

Why do foreign exchange reserves fluctuate? A quantitative assessment of actively managed component of reserves in emerging market economies

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Abstract

The paper examines sources of foreign exchange reserves changes in emerging market economies. These changes can be divided into passive and active. The former include changes due to interest income and valuation effects and are simply driven by interest rates and exchange rates. The latter are driven by reserve policy decisions, i.e. the decisions by government to purchase or sell foreign exchange reserves. Obviously, it is the actively managed component of reserves – and not the total reserves – that should be used when the importance of macroeconomic policy for economic performance, e.g. for the resilience to the global financial crisis, is assessed. The problem is that monetary authorities in the vast majority of 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 emerging market economies. As such our objective 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 COFEER database. The additional complication is that beginning in the second quarter of 2015 the IMF has ceased to release the COFER breakdowns for emerging and advanced economies (only the world breakdown is available). Second, it cannot be used for many important emerging market economies because it crucially depends on the availability of data provided through the IMF Special Data Dissemination Standard (SDDS) Reserve Template. The problem is that countries like China or Brazil only recently have started to publish detailed data on reserves along the requirements of SDDS, so it is not possible to assess the actively managed component of reserves for the period before 2017 for China or 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. Our results are tentative at this stage of research. The main finding, however, is that the variability of actively managed component of reserves is only weakly related to the exchange rate regime although the relation is stronger than the one between variability of total reserves and the exchange rate regimes.

JEL classification: F31, F33, E44; C32

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