The Puzzle of the "Vicious Circle" Mechanism of the Risk-taking Channel of Monetary Policy Under Micro-perspective

Xue Li¹,a,*, Ruo-Xi ZHANG¹,b, Yi-Fan SHI¹,c

¹School of Finance, Academic of Financial Risk Research, Capital University of Economics and Business, 121 Zhangjialukou, Fengtai District, Beijing, China.

a snowlovehome@163.com, b zrxcissy@hotmail.com, c 15661510912@163.com

*Corresponding author

Keywords: "vicious circle" mechanism; risk-taking; monetary policy; financial stability.

Abstract. In view of the fact that monetary policy is related to financial stability, re-examinations and further studies on the risk-taking transmission channel of monetary policy has important practical significance. The marginal contributions of this paper are as follows: first, clarifying the risk effects of loose monetary policy in different micro sectors respectively, and clearing the differences of the micro sectors, which lie in the bottom of transmission channels. Second, based on the exposition of the "vicious circle" mechanism, putting forward purposeful reflection measures that decision-making department should take “appropriate loose” and “structural easing” measures. Third, based on the internal relationship between monetary policy and financial stability, discussing the boundary problem about the effects of monetary policy and macro-prudential supervision policy. On the basis of these, this paper proposes some problems that formulating monetary policy should take care.

Introduction

Since formally proposing the “risk-taking transmission channel” concept, scholars have reached a consensus on some issues that macro monetary policy will directly affect the risk-taking behavior of micro subjects, then increasing the risk exposure of the entire economic system. Further study shows that the risk conduction effects of monetary policy will not only have a role in banking sectors, but spread among non-financial corporate sectors. This proves that there seems to be an inherent relationship between the loose monetary environment and the micro subject's risk taking. On the background of factual evidences, some scholars in the academic circles blame the eruption of financial crisis on the low interest rate monetary policy that the Federal Reserve has implemented for a long time, and believe that low interest rate finally stimulates the vicious expansion of asset securitization products and the huge bubble of asset prices, which makes the micro subjects take great risk for pursuing the benefits. However the problem can’t stop here, since "open type" monetary policy is the first choice responding to the global economic downturn, and undoubtedly is the priority among priorities of the policy combination, therefore it is not the time to continue to attack the "adverse effects" of monetary policy, we should analyze the possible “side effect” in the policy digestion period, and find balanced relationship and be careful of the trap of “vicious cycle”. In view of the fact that monetary policy is related to financial stability, re-examinations and further studies on the risk-taking transmission channel of monetary policy have important practical significance and policy connotation. First of all, China is now in an important period of financial reform and state-owned enterprise reform, and requires urgent transformation of economic structure, and the risk accumulations caused by the policy deserve high attentions. By systematically analyzing and depicting the change of the risk taking behavior of the micro subject after the policy shock, summing up the relevant experience and lessons, then trying to provide some ideas for China's future policy. Furthermore, analyzing whether the United States and other countries incorporate financial stability into policy objectives or not, and how to define the boundary between monetary policy and macro-prudential supervision policy, which has direct revelation for China.
Following this kind of logic, the marginal contributions of this paper are as follows: first, clarifying the risk effects of loose monetary policy in different micro sectors respectively, and clearing the differences of the micro sectors, which lie in the bottom of transmission channels. Second, based on the exposition of the "vicious circle" mechanism, putting forward purposeful reflection measures that decision-making department should take “appropriate loose” and “structural easing” measures. Third, based on the internal relationship between monetary policy and financial stability, discussing the boundary problem about the effects of monetary policy and macro-prudential supervision policy.

**The Transmission Difference of Risk Taking Channel under Micro-Perspective**

**The Heterogeneity of Mechanism of Action between Banks and Enterprises**

Banks and enterprises, the two important micro subjects, have differences in the process of risk taking transmission, the most main performance is that: the banking industry has its special characteristics, especially the structural characteristics will directly or indirectly affect the bank's risk tolerance. After proposing the problem whether increasing fierce banking competition takes a shock to financial stability, there are two opposite views in academic circles, and launch a heated discussion on the "competition-stability" hypothesis and the "competition-frailty" hypothesis. The "competition-frailty" hypothesis holds that lower interest rates prompt banking to compete fiercely for maintaining revenues, and this competition erodes bank franchise value, also the reduction in marginal revenue prompt banks to reduce the motives for prudent behavior. Many scholars support this view using data from different countries, different measurement methods and evidence, for instance, they find evidence both in the developed countries (Turk-Ariss, 2010: Leroy, 2014: Kick and Prietor,2014) and developing countries (Levy-Yeyati and Micco, 2007; Agoraki et al., 2011). However, the "competition-stability" hypothesis challenges above view, and argues that if the fierce competition in the banking encourages banks to lend money to borrowers at lower interest rates, then the low cost of financing will restrain the demotivation of borrowers turn to high risk projects. Especially when retorting that the franchise value is weakened, the bank will use more equity capital or other technology to prevent the risk of franchise value eroded by the high-risk loan. Xuelan, Zhang and Dexu He (2012), Soedarmono et al. (2013) all gave relevant evidences. But up till now, there is no definitive conclusion about the smokeless academic debate. And the efforts of the opposing sides do not seem to focus on the theory of the problem itself, but on the continuous revision in the empirical test.

The special structural characteristic of banking has impact on transmission channel, and there will be some scholars pointing out that, when rising to the meso level, in which each micro enterprise belongs to the major industries, the different characteristics of each industry will also make the degree or direction of the conduction effect change, as Yurong, Hu et al. (2014) preliminarily studied the difference of risk undertaking of enterprises among major industries in China, and the refinement has been the progress in this field. The research shows that when the monetary policy stance is tightening, the biggest reduction of risk taking level lies in information technology industry, wholesale and retail trade, communication and cultural industries; the smaller decline lies in farming, forestry, animal husbandry and fishery department, manufacturing industry, construction industry, transportation and warehousing industry, realty industry and social service industry; but extractive industries and the production and supply of electricity gas and water will increase their risk-taking level. There is obvious asymmetry among different industries, which can be taken as the second “difference” between banks’ and enterprises’ action mechanism.

**“Vicious Cycle” of Monetary Policy**

Excavating from a deeper level, the risk transmission mechanism between two sectors is also different. Taking bank as an example, loose monetary policy doesn’t have directly impact on bank’s risk tolerance, but is indirectly subject to enterprises’ risk behavior by special identity of bank that serving as intermediary agency. When the risk taking level affected by loose monetary policy is rising, the increasing risk exposure will increase the high probability of debt default. Under the circumstance of indirect financing, which mainly includes banking lending, the increasing risk exposure will make
banking be unable to get paid in time, while increasing bad debts will further impel the banking take greater risks for pursuing benefits and compensating loss, which sub operation mechanism of banking risk taking mechanism play a role in here, the close implication between two sectors make the risk transmission of loose monetary policy show superimposed effects. As will be readily seen, compared to single channel of enterprise sector, dual channels of banking expose greater real risk and potential risk, it could be taken as the third difference between banks’ and enterprises’ action mechanism, meanwhile, it reflects the effect mechanism of “vicious cycle” of monetary policy (see Figure 1).

As we can see in Fig. 1, we can find the dilemma of loose monetary policy in the post-crisis era. Interpreting from the policy connotation, monetary policy to boost the economy is related to national financial stability. Since traditional monetary policy transmission channel devalues the financial intermediaries' risk perception and preference, and deviates from the goal that monetary stability should stay in step with financial stability, therefore we should re-examine monetary policy transmission channel from the behavioral perspective, on the basis of focusing on credit quantity expansion, we can’t ignore the advantages and disadvantages of credit quality, then avoid bigger trouble which ignited by local imbalance of total quantity regulation. At present, our banking’s NPL ratio published by the authority doesn’t trigger banking crisis, but there is no doubt that global banking has enter the large adjustment period, the lag effect of monetary policy begins to appear, and it is inevitable that putting monetary policy into the framework of macro prudential management. As for monetary policy maker and supervision department, they are supposed to highlight the timely reflection of market participants for the change of monetary policy and impacts on financial stability, pay attention to mutual cooperation and coordination in the process of policy making, avoid one-way conversation and mutual shuffle, only in this way can monetary policy partly decrease the adverse effect, and monetary policy coordinated with fiscal policy can play a huge role in regulating the economy.

Above analyses of differences show that risk-undertaking channel of monetary policy is different from traditional transmission channel. Owing to the reading of “vicious cycle” mechanism, we realize that the proposition of monetary policy risk undertaking channel hits current financial supervision mode and supervisory system. Crisis eruption offered an opportunity for global economies to re-examine their own financial supervision system. Historical experience proved that insufficient and lagged supervision are largely the main reason of crisis eruption. Macro prudential supervision is in the works, although setting up the framework of macro prudential supervision is in order to
compensate the shortage of monetary policy for financial stability, conflicts between macro prudential supervision and monetary policy are unavoidable. To this day, the reasonable solutions given by academic circle are as follow: it is crucial to clear and clarify the mechanism of risk-taking effect, and then talking the issue of coordination mechanism between monetary policy and macro prudential policy, then providing a solid theoretical support for the establishment of counter-cyclical regulatory framework, also providing a rational basis of exercise the macro-prudential function for central banks. Yong, Ma (2013) pointed out that monetary policy and macro-prudential management policy respectively have their own operating space and policy instrument, and the relationship between them is not simply a kind of substitution, successful macro-prudential supervision could ensure the smooth conduction of monetary policy transmission channels by reducing risks in the financial system. Unfortunately, the discussion on the boundary problem about the effects of monetary policy and macro-prudential supervision policy is still in its infancy. The following section will further research the boundary problem about the effects of monetary policy and macro-prudential supervision policy, gasping the opportunity of the study of relationship between monetary policy and financial stability.

Should the Goal of Financial Stability Be Added into Monetary Policy Framework?

Challenges from Monetary Policy to Regulator

Financial innovation and supervision are always two sides of a coin. Facing economic downturn, national authorities try their best to create and integrate a variety of new monetary policy tools to rescue the market and maintain growth. It is hard to evaluate the huge potential risks behind. For no matter what type of regulatory system and authorities, unprecedented challenges are there. The explosion of crises provides opportunities for the global economy to re-examine financial regulation institution. The rapid development of financial innovation is bound to drive changes of regulatory techniques. Historical experience has proved that lack of supervision and delay are main reasons for crises. Apart from lack of risk estimation, incompetence of micro-prudential supervision is also accountable. The proposal of monetary policy risk-taking channel brings shocks to current financial regulatory and supervisory system. Macro-prudential supervision is ready to come out. Although the establishment of macro-prudential regulatory policy framework is designed to make up for deficiencies in maintaining financial stability, it cannot always escape the conflict with monetary policy. To solve the coordination problem of monetary policy and macro-prudential supervision, reasonable thoughts agreed by academia are: first to clearly comb risk-taking channels, second to solve coordination mechanism between monetary policy and macro-prudential policies. This could provide a solid theoretical support for the establishment of counter-cyclical regulatory institutional framework and allow central banks to carry out macro-prudential functions. Improvement of financial macro-prudential policy framework requires us to consider the relationship between macro-prudential regulation and other policies. Unfortunately, discussion is still on the border between macro-prudential supervision and monetary policy.

In addition, regulators in China are People's Bank of China, China Banking Regulatory Commission, China Securities Regulatory Commission and China Insurance Regulatory Commission. Supervision and management on corporate risk-taking behavior is still defective. China has yet to establish departments or mechanisms to estimate and supervise corporate risk-taking and supervision level. But it does not mean that the problem is not serious. Sustained economic downturn forces the monetary authorities to conduct low interest rates policy. However, global manufacturing industry did not turn well. Instead, enterprises are encouraged to take risks unduly, which is detrimental to long-term stability. If administrative departments are not set up specifically for enterprise risk monitoring, enterprises could take the initiative to assess risk taking capability and establish corporate risk tolerance index system.

“Vicious Cycle” of Monetary Policy

Crisis exposed the traditional goal of price stability is difficult to take stability of the financial system into account. Currently, negative impacts caused by hidden structural imbalance are far beyond our current expectations. Long-term low interest rate becomes booster for financial instability unwittingly.
As Goodfriend and McCallum (2007) emphasized, there are some flaws in traditional monetary policy, and price stability cannot indirectly lead to financial system stability. Issuing (2003) also pointed out that low and stable inflation will cause more fragile financial system. Monetary stability may not necessarily result in financial stability. It is far from enough for central banks to only focus on price movements. They should pay attention to the role of monetary policy to maintain financial stability. So a question arises: should financial stability be added as a goal of monetary policy? Mainstream view is that basic tools of monetary policy is effective on preventing systemic risk. There are studies on the way to strengthen the implementation of monetary policy and financial stability, as well as coordination between the two. For example, the Fed director Tarullo (2014) pointed out that full consideration of financial stability does not mean other tasks for monetary policy. While policymakers did not discover the devastating effects of real estate bubble burst prior to the crisis, but the Fed established a more centralized organizational structure to testing financial stability afterwards. Claeys and Darvas (2015) clearly stated that there will be a thorny problem if monetary policy aims for financial stability. Counter-cyclical monetary policy may not have the desired effect of financial imbalances. For example, tightened monetary policy may curb economic vitality, but also bring about active shadow banks. So the interest rate tool is powerless when used to achieve both goals of financial stability and price, especially when the business cycle and financial cycles are not synchronized.

Some scholars believe that modern central banks undertake dual functions of monetary stability and financial stability. Fed Vice Chairman Ferguson (2003) adhere that financial stability is an inherent task of the central bank. The use of effective supervision, combined with various monetary policy tools, minimizes the negative impact the financial instability on the real economy.

To sum up, to step out of the woods between monetary policy and financial stability, there is a long economic recovery period during the post-crisis era. Easing monetary policy may plant seeds for the next eruption of financial crisis. Although there are doubts on the goal of financial stability, central banks have strengthened the defense against financial risks. The financial stability consideration could promote transformation and development of traditional monetary policy frameworks.

**The Border between Monetary and Macro-Prudential Policies: Own Duties or Cooperation**

Theorists have recognized that monetary policy will have an impact on the effectiveness of prudential regulatory policies through risk-taking channels, while capital regulation policy will in turn impact on the implementation of monetary policy. According to Tinbergen principle, macro-prudential regulation can amend financial imbalances on the process of monetary policy implementation. It is supplement to price stability. The ultimate goal of financial stability closely links monetary policy and macro-prudential policies. Thereby raised a key question: what are the respective roles of monetary policy and macro-prudential policy in their own field, and how to coordinate the two?

Fed Chairman Yellen put forward her own views in a speech in 2014. She believes that it is necessary to improve the focus on financial stability. But from the perspective of costs it will bring high potential costs, so financial stability is not a core element of monetary policy. About which macro-prudential tool is most effective, she pointed out that it is important to distinguish the tool to respond to financial reverse development and the tools to suppress excessive financial development. For example, financial institutions are required to hold adequate capital buffers for unexpected losses; margin trading and central clearing are for derivatives trading; additional capital constraint is conducted for large and systemically important financial institutions. In particular, she believes there are three basic principles to promote a coordinated monetary policy and macro-prudential policy:

1. Regulators should be committed to developing macro-prudential policies to enhance financial stability, thereby monetary policy could focus on price stability and full employment objectives.

---

(2) The most prominent limitation of macro-prudential is that the risky events free from supervision could not be monitored timely. So there is need to adjust monetary policy regularly to limit risk proliferation.

(3) Monetary authorities need to promptly communicate with the public about weigh of risk in monetary policy-making practices.

Tarullo (2014) also expressed his views on pro-cyclical systemic risk. He believes that change of policy from time to time can resolve certain problems caused by accumulation of credit. In short, Tarullo thinks that coping with systemic risk is inseparable from monetary policy.

Further Thinking

In academic field, research on two-policy coordination is scarce. DSGE models with financial frictions become the focus of discussion. Beau et al. (2011), based on the DSGE model, clarified that monetary policy and macro-prudential policy were pegged to price and credit cyclical fluctuations, respectively. Angelini et al. (2011) added banking institutions in DSGE model, and found macro-prudential policy is not prominent in steady period. It easily conflicts with monetary policy. Chinese scholars believed that the way of coordination depends on the type of economic shock, and capital adequacy level and the macroeconomic environment should also be taken into account. Fang et al. (2012) thought that when inflation and systemic risk are moderate, monetary policy and macro-prudential policy can only remain moderate. When inflation is moderate but systemic risk is too high, macro-prudential policy is mainly taken, and monetary policy vice versa. When there are both high inflation and high risk or both deflation and high risk, bank’s capital adequacy ratio should be considered. When the ratio is below or above a certain threshold, different combinations of policy instruments are implemented to realize coordination of total volume control and prevention of financial risks.

Acknowledgement

This research was financially supported by National Social Science Foundation of China (Grant No. 16CJL016). 1 Schwartz (1988) showed that monetary policy to maintain price stability can not only reduce the probability of financial crises, but also reduce the severity of financial instability.1 From a speech on 25 Feb. 2014. http://news.hexun.com/2014-04-17/164025071.html

References