

How did central banks react to the global financial crisis?

A semi-structural investigation

Akihiro Kubo

Faculty of Economics, University of Toyama

Address: 3190 Gofuku, Toyama 930-8555, Japan

E-mail: kubo@eco.u-toyama.ac.jp

Tel & fax: +81 76 445 6440

Abstract

How did central banks react to the global financial crisis (GFC)? Several monetary authorities faced large external shocks from the GFC, especially during 2008–2009. The GFC triggered a liquidity crisis, and central banks could not help implementing massive quantitative easing policies. The GFC also fueled exchange rate volatility, which complicated monetary policy management to some extent. My main focus is on central banks' responses to the GFC in small inflation-targeting open economies. I evaluate the policy actions by investigating the impact of monetary policy and foreign reserves management on the exchange rate.

A large literature has studied the optimal weight of exchange rates in monetary policy under floating, while another literature has recently started exploring the role of foreign reserves during the GFC. To my knowledge, no study has bridged the gap in the two literatures by explicitly examining, in a single model, the relationship between interest rate reaction function and the exchange rate equation included foreign reserves. This paper seeks to fill this gap by using a structural model based on a multivariate approach model rather than the conventional method of estimating monetary policy reaction functions or exchange rate determinants in a univariate equation.

I use Bayesian methods to estimate a small, open, semi-structural macroeconomic model of 12 advanced and developing inflation-targeting countries. The main empirical findings are as follows. First, most developing countries significantly reacted to the exchange rate movements during the GFC. Second, Thailand and the United Kingdom did target the exchange rate as one of their monetary policy objectives, while foreign reserves tended to play a significant role in Australia, Brazil, Chile, Indonesia, and New Zealand during the GFC. Finally, it is interesting that Canada, South Africa, South Korea, and Sweden show little evidence of adjustment, although they experienced economic revival later.