ECONOMIC SCENARIOS.COM
Issue 6
Essential Economic Analysis for Strategic Thinkers

Exploding fiscal deficits in the United States
Implications for the world economy

In just two and a half years there has been a massive turnaround in the projected United States fiscal position. The ten year cumulative deficit has worsened by US$7 trillion. Part of the deterioration is due to a weak economy, but more is due to policy changes.

Although the turnaround has given a short term stimulus to the economy, the medium to long term effects are negative for US real investment and growth. Just as was experienced during the Reagan deficits of the early 1980s, this will unfold as higher real interest rates and an initially strong US dollar. Nominal US long bond yields could be 60 basis points over what they might otherwise have been had the policy induced deterioration in the fiscal deficit not occurred.

Key points

- **A worsening of the US fiscal deficit by 4 per cent of GDP will:**
  - **raise nominal long bonds by 60 basis points**
  - **appreciate the US$ by 11 per cent**
  - **worsen the US current account by 1.3 per cent of GDP**
  - **reduce US GDP by 2 per cent and reduce non-US GDP by 0.5 per cent over a decade.**
- **If foreigners lose confidence in the ability of the US to sustain the resulting larger current account deficits:**
  - **nominal US long bonds will increase by 100 basis points**
  - **the US$ depreciates by 12 per cent**
  - **US GDP will be nearly 6 per cent lower over a decade, but other countries will gain despite the weaker US economy.**

There are negative ripple effects around the world. Most affected is China, where the level of real activity could be 4.4 per cent lower than otherwise. Most of this loss in output is caused by pegging to a strengthening US dollar. The increase in borrowing by the United States draws in savings from overseas and the current account could deteriorate by a further 1.3 per cent of GDP relative to baseline. Other things given, the US dollar would appreciate by around 11 per cent, which is the opposite to current market opinion. Clearly, something else is happening.

That 'something else' is the worries by foreigners about the US economy. If foreigners worry about the size of the deficit and lose their appetite for US securities, the exodus of funds could cause a depreciation of the US dollar of around 12 per cent. Long bond yields could rise by an extra 40 basis points in 2003 under such a scenario, making the change in real interest rates 100 basis points.

The turnaround in the United States fiscal position has been dramatic (see chart 1). In January 2001, the Congressional Budget Office[1] CBO

[1] Congressional Budget Office, *The Budget and Economic Outlook: Fiscal Years 2002–2011*, January 2001.

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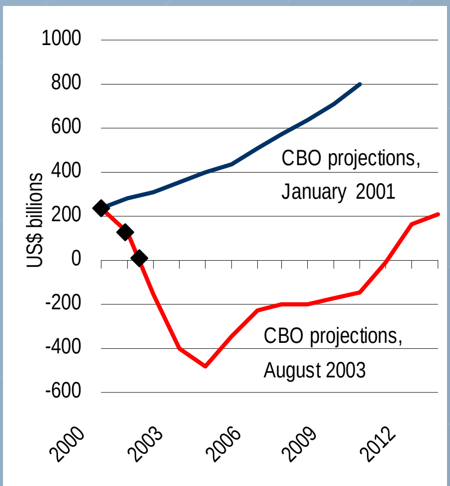
Using these scenarios

Nobody can foretell the future. If they could, they wouldn't tell you about it. These scenarios are not predictions or forecasts. To make profitable investments from this information you also need to decide how likely the events portrayed here are, and what is already priced in the markets. The value of this material is in the insights it offers into the economic effects of various possible events.

1 CBO projections of total US fiscal surplus/deficit



◆Actual

Source: CBO (see footnotes 1 and 3).

1 Version of the model used

Readers will recall a suite of models is used for Economic Scenarios.com. These models all have a similar structure, database and properties. But there are differences in focus — one for example, has a disaggregration focus on Asia (the G-Cubed 7 [Asia Pacific model]). The version used here is MSG3v50o, which has more detail on European economies.

To see a full description of the model, either follow the links on this website or directly access www.msgpl.com.au.

projected a decade on-budget surplus[2] (2002–2011) of US$3.1 trillion. In August this year the decade long on-budget deficit was projected to be US$3.8 trillion (2004–2013).[3]

Three things explain this turnaround in the fiscal position[4]: the downturn in the economy; legislated tax cuts introduced by President George W. Bush; and extra spending, largely due to the war on terrorism. The economic boom of the nineties ended in the third quarter of 2000 after the Nasdaq bubble had burst. It was soon made worse by the September 11 terrorist attack.[5] To stimulate the economy and deliver on an election promise to cut taxes, the President introduced a series of personal income tax cuts and changes to corporate tax law. The CBO admits the effects of the corporate tax law change are difficult to estimate, but the biggest effects stem from changes to personal income tax. These tax changes have a sunset clause. In their projections, CBO have assumed the major tax provisions of the *Economic Growth and Tax Relief Reconciliation Act* of 2001 will expire as scheduled in 2010. There is talk, however, of removing those sunset provisions.

There is wide uncertainty about the size of the projected budget deficit. The CBO projects a range of surpluses and deficits based on past experience and various assumptions of the parameters underlying the baseline. The difference between the possible surplus and deficit in 2008 is around US$1.5 trillion!

The purpose of this issue of Economics Scenarios is to explore the implications of a large deterioration in the US fiscal outlook and overlay that deterioration with a possible loss of confidence by foreign investors in the US economy. The fiscal deterioration in the US leads to a further deterioration in the US current account deficit, which is already close to 5 per cent of GDP.

The danger is that foreign investors, believing the current account deficit to be unsustainable, bail out of holding US assets. What would be the implications for long bond yields and the US dollar? What would be the fallout for other economies? These are the questions addressed in this issue of scenarios. To address these issues a consistent global model (see box 1) is used.

The scenarios

Fiscal deterioration

Comparing the ten year US fiscal surpluses and deficits projected by the CBO between January 2001 and August this year, the turnaround from surplus to deficit amounts to a change of nearly US$7 trillion. The bounds

2 The total deficit includes the off-budget surplus, which comprises Social Security trust funds as well as the net cash flow of the Postal Service. It is normally a surplus, but changes little from year to year, the major change coming from on-budget changes. It is the change in on-budget position that is of interest here.

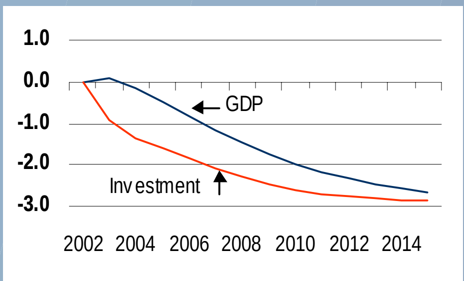
3 Congressional Budget Office, *The Budget and Economic Outlook: An Update*, August 2003.

4 See Bill Gale and Peter Orszag "Perspectives on the Budget Outlook, *Tax Notes*, Feb 10, 2003

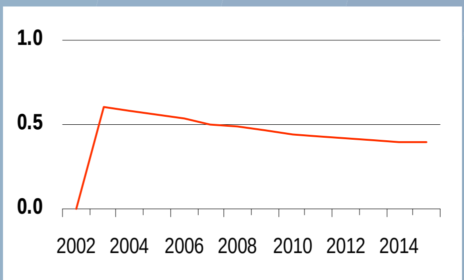
5 See *Economic Scenarios, Issue 1, December 2001*, 'The aftermath of terrorist attacks in the US' for the impact of the attack on the World Trade Centre.

CHART 2: EFFECTS OF THE US FISCAL TURNAROUND ON THE US ECONOMY

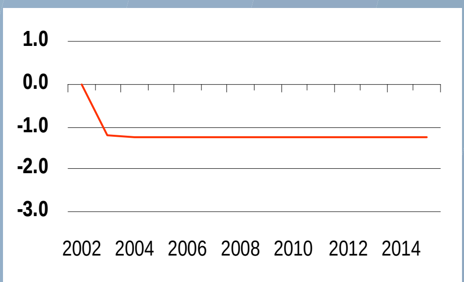
Real GDP, and investment (per cent of GDP deviation from baseline)



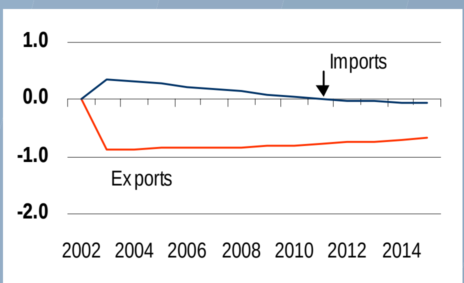
Nominal long bonds (percentage point change from baseline)



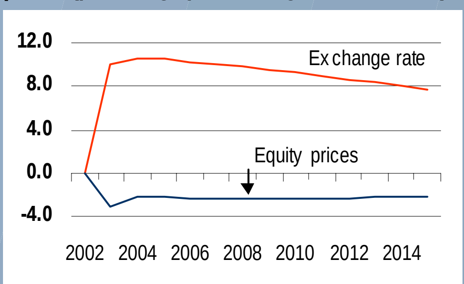
Current account (per cent of GDP change from baseline)



Exports and imports (per cent of GDP change from baseline)



Real effective exchange rate and equity prices (percentage point change from baseline)



around this projection are very wide and it is unknown whether the current sunset provisions in the tax laws will be changed.

For the purposes of understanding the mechanisms at work and the ramifications around the world, we take a permanent shock of deterioration in the fiscal balance of the US economy amounting to 4 per cent of GDP. We further assume that half the change is due to the tax cuts (a loss in revenue) and half is due to extra spending on issues such as the war and subsequent occupation and reconstruction in Iraq. This is meant to be illustrative of the magnitudes involved.

Risk appraisal

Typically, global investors appear to worry when a country's current account deficit approaches 6 per cent of GDP. Forecasts of a current account deficit of 7 per cent of GDP are certainly of concern.

In a sense, the size of the current account deficit should not matter since it is driven by capital inflows that are simply seeking the best return on capital in the world. The current US current account deficit reflects better prospects in the United States than elsewhere.

The deficit reflects the fact that America is borrowing from abroad and the issue is whether they can service and repay these loans. Clearly, they should be able to do so if the inflows are privately determined — after all, private lenders want a return on their loans and an assurance they will get their money back, all appropriately risk-weighted. Examining the composition of the financing of the US current account, however, points to some problems. Asian Central banks have been partly financing the US current account as they cumulate foreign exchange reserves. One report puts this financing at more than half of the current account deficit in the second quarter of 2003[6]. This financing is driven by some combination of a desire to shore up foreign exchange reserves and/or stop their exchange rates appreciating against a (then) depreciating dollar. Two things could happen. One is that Asian central banks have a change of heart. The other is that private investors worry about this possibility and pull their money out of the United States in the belief that the current account deficit is becoming a problem.

To reflect these issues, this scenario explores the case whereby foreign investors change their perceptions of the US economy and require additional return from investments in the US economy to compensate the risk of a widening current account deficit.

Impact of rising fiscal deficits

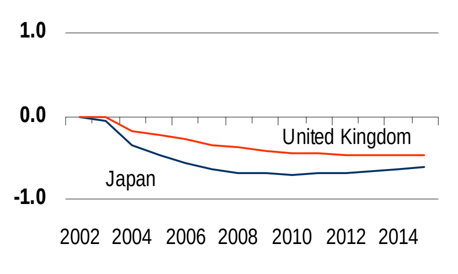
The large turnaround in the fiscal position of the United States — from large surplus to even larger deficit — has a minor stimulatory effect on the economy (see panel 1 of chart 2) in the short run. Real GDP rises by just 0.1 per cent above baseline in 2003.

However, financing the deficit by selling bonds increases the nominal 10 year bond rate by 60 basis points over and above what it might

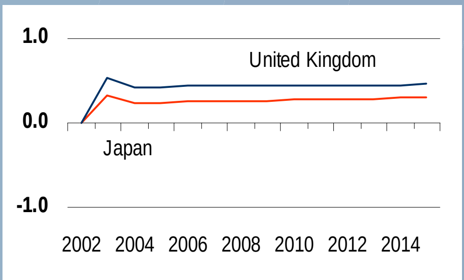
[6] *The Economist*, August 30, 2003, p.52.

CHART 3: EFFECTS OF THE US FISCAL TURNAROUND ON OTHER COUNTRIES

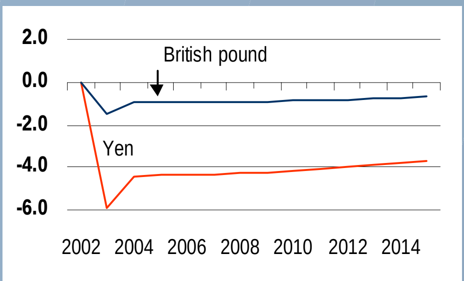
Real GDP (per cent deviation from baseline)



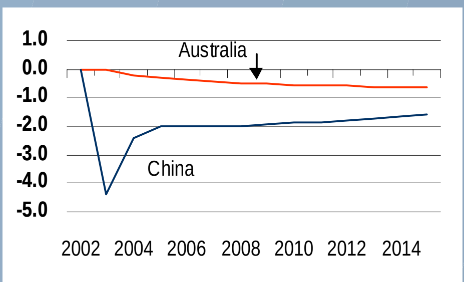
Current account (per cent of GDP change from baseline)



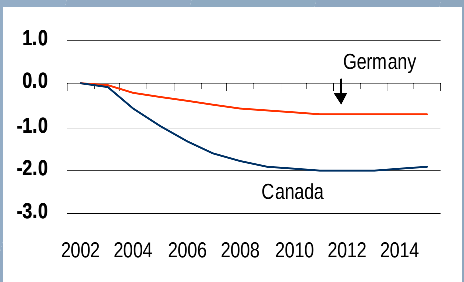
Real effective exchange rate (percentage point change from baseline)



Real GDP (per cent change from baseline)



Real GDP (per cent change from baseline)



otherwise be (panel 2 of chart 2). This change in nominal interest rates reflect a change in underlying real interest rates. Note here that these results are the change from baseline and do not show the impact of the monetary easing by the Federal Reserve in response to the recent economic slowdown. This is already in the baseline and could add a further significant inflation premium to long term bond rates over the coming year.

From chart 2, the long-term effect of the fiscal deterioration is a fall in real GDP. The higher real interest rates and crowding out of economic activity causes long term real GDP to fall by over 2 per cent below baseline by 2010.

Another major effect is on the trade account and current account balances. With the government borrowing the money to fund the deficit, there is an additional large capital inflow. To accommodate this capital inflow there must be a deterioration in the US current account. The US current account is already in substantial deficit — around 5 per cent of GDP. The fiscal turnaround causes the current account deficit to worsen in the first year following the fiscal stimulus by nearly 1.3 per cent of GDP below what it might otherwise have been (panel 3 of chart 2). Most of this change in the current account is caused by a change in the trade balance — exports fall by nearly 1 per cent below baseline and imports rise initially by 0.3 per cent above baseline before tapering off as economic growth falls (panel 4 of chart 2).

To facilitate these changes in the trade balance and current account the US dollar appreciates in real terms against other currencies. The real effective exchange rate peaks at 10.7 percentage points above baseline in 2004 and gradually depreciates after that in the pattern shown on panel 5 of chart 2. This chart also shows that equity prices (represented by Tobin's *q*) fall by over 3 percentage points.

Effects on other countries

The fiscal deterioration in the United States is harmful to growth in all other countries. Financing the US fiscal deficit draws savings away from other countries and so their growth rate is lower than in the baseline. Some of these effects are shown in chart 3. China (panel 4) is worst affected. Canada (panel 5) and, to a lesser extent, Japan (panel 1) are also among the major losers from the US fiscal deterioration.

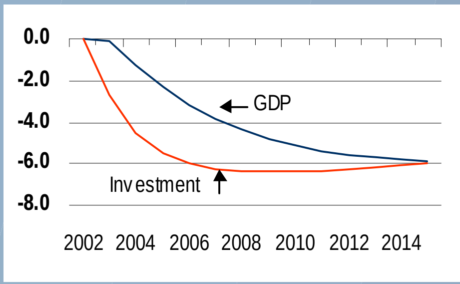
The mirror image of the deterioration of the current account in the United States is the improvement in the current accounts in the rest of the world. Typical of the pattern is the movement in the current account for Japan and the United Kingdom (panel 2). For the United Kingdom, the improvement is 0.5 per cent of GDP improvement in the current account above baseline. This is clearly a political problem for bilateral relations

Rise in risk perceptions

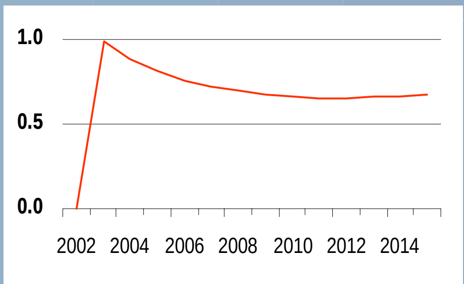
If investors take fright — warranted or not — at the size of the US current account deficit, the repercussions for the United States and world

CHART 4: EFFECTS OF THE US FISCAL TURNAROUND ON THE US ECONOMY WHEN RISK RISES

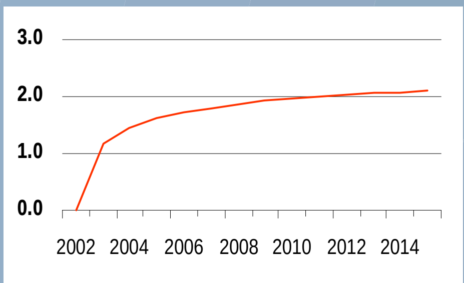
Real GDP, and investment (per cent of GDP deviation from baseline)



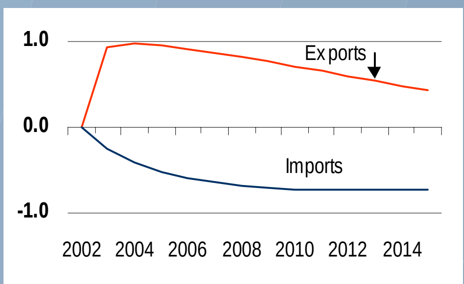
Nominal long bonds (percentage point change from baseline)



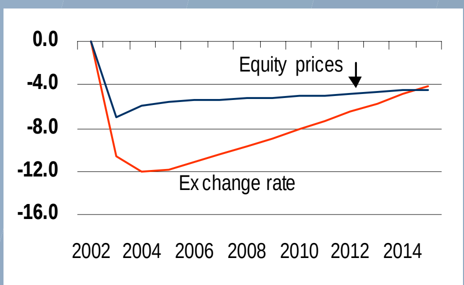
Current account (per cent of GDP change from baseline)



Exports and imports (per cent of GDP change from baseline)



Real effective exchange rate and equity prices (percentage point change from baseline)



economies are very different. These results include both the effects of the fiscal deterioration and the change in risk.

Under this scenario, the drop in real GDP is far greater than before as is the rise in nominal long bond rates (panels 1 and 2 of chart 4). Rather than financing the fiscal deficits from willing foreigners, the funds are now drawn from within the SU economy through higher interest rates reducing private investment.

Real GDP progressively deteriorates and could be nearly 6 per cent below baseline a decade out under this scenario (remember that the baseline is growing, thus this is not an economic recession in absolute terms, but slower growth than would have happened). That is, the concerns about the current account deficit could more than double the deleterious effect of the turnaround in fiscal accounts from surplus to deficit.

The increase in the risk assessment of the United States means a premium has to be offered on borrowings to attract the necessary funds. The nominal 10 year bond rate now rises by 100 basis points above baseline in 2003 to reflect this (panel 2 of chart 4).

The big difference that happens when the risk of holding US securities rises is that there is now a capital outflow, which implies that there has to be a reduction in the US current account deficit (panel 3 of chart 4). For this reduction in the current account deficit, there must be a turnaround in the trade balance so exports rise and imports fall. This is possible because the capital outflow causes the US to depreciate. The real effective exchange rate depreciates by 12 percentage points below baseline in 2004 before gradually recovering. Whereas there was appreciation of the US currency under the fiscal deterioration, now there is a depreciation. Clearly, perceptions of risk (by foreign investors and other financiers of the US current account) in the sustainability of the US current account deficit will matter enormously for the course of the US currency and economy.

Effects on other countries

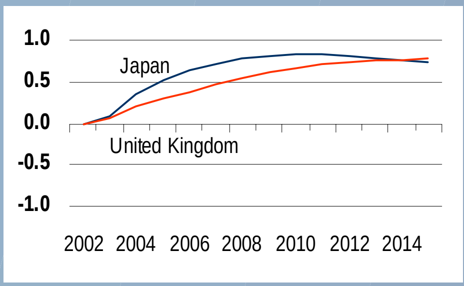
The changed perception of risk by foreigners towards the United States dramatically changes the outlook for third countries. Where all countries lost from the US fiscal deterioration when funds were forthcoming from the rest of the world,, now they stand to gain. Real GDP in China, for example, could now be 4.8 per cent higher in 2003 than otherwise, whereas before it was 4.4 per cent lower (panel 4 of chart 5). The reason for this difference is that the capital previously flowing into the United States now goes elsewhere — including China. The extra investment adds to growth of GDP. Investment in China (not shown) rises by over 3 per cent of GDP in each of 2003, 2004 and 2005.

The same story is true of other countries. Japan and the United Kingdom both show modest gains (panel 1 of chart 5), and Canada, in particular, is a major beneficiary of the lower capital inflow into the United States.

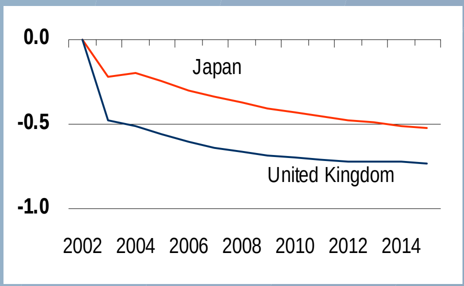
As the current account deficit in the United States falls, so the current account deficit in other countries must widen (or their current account surplus must shrink). The pattern of change for Japan and the United Kingdom is shown on panel 2 of chart 5) and the accompanying

CHART 5: EFFECTS OF THE US FISCAL TURNAROUND ON OTHER COUNTRIES WHEN RISK RISES

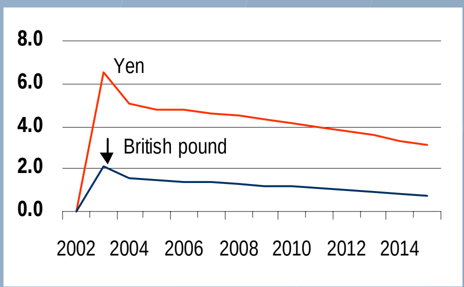
Real GDP (per cent deviation from baseline)



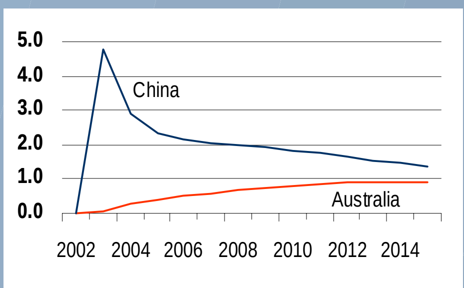
Current account (per cent of GDP change from baseline)



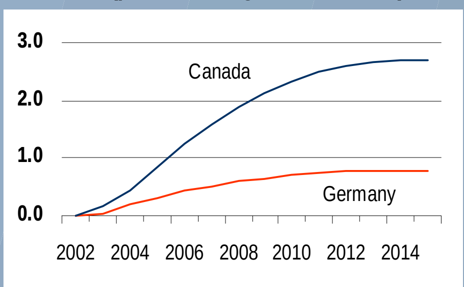
Real effective exchange rate (percentage point change from baseline)



Real GDP (per cent change from baseline)



Real GDP (per cent change from baseline)



appreciation of their real effective exchange rates is shown on panel 3. The yen could appreciate by over 6 percentage points in 2003 — a vastly different story to the effects of the extra US fiscal deficit, but without any change in risk perception by foreign investors. Some of the changes for key countries is shown in table 1.

Implications

The size of the turnaround in the fiscal accounts of the United States is unprecedented. If the United States does not address its looming fiscal crisis, the world might be in for a period of lower growth and higher real interest rates than might otherwise be the case if there were no change in the perception of risk towards the US economy.

The extra fiscal deficit directly leads to a worsening of the US current account deficit. This worsening deficit should not, in theory, be a problem. If the current account deficit is believed to become a problem, it will become a problem.

The difference such a scenario makes is enormous. For one thing, it changes the sign on the impact on the real economies of other countries. Also, it changes the sign on the direction of movement in financial variables such as real effective exchange rates. Instead of appreciating, the US dollar now depreciates. And whereas previously nominal 10 year bond yields rose everywhere, when there is a change in risk toward the United States because of the imbalances they are accumulating, nominal 10 year bonds fall in third countries as shown in table 1. When foreigners are willing to finance US fiscal deficits, they lose investment from their economies to the US. However, when the US country risk premium rises, the US must find the additional saving domestically and this reduces growth in the US.

The effect of the turnaround in the US fiscal position from large surplus to large deficit depends crucially on the dynamics it creates and perceptions by foreigners on the ensuing imbalances.

A depreciation of the US dollar and falling asset prices in the US would be a clear indication that the increase in the US fiscal deficit was impacting on the US economy far more negatively than the previous experience of the early 1980s.

The effect of the explosion in the US fiscal deficit is therefore to make the US dollar either strong or weak, depending on the appetite by foreigners for US dominated securities.

Several striking conclusions emerge.

The US economy is unambiguously worse off in the medium to long term from the rapid deterioration in their fiscal position. How badly the economy fares depends on the willingness of foreigners to hold US assets.

If investors take fright at the size of the looming US current account deficit — warranted or not — the effect of the US fiscal deficits on the economy and hence financial markets are that much worse.

But the effects on other countries are radically different. A slower US economy does not translate into slow economic growth in other countries if there is a change in risk perception towards the United States. Any loss of export demand from third countries to a slow US economy is offset by higher domestic investment — a result that could not have been determined a priori without resort to an empirical global model of the world economy.

The message is the lower the US dollar in the face of a large fiscal blowout, everything else equal, the worse it will be for the US economy and hence for return on US financial assets. However, other countries need not be negatively affected by this outcome.

1. Effects on real GDP, long bonds and real effective exchange rates when investors also increase their perception of risk of sustainability of the United States current account deficit

Country	*2003*	*2004*	*2005*	*2006*
Real GDP (per cent change from base)				
United States	-0.1	-1.3	-2.3	-3.2
Canada	0.2	0.4	0.8	1.2
Japan	0.8	0.4	0.5	0.6
United Kingdom	0.1	0.2	0.3	0.4
Euro zone	-0.0	0.2	0.3	0.4
Australia	0.0	0.3	0.4	0.5
Nominal 10 year bonds (percentage point change from base)				
United States	1.0	0.9	0.8	0.8
Canada	-0.5	-0.5	-0.5	-0.4
Japan	-0.1	-0.1	-0.1	-0.1
United Kingdom	-0.1	-0.1	-0.1	-0.1
Euro zone	-0.1	-0.1	-0.1	-0.1
Australia	-0.1	-0.1	-0.1	-0.1
Real effective exchange rate (percentage point change from base)				
United States	-10.1	-12.1	-11.9	-11.2
Canada	2.0	1.8	1.4	1.1
Japan	6.5	5.0	4.8	4.7
United Kingdom	2.1	1.6	1.5	1.4
Euro zone	6.0	2.0	1.9	1.8
Australia	4.8	4.0	3.8	3.7

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