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CURRENT ACCOUNT DEFICITS: THE AUSTRALIAN DEBATE

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Table of Contents

1.	Introduction	1
2.	The History of Australia's Current Account	5
2.1	A (Brief) Long History of Current Account Deficits	5
2.2	After the Float	8
3.	The Australian Policy Debate	10
3.1	An Evolving Monetary Policy Framework	12
3.2	The Challenge from Academia	15
3.3	The Response	17
3.4	External Recommendations	19
4.	Optimality and Sustainability: An Empirical Assessment	21
5.	Current Account Deficits and External Vulnerability	23
5.1	The Record on Inflation	25
5.2	The Government Debt Market	25
5.3	Financial Markets	26
5.4	Institutional Framework	28
6.	Conclusion	29
	Appendix A: Testing the Intertemporal Model	31
	A.1 Estimation	33
	A.2 Empirical Results	34
	Appendix B: Data	41
	References	42

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1. Introduction

Large and persistent current account deficits are frequently raised as a cause for concern for a number of reasons. Perhaps the key concern is that countries in this situation could be on a path to insolvency, building up excessive net foreign debt, raising the prospects of default and/or a sharp reversal in capital flows. In other words, large deficits and rising indebtedness could leave countries more vulnerable to adverse external shocks (including a change in sentiment of foreign creditors), forcing them to undergo an abrupt and costly adjustment. Some argue that to avoid such outcomes policy-makers should take steps to ensure that countries move towards a sustainable position in which the current account deficit is not so large that it will lead to an excessive build-up in foreign indebtedness.¹

At the other extreme is the argument that, so long as markets are efficient, current account deficits reflect the optimal decisions of borrowers and lenders and, therefore, policy intervention to reduce deficits is not only unwarranted but could reduce welfare. Moreover, policies that attempt to rein in deficits may be ineffective, while it may be that policies to improve market efficiency and enhance welfare could lead to higher current account deficits.

Because Australia has a long history of sizeable current account deficits, it makes for an interesting case study. This paper documents the clear change in the general view which has taken place in Australia over the past three decades concerning the current account balance as a policy objective, highlighting issues related to solvency, sustainability, optimality and vulnerability. This period is also interesting because it spans the transition from a fixed exchange rate regime with stringent capital controls and a heavily regulated financial system, to a flexible exchange rate regime, with an open capital account and liberalised financial markets.

¹ Milesi-Ferretti and Razin (1996) provide a thorough discussion of solvency – when the intertemporal budget constraint is satisfied – and sustainability – whereby the current account deficit is small enough so that net foreign liabilities do not rise as a share of GDP. Optimality by definition will satisfy solvency, could satisfy sustainability and will maximise welfare.

Figure 1 shows Australia's current account balance and some related macroeconomic developments since the 1960s. A shift to larger sustained current account deficits was noticeable around the early 1980s, with the average increasing from about 2½ per cent to 4½ per cent of GDP. Most of this rise can be accounted for by a drop in the saving rate, rather than a rise in investment. This change was sustained in the face of a sizeable turnaround in the fiscal position (as a share of GDP, public sector debt peaked in the early 1990s at a little over 30 per cent and has declined to around zero currently) and a large depreciation of the real exchange rate (of around 30 per cent between the mid 1970s and mid 1980s). Net foreign debt rose rapidly from around 6 per cent of GDP at the beginning of the 1980s to over 30 per cent by the mid 1980s (partly reflecting the effect of the depreciation on foreign currency denominated debt); since then it has risen to about 50 per cent. The profile of net foreign liabilities is not quite as steep, with net foreign equity liabilities flat for much of the period and lower since the late 1990s.²

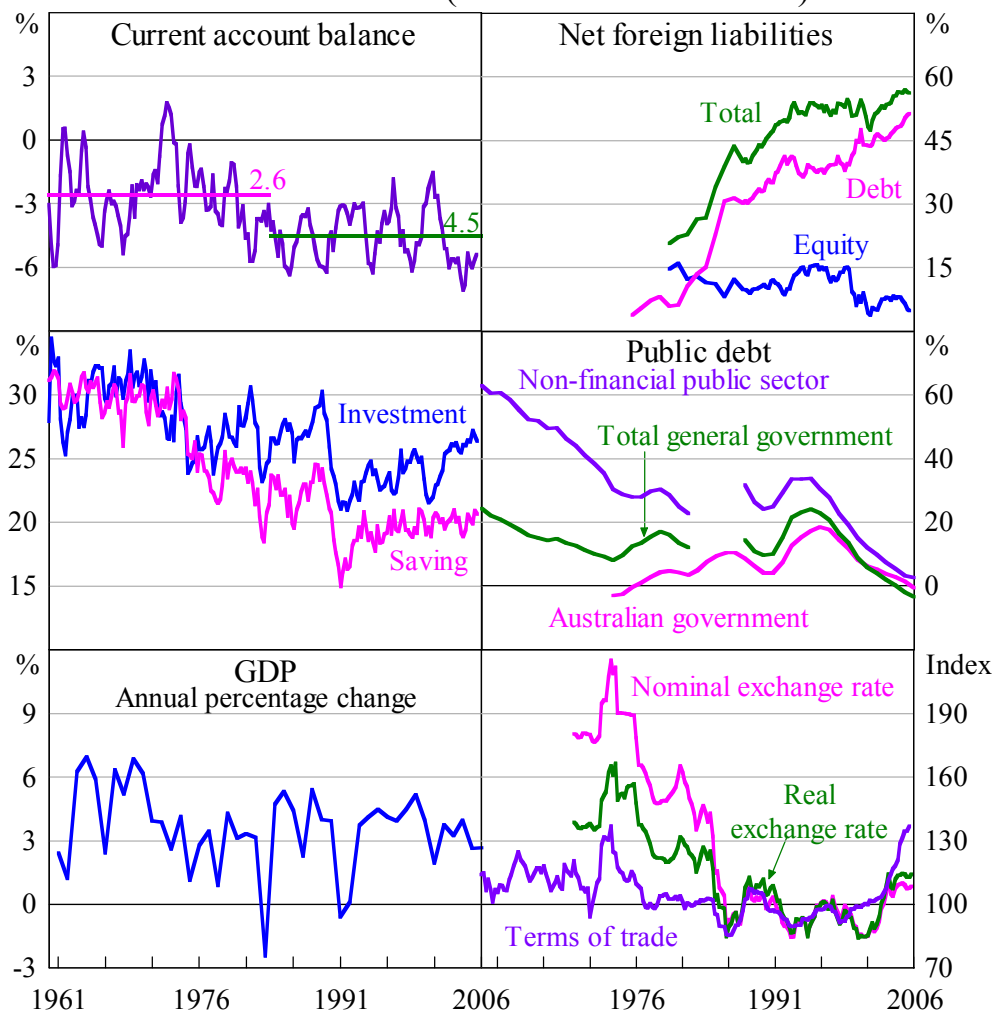
From the early 1970s to December 1983, with the fixed (and later managed) exchange rate regime, current account deficits in Australia were a cause of policy concern to the extent that they were not matched by capital inflows and hence needed to be funded out of foreign exchange reserves. But the more general and growing concern was the problem of managing a partially fixed exchange rate while pursuing monetary policy goals with an increasingly open capital account. By late 1983 these pressures contributed to the complete opening of the capital account and floating of the exchange rate (DeBelle and Plumb 2006).

The view that policy *should* and *could* do something to address large current account deficits and the build-up of external liabilities persisted after the move to the flexible exchange rate. Indeed, with the rapid build-up of external liabilities in the mid 1980s, concerns about excessive and persistent deficits became prominent, in part reflecting the fact that policy makers could no longer rely on capital

² Gruen (2005) provides a detailed discussion of the evolution of the current account deficit in Australia and a comparison with other selected economies. Data compiled by Lane and Milesi-Ferretti (2006) show that since the late 1980s, Australia is one of five long-standing OECD countries with an annual average current account deficit of greater than 4 per cent (relative to GDP), along with Greece, Iceland, New Zealand and Portugal. These and other OECD countries experienced peak deficits on an annual basis of around 9 per cent or higher, compared with a peak of 6.2 per cent for Australia in 2004. These countries also have higher net foreign liabilities (relative to GDP) than Australia.

controls to rein in the current account. The key strategy to address this was through fiscal consolidation, as well as a number of other structural policies aimed at improving international competitiveness. While such policies had the stated objective of lowering the current account deficit, it is worth recognising that such pronouncements may have also played a useful rhetorical role in support of fiscal and market reforms. Of course, the usefulness of these warnings would have waned with the realisation that, despite determined attempts, there was no reduction in the trend current account deficit.

Figure 1: The Current Account Balance, Debt and Other Indicators
Per cent of GDP (unless otherwise noted)



Sources: See Appendix B.

Notes: Current account averages are shown for 1960 to 1983 and for 1984 to June 2006. The terms of trade and exchange rate indices have a post-float average of 100 (the latter are on a trade-weighted basis).

Monetary policy, it was hoped, could also play a role through its influence as a short-term demand management device. Under the ‘checklist’ approach to monetary policy in place from the mid 1980s, the balance of payments was listed explicitly as an important factor to guide policy decisions, and there were frequent references to the need to rein in sizeable current account deficits.

By the end of the 1980s, a number of Australian academics were arguing that policy should not attempt to influence what they perceived to be the outcome of optimal decisions by private agents. At least within the RBA, there were signs of tension emerging regarding the value of having the current account deficit as an explicit objective, as evidenced in various published statements. Even so, large current account deficits in the late 1980s were seen to be a symptom of excess domestic demand pressures and, at least in that sense, something monetary policy could usefully respond to. The ‘consenting adults’ view was gradually taken up by policy-makers in public statements from the late 1980s onwards.³

It is now widely argued that the current account balance need not and can not be an objective for macroeconomic policies. Nor is it seen by itself as a reliable indicator of vulnerabilities. Australia’s experience is particularly relevant in this regard, given its experience with large fluctuations in the exchange rate and sizeable foreign debt, much of it intermediated through the banking system. The floating exchange rate is also an important factor because it bears part of the adjustment to an external shock, and provides a mechanism by which Australia’s external position is subject to continual reassessment by the markets. Australia has managed to sustain the confidence of investors as evident in the maintenance of a current account deficit that has averaged around 4½ per cent of GDP over two decades combined with a real exchange rate which has shown no discernable trend over the same period.

The remainder of the paper is structured as follows. Section 2 provides a brief history of Australia’s current account and incidence of capital reversals going back as far as the 1850s. Section 3 steps through the various stages of the debate about

³ This view is also known as the ‘Pitchford thesis’ in Australia. In the United Kingdom, these same arguments are known as the ‘Lawson doctrine’, named after Nigel Lawson, the British Chancellor in the late 1980s who presented similar views when commenting on their large current account deficit at the time. In the UK, these views had an earlier origin with Congdon (1982), while in Australia they can be traced back to Corden (1977).

the role for policy in stemming large current account deficits in Australia. Section 4 briefly discusses some empirical evidence relevant to the optimality and sustainability of the current account in Australia. In Section 5, the issue of external vulnerabilities is discussed in the context of a range of structural features of the Australian economy. Section 6 concludes.

2. The History of Australia's Current Account

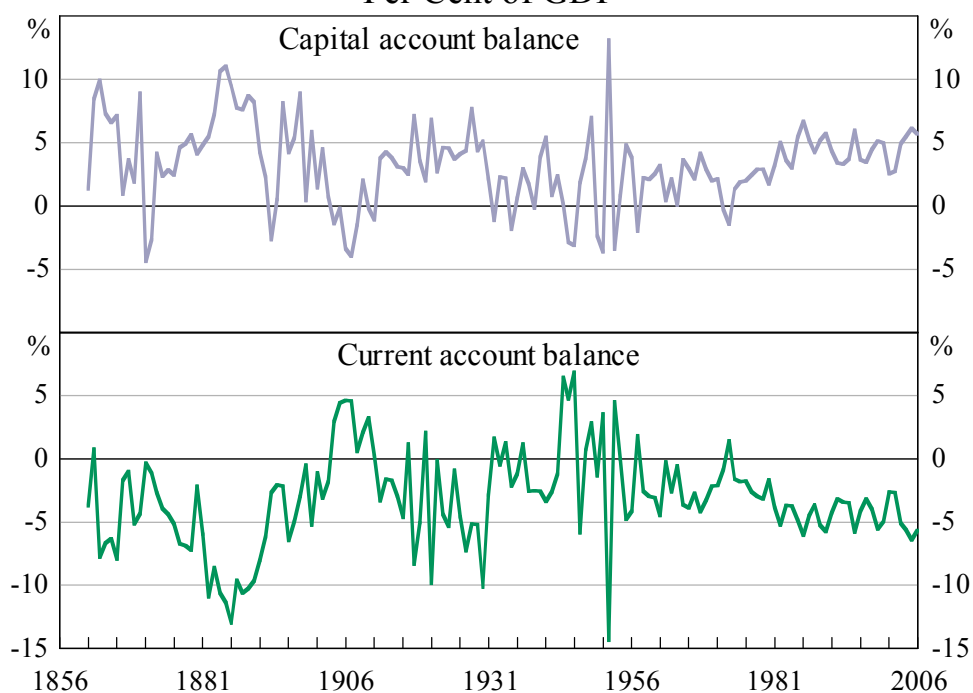
2.1 A (Brief) Long History of Current Account Deficits

Sizeable current account deficits have been recorded in Australia in almost every decade for at least one hundred and fifty years (Figure 2). One of the chief concerns associated with large and persistent current account deficits is that they might increase the prospects of a sharp reversal in capital flows requiring costly adjustments to domestic economic activity.⁴ This section briefly documents the fact that sharp reversals in capital flows have not been a regular, and certainly not a recent, feature of the Australian experience and, most importantly, there have been no instances of default on Australian public debt.

The collapse of property prices in the early 1890s coincided with more than half of trading banks of note issue suspending payments (with around 60 per cent of these eventually closing their doors permanently) and a large number of non-bank financial institutions failing. Deposits from many of these trading banks were effectively frozen for years, with the government enforcing reconstruction of these institutions. Most deposits were repaid between 1893 and 1901, but in some cases deposits did not get repaid until as late as 1918. Not surprisingly, overseas investors took flight during the 1890s, and their full confidence was not restored until the 1910s. The aggregate data imply that large capital inflows were restored by the second half of the 1890s, but this appears to reflect large direct flows to fund mining ventures and related investments associated with the 1890s gold rush in Western Australia (Merrett 1997).

⁴ For a recent discussion and empirical evidence on this issue see Edwards (2004) and Bordo and Eighengreen (1999).

Figure 2: Australia's Capital and Current Account Balances
Per Cent of GDP



Source: ABS; Foster (1996); Vamplew (1987).

The availability of foreign capital in the 1890s was also affected by turmoil in global financial markets. The large London discount house, Barings, suffered a liquidity crisis in the 1890s, in part owing to its financial exposures in South America. This generated concern about all offshore exposures, and it became difficult for Australians to raise funds in London at this time. London remained the main source of offshore funds even into the 1920s. An Australian Royal Commission (1937, paragraph 114) report notes that Australia was virtually cut off from long-term borrowings in London from the late 1920s onwards, as money flowed into the New York stock exchange instead.

Fisher and Kent (1999) argue that for Australia the 1930s depression was somewhat different from the depression of the 1890s. In contrast to the 1890s, the banking sector was relatively healthy in the run-up to the 1930s depression, having taken a more conservative approach to lending in the boom years of the 1920s. Only three financial institutions had cause to stop payments in the 1930s depression and none of these were trading banks. After the 1929 stock market crash, foreign capital dried up, but there was not the same capital flight that was seen in the 1890s episode. Even so, despite initial resistance by the trading banks –

which kept interest rates high in early 1930 – concerns about economic weakness, combined with a reduction in foreign exchange reserves underpinned a devaluation of the exchange rate in late 1930. Thereafter, the current account returned to rough balance reflecting a combination of factors, including the decline in activity, the exchange rate devaluation and an increase in trade protection.

A key development of the 1930s episode was the lengths to which the Commonwealth Government went to avoid default, especially on debt held by foreigners (Caballero, Cowan and Kearns 2004). From April to June 1931, the government of the largest state, New South Wales, did not fully meet interest due on foreign debt. However, the Commonwealth Government and the Commonwealth Bank made good on these payments to protect the ratings of Australian governments (with compensating reductions in revenue payments made to NSW by the Commonwealth). More generally, Commonwealth and state governments cut expenditure, raised taxes and cut bank interest rates and interest paid to domestic holders of debt in order to ensure adequate funds for the payment of foreign debts. In this way, Australia maintained an unblemished record with regards to foreign holders of debt.

Foreign capital inflows were largely curtailed during the period of World War II and were tightly controlled thereafter by a comprehensive system of controls introduced as emergency measures during the war. In the early 1950s, net capital flows displayed considerable volatility, reflecting sharp swings in the terms of trade associated with the Korean war.

DeBelle and Plumb (2006) document a number of episodes of capital flight in the 1970s and early 1980s. These tended to be short-lived events based on speculation of devaluations in the context of the fixed and later crawling peg exchange rate regimes.⁵ However, the overarching pressure over this period was the tendency for sizeable capital inflows (with an increasingly open capital account), which made it difficult to achieve the goal of internal balance. Eventually this tension led to the

⁵ There were heavy outflows in the week leading up to the Federal election in March 1983. After the election, exchange rate was devalued by 10 per cent, contributing to the perception that speculators could precipitate significant exchange rate adjustments. Speculative inflows also occurred in anticipation of revaluations, particularly towards the end of 1983.

floating of the Australian dollar in December 1983 and a complete liberalisation of the capital account.

2.2 After the Float

A significant feature of the years following the floating of the exchange rate was a sustained widening in the current account deficit and the consequent rapid accumulation of foreign debt, which more than doubled between 1984 and 1989. As early as 1984, the then Secretary to the Treasury, Mr John Stone, gave a speech expressing concern that a default elsewhere in the world would harm Australia as international financial markets took ‘flight to quality’ (Stone 1984, p8). In 1984, Argentina had come close to default a number of times, and he suggested there were lessons to be drawn from the 1890s experience, when poor returns from offshore investments in South America, particularly Argentina, spilled over into foreign investor concern about investing in Australia.⁶

The rise in the current account deficit from 1985 to 1986 partly reflected a fall in the terms of trade and the associated depreciation of the exchange rate (of around 50 per cent in nominal effective terms over this period).⁷ Combined with the rise in foreign debt this led the Treasurer at the time, Paul Keating, to warn of the risk of Australia becoming a ‘banana republic’ and underpinned further reform efforts. On the financial side, the banking sector underwent further deregulation, a process which had started in the late 1970s. This largely removed controls on lending to businesses and households, and freed up access to international capital markets. Also, industrial reforms were implemented as arguments mounted for Australian industry to become more internationally competitive. One aspect of this was a further reduction in tariffs on imports and other barriers to trade (following an across-the-board cut in tariffs of 25 per cent in 1973). Another important change

⁶ Other pieces written in the 1980s were less alarmist (Jonson and Stevens 1983, Johnston 1987). While similarities were acknowledged between the 1980s and the 1930s, differences were also noted. In terms of overseas’ borrowings, foreign debt as a per cent of GDP was higher in the 1930s than the 1980s, as was the burden of servicing this debt as a share of export receipts. While capital inflow dried up in the 1930s, in contrast, the 1980s was a period of significant capital inflow.

⁷ Indeed, the depreciation, by raising the Australian-dollar values of debt denominated in foreign currency also saw a widening of the net income deficit – explaining roughly three-quarters of the widening seen in the current account deficit at this time.

was the introduction of a Prices and Incomes Accord (an agreement between the government, trade unions and employers), which had the dual aims of containing domestic inflation and improving international competitiveness (Chapman and Gruen 1990).

The large depreciation that followed the float of the exchange rate went some way to improving the competitiveness of domestic firms and insulating firms from the reduction in trade barriers. However, the depreciation did not generate inflation to the extent that might have been expected under the old fixed exchange rate regime (in part due to the impact of the Prices and Incomes Accord) and proved to be stimulatory in the face of the declining terms of trade (Debelle and Plumb 2006).

Australia also provides evidence of the potential for changes in the supply of capital to influence the current account (that is, the net demand for capital). The removal of capital controls with the floating of the exchange rate allowed foreigners desiring to invest in Australia to bring in capital, and to some extent the economy and the current account adjusted to absorb this inflow of capital. An episode during the late 1990s also illustrates this general point. During the height of the global technology boom, it appears that Australia was viewed as being an 'old economy', contributing to a sizeable depreciation of the exchange rate (not matched by a change in the terms of trade) (Macfarlane 2000). The trade balance moved from a deficit of about 2½ per cent of GDP in 1999 to a surplus of ½ per cent by 2001, with a commensurate turn around in the current account deficit.⁸

The question of resiliency in the face of large external shocks and exchange rate volatility is taken up again in Section 5 of the paper. In the next section we focus on the evolution of the debate about the need for monetary and fiscal policies to respond to large current account deficits.

⁸ Dvornak, Kohler, and Menzies (2003) provide estimates regarding the relationship between the current account deficit and the exchange rate in Australia.

3. The Australian Policy Debate

Up until the mid 1980s, during the period when the exchange rate was fixed, current account deficits had been a cause of concern for policy-makers to the extent that large deficits made it difficult to achieve the goals of internal and external balance.^{9,10} These deficits needed to be financed out of net capital flows and foreign currency reserves, while large swings in net capital inflow could hamper policy-makers' efforts to contain growth in domestic liquidity. With the float of the Australian dollar, these particular difficulties were largely removed, not the least because policy-makers now regained control over the setting of domestic interest rates. By the mid 1980s, large current account deficits were becoming the norm and the Australian-dollar value of foreign debt was building up at a rapid pace. At this stage there was less concern regarding the implications of the deficit for the implementation of policy, and instead the current account deficit for a time became an objective of policy in its own right.

At the heart of this concern was the widespread sense that the pace of foreign borrowing was unsustainable.¹¹ It was feared that it could ultimately impose a constraint on economic growth, and in the meantime, the domestic economy would become more susceptible to the vagaries of international investors while debtors would face higher borrowing costs. This gained further credibility when the credit rating agencies, Moody's and Standard and Poor's, downgraded Australian Commonwealth debt from AAA ratings to Aa2 and AA respectively (Gruen and Stevens 2000). It was at this time in 1986 that the Australian treasurer, Mr Keating, made his famous 'banana republic' remark. The reaction in the markets to this comment was probably greater than the reaction to the downgrades themselves.

Addressing the current account deficit 'problem' became a key stated objective of government policy. Mr Keating remarked '...that economic policy in Australia is,

⁹ Other discussions of these and related issues include Grenville (1997), Gruen and Stevens (2000), Horne (2001), Gruen and Sayegh (2005) and Macfarlane (1999).

¹⁰ Corden (1968, p15) noted that a 'Preoccupation with the balance of payments and a "brooding pessimism" about its prospects are characteristics of Australian economic literature.' However, much of this preoccupation was with regards to foreign ownership rather than more immediate policy concerns.

¹¹ See, Gruen and Stevens (2000) for references to newspaper articles and reports written in the 1980s expressing deep concern over the sustainability of the current account.

and will continue to be, directed principally at securing further reductions in our current account deficit.’ (Keating 1987)

Of course the current account deficit, was clearly not the only ‘problem’ facing the Australian economy. Inflation, which had risen around the time of the first oil price shock in the early 1970s, persisted at a relatively high rate into the 1980s. By the early 1980s, after a period of lower growth and higher inflation, policy-makers had also come to the view that it was necessary to take steps to improve Australia’s international competitiveness. Also, notwithstanding efforts to reduce tariffs in the 1970s, Australia had a long legacy of protectionist policies for both industry and workers that dated back to the beginning of the 20th century and before. In fact, these protectionist policies were being blamed in part for the emergence of the ‘balance of payments problem’ (Commonwealth of Australia 1986, p37).

During the 1980s, the fiscal authorities largely took the lead on the setting of policies for government and the monetary authorities alike. The practical challenge was to determine how to address these ‘problems’. To address the current account deficit, the main strategy was fiscal consolidation alongside reforms to improve Australia’s international competitiveness.¹² The authorities expressed a desire to reduce their call on foreign sources of funds, in line with the ‘twin deficits’ argument that a reduction in the government deficit would also reduce the current account deficit (Edwards 2006, pp310-311, 319, 370).¹³ They also expected that more restrictive fiscal policy would ultimately allow an easing in domestic interest rates. Reforms to improve international competitiveness most notably included a phased reduction in trade barriers and the continuation of the Prices and Incomes Accord, which was being used to help restrain domestic wages growth. As already mentioned, it is plausible that the prominence given to the current account deficit throughout this period may have in part reflected its usefulness as an argument to pursue other worthwhile reforms (Edwards 2006). Of course, the value of such a

¹² The 1986/87 Commonwealth Government Budget Papers described the policy strategy more completely as focussing ‘...on adjusting to recent external shocks by lowering inflation and preserving international competitiveness; dampening the growth of domestic demand to facilitate increased net exports; lowering domestic expenditure and increasing domestic saving; maintaining higher business profitability; and reducing impediments to investment, including high real interest rates.’ (Commonwealth of Australia 1986, p48)

¹³ See and Gruen and Sayegh (2005) for a discussion of Australian fiscal policy since the 1980s.

strategy would have eventually weakened as it became increasingly apparent that policy was ineffective at reducing the trend in the current account deficit.

As the more flexible tool, monetary policy was to be directed as needed to more general demand management, containing cost and price pressures and ensuring stability in financial markets (for example, see Commonwealth of Australia 1988, p43). It was also hoped that restrictive monetary policy would reduce the demand for imports, thereby assisting a rise in the trade balance. The overriding sense was that monetary policy was to operate in such a way as to buy time while the other reforms took effect.¹⁴

3.1 An Evolving Monetary Policy Framework

The role carved out for monetary policy in the second half of the 1980s was highly ambitious. The belief that monetary policy should be guided by a single quantity was called into question towards the end of the monetary targeting period of 1976 to 1985, particularly after financial deregulation when the already tenuous relationship between monetary aggregates and inflation broke down (Johnston 1987, p6). In its place, the RBA instituted a ‘checklist’ approach, which included ‘all major economic and financial factors – present and prospective’ (Johnston 1987, p6). Among other things, the balance of payments was listed as an explicit factor and was given a high weight in monetary policy settings, according to RBA Annual Reports of the time.¹⁵ The checklist had expanded the factors that ‘should’

¹⁴ This is clearly evident in RBA Annual reports. For example, the 1985/86 Report says ‘With other policies unable to respond quickly ... monetary policy was tightened substantially. This step had elements of a holding action ...’ (RBA (a) 1986, p7). A similar sentiment can also be found on p10 of the 1986/87 report (RBA (a) 1987). The 1988/89 Commonwealth Government Budget Papers remark: ‘Because it is a more flexible policy instrument, monetary policy is often called on for the initial response to external or internal shocks while other policy adjustments are made and work their way through the system.’ (Commonwealth of Australia 1988, p53)

¹⁵ In the 1986/87 RBA Annual Report, it states ‘Economic policy over the past year was again dominated by the continuing severe deficit in the current account balance of payments.’ (RBA (a) 1987, p6); in the 1987/88 Report: ‘Australia’s external imbalance and the high level of external debt were major issues for general economic policy.’ (RBA (a) 1988 p8); in the 1988/89 Report: ‘... it is imperative that there be a return to progress on reducing both the rate of inflation and the current account deficit over the coming year.’ (RBA (a) 1989, p7); and in the 1989/1990 Report: ‘By early 1990 it was clear that policy was achieving its primary task

be usefully considered and ultimately influenced by policy setters.¹⁶ While that was true, the RBA's understanding of the transmission mechanisms of policy had not fundamentally changed (although was modified in view of the now floating exchange rate). Specifically, the RBA believed it could operate policy as a 'potent demand management tool' (RBA (a) 1989, p7), with inflation and current account deficits being symptoms of excess demand. However, with the floating exchange rate, policy also needed to be mindful of the effects that the exchange rate could have on inflation and Australia's international competitiveness and to take into account potential feedback effects of interest rate settings on exchange rates (Grenville 1997, Macfarlane 1991). These factors, along with more general concerns about stability in financial (and exchange rate) markets variously influenced policy.

Over this period, there is a sense of dissatisfaction by the authorities with what monetary policy could achieve. The RBA felt that monetary policy was overly bearing the burden of demand management (see for example, RBA (a) 1986, p11 and RBA (a) 1989, pp13,15) and it raised doubts about the effectiveness of interest rates to address the current account deficit (see for example RBA (a) 1989, p7). If policy was to be applied 'vigorously enough and long enough' it was thought that higher interest rates would be able to reduce import demand and therefore the current account deficit. However, benefits in the short term would be less clear and may even operate in the opposite direction if higher interest rates produced an exchange rate appreciation. The RBA concluded that: 'On its own, monetary policy will not produce the longer-term structural benefits Australia is seeking.' (RBA (a) 1989, p7) It was always anticipated that the other arms of government policy – fiscal restraint and micro reforms – would bring about the lasting reduction in the deficit, but the RBA came to question whether monetary policy was able to contribute to the adjustment process at all.

of eliminating excess domestic demand, and thereby contributing to a lessening of pressures on inflation and the balance of payments.' (RBA (a) 1990, p4).

¹⁶ The RBA claimed that it had successfully been able to influence the current account deficit during the second half of the 1980s (for example, RBA (a) 1987, p14 and RBA (a) 1990, p4).

Towards the end of the 1980s, persistent high inflation increasingly became the main focus of the RBA, even though the current account deficit still rated a mention in policy discussions.¹⁷ In part, this reflected disappointment that Australia had failed to achieve much progress on either front, while other countries had managed to get their inflation rates back to previous modest levels (Grenville 1997).

This shift in focus also reflected evolving views within the RBA about the appropriate policy framework. Against the background of dissatisfaction with the operation of the checklist approach, the emerging view was that the single instrument of monetary policy could only be effectively directed to a single objective, namely inflation. Two RBA economists, who both were later to become RBA Governors, put forward this view in 1989: ‘...while monetary policy can and does affect activity in the short run, its ultimate goal should be price stability.’ (Macfarlane and Stevens 1989, p8). The then deputy Governor, Mr Phillips (1989), echoed similar statements, although that year’s RBA Annual Report (1989) still gave weight to the idea that policy could usefully affect the current account deficit.

The 1990 RBA Annual Report devoted much more attention to inflation than had the immediately preceding reports, though the current account deficit still rated a mention (RBA (a) 1990). By the time of writing the 1991 Annual Report, it became the official position of the RBA that inflation was the focus of monetary policy: ‘Monetary policy can best contribute to a sustainable external position in the same way that it can best contribute to overall growth, namely by providing an environment of low inflation.’ (RBA (a) 1991, p4)

By early 1993, the RBA had adopted an inflation targeting framework (Stevens 1999), although considerations of demand fluctuations remained important – that is, the RBA was a flexible inflation targeter. Alongside this shift in the policy objective was a shift in the policy time horizon, from relatively short-term demand management to the medium-term objective of containing inflation (RBA (a) 1991, pp3-4 and Commonwealth of Australia 1991, p2.32).

¹⁷ This sentiment was also reflected in comments by the Treasurer, Mr Keating, in his 1988-89 Budget Speech (p4): ‘Madam Speaker, while the balance of payments deficit is Australia’s number one economic problem, inflation remains Australia’s number one economic disease.’

By the end of the 1980s, it was apparent that, despite the concerted joint efforts of policy-makers, no permanent reduction in the current account deficit had been achieved. By the end of the decade, the current account deficit was back to 6 per cent, roughly around the level that sparked concern in the first place. This was despite an impressive turnaround in the Commonwealth Government's annual budget position of around 5 percentage points of GDP between 1983/84 and 1988/89 (reflecting both, fiscal restraint and strong growth) and significant microeconomic reform. The fact that these policies had had no (persistent) effect on the current account lent weight to the emerging view of academia, which is outlined in the next section.

3.2 The Challenge from Academia

During the second half of the 1980s, Australian academics began to debate whether the current account deficit was an appropriate target of macroeconomic policies and whether the view that the deficit was unsustainable was correct.¹⁸ This debate was led by John Pitchford; however, the 'Pitchford thesis', or 'consenting adults' view, as it is commonly known in Australia, can be traced back to Max Corden who had expressed very similar views in his 1977 book.

The Pitchford (1989b, c, 1990) thesis rests on the understanding that the current account balance is the net result of investment and saving decisions that have been made by agents within the economy. If these decisions are made optimally, then any resulting current account deficit (or surplus) can not be considered a cause for concern. After all, a deficit merely represents households deciding to consume now rather than later and firms deciding to take advantage of profitable investment opportunities in Australia. These decisions are optimal – therefore welfare maximising – and households and firms have made these decisions with every expectation that they will have the capacity to repay. The foreign investors lending the money are obviously of the same mind. The deficit, therefore, is the result of decisions between 'consenting adults'. At the time these arguments were being put, the Commonwealth Government was running a budget surplus and the public sector borrowing requirement was low, and therefore the current account deficit could be largely considered the outcome of private decisions.

¹⁸ Early contributions include Corden (1985) and Pitchford (1987); however, the debate did not achieve true momentum until the end of the 1980s.

The Pitchford thesis fundamentally countered established thinking on the current account deficit – that is, the notion that large current account deficits are always unsustainable or can ultimately impose a constraint on growth. Rather than imposing a constraint on growth, a current account deficit can be a mechanism by which the growth potential of the economy can be raised as advantage can be taken of profitable investment opportunities. Capital flows into Australia are presumably the result of foreign investors seeking high returns, benefiting both the borrowers and lenders in the process.

The key message from Pitchford and others for policy-makers was that there was no role for macroeconomic policies to respond to current account deficits and that current policies aimed at reducing the current account deficit might be severely misplaced. If there was a role for government at all in addressing the current account deficit, it would be to remove distortions and externalities adversely affecting decisions of private agents. Even then, the first-best solution is to use micro-based policies to remove the identified problems at their source.¹⁹

Pitchford (1989b) and other proponents of this view (for example, Corden 1991) accused policy-makers of holding onto the outdated Mundell-Fleming framework that applied when Australia had a fixed exchange rate. Pitchford also accused policy-makers of not justifying their position: ‘There may be a case for believing that current account deficits have been excessive, but if so it has not been made.’ Pitchford (1989b, p5)

While the Pitchford view already presented a strong counter to existing government policies, Pitchford and others also more directly challenged the apparent rationale behind existing policy strategies. In particular, the ‘twin deficits’ argument – on which the fiscal consolidation strategy was seemingly based – was convincingly refuted (for example Argy 1990). The main flaw to the twin deficits argument is that it assumes that private behaviour will not change in response to changes in government behaviour. This does not imply that fiscal consolidation is inappropriate, but just that it would not necessarily reduce the current account deficit.

¹⁹ While the government undertook a lot of micro reforms during the 1980s, Pitchford (1989b, p2) claimed that the relevant microeconomic policies were largely in a class that were not at that time being considered.

The argument that microeconomic reforms would necessarily lead to a reduction in the current account deficit was also disputed. Such reforms might make markets operate more efficiently, but does that mean agents would invest more or less? Save more or less? The effect on the current account deficit is often ambiguous. The merit of micro reforms was that they were worthwhile for their own sake (Pitchford 1989a, p11), not that they produced a particular effect on the current account deficit. Otherwise, Pitchford asked, do you not undertake reforms that might lead to an increase in the current account deficit (Pitchford 1989a, p11)?

3.3 The Response

While many academics were to side with Pitchford in his thinking, other academics and policy-makers did not, particularly with regards to the ‘hands-off’ approach. Some questioned the new framework and viewed it as untested, instead suggesting that policy should be based on the more established way of thinking (see for example Nguyen 1990). Most arguments, however, did not question the framework but rather emphasised practical considerations (see for example Corden 1991).

First, it was argued that private agents are not always able to make optimal decisions. Distortions and externalities exist, which interfere with incentives and provide a rationale for policy intervention. Moore (1989) argued that there were plenty of examples in history of excessive borrowing by nations that had ended in a debt crisis. ‘I take it that Professor Pitchford would not argue that history cannot repeat itself.’ (Moore 1989, p5) Certainly, at least for extreme levels of government borrowing, the ‘twin deficits’ argument might come into play.

Second, an agent’s decision that leads to an increase in external debt may impose costs on other borrowers in the form of higher interest rates through the imposition of a risk premium applying to the country as a whole. Third, there were risks to the economy if there was an adverse swing in sentiment of foreign investors. It was argued that this could result in a sharp and possibly severe adjustment process, in which case, it was preferable that some of the adjustment was already undertaken through appropriate restrictive policy settings (Argy 1990).²⁰

²⁰ Argy (1990, p79), the then director of the Economic Planning Advisory Council suggested that this view was shared ‘by many of us in Canberra’.

While many of these counter arguments have valid elements, in many cases their central concern is not the current account deficit *per se*, rather the deficit is just a symptom of another underlying problem. The appropriate policy response, then, is to address the underlying problem, be that overspending or the distortions and externalities themselves.²¹

The intellectual weight of the Pitchford thesis started to be acknowledged by policy-makers by the late 1980s. In September 1989 and again in June 1990, the then Deputy Governor of the RBA, Mr John Phillips, gave credence to the Pitchford argument stating that the balance of payments was due to ‘community’s attitudes to savings, consumption, investment and debt’ (Phillips 1989, 1990), and as a result, the current account deficit was not an appropriate target of monetary policy.²² Instead, the appropriate role for monetary policy was controlling inflation and the RBA’s stated concern that the current account deficit was unsustainable started to wane. A few years later, the government also expressed the view that monetary policy should not be used to target the current account (see for example, Commonwealth of Australia 1991, p2.33).

In the early 1990s, the Commonwealth government acknowledged the broader implications of the Pitchford thesis, but it was not convinced how well it would apply in practice, in line with many of the arguments outlined above (see in particular Commonwealth of Australia 1991, p2,36).²³ Through the early 1990s, the government continued to point to fiscal consolidation and micro reforms as strategies to address the current account deficit ‘problem’. These policies were, however, increasingly being framed in terms of a broader framework that understood that micro reforms were helpful in their own right and that fiscal consolidation was an important arm of a broader strategy for raising national saving.²⁴ By 1993, the government had more fully accepted the Pitchford line.

²¹ Responses to other arguments can be found in the many papers that constituted this debate (see for example Corden 1991 and Pitchford 1989d).

²² Some acknowledgement by the government of the Pitchford thesis can be found in the 1988/89 Budget Papers (Commonwealth of Australia 1988, p44)

²³ Certainly, broader community feeling was that the deficit should be regarded as a concern, and this led to the government initiating a formal enquiry in October 1991 into the causes and consequences of Australia’s current account deficit and overseas debt (the so-called Langmore 1991 Report).

²⁴ Many of these issues were also raised in the government-commissioned Fitzgerald Report (1993), which outlined a strategy for improving national saving, in part to help reduce

However, there was ongoing concern that high foreign debt would result in a risk premium on Australian foreign borrowings and that a swing in foreign investor sentiment could result in a severe adjustment process for the domestic economy (Commonwealth of Australia 1993, p2.45).

Like the government, the RBA did not at this time entirely accept the view that the current account deficit should not be a concern at all. Mr Bernie Fraser, the RBA Governor between 1989 and 1996, indicated that he believed that the current account deficit was ‘a problem but ... a medium-term problem, not one to agonise over monthly, or even quarterly’ (Fraser 1996). Current account deficits of around 3 per cent of GDP were considered by Mr Fraser as sustainable, while deficits of around 5-6 per cent probably were not (Fraser 1994). Since 1996, the current account deficit has no longer featured as part of the monetary policy debate. In 2004, Mr Glenn Stevens, the then Deputy Governor, restated the RBA’s view as thus: ‘... whether the current account deficit should be a target of any policy is not obvious – it would need to be argued. But whatever one’s view on that question, *the current account is not, and should not, be an objective of monetary policy.*’ (Stevens 2004, italicised as per the original)

The dissenting voices to the Pitchford view – in both academia and policy institutions – from within Australia have now largely disappeared. If concerns are raised, they generally herald from international organisations, such as the OECD or the IMF, in their assessments of the external vulnerabilities facing Australia. More on this will be said immediately below and in Section 5 of this paper, but even here, these concerns have lessened over time.

3.4 External Recommendations

The IMF and the OECD have made regular assessments of the Australian economy since at least the early 1980s. Reports from the IMF have, however, only been publicly available from the mid 1990s. The view from the OECD in the 1980s

Australia’s current account deficit, but also highlighting the need for the government to start making provision for an ageing population.

concluded with Australian authorities that Australia's current account deficit and external debt position were unsustainable. In its 1986/87 report on Australia, the OECD suggested that such concerns needed to be the overriding priority of policy (OECD 1987). The main recommendations for Australian policy-makers were to reduce public sector debt and to implement policies that would improve Australia's international competitiveness (see for example OECD 1984, pp50-51). With regards to the latter, the OECD pointed in particular to a need for real wage moderation and reduced trade protection, particularly for the manufacturing sector. With regards to fiscal policy, the OECD acknowledged that the Australian government had made substantial progress in reducing its deficit, but also pressed for greater efforts to be made in this regard by state and local governments.

OECD concern regarding Australia's current account deficit moderated in the 1990s. In the 1993/94 report, the OECD describe the current account deficit as sustainable in view of current government policies, and in various reports throughout the 1990s, they raise concerns about the potential for high external debt to affect credit ratings and increase external risks. Their latest report, however, presents a more sanguine view. The IMF reports from 1995 onwards describe Australia's net external debt position as sustainable and the external risks as manageable, but they recommend that Australia's external debt position requires continued careful monitoring. Also, these IMF reports often attribute weight to either the narrowing or widening that had been recently observed in the current account deficit, without always an appreciation that most of these movements are part of a standard cyclical pattern around a longer-term average.

Since the time of the Asian crisis, IMF staff have stressed the potential risk from a shift in market sentiment, particularly since around one-half of Australia's foreign debt has a relatively short term maturity. The IMF has a standard set of external vulnerability indicators that they use for a variety of countries in assessing external risks. Over time, the IMF has acknowledged the argument that the 'one-size-fits-all' approach fails to recognise some special factors relevant to the Australian situation, including, for example, the fact that the external debt is denominated in Australian dollars or hedged, that private balance sheets are in a strong position and that the Australian economy has proven to be relatively resilient to large adverse domestic and external shocks, including through the operation of the flexible exchange rate regime.

4. Optimality and Sustainability: An Empirical Assessment

The intertemporal approach to the current account forms the foundation of Pitchford's (1989b, c, 1990) view of the current account. Using the methodology developed by Campbell (1987) and Campbell and Shiller (1987), several studies test whether Australian current account data support the intertemporal model, with mixed results. Milbourne and Otto (1992), using quarterly data, reject the intertemporal model, while, in contrast, Cashin and McDermott (1998) and Otto (2003), using annual data, and McDermott (1999), using quarterly data, find supportive evidence, but only after 1975, 1980 and 1991 respectively. Bergin and Sheffrin (2000) extend the intertemporal model to account for external shocks by allowing the interest rate and exchange rate to vary. They find this improves the fit of the model by better capturing volatility, thereby providing support for the intertemporal model.

Following these studies, this section of the paper examines optimality through the lens of the intertemporal approach to the current balance, but with two innovations. First, account is taken of the effect of the capital market opening and financial market deregulation with the advantage of a longer sample of data postdating these changes. Prior to this, net foreign debt may have been less than optimal (due to consumption and/or investment being too low) and credit constraints may have prevented optimal consumption smoothing in the face of shocks to income. The second innovation is to account for the fact that shocks to the Australian net cash flow may be correlated with shocks in the rest of the world and as a result have a limited effect on the current account (Glick and Rogoff 1995). That is, global shocks should lead to changes in the world interest rate rather than current account balances.

The full details of the model and estimation approach, along with detailed results are reported in Appendix A. In summary, there is tentative evidence in support of the intertemporal model. In particular, the current account balance appears to adjust in a way that is consistent with consumption smoothing in the face of temporary shocks to output, government expenditure and investment. This is true however, only in the period after financial liberalisation in the early 1980s, in line with the removal of capital controls and the easing of credit constraints. There is also evidence of consumption tilting, whereby Australian residents appear more

impatient than the world as a whole. This has contributed to a persistent current account deficit in the order of $4\frac{1}{2}$ per cent of GDP since the mid 1980s. While the extent of this impatience appears relatively modest, within this framework it is not possible to test the solvency condition – that is, whether or not the intertemporal budget constraint has been satisfied.

Indeed, as Milesi-Ferretti and Razin (1996) note, in practise it is difficult to determine whether a country running persistently large current account deficits is solvent at any given time. The more feasible test is to examine the sustainability of the situation – that is, to determine the level of trade surplus (and hence also the current account balance) required to stabilise the level of net foreign liabilities (relative to GDP) given plausible assumptions about output growth and the costs of servicing net foreign liabilities. A number of studies have undertaken this type of exercise for Australia. For example, Gruen and Sayegh (2005) find that an average goods and services trade surplus around $\frac{1}{2}$ to $\frac{3}{4}$ per cent of GDP can sustain foreign liabilities at a ratio of 60 per cent (which compares to the actual deficit on the trade account of $1\frac{1}{2}$ per cent of GDP on average since 1980). In a similar fashion, McDermott (1999) shows that Australia's current account would need to be reduced to $3\frac{3}{4}$ percent of GDP in order to stabilise net external liabilities at its 1997 level.

The limitations of such calculations, however, is that they do not consider what sort of changes would be needed to bring about the turn around in the trade balance (and the associated reduction in the current account), nor exactly when these changes need to occur. Again, this reflects the difference between solvency and sustainability, with the latter being an assessment of what constitutes a stable equilibrium, while the former allows for the possibility that there may be even higher, and potentially sustainable, levels of foreign indebtedness that are welfare enhancing (including by allowing advantage to be taken of expectations of future productivity growth – and associated profitable investment opportunities – without unduly restricting current consumption).

5. Current Account Deficits and External Vulnerability

Instead of focussing on questions of sustainability, it may make more sense to consider the potential costs of large current account deficits and the associated build-up of foreign liabilities in terms of the vulnerability of an economy to external shocks. In essence, such an approach can be thought of as falling somewhere in between those that argue that markets are always efficient and, therefore, that all current account deficits are optimal, and those that caution that countries with large foreign debts should (gradually) reduce their dependence on foreign funds now so as to avoid potentially costly adjustments in the future.

In the wake of the Mexican and Asian financial crises of the 1990s, a number of studies sought to develop models that might provide an early warning of external crises, which by definition imply a costly adjustment (either in the form of a deep recession, associated with higher borrowing costs and/or a cessation or reversal of capital flows).²⁵ By examining time series data across a wide range of countries, this literature attempts to identify indicators that might point to an increasing likelihood of an external crisis. These studies contributed to a perceived association between large net external debt positions and external risks. Australia is a clear outlier in this context, with relatively large net external debt and persistent current account deficits, but no crises.

One problem with such an approach is that it is generally restricted to a relatively limited set of potential indicators, and tends to encourage a ‘one-size-fits-all’ approach to assessing vulnerability, encouraging analysts to treat large current account deficits and external debt as sufficient statistics for vulnerability. However, the value of recognising the role of institutional differences between countries is increasingly being acknowledged (see, for example, Daseking 2002). In this regard, Australia has a number of features that tend to make it relatively resilient in the face of considerable external shocks. Indeed these features underpin the relative stability which encourages sizeable capital inflows in the first place. This suggests that a high debt level may not signal vulnerability but rather that it reflects resilience which permits high debt to be sustained.

²⁵ For example, see Kaminsky and Reinhart (1999).

One feature, in particular, assists Australia to be resilient in the face of large external shocks, in spite of relatively high foreign indebtedness. Namely, foreigners are willing to participate in markets that allow Australian residents to hedge their foreign exchange exposures, at reasonable cost; one (but by no means the only) aspect of this is that foreigners are willing to hold Australian debt denominated in Australian dollars. This ability to hedge allows balance sheets and trading activities of domestic corporations and households (which are net foreign debtors) to be resilient in the face of large, sharp nominal exchange rate fluctuations. Of course such markets can only be expected to evolve fully under a flexible exchange rate regime, in which frequent and often large fluctuations in the nominal exchange rate are the norm. The flexible exchange rate regime also has the advantage of providing a timely and automatic mechanism to adjust to external shocks. That is, it can act as a buffer, allowing shocks to dissipate rapidly across the domestic economy without the widespread impact on inflation as was the case under the fixed exchange rate regime.

The development of this resilience of the Australian economy to external shocks has been well documented in a number of studies (Caballero *et al* 2004, Macfarlane 2005, DeBelle and Plumb 2006, Becker and Fabbro 2006 and McCauley 2006). These studies emphasise the value of maintaining investor confidence in the face of sizeable external shocks via: a robust financial system, with deep, liquid and stable financial markets and strong financial institutions; credible and stabilising macroeconomic policies; and low net foreign currency exposure.²⁶ Arguably, an element of luck and perseverance has also helped in the early stages of floating, allowing these markets and policies to develop.²⁷ The aim of this section of our paper is to summarise this literature by briefly tracing through these four outcomes. In doing so, it becomes clear that while many of these features have come about through a conscious effort of policy-makers seeking to generate resilience, others have arisen more as a by-product of other pursuits or the result of learning-by-doing.

²⁶ Caballero *et al* (2004) argue that this confidence reflects what they term ‘currency trust’ and ‘country trust’. Closely related to currency trust is what McCauley (2006) describes as the internationalisation of the Australian dollar.

²⁷ The RBA believes occasional intervention to be desirable. The Asian crisis is one such example where intervention was used to limit downward pressure on the exchange rate, but only occurred after the exchange rate had moved a long way, and still maintaining the view that a depreciation was a desirable and necessary part of adjustment (Stevens 2006).

5.1 The Record on Inflation

A record of, and a commitment to, low and stable inflation is necessary to keep down the cost of issuing debt – it reassures holders of domestically denominated debt that the value of this will not be eroded to the benefit of issuers. In Australia, the adoption of inflation targeting by the RBA in 1993 has achieved the goal of keeping year-ended inflation on average between 2 and 3 per cent over the cycle. Caballero *et al* (2004) argue that, notwithstanding higher inflation in the 1970s and 1980s, over the past 100 years policy in Australia has established a reputation of being willing and able to maintain modest and stable inflation.

5.2 The Government Debt Market

A key factor behind the confidence of foreigners placed in the market for government debt in Australia is the fact that foreign holders have never suffered from any defaults on the debt (see discussion in Section 2.1).

A number of changes around the early 1980s have been identified as having strengthened the market for government debt in Australia, apparently contributing to the take up by foreigners of Australian-dollar-denominated debt for the first time. McCray (2000) highlights the role of financial deregulation in reducing the extent to which domestic financial institutions acted as a ‘captive market’, thereby contributing to a rise in yields. He also points to a range of important operational changes made as the market moved from a highly regulated environment, with tap issuance (whereby authorities set the price) and a ‘buy and hold’ mentality, to one of open price discovery (through auctions) and an active secondary market (see also McCauley 2006).

As a result, more than one-half of Australian Commonwealth government debt – almost all of which is issued domestically in Australian dollars – is held offshore.²⁸ Foreign investors also hold debt issued by Australian state and local governments and corporations. Indeed, more than 70 per cent of corporate debt is held by offshore investors, with the corporate bond market around eight times larger than the Commonwealth government bond market. Foreign investor interest in

²⁸ As at June 2006, the Commonwealth Government had \$65 billion of bonds on issue of which \$33 billion, or 52 per cent, was held by offshore investors.

Australian corporate bonds has been facilitated by a liquid cross-currency interest rate swaps market, which has allowed foreign investors to accept currency risk whilst insulating themselves from the credit risk associated with lending to Australian firms (McCauley 2006).

5.3 Financial Markets

Caballero *et al* (2004) emphasise the importance of deep and efficient financial markets in helping to ensure that domestic residents are able to hedge foreign exposures at a reasonable cost. International comparisons suggest that these markets are relatively deep for Australia. For example, while Australia's share of world output is relatively small at around 1½ per cent, making it the 15th largest economy, turnover in the Australian dollar spot and derivatives markets is the fourth largest in the world (BIS 2005). The average daily turnover of the Australian dollar swaps market is A\$45 billion (US\$34 billion). This market is deep enough that the net derivatives position of the banking sector could be turned over more than three times a month (Becker and Fabbro 2006).²⁹

Of course this was not the case during the era of capital controls and regulated financial institutions. Debelle and Plumb (2006) discuss the early stages of development of these markets as these controls were eased. One important facet of this was the lesson learnt by Australian borrowers early on in the post-float period about the dangers of unhedged foreign-currency borrowing (see also Becker and Fabbro 2006). In the mid 1980s, some borrowers funded themselves in Swiss Francs to avoid paying much higher domestic interest rates. These borrowers made substantial losses when the Australian dollar depreciated by more than 50 per cent against the Swiss Franc between January 1985 and August 1986. While the scale of the borrowing was relatively small – so that the losses did not disrupt the economy or the banking system overall – they generated enough publicity to provide a salutary lesson to both businesses and households.

Nowadays, the bulk of Australia's non-government foreign debt is raised by the banking sector. These institutions are not only able to raise funds at a relatively low cost (given that they tend to be highly rated), but they are also in a good

²⁹ The average daily turnover of Australian dollar swaps between domestic and overseas banks is around A\$25 billion (US\$19 billion).

position to hedge exchange rate risks arising from these borrowings. It is advantageous, therefore, for these financial institutions to act as intermediaries for business and household sectors given that they can provide Australian borrowers with relatively low cost and fully hedged access to foreign funds.

As in the United States, Australian residents actually have a net long position in foreign currency (before accounting for hedging activities); that is gross foreign currency-denominated assets exceed gross foreign currency-denominated liabilities (Becker and Fabbro 2006). Of Australia's net external debt, around forty per cent is denominated in Australian dollars. According to a recent survey by the Australian Bureau of Statistics (2005), most of the remaining net exposure is hedged, with just over one-tenth of net external debt being in 'unhedged' foreign currency (Becker and Fabbro 2006), which is not to say that it may not be covered by some natural hedge. Much of the hedging activity appears to have non-residents as counter parties, thereby insulating domestic residents as a whole against unfavourable exchange rate fluctuations.

While currency risk does not appear to present much of an issue for Australia, attention has instead focused on refinancing risk, particularly of short-dated debt (for example, see IMF 2006 (a)). Much of Australia's offshore debt is issued by financial institutions, with foreign liabilities accounting for about 27 per cent of Australian banks' total liabilities, compared to around 15 per cent a decade ago. While debt securities comprise the majority of banks' foreign liabilities, more than two-thirds of these have been issued with a term to maturity of greater than one year, with an average maturity of around four years; Australian corporations borrowing offshore tend to issue longer-dated debt. It is beyond the scope of this paper to make more than three brief remarks on refinancing risk. First, thus far, rolling over debt has not been an issue for Australia, even during periods of adverse shocks, such as the Asian crisis. Second, Australian banks have tended to issue offshore debt in a range of different markets and in a range of different currency denominations, providing some diversification against shocks that may adversely affect any one market (RBA (b) 2006). Third, in response to an adverse shock it is likely that much of the adjustment would occur through a depreciation of the exchange rate.

5.4 Institutional Framework

Stable government, credible and sustainable monetary and fiscal policies, a sound financial system based on efficient regulation and supervision, effective legal and accounting frameworks, and transparent and open markets both for factors of production and outputs are critical institutional features necessary for a country to maintain the confidence of (both foreign and domestic resident) investors. In the extreme, these reduce the likelihood of some type of expropriation of wealth and/or income (to the advantage of particular domestic residents), either by direct or indirect means. More generally, however, they also allow countries to better withstand adverse external shocks that might otherwise harm foreign investors' interests.³⁰ Certainly Australia appears to rank highly on a range of indicators in this regard. For example, in 2006 Australia ranked ninth (out of 161 countries) in the *Economic Freedom of the World Index*, which attempts to systematically compare countries across the types of institutional features mentioned above.

One episode that points to the resilience of the Australian economy is the period of the Asian economic crisis of 1997 and 1998, in which there was a sizeable decline in demand from many of Australia's major trading partners in the region. The nominal exchange rate depreciated in effective terms by about 20 per cent from mid 1997 to early 2001, but again the inflationary impact of this was relatively modest. Indeed, unlike a number of countries with substantial commodity exports to the region, the RBA did not tighten policy in response to the depreciation. Instead, the depreciation was viewed as a necessary part of the adjustment to an adverse shock of this type. A widening in the current account deficit – of more than 4 percentage points of GDP over the two years to mid 1999 – was also an important mechanism dampening the impact of the shock on the domestic economy. Caballero *et al* (2004) note that the stimulatory impact of the depreciation (including by facilitating a diversion of exports to the US and Europe) was in contrast to less-developed economies for which the depreciation adversely affected balance sheets of corporations with sizeable exposures to unhedged foreign-currency denominated debts.

³⁰ Kent, Smith and Holloway (2005) present evidence that structural reforms leading to stricter monetary policy regimes, greater labour market flexibility and increased product market competition have played a role in reducing the volatility of output across a range of developed economies.

6. Conclusion

Australia has a long history of large and persistent current account deficits. In the mid 1980s, however, following the floating of the Australian dollar and the opening of the capital account, the deficit rose considerably and has been sustained around an average of about 4½ per cent since, with no discernable trend in the real exchange rate. This shift in the 1980s contributed to a rapid rise in net foreign debt, and the current account deficit became a key object of policy-makers in its own right. The chief concern was that such deficits raised the prospects of default and/or a sharp reversal in capital flows. That is, it was feared that the deficits were not sustainable – implying potentially disruptive adjustments in the future – and that they left the country more vulnerable to adverse external shocks (including a change in sentiment of foreign creditors). Hence, it was argued that all arms of policy, both macroeconomic as well as micro reform, should and could attempt to reduce the current account deficit.

This view was challenged by those that argued that the current account merely reflected the optimal decisions of private agents and, as a result, concerns about sustainability were misplaced and there was certainly no role for macro policy to intervene. This did not mean that efforts at fiscal and other reforms were unwarranted, but that they should not be directed at influencing the current account balance, and indeed may not have had the desired effect in any case. Many elements of this view came to be accepted by policy-makers. In part, this may have been influenced by the realisation that despite widespread reforms (including a substantial fiscal consolidation leading ultimately to no net public debt), the current account deficit remained stable in trend terms.

The ‘consenting adults’ view of current account deficits has become widely accepted in Australia among academics and policy-makers. This paper presented empirical evidence providing some support to the idea that, following capital market opening in 1983, cycles in the current account deficit in Australia have been consistent with optimal consumption-smoothing behaviour. Sustainability calculations imply that, if the recent trend level of the current account deficit continues, foreign liabilities will continue to rise as a share of GDP. This says nothing about the more important question of solvency; however, in a flexible

exchange rate regime, this is subject to the ongoing assessment provided by open and transparent capital markets.

It is generally acknowledged that large deficits and foreign indebtedness *can* imply some degree of vulnerability for a small open economy subject to large external shocks (including swings in investor sentiment). Australia is an interesting case study in this regard, as it is recognised as having a number of institutional features which help to lessens its vulnerability to external shocks. Stable government, credible and sustainable monetary and fiscal policies, a sound financial system based on efficient regulation and supervision, effective legal and accounting frameworks, and transparent and open markets both for factors of production and outputs are critical features to maintain the confidence of (both foreign and domestic) investors. Of particular note, is the fact that foreigners are willing to participate in markets that allow Australian residents to hedge their foreign exchange exposures at reasonable cost. This allows balance sheets and trading activities of domestic corporations and households (which are net foreign debtors) to be resilient in the face of large nominal exchange rate fluctuations. Since floating, Australia has certainly demonstrated considerable resilience in the face of a number of large adverse external shocks.

Indeed, the features that underpin this resilience may have encouraged sizeable capital inflows in the first place. In other words, in Australia's case, a high debt level may be less of a signal of vulnerability and more a reflection of resilience which attracts foreign capital and keeps it in place.

Appendix A: Testing the Intertemporal Model

The model describes a representative agent in a small open economy who chooses a path of consumption and investment to maximise lifetime utility (1) subject to a budget constraint (2) (and a production function).

$$U_t = \sum_{s=t}^{\infty} \beta^{s-t} \frac{C_s^{1-1/\sigma} - 1}{1-1/\sigma} \quad (1)$$

$$CA_t \equiv B_{t+1} - B_t = rB_t + Y_t - C_t - G_t - I_t \quad (2)$$

where C_t is consumption at time t , β is the agent's discount rate, and $1/\sigma$ is the agent's intertemporal elasticity of substitution.³¹ The return on an asset is equal to the fixed world interest rate, r . The stock of assets held from time $t-1$ is B_t , Y_t is output, G_t is exogenous government spending and I_t is investment.³² The budget constraint, Equation (2), defines the current account balance (or change in net foreign liabilities) as being equal to the net cash flow ($Z_t = Y_t - G_t - I_t$) less private consumption and foreign interest payments.

The optimal consumption profile is then given by the Euler equation:

$$C_{t+1} = C_t \beta^\sigma (1+r)^\sigma \quad (3)$$

Optimal consumption can be shown to be proportional to wealth:

$$C_t^* = \left(\frac{r+\nu}{1+r} \right) W_t \quad \text{where} \quad \nu \equiv 1 - \beta^\sigma (1+r)^\sigma \quad (4)$$

³¹ We use an iso-elastic utility function and assume no uncertainty, rather than the more often used quadratic utility function, which implies a strict upper bound on the level of consumption and does not rule out negative consumption levels. In any case, the empirical approach is very similar.

³² Labour is supplied inelastically, output is produced according to the production function, $Y = AF(K)$, and the optimal capital stock (assuming no depreciation) is such that $r = AF'(K)$. Total factor productivity A is exogenous.

and wealth W_t is defined as the sum of current period value of assets and the net present value of current and future net cash flow:

$$W_t \equiv (1+r)B_t + \sum_{s=t}^{\infty} \left(\frac{1}{1+r} \right)^{s-t} (Z_s) \quad (5)$$

Finally, the optimal current account is obtained by substituting Equation (4) and (5) into the budget constraint:

$$CA_t^* = (Z_t - \tilde{Z}_t) - \frac{\nu}{r+\nu} W_t \quad (6)$$

where \tilde{Z}_t is the permanent (or annuity) level of the net cash flow. The bracketed term in Equation (6) says that output below its permanent level leads to a current account deficit, and investment or government spending above their permanent levels lead to a current account deficit. Thus, the net foreign assets adjust in order to smooth consumption in the face of temporary disturbances to the net cash flow.³³ The second right-hand-side term captures consumption tilting that occurs when the rate of time preference (equal to $(1-\beta)/\beta$) is different from the world interest rate (that is, when $\nu \neq 0$). Thus, a country that is more impatient than the rest of the world will be running current account deficits in proportion to their level of wealth.

Since consumption is proportional to wealth, Equation (6) effectively decomposes the optimal current account into its consumption-smoothing and consumption-tilting components:

$$CA_t^S = Z_t - \tilde{Z}_t = - \sum_{s=t+1}^{\infty} \left(\frac{1}{1+r} \right)^{s-t} \Delta Z_s \quad (7)$$

$$CA_t^T \equiv - \frac{\nu}{r+\nu} W_t = \lambda C_t \quad \text{where} \quad \lambda \equiv - \frac{\nu(1+r)}{(r+\nu)^2} \quad (8)$$

³³ This term also captures the potential for income growth (that is, through productivity growth) to influence the level of the current account balance. For a more detailed discussion of this possibility see Engel (2005).

Equation (7) shows that the consumption-smoothing component of the current account will be in deficit when the net present value of future changes in the net cash flow is positive. Furthermore, the consumption smoothing hypothesis embodied in Equation (8) implies that the current account is a sufficient predictor of future changes in net cash flows.

A.1 Estimation

The estimation of this model proceeds by decomposing the current account into these two components. First, the trend behaviour of the current account is removed by estimating the extent of any consumption tilting ($\lambda \neq 0$). Specifically, if CA_t^S and C_t are I(1) and cointegrated, the residuals will be stationary. In this case, the residuals will provide an estimate of the current account smoothing component (CA_t^S), which can be tested for evidence of consumption smoothing.

To test the consumption smoothing hypothesis explicit in Equation (8), the net present value of future changes in the net cash flow is derived by estimating a vector auto regression (VAR) (which provides the basis for estimating future changes in net cash flow):³⁴

$$\begin{bmatrix} \Delta Z_t \\ CA_t^S \end{bmatrix} = \begin{bmatrix} \psi_{11} & \psi_{12} \\ \psi_{21} & \psi_{22} \end{bmatrix} \begin{bmatrix} \Delta Z_{t-1} \\ CA_{t-1}^S \end{bmatrix} + \begin{bmatrix} \varepsilon_{1t} \\ \varepsilon_{2t} \end{bmatrix} \quad (9)$$

A weak test of the consumption smoothing hypothesis is to determine if the current account Granger causes changes in the net cash flow as implied by Equation (7). The VAR provides a convenient way of performing this test.

An estimate of future expected changes in the net cash flow can then be constructed from the VAR estimate as follows:

$$E_t \Delta Z_s = [1 \quad 0] \begin{bmatrix} \psi_{11} & \psi_{12} \\ \psi_{21} & \psi_{22} \end{bmatrix}^{s-t} \begin{bmatrix} \Delta Z_t \\ CA_t^S \end{bmatrix} \quad (10)$$

³⁴ The estimation procedure is justified by asserting that both CA_t^S and ΔZ_t are subject to measurement error. This model is easily generalized to incorporate higher order VARs.

Let Ψ be the matrix $[\psi_{ij}]$ and \mathbf{I} be a two-by-two identity matrix. The optimal consumption smoothing current account can be estimated by substituting Equation (10) into Equation (7).³⁵ The result is

$$CA_t^S = -[1 \quad 0] \left(\frac{1}{1+r} \Psi \right) \left(\mathbf{I} - \frac{1}{1+r} \Psi \right)^{-1} \begin{bmatrix} \Delta Z_t \\ CA_t^S \end{bmatrix} \equiv [\Phi_{\Delta Z} \quad \Phi_{CA}] \begin{bmatrix} \Delta Z_t \\ CA_t^S \end{bmatrix} \quad (11)$$

From Equation (11), a stronger test of the intertemporal model is the joint test of $\Phi_{\Delta Z} = 0$ and $\Phi_{CA} = 1$.³⁶

A.2 Empirical Results

The data used are annual from 1949 to 2005 (see Appendix B for sources and details). To be consistent with the theoretical model, all series are converted into per capita terms and nominal series (including the current account) are converted into real terms by using the GDP deflator.³⁷

The first difference of net cash flow and the level of the current account are shown in Figure A1. A trend in the latter part of the current account series is obvious and suggests the existence of consumption tilting. The series were checked for the presence of a unit root using the Augmented Dickey Fuller (ADF) test. The results (not reported) confirm that the current account, consumption and net cash flow are all non-stationary variables but the change in net cash flow is stationary.

An estimate of the consumption-tilting coefficient λ is obtained in Equation (7) using DOLS:

³⁵ Both CA_t^S and ΔZ_t need to be stationary in order that (11) is well defined.

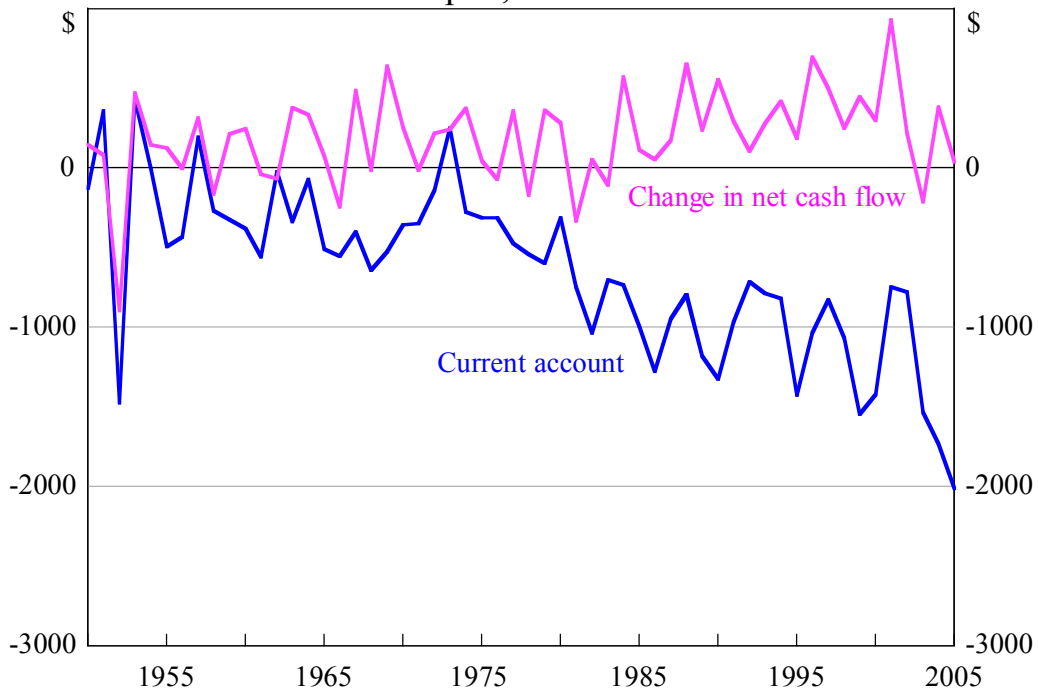
³⁶ Obstfeld and Rogoff (1996) use a stochastic framework but with quadratic utility, which implies certainty equivalence and, therefore, yields the same test of the intertemporal model.

³⁷ There are two problems with the current account data. First, the current account should preferably incorporate changes in net foreign assets due to capital gains and losses. Second, the net income deficit is based on nominal rather than real interest flows. This overstates Australia's real current account deficit which has been running a net income deficit over this entire period. This bias will be increasing over time since net foreign debt has steadily been increasing; although it will be offset somewhat by the fall in world inflation rates since the mid 1980s.

$$CA_t = \lambda C_t + \delta(D_t C_t) + \sum_{i=-1}^1 \gamma_i \Delta C_{t-i} + u_t \quad (12)$$

where D_t is a dummy variable that is one from 1984 onwards and zero otherwise. The expectation is that λ will be negative given the obvious negative trend in the current account (that is, Australia's rate of time preference appears to be above the world interest rate). The inclusion of the second term allows for a break in the trend at 1984, consistent with the capital market opening and financial deregulation. Before this, it is likely that consumers were not able to borrow as much as they desired. In this case, the degree of consumption tilting will have increased after 1983; that is, δ will be negative.

Figure A1: Current Account and First Difference of Net Cash Flow
Per Capita, 1990 Prices



Source: ABS

The results of the estimation are summarised in Table A1. Reported t-statistics have been adjusted so that the standard t-tables are applicable.^{38,39} Clearly, the

³⁸ The OLS t-statistics are multiplied by the factor (s^2 / η^2) ; $s^2 = (T - 5)^{-1} \sum_{t=1}^T \hat{u}_t^2$ and

$\eta = \hat{\sigma} / (1 - \hat{\phi}_1 - \hat{\phi}_2)$, where $\hat{\sigma}$ is a consistent estimate of the standard deviation of residuals from a AR(2) regression of \hat{u} with AR coefficients $\hat{\phi}_1$ and $\hat{\phi}_2$.

current account balance and consumption are cointegrated and the estimate of λ is less than zero. Furthermore, δ is significantly less than zero, which confirms that the degree of consumption tilting increased after financial liberalisation in 1983. This is evidence in support of the existence of binding credit constraints in the period prior to 1983 (so long as the reasonable assumption of unchanged consumer preferences is maintained).

	λ	δ	ADF for residuals
Coefficient	-0.035	-0.029	-5.61*
T-statistic	-4.65	-5.16	

Note: Critical values for the ADF statistic are from Fuller (1976). A * indicates rejection of the null hypothesis of no cointegration at the 5 per cent significance level.

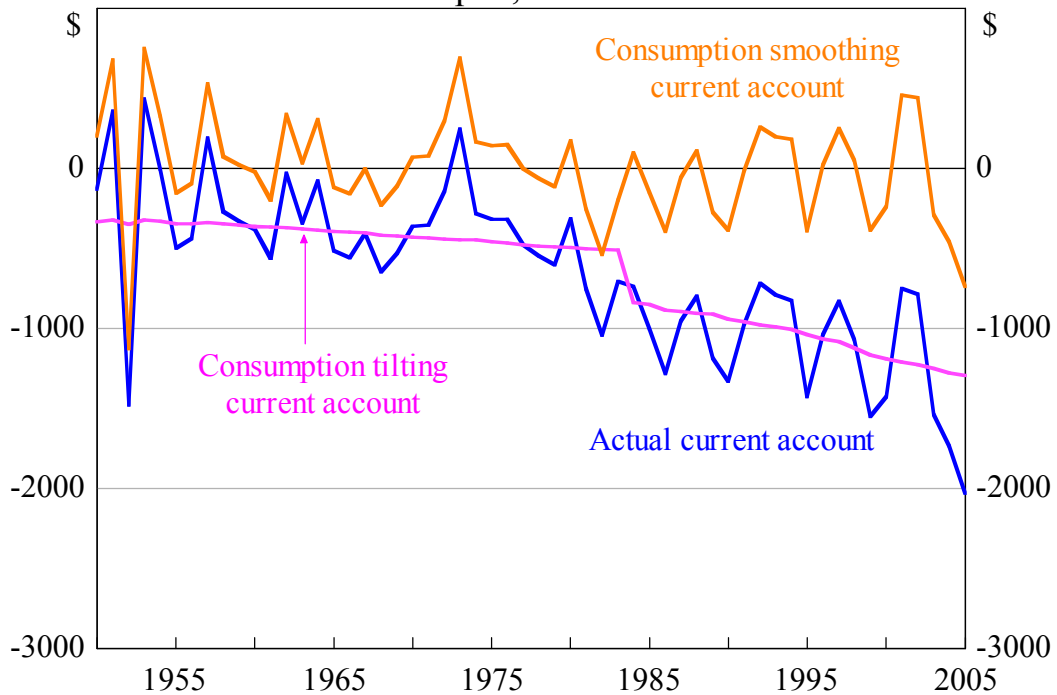
The actual current account is separated into its stationary and non-stationary components in Figure A2.⁴⁰ Using estimates of the sum of λ and δ , it is possible to back out a rough estimate of the Australian rate of time preference, $(1-\beta)/\beta$. Deaton (1992) provides a summary of estimates of the intertemporal elasticity of substitution ($1/\sigma$) that range from 0.35 to 0.75. Using an interest rate of 4 per cent implies that the rate of time preference is between 0.04004 and 0.04008.⁴¹ That is, the consumption-tilting behaviour implies rates of time preference only marginally above the world interest rate.

³⁹ Consistent with theory, no constant term was included in the regression. Further, a constant was insignificant when included and had a negligible effect on the slope coefficient estimates.

⁴⁰ The stationary component of the current account is obtained as the estimated residuals $CA_t - \hat{\lambda}C_t - \hat{\delta}D_tC_t = \mu + \varepsilon_t$. The left hand side of this expression has a non-zero mean because of the inclusion of leads and lags of consumption changes in the right hand side of Equation (12). The non-stationary consumption-tilting component of the current account is simply $\hat{\lambda}C_t + \hat{\delta}D_tC_t - \hat{\mu}$.

⁴¹ For an interest rate of 2 per cent the estimate is between 0.02001 and 0.02002. For an interest rate of 6 per cent the estimate is between 0.06008 and 0.06017.

Figure A2: Current Account Tilting and Smoothing Components
Per Capita, 1990 Prices



Before estimating the VAR shown in Equation (9), it is necessary to control for common world shocks. Theory predicts that these will have a much smaller effect on the current account than on investment (interest rates adjust to ensure that world savings equal world investment). Glick and Rogoff (1995) show that this is true for the group of G7 countries.

The idiosyncratic changes in the Australian net cash flow, ΔZ_t^I are constructed as the estimated residuals from the following regression:

$$\Delta Z_t = \alpha + \delta \Delta Z_t^W + \varepsilon_t \quad (7)$$

where ΔZ_t and ΔZ_t^W are changes in the Australian and the world net cash flows, respectively. Obstfeld and Rogoff (1995) show that under certain conditions ΔZ_t can be replaced by ΔZ_t^I in Equation (15).⁴² A VAR(1), VAR(2) and VAR(3) were

⁴² These conditions include a zero net foreign asset position. Otherwise, changes in the world interest rate will have a differential income effect on net debtors and net creditors, thereby leading to some adjustment of these countries' current accounts. Glick and Rogoff (1995) demonstrate that this effect is small for the set of G7 countries. In the case of Australia, this effect is likely to be more significant only in the latter part of the sample, following the more rapid accumulation of net foreign debt after 1983.

estimated with the results presented in Table A2. The Granger causality test results and transformed coefficient vector Φ are shown in Table A3 and Table A4 respectively. For the VAR(1) and VAR(2), the current account Granger causes the change in the net cash flow, but not vice versa, providing weak evidence of consumption smoothing. This is not the case for the VAR(3), which appears to be a consequence of the loss of the influential observation of 1952. However, the estimates of the vector Φ imply a failure of the strict test of the intertemporal model – that is, that the element applying to CA_t^S should be one, with all other elements being zero.⁴³

Table A2: VAR Estimates - Using Idiosyncratic Component of Net Cash Flow 1951 to 2005

	VAR(1)		VAR(2)		VAR(3)	
	ΔZ_t^I	CA_t^S	ΔZ_t^I	CA_t^S	ΔZ_t^I	CA_t^S
ΔZ_{t-1}^I	0.08 (0.14)	-0.03 (0.17)	-0.09 (0.14)	-0.22 (0.17)	-0.08 (0.15)	-0.07 (0.16)
ΔZ_{t-2}^I			0.11 (0.13)	-0.11 (0.15)	0.10 (0.15)	-0.02 (0.15)
ΔZ_{t-3}^I					0.05 (0.14)	0.14 (0.14)
CA_{t-1}^S	-0.35*** (0.12)	-0.03 (0.15)	-0.19 (0.12)	0.18 (0.14)	-0.16 (0.14)	0.39*** (0.14)
CA_{t-2}^S			-0.20 (0.13)	-0.13 (0.15)	-0.21 (0.13)	-0.25* (0.14)
CA_{t-3}^S					-0.06 (0.13)	-0.05 (0.14)
DW	1.96	1.46	1.95	1.28	2.01	1.70
No. Obs.	54	54	53	53	52	52

⁴³ The estimates shown are based on a real interest rate of 4 per cent. Results were robust to using either a 2 or a 6 per cent real interest rate.

Table A3: Granger Causality Tests

	F Statistics					
	VAR(1)		VAR(2)		VAR(3)	
	ΔZ_t^I	CA_t^S	ΔZ_t^I	CA_t^S	ΔZ_t^I	CA_t^S
$CA_{t-i}^S \forall i \geq 1$	7.72***		2.68*		1.58	
$\Delta Z_{t-i}^I \forall i \geq 1$	0.04		1.19		0.34	

Note: ***, ** and * represent significance at the 1, 5 and 10 per cent levels respectively.

Table A4: Test of the Nonlinear Consumption Smoothing Restriction

$$H_0 : \Phi_i = 0 \text{ for all } i \text{ except } \Phi_{1CA} = 1$$

	VAR (1)	VAR (2)	VAR (3)
$\Phi_{1\Delta Z}$	-0.10 (0.14)	-0.16 (0.22) [†]	-0.05 (0.22)
$\Phi_{2\Delta Z}$		-0.17 (0.17) [†]	-0.10 (0.19)
$\Phi_{3\Delta Z}$			-0.01 (0.13)
Φ_{1CA}	0.36 (0.14)	0.45 (0.24) [†]	0.47 (0.24)
Φ_{2CA}		0.16 (0.13) [†]	0.13 (0.13)
Φ_{3CA}			0.03 (0.12)
Wald Statistic	47.65***	49.84***	19.60***

Notes: † indicates that standard errors are adjusted using White's correction for heteroskedasticity.

***, ** and * indicates rejection of the joint null at a 1, 5 and 10 per cent significance level respectively.

This rejection of the intertemporal model could be due to the existence of credit constraints prior to 1983. To account for this, the model is re-estimated for the two periods, 1951 to 1983 and 1984 to 2005. The Granger causality and transformed VAR(1) estimates are shown in Table A5 and Table A6.

In the later sample, the current account Granger causes changes in the net cash flow, but not vice versa. Furthermore, the stricter test of the null hypothesis of consumption smoothing (that is, the restriction on the vector Φ) is rejected for the earlier sub-sample, but is accepted for the latter sub-sample. However, for the VAR(2) and VAR(3), not presented here, the null hypothesis of consumption smoothing is accepted at the 1 per cent significance level but is rejected at the 5 per cent level for the post-float sample.

Table A5: Granger Causality Tests

		F statistics	
		1951 to 1983	1984 to 2005
		ΔZ_t^I	CA_t^S
CA_{t-1}^S		2.70	5.24**
ΔZ_{t-1}^I			0.03

Note: ***, ** and * represent significance at the 1, 5 and 10 per cent levels respectively.

Table A6: Test of the Nonlinear Consumption Smoothing Restriction

$$H_0 : \Phi_{\Delta Z} = 0 \text{ and } \Phi_{CA} = 1$$

	1951 to 1983	1984 to 2005
$\Phi_{1\Delta Z}$	-0.00 (0.17)	-0.16 (0.24)
Φ_{1CA}	0.23 (0.14)	0.81 (0.41)
Wald Statistic	59.91***	1.55

Note: ***, ** and * indicates rejection of the joint null at the 1, 5 and 10 per cent significance level respectively.

Appendix B: Data

Current account: 1861–1949 data from Vamplew (1987), Table ITFC 1-8, and Table ITFC 84-100; 1950-1959 data from Foster (1996), Table 1.1; and data from 1960 onwards are from the Australian Bureau of Statistics (ABS Cat No 5302.0).

Capital account: 1861–1900, indirect estimate of long-term capital inflows from Butlin (1962), Table 250; 1901–1949, apparent capital inflow from Vamplew (1987), Tables ITFC 101–106 and ITFC 200-210; 1950-1959 data are from Foster (1996), Table 1.15; and data from 1960 onwards are from ABS Cat No 5302.0.

GDP: in current prices for 1861–1900 is from Butlin (1962), Table 1, col. 2 and is GDP at market prices; from 1900/01 to 1949/50 data are from Vamplew (1987), Table ANA 119-129; for 1950-1959 data are from Foster (1996), Table 5.1a; and for 1960 onwards nominal and real GDP are from ABS Cat No 5206.0.

Net foreign liabilities: ABS Cat No 5302.0.

Saving, investment, terms of trade, consumption, government and investment expenditures: ABS Cat No 5206.0, Tables 2, 9 and 32. A statistical discrepancy, averaging 2.3 per cent and -0.2 per cent of GDP from 1960-1975 and 1976-2006 respectively, reconciles the saving-investment balance to the current account.

Public sector debt: Commonwealth government debt is from Treasury Budget Paper 1, Table A3; 1960-1982 total general government and public sector debt are from Vamplew (1987); and 1988 onwards they are from Treasury Budget Paper 1, Table A4.

Trade weighted indices (of the exchange rate): RBA Bulletin, Table F11. CPI data from Australia's trade partners are used to calculate real TWI.

World net cash flow: is based on the net cash flow for the United States, Japan, Germany, China, France, Italy, United Kingdom, and Canada. Data are from the IMF, *International Financial Statistics*. Percentage changes in net cash flow for each country are weighted by nominal GDP. Countries with missing data were not included in that year's net cash flow.

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