Global Factors in Capital Flows and Credit Growth

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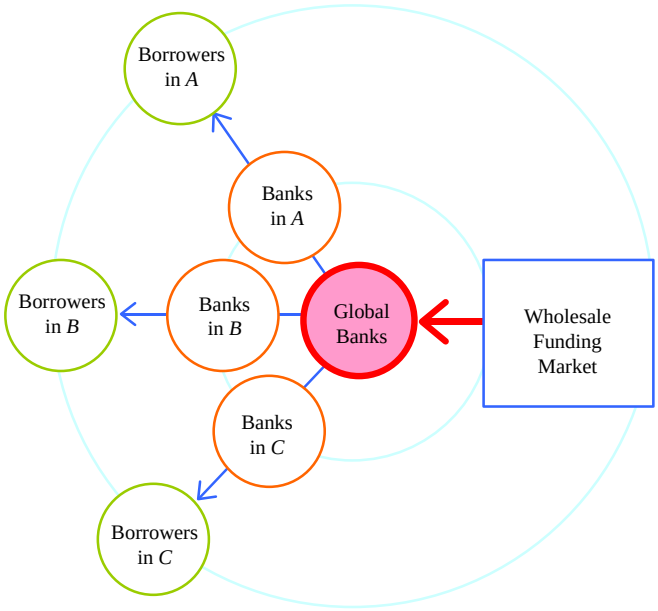
It is a cliché that the world has become more connected, but the financial crisis and the boom that preceded it have focused attention on the global factors behind credit growth and capital flows. Calvo, Leiderman and Reinhart (1993, 1996) famously distinguished the global "push" factors for capital flows from the country-specific "pull" factors, and the BIS report on global liquidity (the "Landau report") has highlighted the role of cross-border banking in the transmission of financial conditions (BIS (2011)).

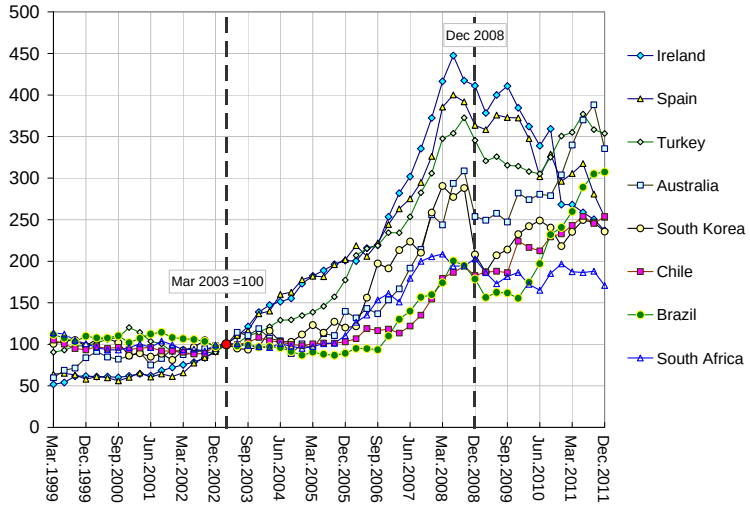
Figure 1: Propagation of Global Liquidity



In a recent paper (Bruno and Shin (2012a)) we examine the theoretical and empirical basis for global liquidity. Schematically, global liquidity propagates as in Figure 1. When global banks apply more lenient conditions on local banks in supplying wholesale funding, the local banks transmit the more lenient conditions to their borrowers through greater availability of local credit. In this way, global liquidity is transmitted through the interactions of global and local banks through the waxing and waning of bank risk-taking.

In our panel regression study of 46 countries we find that global "supply push" factors play the dominant role relative to local "demand pull" factors (such as GDP growth) in determining credit growth and capital flows. Figure 2 highlights the international evidence on how cross-border bank claims expanded dramatically – and in synchronized fashion – in the years prior to the crisis.

Figure 2: Claims of BIS-reporting banks on counterparties in countries as listed (March 2003 = 100)
(Source: Bruno and Shin (2012a), data from BIS Locational banking statistics, Table 7A)



The experience of Spain is particularly instructive on how global liquidity converts capital flows into domestic credit growth. Total bank credit in Spain stood at 414 billion euros on the eve of the euro, but subsequently increased five-fold to nearly 2 trillion euros (Figure 3). At the launch of the euro, bank lending could be financed entirely from Spanish residents (Figure 4), but global liquidity changed all that as capital flows and the lending boom fed off each other. At the peak of the cycle in 2008, only half of the bank lending in Spain was financed from domestic sources. The rest came from capital inflows, as foreign banks increased their lending to Spanish banks (Figure 4). Our findings underscore how the crisis in the eurozone is part of a larger global picture. Global liquidity mirrors the procyclical nature of the global banking system.

Figure 3: Banking sector credit to non-financial borrowers in Spain
(1992 – 2012) (source: Bank of Spain)

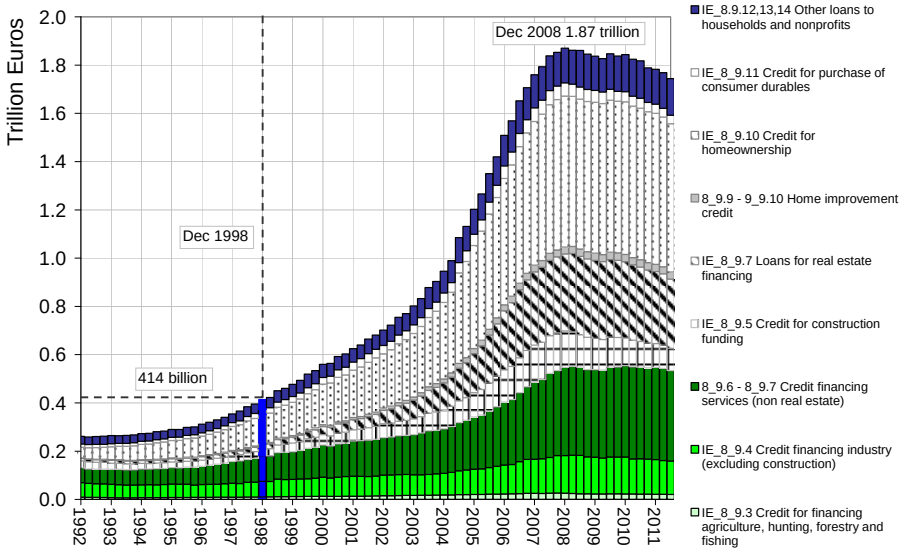


Figure 4: Funding gap of Spanish banks. Liabilities of banks in Spain to domestic residents are indicated as "core liabilities". Red region is lending financed with capital inflows, and yellow is ECB funding (Source: Bank of Spain)

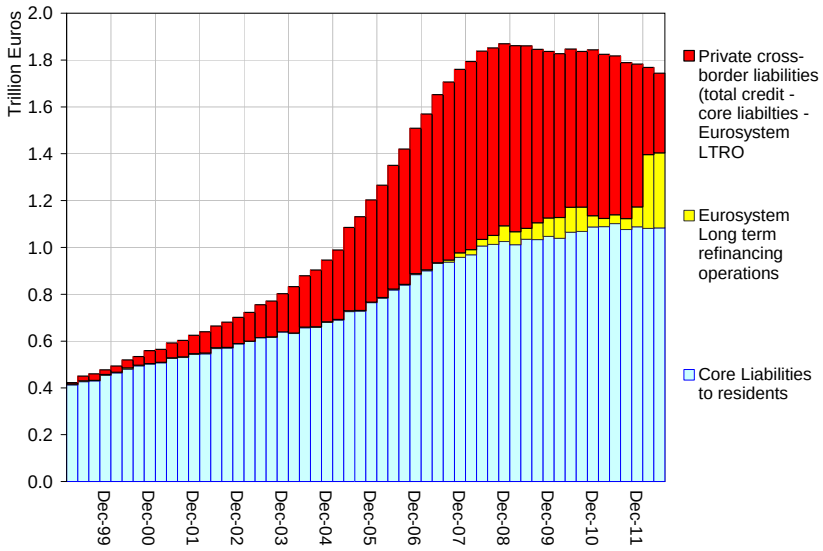
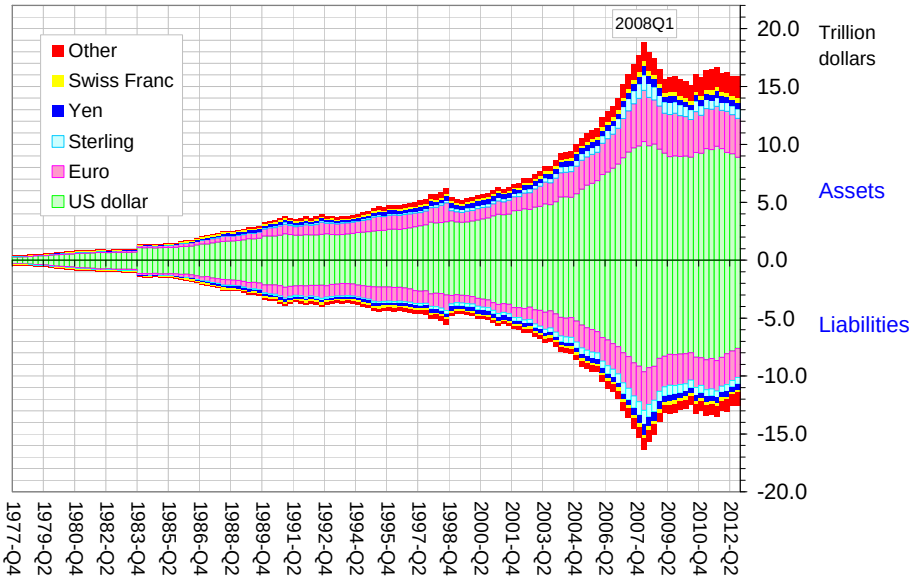


Figure 5: Foreign currency assets and liabilities of BIS-reporting banks by currency (Source: BIS Locational banking statistics, Table 5A)

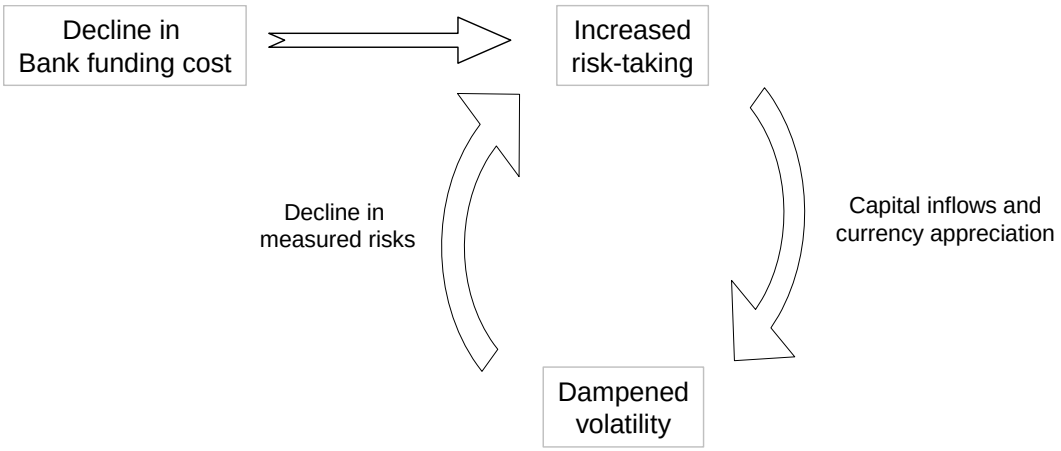


Monetary policy looms large in the propagation of global liquidity through the risk-taking channel, as shown in a separate, related paper (Bruno and Shin (2012b)). The US dollar takes center stage in the risk-taking channel as the currency that underpins the global banking system. Figure 5 shows foreign

currency assets and liabilities of global banks tracked by the BIS, arranged by currency. The US dollar series shows the US dollar assets and liabilities of banks outside the United States, the euro series gives the euro-denominated assets and liabilities of banks that are outside the euro area, and so on. The US dollar asset series exceeded 10 trillion dollars in 2008:Q1, briefly exceeding the total assets of the US chartered commercial bank sector (Shin (2012)). Bruno and Shin (2012b) find that the risk-taking channel is a powerful determinant of leverage, thereby acting as the linchpin in the propagation of global liquidity.

A further distinctive feature of the risk-taking channel is that currency appreciation can *fuel* capital inflows rather than stem them, as currency appreciation strengthens local borrower balance sheets and creates further slack in lending capacity for banks, thereby stimulating further inflows, as sketched in Figure 6.

Figure 6: Feedback created by currency appreciation in the presence of the risk-taking channel (Source: Bruno and Shin (2012b))



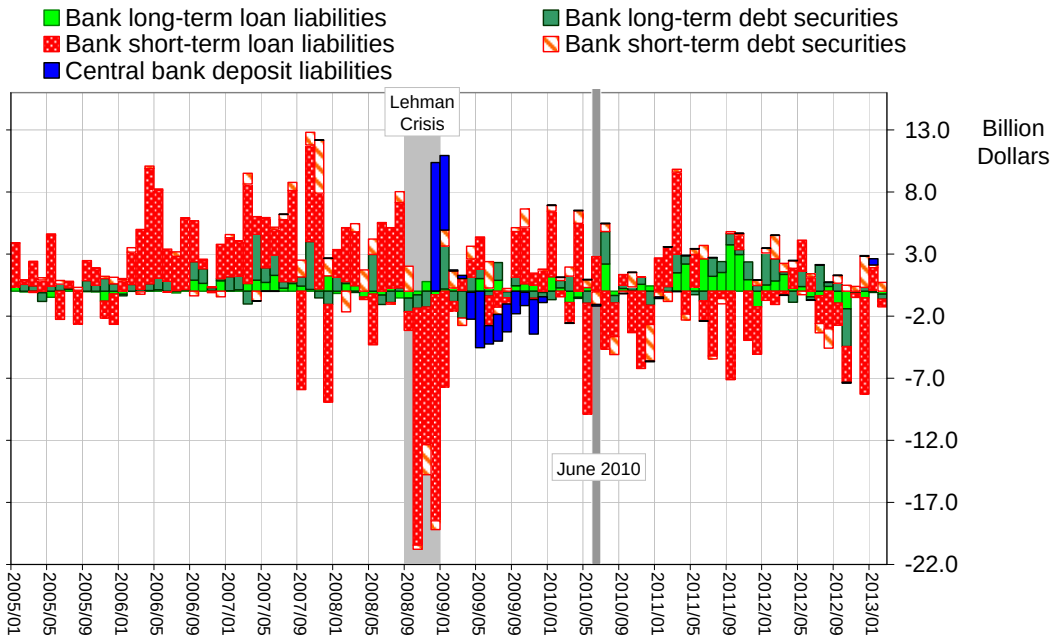
What is the right policy in such circumstances? Just letting the currency appreciate may not be sufficient to stem credit booms and capital inflow pressures when global liquidity is rampant, and policy makers may inadvertently set the economy up for a bigger boom-bust episode. Iceland is perhaps the poster child in this respect, but the lessons are more general. Some combination of micro- and macro-prudential instruments in concert with domestic monetary policy tools will be crucial in leaning against the wind. Macroprudential policy and monetary policy are likely to be strong complements when global liquidity is operating strongly, where the prudential rules create sufficient space for domestic monetary policy to operate without the distortionary effect of capital flows.

In another recent paper (Bruno and Shin (2013)), we assess the impact of the macroprudential policies implemented in Korea in 2010. Korea was one of the countries hardest hit in the 1997 Asian financial crisis, and was again at the sharp end of the financial turmoil unleashed after the failure of Lehman Brothers in September 2008. In recognition of its susceptibility to global liquidity, Korea introduced a leverage cap on FX derivatives and a macroprudential levy on non-core bank liabilities, both aimed dampening the bank risk-taking channel.

Figure 7 shows some evidence that short-term bank liabilities continued to shrink, and was replaced with long-term liabilities after the introduction of the new measures starting in June 2010. Panel

regressions confirm that Korea's sensitivity to global factors decreased markedly relative to a comparison group of countries.

Figure 7: Capital flows to banking sector in Korea by category of liabilities
(Source: Bruno and Shin (2013), data from Bank of Korea balance of payments statistics)



Although it is too early to come to a definitive assessment of such policy initiatives, researchers and policy makers would do well to recognize the role of global liquidity as a key concept in international finance – one that gives rise to conclusions that differ from standard textbook prescriptions but which is critically important to understand well.

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