 2006 to 20084.133 billion Yuan in 2011 (see Table 1). Because the interest rate is not fully market-oriented in China and the effects of the open market operations are partly constrained by weaker purchasing willingness on the part of commercial banks, the PBC increased the use of the reserve requirement ratio as a policy instrument. From 1998 to 2011, the People’s Bank of China had adjusted the reserve requirement ratio for thirty-nine times, which is rarely seen in the world and brought it from 8.0 percent in March 1998 to 21.0 percent for the large financial institutions and 17.5 percent for small and medium-sized financial institutions in December 2011. Especially, since 2007, the reserve requirement ratio had been changed frequently for thirty-two times with ten times in 2007, nine times in 2008, six times in 2010 and seven times in 2011. The above three instruments have played a significant role for managing liquidity, to facilitate efforts to normalize money and credit growth, and to handle inflationary expectations, which contributes to achieve the stable price level and economic growth.

As for China’s stability of banking industry, the financial system is bank-based in China and the Chinese commercial banks directly affect financial stability of the whole economy. Though the financial stability is not included in the objective of China’s monetary policy, the People’s Bank of China attaches much importance to financial stability in practice and China’s banking industry is in good condition. Since July 2003, the People’s Bank of China has carried out the self-assessment on China’s financial stability and released China Financial Stability Report. In August 2009, China officially started the Financial Sector Assessment Program (FSAP), which was jointly launched by the IMF and World Bank in May 1999. On April 19, 2011, Dagong Global Credit Rating Co. Ltd. released the report-2011 Credit Risk Guideline for Chinese Banking Industry that gave a latest evaluation on the major banks’ credit risk in China and a “stable” prospect to the basic situations of the credit of China’s banking industry. On May 25, 2011, Standard
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