

Global Imbalances and the Accumulation of Risk

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It is often argued that a key factor behind the current financial crisis has been the large US current account deficit. However, the *raison d'être* of a financial system is dealing with imbalances (between savers and investors). Hence the question is: why should the existence of current account 'imbalances', even if they persist for some time, provoke the biggest financial crisis in living history? The answer must come from the huge, structural build-up of a mismatch between asset supply and demand that arose from what are commonly called 'global imbalances'. As is well known, the current account deficit of the US arose from an unsustainable increase in consumption (and residential construction). This excess of domestic spending was financed mainly through an increase in the mortgage debt of US households. One key characteristic of mortgages is that they are long term (often for 30 years). The consumption spree of US households thus led to a large additional supply of long-term (private) assets.

However, this supply of longer-term assets was not matched by a corresponding demand for this type of assets. The excess savings from China – and other emerging economies (EMEs) and oil producers – were mostly intermediated by their central bank, which accumulated huge foreign exchange reserves. These reserves were (and still are) almost exclusively invested in short- to medium-term, safe (i.e. government) and liquid securities (mostly in the US).¹ There was thus a need for maturity (and risk)

¹ Brender & Pisani (2009) report that about one-third of all foreign exchange reserves are in the form of bank deposits. Little is known about the maturity composition

transformation on a very large scale to meet a persistent excess demand for safe and liquid assets.

Figure 1 below shows the relevant data. There is a close correlation between the US current account deficit and reserve accumulation, but it is not perfect since the US deficit had already been very large for some time before the 'search for yield' started. But before 2003, reserve accumulation had been much lower than the US deficit (which had thus been financed largely by private capital transfers). By contrast, after this date reserve accumulation increased relative to the (increasing) US deficit until, by 2006, reserve accumulation actually surpassed by far the US deficit. There is thus certainly a link between the US current account deficit and the build-up of the crisis, but this not as straightforward as sometimes believed.

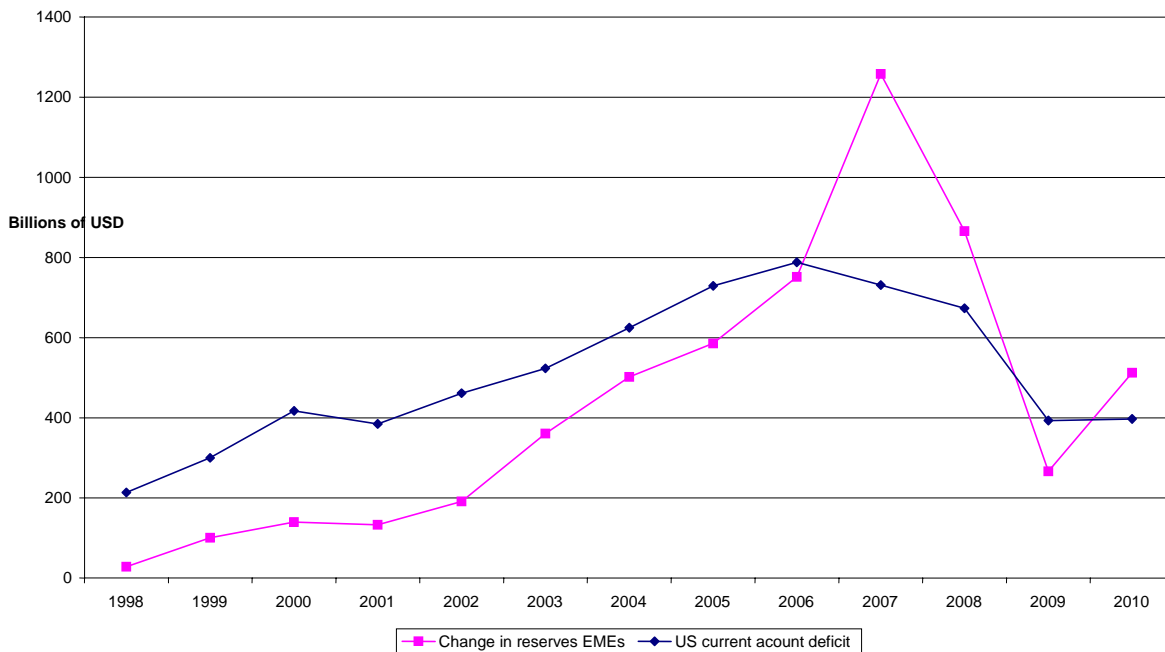
Part of the build-up of reserves went also into euros. IMF data suggest that this part was relatively minor (20-30%), but it might still have had an impact on government debt in the euro area, contributing to lower interest rates and a compression of yield differentials in Europe as well. Securitisation started in the euro area around this date, although it never acquired the same scale as in the US.

of the remainder, most of which is invested in interest-bearing securities. The scarce available data on the composition of USD foreign exchange reserves that can be gleaned from the TIC data suggests that over half of official foreign holdings of US securities had a maturity of less than three years. See also Brender & Pisani (2007).

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Figure 1. Reserve accumulation by emerging economies and the US current account deficit



Source: IMF, WEO data base April 2009, variable 'change in reserves'.

Another way to look at the same phenomenon is to note that the increased demand for US government debt by EME central banks led to lower yields on that asset, thus forcing those savers in the OECD countries who would normally have held government assets into a frantic 'search for yield'. But this was a search for yield on safe (and liquid) assets. The AAA tranches on securitised US mortgages (and other debt) seemed to provide the safety plus a 'yield pick up' without any risk, at least in the sense that the securities were rated AAA.

As long as US house prices kept on increasing and unemployment remained, actual delinquencies remained low and there seemed to be no reason for market participants to question the high ratings ascribed to these securities, although the incentive for the ratings agencies to provide favourable ratings were well known. Thus, AAA-rated residential mortgage-backed securities (RMBS) provided an important source of liquidity by their widespread use as collateral.

From flows to stocks: Most analyses of global imbalances have focused on the size of the flows, namely the current account deficit of the US relative to US GDP or world savings. Accordingly most concerns about global imbalances emphasised the magnitude of the exchange rate adjustment that would be required to rebalance US spending and absorption. However, this aspect turned out not to have been crucial; instead the severity of the present crisis is due to the unprecedented magnitude of the

accumulated imbalances in the stocks of assets and liabilities.

The magnitude of the imbalances between asset supply and demand that cumulated over time is gigantic. Over the period 2000-07, the cumulated US current account deficit amounted to almost \$5 trillion and US household debt increased by almost \$7 trillion, of which approximately \$5 trillion was in the form of mortgages. Meanwhile the foreign exchange reserves of emerging markets increased by about \$4 trillion (of which the Chinese central bank accounted for about a third). The financial system thus had to transform trillions of dollars of US household mortgages into the type of assets in excess demand from those investors who had been crowded out of the government debt market due to the reserve accumulation by EME central banks. In so doing, it took an enormous macro risk.²

The key technology that permitted the transformation of US mortgages into safe liquid assets was securitisation. Until 2007, it was widely believed that securitisation should lead to a better distribution of risk since the 'originate to distribute' model – in its pure form – implies a full risk transfer to the buyers of the various forms of asset-backed securities (ABS) and RMBS. However, in the context of global imbalances, this could not have happened on a large scale since the massive buying

² For an excellent description of the chain of risk-takers, see Brender & Pisani (2009).

of US government paper by EME central banks had displaced other investors whose preference previously had been for safe, short-term and liquid assets. ABS, especially RMBS, do not, a priori have these qualities. A piece of a pool of mortgages represents a longer-term asset; it is only as safe as the underlying mortgages and is only liquid if there is a demand for this specific asset. Government paper of a given maturity is highly substitutable, whereas every asset-backed security constitutes a special case and thus by its nature is much less liquid. Ultimately an RMBS resembles more an equity investment in a regional mortgage lender than a government bond.

The excess demand for short-term, safe and liquid assets created by EMEs' accumulation of reserves could not have been satisfied by the securitisation of US mortgages (and consumer credit) without massive credit and liquidity 'enhancements' by the banking system. A clean securitisation with full risk transfer to the investor was thus not possible from a general equilibrium point of view.

How were RMBS made safe, short-term and liquid? The exact way in which this was achieved varies enormously from case to case, but the general rules of the game were as follows:

- a) Safe: As already mentioned above, the appearance of safety was created by the slicing of tranches coupled with high (AAA) ratings for the most senior tranches (in reality most often about 85% of the total, as experience suggested that a total loss of over 15% was extremely unlikely to occur). This service was provided by the ratings agencies for which it represented a major source of income.³
- b) Short to medium term: Banks or shadow banking institutions, such as special investment vehicles, used RMBS (and similar assets) as collateral to borrow more funds, e.g. by issuing asset-backed commercial paper (ABCP), which is short-term and thus the kind of assets in excess demand then. Issuance of ABCP, which surged after around 2003 (around the same time as the reserve accumulation by EMEs also increased, as shown above), constitutes a classic maturity transformation, which was very profitable (given the absence of capital requirements) as long as central banks kept short-term interest rates low and promised (as did the Federal Reserve) to increase them only at a 'measured pace'.

³ Benn Steil (2009) shows a near-perfect correlation between the profits of the major rating agencies and the number of securitised assets rated by them.

- c) Liquid: ABCP were already more liquid than the assets with which they were backed. However, ABCP programmes were usually possible only if a bank provided a back-up line of credit. Only the banking system could provide the back-stop liquidity that was required by the ultimate investors.

All these elements were necessary to recycle excess EME savings to dis-saving US households. Banks had to provide the maturity transformation and the credit enhancement that later proved so costly to them. This transformation required of course a huge increase in the balance sheet of the banking (and shadow banking) system and thus a huge increase in leverage.⁴ This increase in leverage, in turn, acted as a powerful amplifier once risk returned.

This analysis implies that one has to take into account the way current account deficits are financed, and how flow imbalances cumulated into large stock disequilibria, when one looks at the risk that persistent global current account imbalances may create for finance stability.

Looking forward, this analysis implies that the current (reduced, but still sizeable) US current account deficit should not lead to similar asset supply and demand mis-matches since US households are now starting to save and it is the US government that is running the deficit, thus supplying exactly the kind of assets needed by EME central banks.

References

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⁴ An increase in capital commensurate with the risk taken by the financial sector would of course have limited the damage, but it would probably have made this transformation too expensive.

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