such claims typically assume that the objective is either to hold down the exchange rate or to suppress the total volume of inflows. In this approach the emphasis is on the exchange rate's influence on the trade balance and thus also the attempt to hold back currency appreciation by limiting financial inflows, whatever their precise form.

But if capital controls and related macroprudential measures are seen not as instruments of exchange rate management but as part of a package of policies targeted at financial stability, then it is the *composition* of capital flows that takes center stage rather than their volume.[11] Foreign direct investment (FDI) and portfolio equity flows are less likely to reverse direction abruptly. And even when portfolio flows do reverse, the impact on funding may be less damaging than any sudden loss of access by the banking sector. Foreign sellers of stocks in a crisis face the double penalty of lower local currency prices when they sell and a sharply depreciating exchange rate, the implication being that the dollar-equivalent outflow associated with repatriation of portfolio equity sales proceeds tends to be small compared to the pre-crisis marked-to-market value of foreign holdings of equity. And the typical equity investor (such as a pension fund or mutual fund) is not leveraged.

In contrast, when foreign funding of the banking sector evaporates abruptly, the consequences are more damaging. If the local bank is leveraged and debt is denominated in dollars, then outflows can set off the well-known cycle of distress in which belated attempts by banks to hedge their dollar exposure drives down the value of the local currency, making the dollar-denominated debt even larger.[12] If the crisis erupts after a long build-up of such mismatches, the coincidence of the banking crisis with the currency crisis (the "twin crisis") can undermine banking sector solvency, with significant economic costs.

Capital controls are not, of course, the only tool for dealing with inflows. Microprudential tools such as minimum capital ratios should be part of the policy response. Even these tools, however, may not be enough to dampen the upswing of the cycle. Bank capital ratios often look strong during booms when banks are profitable and the measured quality of loans is high. In addition, the application of discretionary measures, such as higher capital requirements, must surmount concerted lobbying by vested interests that benefit from the boom.

Currency appreciation may also help to moderate the size of capital inflows, as foreign investors perceive less of a one way bet. However, when banking sector flows form the bulk of the inflows, merely allowing the currency to appreciate may not suffice. The behavior of banks and other leveraged institutions is additionally influenced by their capital position and their perception of risks. Currency appreciation and strong profitability coupled with tranquil economic conditions can be seen by banks as a cue to expand lending rather than to curtail their activity.

In sum, capital controls can, under some circumstances, be useful for managing maturity and currency mismatches and, in particular, for forestalling dollar shortages in the banking system. Judiciously employed along with other macroprudential policies, they can reduce financial instability as well as boom-bust cycles, thereby serving as a useful complement to conventional monetary policy instruments. As with other instruments, care should be taken that they are used to reduce macro-economic volatility rather than merely to suppress it, only to see it emerge in other, potentially more destructive ways. Moreover, with capital accounts becoming more open and given the increasing fungibility of funds across different forms of capital, even controls limited to specific types of capital flows are becoming an increasingly

[11] For an extensive discussion, see Ostry, Ghosh, Habermeier, Chamon, Qureshi, and Reinhardt (2010).
[12] Figuratively, the attempt to clamber out of the ditch by buying dollars merely drags others into the ditch.