Copyright of Full Text rests with the original copyright owner and, except as permitted under the Copyright Act 1968, copying this copyright material is prohibited without the permission of the owner or its exclusive licensee or agent or by way of a licence from Copyright Agency Limited. For information about such licences contact Copyright Agency Limited on (02) 93947600 (ph) or (02) 93947601 (fax)

200407825

SUPERANNUATION: THE RICARDIAN CRISIS

Dick Bryan*

When compulsory superannuation was introduced into Australia in 1992, the core rationale related to issues of national savings. The Fitzgerald Report on National Savings (Fitzgerald 1993), commissioned by the Government to rationalize the shift to superannuation as a macroeconomic necessity, projected a shortage of savings to fund old age especially in the face of an ageing population. A stark choice was faced: either the government needed a greater claim on national savings via taxation to fund a public pension scheme, or private saving for old age had to be mandated to reduce the burden on the state's future welfare budget. The latter choice prevailed and compulsory superannuation commenced.[1]

As it played out, a number of strategic issues came together that brought surprisingly broad support for this proposal.

- It addressed the state's concerns about future fiscal problems of having to fund baby boomer retirement, for the onus would shift to self-funding. Moreover, the macroeconomists, concerned with Australia's mounting foreign debt, were gratified that Australia's reliance in 'foreign savings' could diminish.

---

* Comments by Nick Coates and Michael Rafferty on various drafts were greatly appreciated.

1 The similarities between taxation funded pensions and compulsory super schemes has led many economists to classify compulsory super as a tax. This blurring between state and quasi-privately provided welfare is an issue taken up later in this paper.

- It pleased the financial sector, particularly the life offices and pension funds which gained access to the management (and hence the notorious 'management fees') of the compulsory store of savings. As the prudential supervision of management refined, the larger financial interests entrenched their positions.
- It met with trade union (ACTU) approval on two fronts. First, it presented the union movement as active in determining the life-long well-being of its members. Old age, as well as working life, were now central union concerns. Second, the pool of savings generated by compulsory superannuation was compatible with the ACTU's aspiration of mobilizing national savings for job-creating local investments.
- It presented workers with the prospect of enjoying retirement incomes better than those offered by frugal public pensions, as well as the prospect of early retirement.

We have previously seen in this Journal argument that the basis of much of this support was misconceived. It has been argued that there is no pool of 'national savings' to fund 'national investment' (Coates 1997). There has also been argument against industry policies predicated upon the mobilization of superannuation funds for local investment (Coates 1997 and Bryan 2003). Empirically, the Reserve Bank of Australia has found that national savings have not increased significantly since the introduction of compulsory superannuation,[2] and companies in Australia continue to borrow off-shore because it is cheaper (Battellino 2002). So national savings has moved off centre stage as the rationale driving compulsory superannuation.

The focus of this paper is different, though related. It addresses the tensions that inevitably arose between the first strategic issue and third and fourth issues: between the concerns of a fiscal crisis and union aspirations of funding living standards in old age. The proposition is that shifting the funding responsibility from PAYE taxation to private savings

2 In Reserve Bank research, Edey and Gower (2000) found for the 1990s that aggregate savings did not increased, due to substitution effects. More recent Reserve Bank research by Connolly and Kohler (2004) contend that substitution effects have been only partial, but the results are unclear at this stage.

could never resolve the savings problem because, either way, it is each generation of workers that has to fund the previous generation's retirement consumption. What is remarkable in the advocacy of private superannuation is the level of faith in the capacity of capital markets to conjure future wealth and solve the generational funding dilemma.

In one dimension, this is about faith in the capacity of capital markets to perpetually deliver asset growth to fund retirement (the magical powers of compound interest). The 2002 and 2003 negative industry fund returns (of up to -17 percent) should be seen as a warning sign. The virtuous cycle between more mandatory savings entering capital markets, causing further asset price rises, must at some point come to an end. When it does, the guarantee of retirement income adequacy becomes problematical. But the other dimension, which forms the focus of this paper, is the theoretical faith that capital markets actually serve to create wealth and hence provide in principle the foundations of self-funded retirement.

The Riddle of the Public-Private Dichotomy

The fear of a future fiscal crisis in the funding of aged pensions is not without foundation. It rests centrally on the consequences of an ageing population. It is not difficult to project that, with no substantial productivity growth, if old age were financed via taxation revenues, an ageing population would see the growing demand for aged pensions outstrip the growth of government revenue derived from the taxation of working-age people. Moreover, this could be posed as inter-generational dependence: the baby boomers would be asking for their old age consumption to be paid for by the next generation. And since the baby boomers were said to have had the luxury of the boom years, it would be seen as doubly exploitative.

The shift to private provision of superannuation, it was said by the advocates of the new policy, would make the ageing baby-boomers more self reliant and inter-generationally responsible. Retirement would be 'self funding' individually and therefore (and we will see shortly that this is a critical leap of aggregation) collectively.

So how would private saving (via superannuation) avert the crisis so apparent in the projected reliance on the public purse? Where would the private revenues come from? The answer was never far away from a neo-liberal, idealised view of markets. First, workers would become more decisive in their savings strategy. They would not only save for superannuation because it became compulsory, they would also respond to the incentives of superannuation taxation rates and the latent threats of below subsistence aged pensions, and take personal responsibility for long-term personal strategies.

Secondly, these private savings would be invested in the capital market and, given effective and prudent management, they would accumulate over time. Savings (sacrifice) now would be 'working for you', and compound into a tidy retirement package, with market discipline ensuring efficient management. States, by contrast, are thought not to accumulate – they live hand-to-mouth and they exploit any soft-budget constraints. They don't accumulate to pay future pensions; they just fund them out of current revenue. Through investment in capital markets and private accumulation, private superannuation would resolve the intergenerational time-bomb that public pensions could not. At least, this was the official, and generally ascribed to, wisdom.[3]

Despite the claims for superannuation as a solution to fiscal crisis associated with an ageing population, the adequacy of existing systems is being challenged, including by their designers. Some, such as former Treasurer and Prime Minister Paul Keating (2004), an architect of the current Australian scheme, have argued the need to increase the compulsory rate of deduction from wages to secure sufficient savings for future consumption. Others, including current Treasurer Peter Costello, claim that the projected formula for self-funded retirement is not sufficient – there is need to postpone retirement and hence increase the proportion of life that people pay into superannuation and reduce the proportion of life that people live on superannuation.

Either way, these responses indicate that the notion of self-perpetuating wealth creation in capital markets is not delivering what its advocates a

3 See World Bank (1994) for a fully developed analysis in this vein.

decade ago believed. This paper will look at the policy proposals shortly. First, it is important to note that the policy rests on some very basic propositions that are specific to neo-liberal views of capital markets. Conversely, a surplus approach raises a different set of concerns that suggest the current policy crisis was inevitable.

Superannuation: a Surplus Approach

The surplus approach of classical political economy contends that wages are used to reproduce workers and profits to reproduce capital. That theory works most simply, therefore, when we can depict a distinct class of workers earning wages and capitalists earning profits. Superannuation, whereby workers receive dividends and interest over their lifetime, is a challenge – not to the surplus approach, but to its simplified version.

There are two critical questions that need to be resolved: first, are the weekly payments to superannuation a payment out of wages or out of profits? Second, are the dividends, and interest that those superannuation savings generate, part of life-long wages or part of profit? The first is an empirical/historical question and can be readily clarified; the second turns out to be critical in understanding the current crisis of superannuation.

The evidence on this first question is clear in the Australian case because it was explicitly negotiated in wage settlements at the time of the introduction of compulsory superannuation – the Superannuation Guarantee Levy (SG). Compulsory superannuation was introduced at a time of centralized wage fixation, where the rationale for wage setting was made explicit rather than just being the outcome of a series of private, behind-closed-doors negotiations. Superannuation payments by workers are unquestionably a deduction from wages and hence from current living standards. The Federal Government's submission (made jointly with the Governments of South Australia and Northern Territory) to the Australian Industrial Relations Commission 2000-2001 Safety Net Wages Review made this clear:

> Since the inception of award superannuation in the mid-1980s successive Commonwealth Governments have accepted that the SG results in a change in the mix of employee remuneration and not in an increase in overall remuneration or in business costs, which would have a negative impact on employment (Commonwealth of Australia, 2000:7:13).

Accordingly, superannuation has always been a systematic attempt to take provision for retirement out of state revenues, and entirely away from the responsibilities of capital. Hence policies to increase labour's input into superannuation can be seen as a new form of conflict over working hours, now posed as a question of the working life, rather than the working day.

But while the contributions to superannuation may be understood as wages converted into (forced) savings, the dividends and interest payments (our second critical question) are not: they are part of the surplus. Irrespective of who acquires dividends and interest payments, be they 'workers', 'capitalists' or any conceived category in between, they are 'unearned' income. They are income that accrues to ownership rather than deriving from a contribution to the production of goods and services. But the open question remains: from whom is this 'unearned' income acquired?

For the neo-classical economists, unearned income comes from capital's contribution to production. It is sometimes rationalized as a reward for 'waiting' (ie. not consuming), sometimes as a reward for 'risk-taking', and sometimes as a payment for 'entrepreneurship' (Fine 1977). But essentially it is a payment for ownership. In surplus theories, by contrast, unearned income is produced by, and hence a deduction from, labour.

If we follow this surplus approach, two questions follow that point directly to superannuation being unsustainable as the 'solution' to funding old age. First, can workers as a class become wealthier by appropriating surplus produced by each other? And, second, how is capital to be reproduced when profits are being used to fund workers' consumption? Combined, they address the class role of the surplus.

⊠

Self-funded Retirement: the Ricardian Crisis

Rethinking superannuation from a classical surplus perspective raises a distributional issue between classes. While there is debate amongst surplus theorists as to how the distribution between wages and profits is determined, there is agreement on this basic point of class relations. There is also agreement that wages are the means by which labour as a class is reproduced (labour buys its means of subsistence) and profits are the means by which capital as a class is reproduced (capital invests the surplus).

In surplus terms, generalized superannuation seems an anomaly. Superannuation breaks down the divide between capital and labour – workers receive both wages and dividends throughout their lives. Accordingly, we have seen arguments about workers as shareholders demonstrating the end of class, etc. Sociologically, that may be an interesting debate, but it does not obviate a basic economic concern. It appears that profits are now called on to sustain both capital (ie. to reproduce investment) and (retired) labour. If this is the case, the reproduction of capital has undergone a fundamental change.

When labour starts to accumulate via superannuation, apparently like capitalists, there is initially no shortage if investment funds.[4] Indeed, investment funds grow rapidly in the first generation of superannuation, in a process akin to Marx's 'primitive accumulation'. As this generation of saving workers ages, however, it withdraws its savings from reinvestment in order to fund old-age consumption. These retired workers become rentiers: people who live off income generated by their assets. The balance of the surplus shifts from reproducing capital

4 The impact of such a development on the overall rate of capital accumulation is an issue of long-term debate. Pasinetti has contended, and, within a surplus approach it is generally accepted, that workers' savings affect only the level of capital stock, not the rate of growth of investment, production and employment. For a discussion in relation to social security, see Michl and Foley (2004). Michl and Foley, however, model social security in terms that assumes the workforce grows in line with capital formation - the opposite of the conditions of an ageing population. Their model also focuses on the distribution of 'wealth' between capital and labour, but never asks questions about the class origins of the surplus. In this sense, it is purely a distributional model.

(reinvestment) to consumption. So long as new workers are entering the savings process at a rate faster than ageing workers are converting savings to consumption, there is a growth in the surplus dedicated to reinvestment. But if ever the mass of new entrants (savings funding reinvestment) is outstripped by the mass of retirement (savings funding consumption), the surplus starts to turn away from funding investment and towards funding (aged) consumption. The historic role of profits – to fund new investment – is undermined.

This scenario takes the form of a Ricardian crisis. It will be recalled that two hundred years ago David Ricardo foresaw a crisis of nascent capitalism because, he perceived, the surplus would increasingly get in the hands of non-investors. With a growing population to be fed, Ricardo predicted that the demand for agricultural land would grow. Rents, he said, would therefore rise, and the proportion of the surplus going to rents would increase and the proportion going to profits would accordingly fall. For Ricardo, the landlords were an unworthy class – they earned rent via monopoly ownership of fertile land, and consumed the surplus rather than invested it. They had no incentive to do otherwise, for there was no challenge to their land monopoly and hence no competitive requirement to invest in new technology. The capitalist class, conversely, faced intense competition, and so had to invest its surplus (profits) back into production. Hence, for Ricardo, if the share of profit fell relative to the share of rent, investment would fall relative to consumption, and capitalist accumulation would move into crisis.

The superannuation analogy of the Ricardian crisis plays out in the context of shrinking, not expanding, population, but the use-of-surplus issue is the same. Instead of a food shortage crisis, we have a labour shortage crisis. With an ageing population and hence a growing proportion of workers past retirement age, an increasing proportion of the surplus that accrues to labour via superannuation goes to fund consumption rather than further investment. Put another way, the rate at which current workers are engaged in surplus reinvestment is lower than the rate at which past workers are converting surplus into consumption, and the gap is widening. The attachment of the surplus to investment diminishes. In this sense, it is a Ricardian crisis.

Alternatively, think of the issue in terms of a supply of labour that undertakes production. What, in this context, is superannuation (or savings generally)? It is command over future labour – the capacity to purchase the goods and services produced by that future labour. The ageing population process in this context shows up as a shortage of future productive labour and hence a shortage of products produced by future labour. Instead of Ricardo's investment crisis, we have framed the same process as a production crisis and/or a labour crisis.

Either way – whether it is posed in terms of profits or labour – the ageing population leads to the question of the unsustainability of the current system. This is the case irrespective of whether aged consumption is funded out of tax revenue or workers' savings

Dean Baker (2003) of the International Confederation of Free Trades Union has put the point sharply:

> No matter how the system is financed, one still has the economy, and therefore, active workers, supporting those who are no longer active. What ever system of pension provision is used, it will always involve a transfer of a given amount of real resources from the working population to the retired population.

So what went wrong with the apparent logic that saw private superannuation as the answer to the looming fiscal crisis?

First, the projected fiscal crisis that made public pensions unsustainable has not been averted with self-funded retirement. It has just been re-specified within the private sector. The reason is that the crisis is not, in essence, a monetary one – of how to get enough spending power into the hands of old people. It is a crisis of production – how to get enough production to honour the purchasing power of retirees.

Second, it is important to ask why the lure of superannuation and personal saving for the future has proved so deceptive as a solution to the state fiscal crisis. The problem becomes apparent when we think of the difference in posing the rentier issue in individual and in class terms, for it seems that the superannuation agenda has been entrapped in the neo-liberal, individualist discourse.

For any individual, there is the perception that a person's savings 'works for them' – their bonds accrue interest and their shares pay dividends. Hence ownership of capital generates a stream of payments. This person can live as a rentier. But what is true of any individual is not true for all individuals combined. The individual framing avoids the point that dividends and interest are merely claims on future production, but someone else has to produce the future output for consumption. Being a rentier implies a relationship between people: unearned income has to be produced by other people, so all individuals cannot be rentiers.

For a traditionally-defined class of capital owners, who make up a small portion of the population, the individualist discourse still seems to work – their capital 'works for them' in the sense that there is enough future production to honour their claims. But this class version is critically different in substance from the individual version. Their savings 'work for them' not because of the neo-liberal, individualist proposition that capital is 'productive', but because there are systematic means by which the class division between labour and capital both secures that revenue and uses it to reproduce class relations. But once profit is treated in superannuation policy not as a class revenue but as an individual revenue – simply as a payment for ownership – the source of the revenue is not systematically posed and the role of the revenue in the reproduction of class relations ignored. It is as if aggregate accumulation is being treated as a series of individual savings strategies. But for society as a whole there can be no notion that society's savings 'works for it', creating unearned income: someone must do the work that generates the surplus. A whole society cannot maintain a livelihood by simply owning capital! The emptiness of this rentier fantasy becomes evident as soon as it is stated. But this precisely what universal saving for superannuation has implied.

The Costello/Greenspan Solutions to the Ricardian Crisis

The Ricardian crisis did not eventuate 200 years ago. Ricardo was wrong on a number of counts: empirically, he was wrong about the rate of population growth, and theoretically he failed to consider technological change: the capacity to make a given plot of land more productive.

Moreover, Ricardo did come up with a partial solution: international trade. His theory of comparative advantage was not just abstract theory: it was posed as a solution to England's food shortage.

Each of these strands from Ricardo's crisis resonates in the context of superannuation. Empirically, unlike Ricardo's population projections, there seems little doubt that there is an ageing population, at least *within* Australia and most advanced capitalist countries. Second, the proposed solutions to the superannuation crisis are precisely in the area that Ricardo ignored: technological change.

Ricardo's neglect of technological change was the issue for which he was most roundly criticized. In the superannuation context, the parallel of technological change relates to increases in labour productivity.[5] Virtually all government and international agency economic reports on ageing and the funding of old age note that improvements in labour productivity and associated economic growth can ease the impacts of a growth in the non-productive portion of the population. But none sees increased capital stock as a panacea. There is a need to innovate new ways to increase productivity in any generation.

In this light, the recent call by both the Australian Treasurer Peter Costello and the US Federal Reserve Chairman Alan Greenspan to extend the working life, and reduce time on retirement income, becomes explicable. Within a day of each other, in February 2004, they announced to their respective Federal legislatures the urgent need to re-consider (and raise) the age of retirement.

They both focused the question away from the (classical) Ricardian question of distribution of the extant surplus, and towards increasing the rate of accumulation to increase the surplus. Productivity (technological change), they both contended, was the key to the nation resourcing a growing retired population, but productivity growth by a (relatively) shrinking working age population could not be expected to be sufficient to hold back the effects of tide of a growing population of retirees. The

---

5 The Bank for International Settlements (1998:10), in its report on ageing in the G10 countries, engages in a rather facile debate as to whether an ageing population promotes or detracts from an innovation culture.

key to productivity growth, in their reasoning, is the productivity of the ageing population itself.

In a media interview associated with the release of the Australian Government's policy '*A More Flexible and Adaptable Retirement Income System*' (Australian Treasury 2004) Treasurer Peter Costello (2004) put it starkly:

> Well, the problem is this, that the number of people of workforce age will not be increasing, with medical advances and scientific advances, we'll all be living longer. So, instead of having five people in the workforce to support each person above 65, we will have 2 ½, those people have to pay their own taxes for their own services, and they will have to take a share of funding that larger proportion that is at retirement age.[6] Now, in this paper, what I put out, is I say, we can address that demographic problem in four ways – you could increase tax, that is . . . not something that is going to excite the public, you could restrict expenditures, you could run deficit budgets and blow the problem out to future generations, or you can try and run your economy faster and stronger – and that is what I think we have to aim at, a stronger economic performance. Now, where are we going to get this from? Well, one of the areas that we can get it from is by engaging more Australians in the workforce, and we go through in our paper, we look at some of those parts of the Australian population that aren't engaged in the workforce, and we asked the question, what can we do to give better incentives for them to be engaged?

The agenda is therefore clear: to fund retirement, there is need for more work, and the program is to get all parts of surplus population – the unemployed and others, especially women, not in the labour force – into work to fund retirement. But special attention is given to recent retirees:

> Well, let me come to each of these in turn, I think it is important. Let's go to the older people. Yes, I think it would be good for Australia if we can encourage older people to stay in the

6 On this point, Treasury estimates that the increase in the proportion of people aged over 65, from the present 13 percent to 25 percent by 2042, would leave a hole in the budget of 5 percent of GDP, or a $40 billion deficit.

> workforce, yes I do. At the moment you have got to preserve your superannuation to 55, but if somebody is going to retire at 55, with life expectancy going out to 80, that is 25 years of retirement, it is going to be very hard for them to support themselves.

In summary, according to Costello, "there is going to be no such thing as full-time retirement. There's going to be part-time retirement and part-time work".

Overall, there is a clear message (obscured in the Ricardian framework). It is that the way the state averts the crisis of funding an ageing population is to make sure that the surplus is not simply what is left over after costs of production have been met: production itself (over a workers' lifetimes) has to be rearranged to secure the 'appropriate' rate of long-term surplus. And, thereby, capital's share is not what is 'left over' after labour's interest and dividends have been extracted: labour must extend and intensify its working life to produce more surplus value so that there is enough 'surplus' to pay labour its retirement income and still reproduce the class of capital.

U.S. Federal Reserve Chairman Alan Greenspan (2004) made a virtually identical point in testimony to the House Budget Committee:

> [T]he long-term budget outlook offer[s] a vivid and sobering illustration of the challenges we face as we prepare for the retirement of the baby-boom generation. These scenarios suggest that, under a range of reasonably plausible assumptions about spending and taxes, we could be in a situation in the decades ahead in which rapid increases in the unified budget deficit set in motion a dynamic in which large deficits result in ever-growing interest payments that augment deficits in future years. The resulting rise in the federal debt could drain funds away from private capital formation and thus, over time, slow the growth of living standards.

Greenspan made two recommendations. One is lowering the annual cost-of-living adjustments to Social Security payments by using a 'better' (lower) measure of prices. The other is raising the retirement age. In central-banker speak, Greenspan put it this way:

> Under current law, and even with the so-called normal retirement age for Social Security slated to move up to 67 over the next two decades, the ratio of the number of years that a typical worker will spend in retirement to the number of years he or she works will rise in the long term. A critical step forward would be to adjust the system so that this ratio stabilizes.

The aspiration of stabilizing the ratio of years worked to years retired sounds remarkably like it is addressing the labour-shortage version of the Ricardian crisis.

For both Costello and Greenspan the effect of the recommended policy is to extend the period of time that labour's share of the surplus stays in the role of capital (ie. being reinvested and accumulating) and reduce the period of time that labour's share of the surplus funds consumption. In Marxist surplus terms, the proposal is an attempt by Costello and Greenspan to increase absolute surplus value: to lengthen the working life but without increasing the lifetime income. In short, the surplus becomes dedicated less to funding consumption, for 'older' workers continue to generate new surplus for capital. The Ricardian crisis is averted, by increasing the (lifetime) rate of exploitation of labour.

By the same measure, a longer working life means more PAYE taxation, and hence greater state-capacity to fund pensions. The solution, like the problem, is the same whether it is posed in terms of private superannuation or public pensions.

Conclusion

The shift to superannuation has not been a solution to an ageing population, but it has been a victory for the neo-liberal agenda. Compulsory superannuation has pushed workers into the hands of financial institutions, and ensured the appropriation of healthy management fees from worker's savings. More generally, it has been part of an economic and social culture that embraces individualistic paths to security in old age. It has embraced competition as an agenda of labour as well as of capital, and a program in which the intensification of work is posed as the source of labour's salvation. It seems to be here to stay,

but its introduction should hardly be hailed as a victory for labour or for the union movement.

Finally, let us not forget Ricardo's own proposed solution to the food shortage crisis: international trade. The contemporary equivalent amelioration of the labour shortage crisis is increased immigration – to reverse the ageing demographic. The conservatives, both environmental and social, will have none of it. But it would appear as integral to future capitalist development as has been international trade to its past.

References

Australian Treasury 2004 *A More Flexible and Adaptable Retirement Income System.* http://demographics.treasury.gov.au

Baker, D. 2003 'World Bank Involvement in the Privatisation of Public Pension Systems in Developing and Transition Countries'. Background Paper produced by the International Confederation of Free Trade Unions (ICFTU) May. http://www.icftu.org/www/pdf/pensionreform.pdf

Bank for International Settlements 1998 'The Macroeconomic and Financial Implications of Ageing Populations'. Basil: BIS. http://www.bis.org/publ/gten04.pdf

Battellino, R. (Assistant Governor, Reserve Bank of Australia) 2002 'Why do so Many Australian Borrowers Issue Bonds Offshore?' Talk to Australian Credit Forum 2002 Sydney, 26 November. http://www.rba.gov.au/Speeches/2002/sp_ag_261102.html

Bryan, D. 2003 'Alternative Economic Strategies: An Evaluation' *Journal of Australian Political Economy* No.50: 153-62.

Commonwealth of Australia (with the Governments of South Australia and the Northern Territory) 2000 *Safety Net Review – Wages 2000-2001.* http://www.workplace.gov.au/WP/CDA/files/WP/WR/sub2001.pdf

Coates, N. 1997 '"Australia Reconstructed's" Superannuation Strategy', *Journal of Australian Political Economy* No.37 :80-98.

Connolly, E. and Kohler, M. 2004 'The Impact of Superannuation on Household Saving', Reserve Bank of Australia Research Discussion Paper RDP2004-01 March. http://www.rba.gov.au/PublicationsAndResearch/RDP/RDP2004-01.html

Costello, P. (Federal Treasurer) 2004 Interview with Kerry O'Brien, ABC Television 7.30 Report, Wednesday, 25 February. http://www.treasurer.gov.au/tsr/content/transcripts/2004/015.asp

Edey, M. and Gower, L. 2000 'National savings: Trends and Policy' in D. Gruen and S. Shrestha, (ed.) *The Australian Economy in the 1990s*. Sydney: Reserve Bank of Australia. http://www.rba.gov.au/PublicationsAndResearch/Conferences/2000/EdeyGower.pdf

Fine, B. 1977 'The nature and origin of profits' in F. Green and P. Nore (eds.) *Economics: An Anti-Text*. London: Macmillan.

FitzGerald, V. 1993 *National Saving: A Report to the Treasurer*. Canberra: AGPS.

Greenspan, A. (Chairman, US Federal Reserve Board) 2004 Testimony before House of Representatives Budget Committee, 24 February. Testimony transcribed and reprinted at http://www.nytimes.com/2004/02/25/business/25WEBFTEX.html?ei=5070&en=5d2f9c8bd29f324a&ex=1080622800&pagewanted=all&position

Keating, P. 2004 'Why We're Left Singing for Our Super', *Sydney Morning Herald*, 27 February.

Michl, T. and Foley, D. 2004 'Social Security in a Classical Growth Model', *Cambridge Journal of Economics*, Vol.28: 1-20.

World Bank 1994 *Averting the Old Age Crisis*. Oxford: Oxford University Press.