How far might the dollar fall? By as much as 50 per cent from its peak, in trade-weighted nominal terms, suggest two distinguished international economists, Maurice Obstfeld of the University of California, Berkeley and Kenneth Rogoff of Harvard.* Up to now, the fall has been just 17 per cent, on a broad trade-weighted basis (see chart). More, it seems, is on the way.

The work of these two economists assesses the real exchange rate adjustments needed to reduce the US current account deficit. But a prior question is whether such a reduction is needed. The honest answer is: nobody knows. But it is easy to accept that the present path is unsustainable, since both the current account deficit and external liabilities are on an explosive upward trajectory. On current trends, the current account deficit might even jump from 6 per cent of gross domestic product to as much as 10 per cent by the next decade.

Already, strains are showing. Since 2001, there has been a net outflow of foreign direct investment and portfolio equity, but a huge inflow of money from foreign governments (see chart). In 2002, 2003 and the first half of 2004, foreign governments financed Dollars 564bn (43 per cent) of a cumulative current account deficit of Dollars 1,318bn (Pounds 695bn). Since the US fiscal deficit is the principal domestic counterpart of the external deficit, the flow from foreign governments is the biggest (albeit unofficial) aid programme in history.

Some argue that Asian governments - and, above all, China's - are wedded to the fixed exchange rate against the dollar. Others argue that, once the floor to the dollar is established, private flows will, once again, take up the strain. All this is conceivable. But at least one good reason why the private sector will not finance the US deficit is the size of the exchange-rate risk. To assess this risk, it is necessary to analyse how big a fall in
the dollar might be needed. The smaller the needed fall, the smaller the exchange-rate risk and the more sustained the capital inflow will be.

Total spending by US residents now exceeds GDP by close to 6 per cent. Suppose that the US was a small country whose aggregate income was spent on perfectly tradeable goods and services. All that would then be needed, to eliminate the current account deficit, would be to cut aggregate spending by this amount. The excess demand currently satisfied by imports would disappear, while GDP itself would be unaffected. No change in relative prices would be needed and so no change in the exchange rate.

This is not how any economy, least of all the US, works. Prof Obstfeld and Prof Rogoff introduce three modifications: first, the tradeable goods and services made by the US are different from those it imports; second, the US accounts for at least a quarter of global output; and, third, some three quarters of US output is made of things it can trade only with difficulty, such as domestic transport, healthcare, restaurant services and so forth.

Think of a world with just two countries: the US, with an external deficit of 6 per cent of GDP, and the rest of the world, with a surplus of 2 per cent. A reduction in the US current account deficit and so of the rest of the world's surplus must now generate changes in three relative prices - prices of US-made tradeables relative to its imports, prices of US non-tradeables against its tradeables and the prices of foreign non-tradeables against foreign tradeables. What then determines the change in the real exchange rate (or home prices against foreign prices)? The answer is the price changes needed to preserve full employment.

If there were no changes in relative prices, a reduction in US demand would not only improve the current account deficit, but also generate a recession. A reduction in demand equal to the current account deficit would end up reducing it only from 6 per cent to 4.2 per cent of GDP. But it would also lower demand for non-tradeables and so reduce GDP by 4.2 per cent. To eliminate the external deficit, GDP would need to fall by a sixth and output of non-tradeables by a fifth.

This would be a depression.

Moreover, since the US is a large country, the reduction in its demand for tradeables would affect the rest of the world. To eliminate its current account deficit, the required reduction in US demand must be still bigger.

Reducing a current account deficit unquestionably demands a fall in demand relative to output. But to prevent a big recession, there must also be a rise in the relative price of tradeables in the country reducing its deficit, to switch demand towards non-tradeables and so sustain output, with the opposite happening in countries reducing their surpluses. For a big country there will also need to be a reduction in the terms of trade - the price of its tradeables against those of the rest of the world.
The size of the required price changes is determined by "elasticities of substitution" - a fancy name for the changes in relative prices needed to bring about given changes in demand. According to Prof Obstfeld and Prof Rogoff, the real exchange rate depreciation needed in the US could be as big as 34 per cent. Moreover, in these calculations, the internal price change exceeds the terms of trade adjustment by a large margin: if the needed real depreciation is 34 per cent, the deterioration in the US terms of trade is only 7 per cent. Finally, because the pass-through of changes in nominal exchange rates to prices is low, the nominal exchange rate change needed might be double the real one.

This is not an analysis of what will happen. It is an analysis of what could happen if the US had to eliminate its current account deficit. Provided the rest of the world is happy to finance a substantial (albeit somewhat smaller) deficit indefinitely or is relaxed about the speed of adjustment, the required changes in relative prices can be smaller, slower or both.

Yet the risks are also obvious. To bring about a substantial reduction in the external deficit without a deep recession, the US needs a huge change in internal relative prices. If the financing of the deficit is indeed in doubt, a weak dollar is a certainty. Hard currency enthusiasts may want the US to choose a depression, instead, or hope the deficit can grow without limit. Neither position is sensible. Big adjustments in the dollar's real value are a certainty. The only questions are when, how and how much.

* The Unsustainable US Current Account Position Revisited, Maurice Obstfeld and Kenneth Rogoff, NBER Working Paper 10869 martin.wolf@ft.com