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Monetary policy, cash holding and corporate investment: Evidence from China

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ABSTRACT

This paper uses 13,766 firm-year observations between 2003 and 2013 from China to investigate the effects of monetary policy on corporate investment and the mitigating effects of cash holding. We find that tightening monetary policy reduces corporate investment while cash holdings mitigate such adverse effects. The cash mitigating role is especially significant for financially constrained firms, non-state-owned enterprises (non-SOEs) and those firms located in a less developed financial market. Cash holding also improves investment efficiency when monetary policy is tightening and tightening monetary policy enhances the 'cash-cash flow' sensitivity. Our empirical evidence calls for a critical evaluation on the monetary policies implemented in China which are less effective for state-owned enterprises. It also calls for a necessity for local government to further develop regional financial markets to protect vulnerable businesses, such as non-SOEs and financially constrained firms, from external shocks in order to maintain their sustainable growth and competitive advantages.

1. Introduction

Over the last decades, the monetary policies implemented by the central bank of China have gained particular attention globally and the adjustment of such policies has become more frequent due to the appreciation pressures on Chinese currency RMB and the pressure of the economic downturn. It has also been acknowledged that monetary policies, such as M2 growth rate, possess a strong capability of predicting economic growth (Higgins, Zha, & Zhong, 2016). Indeed, recent investigations on monetary policy and corporate investment in China have paid more attention to the role played by monetary policies in economic stabilization during financial crisis (Chang, Liu, & Spiegel, 2015), economic expansion (Shen, Firth, & Poon, 2015) and stimulus (e.g. Liu, Pan, & Tian, 2016). However, little is known about how businesses make investment decisions with tightening monetary policies by considering the heterogeneity of firm level (e.g. state-ownership) and regional level factors (e.g. regional financial market).

As one of the most important macroeconomic policies, monetary policies have been found to place a significant impact on corporate lending (Kashyap & Stein, 1993) and corporate investment (Morck, Yavuz, & Yeung, 2013). With an institutional background of interest rate marketization and investment-motivated economic growth in China (Song, Storesletten, & Zilibotti, 2011), the impacts of monetary policies on corporate finance become prominent (Li & Liu, 2017). Existing literature has shown clear evidence that central bank employs a set of instruments (e.g. M2 growth rate) to adjust the costs of corporate loans and bank credit supply

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(He & Wang, 2012) in order to manage corporate investment (Chen, Waggoner, Higgins, & Zha, 2016). For example, with tightening monetary policies, businesses would reduce their investment due to stronger financial constraints they face when banks reduce their credit supply (Morck et al., 2013) and they rely more heavily on internal sources of capital, such as cash holding, to finance investment (Allen, Qian, & Qian, 2005). Therefore, it is likely that the effectiveness of tightening monetary policies on corporate investment could be mitigated by corporate cash holding.

This paper aims to investigate, with tightening monetary policies, if corporate cash holding could mitigate the adverse effects of money tightening on corporate investment. In addition, we explicitly control for the heterogeneity of regional financial development and corporate ownership structure and examine if they make any difference on the potential mitigating effects of cash holding on corporate investment. This is particularly important in a Chinese setting for two reasons. On one hand, as an emerging economy, China is experiencing an economic transition where the degree of financial development is relatively low, compared with that in developed economies, and varies from region to region. Therefore, the sensitivities of commercial banks to monetary policy changes may vary on a regional basis (Carlino & DeFina, 1998). On the other hand, due to the credit discrimination in an economic transition period (Brandt & Li, 2003), state-owned enterprises (SOEs) may have a superior access to bank credits because government may implicitly and explicitly guarantee bank loans issued to SOEs even their average productivity has been found to be lower than that of private firms (Song et al., 2011). Therefore, privately-owned enterprises could be more sensitive to business cycle shocks than SOEs (Chang, Liu, Spiegel, & Zhang, 2017) and Dickinson and Liu (2007) have shown that the variety of the degree of financial development and ownership structure could drive the heterogeneity of the impacts of monetary policies on individual business.

In specific, this paper aims to answer three questions as (1) how monetary policies affect corporate investment in China, (2) whether corporate cash holding mitigates the effects of monetary policy on corporate investment decisions, and (3) how such effects vary over firms' and regional characteristics, such as financial constraints, state ownership and financial development. We also carry out additional analysis to answer three highly relevant and important questions. (1) Do financially constrained firms and non-SOEs voluntarily hold more cash when monetary policies are tightened? (2) What are the effects of cash holding on investment smoothing with tight monetary policies? (3) Would investment be more efficient when monetary policies become tightening? Answering these questions would enable us to better capture how businesses react to public policies by adjusting their financing and investment decisions.

These research questions are particularly important for China for several reasons. First, during the period of economic transformation, monetary policy making is especially important for China where economic growth is investment driven (Song et al., 2011) and slowing down. Second, data from World Development Indicators shows that the fixed asset investment is experiencing a declining growth rate recently in China and the deviation of M2 growth rate from GDP growth has increased to 11% between 1982 and 2010. Therefore, an investigation on the effects of monetary policies on corporate investment would enable policy makers to better govern the volatility of M2 growth rates and economic growth. Finally, due to the imperfections in Chinese financial markets, Chinese companies, especially those located in less financially developed regions and non-state owned enterprises (non-SOEs), may have limited access to external finance and therefore, cash would play an important role as an alternative internal source of finance for corporate investment.

Our results indicate that the tightening of monetary policies in China does reduce corporate investments and the effectiveness of policy implementation is mitigated by corporate cash holdings. We also show that, with tightening monetary policies, financially constrained firms and those private firms (non-SOEs) would have to rely heavily on either internal cash holding or the availability of external finance from a well-developed financial market to sustain their investment. Such evidence reinforces the argument that monetary policy transmission would have heterogeneous impacts on real economy. Therefore, overall, this paper contributes to relevant economic and finance research on corporate investment in China by offering unique empirical evidence on the variation of monetary policy effects on corporate investment, where “the consequences of bank loan supply shock on corporate financial policies across different groups of firms are unknown” (Shen et al., 2015, p.5).

Our study contributes to the extant literature in four ways. First, complementary to existing literature at a macroeconomic level (e.g. Chang et al., 2015; Chen, Ren, & Zha, 2017), the empirical evidence provided in this paper deepens our understanding on the impacts monetary policies on corporate investment decision-making at a microeconomic level. Second, existing literature has shown the effects of tightening monetary policy on corporate investment by reducing credit supply (Morck et al., 2013) and constraining corporate finance (Huang, Song, & Wang, 2012). This paper offers novel and additional evidence on the role played by cash holding to mitigating the adverse effects of monetary tightening by considering the variation at both firm (e.g. state-ownership) and regional level (e.g. regional financial development). Such evidence provides stronger implications to Chinese businesses who rely more heavily on internal retained profits to finance investment in an economic transition period (Allen et al., 2005). Third, recent studies have shown that the impacts of monetary policies on economies have become reduced because of the development of shadow banking market (Chen et al., 2017). To complement to existing studies on external determining factors, this paper focuses on the role played by corporate internal sources of finance in responding to monetary policy changes. Finally, this paper investigates the mechanisms and consequences (e.g. investment efficiency) of how cash holding mitigates the effects of monetary tightening. This is an addition to the recent development in China economic research on how one corporate finance decision making affects another.

The remainder of the paper is structured as follows. Section 2 provides institutional background information in China and reviews relevant literature and develops hypotheses. Section 3 describes the data and methodology. We report the empirical results in Section 4 and conclude in Section 5.