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"Leaning with the wind"? An open-economy example

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Abstract

This paper uses a forward-looking open-economy optimizing model to show that the existence of a real exchange rate channel in the Phillips Curve dramatically alters the conduct of optimal monetary policy. The central bank's optimal reaction function can produce a "lean with the wind" response to domestic IS disturbances and the foreign output gap provided that both a pronounced exchange rate channel exists and the disturbances are highly persistent. The more potent the real exchange rate channel in the Phillips Curve becomes, the greater (smaller) the fluctuations in the output gap (real exchange rate). How this channel affects the variability of the nominal variables depends on the degree of persistence of the disturbances.

JEL classification: E52; F41

Keywords: Optimal discretionary policy; Reaction function; Exchange rate channel in Phillips Curve

1. Introduction

In its simplest incarnation, a strategy of flexible inflation targeting requires a central bank to focus on two policy objectives. Apart from stabilizing the rate of inflation, the central bank also pays heed to the state of the real economy. There is increasing evidence that flexible inflation targeting characterizes the conduct of monetary policy even in those countries where the pursuit of price stability is the overriding goal of monetary policy.

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That strict inflation targeting is not what central banks practice is borne out by the wording of policy targets agreements or formal contracts entered into by the executive branch of government and the head of the central bank. For instance, the policy targets agreements concluded by the Minister of Finance and the Governor of the Reserve Bank of New Zealand in 1999 and 2002 stipulate that "[i]n pursuing its price stability objective, the Bank shall implement monetary policy in a sustainable, consistent and transparent manner and shall seek to avoid unnecessary instability in output, interest rates and the exchange rate".[1] Other central banks that are viewed as having adopted flexible inflation targeting are the Swedish Riksbank and the Bank of England.[2] The Reserve Bank of Australia and the Bank of Canada are also widely acknowledged as practicing flexible inflation targeting, albeit in a less formal way compared to the Swedish Riksbank or the Bank of England. Flexible inflation targeting has also been embraced by central banks in transition economies like the Czech Republic, Hungary, and Poland as well as in emerging countries like Brazil, Chile, Mexico, to name but a few.[3] The rationale for minimizing fluctuations in variables other than the rate of inflation derives from the simple realization that a narrow focus on the rate of inflation will cause excessive swings in the nominal interest rate, the exchange rate, and real output. Pronounced volatility of the nominal interest rate and the exchange rate are disruptive to the smooth working of financial markets. Huge swings in real output are not acceptable for economic as well as political reasons.[4]

The countries currently practicing flexible inflation targeting are typically small open economies.[5] The central banks in these countries are assigned an inflation target specified as a numerical value or as a target range for the rate of inflation. By convention, the target proper or band for the rate of inflation is expressed in terms of a percentage point change in the consumer price index (CPI). Thus, the rate of inflation in these countries is determined by domestic and international factors. These factors may pull the rate of inflation in opposite directions. For instance, unexpected strong domestic demand relative to capacity will put upward pressure on the domestic component of CPI inflation. With the interest

[1] Policy Targets Agreement 1999, Section 4, Implementation and Accountability, Part c. Policy Targets Agreement 2002, Section 4, Communication, Implementation, and Accountability, Part b. The latter agreement is still in force. Notice that the economic variables are not arranged in alphabetical order. The order in which they appear is arguably indicative of their relative importance. A second observation that deserves mentioning is related to the change of emphasis in the wording of the policy targets agreement over time. The first three policy targets agreements (March 1990, December 1990, 1992) define the mandate of the Reserve Bank as the achievement of price stability without reference to the underlying state of the economy. The policy targets agreements of 1996 and 1997 mention the achievement of price stability in conjunction with sustainable economic growth and employment as the ultimate objective.

[2] According to Svensson (2001). The Bank of England Act of 1998 stipulates that "the objectives of the Bank of England shall be (a) to maintain price stability, and (b) subject to that, to support the policies of Her Majesty's government, including its objectives for growth and employment". The Swedish Riksbank Act of 1988 in contrast does not contain any references to growth and employment objectives. Indeed Article 2 of Chapter 1 merely states that "the objective of the Riksbank's operations shall be to maintain price stability. Thus, it is not clear whether the Swedish Riksbank is actually formally bound to engage in flexible inflation targeting.

[3] Bernanke (2003).

[4] For our purposes the mere realization that central banks are concerned about fluctuations in both the rate of inflation and real output is sufficient. Detailing the complex interrelationships between the central bank, the executive, and the legislative branch of government goes beyond the scope of the paper.

[5] The central banks of large and rather closed countries such as the United States and Japan have not announced specific inflation targets or bands. The European Central Bank follows a strategy of monetary policy that is based on two pillars: A 2% target for the rate of inflation and a reference value for the growth rate of M3.