DOLLARS AND DEFICITS – THE US CURRENT ACCOUNT DEFICIT AND ITS EXCHANGE RATE CONSEQUENCES

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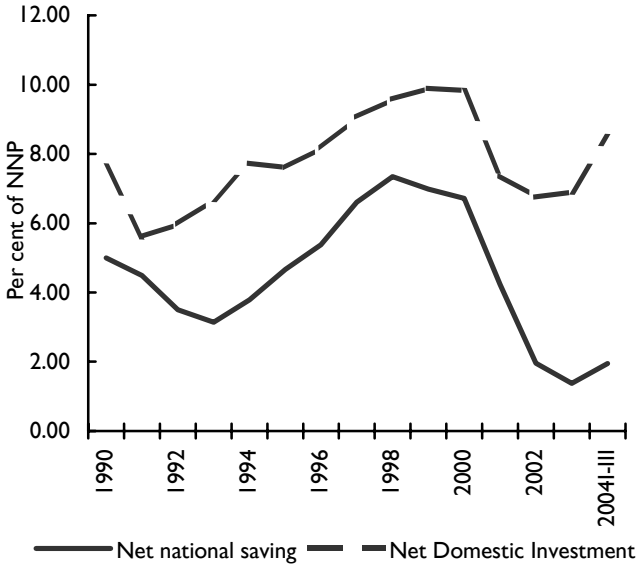
The path of the dollar

In the past three years the US dollar has been declining whilst the US current account deficit has expanded, and these two developments are clearly linked. However, the causes of the decline in the dollar and the solution to the US deficit may not be as closely related as at first may appear. The emergence of a sustained deficit does not automatically necessitate a fall in the exchange rate, and a fall in the exchange rate may not correct such a deficit. Deficits can exist if the currency moves above its sustainable real exchange rate, and a real depreciation can remove such a deficit. Deficits caused by exchange rate movements are likely to be more temporary than those that either emerge for long-term structural reasons or result from structural imbalances in the economy. A structural deficit can be the consequence of low domestic saving or high domestic government borrowing. If domestic investment is very profitable then even high levels of domestic saving may still result in a savings shortfall, and the high returns may induce a structural capital inflow which will produce a sustainable current account deficit as a consequence. All these factors have influenced the increase in the US deficit in the past decade, and it is difficult to see how a correction to the deficit can occur without one of the domestic drivers changing in some way. Here we present a set of simulations using NiGEM to examine the impacts of alternative adjustment scenarios and their global implications. Before adding to the debate about the possible remedies, we will attempt to establish the sources of the current conjuncture, as the alternative adjustment paths for deficits and for the dollar depend on the sources of misalignment.

The US current account deficit as per cent of GDP has been climbing rapidly since the early 1990s. By 2000, the US current account deficits have exceeded even those of the Reagan era, and 2004 is projected to have seen another record. Much of the recent debate in economic literature and in the media has focused on whether such large current account deficits are sustainable and if not, how large the dollar realignment must be to bring about the required adjustment.

A current account deficit is the difference between national savings and national investment. Depending on the source of the imbalance, a deficit can either be viewed as sustainable or unsustainable, or more commonly, productive or unproductive. The driving factors behind the US current account deficit have shifted in recent years. Beginning in the mid-1990s, moderate national savings

Chart 1. US net investment and net national savings



were coupled with large inflows of foreign savings which sustained rising investment. From 2001, a fall in national savings and a reduction in the inflows of foreign savings have accompanied falling levels of investment and rising consumption. The difference between the two scenarios is crucial. In the former case, the current account deficit reflected productive behaviour in the form of expected future income generation. Expected future income growth from currently rising investment may ensure that a country displays intertemporal solvency and may enable a nation to service current debt obligations. Both consumption and investment were able to grow simultaneously during the second half of the 1990s because capital flows appeared to be based on favourable future returns. Since 2001 the mirror image of the deficit has moved from investment in the productive capacity of the US economy to reduced national savings and investment alongside rising consumption. From chart 1, which plots the rate of net investment and net national saving in the US, it is immediately clear that the large and growing current account deficits of the recent years are a direct result of the drop in the level of national saving.

The reason that net national saving has declined so severely over the past several years becomes clear from chart 2, which plots private and national saving. The change in national saving comes from the increase in the federal budget deficit, or in government borrowing. As Summers (2004) reports, the federal deficit now absorbs three quarters of the private saving generated by the US economy. If debt is not neutral then a widening budget deficit impacts on savings and investment decisions and produces a link between government dissaving, lower national saving and a widening current account deficit, as is discussed by Pomerantz and Weale (2005). This is clearly the case in the US today as net private savings have been declining since the early 1990s, while national savings as a whole began to deteriorate substantially only in 2001.

Given a fiscal expansion one would expect to find rising domestic interest rates not only to balance financial markets, but also to compensate lenders for an increasing risk associated with holding larger stock of US debt. The increase in the interest rate that would follow from a looser fiscal stance would depend upon the reactions of the Federal Reserve. As long as it is perceived that an increase in demand would put upward pressure on inflation and was concerned about this, rates would rise. Higher interest rates would move to dampen consumption and increase savings and investment and, thus, lead to an improvement in the current account deficit. However, US interest rates, currently at very accommodative levels, have not risen as might have been expected.

It is clear from examining the sources of finance of the US current account deficit that increasingly the imbalance is less about investment and more about financing current consumption. There has been a reduction of inflows of foreign savings, in the form of foreign direct investments and equity flows, and a rise in official purchases of US securities. Chart 3 plots the shares of foreign investment by asset class. It shows that since 2000, FDI and foreign

Chart 2. US private and national savings

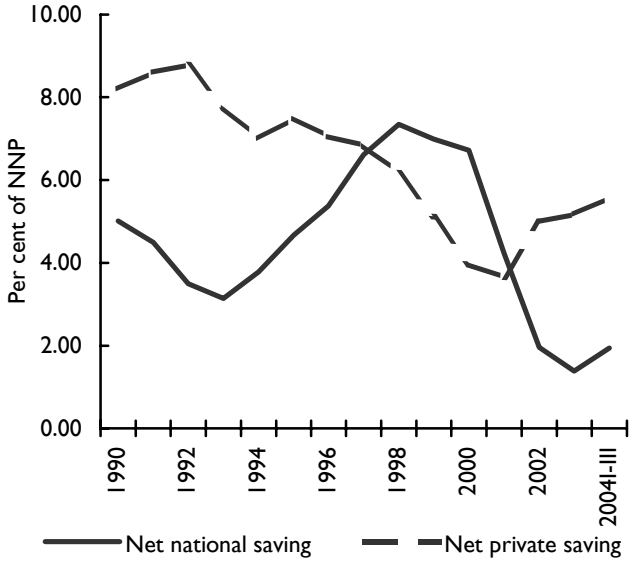
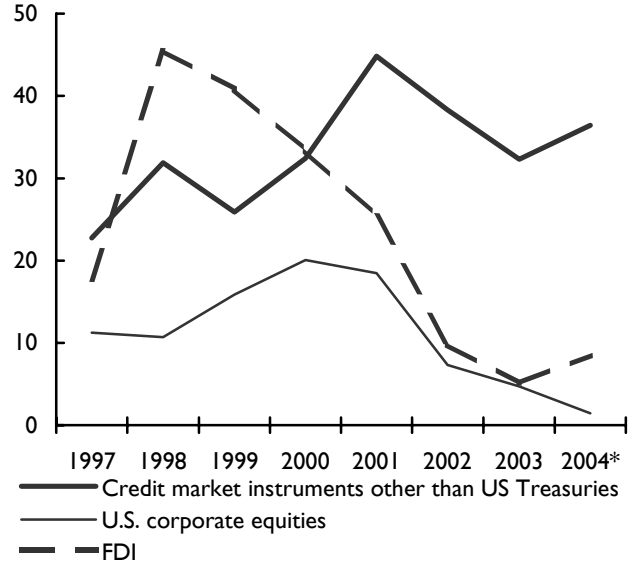


Chart 3. Shares of foreign investments into US by asset class

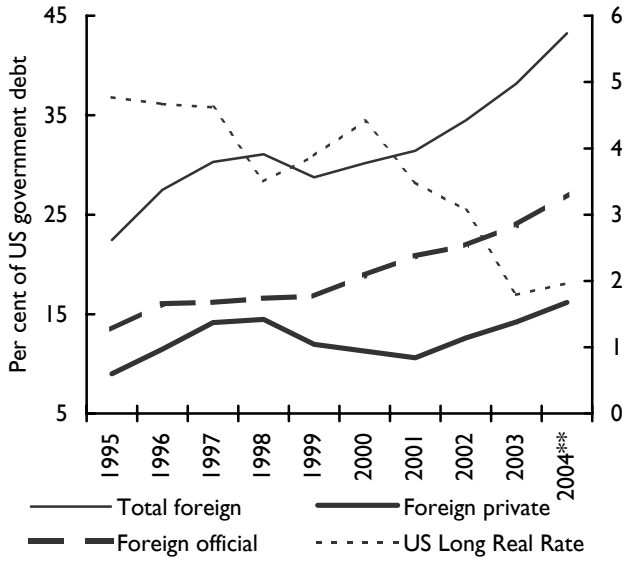


investment into US corporate equities tumbled as a share of all foreign investment, while short-term more accommodating flows accounted for nearly 40 per cent (up from 20 per cent in 2000) of all foreign investment in the US in the first three quarters of 2004.

The US government has increasingly relied on foreigners to finance its government deficit, as the proportion of the federal debt held by foreigners increased from 22 per cent in 1995 to over 43 per cent in 2004. As the inflow of foreign savings began to dry up in 2001, foreign central banks, notably those in Asia, became the main source of financing for the current US federal deficits. In an attempt to maintain competitive exchange rates vis-à-vis the dollar, Asian central banks, pursuing quasi-fixed exchange rate regimes, have been buying large amounts of official US securities. Their actions have helped slow down the adjustment in interest rates we would expect, with noticeable foreign exchange market intervention being conducted in emerging Asia, with China taking the lead. The combination of low long-term interest rates and weak Asian currencies only exacerbates the deterioration in the US current account as consumers continue to buy cheap imported goods and face no incentives to raise savings.

The accumulation of US denominated foreign exchange reserves by Asian central banks has clearly gone beyond what could be considered a prudent measure against speculative currency pressures. And the question now becomes, how long are Asian central banks willing to finance the US imbalance through asset accumulation without demanding higher rates of return? To the extent that US national savings are deficient and Asian growth is being driven by competitive exports to the US, it is likely that this scenario will persist for some time. However, as US interest rates begin to return to more neutral levels and the current US dollar slide begins to elicit higher yields via increased perceived exchange rate risk, then the cost of debt obligations will begin to rise. Foreigners may then diversify out of dollar holdings into alternatives, such as the euro or yen.

Chart 4. Ownership of US Government debt



Currently a popular view held in the media and public policy circles is that a fall in the dollar will reduce the US current account deficit. Obstfeld and Rogoff (2004) argue and our own results show, that even very large autonomous exchange rate realignments will not go far toward reducing the size of the US current account deficit. The adjustment must come from fundamental shifts in consumption, not the depreciation of the nominal exchange rate. Exercises using our model, NiGEM, confirm the point that the majority of the adjustment has to come from increasing the US national savings either by increases in private saving or by reducing the size of government borrowing.

Generating sustained major movements in real exchange rates is very difficult. Furthermore, it is not clear that a shift in the nominal exchange rate can induce such a movement. Exchange rates are determined in a complex set of markets, and can move for many reasons. In a world with liberalised and sophisticated financial markets the bilateral exchange rate, *rx* – defined as domestic currency per unit of foreign currency – will depend up the interest differential ($r_{home} - r_{abroad}$) between the two countries and the exchange rate expected next period, along with a risk premium on the assets of one of the countries. If markets work efficiently we may write the so called open arbitrage condition for efficient markets (approximately) as

$$r_{home,t} = r_{abroad,\,t} + E(rx_{t+1} - rx_t) + risk. \qquad (1)$$

The current exchange rate may shift because exchange rates are expected to be different in the future or because the risk premium has changed. A move in the expected exchange rate could be generated in turn by a change in the real rate of return or by a change in the nominal interest rate driven by expected developments in monetary policy. A change in the euro dollar rate could be driven by a number of possible factors:

- a productivity shock, as discussed in Barrell and Holland (2004) and in't Veld (2004),

- a shift in the expected stance of monetary policy, as discussed in Barrell and Pain (2000), Laxton *et al*. (1998) and Erceg *et a*l. (2004),

- a change in the risk premium on dollar assets, as discussed in Barrell and Holland (2004a).

Each of these could produce a fall in the dollar of a given magnitude with sharply different consequences for the US and Euro Area economies, because the exchange rate is an endogenous variable in the world, as it is in the structural, forward looking models the authors cited above use. If the exchange rate is treated as an exogenous variable, as in Dalsgaard *et al*. (2001), the analysis frequently produces misleading results because, among other factors, the impact of monetary policy is not taken into account.

Simulating dollar realignments using NiGEM

A rise in the risk premium on US assets in forward looking, rational financial markets pushes a wedge between the long-term real interest rate in the US, which should rise, and that in the Euro Area and elsewhere, which should fall. The size and distribution of these changes will depend upon the monetary policy reactions of the authorities, who can mitigate or amplify the effects. The fall in the real exchange rate in the US and the rise in the real exchange rate of the Euro Area will increase external demand in the former and reduce it in the latter. The rise in real interest rates in the US will moderate the expansionary effects of the depreciation, and the fall in real interest rates will stimulate domestic demand and help offset the fall in external demand in the Euro Area.

Table 1 details the movements in the long-term real interest rates and the inflation rates in the US and the Euro Area, as well as the effects on output, domestic demand and export volumes in the two regions. The appreciation of the euro slows growth in that region, and speeds it in the US, and in both regions inflation moves in the opposite direction to output. Domestic demand declines in the Euro Area, with a noticeable fall in the level of output, and so the indirect effects on export and import volumes from the appreciation of the euro are not offset by the impacts of lower real interest rates on investment and on consumption through their impact on wealth. Real exchange rates return to base in the longer term, as we have applied a temporary risk premium shock. This shock has little overall effect on world demand because it redistributes it, rather than expands it. Monetary shocks, however, are rather different and we turn to them next.

Table 1. US risk premium shock[a]

	Long real rate[a]	Real GDP[b]	Inflation[a]	Domestic demand[b]	Export volumes[b]
United States					
2005	0.030	0.278	0.787	0.080	
2006	0.048	0.358	2.044	0.013	
2007	0.053	0.253	2.481	–0.109	
2008	0.050	0.094	2.536	–0.233	
2009	0.038	–0.078	2.245	–0.359	
2010	0.022	–0.262	1.632	–0.472	
Euro Area					
2005	–0.248	–0.511	–0.205	–0.096	–1.848
2006	–0.217	–0.493	–0.178	–0.074	–1.599
2007	–0.180	–0.420	–0.135	–0.093	–1.301
2008	–0.138	–0.298	–0.093	–0.078	–0.984
2009	–0.096	–0.148	0.001	–0.064	–0.584
2010	–0.066	0.009	0.122	–0.059	–0.213

Notes: (a) Long real rates and inflation are the absolute difference from base values. (b) GDP, domestic demand and export volumes are seen as the percentage difference from base values.

We can repeat the same exchange rate shock, but presume that it is driven by a shift in the anticipated stance of *monetary policy in the US*. A monetary shock in the US that causes a depreciation increases the level of world demand, albeit temporarily, and raises the world price level. The impact on the Euro Area of a monetary stimulus in the US depends upon the response of the ECB. We presume that the ECB will focus on price stability in the medium term, and hence follow our default policy rule (see for instance Barrell and Dury, 2000). The fall in the real exchange rate in the US and the rise in the real exchange rate of the Euro Area will increase external demand in the former and reduce it in the latter. Expansionary monetary policy in the US will also raise domestic demand because interest rates fall, and this will amplify the expansionary effects of the depreciation.

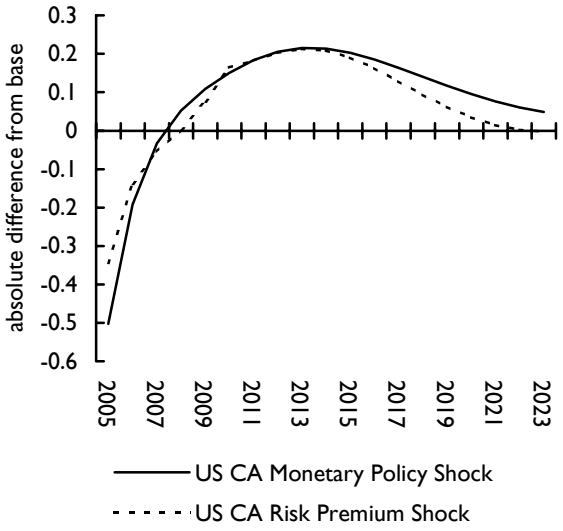
The monetary stance of the ECB would ensure that interest rates respond only marginally in the Euro Area and there will be little direct stimulus to domestic demand to help offset the initial fall in external demand in the Euro Area. Table 2 details the movements in the long-term real interest rate and the inflation rate in the US and the Euro Area, and also reports the effects on output, domestic demand and export volumes in the two regions. The appreciation of the euro slows growth in that region, and speeds it in the US, where the rise in the latter country's growth rate is rather more pronounced than in the risk premium case. The strength of output growth in the US in this scenario is marked and it is sufficient to raise the level of external demand facing the Euro Area noticeably, which is evidenced by a smaller negative impact on export volumes

Table 2. US monetary policy shock[a]

	Long real rate[a]	Real GDP[b]	Inflation[a]	Domestic demand[b]	Export volumes[b]
United States					
2005	–0.833	1.405	0.874	1.502	
2006	–0.525	1.657	2.394	1.760	
2007	–0.325	1.276	2.555	1.387	
2008	–0.211	0.826	2.366	0.940	
2009	–0.153	0.468	1.799	0.569	
2010	–0.125	0.229	1.212	0.309	
Euro Area					
2005	–0.262	–0.400	–0.221	–0.051	–1.389
2006	–0.249	–0.242	–0.161	0.051	–0.710
2007	–0.236	–0.108	–0.131	0.108	–0.284
2008	–0.221	–0.019	–0.137	0.169	–0.121
2009	–0.203	0.028	–0.099	0.213	–0.089
2010	–0.183	0.051	–0.047	0.234	–0.081

Notes: (a) Long real rates and inflation are the absolute difference from base values. (b) GDP, domestic demand and export volumes are seen as the percentage difference from base values.

Chart 5. The impact of a fall in the dollar on the US current account



than in the risk premium shock above. As a result, Euro Area output effects disappear more rapidly in this scenario.

The impacts of an appreciation of the euro can be moderated by the ECB, and if it chose to cut interest rates to maintain the value of the currency then it would induce a monetary expansion and would reduce the impact on output. However, inflation would rise. The appropriate monetary reaction in response to a rise in the euro is impossible to judge unless one knows the reason for the appreciation, and a focus on domestic inflation as an obvious indicator of demand pressures seems wise. Of course if the appreciation of the euro were driven by a monetary tightening in the Euro Area, world demand would slow, and the impact on domestic demand would be much more marked. The decline in output growth would be larger, and inflation would fall. However, at least in this case, the ECB could be clear as to the reasons for the rise in the euro.

The fundamental determinants of the current account are not affected by a temporary change in the US risk premium or by a shift in perceptions of the US monetary stance. In both cases, as we can see from chart 5, the current account in the US initially deteriorates, as we would expect if prices are sluggish (the J curve effect). After about ten years, the 6 per cent fall in the dollar improves the US current account by only 0.2 per cent of GDP in both cases. Even this effect is transitory, as the rise in the price level the devaluation induces has no real effects on the domestic economy.[1] In both cases, the real exchange rate for the US dollar returns to base, but only after a sustained period. However, the two scenarios differ significantly in their implications for output and domestic demand. It is clear that an appreciation of the euro will in both cases reduce output in the Euro Area, but policy reactions can effect the impacts we report. Indeed it is possible to design policy reactions for these scenarios where a risk premium shock does not increase the level of output in the US. Hence, we caution against drawing conclusions for policy from standard simulations on models that can only cope with exogenous exchange rate shocks.

Removing imbalances

Removing the US imbalances is problematic, as it would involve redressing the imbalances within the domestic economy. Here, we have undertaken two scenarios that allow for such a correction. In the first, government borrowing is reduced by 2 per cent of GDP as a result of a significant rise in direct tax rates, whilst in the second there is a similarly scaled rise in the saving ratio of households. These changes, along with the respective implications for the current account (CA) are plotted in chart 6. It can be seen that in both cases, the US current account permanently improves.

The initial impacts on both the US and the Euro Area are contractionary, as we can see from table 3. In both cases, US output growth would be lower than on our baseline, and interest rates and the exchange rate would jump down

Chart 6. Redressing imbalances

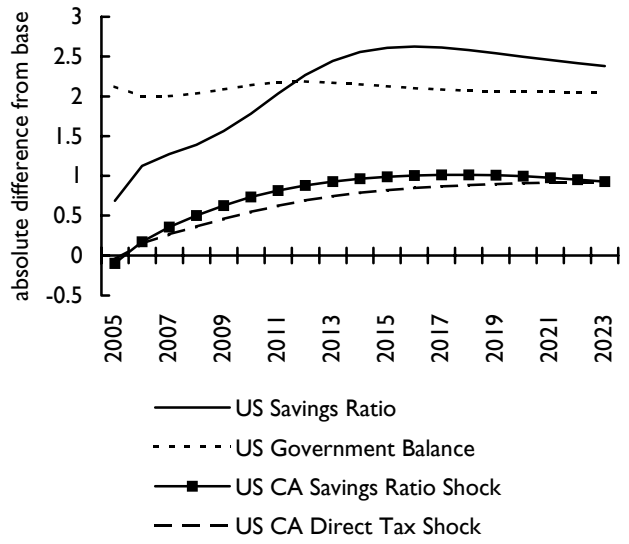


Table 3. US monetary policy shock[a]

	US GDP[b]	Euro Area GDP[b]	US inflation[a]	Euro Area inflation[a]	Euro Area export volumes[b]
US direct tax shock					
2005	–0.311	–0.245	0.246	–0.114	–1.053
2006	–0.687	–0.246	0.490	–0.155	–1.231
2007	–1.015	–0.251	0.405	–0.166	–1.346
2008	–1.264	–0.242	0.199	–0.177	–1.407
2009	–1.432	–0.227	–0.022	–0.176	–1.406
2010	–1.510	–0.205	–0.202	–0.169	–1.342
US savings ratio shock					
2005	–0.170	–0.286	0.349	–0.140	–1.209
2006	–0.743	–0.303	0.737	–0.187	–1.468
2007	–1.300	–0.330	0.565	–0.204	–1.683
2008	–1.699	–0.339	0.215	–0.223	–1.815
2009	–1.927	–0.332	–0.170	–0.225	–1.834
2010	–1.995	–0.306	–0.455	–0.216	–1.737

Notes: (a) Inflation is seen as the absolute difference from base values. (b) GDP and export volumes are seen as the percentage difference from base values.

as both shocks are presumed to be fully anticipated. The combination of lower US demand and a stronger exchange rate would mean that Euro Area output growth would fall in the first year of the scenario, and inflation would fall, even though we would anticipate that the ECB would cut interest rates. Moreover, the depth of the contraction in US GDP implies a significant reduction in the external demand for Euro Area exports that is much more pronounced than in the risk premium and monetary policy shocks above.

Redressing the US imbalances has global implications and it is difficult to see how this might be done with limited pain. We have illustrated that any long-term adjustment in the US current account must involve a correction in US domestic imbalances. The impact on the rest of the world, and the Euro Area in particular, depends on the policy response of each country. However, one certainty that policymakers face is a reduction in US demand.

NOTE

1 Except in the situation where there are significant amounts of assets held in nominal terms, when there might be a real balance effect. We do not consider this to be a major consideration.

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