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"Capital mobility in East Asian Countries is not so high": Examining the impact of sterilization on capital flows

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ABSTRACT

This paper examines how international capital mobility can be affected by sterilization activities for seven East Asian economies. We develop a model that shows how sterilization measures by a central bank can lead to a reduction in a country's capital mobility. Using data from 1980 to 2006, we then derive sterilization intensities and capital mobility estimates for our countries, and discover that conventional measures overstate the degree of capital mobility due to their failure to adjust for sterilization actions. Our findings are important for policy makers since using our modified estimates will help to better understand the magnitude of capital mobility when central banks exercise sterilization to dampen the effect of capital inflows.

1. Introduction

The last three decades have witnessed an unprecedented surge in the flows of financial capital across national borders. Due to financial deregulation in many countries, as well as technical and financial innovations, financial markets have become more globally integrated and capital mobility has risen since the 1970s (see, inter alia, Kim, Oh, and Jeong (2005) and Goldstein (1995)). However, foreign capital is regarded as a mixed blessing for the recipient countries. On the one hand, foreign capital inflows are desirable as they help finance domestic investment and foster economic growth. On the other hand, the appreciation of the real exchange rate that frequently accompanies these capital inflows weakens the competitiveness of the trade sector and expands existing current account deficits. Moreover, a sudden reversal of foreign capital flows can trigger financial crises, as has occurred on a number of occasions in the last two decades.[1]

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[1] Industrial countries, such as the United Kingdom, Sweden and Norway, all experienced severe capital outflows in the early 1990s. Mexico experienced the Peso crisis in 1994, followed by the effects of the Asian financial crisis in 1997. The financial contagion spread to Russia and Brazil in 1998 and 1999, respectively. Recently, the global financial crisis struck almost all economies in 2008, and the extent of its negative economic impact is greater than the impacts of the Great Depression and the oil crisis in the 1930s and 1970s, respectively.

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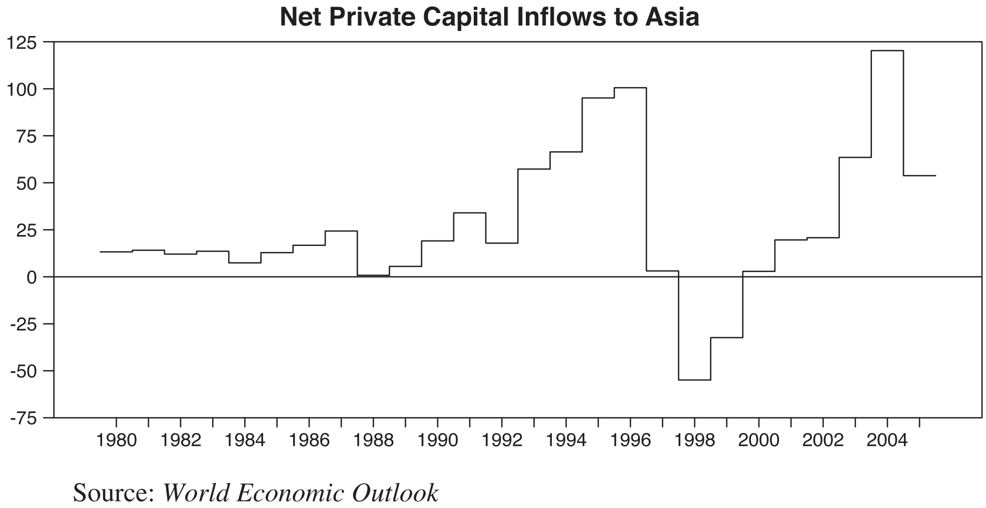

Fig. 1. Net private capital inflows to Asia.

East Asian economies around the Pacific Rim have received particular attention from international investors and economists because of their decades-long sustained economic growth, sound macroeconomic policies, and coordinated responses to inflows of international capital. As Fig. 1 shows, Asian economies received approximately $100 billion in net capital inflows in 1996, the year before the outbreak of the Asian financial crisis. Although the capital inflows reversed temporarily between 1997 and 1999, there has been a resurgence of capital inflows since 2000. Asian economies received net capital inflows of $128 billion in 2004 alone. These Asian economies include four Newly Industrialized Economies (NIEs) (Hong Kong, Korea, Singapore, and Taiwan) and twenty-six developing countries. According to a report from the Asian Development Bank (ADB), Asian economies received $269 billion in capital inflows in 2006. Although Asian governments are in a far better position to respond to financial shocks than a decade ago, these enormous foreign capital inflows put upward pressures on national currencies and asset prices, which have become new problems for Asian economies to manage (Ying & Kim, 2001).

The rise in inflows poses a challenge for the countries' monetary authorities. The primary goals of central banks in East Asian economies include providing monetary stability and conducting autonomous monetary policies. Therefore, persistent capital inflows force authorities to exercise aggressive sterilization. The sterilization of capital inflows may meet the aforementioned goals, but interest rates in the recipient countries will persistently be higher than in the rest of the world.[2] Using a sample obtained between 1981:01 and 1994:12, Moreno (1996) finds that the monetary authorities in both Korea and Taiwan are more tolerant of an increase in domestic credit than an increase in foreign assets. Wu and Wang (2003) demonstrate that Singapore exercised nearly perfect sterilization from 1984 to 1995 by moving pension funds from commercial banks to its central bank. Thailand and Indonesia have transferred public deposits from commercial banks to their central banks. Based on evidence of aggressive sterilization by East Asian central banks, it is not surprising to find a sizeable interest rate differential between domestic and foreign assets. Therefore, the use of either uncovered or covered interest parity to measure international capital mobility may be confounded by the active monetary policies of Asian central banks. Failing to understand or accurately measure capital mobility levels in capital recipient countries may result in substantial costs. For example, sterilization can be very costly and ineffective for a country with near perfect capital mobility, in which the government issues high-yield assets and increases holdings of low-yield foreign assets; this policy will fail to reduce the interest rate differential and attract further capital inflows.[3]

Our paper seeks to add insights in a few key areas. First, East Asian economies have heavily sterilized capital inflows to maintain their fixed or highly managed floating exchange rate regimes (Chinn & Dooley, 1997; Kwack, 2001; Moreno, 1996; Takagi & Esaka, 2001). However, the true extent of international capital mobility in East Asian economies practicing sterilization is not well known. We examine international capital mobility in the presence of central bank sterilization for seven East Asian economies: Indonesia, Korea, Malaysia, the Philippines, Singapore, Taiwan, and Thailand. We seek to understand the scope of and changes in international capital mobility in these countries over time, as they have experienced periods of liberalization, changes in the extent of their integration into the world economy, and financial crises. Second, if aggressive sterilization policies are effective, then interest rates in Asian economies deviate from the market interest rates that would prevail in the absence of policy intervention.

[2] Ouyang et al. (2010) provided various empirical methodologies to illustrate the relationship between net foreign assets and net domestic assets in China. Based on their empirical findings, the authors claim that there was moderate capital mobility in China between mid 2000 and 2008 but that the People's Bank of China (PBC) has heavily sterilized capital inflows because of their substantial accumulations of foreign reserves.

[3] The degree of capital mobility is a key characteristic of the Mundell-Fleming model. A country employing a fixed exchange rate regime that experiences perfect capital mobility will experience substantial increases in output if the national government promotes expansionary policies, *ceteris paribus*.