Journal of Economic Dynamics & Control 49 (2014) 21–30

Contents lists available at ScienceDirect

Journal of Economic Dynamics & Control

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

Monetary policy in open economies: Practical perspectives for pragmatic central bankers

Richard H. Clarida [1]

Columbia University and NBER, New York, NY, USA

ARTICLE INFO

Article history:
Received 15 August 2014
Accepted 23 September 2014
Available online 14 October 2014

JEL classification:
F31
F33
F41
E52

Keywords:
Exchange rates
International finance
Monetary economics

ABSTRACT

This paper reviews and interprets some of the key policy implications that flow from a class of DSGE models for optimal monetary policy in the open economy. The framework suggests that good macroeconomic outcomes in open economies are possible by focusing inflation targeting that is implemented by a Taylor type rule, a rule that in equilibrium is reflected in the exchange rate as an asset price. Optimal monetary policy will not be able deliver a stationary ('stable') nominal exchange rate – let alone a fixed exchange rate or one that remains inside a target zone – because, absent a commitment device, optimal monetary can't deliver a stationary domestic price level. Another feature in the data for inflation targeting countries that is consistent with monetary policy via Taylor type rule is that it will tend push the nominal exchange rate in the opposite direction from PPP in response to an 'inflation' shock—the 'bad news god news' result of Clarida and Waldman (2008. Is Bad News about Inflation Good News for the Exchange Rate. In: John Campbell, (Ed.), Asset Prices and Monetary Policy, Chicago: University of Chicago Press), Clarida and Waldman (2014. Bad News About Inflation is Good News for the Nominal Exchange Rate Under Optimal Monetary Policy: DSGE Theory and a Decade of Empirical Evidence). This is so even though in the long run of these models the nominal exchange rate must in expectation obey PPP.

1. Introduction

The theory and practice of conducting monetary policy in the global economy has evolved and, along many dimensions, converged over the past twenty years. In the fifteen years before the world financial crisis, this was evident in the widespread adoption of inflation targeting, flexible exchange rates, and of policy implementation well understood and evaluated within a Taylor Rule framework. Empirical research suggest that the apparent convergence to a Taylor Rule framework did in fact occur during this period (Clarida and Gertler, 1997; Clarida et al., 1998,2000; Clarida, 1999,2001,2009; Lubik and Schorfheide, 2003; Engel and West, 2006; Molodtsova and Papell, 2009). We believe this convergence was no coincidence. In fact, building on the research program introduced in Taylor (1982,1993) and advanced by Obstfeld and Rogoff (1996,2000) and Svensson (2000), a number of papers (Clarida et al., 2001,2002; Obstfeld, 2002; Corsetti and Pesenti, 2005; Gali and Monacelli, 2005; Engel, 2009; Woodford, 2010; Devereux and Hnatkovska, 2011) among others show that, in dynamic stochastic general equilibrium models with nominal rigidities, flexible exchange rates and inflation targeting

E-mail address: rhc2@columbia.edu

[1] Paper prepared for the Hoover Institution Conference on Monetary Policy for the 21st Century. I would like to thank the conference organizers, participants, and especially my discussant Maurice Obstfeld as well as Ken Judd for insightful suggestions for future work.

http://dx.doi.org/10.1016/j.jedc.2014.09.036
0165-1889/

produce desirable macroeconomic outcomes in open economies. Indeed under certain conditions and in particular models, inflation targeting implemented by a Taylor rule in a regime of flexible exchange rates characterizes the *optimal* monetary policy for a central bank seeking to maximize a well specified social welfare function in an open economy. This paper reviews several of the most relevant findings from this literature, findings that until now have been and likely will, in the future be, of practical interest to pragmatic central bankers conducting monetary policy in the global economy of the 21st century. The focus will be on implications from this research that, in our opinion, are most likely in the decades ahead to be robust in practical, real-world application, not just in the particular theoretical models from which they were originally derived.

The plan of the paper is as follows. In Section 2 we review the set-up of the open economy DSGE model introduced in Clarida et al. (2001,2002), Gali and Monacelli (2005) and Galí (2009) and extended by, among others, Engel (2009), Woodford (2010), and Devereux and Hnatkovska. (2011). We provide intuition for the 'isomorphism result' tightly linking optimal monetary policy in open and closed economies that is a property of a class of models discussed in Clarida et al. (2001,2002). In Section 3 we solve for optimal monetary policy and highlight several key and we believe robust implications of the above cited DSGE literature for open economy monetary policy operating away from the zero lower bound. We are motivated by a belief that as the world's major central banks begin to normalize policy rates and escape (finally!) from the zero bound, the Taylor Rule framework will re-emerge as the preferred de facto if not de jure construct for conducting, evaluating, and ultimately for communicating monetary policy, with the crucial understanding that….

> *The neutral real interest rate*, a key input to Taylor rule analysis, appears in practice to be time varying (Laubach and Williams, 2003), and this time variation is likely to be more important in the future than in the past for calibrating monetary policy. In particular, the neutral real interest rate in the open economy will in general be a function of *global* as well local factors such as the rate of potential growth….

- *The exchange rate* is an asset price will reflect expectations of the future time path of the policy rate as summarized by the policy rule and thus the expected future time path of inflation and output under the policy rule. One important empirical implication of monetary policy by Taylor rule in the open economy is that 'bad news about inflation can be good news for the nominal exchange rate' (Clarida and Waldman, 2008); see also the discussion in Krugman and Melitz (2011) even though with inflation targeting, bad news about inflation must in expectation be bad news for the long run level of the nominal exchange rate. Moreover, …..
- *In the absence of a commitment device* that binds central banker and their successors, optimal monetary policy in the open economy can at most achieve a stationary rate of inflation not a stationary price level. In other words, price level targeting is not in general time consistent in the class of DSGE models cited above, a direct consequence of Clarida et al. (1999), Woodford (2003); and the isomorphism result in Clarida et al. (2001,2002) and Gali and Monacelli (2005). As a result, even if the equilibrium terms of trade are stationary, the equilibrium nominal exchange rate under an optimal policy will resemble a random walk. Technically it will possess a unit root but in fact will be co integrated with the price level. In other words…
- *A regime of fixed exchange rates is a* '*mirage*' (Obstfeld and Rogoff, 1996) in the sense that in these economies it is not time consistent in the presence of nominal rigidities for the policymaker who is maximizing household welfare to promise fix the exchange rate. Moreover, in general, while PPP may be expected to hold in the long run……
- *The persistence of PPP deviations* will in general depend directly on the policy rule in economies in which inflation 'inertia' is endogenous. Theoretically (Clarida and Waldman, 2008,2014), the greater is the relative weight the policy maker places on output stabilization relative to inflation stabilization, the greater will be the equilibrium half-life of PPP deviations. Clarida and Waldman (2008) report an empirical announcement effect study (Table 1) that documents the bad news good news correlation in high frequency data for G10 countries over the 2001–2005 period. Claridaand Waldman (2014) update the original announcement effect study to span 2001–2013 period and show (Table 2) that the 'bad news good news' effect remains a robust feature of the data on days when there are inflation announcements.

Table 1
CW1 inflation targeters.

	Headline		**Core**	
	MoM	YoY	MoM	YoY
Coefficient	0.2	0.2	0.5	0.5
***T*-statistic**	5.9	6.2	9.7	9.2
***R*-squared**	0.08	0.09	0.27	0.25
# Observations	394	387	257	259

Regression method: stacked OLS.
Percentage change in exchange rate resulting from one percentage point upward surprise in inflation.
Positive coefficient indicates appreciation of domestic currency.
Countries: Australia, Canada, Euro area, Japan, New Zealand, Norway, Sweden, Switzerland, UK, and US.
Data: July 2001–December 2005. Some countries missing observations.