

# Managing the Monetary Consequences of Reserve Accumulation in Emerging Asia

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## Summary

Asia accounted for over half of global international reserve holdings during the period 1999-2005, up from one third in the period 1990-1995. While China and Japan have been the main drivers of the massive stockpiling of reserves in the region, India, the Newly Industrializing Economies or NIEs (Hong Kong, Korea, Singapore, and Taiwan) and some middle-income ASEAN economies have also experienced significant swelling of their reserves since the crisis.

Some have argued that the reserve growth in emerging Asia more recently is a by-product of a desire by central banks to smooth exchange rate movements, but smoothing behavior by central banks should have no net impact on reserves over time. The continued build-up of reserves suggests that intervention is largely asymmetric, and that it stems largely from a desire to maintain relatively stable and/or “ultra-competitive” exchange rates. A number of commentators have expressed concerns that such large-scale intervention runs a serious risk of generating increases in inflation in the intervening countries, and some have even suggested that such reserve accumulations have played a major role in the creation of excessive global liquidity. Key to such issues is the extent to which monetary authorities can successfully sterilize the domestic monetary effects of reserve accumulation. Most monetary models of the exchange rate and balance of payments assume no sterilization so that large reserve accumulations would automatically lead to rapid growth in domestic money and credit. Sufficiently high levels of international capital mobility would make effective sterilization impossible, no matter the intensity of efforts of the domestic monetary authorities.

The aim of this paper is to investigate the extent of monetary sterilization and the degree of capital mobility to eight Asian economies: ASEAN-4 (Indonesia, Malaysia, Philippines, Thailand), India, Korea, Singapore, and Taiwan. In order to do so, the paper first outlines a set of simultaneous equations to examine the feedback effects between net domestic assets (*NDA*) and net foreign assets (*NFA*) as a means of estimating the extent of *de facto* sterilization (sterilization coefficient) and capital mobility (offset coefficient) concurrently. The sterilization and offset coefficient estimates are based on quarterly data for the period 1990:q1 to 2005:q3. We divide the whole sample period into two sub-samples: the pre-crisis period (defined as 1990:q1 to 1997:q1), and the post-crisis period (defined as 1998:q3 to 2005:q3). By comparing the different values of offset and sterilization coefficients in these two sub-samples we are able to ascertain how the extent of sterilization and degree of capital mobility has changed in the two periods for the emerging Asian economies under consideration. We also conduct a recursive estimation to investigate the dynamic change of estimated offset and sterilization coefficients.

For the eight economies as a group, the estimated offset coefficient decreased from around 0.8-0.9 to 0.6 post-crisis, indicating the degree of *de facto* capital mobility dropped after the crisis. However, there is evidence that capital mobility has picked up between 2003 and 2005 as the region has seen a resurgence in net capital inflows. There is evidence that the sterilization coefficient remained close to 1 between 1995 and 1999 and between 2003 and 2005, suggesting full sterilization of reserve accumulations. If, however, the reserve build-up persists unabated and the fiscal costs of sterilization begin to escalate, it is unlikely that the regional monetary authorities can persist with aggressive sterilization on such a huge scale. In such a situation domestic macroeconomic stability could be compromised. Our conclusion that past reserve accumulations have not been a major source of excessive liquidity creation should not be taken as suggesting that there is nothing to worry about.