Economic Modelling 28 (2011) 2609–2621

Contents lists available at SciVerse ScienceDirect

Economic Modelling

journal homepage: www.elsevier.com/locate/ecmod

Financial market imperfections and monetary policy strategy

Meixing Dai *

BETA, University of Strasbourg, 61, Avenue de la Forêt Noire, 67085 Strasbourg Cedex, France

ARTICLE INFO

Article history:
Accepted 20 July 2011

JEL classification:
E44
E52
E58

Keywords:
Imperfect financial markets
Incomplete interest rate pass-through
Inflation targeting
Monetary targeting
Macroeconomic stability
Friedman's *k*-percent rule
Feedback money growth rules
Two-pillar strategy

ABSTRACT

In a model with imperfect money, credit and reserve markets, we examine if an inflation-targeting central bank applying the funds rate operating procedure to indirectly control market interest rates also needs a monetary aggregate as policy instrument. We show that if private agents use information extracted from money and financial markets to form inflation expectations and if interest rate pass-through is incomplete, the central bank can use a narrow monetary aggregate and the discount interest rate as independent and complementary policy instruments to reinforce the credibility of its announcements and the role of inflation target as a nominal anchor for inflation expectations. This study shows how a monetary policy strategy combining inflation targeting and monetary targeting can be conceived to guarantee macroeconomic stability and the credibility of monetary policy. Friedman's *k*-percent money growth rule, which can generate dynamic instability, and two alternative stabilizing feedback monetary targeting rules are examined.

© 2011 Elsevier B.V. All rights reserved.

1. Introduction

Over the last decade, more and more central banks have adopted a new framework for conducting monetary policy known as inflation targeting, which is presented by Mishkin (1999) as a successor to and more efficient in controlling inflation than monetary targeting.[1] In this context, the two-pillar monetary policy strategy of the ECB, announced in the autumn of 1998, appears quite singular and quickly becomes controversial.

Political considerations, i.e. the need to demonstrate continuity with the policies of the Bundesbank, have apparently dictated that the ECB pays attention to monetary aggregates as well in its two-pillar strategy. The Bundesbank's success in controlling inflation is due to that its monetary targeting is quite similar to inflation targeting as it announced inflation target and transparently communicated to market participants and the public (e.g., Clarida and Gertler, 1996; Bernanke and Mihov, 1997; Laubach and Posen, 1997; Clarida et al., 1998). Its monetary policy is actually closer to inflation targeting than to Friedman-like monetary targeting and thus might best be thought of as "hybrid" inflation targeting.[2] Many observers have interpreted the ECB's two-pillar strategy as a bridge between the monetary targeting strategy of the old Bundesbank and the more up-to-date inflation targeting approach (Bernanke et al., 1999; Svensson, 2000; Rudebusch and Svensson, 2002; Mayer, 2006). In effect, the "economic pillar" resembles an implicit form of inflation targeting and the "monetary pillar" a weak type of monetary targeting. However, for Assenmacher-Wesche and Gerlach (2007), this is a "misinterpretation" which has lead to the criticism of the framework for being inconsistent and lacking clarity.

The disagreement among economists about the true nature of the two-pillar strategy is arguably due to the fact that the ECB provides neither an explicit representation of the inflation process nor an explanation for why it necessitates a two-pillar framework. In effect, it lacks a theory justifying the simultaneous use of monetary targeting and inflation targeting. In addition, it is at odds with the current consensus about the best monetary policy strategy, i.e. inflation

---

* Tel.: +33 03 68 85 21 31; fax: +33 03 68 85 20 71.
E-mail address: dai@unistra.fr.

[1] Recent studies tend to reject monetary targeting on the basis that it is less efficient than inflation targeting (e.g., Rudebusch and Svensson, 2002; Evans and Honkapohja, 2003; Woodford, 2008) or that the instability of the relationship between monetary aggregates and goal variables implies too many conditions for its success (Mishkin, 1999) and larger control problems (Cabos et al., 2003). However, when this relationship is unstable, a central bank with high credibility can successfully stabilize inflation and output through monetary targeting if it is flexible, transparent and accountable (Mishkin, 2002).

[2] Gerberding et al. (2005) find that the Bundesbank took its monetary targets seriously, but also responded to deviations of expected inflation and output growth from target.

0264-9993/$ – see front matter © 2011 Elsevier B.V. All rights reserved.
doi:10.1016/j.econmod.2011.07.012

targeting. According to this consensus, if the central bank controls the nominal interest rate, inflation expectations are independent of monetary aggregates. Furthermore, the duality problem in a simple New-Keynesian or traditional IS-LM model implies that we can either control money supply or nominal interest rate but not two of them at the same time.

Several authors provide empirical models of two-pillar Phillips curve which justifies the two-pillar strategy (e.g. Gerlach, 2004; Assenmacher-Wesche and Gerlach, 2007) by testing the hypothesis that inflation can be decomposed into a 'trend', which is explained by a smoothed measure of past money growth, and a deviation from that trend, which is accounted for by the output gap. Based on Ireland (2004), Barthélemy et al. (2008) have developed a DSGE monetary policy model for the Euro Area in which both the IS and Phillips curves depend on real balances. They have found a significant role for money in the Euro Area. These studies imply that the optimal interest rate rule depends on the money. Hence, inflation expectations depend on monetary aggregates even if only information extracted from the optimal inflation targeting rule, the Phillips curve and the IS curve are used to form them.

Other arguments in favor of the ECB's two-pillar strategy do not require direct effects of money on output or inflation. Bordes and Clerc (2007) argue that the central bank can influence the real interest rate through the liquidity effect in the short term but not in the medium to long term. Therefore, in order to reduce long-term price level uncertainty and to ensure the consistency between short-term and long-term inflation expectations, its only means of action is to influence inflation expectations through the announcement of a money growth target (or reference value). Beck and Wieland (2007) have shown that, in the event of persistent policy misperceptions regarding potential output, the ECB-style cross-checking and changing interest rates in response to sustained deviations of long-run money growth can have some stabilization properties. Even Woodford (2008) agrees that, to the extent that money growth is useful as an indicator variable, there is no a priori reason to exclude monetary variables from the set of indicators that are taken into account by the central bank.

The financial crisis of 2007–09 has lead De Grauwe and Gros (2009) to contest the consensus according to which the price stability is a strategy that will minimize the risk of financial instability and the main responsibility for maintaining financial stability is in the hands of the supervisors and regulators.[3] Considering that there is a trade-off between price stability and financial stability, they suggest that the ECB would continue to use the interest rate to achieve its inflation target while using reserve requirements and macro-prudential controls to maintain financial stability. Thus, the ECB would have an instrument to prevent asset bubbles from getting out of hand, which should stabilize inflation expectations.

The above studies neglect one important assumption which justifies the opposition between monetary targeting and inflation targeting. Indeed, under the assumption that all financial assets are perfect substitutes and hence interest rates in money and credit markets are perfectly controlled by the central bank, these two strategies become substitutable. By recommending the control of nominal interest rate, economists advocate that the supply of money is automatically determined by the demand (Woodford, 1998; Rudebusch and Svensson, 1999). It implies that the monetary authority implicitly confers to the private sector the following message: any quantity of money that you wish at given nominal interest rate will be provided. In a reduced macro-economic model (New-Keynesian or traditional IS-LM model) which simplifies at maximum the functioning of money and financial markets, the inflation-targeting strategy is efficient and allows anchoring inflation expectations when the central bank is perfectly credible and transparent. However, in practice, financial institutions and other private agents do not have an unconstrained access to the central liquidity and the central bank is never perfectly credible and transparent.

It is to notice that, since the end of 1980s, most central banks (including inflation-targeting central banks) target only indirectly market interest rates through a funds rate targeting procedure (Walsh, 2003). Under such an operating procedure, the central bank, setting the discount interest rate, conducts open-market operations to target the funds rate, a very short interest rate in the interbank market. The literature on inflation targeting and interest rate rules greatly simplifies the theoretical models by not distinguishing these interest rates with other market interest rates (e.g., longer term interbank interest rate, medium and long term lending rates), which directly affect private consumption and investment.

As Romer (2000) has remarked, one area in which both the traditional IS-LM approach (where the money is considered as monetary policy instrument) and IS-MP approach (where MP stands for monetary policy, i.e. interest rate rule or inflation targeting rule) may have simplified too far is in their treatment of financial markets. In both approaches, the only feature of financial markets that matters for the demand for goods is 'the' real interest rate that monetary policy can powerfully and directly influence as the central bank desires. In practice, the demand for goods depends on interest rates that the central bank may not be able to control directly and tenuously as well as the level of credit which is available at those rates. An analysis, which more carefully takes account of the impacts of various developments in financial markets on the demand for goods as well as the mechanism through which the monetary policy affects these interest rates and the level of credit, would highlight many of the difficulties and uncertainties of actual policy-making. For B. Friedman (2003), abandoning the role of money and the analytic of the LM curve makes it more difficult to take into account how the functioning of the banking system (and with it the credit markets more generally) matters for monetary policy and also leaves open the underlying question of how the central bank manages to fix the chosen interest rate in the first place.[4]

A large empirical literature has shown that the transmission mechanism of monetary policy is hindered by incomplete interest rate pass-through from the discount rate to the credit market interest rate due to various imperfections or frictions in money and financial markets (e.g. Hofmann and Mizen, 2004; Liu et al., 2008; Hulsewig et al., 2009). Incomplete interest rate pass-through offers a better description about how the economy is functioning and how the monetary policy is implemented, and it has important implications for the monetary policy strategy. For Kobayashi (2008), it implies that the central bank should smooth the movement in policy interest rate. A theoretical study of Kwapil and Scharler (2010) has shown that the incomplete pass-through renders the Taylor principle insufficient. Dai (2010) has proven that a monetary base operating procedure is always more efficient in stabilizing output than a funds rate targeting procedure when the control of market interest rates is indirect and imperfect.

This paper examines how the monetary policy strategy of a central bank, which uses a funds rate targeting procedure to indirectly control market interest rates through setting the discount interest rate and conducting open-market operations, will be affected by the

---

[3] They agree with the emerging consensus that price stability does not guarantee financial stability and is, in fact, often associated with excess credit growth and emerging asset bubbles (e.g., M. King, 2009; Shirakawa, 2009).

[4] These concerns find some echoes in Goodhart (2007) who thinks that the central banks must still pay attention to monetary aggregates, in particular the growth rate of the bank credit allocated to the private sector, or in Christiano et al. (2007) showing that a monetary policy which concentrates too narrowly on inflation can, in an unintended way, contribute to reduce the welfare via cycles of expansion and depression in real and financial variables. More recently, Walsh (2009) observes that distortions in financial markets and financial shocks that generate real effects of monetary policy also imply that financial stability may require making trade-offs with inflation stabilization and output stabilization.

دریافت فوری ← **متن کامل مقاله**

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات

ISIArticles
مرجع مقالات تخصصی ایران