Optimal Exchange Rate Policy in a Growing Semi-Open Economy

Philippe Bacchetta
University of Lausanne
Centre for Economic Policy Research
Hong Kong Institute for Monetary Research

and

Kenza Benhima
University of Lausanne
Centre for Economic Policy Research

and

Yannick Kalantzis
Banque de France

May 2014

Summary

In recent years we have seen a heated debate on Chinese exchange rate policy and the enormous accumulation of international reserves by its central bank. The renminbi (RMB) has typically been viewed as undervalued. A standard perspective is that China experienced an exogenous increase in export demand. To prevent a nominal appreciation, the central bank intervened in the foreign exchange market and accumulated reserves. In this paper, we consider an alternative perspective to China's exchange rate policy by focusing on saving decisions in an economy with capital controls. Our alternative perspective starts from an exogenous growth acceleration that increases saving by Chinese consumers, mainly in the form of bank deposits. The implied increase in liabilities of the Chinese banking sector is translated into an increase in central bank liabilities, through required reserves and central bank bills. When the central bank uses these funds to purchase foreign currency assets, it serves as intermediary between the private sector and the international capital market.

We examine the optimal exchange rate policy in a dynamic intertemporal model that incorporates four basic features of the Chinese economy: i) limited capital mobility; ii) a net capital outflow taking the form of an accumulation of central bank international reserves; iii) underdeveloped financial markets; iv) a very high growth rate. Growth is assumed to arise from exogenous increases in endowments. In such a context the central bank is modeled as a Ramsey planner who can choose the optimal path of the exchange rate and of international reserves. Our main result is that in a growth acceleration episode it is optimal to have an initial real depreciation of the currency combined with an accumulation of reserves. This depreciation is followed by an appreciation in the long run. We also show that the optimal exchange rate path is close to the one that would result in an economy with full capital mobility and no central bank intervention. The main reason for an optimal depreciation is financial underdevelopment implying a limited supply of financial assets. With a developed financial system, an initial appreciation would be optimal.