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Capital flows and real exchange rates in emerging Asian countries

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ABSTRACT

This paper examines the impact of capital flows on real exchange rates in emerging Asian countries during 2000–2009 using a dynamic panel-data model. The estimation results show that the composition of capital flow matters in determining the impact of the flows on real exchange rates. Other forms of capital flow, especially portfolio investment, bring in a faster speed of real exchange rate appreciation than foreign direct investment (FDI). However, the magnitude of appreciation among capital flows is close to each other. The increasing importance of merger and acquisition (M&A) activities in FDI in the region makes these flows behave closer to other forms of capital flow. The estimation results also show that during the estimation period, capital outflows bring about a greater degree of exchange rate adjustment than capital inflows. This evidence is found for all types of capital flow. All in all, the results indicate that the swift rebound of capital inflows into the region could result in excessive appreciation of (real) currencies, especially when capital inflows are in the form of portfolio investment.

1. Introduction

The swift and strong rebound of capital inflows in emerging Asian economies after the onset of the global financial crisis in 2008 has added new impetus to the debate on how to reap the gains from capital inflows while minimizing any possible economic costs. One of the unfavorable side effects of 'too much' capital flows is (real) exchange rate appreciation – a loss of a country's competitiveness – that could adversely affect the tradable production and export sectors. Real exchange rate appreciation occurs regardless of the nature of the exchange rate regime implemented in a country. Under a flexible exchange rate regime, real exchange rate appreciation occurs through the appreciation of the nominal exchange rate, while under a fixed exchange rate regime appreciation comes mainly through a rise in non-tradable prices. Under an intermediate regime, real currency appreciation occurs through a mixture of these two processes.

Stronger currency appreciation has become evident in emerging Asian economies along with a strong rebound in capital inflows. Exporters in many countries have asked for government intervention to mitigate the pressures arising from currency appreciation. Besides currency appreciation the excessive liquidity associated with the strong rebound in capital inflows began to determine the new level of asset prices. Particularly in the PRC asset prices have increased noticeably and worry over the prospect of asset price bubbles has become intense. Many central banks in the region, including the PRC and Taipei, China have begun to tighten capital control policies, while the others monitor closely the movement of capital flows.

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In Korea, Taipei, China and Thailand central banks have also intervened extensively in foreign exchange markets, while local-currency bonds were issued to mop up liquidity arising from foreign exchange market intervention.

These issues lead to empirical questions concerning the relationship between real exchange rates and capital flows in emerging Asian countries; particularly how far and how fast (real) exchange rates will be adjusted in response to capital flows. While there is strong evidence to believe that different types of capital flows behave differently, whether compositions of capital flows matters in determining the movements of (real) exchange rates is also a question of considerable interest. In particular, does the impact of foreign direct investment (FDI) on real exchange rates differ from other forms of capital flow, especially portfolio and bank loan investment? Whether an increase in merger and acquisition activities in emerging Asia matters to the relationship between FDI and real exchange rates is another related question. Furthermore, after 2003 capital outflows built up noticeably in the region. They then declined in response to the global economic downturn, before seemingly resuming an upward path after 2009Q2. The huge capital outflows since 2003 have set another interesting question of whether or not capital inflows and outflows facilitate different impacts on real exchange rates in the region.

The paper aims to answer these questions using a dynamic panel data model for emerging Asian economies. There are sizeable empirical studies examining the determinants of real exchange rates including a capital-flow variable in the model (see Baffes, Elbadawi, & O'Connell, 1999; Elbadawi, 1994; Hinkle & Montiel, 1999; Jongwanich, 2008). However, there have been a limited number of systematic empirical studies paying attention to different types of capital flow, in terms of both asset types, direction of flow and real exchange rates. To capture the possibly different impacts that could arise from the different type/direction of flows, in this study capital flows are divided into FDI, portfolio investment and other investment flows (bank loans).[2] Capital inflows and outflows for all types of capital are also treated differently in this empirical analysis. In addition, this study also captures the dynamic relationship between RER and capital flows, while most previous studies investigated the nexus between RER and capital flows across countries in a static relationship.

The rest of the paper is organized as follows. Section 2 briefly looks at capital flows in emerging Asian countries. The movements of FDI and other forms of capital flow are shown in this section, as well as the simple relationship between net capital flows and real exchange rates. Section 3 sets out the analytical framework of real exchange rate determinants. The data and econometric procedures are discussed in Section 4. Results are provided in Section 5 and the final section concludes with the key findings and provides policy inferences.

2. Capital flows and real exchange rates in emerging Asia: a first look

After the 1997 Asian financial crisis, capital inflows gathered momentum again from 2002 up until 2007 (Fig. 1). The global financial crisis, pronounced in late 2008, caused a slowdown in cross-border capital inflows into developing Asia (Fig. 1). However, because of strong economic fundamentals, including healthy financial institutions, and swift policy responses in the region, Asian economies, especially the PRC, recovered faster than other regions and capital flows have shown an upward trend again since the second quarter of 2009.

After 2003 a substantial rise in capital inflows, capital outflows, both FDI and other forms of capital flow, occurred in the region. Gross capital outflows reached US$770 billion in 2007 (10.5% of GDP), from US$47 billion in 2002 (1.3% of GDP). Portfolio investment grew rapidly, especially in 2006–2007. Portfolio outflows increased to 3.5% of GDP in 2006–2007 (US$219 billion), from 2.4% of GDP in 2002 (US$86 billion). Apart from Hong Kong, China; Singapore; and Taipei, China, the PRC became an important portfolio investor in the region. In 2005–2007, portfolio outflows from the PRC increased to US$46 billion, from US$15 billion in 2000–2002. Bank loan outflows also increased substantially. Hong Kong, China; Singapore; and the PRC were the key overseas investors in this type of capital outflow. Economic recovery; recycling huge foreign exchange reserves and the liberalization of capital outflows were the key factors supporting portfolio and bank loan outflows.

The amount of outward FDI also rose substantially to US$155 billion in 2007 (2.1% of GDP), up from US$33 billion in 2002 (0.9% of GDP). In addition to Hong Kong, China and Singapore, the PRC and India have become important overseas investors. Market-seeking, efficiency-seeking, and resource-seeking FDIs were crucial components of outward FDI from the region, while asset-augmenting FDI, mostly going to developed countries to acquire proprietary assets, was limited and concentrated in emerging Asian countries, such as Hong Kong, China; Singapore; Taipei, China; and Korea (Hill & Jongwanich, 2009). Sovereign Wealth Funds (SWFs) are also beginning to play a bigger role in outward FDI through their growing involvement in mergers and acquisitions (M&A).

Even though outward FDI flows have increased substantially over the past decades, their share in total capital flows was lower than portfolio investment (Fig. 2). On average, FDI accounted for less than 24% of total capital outflows in 2003–2007 only, compared to 35% for portfolio investment and 25% for bank loans. This picture is consistent throughout the region, even in net oversea investors in terms of FDI like Korea and Taipei, China.

Among capital inflows, FDI accounted for a substantial proportion of total inflows in the region, i.e. around 40% of the total. The contribution of FDI to total capital inflows varies slightly among developing Asian countries. FDI has been a dominant component of capital inflows in the PRC and India over the past decades, while in Indonesia and Thailand the composition of capital inflows started to shift from bank loans toward increasingly more FDI after the 1997 Asian financial

[2] Note that port-folio investment is further disaggregated into equity and debt security. However, the impacts of both flows on RER are statistically indifferent so we can use port-folio flows as a proxy of both equity and debt security.