International Reserves and the Global Financial Crisis

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The global financial crisis wreaked havoc on world markets and has led to major economic dislocation around the world. Initially it was the developed countries that bore the brunt of the crisis, but by mid-2008 the crisis was global. Some countries were hit more strongly by the crisis (especially in Central and Eastern Europe) while others, at least initially, appeared more shielded. Many of these emerging market countries had accumulated impressive stocks of international reserves prior to the global crisis. Our study aims to understand whether these precrisis international reserve accumulations, as well as exchange rate and reserve policy decisions made during the crisis, can help to explain cross-country differences in post-crisis economic performance.

The contribution of this paper is four-fold. First, we make use of new data which provides a breakdown of the types of assets included in the foreign currency reserve component of official reserves. This data, along with assumptions on currency composition and the applicable interest rate on these assets, make it possible to estimate the *passive* interest income and valuation changes which are included in measures of official reserves. Second, we derive the actively managed component of foreign currency reserves by subtracting the interest income and valuation changes from the official reserve data. As a consequence, we have much better estimates of actual purchases and sales of reserve assets, which are conceptually similar to foreign exchange intervention. Third, using these new data we find that emerging market economies did deplete foreign currency reserves during the global financial crisis. Many countries that were reserve accumulators before the crisis sold reserves and allowed their currencies to depreciate during the crisis. We also find evidence of "reserve bounce back"; after the crisis many emerging market countries went back to their pre-crisis reserve accumulation trends. Fourth, we find that real GDP growth recovery after the crisis was stronger for countries with large pre-crisis accumulations of foreign currency reserves. The influence of currency depreciation and reserve depletion during the crisis on GDP growth after the crisis differed depending on which countries are included in the sample. Perhaps ironically, the group of countries that benefitted the most from reserve depletion during the crisis is the carry-trade

counterparty countries (who are also the countries that suffered the highest valuation losses on their reserve stocks).

Official reserve accumulation among emerging market economies is a contentious topic. Trading partners often accuse reserve accumulators of having mercantilist motives, and domestically large reserve stocks are sometimes criticized as wasteful resource allocation. Emerging market economies often rebut these criticisms by citing the self-insurance value of reserves. They argue that reserves reduce the probability of falling into a crisis, and that the value of self-insurance exceeds the costs. Our findings support the view that higher reserve accumulations prior to the global financial crisis are associated with higher post-crisis GDP growth.