China Economic Review 26 (2013) 56–74

Contents lists available at ScienceDirect

China Economic Review

Does monetary policy matter in China? A narrative approach

Rongrong SUN *,[1]

Schumpeter School of Business and Economics, University of Wuppertal, Gaussstr. 20, 42119 Wuppertal, Germany

ARTICLE INFO

Article history:
Received 9 October 2012
Accepted 19 March 2013
Available online 29 March 2013

JEL classification:
E52
E58

Keywords:
Exogenous shocks
The narrative approach
Real effects of monetary policy

ABSTRACT

This paper applies the narrative approach to Chinese monetary policy to solve two problems of policy measurement. The first problem arises because the PBC (the Chinese central bank) applies multiple instruments and none of them alone can adequately reflect changes in its monetary policy. The second one is the classical identification problem: the causation direction of the observed interaction between central bank actions and real activity needs to be identified. The PBC's documents are used to infer the intentions behind policy movements. Three shocks are identified for the period 2000–2011 that are exogenous to real output. Estimates using these shocks and various robustness tests indicate that monetary policy has large and persistent impact on output in China.

1. Introduction

Does monetary policy matter in China? Very few studies have addressed this issue, but reported somewhat mixed findings (see, e.g., Dickinson & Liu, 2007; Sun, Ford, & Dickinson, 2010). On the other hand, it is a well-established fact that in advanced economies, monetary policy has a significant impact on output (at least in the short run), thanks to numerous contributions (see, e.g., Bernanke & Blinder, 1992; Bernanke & Gertler, 1995; Blanchard, 1990; Friedman, 1995; Romer & Romer, 1989). Yet, given the substantial differences between China and those economies in their central banking strategies and practices, it is unclear that we can simply extend this conclusion to the case of China. Therefore, it is necessary to conduct an independent study to examine the effectiveness of monetary policy in China.

In order to estimate the effect of monetary policy, first we should be able to measure monetary policy changes (i.e., to describe monetary policy in a quantitative way). The validity of this measure is the premise of an accurate estimate of the effects of monetary policy (see, e.g., Bernanke & Mihov, 1998; Romer & Romer, 1989, 2004). However, the study of China's monetary policy faces two measurement problems. The first is which policy instrument should be used as a policy indicator. The central bank of China, the People's Bank of China (PBC[2]), does not follow the standard one-instrument operating procedure that advanced economies adopt.[3] Rather, it uses multiple instruments, including unconventional administrative measures, to achieve various tasks. This operating procedure suggests that all of its frequently-applied policy instruments contain information about its policy (see, e.g., Chen, Chen, & Gerlach, 2011; He & Pauwels, 2008; Shu & Ng, 2010; Xiong, 2012). On the other hand, these instruments

* Corresponding author. Tel.: +49 202 4393960; fax: +49 202 4392868.
E-mail address: sun@wiwi.uni-wuppertal.de.

[1] This paper was the fourth chapter of my Ph.D. dissertation at the University of Wuppertal. I thank Rüdiger Bachmann, Katrin Heinrichs, Jan Klingelhöfer, Ronald Schettkat, Paul Welfens and seminar/conference participants at the University of Wuppertal, RWTH Aachen University, the 2012 DIW Macroeconometric Workshop (in Berlin), the 2013 AEA Annual Meeting (in San Diego) and two anonymous referees for their helpful discussions and comments. Any remaining errors are my own.

[2] In the literature, two short forms of the People's Bank of China are used: PBoC and PBC, although the People's Bank of China tags itself with PBC only. In this paper, I follow the Bank's routine and use PBC.

[3] That is, use open market operations with short-term money market rates as the operational target.

1043-951X/$ – see front matter © 2013 Elsevier Inc. All rights reserved.
http://dx.doi.org/10.1016/j.chieco.2013.03.003

are different in nature and their changes are not necessarily identical in terms of the frequency and magnitude. None of them alone can represent the behavior of all others and hereby adequately reflect changes in the PBC's policy stance.

The second problem is known as the identification problem in the literature. That is, the causation direction of the observed interaction between monetary policy and economic fluctuations needs to be identified. A simple regression of output on changes in monetary policy is very likely to result in biased estimates of the effect of monetary policy as the causation runs in the other direction as well. For example, if the central bank takes counter-cyclical actions and stabilizes the level of economic activity absolutely, "then an observer … would see (changes in the interest rate) accompanied by a steady level of aggregate activity. He would presumably conclude that monetary policy has no effects at all, which would be precisely the opposite of the truth" (Kareken & Solow, 1963: 16). By contrast, economic fluctuations in consequence of exogenous policy movements should reflect the impact of monetary policy, but not other influences (see Romer & Romer, 2004). Hence, it is necessary to isolate exogenous components of policy changes from endogenous policy responses.

One approach to overcome these two challenges is the narrative approach, which was pioneered by Friedman and Schwartz in their *Monetary History of the United States* (Friedman & Schwartz, 1963) and has been applied by Romer and Romer in a series of studies (Romer & Romer, 1989, 2004).[4] This approach relies on the reading of the central bank's documents to infer additional information on policy-makers' intentions. The policy stance is identified and in addition, the driving force of each policy movement is detected. Only those policy shifts are defined as exogenous that are not driven by *current and future* developments on the real side of economy. These shocks are exogenous with respect to the state of the real economy.

One study by Shu and Ng (2010) has applied the narrative approach to examine monetary policy of the PBC.[5] They study *China Monetary Policy Report*, a quarterly executive report of monetary policy of China, and construct a time series of the PBC's policy stance index (tight, neutral or easy, for example). The Shu-Ng index is useful as it can be used as a monetary policy indicator to solve the policy indicator problem. However, Shu and Ng (2010) shies away from the identification problem and their index does not separate exogenous policy changes from endogenous policy reactions. My paper complements Shu and Ng's study with another independent reading of the PBC's historical records and singles out exogenous components in policy changes.

This paper uses two sources of the PBC's documents: short summaries of quarterly Monetary Policy Committee's meeting and *China Monetary Policy Report*. Both documents include explicit statements of the PBC's monetary policy stance for the next period and reasoning of changes in policy. Based on this information, three exogenous shocks are identified as episodes, in which the PBC shifted policy to contraction to rein in inflation. Estimates using these shocks and various robustness tests indicate that monetary policy has large and persistent effects on output in China. A comparison with other conventional measures suggests that my narrative-based shocks perform better in estimating the effects of monetary policy.

This paper proceeds as follows. Section 2 provides institutional backgrounds of Chinese monetary policy and highlights the monetary policy indicator problem. Section 3 presents a simple framework, explaining why a policy measure with endogenous components is likely to lead to biased estimates. Section 4 identifies three exogenous policy shifts of the PBC through reading its documents. Section 5 examines the impacts of these shocks on output and inflation. Section 6 concludes.

2. What measures China's monetary policy

Since the mid-1980s, the PBC has experienced a series of changes in its institutional framework and its operating procedure. Currently, it targets the broad money (M2) and uses multiple monetary instruments to achieve various tasks. Is it possible to measure the PBC's monetary policy with the money stock or one of its policy instruments? In this section, I address the monetary policy indicator problem.

2.1. Institutional background

The PBC was established on December 1st, 1948 and was the only bank in China before the economic reforms. It combined the functions of a central bank and commercial banks.[6] In the 1984 central bank reform, the regular commercial banking activities were separated from the PBC and passed to four newly established (or reorganized) state-owned commercial banks. The PBC was designated exclusively as a central bank. The objectives of its monetary policy are defined in the People's Bank of China Act (promulgated in 1995) as "to maintain the stability of the value of the currency and thereby promote economic growth". The first mandate of the PBC is thus price stability. Meanwhile, the PBC has attached great importance to economic growth. The GDP growth target is set each year by the central government of China to guarantee high-level job creation so as to absorb the consistent labor surplus, either freed from the agricultural sector or as a result of workers being laid-off from state-owned enterprises. One of the major tasks of the PBC is to implement monetary policy in line with this growth target. Along with this mandate, the PBC is actively engaged in foreign exchange interventions to keep the renminbi (RMB) exchange rate within its floating range (it will be elaborated in the next subsection). Thus, the PBC appears to pursue monetary policy with multiple objectives — price stability, economic growth and exchange rate stability.

[4] The narrative approach has also been applied in studies on the effect of fiscal policy (see, e.g., Alesina, Favero, & Giavazzi, 2012; Ramey, 2011; Ramey & Shapiro, 1998; Romer & Romer, 2010).

[5] Xiong (2012) applies the narrative approach by reading *China Monetary Policy Report* as well to abstract the information on the PBC's views of macroeconomic conditions.

[6] Such a banking system was typical for planned economies, where the central bank functioned mainly as a fiscal agent of the central government in fulfilling the state production plan. The function of financial intermediation remained limited — the investment was financed through budget and on the other hand, private savings were low.