

A quantitative assessment of actively managed component of foreign exchange reserves in emerging market economies

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Abstract

The paper examines sources of foreign exchange reserves changes in emerging market economies (EMEs). The changes can be divided into passive and active. The former include changes due to interest income and valuation effects. The latter are mainly driven by reserve policy decisions. It is the actively managed component of reserves – and not the changes in total reserves – that should be used when the importance of macroeconomic policy for economic performance, e.g. for the resilience to financial crises, is assessed. The problem is that monetary authorities in many emerging market economies do not decompose reserve changes into active and passive components.

The research objective is to identify the actively managed component of reserves in EMEs. As such it is similar to that of Dominguez et al. (2012). Their methodology, however, suffers from two problems. First, it relies on the arbitrary assumption about the currency composition of foreign reserves, which is assumed to be the same across all countries and based on the IMF COFER database. Second, it cannot be used for many important EMEs because it depends on the availability of data provided through the IMF SDDS Reserve Template. Countries like China or Brazil only recently have started to publish data along the SDDS requirements, so it is not possible to assess the actively managed component of reserves for the period before 2017 for China (2014 for Brazil).

Our methodology enables us to circumvent these problems. We use the state space methods to uncover the actively managed component of reserves. The main strength of our approach is that it allows to estimate the actively managed component of reserves in a broader range of countries than the alternative approach since data requirements are not as demanding. The main finding, however, is that the measures of variability based on raw data on actual reserves are misleading as measures of activity of monetary authorities. The results are cross-checked against the data on foreign exchange market interventions in the Czech Republic. It is demonstrated that our approach works not worse than the one developed by Dominguez et al. (2012). Moreover, our approach is not as severely constrained by data availability as the alternative approach.

JEL classification: F31, F33, E44; C32

Key words: foreign exchange reserve, exchange rate regime, open economy macroeconomics, state space models