

National Saving: Trends and Policy

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1. Introduction

Throughout the 1990s, concerns about the adequacy of saving in Australia remained close to the forefront of national policy debate. The general view prevailed that saving rates in Australia were too low, and hence there was broad consensus at the political level on the desirability of implementing pro-saving policies.

While this basic premise has remained intact, the debate has undergone some significant evolution. Much of the initial impetus for the view that Australia under-saves came from concerns in the late 1980s about the size and sustainability of the current account deficit. More recently, while the concern with external balance has still been present, there has been a greater focus on issues related to population ageing and the implications this will have for the retirement saving system, and for government expenditures, in the decades ahead. In this respect, the debate in Australia has become more like those occurring in other advanced countries, where these issues have also attracted increasing attention in the past decade.²

The nature of the debate in Australia has necessarily been shaped by the elevation of superannuation policy as the primary vehicle for dealing with concerns about the adequacy of private saving. The process had begun in the mid 1980s, with the advent of award-based superannuation, and received its major boost with the commencement of the Superannuation Guarantee in 1992. This policy development raised a number of issues that remain alive almost a decade later – for example, the role of compulsion rather than incentives in promoting private saving, the appropriate level of compulsory saving, the need to address leakages from the system, and the effectiveness of the system in generating an overall lift in national saving. These and other issues associated with the design of the superannuation system have become central to the debate on saving in a way not foreseeable a decade ago.

This paper aims to provide a broad overview of developments in saving, and in policies related to saving, in Australia during the past decade. The main part of the paper is in four sections, looking at trends in the broad saving aggregates, the key policy developments, the impact of compulsory superannuation, and the basis for claims that Australia's saving rates are inadequate. A final section discusses some policy issues likely to require attention in the years ahead.

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1. We thank Jonathan Kearns and Jeremy Nguyen for research assistance, and we are grateful to the Department of the Treasury for having supplied some of the data.
 2. See for example OECD (1998), World Bank (1994) and Feldstein (1998).

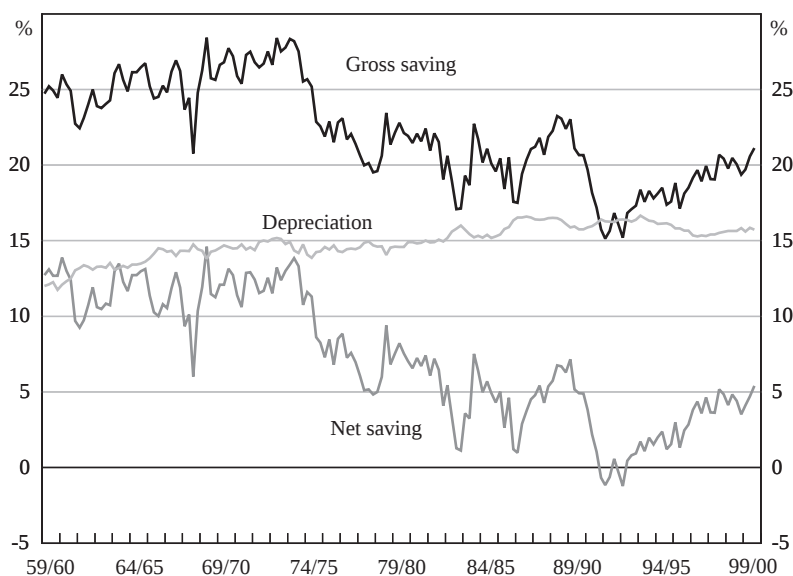
2. Trends in Saving

2.1 National saving

A long-term decline in Australia's aggregate level of saving has been well documented and forms an important part of the backdrop to the economic policy debate. The broadest measure of aggregate saving, the gross national saving rate, averaged around 18 per cent of GDP in the 1990s, well down from the levels of around 25 per cent that prevailed in the 1960s and early 1970s (Figure 1). In decade-average terms, this measure of saving has been lower in each successive decade since the 1960s.

It is less clear whether the trend decline in saving is still continuing. The level of saving has been subject to strong cyclical variations that can dominate the longer-term trend for significant periods of time. As theory would predict, saving has generally declined in recessions and picked up in recoveries, reflecting a tendency for consumption to move by less, relative to trend, than the movement in incomes. This pattern was particularly pronounced in the early 1990s recession, when the national saving rate fell by several percentage points, to reach its lowest level in the post-war period.³ Given this background, it is reasonable to conclude that cyclical factors have also made a substantial contribution to the subsequent recovery in saving, although it is difficult to disentangle the structural and cyclical components with any

Figure 1: Gross and Net National Saving
Per cent of GDP



Source: ABS Cat No 5206.0

3. This is apparent from longer-run data presented by FitzGerald (1993, p 2).

precision. By the end of the decade, the national saving rate had climbed back to around 21 per cent of GDP, which was close to its average of the 1980s. Whether national saving is still declining in a structural sense is not yet clear, but the fact that saving is still well below its most recent cyclical peak, notwithstanding the strength of the economic expansion in recent years, might give some grounds for thinking that the longer-term decline has not yet been arrested.

For those concerned about the adequacy of saving, the picture is slightly more disturbing if we focus on net rather than gross measures (that is, after deducting capital depreciation from the measure of national income). Since depreciation has gradually increased as a proportion of GDP, net national saving has declined by more than the gross measure, although the difference is not large. In decade-average terms, net national saving fell from 11 per cent of GDP in the 1960s to 2 per cent in the 1990s, including a brief period of negative net saving in the early part of the decade. Conceptually, it is the net measure that better represents the economic concept of saving as an accumulation of wealth. Nonetheless, uncertainties in the estimation of depreciation are such that gross measures have generally been preferred as a basis for broader sectoral analysis and in international comparisons. Hence, the remainder of this section focuses mainly on further details of the components of Australia's gross saving performance.

2.2 Public saving

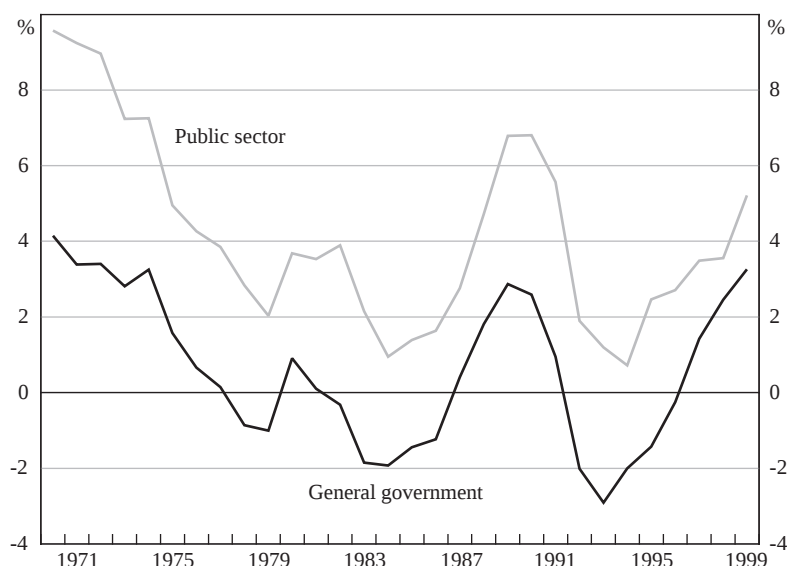
It is useful to decompose national saving into public and private-sector components, since the forces driving the behaviour of the two sectors are likely to be quite different. On the face of it, much of the fall in national saving during the 1970s – which looks to have been the period of sharpest structural decline in the overall saving performance – was accounted for by the public-sector component (Figure 2). Prior to the mid 1970s, saving by the *general government* sector had been fairly stable, at around 3 per cent of GDP, but it fell sharply to be at a negative level for most of the decade from 1975 to 1985.

The picture becomes more difficult to evaluate in the subsequent period, because the cyclical fluctuations in government saving appear to have become much larger than had previously been evident. General government saving has exhibited two periods of strong growth, coinciding with the economic expansions of the 1980s and 1990s. In the intervening period, reflecting the impact of the early 1990s recession, it fell to record lows. It remains to be seen how far the latest recovery in government saving represents a structural shift and, given the apparent importance of cyclical factors, it will be difficult to assess the extent of such a shift without considerable hindsight. At this stage, the recent increases in general government saving have brought that sector's saving rate back to around 3 per cent of GDP, which is roughly the level prevailing before the sharp decline recorded in the mid 1970s.

A broader measure of public-sector saving, which includes the saving of public corporations, shows a clearer long-term decline.⁴ While it could not be claimed that

4. For a discussion of the sources of these data, see Treasury (1999).

Figure 2: Public Sector and General Government Saving
Per cent of GDP



Sources: ABS Cat No 5204.0; Treasury

government corporations are driven by the same behavioural forces as the general government sector, it makes some sense to consolidate the two sectors on the basis of their ownership structure: public-sector corporations are owned by the government, and hence the retained profits of those corporations form part of the government's net assets. This broader measure of public saving fell from an average of just under 10 per cent of GDP in the 1960s and early 1970s to be fluctuating mainly in a range of 0–5 per cent of GDP in the subsequent period, partly reflecting a substantial decline in the saving of the public corporate sector. Some of that fall will have reflected the general shrinkage of the public corporate sector due to privatisations, although it should be noted that a significant decline in public-enterprise saving had already occurred in the 1970s, well before widespread privatisations had commenced.

It should be noted in passing that this discussion of trends in government saving does not have any direct bearing on the question of how much saving is enough. While the policy debate often presumes that more government saving is always better, the public finance literature does not support such a simplistic presumption. A detailed consideration of optimal public saving cannot be undertaken here, but two points seem worth making in this context. The first is that, along with the declines in public saving noted above, there has been a long-term decline in public investment over the past few decades. Since the 1960s, the average ratio of general government investment to GDP has declined by around 2 percentage points. If government policy were aiming to maintain a roughly stable financing requirement, that would

imply a similar decline in government saving. Hence, the appropriate level of government saving cannot be considered in isolation from public investment requirements.

A second, and related, point is that the categorisation of expenditures as current or capital is to some extent debatable. Governments have been spending less in recent decades on physical capital, but have spent more in fields like education and health, which many would argue are also partly capital in nature. If some part of these expenditures were reclassified as capital, it would strengthen the recorded levels of both saving and investment in the recent past, relative to earlier years.⁵ This would potentially have a significant impact on conclusions about the longer-run trends. For example, government spending on education increased between 1970 and 1999 by 2 per cent of GDP, about the same as the decline in government spending on fixed capital, and hence a broader investment aggregate encompassing education expenditure would have been roughly stable over the period. Of course, the same point is also applicable to the economy as a whole: the longer-term decline in recorded saving and investment levels might be argued to be partly a reflection of spending being switched from physical to non-physical forms of capital expenditure.

2.3 Private saving

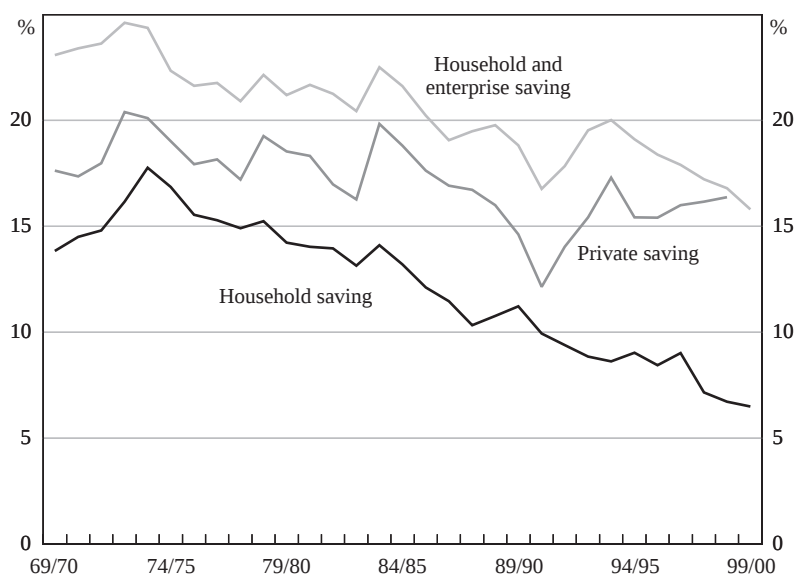
The preferred measure of private saving discussed by Edey and Britten-Jones (1990) used a definition which aggregated the saving of the household sector with that of the private corporate sector. The rationale for this approach is analogous to that already noted in relation to public saving: the household sector owns the private corporate sector, and hence the net income of the household sector includes the profits of businesses, whether they are retained within the company or paid out as dividends. In the discussion below, we broadly maintain that approach, although the analysis is hampered by recent changes to the national accounts which prevent a consistent historical series for private corporate saving from being compiled.⁶ To address this problem, we also consider a broader aggregate, 'household and enterprise saving', which includes the saving of both public and private corporations, and which can be compiled on a consistent basis. These data, along with data for the household sector, and available figures for the preferred private-sector definition, are presented in Figure 3.

In general terms, the most stable of the three aggregates, over a period of decades, has been that for the private sector. (The 'household and enterprise' aggregate has shown a greater long-run tendency to decline, reflecting the reductions in public corporate saving noted above.) At least until around 1990, private saving was considerably more stable than its public-sector counterpart, fluctuating mainly in a range of 17-20 per cent of GDP. In the early 1990s, private saving fell much more sharply than it had done in previous recessions, reaching a post-war low, but it has since recovered much of that fall.

5. This point has been made by Depta, Ravalli and Harding (1994).

6. See Treasury (1999).

Figure 3: Private Saving
Gross, per cent of GDP



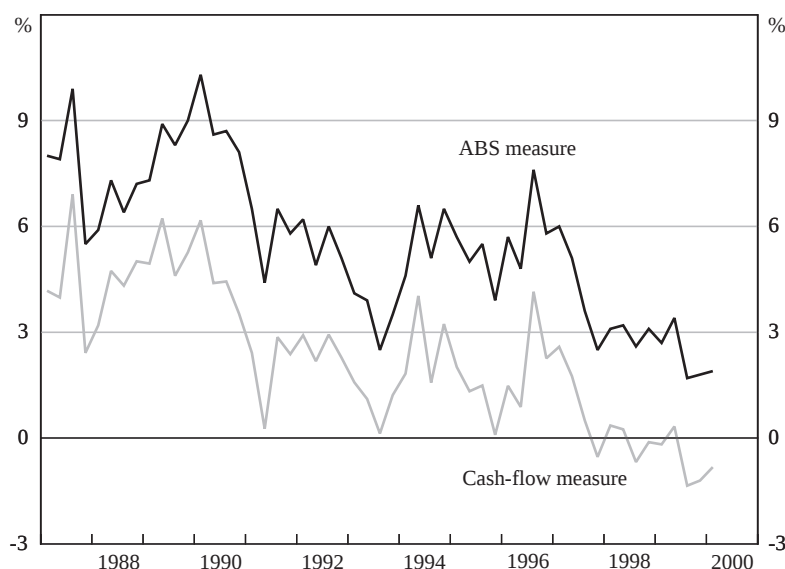
Sources: ABS Cat No 5204.0; Treasury

At the same time, the composition of private saving has continued to shift, with the level of private corporate saving tending to increase over the past two decades while household saving has been falling. The decline in household saving is even more pronounced in terms of the more familiar net measure relative to disposable income (i.e. the household saving ratio published in the quarterly national accounts) (Figure 4). This measure has declined dramatically from a peak of 15 per cent in the mid 1970s to levels of around 1–2 per cent, according to the latest quarterly figures.

Falling household saving over the past two decades has been associated with an increasing household appetite for debt. One indicator of this is an adjusted ‘cash-flow’ measure of the household saving rate. This is calculated by removing from estimates of household income and expenditure those items which are either imputed (depreciation and imputed rent) or are illiquid (employer contributions to superannuation, and earnings on superannuation assets). This produces a measure of saving consistently below the conventional household saving rate, and which has turned negative during the past two years.⁷ More broadly, the household sector has greatly expanded its borrowing during the past two decades: since 1980, household

7. Since this is still a measure of income minus consumption, it does not purport to measure households’ total net cash flow. Specifically, household investment expenditure is excluded from the calculation.

Figure 4: Household Saving Ratio
Net, per cent of disposable income



Sources: ABS Cat No 5206.0; RBA estimates

debt to financial institutions has roughly doubled in relation to income, from around 45 per cent of income to more than 90 per cent. A number of reasons have been cited for this trend increase in household borrowing. These include increased competition and innovation in the financial sector, which has reduced the cost of financial intermediation, increases in household wealth, which have increased the capacity to borrow, and the shift to a low-inflation and low interest-rate environment in the 1990s.⁸

Commentators on the decline in household saving and the shift in the composition of private saving have noted that the dividing lines between the household and private corporate sectors are to some extent arbitrary. For example, unincorporated businesses are included in the household sector, and hence the split between household and corporate saving is likely to have been influenced by a trend towards increasing corporatisation of businesses. Also, since households own the private corporate sector, they have indirect ownership of corporate retained earnings, which would therefore be a factor in their spending and saving decisions. While this does not amount to a full explanation for the relative decline in household saving, it does suggest that there is some sense in aggregating the two components for analytical

8. For a discussion of wealth effects on household consumption, see Tan and Voss (2000).

purposes. The relative stability of the private saving aggregate, and the strong inverse correlation between household and corporate saving, give some credence to this view.

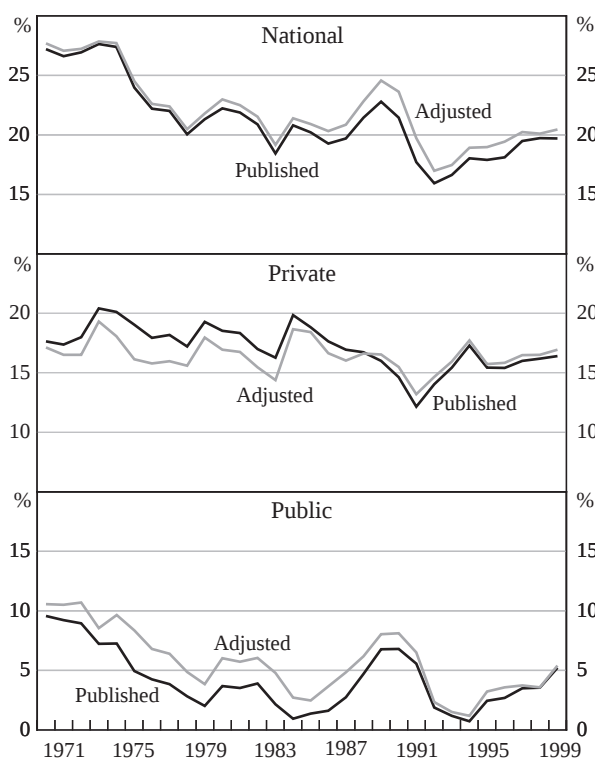
2.4 Inflation adjustment

It has been noted in a number of studies that inflation significantly distorts the measurement of saving since, in effect, the national accounting aggregates count interest payments and receipts on a nominal rather than a real basis. In other words, the accounts do not record the capital transfers from lenders to borrowers effected by inflation. Anstie and Pagan (1983) and a number of subsequent studies have adjusted standard saving measures to account for this effect. The adjustment generally boosts public saving, since the public sector has usually been a large net borrower in recent decades. In some periods, this effect is quite large, particularly in the mid 1970s when both government debt and inflation were relatively high. As pointed out by O'Mara and Walshaw (1992), there is also, for a country with a net foreign debt, an inflation transfer from the foreign to the domestic sectors, and hence a comprehensive set of inflation adjustments should also take that effect into account. Inflation-adjusted estimates of public, private and national saving on this more comprehensive basis are presented in Figure 5.⁹

As might be expected, the inflation adjustment to total national saving is generally quite small (of the order of 1 per cent of GDP). This is because, apart from a brief period in the second half of the 1980s, there has been no period when inflation and net external debt were simultaneously high enough to generate a large interaction between the two. In contrast, the inflation adjustments to domestic public and private saving rates are much larger in some periods, particularly in the 1970s, for the reasons noted above. The additional income to governments imputed from the inflation adjustment adds substantially to the estimated level of public saving in the 1970s and early 1980s, amplifying its apparent long-run decline in the subsequent period. Inflation adjustment has the reverse impact on private saving, reducing the level of saving in earlier periods and flattening out the longer-run trend. The estimates imply an adjusted private saving rate of 16 per cent of GDP in the second half of the 1990s, not far below the average of the 1970s. Hence the conclusion of Edey and Britten-Jones (1990), that this measure of saving had fluctuated around a fairly stable average, looks to have been broadly maintained in the 1990s.

Two important qualifications to this observation should be made. The first is that judgements about the long-run trends in saving can be obscured for quite long periods of time by the influence of cyclical factors. If it is true that the private saving

9. The inflation adjustments here are as calculated by Commonwealth Treasury. The method uses estimates of the net debts of the public and private sectors, separated into domestic and foreign-currency components. Inflation adjustments are calculated by applying the CPI inflation rate to domestic-currency debt, and a 'world' inflation rate to the foreign-currency debt (see Treasury (1999)). It is possible that this method overstates the foreign-currency component of foreign debt (and correspondingly understates the domestic-currency component) to the extent that there is unrecorded hedging of foreign-currency debt exposures.

Figure 5: Published and Inflation-adjusted Saving Rates

Source: Treasury

rate has a stable average, it might be expected that in the late 1990s, after a long period of economic expansion, the saving rate would have been above that average. The fact that this was not the case might therefore be consistent with a conclusion that the average, in a cyclically-adjusted sense, has in fact been declining. A second point concerns the sectoral definition of saving. As noted above, private saving is likely to have been boosted during the past decade by the transfer of public corporations to the private sector. However, the trend toward privatisation and partial privatisation of government businesses makes less clear the distinction between the public and private corporate sectors for the purpose of this analysis. As noted above, the broader aggregate of household and enterprise saving, which includes the saving of public corporations, shows a much clearer downward trend.

2.5 Saving, investment and the current account

Since much of the concern about Australia's level of saving has been motivated by the current account deficit, it is of some interest to break down movements in the current account into its component saving and investment balances. This exercise is

difficult to do on a year-to-year basis because short-term movements in these variables tend to be dominated by temporary factors and by movements in the statistical discrepancy. Over longer periods, however, some useful comparisons can be made. Decade averages of the sectoral saving and investment balances (shown on both an unadjusted and inflation-adjusted basis) are presented in Table 1.¹⁰ In terms of decade averages, Australia's current account deficit widened by about 2½ per cent of GDP between the 1970s and the 1990s. The counterpart of this in terms of saving and investment at a national level was a decline in investment by just over 3 per cent of GDP and a decline in national saving of nearly 6 per cent of GDP.¹¹

This movement in the current account position can, in principle, be allocated between public and private-sector contributions. However, divergent conclusions are implied by the adjusted and unadjusted sets of estimates. In unadjusted terms, saving and investment declined in both the public and private sectors over the period from the 1970s to the 1990s. The magnitudes calculated on this basis are such that the public sector's average net financial balance was roughly unchanged over the

Table 1: Saving, Investment and the Current Account
Per cent of GDP, decade averages

	As published			Inflation-adjusted		
	Saving	Investment	Balance	Saving	Investment	Balance
<i>Household and enterprise</i>						
1970s	22.8	22.1	0.7	21.2	22.1	-0.9
1980s	20.7	22.7	-2.0	19.7	22.7	-3.0
1990s	18.2	20.6	-2.4	18.8	20.6	-1.8
<i>General government</i>						
1970s	1.7	3.9	-2.2	3.7	3.9	-0.2
1980s	-0.1	2.9	-3.0	1.8	2.9	-1.1
1990s	0.2	2.5	-2.3	0.8	2.5	-1.7
<i>National</i>						
1970s	24.5	26.1	-1.8	24.9	26.1	-1.4
1980s	20.6	25.6	-4.7	21.5	25.6	-3.8
1990s	18.5	23.0	-4.4	19.7	23.0	-3.2

Sources: ABS Cat No 5206.0; RBA estimates and Treasury. The published national saving-investment balance reported in the table is the actual current account deficit. Figures do not add exactly to this amount due to the statistical discrepancy in the national accounts.

10. The table applies the inflation adjustments described above to a sectoral decomposition into 'general government' and 'household and enterprise' sectors.

11. The addition is not exact due to the existence of the statistical discrepancy between income and expenditure measures of GDP in the national accounts.

period, while the private sector shifted into financial deficit by around 3 per cent of GDP. Hence, on that basis, the overall movement in the current account deficit is approximately accounted for by the private-sector contribution.

However, a different conclusion is reached if the inflation-adjusted estimates are used. The decline in public saving on an inflation-adjusted basis is significantly increased, implying a substantial widening of the public-sector deficit in inflation-adjusted terms. On this basis, a large part of the change in the current account position between the 1970s and the 1990s would be accounted for by the public-sector component. Hence, the attribution of the widening current account to movements in private or public-sector financial balances largely depends on whether or not the inflation-adjusted saving estimates are accepted as the appropriate basis for analysis.

3. Policy Developments

As noted at the outset, there has been wide support, at the level of economic policy-making, for the proposition that Australia's saving rate is too low. The economic basis for this proposition is reviewed in Section 5. For the present, it can be noted that this consensus has supported two broad focuses of policy, aimed respectively at boosting the public and private components of national saving.

3.1 Public saving and fiscal policy

An emphasis on the importance of public saving can be seen in the rhetoric of governments throughout the decade, and in the public debate more widely. In his Report to the Treasurer on National Saving, FitzGerald (1993) argued that the strategy for raising national saving should focus primarily on the public saving component, a view also reflected in numerous fiscal policy statements during the course of the decade.¹² This emphasis partly reflected the observation, already described in Section 2, that much of the deterioration in national saving since the 1960s had been accounted for by the public-sector component, particularly in the 1970s. There was also a view that an improved fiscal balance could reliably and directly contribute to national saving, whereas policies to promote private saving would be uncertain in their effect.

The focus on fiscal policy was given added impetus by the sharp fiscal deterioration associated with the early 1990s recession. FitzGerald's report was written at around the time of the peak in the public-sector deficit, and there has been considerable success in shifting the fiscal position in subsequent years. Given the interdependency between Commonwealth and State budgets, these developments can best be gauged by looking at the government sector as a whole. The general government deficit on a consolidated basis peaked at 4.7 per cent of GDP in 1992/93 and was subsequently turned around to an estimated surplus of 1.5 per cent of GDP in 1999/2000 – a movement of more than 6 percentage points, no doubt due to a combination of

12. For further discussion, see Gruen and Stevens (this volume).

structural and cyclical factors.¹³ The movement in the fiscal position since 1993 largely reversed the change over the previous three years, bringing the general government surplus by the end of the 1990s back to around the peak reached a decade earlier.

3.2 Mandatory superannuation

The thrust of policies aimed at promoting *private* saving since the mid 1980s has been directed primarily, although not exclusively, at mandatory superannuation. The original vehicle for this was a push for award-based superannuation in the mid 1980s, which took place under the overall framework of the Accord. As part of the 1985 Accord negotiations, it was agreed that a 3 per cent wage increase that would have been due on productivity grounds should be paid as a superannuation benefit. This position was accepted by the Industrial Relations Commission in 1986, and individual unions were then able to have the superannuation benefit incorporated in awards, although the process of extending coverage was relatively slow, particularly in the private sector.

Statements by the Government at the time point to a mixture of short-term considerations and broader strategic goals driving this process. An immediate issue was that there had been a substantial decline in the terms of trade and a widening of the current account deficit in 1984 and 1985, prompting considerable concern about macroeconomic performance. In these circumstances, it was argued that a wage increase paid in the form of superannuation would be more responsible than a cash increase, because it would have less short-run impact on demand and inflation. At the same time, the longer-term goal of seeking to boost domestic saving was clearly stated. Another factor cited was that too much of Australia's saving was being absorbed by housing – superannuation was seen as a vehicle for channelling savings into more productive forms of investment.¹⁴ The Government clearly viewed the introduction of award superannuation as part of a longer-term strategy, and signalled its intention at the time to develop standards for vesting, preservation and portability which would give superannuation a central role in private saving.

By the time of the 1991 Budget, dissatisfaction at the lack of progress in extending award superannuation led to the announcement of the 'superannuation guarantee levy'¹⁵ – a federally mandated increase in employer-funded superannuation contributions with penalties for non-compliance. This was enacted to commence on

13. While it is difficult to disentangle structural and cyclical components of this movement with any precision, estimates produced by the IMF and OECD imply that roughly 5 percentage points of the total fiscal consolidation over that period was structural, although it may be that such estimates understate the cyclical sensitivity of budget positions. Sources: OECD (1999a), Annex Table 30; IMF (1999), Tables 15 and 16; and Budget Statements (2000).

14. See for example, the address by the Minister for Finance, Senator Walsh to the Association of Superannuation Funds of Australia, 24 June 1986; and the statement by the Minister for Employment and Industrial Relations, Mr Willis, *Hansard*, 25 November 1985.

15. The system became later referred to as the Superannuation Guarantee Charge, or just Superannuation Guarantee (SG).

1 July 1992, with a target contribution rate of 9 per cent by 2002/03.¹⁶ In announcing the policy, the Treasurer noted simply that the award superannuation requirement 'had not been complied with in full'.¹⁷ In shifting from reliance on the award system to the use of federal legislation to enforce contribution rates, the new policy thus established the basic shape of the mandatory saving system that remains in place. As had been foreshadowed, standards for vesting, preservation and portability were enacted in 1992, and a strengthened supervisory regime for the industry was put in place the following year.

3.3 Compulsion and incentives

From the start, the question of compulsion versus incentives, as alternative strategies for promoting private saving, attracted attention. This was among the issues addressed in a Senate inquiry into superannuation policy in 1991 and 1992, at the time the superannuation guarantee policy was being put in place. The issue was also debated in the economics literature more widely. Some key aspects of this debate are considered further below.

At the policy-making level, there were some significant differences concerning the role of a compulsory saving system, although these differences tended to narrow as the decade progressed. In its 1991 *Fightback!* policy document, the federal coalition favoured an emphasis on promoting voluntary saving, and undertook only to maintain the mandatory contribution rate at the level in place at the time of the next election. At the same time, the Labor Government sought to increase the target for mandatory contributions further by supplementing the system with contributions from employees. This policy was foreshadowed in 1992 and was further developed in 1995 into a proposal to raise the target contribution rate to an eventual 15 per cent.¹⁸ The mechanism for achieving this was to be a 3 per cent employee contribution mandated in industrial agreements and awards, matched by a means-tested government contribution, financed by previously legislated tax cuts. In the event, the new Coalition Government after 1996 kept the Superannuation Guarantee in place under its original timetable (that is, with an eventual contributions target of 9 per cent), but did not proceed with the additional tranche of employee and government contributions.¹⁹

16. The target announced in the 1991/92 Budget was for the 9 per cent contributions rate to be reached in 2000/01; this was relaxed to a 2002/03 target date by the time the system was enacted.

17. Budget Statements (1991), p 11.

18. *Security in Retirement*, Statement by the Treasurer, Mr Dawkins, 30 June 1992; and *Saving for our Future*, Statement by the Treasurer, Mr Willis, 9 May 1995.

19. A further development was the adoption of a (capped) savings rebate in the 1997/98 Budget. This was dropped (effective from 1999/2000) as part of the government's tax reform package, on the basis that the new tax system would provide a broader pro-saving environment and hence the rebate would no longer be needed (Commonwealth of Australia 1998, p 48).

3.4 Taxation of superannuation

Another important aspect of policy development has been in the taxation of superannuation. The general thrust of policies in this area has been to make the tax treatment less concessionary. Major changes in this direction began in 1983 with a significant reduction in tax concessions for lump sums, and continued in 1988 with the introduction of a 15 per cent tax on fund earnings and on employer contributions (partly offset by a rebate on final benefits). Prior to 1983, contributions by employers had been tax-deductible and lump-sum withdrawals subject only to a tax on 5 per cent of the amount withdrawn. The changes represented a substantial curtailment of the tax benefits associated with employer-funded contributions. Changes in the 1990s were less dramatic but, by and large, continued to reduce the tax concessions available. Important changes were the introduction of flat-rate reasonable benefit limits (RBLs) in 1994²⁰ and the introduction, in the 1996/97 Budget, of a 15 per cent surcharge on employer-funded contributions above a stipulated income level. These two changes were directed specifically at reducing tax concessions to high-income earners.

In its broad structure, the tax system for superannuation post-1988 can be described as a hybrid between expenditure-tax and income-tax principles.²¹ Under a pure expenditure-tax treatment, saved income (that is, contributions and fund earnings) would be tax-free while post-retirement expenditure would be taxed at standard rates. The various remaining concessionary elements in the tax treatment of superannuation go part of the way toward approximating such an outcome, since fund earnings are only lightly taxed during the accumulation phase and employer contributions, although taxed, give rise to a roughly offsetting rebate at the benefit stage. Employee contributions are less favourably treated, because they are made from after-tax income but still give rise to taxable earnings during the accumulation period and in retirement. Again, however, the taxation of earnings on these savings is lower than would be the case outside the superannuation system.

The appropriate tax regime for superannuation has been the subject of extensive debate, which can be only briefly reviewed here. One view is that tax concessions on mandatory superannuation are essentially wasted, in the sense that there is no need to provide an incentive to do what is already compulsory. The FitzGerald Report gave some consideration to this argument and, while not entirely accepting it, argued for some re-allocation of tax concessions away from compulsory and towards voluntary components of saving. Piggott (1998) on the other hand argues that the tax regime for superannuation is not as concessionary as it seems; he calculates that, after allowing for the impact of compulsory superannuation on pension entitlements, the government's 'tax expenditure' on superannuation is actually negative in net present-value terms. Another relevant point here is that the tax treatment of compulsory contributions can still affect behaviour through its

20. RBLs, which define the maximum lifetime amount of concessionally taxed benefits available to an individual, were previously expressed as multiples of income.

21. The following discussion draws on Edey and Simon (1998).

impact on labour supply – heavier taxation of compulsory superannuation may discourage labour supply, particularly in the years close to normal retiring age, and hence by that channel may reduce the level of saving. In an environment where the overall policy objective is to encourage saving, this suggests that the argument for further removing tax concessions from compulsory superannuation is not straightforward.

3.5 Tightening the system

A third broad area of policy development can be placed under the general heading of ‘tightening the system’. It has been widely agreed that the compulsory system is vulnerable to leakages, particularly through early retirement and dissipation of accumulated funds. The problem arises essentially from the adverse incentives created by the interaction of compulsory saving with a means-tested government retirement pension. For many low and middle-income earners who cannot expect to accumulate sufficient funds to generate an income much above the government pension, there is a strong incentive to avoid accumulating ‘too much’: in effect, the prospective withdrawal of the government pension creates very high effective marginal tax rates on saved income. This incentive structure is generally argued to encourage early retirement, financed by running down accumulated superannuation, with the pension subsequently available as a safety net, a practice widely referred to as ‘double-dipping’.

Given the policy objectives of maintaining a safety net while promoting self-provision for retirement, two broad strategies would seem to be available to mitigate this incentive problem. One would be to make the government pension universal, as is the case in New Zealand. This would obviously remove the adverse incentive generated by the means test, although with significant drawbacks in terms of the equity of the system and its overall cost. The other approach, broadly the strategy that has been followed in Australia during the past decade or so, is to tighten the enforcement of compulsory self-provision for retirement and to modify tax incentives so as to make double-dipping less attractive.

Policy decisions in this direction have included measures to increase the attractiveness of annuity benefits relative to lump sums, and a gradual increase in the compulsory preservation age for superannuation benefits, announced in 1992.²² In the 1997/98 Budget, the Government tightened preservation rules and introduced a financial incentive to delay receipt of the government pension. The common objective in these decisions has been to reduce leakages of savings from the compulsory system. Nonetheless, changes in this direction have proved hard to bring about quickly because of a strong presumption that existing accumulated entitlements should be protected from significant rule changes.

22. The compulsory preservation age (the minimum age of access to accumulated superannuation benefits) is to be raised from 55 to 60 by 2025.

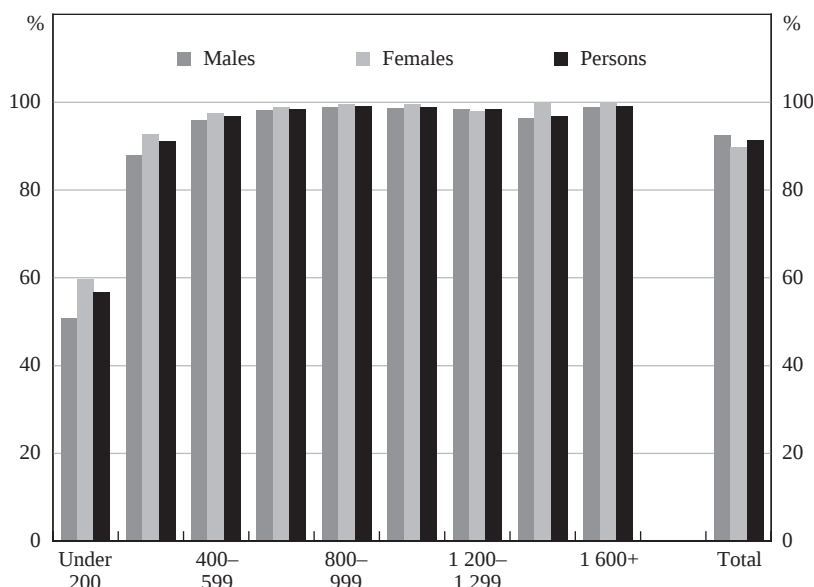
4. Private Saving and Superannuation

Given the importance of compulsory superannuation in the overall policy strategy over the past 15 years, it is of some interest to look at the impact this has had on private saving behaviour. An obvious question that arises, given the trends outlined in Section 2, is why the expansion of compulsory superannuation has not resulted in a discernible lift in aggregate private saving.

It is certainly the case that the policy has had a substantial impact on *employee coverage*. Prior to the introduction of award superannuation, around one-third of employees in the private sector, and around 60 per cent in the public sector, were receiving employer-funded superannuation benefits. These ratios have now risen to over 90 per cent, with the only significant areas of lower coverage being for workers earning less than the exemption threshold of \$450 a week. Even at very low levels of weekly income, coverage is now quite high, suggesting that in many cases superannuation has become a standard employment condition even where there is no legal requirement to provide it (Figure 6).

The expansion of coverage under award-based superannuation in the mid 1980s was initially most rapid in the public sector, where a 90 per cent coverage ratio was reached within two to three years of the original IRC decision (Table 2). As was remarked earlier, the slower progress in the private sector was a source of dissatisfaction on the Government's part and helped to motivate the introduction of the SG

Figure 6: Superannuation Coverage, August 1998
By weekly income, \$, per cent of total employed



Source: ABS Cat No 6310.0

Table 2: Superannuation Coverage
Per cent of employees

	Public sector	Private sector	Total
1985/86	na	32.3	na
1986/87	63.4	31.8	41.6
1987/88	68.0	34.1	44.0
1988/89	90.4	40.7	54.8
1989/90	91.7	56.9	66.9
1990/91	93.9	67.5	75.3
1991/92	94.6	70.7	77.6
1993/94	97.1	89.2	91.3
1995/96	96.8	90.0	91.4

Source: ABS Cat No 6348.0

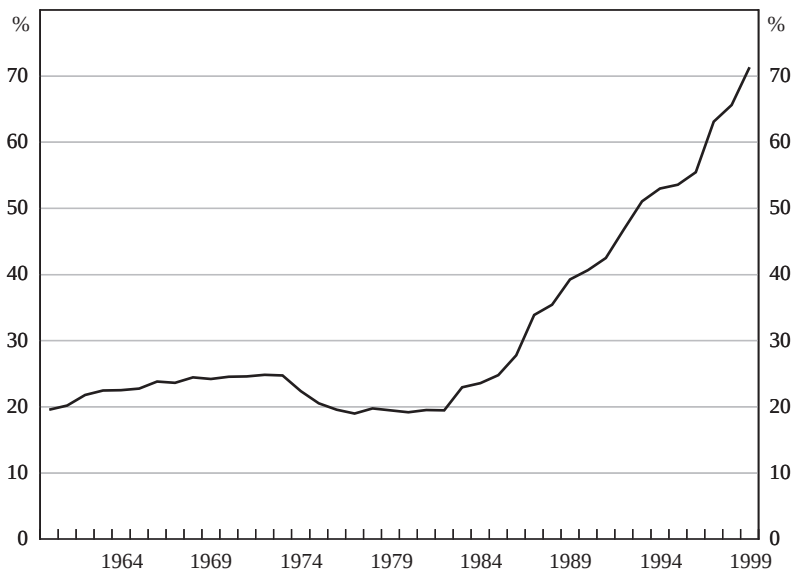
arrangements in 1992. Within a year of the adoption of those arrangements, private sector coverage had also quickly surpassed the 90 per cent mark. The expansion of superannuation has brought about a substantial convergence of male and female coverage rates, and, closely related to that, a significant lift in coverage of part-time workers. Tinnion (1998) notes, however, that females still lag significantly in terms of accumulated entitlements.

As well as an expansion of coverage, the extension of compulsory superannuation in the past 15 years has been accompanied by rapid growth in assets (Figure 7). Since 1985, superannuation assets have grown at a compound annual rate of 15 per cent, and the ratio of these assets to GDP has increased from just over 20 per cent to over 70 per cent. They have also formed an increasingly important part of household wealth. Estimates compiled by Bacon (1998) indicate that life insurance and superannuation assets constituted only 7 per cent of household wealth in 1960, compared with 22 per cent in 1997. Another important development has been a shift in the type of funds, with a long-term decline in the proportion of defined-benefit funds. While, historically, this type of fund was more common, nearly all new funds are now defined contribution funds. In 1999, only 15 per cent of all superannuation accounts were defined-benefit, although schemes with at least some defined-benefit component still accounted for 41 per cent of assets.

In principle the sources of superannuation asset growth can be divided into three components: net contributions, interest and dividend income on assets (net of fund administration costs), and capital gains. Available data on these concepts are presented in Figures 8 and 9. Some caution is required in interpreting these data, as they are not compiled on a mutually consistent basis²² but, nonetheless, a number of

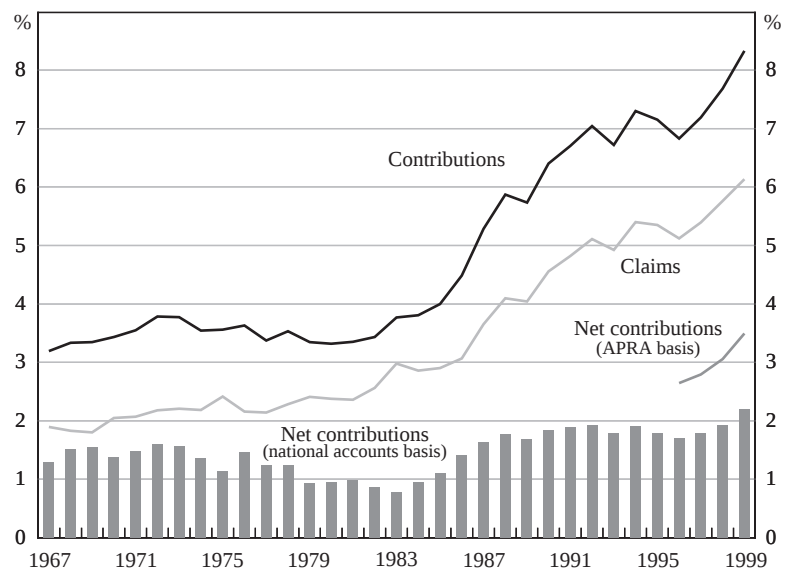
22. Asset growth is based on stock data reported in the financial accounts, while contributions and earnings data are separately reported.

Figure 7: Superannuation Assets
Per cent of GDP



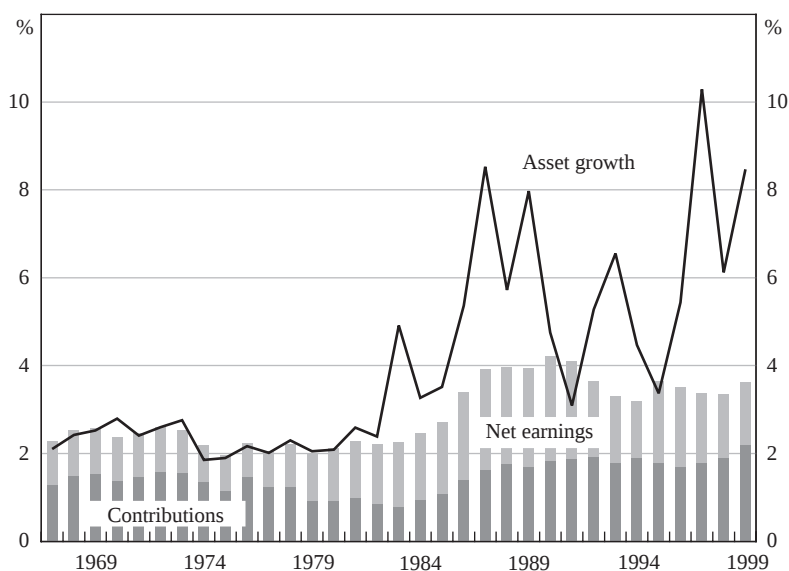
Source: ABS Cat No 5232.0

Figure 8: Superannuation Contributions
Per cent of GDP



Sources: ABS Cat No 5204.0, APRA (1999)

Figure 9: Components of Superannuation Growth
Per cent of GDP



Sources: ABS Cat Nos 5204.0 and 5232.0 (Table 12); RBA estimates

stylised facts seem reasonably clear. Since the mid 1980s, there has been a strong increase in both contributions and claims. This is likely to have reflected both the growth of coverage and the increasing liquidity of superannuation funds, with much of the growth in contributions and claims representing transfers within the system. There has also been a smaller but significant increase in *net* contributions (the difference between the two). According to the national accounts, net contributions have roughly doubled since 1985, from around 1 to around 2 per cent of GDP. Alternative APRA data, available only since the mid 1990s, suggest a higher level of net contributions (around 3 per cent of GDP).²⁴

The other sources of asset growth are depicted in Figure 9. Not surprisingly, the data indicate that net earnings were on average higher in the 1980s and 1990s than in earlier decades, reflecting a combination of higher levels of assets and relatively high rates of return, partly offset in recent years by higher administration costs. The sum of net contributions and net earnings represents the contribution of superannuation to conventional measures of household saving. This has gradually increased over the past two decades from around 2 to around 4 per cent of GDP. *Total* asset growth has on average been greater than that amount (and also more volatile), implicitly reflecting the additional contribution of capital gains.

24. Comparable ABS and APRA data on net contributions can be constructed by including claims on separately constituted superannuation funds in the latter. The discrepancy between the two resulting series appears to suggest an ABS over-estimate of claims on the separately constituted funds.

With this background, we can return to the question posed at the beginning of the section: why has there been no discernible increase in private saving arising from the expansion of compulsory superannuation? Part of the answer would seem to lie in the definition of saving. As indicated above, a significant part of the asset growth in superannuation funds in the past two decades has come from capital gains, which are not included in conventional income and saving aggregates. This provides a partial explanation for the co-existence of rapid asset growth in the superannuation sector with only fairly gradual increases in net contributions.

Another potential explanation for the lack of impact on aggregate saving is that leakages from compulsory superannuation may have increased, hence explaining the relatively small run-up in net contributions. This explanation features prominently in policy debate, but is difficult to evaluate, since there are no comprehensive data on the reasons for withdrawal of superannuation assets or the uses made of withdrawn funds. Nonetheless, it is widely argued that the incentive structure encourages leakages from the system through early retirement and double-dipping.

One trend that might be regarded as symptomatic of the problem is the long-term decline in labour force participation by over-55 males, the group for whom the interaction between accumulated superannuation and the means-tested pension is likely to be most significant. While this is a trend that has been common to most advanced countries, and likely therefore to have wider causes, the incentive structure in Australia can hardly have helped. Moreover, Bacon (1999) points out that the decline in the employment rate in Australia for males aged 55–59, in the period since 1975, has been the largest in the OECD area. It has also been pointed out that data on the distribution of income and wealth among people of pension age is highly suggestive of households tailoring their affairs to qualify for the pension.²⁵

Evidence on the nature of withdrawals from superannuation is suggestive of a significant leakage problem, but does not provide a comprehensive picture of the final uses of the funds withdrawn. Piggott (1997b) notes a preference for lump sum withdrawals, and reports that lump sums account for about 45 per cent of total superannuation benefits paid. Moreover, a surprisingly high proportion of funds withdrawn from superannuation is accounted for by people of less than normal retiring age. In a detailed analysis of data on eligible termination payments (ETPs) from superannuation funds, Tinnion (1998) reports that about 40 per cent of the total value of ETPs in 1995/96 (and more than 70 per cent of the number of such payments) were made to fund members aged less than 55. This is consistent with the high level of access to funds that exists on change of employment and on grounds of hardship.²⁶

These facts, however, do not constitute direct evidence of the extent of double-dipping, since it is likely that a significant proportion of lump sums and early withdrawals are re-invested in the system, and the extent to which they give rise to

25. See for example Freebairn, Porter and Walsh (1989).

26. Rothman (1997) estimates that about 65 per cent of superannuation assets are not subject to compulsory preservation.

‘excessive’ consumption is hard to judge. Also difficult to judge is the extent to which such behaviour may be changing over time. If early retirement is regarded as a key indicator of the problem, it would not appear to be getting any worse. Much of the decline in male employment in the 55-59 age group took place in the 1970s and 1980s, and in the past decade the situation has broadly stabilised. Moreover, the total employment ratio in that age group has been steadily increasing in recent years, reflecting rising female employment. Over time, it might be expected that these trends will be reinforced by the prospective increases in the preservation age and the tightening of preservation rules already announced.

Another aspect of the original question concerning the impact of superannuation on private saving concerns the potential for compulsory superannuation to displace other forms of saving. It is generally agreed that some offsetting reduction in non-superannuation saving is likely, although the degree of offset is likely to be incomplete. Although econometric estimates of the degree of offset vary, they generally bear out this view. They range as high as 0.75 (Morling and Subbaraman 1995), although there seems to be a loose consensus in the range of the 0.37 and 0.5 parameter estimates of Covick and Higgs (1995) and FitzGerald and Harper (1992). Certainly, the estimates of around a third accord with calculations using cross-sectional data for tax-preferred retirement savings vehicles in the United States (Hubbard and Skinner 1996). More recent consumer survey evidence by Loundes (1999) however suggests that the extent of reduction in voluntary saving due to compulsory superannuation may be quite large.

Some perspective on these issues can be gained by considering official projections of the impact of compulsory superannuation. Projections reported in conjunction with the Government’s 1995 superannuation policy statement²⁷ assumed an offset coefficient of a third, and incorporated the additional tranche of employee and government co-contributions which was then scheduled to commence in 1997/98. Subsequently Gallagher (1997) produced revised estimates reflecting policy changes in the intervening period, including the dropping of the second tranche of contributions, adoption of the government’s savings rebate, introduction of the superannuation surcharge and changes to preservation rules.²⁸ These projections, including the estimated effects of the SG since its introduction in 1992, are summarised in Figure 10. They point to a fairly gradual increase in private and national saving as the target contribution rate is increased and the system matures. The system was expected to have increased national saving by around 1 per cent of GDP by the end of the 1990s, gradually rising to almost 4 per cent of GDP by 2020.²⁹

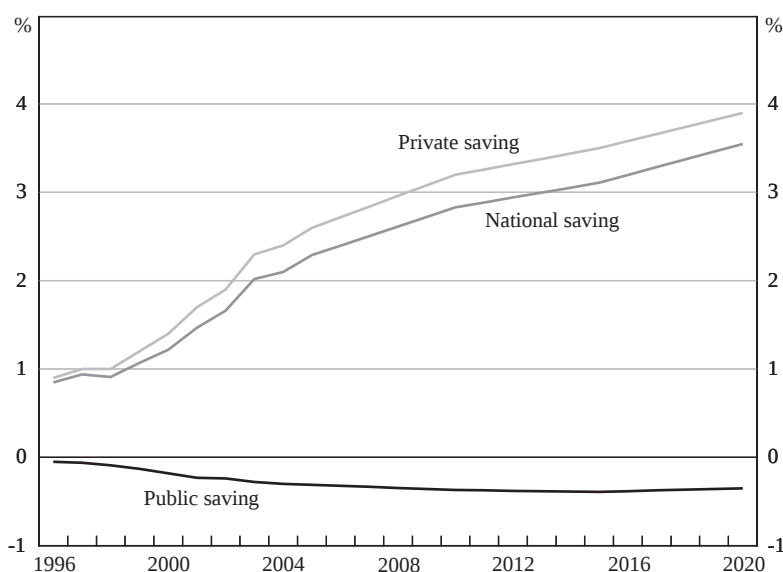
It is interesting to line up these expectations against what has actually happened. The key stylised facts outlined above can be summarised as encompassing a flat or falling private saving ratio over the past two decades, combined with a modest

27. Willis (1995), Chart 2.

28. Obviously this will not take account of any effects from the subsequent discontinuation of the savings rebate and broader changes to the tax system.

29. These projected effects are much larger than earlier estimates of the impact of the original SG framework reported by Gallagher and Preston (1993).

Figure 10: Projected Impact of Compulsory Superannuation
Per cent of GDP



Source: Gallagher (1997)

increase in net superannuation contributions. As noted, compulsory superannuation was expected to have added a net 1 per cent of GDP to national saving, principally via its effect on private saving, during the same period. There would seem to be two possible interpretations of this combination of facts. One is that the system is having something like its expected effect, but that other factors have been acting to hold down voluntary saving to an extent that has offset the increase in compulsory contributions. On this view, the projected increases in private saving should eventually become clear, assuming voluntary saving in a cyclically adjusted sense were to remain broadly stable in the longer run. The other interpretation is that the extent to which compulsory superannuation generates offsetting reductions in voluntary saving is much larger than has been assumed, rendering the system unlikely to produce significant increases in private saving even in the longer run. Which of these views is more correct should become clearer in the next few years as the timetable for increases in compulsory contributions moves to completion.

5. Does Australia Save Too Little?

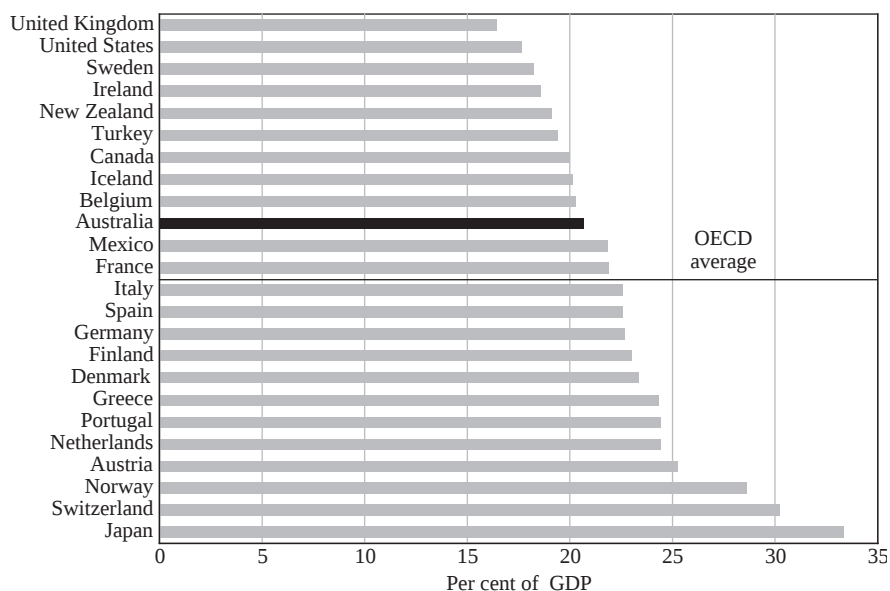
The proposition that saving in Australia is less than its optimum has been taken as a given in much of the policy debate during the past decade. Proponents of this proposition have been able to appeal to a number of stylised facts which would appear to give the case strong *prima facie* support. The key facts in this context are: that saving rates in Australia have been in long-term decline; that Australia's

national saving is low by international standards; that prospective population ageing implies increasing saving requirements; and that Australia runs an uncomfortably high current account deficit. A further point is that the adequacy of retirement income provision under the current superannuation plan has been called into question by some observers. The first of these points was examined in detail in Section 2, but the remaining points are worth amplifying.

5.1 International comparisons

By international standards, Australia's national saving rate is relatively low (Figure 11). Over the past three decades, gross national saving in Australia has averaged 21 per cent of GDP, 2 percentage points below the OECD average. It is also the case that saving in Australia has declined more rapidly than in the OECD as a whole (Table 3). These comparisons may be suggestive of a cause for concern, although they obviously do not address issues as to how saving requirements might vary across countries in relation to factors such as age structure, growth and the availability of profitable investment opportunities. It is evident that the English-speaking countries in general run lower-than-average saving rates, and Australia saves more than some countries with whom we are often compared, including the US, UK, New Zealand and Canada. On the other hand, it might be argued that Australia is a relatively high-investment country and therefore has a higher saving requirement, a point taken up further below.

Figure 11: Average Gross National Savings Rates: 1969–1997



Source: OECD (1999b)

Table 3: Gross National Saving
Per cent of GDP, decade average

	Australia	OECD
1970s	23.7	24.8
1980s	20.0	21.7
1990s ^(a)	17.0	20.4

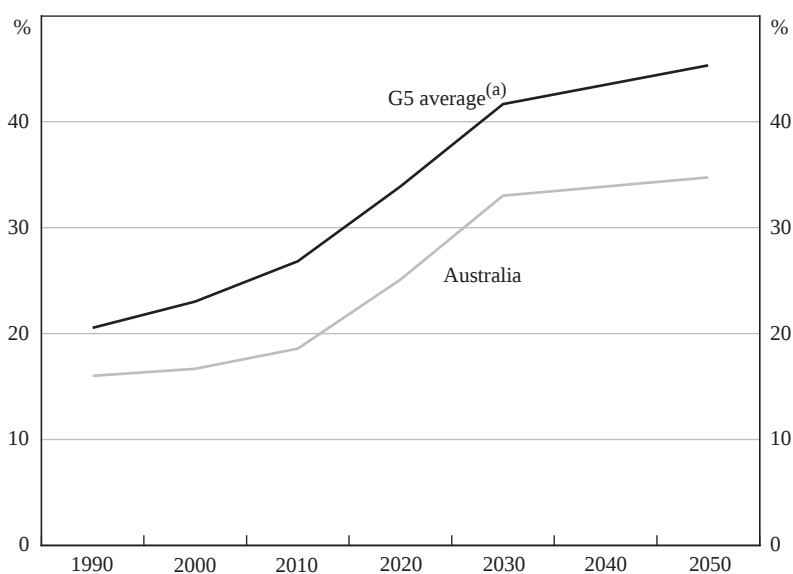
(a) 1990–97

Source: OECD (1999b). These data are compiled using SNA68 national accounts, and are therefore not directly comparable with the data in Table 1.

5.2 Saving and population ageing

Like most advanced countries, Australia is currently in the midst of a significant long-term ageing of the population structure. A useful summary measure of prospective population ageing is the elderly dependency ratio (the ratio of the over-65 population to that of the 15–64 age group). Official projections of this ratio for Australia and for a group of major industrial countries are presented in Figure 12. The projections point to a marked increase in elderly dependency in most advanced

Figure 12: Elderly Dependency Ratio
Population 65+ / population 15–64



(a) France, Germany, Japan, the United Kingdom and the United States.

Sources: Bosworth and Burtless (1998), Bos *et al* (1994)

countries, although it will be less pronounced in Australia than elsewhere. These trends, which have already been under way for some decades, are expected to accelerate, with the period of most rapid population ageing in most countries projected to occur between 2010 and 2030. A summary statistic of these trends is that the number of persons of working age per person of retirement age in Australia will, on these definitions, decline from about 6 at present to about 3 in 2030.

Population ageing can be expected to have implications for both private and public saving rates. Standard life-cycle models of consumption predict a hump-shaped age distribution of household saving, with people attaining maximum saving rates in the decade or two leading up to retirement.³⁰ With most of the baby-boom generation in Australia now at, or close to, the age of maximum saving, simple life-cycle theories would therefore predict that demographic trends will soon begin to reduce household saving.³¹ Yet formal evidence to link age profiles to saving in an Australian context is scarce and inconclusive. De Brouwer (1999) finds that the Australian consumption function is unaffected by the inclusion of an elderly dependency ratio, and Lattimore (1994) finds that demographic variables have effects on the saving rate which are both slight and sensitive to the specification of the consumption function.

The more important implications of population ageing are probably those for public saving.³² It is usually argued that the problem of population ageing requires either an increase in current public saving (relative to what would be needed with a stable age profile) or pre-emptive structural actions to limit the build-up of expenditure obligations in the future. The focus on pension reform in a number of OECD countries is an example of the latter.

Assessing the implications of demographic trends for future public expenditure and saving requirements is a highly complex exercise. Among the factors that need to be considered are the effects of population ageing on government pension liabilities, health expenditures and tax revenues, all of which will add to government financing requirements in the decades ahead, as well as any offsetting effects arising from lower expenditures associated with falling juvenile dependency (for example, lower aggregate education costs). In a detailed multi-country study of these issues Roseveare *et al* (1996) suggest that while all OECD countries face significant net increases in financing requirements as a result of population ageing, Australia is among the best placed. This is partly because, as already noted, population ageing is projected to be less pronounced in Australia than elsewhere.

There are also some important structural characteristics in Australia that will help to make the impact of population ageing on public finances significantly smaller than elsewhere. Australia enters the period of accelerating population ageing with

30. Piggott (1997b) citing Mylott (1996), reports that maximum saving rates are reached in the 45–64 age cohort.

31. This is the conclusion of Masson, Bayoumi and Samiei (1995).

32. This is consistent with the conclusions of Bosworth and Burtless (1998) for the major industrial countries.

relatively low levels of government debt. More importantly in this context, the pension system in Australia generates relatively low per capita social security costs by international standards, since the pension is not universal and not related to pre-retirement income.³³ This is in contrast to most other OECD countries, where governments typically run unfunded, income-related pension schemes which are now assessed as having substantial net unfunded liabilities. In a recent study drawing on these OECD estimates, Disney (2000) summarises the impact of population ageing on government pension liabilities by presenting estimates of the increase in average tax revenues required to maintain a stable public debt ratio in the period to 2030; in Australia this increase, equivalent to 2.4 per cent of GDP, is the second lowest (after Ireland) in the OECD area.

While these studies have focused on government pension liabilities, other studies have emphasised the impact on prospective health expenditures. The World Bank (1994) finds a strong cross-country correlation between the age profile of a population and the proportion of its income spent on health. However, existing evidence for Australia (Richardson and Robertson 1999) suggests that age structure has been a weak predictor of the relative size of the health sector, presumably reflecting a tendency for governments to ration funds to the sector over time on the basis of available resources. Similarly, Dowrick (1999) and Johnson (1999) present a fairly relaxed attitude to the ageing problem, arguing that behaviour may adjust to changing demographic circumstances through greater investment in human capital and in other ways that are not yet foreseeable.

Table 4: Social Expenditure Costs Per Head

Constant 1990 dollars

	Age pension	Other aged	Unemploy- ment benefits	Other social benefits	Health	Edu- cation	Employ- ment	Total
0–15	0	4	0	883	443	9 313	2	2 245
16–24	0	2	384	346	443	1 529	165	2 870
25–39	1	2	300	423	602	303	60	1 690
40–49	6	3	211	503	565	141	38	1 466
50–59	57	6	215	1 088	942	58	25	2 390
60–64	1 139	12	184	1 729	1 579	24	13	4 681
65–69	2 430	31	0	2 041	2 185	16	0	6 703
70–74	3 368	60	0	1 626	3 255	16	0	8 324
74+	4 168	263	0	1 135	6 111	12	0	11 689

Source: Creedy (1999)

33. See for example Kahn (1999) and OECD (1998).

Nonetheless, data on current patterns of government expenditure suggest that there is at least the potential for expenditure to be considerably influenced by the age structure of the population. Estimates compiled by Creedy (1999), showing public expenditures on different age categories for the main classes of social expenditure, are presented in Table 4. These suggest that per capita health costs for higher age cohorts are significantly higher than social security costs, and that they increase more steeply with age. An implication of this is that the impact of population ageing on future health expenditures could be larger than the impact on pension costs, if existing patterns of health expenditure in relation to income were maintained. Of course, a major uncertainty in thinking about these issues is the future of productivity growth. It has been pointed out that higher trend productivity growth can significantly ease the net burden on future governments from these developments by generating stronger revenue growth, although countervailing that to some extent is that the associated growth in real incomes tends to raise community aspirations, and hence the demands on public expenditure, at the same time.

5.3 The current account

Another factor often regarded as supporting the case that Australia's saving is insufficient is the size of the current account deficit.³⁴ It can be pointed out that while Australia saves less than the OECD average, similar international comparisons also show that Australia is a low saver relative to domestic investment (Figure 13). In general there is a strong cross-country correlation between national saving and investment levels, which is another way of saying that the volume of a country's domestic saving appears to act as a constraint on the level of investment.

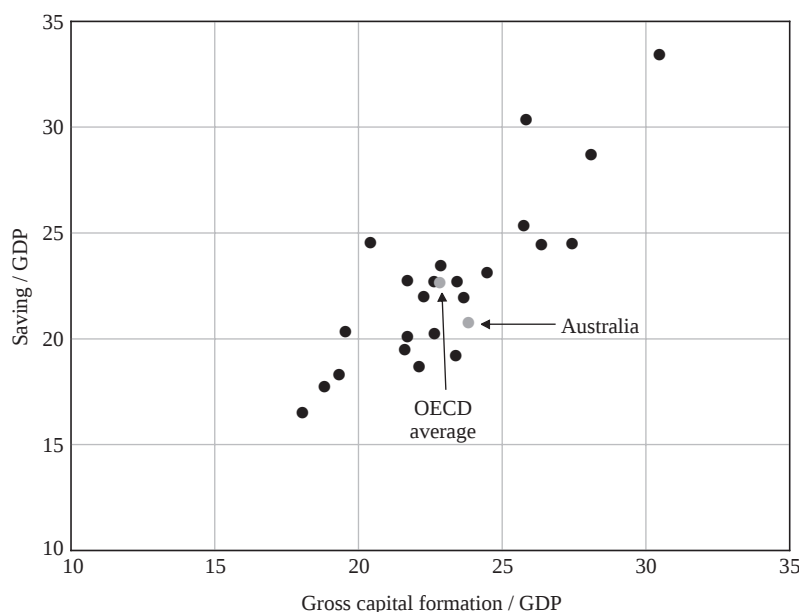
While these simple correlations obviously ignore important issues of optimisation through time, a number of recent studies have sought to capture these issues more fully by attempting to model an optimum sustainable consumption path for Australia. In general these studies have concluded that Australia does save less than the optimum, although there is considerable uncertainty as to the extent of the shortfall. Cashin and McDermott (1998) use a method which essentially tests whether the current consumption path is sustainable (that is, consistent with a stable ratio of external debt to GDP). They find that, since the mid 1980s, net national saving has been between 2 and 4 per cent below the level required to satisfy sustainability.³⁵

An alternative approach to the same question by Guest and McDonald (1999) uses a growth model of the Australian economy to solve for an optimal saving path consistent with national investment requirements and with meeting the inter-temporal budget constraint. In their base model they estimate that Australia is currently under-saving relative to the optimum by a considerable amount (more than 8 per cent of GDP). This result appears to be mainly driven by the expected population dynamics in the decades ahead: the forthcoming population transition implies that there should be a relatively high saving ratio now, if standard assumptions about

34. For further discussion of this issue, see Gruen and Stevens (this volume).

35. Leachman and Thorpe (1998) reach a similar conclusion.

Figure 13: Gross Capital Formation and Saving
1969–97



Source: OECD (1999b)

optimal consumption smoothing are maintained. However, Guest and McDonald also found their results to be highly sensitive to the model specification, with the current actual saving rate able to be replicated within a plausible range of parameter assumptions. Hence, in a full equilibrium framework, the proposition that there is significant under-saving, and the extent of that under-saving, appear difficult to establish. For those convinced that lowering the current account deficit should be an important policy priority, these optimal saving results are probably not the decisive arguments.

5.4 Adequacy of retirement provision

Sceptics of the proposition that Australia under-saves would argue that the adequacy or otherwise of the level of saving cannot be established by these general macroeconomic criteria – the key issue is whether, at the micro level, decisions are being distorted in a direction that leads on average to under-saving. This brings the focus back to questions as to whether private saving decisions are being distorted by policy, and whether there exist other sources of under-saving which policy should set out to correct.

The literature on private saving behaviour offers some grounds for thinking that such an under-saving bias may be important. Theorists have argued that something akin to a time-consistency problem exists for individuals, such that they would generally prefer to defer being virtuous – the example of a smoker who always wants

to quit tomorrow.³⁶ This induces a greater short-termism than is embodied in the true rate of time preference, and is therefore argued to create a general bias towards under-saving relative to the optimum.³⁷ This theoretical result seems consistent with survey evidence suggesting that people fail to plan rationally for retirement. For example, studies in the United States have found that people systematically fail to focus on their saving needs, or tend to underestimate them – or, equivalently, that they overestimate the standard of living that their current saving patterns will generate in retirement.³⁸ These features of private behaviour would seem to support the case for policy intervention to encourage saving.

Policies adopted in Australia, and indeed in most other advanced countries, can be interpreted as seeking to address this problem through a two-pronged approach, comprising a compulsory saving requirement and a safety net for those who are not in a position to save enough. The unavoidable existence of the safety net arguably reinforces under-saving biases and strengthens the case for the compulsory saving element. If this is accepted as the rationale for the policy approach, it raises the further question of whether the compulsory level of contributions is sufficient to meet the stated goals of counteracting any under-saving bias and providing households with adequate retirement incomes.³⁹

This has been a matter of some debate in Australia, with some commentators arguing that the existing 9 per cent contributions target will be sufficient, while others are of the view that more will be required. In this context, studies generally assume an aspired replacement rate (the ratio of post-retirement to pre-retirement levels of income or consumption) of the order of 60 per cent.⁴⁰ Tinnion and Rothman (1999) find, using a consumption replacement benchmark, that the 9 per cent contributions target should be sufficient, at least for relatively low-income earners. This result depends crucially on access to remaining part-pension entitlements, and replacement ratios are much lower for middle and upper-income earners for whom continuing access to government pensions will be less important. Some of these features are evident in the official projections for retirement incomes summarised in Table 5. FitzGerald (1993) argues for a higher contribution rate of around 18 per cent, with ASFA (1999) estimating that a range of 12 to 15 per cent would be necessary to meet adequate replacement benchmarks at most levels of income. Consistent with a view that existing contribution rates may be too low, Webster (1997) finds in survey evidence that employees have a strong tendency to overestimate their ability to fund retirement from their existing superannuation plans.

36. Some of these arguments are canvassed by Piggott (1997a).

37. This is analogous to the theoretical problem of time-consistency in the literature on inflation control.

38. See for example Lusardi (2000) and Moore and Mitchell (1998).

39. The case for compulsory self-provision for retirement is not universally accepted. Freebairn (1998) provides a contrary view.

40. Figures of the order of 60 per cent are widely used, but it matters whether consumption or income is the chosen benchmark, the consumption benchmark being less demanding than that for income.

Table 5: Projected Sources of Retirement Income

Per cent of pre-retirement expenditure

Pre-retirement income (per cent of AWOTE)	Funded annuity	Tax	Age pension	Total
<i>Single males</i>				
75	49	(6)	49	93
100	53	(5)	31	79
150	59	(5)	11	65
200	63	(6)	2	59
<i>Couples</i>				
75	38	(5)	42	75
100	40	(4)	26	63
150	45	(4)	10	51
200	48	(5)	3	47

Source: Willis (1995), Table 1. The projections assume a 9 per cent contribution rate, a 6 per cent real rate of return on funds invested and an unbroken contribution period of 40 years for the main income earner. Further details of the assumptions are given in the original source.

Another relevant point here is that the projected retirement incomes generated by a 9 per cent contribution rate would still leave most retirees on at least a part-rate government pension even when the system has fully matured. An implication of this, which does not seem to have been remarked upon, is that it would leave most retired people still in the income range where the interaction of the means test with accumulated superannuation, and hence the incentive to engage in double-dipping, is most severe. In other words, the existing plan is not projected to raise most retirement incomes beyond the point where the double-dipping incentive is likely to be most significant. These issues clearly merit further study. It may be that, even if scepticism prevails on the macroeconomic case for higher saving, there is still a case for promoting an increase in saving from current levels on the grounds of retirement income adequacy.

6. Conclusions

In hindsight, despite various controversies encountered along the way, the policy debate during the past decade can be seen as characterised by some important points of common ground. In particular, saving-related policies in Australia have been guided by a shared presumption that saving is too low, and by a gradually emerging consensus on a strategy to remedy that. The strategy has had two main elements – an emphasis on the role of fiscal responsibility, and the promotion of private saving through development of the compulsory superannuation system.

The implementation of these policies has coincided, for much of the past decade, with a gradual increase in national saving. However, the increase has come off an exceptionally low base and contains a large cyclical element. It was only at the end of the decade that the national saving rate again attained its average level of the 1980s, and it is not clear whether a structural increase in national saving is yet under way. Private saving, in particular, has yet to show any obvious response to the increase in compulsory contributions. As has been the case in other countries, this experience testifies to the difficulty of generating a sustained increase in private saving through government policy actions. Nonetheless, it should be emphasised that the impact of the superannuation strategy now in place was always projected to be fairly gradual, and the key test of its effectiveness in raising private saving lies in the decade ahead.

While quite a high degree of consensus has developed around the broad policy approach, a number of issues remain unresolved and likely to require further attention. Two can be briefly highlighted. The first concerns the ability of the current superannuation system to generate satisfactory levels of private saving. This has several dimensions including the appropriate level of compulsory contributions, the extent to which further action may be required to reduce scope for the dissipation of accumulated funds, and the interaction of the tax and benefit system with compulsory superannuation in the years around retirement. The discussion above suggests that significant problems remain in this area.

A second issue concerns the complexity of the system. This has been widely commented on, although it is obviously a difficult problem to deal with. The complexity arises from several sources including grandfathering of incremental rule changes and the multi-stage nature of the taxation treatment. Complexity is argued to contribute to administration costs and to blur incentives built into the taxation of superannuation, since those incentives are not easily understood. Closely related to this issue is the broader question of the appropriate overall tax burden on superannuation, and the extent to which it should remain concessionary.

These are issues on which there is not at this stage a consensus, although the possibility of a further increase in compulsory contributions is being actively debated. Many of these issues are likely to prove interrelated, since public support for further expansion of the compulsory system may depend on developments in the other aspects of system design. Given the primacy that superannuation policy has now attained in the strategy for private saving, it seems inevitable that these issues will remain high on the policy agenda in the years ahead.

References

- Anstie RK and AR Pagan (1983), 'Inflation and the Consumption Ratio', *The Effects of Inflation: Theoretical Issues and Australian Evidence*, Centre for Economic Policy Research, Australian National University, Canberra, pp 321–349.
- Association of Superannuation Funds of Australia (ASFA) (1999), 'Achieving an Adequate Retirement Income - How Much is Enough?', Summary of Research Findings and Issues for Discussion, ASFA Research Centre, October.
- Australian Prudential Regulation Authority (APRA) (1999), *Superannuation Trends – December Quarter 1999*.
- Bacon BR (1998), 'Household Wealth and the Aged: An Income Distribution Survey Analysis', The Sixth Colloquium of Superannuation Researchers, University of Melbourne, Conference Paper 98/3.
- Bacon BR (1999), 'Ageing in Australia: Some Modelling Results and Research Issues', in *Policy Implications of the Ageing of Australia's Population*, Conference Proceedings, Productivity Commission and Melbourne Institute of Applied Economic and Social Research, AusInfo, Canberra, pp 77–106.
- Bos E, MT Vu, E Massiah and RA Bulatao (1994), *World Population Projections 1994–1995: Estimates and Projections with Related Demographic Statistics*, World Bank, The John Hopkins University Press, Washington DC.
- Bosworth BP and GT Burtless, (1998), 'Population Aging and Economic Performance', in Bosworth and Burtless (eds), *Aging Societies: The Global Dimension*, The Brookings Institution Press, Washington DC, pp 1–32.
- Budget Statements (1991), *Budget Speech 1991-92*, Australian Government Publishing Service, Canberra.
- Budget Statements (2000), *Budget Strategy and Outlook 2000-01*, Australian Government Publishing Service, Canberra, pp 8–45.
- Cashin PA and CJ McDermott (1998), 'Are Australia's Current Account Deficits Excessive?', *Economic Record*, 74(227), pp 346–361.
- Commonwealth of Australia (1998), *Tax Reform: not a new tax, a new tax system*, Australian Government Publishing Service, Canberra.
- Covick OE and B Higgs (1995), 'Will the Australian Government's Superannuation Initiatives Increase National Saving?', papers presented to the 24th Conference of Economists, University of Adelaide, Volume 2: Cockerell-Gabbittas.
- Creedy J (1999), 'Population Ageing and the Growth of Social Expenditure', in *Policy Implications of the Ageing of Australia's Population*, Conference Proceedings, Productivity Commission and Melbourne Institute of Applied Economic and Social Research, AusInfo, Canberra, pp 229–250.
- de Brouwer G (1999), *Financial Integration in East Asia*, Cambridge University Press, UK.
- Depta P, F Ravalli and D Harding (1994), 'Extended Measures of Investment and Saving', Treasury Research Discussion Paper No 8.
- Disney R (2000), 'Crises in Public Pension Programmes in OECD: What are the Reform Options?', *Economic Journal*, 110(461), pp F1–F23.

- Dowrick S (1999), 'Demographic Change and Australian Economic Growth to 2020', in *Policy Implications of the Ageing of Australia's Population*, Conference Proceedings, Productivity Commission and Melbourne Institute of Applied Economic and Social Research, AusInfo, Canberra, pp 33–45.
- Edey M and M Britten-Jones (1990), 'Saving and Investment', in SA Grenville (ed), *The Australian Macroeconomy in the 1980s*, Proceedings of a Conference, Reserve Bank of Australia, Sydney, pp 79–145.
- Edey M and J Simon (1998), 'Australia's Retirement Income System', in MS Feldstein (ed), *Privatizing Social Security*, National Bureau of Economic Research Project Report, University of Chicago Press, Chicago, pp 63–89.
- Feldstein MS (ed) (1998), *Privatizing Social Security*, National Bureau of Economic Research Project Report, University of Chicago Press, Chicago.
- FitzGerald VW (1993), 'National Saving: A Report to the Treasurer', Australian Government Publishing Service, Canberra.
- FitzGerald VW and IR Harper (1992), 'Super Preferred or "Level Playing Field"? Implications for the Financial System', *Australian Tax Forum*, 9(2), pp 193–258.
- Freebairn JW (1998), 'Compulsory Superannuation and Labour Market Responses', *Australian Economic Papers*, 37(1), pp 58–70.
- Freebairn JW, MG Porter and C Walsh (eds) (1989), *Savings and Productivity: Incentives for the 1990s*, Allen and Unwin in association with National Priorities Project, Sydney.
- Gallagher P (1997), 'Assessing the National Saving Effects of the Government's Superannuation Policies: Some Examples of the New RIMGROUP National Saving Methodology', The Fifth Colloquium of Superannuation Researchers, University of Melbourne, Conference Paper 97/3.
- Gallagher P and A Preston (1993), 'Retirement Income Modelling and Policy Development in Australia', Retirement Income Modelling Task Force, Conference Paper 93/3.
- Guest RS and IM McDonald (1999), 'Ageing, Immigration and Optimal National Saving in Australia', Griffith University and University of Melbourne, mimeo.
- Hubbard RG and JS Skinner (1996), 'Assessing the Effectiveness of Saving Incentives', *Journal of Economic Perspectives*, 10(4), pp 73–90.
- International Monetary Fund (IMF) (1999), *World Economic Outlook*, October, IMF, Washington DC.
- Johnson PA (1999), 'Ageing in the Twenty-first Century: Implications for Public Policy', in *Policy Implications of the Ageing of Australia's Population*, Conference Proceedings, Productivity Commission and Melbourne Institute of Applied Economic and Social Research, AusInfo, Canberra, pp 11–31.
- Khan Q (1999), 'Australia's Retirement Income System: An Example of Sustainable Cost-effective Coverage', Productivity Commission and Melbourne Institute of Applied Economic and Social Research, in *Policy Implications of the Ageing of Australia's Population*, Conference Proceedings, AusInfo, Canberra, pp 141–153.
- Lattimore R (1994), 'Australian Consumption and Saving', *Oxford Review of Economic Policy*, 10(2), pp 54–70.
- Leachman LL and MW Thorpe (1998), 'Intertemporal Solvency in the Small Open Economy of Australia', *Economic Record*, 74(226), pp 231–242.

- Loundes J (1999), 'Household Saving Behaviour in Australia', Melbourne Institute of Applied Economic and Social Research Working Paper No 17/99.
- Lusardi A (2000), 'Explaining Why So Many Households Do Not Save', Dartmouth College and University of Chicago, mimeo.
- Masson PR, TA Bayoumi and HS Samiei (1995), 'International Evidence on the Determinants of Private Savings', IMF Working Paper No 95/051, Washington DC.
- Moore JF and OS Mitchell (1998), 'Projected Retirement Wealth and Saving Adequacy in the Health and Retirement Study', Pension Research Council Working Paper 98-1, The Wharton School of the University of Pennsylvania, Philadelphia.
- Morling SR and R Subbaraman (1995), 'Superannuation and Saving', Reserve Bank of Australia Research Discussion Paper No 9511.
- Mylott L (1996), *An Economic Analysis of Tax Preferred Saving Schemes*, University of New South Wales, B Com (Hons) Thesis.
- O'Mara LP and TJ Walshaw (1992), 'Some implications of inflation adjustment of interest payments on Australia's foreign debt', *Economic Analysis and Policy*, 22(1), pp 51–65.
- OECD (1998), *Maintaining Prosperity in an Ageing Society*, OECD, Paris.
- OECD (1999a), *Economic Outlook*, 66, OECD, Paris.
- OECD (1999b), *OECD National Accounts Main Aggregates: 1960–1997*, OECD, Paris.
- Piggott J (1997a), 'Australian Retirement Income Provision: Policies and Impacts', Retirement Economics Group, The University of New South Wales, Research Paper No 8.
- Piggott J (1997b), 'Taxation and Pensions: Designs for Retirement Saving', Retirement Economics Group, The University of New South Wales, Research Paper No 7.
- Piggott J (1998), 'Comment on Australia's Retirement Income System', in MS Feldstein (ed), *Privatising Social Security*, National Bureau of Economic Research Project Report, pp 89–96.
- Richardson JRJ and I Robertson (1999), 'Ageing and the Cost of Health Services', Productivity Commission and Melbourne Institute of Applied Economic and Social Research, in *Policy Implications of the Ageing of Australia's Population*, Conference Proceedings, AusInfo, Canberra, pp 329–355.
- Roseveare D, W Leibfritz, D Fore and E Wurzel (1996), 'Ageing Populations, Pension Systems and Government Budgets: Simulations from 20 OECD Countries', Economics Department Working Paper No 168, OECD, Paris.
- Rothman GP (1997), 'Aggregate Analyses of Policies for Accessing Superannuation Accumulations', The Fifth Colloquium of Superannuation Researchers, University of Melbourne, Conference Paper 97/2.
- Tan AS and G Voss (2000), 'Consumption and Wealth', Reserve Bank of Australia, mimeo.
- Tinnion J (1998), 'Provision for Retirement – Who does What? Distribution of Superannuation Contributions, Lump Sum Payments and Capital Incomes of Tax Filers 1995–96: New National Estimates', The Sixth Colloquium of Superannuation Researchers, University of Melbourne, Conference Paper 98/1.

- Tinnion J and GP Rothman (1999), 'Retirement Income Adequacy and the Emerging Superannuation System—New Estimates', The Seventh Colloquium of Superannuation Researchers, University of Melbourne, Conference Paper 99/2.
- Treasury (1999), 'The Measurement of Saving in Australia', *Economic Roundup*, pp 21–50.
- Webster E (1997), 'Householder Attitudes Towards Retirement Incomes, Australia, 1997', Melbourne Institute of Applied Economic and Social Research, Working Paper No 15/97.
- Willis R (1995), *Saving For Our Future*, Australian Government Publishing Service, Canberra.
- World Bank (1994), *Averting the Old Age Crisis: Policies to Protect the Old and Promote Growth*, Oxford University Press, Washington DC.