

Comparing the net foreign liability dynamics of Australia and the United States

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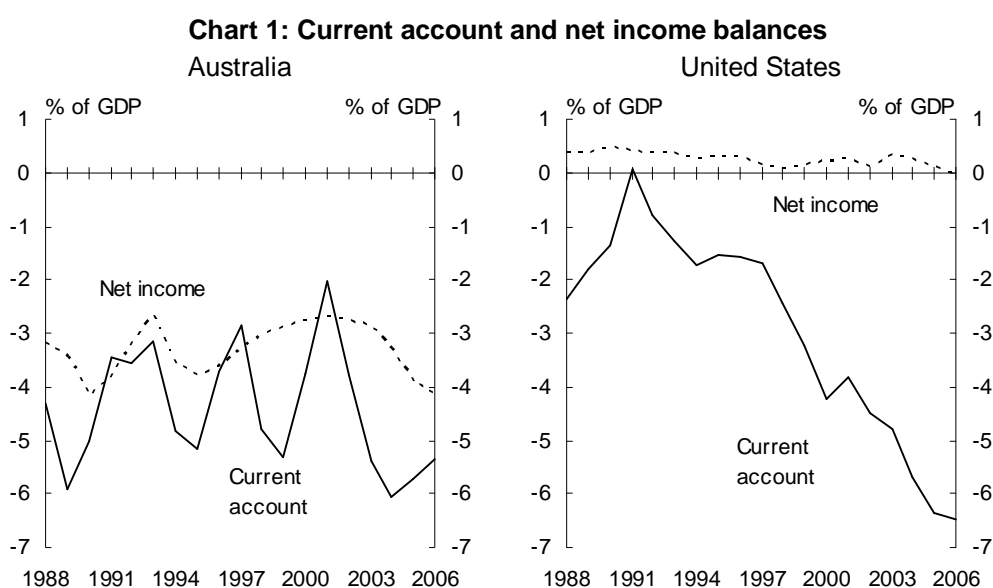
This article examines the evolution of net foreign liabilities as a share of GDP in Australia and the United States. The two countries have been running similarly large current account deficits in recent years. But while net foreign liabilities have been growing steadily as a share of GDP in Australia they have, remarkably, been falling in the US.

Changes in the net foreign liability share of GDP are influenced by differences between rates of return on gross foreign assets and liabilities. The US and, to a lesser extent, Australia have benefited over time from rates of return on their gross foreign assets that have been higher than on their gross foreign liabilities. This has been partly because both countries' gross foreign assets include a higher share of equities (with a higher average rate of return than debt) than their foreign liabilities. The striking difference between the evolution of net foreign liabilities in the two countries in recent years is due to relative returns having been unusually favourable to the US and unfavourable to Australia, compared to historical experience. For plausible differences between future rates of return, the external adjustment required to stabilise net foreign liabilities as a share of GDP in each country is significantly smaller than conventional analysis suggests.

1 The author is from Domestic Economy Division, the Australian Treasury. This article has benefited from comments and suggestions provided by David Gruen and Steven Kennedy. The views in this article are those of the author and not necessarily those of the Australian Treasury.

Introduction

Australia and the United States are often mentioned together in discussions of advanced economies running persistent large current account deficits (CADs). Both countries have had CADs exceeding 5 per cent of GDP over the past four years, although the composition is very different, with the net income deficit accounting for most of Australia's CAD but none of the US CAD (Chart 1).² This partly reflects Australia's longer history of CADs and, hence, larger accumulation of net foreign liabilities (NFLs). But it also reflects differences in relative investment income yields on foreign assets and liabilities, which have allowed the US to remain in net income surplus, despite its rising NFL position.

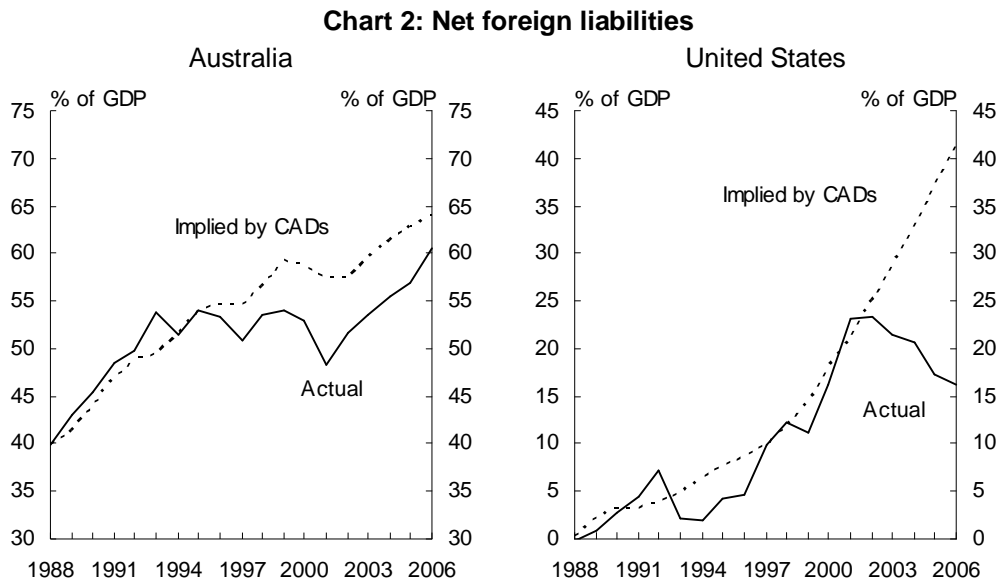


Source: ABS cat. no. 5302.0, BEA.

There have also been differences between the two economies in the dynamics of NFLs. As Chart 2 shows, valuation changes arising from asset price and exchange rate movements can cause the evolution of NFLs to diverge significantly from that implied by CADs. This is illustrated most notably by the recent US experience, where NFLs have fallen by 7 per cent of GDP over the past four years, even though the size of CADs would have implied a rise of 16 per cent of GDP. Similarly, Australia's NFLs fell by 6 per cent of GDP between 1993 and 2001, when ongoing CADs would have

² The difference between the current account and net income is equal to the trade balance plus net current transfers. For Australia, net current transfers are very small, but the US consistently runs a deficit on net transfers of around 0.5 to 0.7 per cent of GDP. For simplicity, this article will define the trade deficit as including net current transfers.

implied a rise of 8 per cent of GDP. Since 2001, Australia's NFLs have grown by 12 per cent of GDP, when CADs would have implied an increase of 7 per cent of GDP.



These dynamics matter because they affect the need for future external adjustment. NFLs cannot grow indefinitely at a faster rate than GDP, otherwise eventually they could not be serviced. Adjustment will be needed if the present balance of payments position is not consistent with NFLs stabilising as a share of GDP.

The likelihood that an adjustment will be needed at some point need not imply that it must happen immediately. Gradual adjustments over a number of years are far easier to manage than rapid adjustments. External adjustments are less likely to be disruptive in economies like Australia and the US, which have flexible economies and exchange rate regimes, credible macroeconomic policy, strong financial systems and foreign liabilities largely denominated in their own currency. These attributes increase the economy's capacity to smoothly manage any adjustment while reducing the likelihood of a rapid adjustment forced by a sharp fall in capital inflows.

Understanding the factors that underpin the evolution of NFLs, and their likely persistence into the future, is important for assessing how much future external adjustment might be needed. A key theme of this article is that relative rates of return on gross foreign assets and liabilities — including both income flows, such as dividends and interest, and capital gains or losses — have a substantial influence on this evolution. For plausible differences between rates of return, the adjustment required to stabilise NFLs as a share of GDP in each country is significantly smaller than conventional analysis suggests.

Another key theme is that these issues cannot be considered solely in terms of the CAD. First, an important limitation of the current account in this regard is that net capital gains are excluded. This matters particularly as equity investments (in contrast to debt) tend to provide most of their returns in the form of capital gains, and both countries hold more of their foreign assets in equities than their foreign liabilities.

Second, external adjustment is better considered in terms of the trade balance. This is partly because CAD adjustment must occur largely through the trade balance, but also because the CAD can give a misleading indication of the size of adjustment.³ For example, a constant CAD of 6 per cent of GDP would see Australian NFLs eventually stabilise at 100 per cent of GDP (assuming nominal GDP growth of 6 per cent), a rise of nearly 40 per cent of GDP from the current level. Assuming a 6 per cent rate of return, this would imply a rise in net income deficit of 2½ per cent of GDP, requiring an equivalent improvement in the trade deficit. Adjustment would not be avoided, even if a CAD of this size was sustained indefinitely.

Past evolution of net foreign liabilities as a share of GDP

The evolution of NFLs as a share of GDP can be described by the identity:

$$(1) \quad nfl_t - nfl_{t-1} = td_t + nid_t - \left(\frac{g_t}{1 + g_t} \right) nfl_{t-1} - v_t$$

where **nfl** is net foreign liabilities at the end of the year, **td** is the trade deficit, **nid** is the net income deficit, **v** is net valuation gains to the international investment position — all as shares of nominal GDP — and **g** is the nominal GDP growth rate.

Equation (1) can be used to decompose changes in the NFL to GDP ratio into four components. Table 1 shows a decomposition for Australia and the US of cumulative changes since 1988, which is the earliest year for which Australian data are published. While the two countries have had reasonably similar increases in NFLs as a share of GDP, the composition of these increases has been quite different.

3 Some adjustment to the net income deficit could occur through valuation effects of currency depreciation, which would increase income credits from foreign assets, denominated in foreign currency (net of increases in debits on foreign currency-denominated debt). However, Australian income credits are only 3 per cent of GDP (and net foreign currency-denominated flows somewhat smaller), whereas combined exports and imports are 42 per cent of GDP. For the US, income credits are 5 per cent of GDP, while total exports and imports are 28 per cent of GDP.

Table 1: Contributions to increases in net foreign liabilities as a share of GDP since 1988

| | Australia 1988-2006 | United States 1988-2006 |
|---|------------------------|----------------------------|
| Cumulated trade deficits | 20.0 | 57.7 |
| Cumulated net income deficits | 59.9 | -4.4 |
| Nominal GDP growth | -53.1 | -9.1 |
| Net valuation gains | -3.6 | -26.4 |
| Discrepancy | -2.6 | -1.4 |
| Increase in net foreign liabilities/GDP | 20.7 | 16.4 |

Source: ABS cat. no. 5302.0, BEA, Treasury.

For Australia, the increase in the NFL to GDP ratio closely matches the accumulation of trade deficits. Cumulated net income deficits, which account for three-quarters of cumulated CADs over this period, have been largely offset by the effects of nominal GDP growth in reducing the burden of existing NFLs. A modest offset has also come from cumulated net valuation gains. This is despite the fact that foreign assets have been only 40 to 60 per cent as large as foreign liabilities over this period, implying that the rate of valuation gain on assets has been significantly higher than that on liabilities.

The US has had a much larger accumulation of trade deficits over time. About 70 per cent of this has been offset, however, by a combination of other factors. In contrast to Australia, the US has cumulated net income surpluses, while valuation gains have been much larger. The gain to the US from nominal GDP growth has been much smaller, largely because its NFLs have been a much smaller share of GDP.

In order to draw implications about the future adjustment that may be needed to stabilise NFLs as a share of GDP, it is useful to express the net income deficit and net valuation changes in terms of total rates of return on foreign assets and liabilities. This gives an alternative expression, which is algebraically equivalent to equation (1):

$$(2) \quad nfl_t - nfl_{t-1} = td_t + \left(\frac{r_t^L - g_t}{1 + g_t} \right) nfl_{t-1} - \left(\frac{r_t^A - r_t^L}{1 + g_t} \right) gfa_{t-1}$$

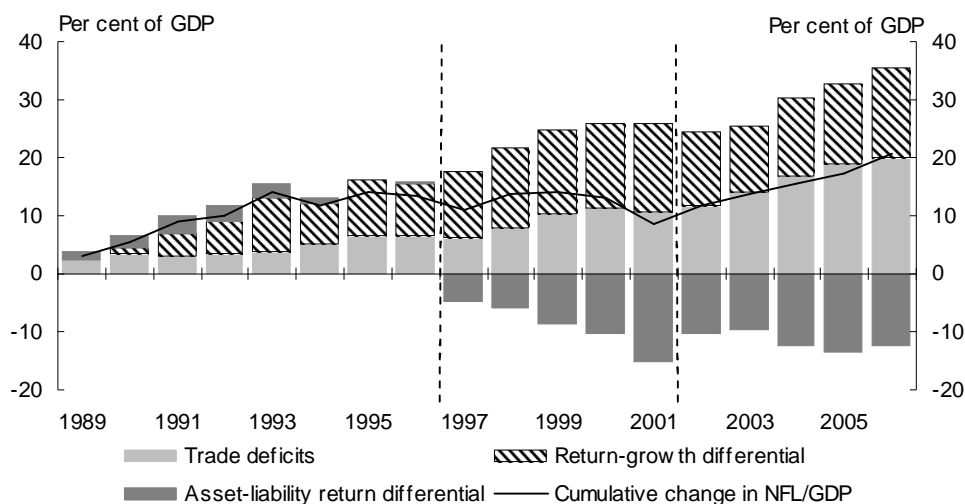
where gfa is gross foreign assets as a share of GDP and r^L and r^A are nominal rates of return (including valuation gains) on foreign liabilities and assets.⁴

4 This expression is derived by substituting $nid_t - v_t = \left(\frac{r_t^L}{1 + g_t} \right) gfl_{t-1} - \left(\frac{r_t^A}{1 + g_t} \right) gfa_{t-1}$ into equation (1), and then substituting $gfl_{t-1} = gfa_{t-1} + nfl_{t-1}$ and rearranging terms.

The three terms in equation (2) allow us to identify contributions to the change in NFLs as a share of GDP coming from three sources: cumulated trade deficits, the effect of differences between the rate of return on foreign liabilities and GDP growth, and the effect of differences between rates of return on foreign assets and liabilities. For a given level of trade deficits, a positive differential between the rate of return on foreign liabilities and nominal GDP growth will cause NFLs to grow faster as a share of GDP, while a positive differential between the rates of return on foreign assets and liabilities will cause NFLs to grow more slowly as a share of GDP.

Cumulative contributions over a period of time are of greater interest than contributions to year-to-year changes, which fluctuate due to volatility in asset prices. Chart 3 shows the decomposition of cumulative changes in Australia's NFL to GDP ratio relative to the position in 1988. We can divide this into three periods, which are characterised by differences in the dynamic behaviour of the NFL to GDP ratio.

Chart 3: Contributions to cumulative changes in Australian net foreign liabilities as a share of GDP since 1988

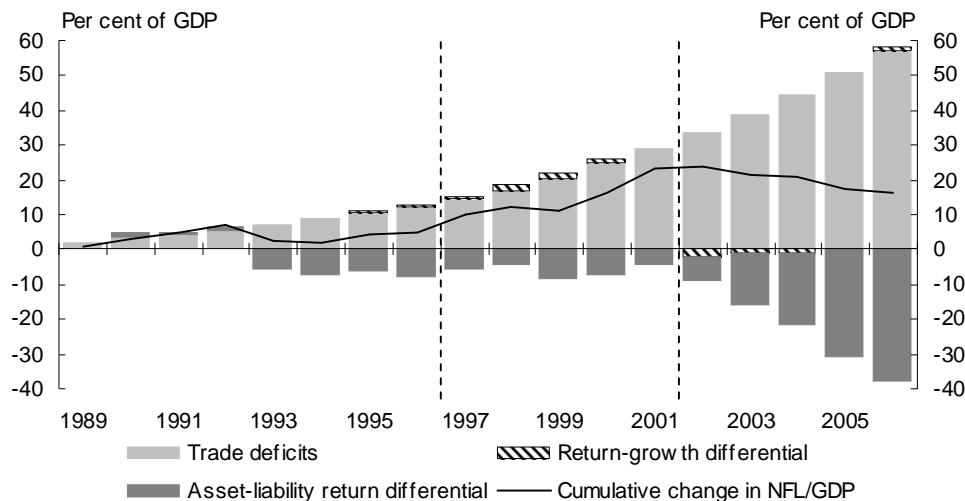


Source: ABS cat. no. 5302.0, Treasury.

Up to 1996, growth in NFLs as a share of GDP was driven by trade deficits and a positive return-growth differential. In the period 1997 to 2001, further growth in these two factors was offset by the effect of positive differentials between asset and liability returns, which kept the NFL to GDP ratio roughly stable. Since 2001, the NFL to GDP ratio has again resumed an upward path. The effects of return-growth and asset-liability return differentials have been broadly offsetting in the recent period, so that growth in Australia's NFLs as a share of GDP has reflected the accumulation of trade deficits.

Chart 4 shows the same decomposition for the United States, which can also be divided into the same three periods. In the period to 1996, NFLs were relatively stable as share of GDP, with trade deficits being substantially offset by the effect of positive differentials between asset and liability returns. In the period 1997 to 2001, NFLs grew in line with cumulated trade deficits. Since 2001, however, continued accumulation of trade deficits has been more than offset by a dramatic rise in the effect of the positive asset-liability return differential. Over the whole period, this has offset nearly three-quarters of the increase in the ratio of NFLs to GDP that would otherwise have occurred. In contrast to Australia, the effect of return-growth differentials has been close to neutral for the US.

Chart 4: Contributions to cumulative changes in US net foreign liabilities as a share of GDP since 1988



Source: BEA, Treasury.

In order to understand what has been driving these different trends, we need to examine the behaviour of the individual components of equation (2) over the three periods (Table 1). Looking at the first component, it is notable that US trade deficits have been steadily increasing over time as a share of GDP. Australia's trade deficits have been much smaller, though they have also increased recently.

In relation to the second component, returns on Australia's foreign liabilities until recently exceeded nominal GDP growth by a significant margin. This return-growth differential has closed recently as terms of trade increases have boosted nominal GDP growth. The US has also had a substantial decline in the return-growth differential over time, although the impact of this differential has been limited because US NFLs have been relatively small as a share of GDP.

Comparing the net foreign liability dynamics of Australia and the United States

Table 2: Contributions to changes in net foreign liabilities as a share of GDP (annual averages, per cent)

| | Australia | | | United States | | |
|---|-----------|---------|---------|---------------|---------|---------|
| | 1989-96 | 1997-01 | 2002-06 | 1989-96 | 1997-01 | 2002-06 |
| (1) Trade deficit/GDP | 0.8 | 0.8 | 1.9 | 1.6 | 3.2 | 5.7 |
| (2) Return-growth differential | 2.5 | 2.5 | -0.1 | 3.4 | 1.4 | 0.7 |
| Net foreign liabilities/GDP | 50 | 52 | 56 | 4 | 15 | 20 |
| Impact on NFL/GDP | 1.1 | 1.2 | 0.0 | 0.1 | 0.0 | 0.1 |
| (3) Asset-liability return differential | -0.4 | 6.4 | -0.7 | 1.7 | -1.0 | 8.9 |
| Of which: | | | | | | |
| Income yields | -2.5 | -1.1 | -1.4 | 0.8 | 0.6 | 0.7 |
| Valuation changes | 2.1 | 7.5 | 0.7 | 0.9 | -1.7 | 8.2 |
| Exchange rate | -0.3 | 3.3 | -1.1 | -0.5 | -2.2 | 2.4 |
| Price & other | 2.4 | 4.2 | 1.8 | 1.4 | 0.5 | 5.7 |
| Gross foreign assets/GDP | 33 | 60 | 77 | 48 | 72 | 89 |
| Impact on NFL/GDP | 0.0 | -3.1 | 0.5 | -0.6 | 0.7 | -6.7 |
| Total change in NFL/GDP | 1.7 | -1.0 | 2.4 | 1.1 | 3.7 | -1.4 |
| Memo items: | | | | | | |
| Nominal GDP growth | 5.8 | 5.9 | 7.1 | 5.6 | 5.3 | 5.4 |
| Real return on foreign assets | 4.2 | 12.6 | 3.4 | 7.2 | 3.2 | 12.4 |
| Income yields | 0.1 | 1.4 | 0.2 | 2.3 | 2.0 | 1.4 |
| Valuation gains | 4.1 | 11.1 | 3.1 | 4.9 | 1.2 | 11.0 |
| Real return on foreign liabilities | 4.6 | 6.2 | 4.1 | 5.5 | 4.3 | 3.5 |
| Income yields | 2.6 | 2.5 | 1.7 | 1.5 | 1.4 | 0.6 |
| Valuation gains | 2.0 | 3.6 | 2.4 | 4.0 | 2.9 | 2.8 |

There has been considerable variation over time in the third component. For Australia, the differential between asset and liability returns has been moderately negative in the early and recent periods, interspersed by a period of strong positive differentials from 1997 to 2001. The US has experienced the opposite pattern, with a particularly favourable return differential since 2001. The effects of these differentials have been increased over time by strong growth in gross foreign assets relative to GDP.

The asset-liability return differential can be further decomposed into contributions from income yields and valuation changes. It is notable that yields on Australia's foreign liabilities from interest, dividends and other income flows have consistently exceeded those on its assets. This has contributed to the relatively high net income deficit noted earlier, but has been offset by a tendency to make proportionally higher valuation gains on foreign assets relative to liabilities. The negative income yield differential has fallen over the past decade, reflecting a decline in the risk premium on Australian interest rates: for instance, the spread between Australian and US 10-year bond yields averaged 0.8 per cent over the past decade compared to 2.8 per cent over period 1989-1996.

The US, in contrast, has consistently earned higher income yields on its foreign assets than on its liabilities. This has kept its net income in surplus until very recently, despite

a growing NFL position. The US has also generally received valuation gains in its favour, except for the period 1997 to 2001.

It is apparent from Table 2 that asset-liability return differentials for Australia and the US have tended to be negatively correlated. This reflects cycles in the behaviour of exchange rates and asset prices that have affected the two countries differently. This is shown by the contributions that exchange rate and price valuation changes have made to return differentials.

The US dollar appreciated significantly over the period 1997-2001, but has since depreciated, whereas the Australian dollar (partly as a consequence) has moved in the opposite direction. Both Australia and the US achieve valuation gains from depreciation of their currencies, and valuation losses from appreciation.⁵ This is because both countries' foreign liabilities are mostly denominated in their own currencies, while foreign assets are largely denominated in foreign currencies (so their value in terms of domestic currency increases when the currency depreciates). As a result, Australia had exchange rate valuation gains in the period 1997-2001, followed by losses in the period since, while the US experienced the reverse.

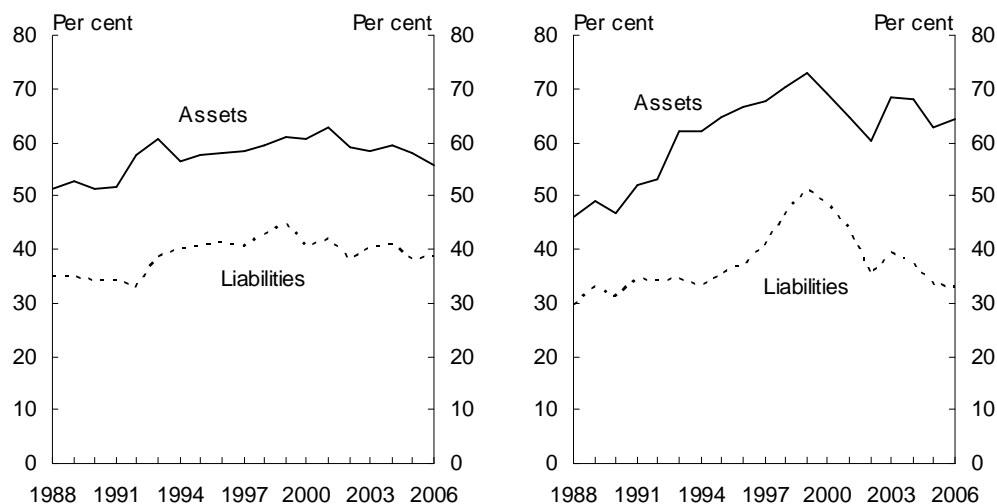
The other major influence on relative rates of return has been the behaviour of equity prices. Over the period 1997-2001, the global equity market boom increased foreign equity prices much more than Australian prices. This meant that price valuation changes boosted returns on foreign assets more than those on liabilities. In the recent period this differential has been eliminated by the global equity market correction early this decade and the impacts of the resources boom on share prices of Australian companies. For the US, these equity market cycles have had the opposite effects on relative rates of return on assets and liabilities.

One reason why both countries have consistently gained a positive return advantage from price valuation changes is that equities (both direct investment and portfolio) have comprised a significantly larger share of their foreign assets than of their foreign liabilities (Chart 5). Compared to debt, equities tend to provide a larger share of their returns in the form of capital gains, since companies rarely distribute all of their earnings as dividends. A substantial share of earnings is generally retained for reinvestment, increasing the market value of the firm and providing capital gains to investors.

5 The Reserve Bank of Australia (2006) estimates that a uniform 10 per cent depreciation of the Australian dollar reduces NFLs by around 3 per cent of GDP. Cline (2005) arrives at a similar estimate for the US. Actual effects will depend on how the distribution of exchange rate movements across currencies interacts with the currency composition of assets and liabilities.

Comparing the net foreign liability dynamics of Australia and the United States

Chart 5: Equity share of foreign assets and liabilities
Australia United States



Source: ABS cat. no. 5302.0, BEA.

Why do rates of return on foreign assets and liabilities differ?

Before considering what this analysis implies for the need for future external adjustment, we need to understand why differences in rates of return arise. The basic tenet of efficient financial markets is that differences in *ex ante* (expected) rates of return should reflect differences in risk.⁶ Differences in *ex post* rates of return will also reflect exchange rate or asset price adjustments in response to unanticipated developments, or 'news'.

These 'news' effects should have no implications for future returns. Rather, they should reflect valuation changes that occur in order to equalise *ex ante* risk-adjusted rates of return across different assets. For example, if an increase in commodity prices raises expectations of future returns on Australian assets then the foreign currency value of these assets must increase through a combination of asset price increases and Australian dollar appreciation until the *ex ante* excess rate of return is eliminated. The fact that *ex post* returns during this phase are unusually high does not mean they will continue to be high if commodity prices are sustained. Such returns reflect the adjustment to past 'news', and should only be repeated if new information leads to a further upgrading of expectations.

⁶ Whilst it is arguable that financial markets are not efficient, it may be reasonable to assume that this premise holds on average, with periods of excessive optimism/pessimism cancelling out over the longer term.

This means that, in considering what past returns imply for future returns, we want to factor in differences due to risk but exclude those due to unanticipated ‘news’. There are two ways in which differences in risk may lead to *ex ante* differentials between returns on foreign assets and liabilities.

First, there are differences in risk across countries. Advanced economies such as Australia and the US are seen as relatively safe investment destinations. While most of these countries’ foreign investments are held in similarly advanced economies, around 15 to 20 per cent are in emerging economies, where risk premia are higher.

This might be expected to contribute to a higher average rate of return on foreign assets relative to liabilities. This advantage should be smaller for Australia than for the US, which has additional advantages in attracting cheap finance because of the US dollar’s global reserve currency role and the depth of its financial markets. Over 70 per cent of Australia’s foreign assets are held in the US and the European Union, which shares some of these US advantages.

The second source of *ex ante* differentials is differences in risk between different types of asset, in particular between equities and debt. As equities are generally more risky investments than debt, they provide a higher rate of return on average. As noted above, both countries have a higher share of equities on the asset side than on the liabilities side. This compositional difference could be expected to contribute to a positive differential between rates of return across all assets and liabilities.

Implications for future external adjustment

Equation (2) can be rearranged to obtain the trade surplus needed to stabilise NFLs at a given share of GDP:

$$(3) \quad ts = \left(\frac{r^L - g}{1 + g} \right) nfl - \left(\frac{r^A - r^L}{1 + g} \right) gfa$$

This implies that the required trade surplus depends on the average future differentials $(r^L - g)$ and $(r^A - r^L)$ as well as on the future level of gross foreign assets.⁷

7 A more commonly-used condition excludes the last term, implicitly assuming that foreign assets and liabilities provide the same rate of return. If we ignore valuation changes this

reduces to a simple condition for the current account: $cad = \left(\frac{g}{1 + g} \right) nfl$.

Past differentials may provide a guide to likely future differentials, provided we take average differentials over a sufficiently long period.⁸ The effects of news should average to zero in the long-run; otherwise markets would be making systematic errors. Hence, longer-term averages should tend to net out the effects of past 'news'.

The choice of period involves a trade-off, however, as averages over longer periods may miss structural shifts in relative risk premia. As noted earlier, there has clearly been a reduction in the risk premium on Australian interest rates over the past decade, most likely due to increased credibility of macroeconomic policy as expectations of low inflation became embedded. There has also been a more general decline in risk perceptions in global financial markets, which has tended to reduce interest rates relative to GDP growth.

This suggests there may be a case for using average differentials for the post-1996 period rather than over the full post-1988 period for which data are available. Using the shorter period may, however, entail a greater risk that the averages have been influenced by unanticipated 'news' over the past decade. Hence, it may be advisable to consider both sets of period averages.

Table 3: Return-growth and asset-liability return differentials (annual averages, per cent)

| | Australia | | United States | |
|--|-----------|-----------|---------------|-----------|
| | 1989-2006 | 1997-2006 | 1989-2006 | 1997-2006 |
| Return-growth differential | 1.8 | 1.2 | 1.8 | 1.0 |
| Asset-liability return differential | 1.4 | 2.8 | 3.3 | 3.9 |
| Of which: | | | | |
| Income yields | -1.8 | -1.3 | 0.8 | 0.7 |
| Exchange rate valuation changes | 0.5 | 1.1 | 0.0 | 0.1 |
| Price and other valuation changes | 2.4 | 2.9 | 2.4 | 3.1 |
| Memo items: | | | | |
| Nominal GDP growth | 6.2 | 6.5 | 5.4 | 5.4 |
| Real return on foreign assets (a) | 6.3 | 8.0 | 7.5 | 7.8 |
| Income yields | 0.5 | 0.8 | 1.9 | 1.7 |
| Valuation gains | 5.8 | 7.1 | 5.5 | 6.1 |
| Real return on foreign liabilities (a) | 4.9 | 5.1 | 4.2 | 3.9 |
| Income yields | 2.3 | 2.1 | 1.2 | 1.0 |
| Valuation gains | 2.6 | 3.0 | 3.1 | 2.9 |

Source: Treasury.

(a) Real returns calculated using CPI inflation.

⁸ In principle, *ex ante* returns might be identified directly using data from forward or futures markets. However, undertaking such an analysis across a large number of different assets would be a formidable task and suitable markets may not exist for all assets.

Table 3 shows that, for both countries, return-growth differentials have been lower and asset-liability return differentials higher on average over the past decade than over the full 18-year period. Both factors imply a higher sustainable trade deficit if 10-year averages are used rather than 18-year averages.

Comparing the two countries, it is notable that average rates of return on foreign liabilities have exceeded nominal GDP growth by a similar margin over time, but the differential between rates of return on foreign assets and liabilities has remained significantly higher for the US. This is due to the lower rate of return on US foreign liabilities, consistent with the factors noted above.

It is also notable that Australia has benefited from exchange rate valuation gains over time — reflecting depreciation of the Australian dollar — whereas this has been a neutral factor for the US. These gains are mainly reflected in the high rate of valuation gain on foreign assets. But depreciation only provides net gains when is unforeseen. If the risk of depreciation had been anticipated by financial markets, valuation gains would have been offset by higher yields on Australian liabilities. The negative differential on income yields might, to some extent, reflect this.

Table 4 compares current trade deficits in Australia and the US to those needed to stabilise NFLs at either the current share of GDP or a higher share. These deficits are calculated under alternative scenarios where future asset-liability return and return-growth differentials are assumed to reflect either their post-1988 or post-1996 averages. In each case, results are presented for both the current gross foreign assets share of GDP and a share that is 50 per cent higher, which could be reached in 10 to 15 years if the trend increase over past 15 years is maintained.

Table 4: Trade deficits consistent with stabilising the net foreign liability share of GDP (per cent of GDP)^(a)

| | Australia | | United States | |
|-------------------------------------|-----------|------|---------------|-----|
| Actual trade deficit in 2006 | 1.2 | | 6.4 | |
| NFL share of GDP | 61 | 80 | 16 | 50 |
| Required trade deficit assuming: | | | | |
| (1) Average post-1988 differentials | | | | |
| (i) Current GFA/GDP | 0.1 | -0.2 | 2.8 | 2.3 |
| (ii) GFA/GDP 50% higher | 0.7 | 0.4 | 4.4 | 3.9 |
| (2) Average post-1996 differentials | | | | |
| (i) Current GFA/GDP | 1.6 | 1.4 | 3.6 | 3.3 |
| (ii) GFA/GDP 50% higher | 2.7 | 2.5 | 5.5 | 5.2 |

Source: Treasury.

(a) A negative deficit means a trade surplus is required.

These figures suggest that only a moderate external adjustment may be needed to stabilise Australia's NFLs at either their current share of GDP or a somewhat higher share. Indeed, if average differentials of the past decade were to apply in future then

the sustainable trade deficit would be larger than its recent level and no adjustment may be required.

It is worth contrasting these results with a more conventional analysis which assumes identical rates of return on assets and liabilities. For instance, Gruen and Sayegh (2005) calculated that a trade surplus of $\frac{1}{2}$ to $\frac{3}{4}$ per cent of GDP would be needed to stabilise Australia's NFLs at 60 per cent of GDP, assuming a rate of return on foreign liabilities around 1 percentage point above nominal GDP growth. Allowing for the favourable return differential, as done here, reduces the required adjustment to the trade balance by between 1 and $2\frac{1}{4}$ per cent of GDP for Australia, depending on the period average used. For the US, the effect is between 3 and $3\frac{3}{4}$ per cent of GDP. A higher gross foreign assets share of GDP would increase these effects.

For the US, trade deficits consistent with a stable NFL to GDP ratio are significantly higher than for Australia, mainly due to the larger differential between asset and liability returns. Despite this advantage, the adjustment eventually needed to stabilise the NFL to GDP ratio seems likely to be larger for the US because its trade deficit is currently much larger. This does not mean that the adjustment must necessarily occur soon, particularly as US NFLs are still a relatively low share of GDP.

The required adjustments are slightly larger if NFLs are allowed to increase further as a share of GDP, although this would also allow the adjustment to be deferred for some time. As equation (3) indicates, as long as the rate of return on liabilities exceeds GDP growth, a growing ratio of NFLs to GDP must imply a higher trade surplus (or lower deficit) in the long run.

On the other hand, the need for adjustment might be reduced by further growth in the gross foreign assets share of GDP, which is likely given that foreign shares of asset portfolios are still well below those that might be expected in a 'borderless' world. As equation (3) implies, this would reduce the trade surplus required to stabilise the NFL share of GDP, all other things equal.

A key limitation of this analysis is that, while it is clear that NFLs must eventually stabilise at some share of GDP, it is impossible to be definitive about what this share might be for any individual economy. Whether adjustment is likely to be needed soon or can be deferred for some time obviously matters. Nonetheless, it is important to recognise that external adjustment cannot be indefinitely avoided, and that deferral is likely to increase the size of the adjustment.

Further, if financial markets are forward-looking they should recognise that if external adjustment needs to occur eventually then it might be expected to require a real depreciation, which implies currency losses for foreign investors. This prospect could be expected to lead them to demand a higher rate of return now than would be the

case if trade deficits were already consistent with stabilising NFLs as a share of GDP. Hence, this issue can have implications for the near term, even if adjustment can be deferred for some time.

Conclusion

Australia and the United States have been running similarly large current account deficits in recent years. While this has been associated with a steadily rising net foreign liability share of GDP in Australia, it is remarkable that the US share has been falling since 2002. A key issue in relation to the need for future external adjustment is how deficits might translate into future changes in net foreign liabilities as a share of GDP. From this perspective, focussing on the current account has two key limitations. First, it is the trade deficit that is key to the size of future adjustment. Second, valuation changes to foreign asset and liability positions, which are excluded from the current account, can significantly influence the evolution of net foreign liabilities as a share of GDP.

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Over the longer term, both the United States and, to a lesser extent, Australia have benefited from rates of return on foreign assets exceeding those on foreign liabilities, with much of this coming from proportionately higher valuation gains on foreign assets. If past experience continues to apply in future, this would provide some scope to sustain trade deficits without net foreign liabilities growing as a share of GDP. On this basis, the future external adjustment needed to stabilise this share is likely to be much smaller for Australia than for the United States, given the latter's currently much higher trade deficit as a share of GDP.

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