

## **AUSTRALIAN SUPERANNUATION: AN UNSUSTAINABLE PYRAMID SCHEME?**

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Equity purchases by Australian superannuation funds have the potential to stoke, and may already have stoked, an unsustainable asset bubble. While it is impossible to prove this - financial bubbles only reveal themselves after the event - it is clear that Australian superannuation funds fuel an asymmetrical development of equity markets rather than feeding real investment in the way advocates anticipated. Growing superannuation funds provide net money inflows, unmatched by new equity or rises in the level of 'real economy' activity represented by existing shares. Superfunds therefore raise the demand on secondary markets, pushing-up prices.

In identifying a pyramidal aspect to superannuation funds, we are not suggesting either fraud, in the spirit of Charles Ponzi, nor necessarily attributing bubbles to loose credit or psychology (Keynes 1973; Minsky 1986; Kindleberger 1996; Mishkin 2011). Ponzi's original scheme, however, sustained high interest payments only by drawing-in new investors; and here there are parallels in that Australian equity prices could rise, at least in part, by drawing-in new funds from superannuation. Similarly, there are parallels with the bubbles in commodity prices and real estate, which occurred prior to the Global Financial Crisis, during which not only individual speculators but institutional investors bought assets, the prices of which rose at least in part because of the growing net purchases by these investors (Wray 2008). There is a structural logic which produces positive feedback effects in asset prices, but both logic and history suggest this is an inherently limited process.

The period from the 1980s saw a rapid rise of private pension provision in many countries. Private pensions were not new, dating back to the 19<sup>th</sup>

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century but, as the first section of this article argues, the spread, both geographically and socially, can reasonably be seen as a qualitative, rather than simply a quantitative, shift. Australia was an early adopter of a mandatory private superannuation system and remains amongst the world-leaders in terms of the size of its private pension funds in relation to national income. Australian superannuation funds are also notable for the unusually high proportion of assets held in domestic equity, as opposed to the majority of pension funds globally that are held in bonds or cash.

The second section of this article outlines arguments for pension privatisation. It was seen as desirable in that it would increase savings and thence investment and national economic growth. Paul Keating, the Prime Minister primarily responsible for the growth of Australia's system, expressed the idea particularly clearly: 'when the savings position gets better, the position of investment becomes more propitious' (in Coates and Vidler 2004: 12). State commitments could be scaled-back while individuals and the national economy stood to gain. Demographic change also provided a powerful rationale, as it was understood that the income tax revenues collected from relatively fewer current workers would become decreasingly able to meet the pension payment demands of a steadily growing number of retirees.

The third section draws on a critical literature that questions the economic imperatives for pension privatisation and criticises its inequalitarian consequences. It argues that super-fund growth has not led to improved rates of national savings, investment or growth. It identifies five particular problems. First, the savings represented by super-funds might substitute for, and undermine, other forms of savings. Second, as Keynes (1973) argues, increased saving implies decreased consumption, which may lead to less investment in the sense of new capital formation, with the identity of savings and investment being achieved only at reduced levels. Significantly for what follows, if the amount of money funds put into equity markets outstrips new equity issuances by firms, pension savings are being used to purchase existing assets on secondary markets, driving up prices but not driving any new investment. Third, super-fund savings may themselves consume a portion of workers' pension savings through fees and overheads. Fourth, although this is a relatively minor feature of the Australian system compared with many other OECD countries, the pension funds of any one country may be invested abroad rather than within the national economy. Finally, arguments around demographic change are also more ambiguous than is often presented. There are reasons

to question the demographic imperative. Amongst other things, most rich countries experienced rising rather than falling rates of labour force participation and falling rather than rising rates of taxation. However, to the extent that demographic change does require greater retiree funding from a relatively smaller pool of value-adding labour, pension reform merely shifts the burden of payment away from states to individuals, with potentially serious and deleterious economic and social consequences. Pension reforms shift the burden of payment but, of course, do not change the demographics.

The fourth section of the article shows that Australian super-fund growth has not coincided with commensurate growth in savings or investment as measured by capital formation. It has, however, corresponded closely with rising stock market capitalisation. Funds' equity purchases, unmatched by any corresponding imperative to sell, create a systematic asymmetry, producing a mutually reinforcing logic of asset and super-fund performance. However, this relies on the continuation of such purchases. While the logic of existing pension provision and reform (designed to increase the inflows) may sustain the apparently virtuous cycle, it is shown that this is not reflecting investment and growth in the wider economy but is instead essentially pyramidal and therefore fragile. Conversely, the demographic arguments which were used to justify the pension privatisations suggest an eventual pressure in the opposite direction: to draw down funds. The very different character of the pressures to buy and sell that are created by the flows from super-funds, independent of supplies of new equity, and the inherently volatile nature of financial assets makes a stable equilibrium unlikely and the risk of financial collapse accordingly high.

### **Pension reform**

This section briefly sketches of the global rise of private pensions. It is impossible to cover every aspect of controversy, for example disputes around super-fund taxation. Fuller accounts are available (see e.g. Jousten 2007, Orenstein 2008, Blackburn 2012, Clarke 2017). It is useful to the argument that follows, however, to introduce the previous system and the phenomenal but uneven rise of private pensions.

In the post-World-War-II era, welfare states in rich countries typically used a mix of two systems of pension provision (Jousten 2007; Clarke 2017).

The first was a state-funded, pay-as-you-go (PAYG) model, in which current taxes paid current pensions. Denmark and the UK were examples, latterly epitomised by the French system. The second system, sometimes described as ‘Bismarkian’ to acknowledge its German origins, was associated with employer-sponsored schemes with states providing more basic-level pension coverage (Orenstein 2008; Clarke 2017). The US system was particularly dominated by such corporate work-based schemes. In both systems, whether state or corporate, the schemes usually provided pensions on the basis of ‘Defined Benefits’ (DB), usually defined at some index-linked ratio to final earnings and the length of employment. In such schemes, the accrual risk was assigned to the sponsor, whether state or private (Orszag and Stiglitz 1999: 5; Blackburn 2012). It is worth emphasising, in terms of the argument that follows, that large state or corporate schemes allowed relatively accurate actuarial calculations of risk and longevity, which it is impossible for individuals to make on their own account. While there was considerable variety across countries and often a mixture of different schemes, most countries established some form of systematic pension provision, although usually much weaker in poorer countries. In some of these poorer countries there has been a third type of scheme, based on a ‘national provident fund’ which gave lump sum payments on retirement, ‘popular in Asia and some African countries under British colonial influence’ (Orenstein 2008: 22). Many elements of the earlier systems remain. In Australia, for example, in 2016-17, tax-funded government pensions provided the major source of retirement income for nearly 50 per cent of men and 45 per cent of women (ABS 2018).

Private pensions have an even longer history, dating from at least the second half of the 19<sup>th</sup> century. In North America they are associated with voluntary employer-supervised schemes (OECD 2017). Such private pensions were formerly mainly the preserve of the wealthy but have spread, so that they are no longer confined either to rich countries or rich individuals.

Chile’s neoliberal ‘experiment’ led the way. Reform in 1981 abandoned the previous social-security system and established pensions paid for by 10 per cent payroll contributions: concurrent tax-cuts allowed real wages still to grow (Orenstein 2008: 74-5). Amongst rich countries, the UK began a process of reform by introducing a voluntary opt-out of its public pensions system in 1986 (Orenstein 2013: 265). Others soon followed, adopting various forms of pension privatisation. Orszag and Stiglitz identify

‘Argentina, Bolivia, Columbia, Hungary, Kazakhstan, Latvia, Peru, Poland, Sweden, and Uruguay’ (1999: 4) as a second tranche of innovators. By the 1990s, the World Bank was promoting a privatising agenda for developing countries (Coates and Vidler 2004; Orenstein 2008).

Australia was already taking the lead. In 1992, the Australian parliament passed legislation for compulsory superannuation to apply in principle to all employees. Instead of introducing a single national superannuation fund, the policy allowed an array of industry-funds and retail funds to operate, competing for shares of the rapidly expanding pool of workers’ compulsory retirement savings. Employer contributions rose from 3 to 9 per cent by 2002, and to 9.5 per cent in 2014, with further rises to 12.0 per cent planned by 2025. Several schemes provided higher rates. The total amount invested in the funds rose steeply, from \$136b in 1992 to \$2376b by the end of 2016 (ABS 2018). In 2017-18 employer contributions represented 64 per cent of the total with ‘member and other’ contributions accounting for the remainder (ASFA 2019). This constituted the third largest pension market in the world, in absolute terms behind only the US and UK (OECD 2016a).

Funds were accumulated in the name of individual holders, to whom the responsibility for funding retirement was shifted. Funds accumulated according to the contributions made and, with variations according to the particular schemes, the success of the investments. These were therefore ‘Defined Contribution’ (DC) rather than the DB schemes typical in the previous period, although it should be stressed there is no necessary connection between the shifts to private and to DC schemes. It was possible to (re)define state systems to pay according to contribution, as occurred, for example, in Sweden. Conversely, some private schemes continued to pay DBs. For example, in Switzerland private funds became the norm but were entirely of defined benefit or ‘hybrid-mixed’ type rather than pure defined contribution schemes (OECD 2016a). Thus the shifts from state to private and from DB to DC schemes broadly ran in parallel but were not identical. As will be discussed below, the individualisation of responsibility tended to exacerbate inequalities previously offset by many state systems. Those with high incomes could contribute disproportionately more, while those with shorter periods in paid employment, including women and those suffering illness or disability, contributed disproportionately less.

Overall, take-up has been very uneven. In eight of 81 reporting countries, Australia, Canada, Denmark, Iceland, Netherlands, South Africa, Switzerland and the US, the value of total pension fund assets exceeded the nation's GDP by 2016 (OECD 2017: 6). US pension funds accounted for more than half the world total, reflecting the overall size of its economy. Elsewhere levels remained very low. Amongst other large, rich, countries, pension funds amounted to less than ten per cent of GDP in France (9.8%), Germany (6.8%) and Italy (9.4%). Levels were less than two per cent of GDP in China and India (OECD 2017).

There is also considerable international variation in the nature of the assets which funds held. The OECD (2017) report that, in total, in 2016 large pension funds held 57.2 per cent of their assets as fixed income or cash, 28.9 per cent in listed equity and 13.8 per cent in other assets including land and buildings. Overall, large funds began reducing their equity exposure (OECD 2016b), but there were exceptions, including Australia, which was one of four places (along with Poland, Hong Kong and Namibia) where equity comprised over half the total assets (OECD 2017: 17). Elsewhere bills and bonds were more important, and these dominated particularly in poorer countries (OECD 2017). Anticipating the arguments that follow, it can already be seen that Australian funds held both a relatively high level of assets and a high proportion of these assets in equity.

There were set-backs in the 2000s, particularly when asset value fell during the global financial crisis of 2007-09. That crisis also dampened enthusiasm for pensions privatisation; and several countries, including Argentina, Hungary, Poland and Portugal, either suspended or reversed elements of their private systems in the 2010s (Orenstein 2013: 262, OECD 2017). In general, however, the funds continued to grow and, by 2016, nearly \$40 trillion worth of assets was accumulated across the globe, up from \$26 trillion ten years earlier (OECD 2017). As the next section will describe, this represented the (as yet incomplete) fulfilment of a longstanding liberal ambition.

### **The case for reform**

There are several arguments why the old pensions systems needed to be reformed. Some reforms can be seen as pragmatic responses to changed circumstances, but there is often an underlying liberal claim. This section

will briefly sketch this general argument and consider a hugely influential associated claim about demographic change.

The fundamental liberal argument for pension reform maintains that national growth will be improved by increased investment, that investment will be boosted by increased savings, and that people will save more if state provisions are reduced. Having the state as a backstop has created a moral hazard by encouraging dissaving and feckless behaviour. Instead, the private pension funds could become important ‘sources of productive long-term capital’ (OECD 2016b: 10). At each stage of the argument there can appear to be a compelling logic, even if at each stage it is also possible to identify problems, to which the next section of this article will turn.

The arguments for pensions privatisation became increasingly influential from the 1970s, with Feldstein’s (1974) article often cited as the cornerstone. This built on a longstanding liberal tradition, which can be traced back at least to Fisher who identified different propensities to save according to income and individual characteristics, with savings likely to be lower amongst those of lower income and particularly those who were ‘shortsighted, weak-willed, accustomed to spend, [and] without heirs’ (Fisher 1907: 115). Such people were considered likely to have a stronger preference for present over future income (1907: 94). The poor, in particular, saved little while generous welfare further discouraged them from doing so.

The liberal argument therefore suggests that pensions privatisation can encourage the poor to save more than they would otherwise have done. In the first place, this is achieved directly by making superannuation contributions compulsory for all workers. Secondly, it can be achieved by the removal or radical reduction of state support, encouraging self-reliance and greater saving. This might appear to raise some awkward ethical questions for the liberal tradition, because the first argument uses state power to undermine subjective evaluations of individual utility maximisation, while the second is based on reasserting the primacy of those evaluations. In practice, supporters appeared to claim a broad, long-term utilitarian justification which could discretely overlook short-term costs and the welfare losses to intervening generations, which even the liberal modelling anticipated (Orszag and Stiglitz 1999: 7). In Australia, Keating described the individual affluence that reform might achieve but only in a rather distant future: ‘The scheme I had in mind meant that, if you joined the workforce at 20, retired at 60, preserved your funds, and

had an earning rate of somewhere between 5% and 5.5%, you would retire on a pension equal to average weakly earnings' (cited in Coates and Vidler 2004: 15). But how to weigh that benefit to the individual against the welfare-loss arising from having to undertake forced saving, which reduced disposable income for current consumption? It seems clear that individually welfare-enhancing features are not necessary to the underlying argument and may run counter to its rationale.

A second strand in the liberal reasoning has prioritised increased aggregate saving over increased welfare. As Orszag and Stiglitz (1999:7) write:

[W]e could perhaps induce people to save more by exposing them to more risk. But that need not improve their welfare. For example, risk-averse individuals might respond to increased variance in the real return of their pension plan by increasing their saving rates. The increased risk, however, would make them unambiguously worse off.

The logic of impelling increased savings hung in part on further reducing the income of those on lower incomes. In the Australian context, cutting current wages was an acknowledged objective. An acceptance of cost-push theories of inflation had predisposed Labor parliamentarians to reach a deal with trade union leaders, under the auspices of a revised Accord, to forgo workers' current wage increases in return for employer contributions to superannuation funds (Phillips 2013).

Superannuation schemes have often been treated generously for tax purposes (Spies Butcher and Spelling 2011, Blackburn 2012). In practice, this favours the rich who pay more into them, in contrast to relatively progressive general income tax regimes. Some of the extrapolations of the financial consequences need to be treated cautiously, but Blackburn reports estimates for the US (rather more pessimistic than those made by Keating for Australia) that, by 2030, high-income pensioners would receive 56% of their pre-retirement income, low-income pensioners only 25% (Blackburn 2012). In the Australian system a suite of tax concessions was held compensate workers for the loss of income, with a flat concessional tax rate of 15 per cent across superannuation contributions up to \$25,000 each year for those earning below \$250,000 p.a. As the Australians on \$180,000 to \$250,000 p.a. would normally pay 45 per cent tax on their earnings, redirecting this income into superannuation and avoiding 30 per cent of tax facilitates a significant transfer of wealth over a lifetime's earnings. Meanwhile, for the lowest wage-earners on less than the tax-free threshold of \$18,200 p.a., the flat concession of 15 per cent on superannuation left them paying more tax. Treasury data from 2014

confirms that the bottom decile suffered absolute losses, with the overwhelming majority of superannuation tax concessions accruing to the wealthiest (Treasury 2014). The effects of the reform were to redistribute income upwards.

Again, this reinforces the objective of increasing savings. The wealthy have both a greater capacity and propensity to save than do the poor (Fisher 1907, Keynes 1973). There were strongly gendered dimensions to the increases in inequality too, with the gaps between superannuation accumulations considerably greater than gender differences in pay (or in entitlements under DB schemes). Women live longer than men but accumulate less retirement savings (Olsberg 2004). The premise of a full (paid) working life on which DC schemes were predicated was also unattainable for many people, again disproportionately women, and the sick and the poor (O'Brien and Burgess 2004). The augmented wealth of the already rich, who are likely to save more of their income, can reasonably be expected to increase aggregate savings. Because, superannuation funds put part of their diverse portfolios into corporate bonds and equity, this funds productive investment, which, in turn, drives expansion, innovation and growth.

What of the other, more particular, argument that demographic shifts, even a 'time-bomb' (Coates 2004), required pension reform? Feldstein (1974), from the beginning, stressed that people were living longer and drawing more savings. It has become something of a journalistic commonplace that, with fewer people of working age supporting an increasing old population, PAYG systems become hard to sustain. Retirement has to be postponed and state support reduced. The OECD report that extensive population aging and population decline will involve 'an increase on the strain on social security and pension systems' (2014: 55). In Australia, phased increases in pension age from 65 to 67 are currently being implemented, with proposals for further increases to 70 seriously discussed during 2018 (*The Guardian* 2018). According to the IMF, 'all of these policies can be summarized to a simple observation of a need for benefit cuts to current and future retirees or contribution hikes for current and future workers' (Jousten 2007: 5). An elegant liberal argument adds that where PAYG systems made the old dependent on those still working, private pensions mean 'the elderly are earning income because they are the owners of the productive assets the young are working with' (Jousten 2007: 14).

**Table 1: Changes in Fertility and Life Expectancy**

	<b>Total Fertility</b> (children per woman)		<b>Life expectancy</b> <b>at birth</b>	
	1970-75	2000-05	2000-05	2045-50
World	4.49	2.65	65.4	75.1
More developed regions	2.12	1.56	75.6	82.1
Less developed regions	5.44	2.90	63.4	74.0

*Source:* Jousten 2007.

Pension reform could therefore be presented as resolving an inter-generational conflict. This arose, according to Steve Miller, 'as young people increasingly resent having their wages reduced and taxed away to support social programmes for their grandparents' income and health care concerns' (cited in Blackburn 2012: 138). Miller was notorious as an asset stripper, whose success came partly from renegeing on the pensions commitments of the firms he bought. The logic of the demographic argument, however, has been widely accepted. Decreases in fertility have coincided with increased longevity. An IMF primer on pensions' reform seeks to demonstrate this with the figures reproduced in Table 1. The argument is simple; states are becoming decreasingly able to meet their commitments and would need extraordinary tax-hikes to do so. Reducing their pensions commitments would also reinforce the broader liberal objectives of reducing state spending and the 'implicit public debt' of the future payments implied by pensions' commitments.

## **Why pensions savings might not produce economic benefits**

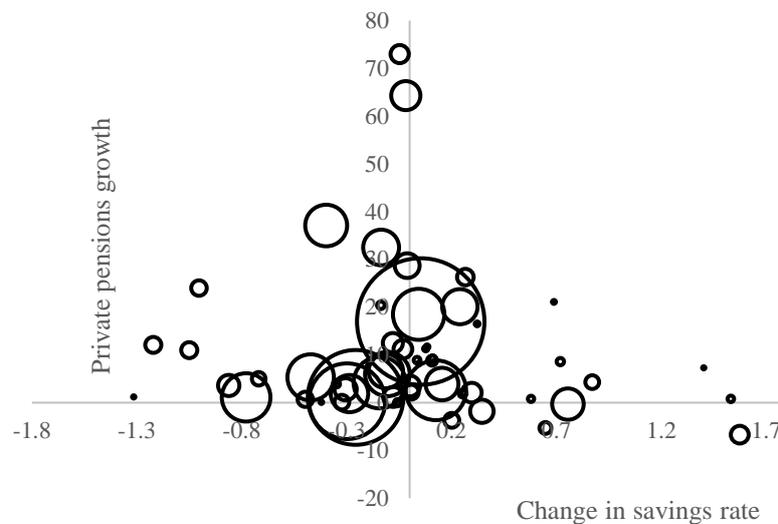
This section suggests that the evidence does not support claims that the increase in private pensions produces increased investment and growth in the way proponents anticipated, and that this should not be surprising. While there are plausible connections between the rise of pension funds and investment, these are at best heavily mediated.

There is little direct empirical relationship between the rise of pension funds and economic growth. Unsurprisingly, with few countries' funds constituting a large share of GDP, cross-country data cannot reveal any clear relationship. It seems notable, however, that over the decade to 2016, the countries with the strongest private pensions' growth, Denmark and the Netherlands, experienced very low economic growth. Of the 57 countries for which data was available, Australia had the fourth largest pensions' expansion (by 32.5 per cent in relation to GDP) and relatively healthy economic growth (of 2.8 per cent per year).

The sheer variety of international experiences highlights the problems with claims that increased pension savings increases growth in any straightforward way (World Bank 2017, OECD 2016a). So it is important to develop a clear analysis of the avenues through which the link may operate. This section examines four substantive reasons why the liberal arguments discussed in the previous section, imputing a positive relation, might be misplaced. It also then suggests that there are problems with claims that pension reform was required because of demographic change.

First, the savings going into pension funds might substitute for other forms of savings. Figure 1 plots the ratio of savings to GDP against the change of the size of pension fund assets, for the same 57 countries for which data were available. As can be seen from this figure (on the following page), there is no clear evidence of any statistical relationship, but what little relationship there is appears negative.

**Figure 1: Trend of Savings to GDP and Pension Fund Growth, 2006-16, 57 countries**



*Note:* Circle size denotes country GDP.

*Source:* World Bank 2017, OECD 2016a.

By widening income inequality, pension privatisation could contribute to increased savings, as previously argued. However, for those at any given level of high income who would otherwise have saved at rates in excess of compulsory superannuation rates, there seems little reason (tax breaks aside) to assume there would be any net additional saving. They are presumably simply able to reduce alternative savings. For lower-income individuals the process seems more complex. While the logic of state withdrawal provoking increased saving is compelling, the state is still required as a 'back-stop' unless there is to be a radical abandonment of the aged-poor. The fact that accumulated superannuation levels were greater than 100 per cent of GDP in only a few countries, and very unevenly distributed within countries, highlights that, for most people, particularly women, the funds are insufficient to secure adequate post-retirement incomes for any protracted period. Such figures indicate that the majority

of people have *accumulated* retirement savings amounting to less than their *annual* pre-retirement income. What Spies-Butcher and Stebbing (2011), in the Australian context, call a 'dual welfare state' persists. Private pension provision remains inadequate for an unclearly defined but substantial proportion of low-income earners who remain reliant on the state. For the moderately poor, reducing state provision, particularly through means testing, threatens to increase moral hazard by making private saving irrational for those near means-test thresholds.

The accrual of savings through pension funds also needs to be evaluated against the potential dissaving upon reaching retirement age, a theme to which the fourth section of this article will return. Again following Fisher (1907: 115), there is a liberal argument that the heritability of private savings would not only provide an incentive for their accumulation (in sharp contrast to state PAYG systems) but also a disincentive to running them down. However, individuals face difficult choices about what to do with their pensions' savings and individually rational decisions may undermine the savings motive. Thus, while the liberal tradition seems broadly reconciled to the insurance industry and principles of actuarial calculation, the individual responsibilities involved in making retirement savings decisions may substantially negate the possibilities for such collectively rational decision making.

Meanwhile, for a range of middle-to-high income earners, real savings and retirement income may be increased. Where state-funded schemes maintained statutory retirement ages, substantial accumulated superannuation provides an incentive 'to some individuals whose productivity has not fallen to retire earlier than they otherwise would have' (Orszag and Stiglitz 1999: 26). The effect would be the withdrawal of these high-income and high-tax-paying individuals from the labour market, thereby reducing saving and exacerbating the putative demographic problems.

The second potential problem raises more complex theoretical issues of a macroeconomic character. At least since Keynes, it is well-known that increasing savings need not lead to increased investment in any straightforward way. Keynes (1973) argued that increased saving is likely to diminish consumption and thence investment, so the savings/investment identity is realised only at lower levels of both. This remains controversial but, minimally, the *ceteris paribus* condition by which it is argued that increased saving *leads to* increased investment must be seen as deeply

problematic. As above, the Australian superannuation system was unambiguously designed to reduce workers' current earnings, potentially increasing profit and investment. However, while consumer demand may suffer, there is no imperative for the assets that pension funds buy to directly produce new investment.

As noted above, most Australian pension funds' assets have been held as either bonds or equity. Corporate bond purchases may enable the issuing firms to invest more readily and cheaply than they would otherwise have done, although bond sales are not simply an addition to the funds potentially supplied by bank borrowing. Similarly, firms may issue new equity to fund investment, though funds can instead purchase existing shares on secondary markets. This too may fuel feed-back and confidence effects, for example as high equity prices improve credit ratings, a willingness to undertake new investments and the stimulation of new public offerings. However, secondary purchases of existing assets could also increase stock prices without adding to real economy investment. Pension funds 'savings' may be accumulated in financial markets where they are held or 'churned' without producing investment in the sense of capital formation. These purchases, as the next section will discuss, also then have the potential to drive asset bubbles.

A related third point is that pension funds may themselves absorb substantial amounts of the assets they receive (Vidler 2004; APRA 2019). Orenstein estimates that these administrative fees have averaged four to five times those of state systems (2013: 266). One US study reported that: 'advertising expenses, the loss of economies-of-scale, competitive returns of financial company capital, and various other costs ... would, over a 40-year work career, consume about 20 percent of the value of the account accumulated over the career' (Orszag and Stiglitz 1999: 30). Vidler (2004) gives a slightly higher figure of 25 per cent for Australia. For the UK, Orszag and Stiglitz (1999) suggest a figure of between 40 and 45 percent. There are huge international variations in the number of funds in different countries. Australia is at the upper end, with the superannuation industry comprising a large number of funds, employees and high costs. Australian employment in insurance and superannuation (only listed together in ABS statistics) reached a high of 103,000 in 2018 (ABS 2018). It is a well-remunerated industry and other costs, including large amounts of advertising, are high. All this indicative of a large and growing contribution to GDP but not an addition to investment in the sense of an increase in productive capacity (Keynes 1973: 62).

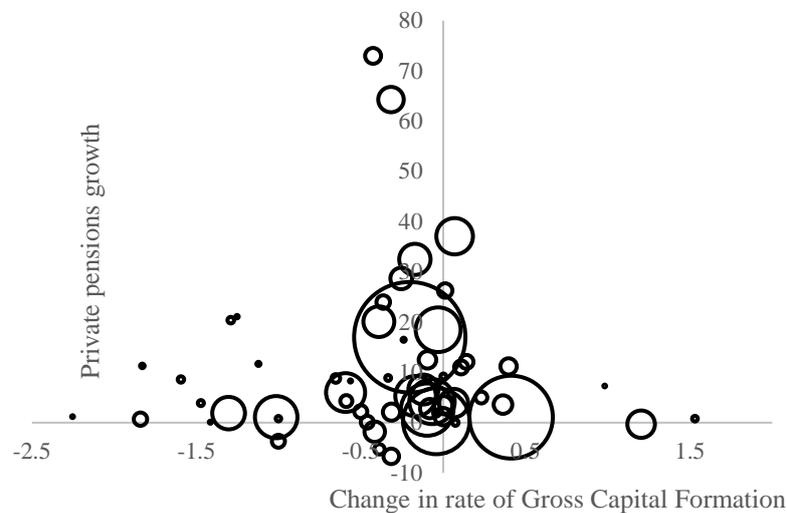
A fourth potential issue concerns the location of investment. Pension funds can be invested outside their country of origin. In 2014, more than 30% of total pension funds in most of OECD countries was invested in foreign assets (PwC 2015: 7). The global effect is zero-sum, although some countries may run substantial net deficits or surpluses. The responsibilities of fund managers to maximise (risk-weighted) returns may predispose them to sending the money abroad. Considerable proportions of funds from several smaller countries, as well as large Eurozone countries such as Italy and the Netherlands, went overseas. In countries from which a high proportion of assets go abroad, there can be little basis to a claim that they contribute to national investment (OECD 2017: 5). So, while low rates of domestic investment may provide regulators with strong incentives to privatise pensions, those same low rates of domestic investment may provide pension fund managers with strong incentives to look elsewhere. This leaves regulators facing difficult decisions, with varying levels of restrictions on overseas investments found in different countries (PwC 2015).

Conversely, strong 'home biases' are evident in the investments by pension funds in most large rich-country economies. Several countries had very low levels of foreign investment (OECD 2017: 21). In Australia, overseas assets rose to a high of 15.2 per cent of the total in 2002, fell to 11.0 per cent in 2011, then gradually increased to reach 14.7 per cent by the end of 2017 (ABS 2018). The OECD (2017) gives a slightly higher figure of 19.3 per cent for 2016. Other sources claim a substantially higher figure of 30 per cent (PwC 2015), still a relatively modest level by international standards, and showing a strong home bias that potentially allows the funds to fuel domestic investment. At the same time, however, such home biases may exacerbate the danger of a scenario whereby pension funds contribute to domestic asset bubbles.

Overall, there is little evidence that increased pension fund assets have been associated with increased domestic investment. As Figure 2 (on the next page) shows, the changes in gross capital formation over the decade to 2016 were typically negative. Investment declined in most countries, apparently largely irrespective of what happened to pension fund accumulation. Of course, there were many other reasons for declining rates of investment, all warranting further research. But, if anything, there seems to be an inverse relationship between private pensions growth and investment, according to this data. So if pension fund have not been leading to greater investment in the real economy, it becomes germane to

ask exactly what they are doing. The last section of this article returns to this question.

**Figure 2: Capital Formation to GDP and Pension Fund Growth, 2006-16, 57 countries**



*Note:* Circle size denotes country GDP.

*Source:* World Bank 2017, OECD 2016a.

Finally, in this section, we note three problems with the demographic argument in its application to pensions reform. First, while longer life expectancy throughout the developed world has resulted in retirees comprising a growing proportion of the population, the parallel concerns around the declining birth rates leading to fewer workers has not eventuated. Increased female labour force participation, to which declining fertility has often been attributed, has led to rising overall labour force participation in most rich countries between the 1970s and 2010s, as shown opposite in Table 2 (in which figures are calculated as an average from the maximum available number of years). This increased, or at least partially offsets, the impact of declining birth rates over the same period.

**Table 2: Labour Force Participation Amongst the Population Aged 15 and over, 1970s to 2010s, selected countries**

	1970s	2010s	change
<b>Japan</b>	63.9	59.5	-4.4
<b>Denmark</b>	64.0	63.1	-0.9
<b>Italy</b>	49.5	48.8	-0.7
<b>US</b>	61.5	63.4	1.9
<b>France</b>	54.1	56.3	2.2
<b>Finland</b>	56.7	59.3	2.6
<b>Australia</b>	60.3	65.0	4.7
<b>Canada</b>	61.2	66.3	5.1
<b>Austria</b>	55.3	60.7	5.4
<b>Ireland</b>	53.8	60.2	6.4
<b>Sweden</b>	63.5	71.4	7.9
<b>Belgium</b>	44.1	53.4	9.3
<b>Spain</b>	49.5	59.2	9.7
<b>South Korea</b>	51.8	61.8	10.0
<b>Greece</b>	42.1	52.4	10.3
<b>New Zealand</b>	57.7	68.3	10.6
<b>UK</b>	51.7	62.6	10.9
<b>Netherlands</b>	49.4	64.6	15.2
<b>Switzerland</b>	52.2	67.7	15.5
<b>Norway</b>	50.9	68.6	17.7
<b>Iceland</b>	59.9	81.4	21.5

*Source:* World Bank (2017).

In Australia, the decline in birth rates on the number of workers is also counteracted by immigration, which contributes to increasing the total volume of the labour force. With demographic change also meaning fewer under fifteens, labour force participation as a proportion of the total population in Australia was higher than it had ever been (at an average of 52.8 per cent from 2010 to 2017, up from 43.0 per cent in the 1970s) (World Bank 2019). As a result, there are more, rather than fewer, workers now than in the 1970s. None of this denies the reality of demographic change, of longer life expectancy and an increase in the dependency ratio of retirees to workers. But it seems hard to sustain an argument that this was sufficient to necessitate the radical pension reform agenda.

Australia's increased labour force participation was relatively modest by international standards but the overall figures also highlight that the national labour market experiences have scant association with the scale of pensions reform. Of the three countries with falling labour force participation, Denmark was indeed the world leader in terms of the size of its private pensions as a proportion of GDP. Neither Japan nor Italy had substantial private pensions systems. At the other end of the scale, Iceland has vastly increased labour force participation but one of the largest private pensions systems.

Second, rather than rising to meet increasing pension commitments, both personal and corporate tax rates fell steeply in most rich country economies (Glyn 2006). There are powerful arguments that this too was compelled by external forces of economic change (Frieden 1991). But there was at least an element of policy choice. This is attested not least by the generous treatment of superannuation funds, which may cost states more in lost revenues than anything they gain from reduced pensions payments. In Australia, annual superannuation tax concessions have been estimated to have cost the government \$36b in foregone annual revenue, while saving only \$7b annually on aged pensions (Smith 2013, ASFA 2015, Treasury 2017, see also Denniss 2007). Similarly, while corporate-funded schemes came under pressure as restructuring, 'downsizing' and outsourcing occurred, meaning that fewer current employees were available to pay for potentially growing numbers of retirees, and there was a conspicuous neglect of pension funds by large corporations. When asset prices rose it was possible for firms to maintain the value of funds, without putting aside more money (as done by General Electric for 13 years), while an inability to meet commitments in times of slacker labour markets was used to demand employee concessions (Blackburn 2012: 128). At both

state and corporate level there were vested interests in reform, and liberal arguments need to be weighed against opportunist demands for restructuring in the interests of the already wealthy.

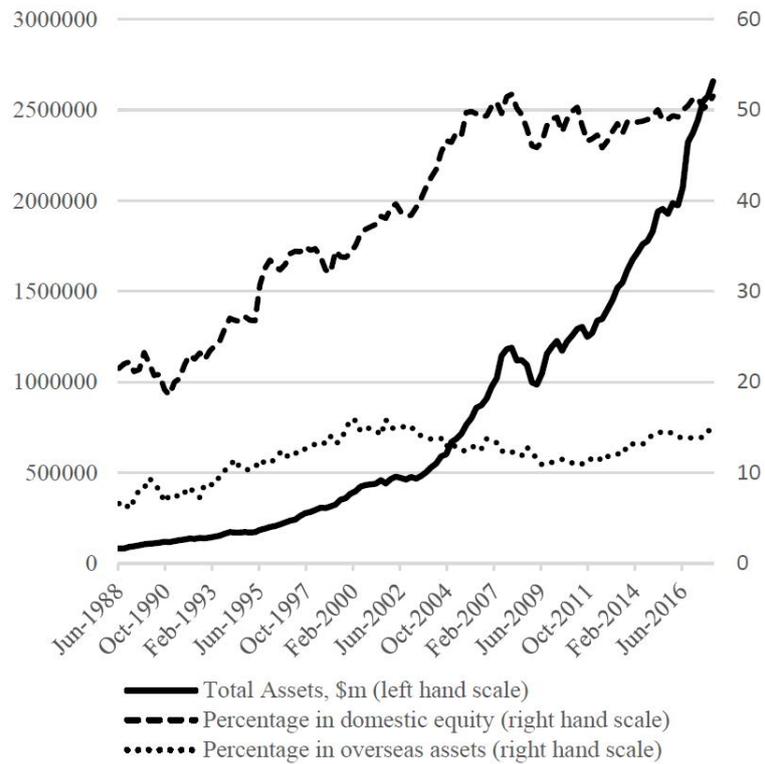
Third, there is, of course, no suggestion that pension reform changes the demographics themselves. As more subtle supporters acknowledge, privatisation rather shifts the problem from one of sustainability to one of ‘the possibility of inadequate benefit levels’ (Barr and Diamond 2009:2). Again, the effects are to shift the burden of paying for change away from states and corporations. These shifts in risk and responsibility may have serious economic repercussions, as discussed in the next section.

### **Australian superannuation and stock market growth**

As noted above, Australian superannuation stands out in international terms both in the size of its funds in relation to GDP and in the proportion oriented to domestic equity. Figure 3 (on the following page) shows the steep rise in Australian superannuation. It also shows two important elements of the funds: their more than 50% holdings of domestic equity and, since 2000, their fairly stable holdings of overseas assets at approximately 15%.

The health of the economy has been celebrated, not least in that Australia has avoided recession since 1992. However, measured on an inflation-adjusted per capita basis, economic growth rates between 1990 and 2017 averaged a rather modest 1.7 per cent, although this still exceeded the rich-country average of 1.4 per cent (World Bank 2018). The advocates of superannuation may be tempted to attribute this slightly above average economic growth to added investment prompted by superannuation. The hypothesis advanced in this final section is that, on the contrary, Australian superannuation instead fuelled a stock market boom and that this is unlikely to prove sustainable.

**Figure 3: The Rise of Australian Superannuation**

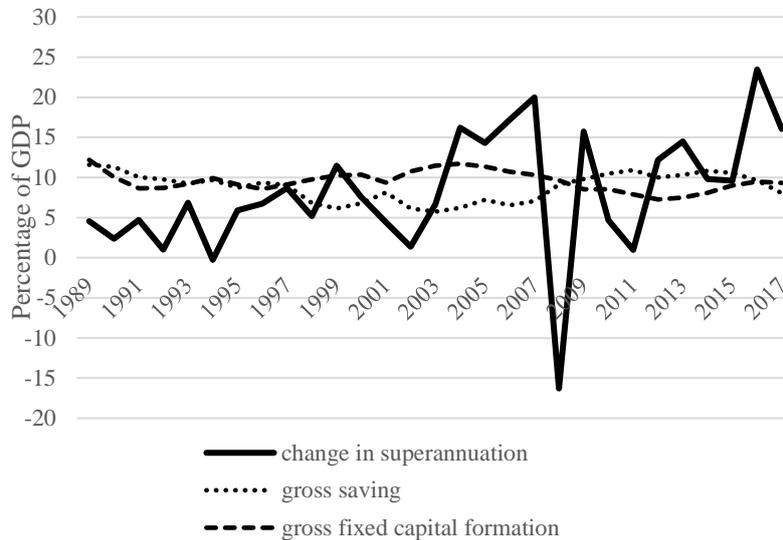


Source: ABS 2018

To evaluate the claim that superannuation has boosted savings and investment, Figure 4 shows annual changes in superannuation funds, gross savings and gross fixed capital formation as a percentage of GDP between 1989 and 2017. It indicates that the rise of superannuation has not coincided with commensurate rises in savings and investment in the ‘real’ economy. Although low and not statistically significant, there is a *negative* correlation between the annual growth in superannuation funds and the level of gross saving ( $r = -0.22$ ,  $t \text{ stat} = -1.19$ ) (calculated from ABS 2018). It remains the case, as Coates argued 15 years ago, that there is virtually

no correlation between changes in superannuation investment and levels of gross fixed capital formation ( $r = 0.04/ t \text{ stat} = 0.24$ ). Thus, the Australian experience does not support claims that the major growth in superannuation fuels an overall rise in savings and investment.

**Figure 4: Superannuation Changes, Savings and Investment in Australia, 1989-2017**

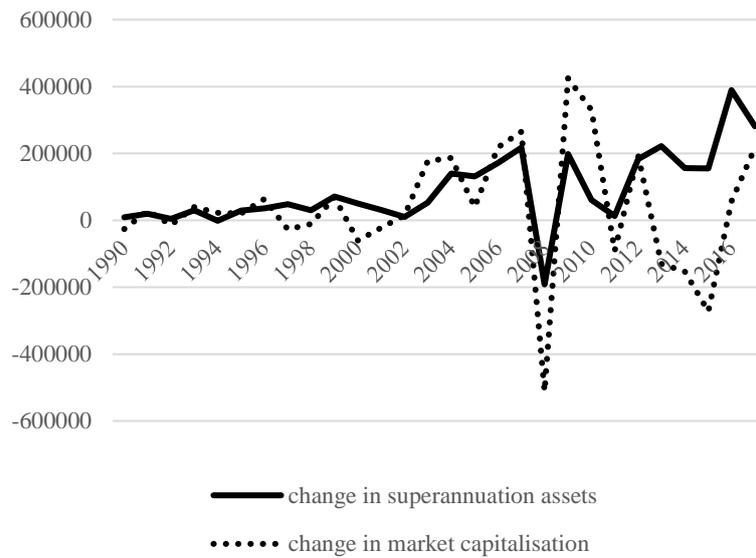


Source: Calculated from ABS 2018, World Bank 2018.

By contrast, superannuation funds do appear to have fuelled a rise in stock market prices, as savings are accumulated in financial markets without necessarily adding to capital formation. Figure 5 on the next page shows changes in superannuation assets and the market capitalization of domestically listed Australian companies. The two indices move particularly closely together from 1990 to 2012 ( $r = 0.86, t \text{ stat} = 7.72$ ), although they subsequently diverge. Of course, we may suspect the presence of mutual causation. Thus, in addition to the claim being made here that inflows of super-funds drive-up stock market prices, stock market

price rises that add to the value of superannuation assets can drive both superannuation contributions and change broader asset allocation behaviour. The evidence, however, at least seems compatible with the former hypothesis. Indeed, the continued inflows after 2012 appeared to have contributed to the revival of stock markets which would otherwise turned downwards, while the divergence of the two indices confirms the argument here that there cannot be any complacency about on-going, mutually-reinforcing growth.

**Figure 5: Changes in Australian Superannuation and Market Capitalisation, 1990-2016, \$m**



Source: Calculated from ABS 2018, RBA 2018, World Bank 2018.

That super-funds continued to buy stocks during this period, despite generally falling markets, confirms the asymmetry to which this article points. Indeed, it has been suggested that as share prices fall, super-funds

must respond by increasing their purchases to retain strategic allocation.<sup>1</sup> At the same time, it highlights that the inherent volatility in financial markets can trump any changes in supply and demand. The proportion of the (steeply rising) total of superannuation assets held in domestic equities went from 45.8 per cent in June 2012 to 51.5 per cent in December 2017 (ABS 2018). Funds' net inflows to share markets were unmatched by any corresponding imperative to sell or for firms to issue new equity. In 2017, for example, \$20 billion of superannuation funds entered the equities market, but only \$13 billion of new shares were released (Poljak 2017, Jacobs 2018). The cumulative effect of new demand from superannuation funds outstripping new supply, year-on-year, inflates share prices, which therefore do not reflect underlying company values or productive economic activity (Smith 2013). Australian share price-to-earnings ratios were unspectacular by international standards but, as post-Keynesian economists insist, financial assets have no 'objective' equilibrium position. It is impossible to demonstrate that any one value is 'correct' and another too high or too low. There is, however, a well-established propensity to inflate asset prices (Keynes 1973, Minsky 1982). Wray's (2008) analysis of how institutional investors fuelled the commodities bubble in the early 2000s has direct parallels with the argument here.

Finally, there is the question of how these concerns relate to demographic change. As previously noted, while the ratio of retirees to workers has increased, the framing of these demographic changes as a 'crisis' had more to do with the goals of shifting risk and responsibility and restructuring the economy in the interests of the already wealthy. Gradual (but finite) changes in demographics do not warrant claims of a crisis in government expenditure, as evidenced by the Australian government's increased spending on superannuation tax concessions.

However, demographic change potentially creates an alternative asymmetry. As Minns and Sexton (2006) ask:

what happens when pensioners want to claim their pensions? What are their savings going to be worth if they have expanded without any equivalent expansion in the real economy, nationally or internationally? [...] The ultimate conundrum is this. When the current generation of savers retires, their savings schemes must attract more savers to keep the system going. The claims on the underlying assets—the shares in

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<sup>1</sup> We are grateful to one of the journal's anonymous referees for making this point.

companies as well as property holdings and government securities—must be sold to other savers, such as younger workers, or these schemes will get into difficulty. These ‘pension pyramids’ underpin the edifice of private pensions.

Demographic shifts potentially create a situation where, at some point, proportionally larger numbers of retirees would be able to draw on superannuation funds, while proportionally fewer current workers contributed to them. Now sellers would exceed buyers. In this situation, the collapse of stock markets and the holdings of super-funds in these markets seems likely. While superannuation funds’ net cashflow is expected to grow over the coming decade, Deloitte (2015: 7) suggest a plateau around 2030, followed by decline in net cashflow from 2035. It is conceivable that astute management, mandating more compulsory deductions such as the proposed increase to 12%, together with longer years of waged employment, could maintain some sort of balance. However, this seems, at best, precarious and likely to only delay, rather than obviate, the problem.

## Conclusion

This article has argued that the rise of Australian superannuation funds has not fuelled real-economy investment, as claimed by its proponents. Instead, the purchases of equities on secondary markets by Australian superfunds inflates those markets, creating the potential for the collapse of values, including the value of the assets held by super-funds. For the time-being, increasing numbers of fundholders and rising levels of contributions continue to produce an asymmetrical inflow and the long-term trend remains upwards. This, however, is an intrinsically limited process. The demographic changes, on the basis of which pension reform is often posed as necessary, would at some point create an asymmetrical outflow, undermining the equity markets. There are many economic and ethical objections to pensions’ privatisation but not least amongst these should be concerns that they are stoking an unsustainable pyramid scheme.

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## References

- ABS (2018) Australian Bureau of Statistics, statistics available at [www.abs.gov.au/](http://www.abs.gov.au/)
- APRA (2019) *Quarterly superannuation performance statistics*, available at [www.apra.gov.au/publications/quarterly-superannuation-performance-statistics](http://www.apra.gov.au/publications/quarterly-superannuation-performance-statistics)
- ASFA (2015) *Mythbusting superannuation tax concessions*, Association of Superannuation Funds of Australia, Sydney, Australia.
- ASFA (2019) *Superannuation Statistics, March 2019*, Association of Superannuation Funds of Australia, available at <https://www.superannuation.asn.au/resources/superannuation-statistics>
- Barr, N. and Diamond, P. (2009) *Reforming pensions*, CESinfo working paper, No. 2523, available at [www.econstor.eu](http://www.econstor.eu)
- Blackburn, R. (2012) *Age Shock :How Finance is Failing Us*, London: Verso.
- Clark G.L. (2017) The financial legacy of pension fund capitalism, in R. Martin and J. Pollard, eds, *Handbook of Economic Geographies*, Edward Elgar, online
- Coates, N. and Vidler, S. (2004) Superannuation Policy: Commentary on an Interview with Paul Keating, former Prime Minister, *Journal of Australian Political Economy*, 53 June: 9-16.
- Deloitte (2015) *Dynamics of the Australian Superannuation System: the next 20 years: 2015-2035*, Deloitte Actuaries and Consultants, November 2015.
- Denniss, R. (2007) Crisis of cash or crisis of confidence: the costs of ageing in Australia, *Journal of Australian Political Economy*, 59 June: 30-47
- Fisher, I. (1907) *The Rate of Interest*, New York: Macmillan.
- Feldstein, M. (1974) Social security, induced retirement, and aggregate capital accumulation, *Journal of Political Economy*, 82(5): 905-926.
- Frieden, J.A. (1991) Invested Interests: the Politics of National Economic Policies in a World of Global Finance, *International Organization*, 45(4), 425-51
- Glyn, A. (2006). *Capitalism Unleashed: Finance, Globalization, and Welfare*, Oxford: OUP, 2006.
- Guardian, The (2018) *Pension age hike will force thousands of elderly Australians on to Newstart*, 4 May 2018.
- Jacobs, S. (2018) Super funds now own almost half of the Australian stock market, *Business Insider*, [accessed on 22 Sept. 2018 at [www.businessinsider.com.au/australian-super-funds-now-own-almost-half-of-the-australian-stock-market-2018-3](http://www.businessinsider.com.au/australian-super-funds-now-own-almost-half-of-the-australian-stock-market-2018-3)]
- Jousten, A. (2007) *Public Pension Reform: A Primer*, IMF Working Paper, WP/07/28.
- Keynes, J.M. (1973 [1936]). *The General Theory of Employment, Interest and Money*, London: MacMillan.
- Keynes, J.M. (1937) The General Theory of Employment, [*The Quarterly Journal of Economics*] in *Collected Writings of John Maynard Keynes*, XIV, ed. by E. Johnson, D. Moggridge, DOI: <http://dx.doi.org/10.1017/UPO9781139524261>
- Kindleberger, C.P. (1996) *Manias, Panics, and Crashes*, New York: John Wiley.

- Minns, R. and Sexton, S. (2006) Too Many Grannies? Private Pensions, Corporate Welfare and Growing Insecurity, *Corner House Briefing*, 35, 1 May 2006, available at <http://www.thecornerhouse.org.uk/resource/too-many-grannies> on 7 May 2019
- Minsky, H.P. (1986) *Stabilizing an Unstable Economy*, New York: McGraw Hill.
- Mishkin, F.S. (2011) How Should Central Banks Respond to Asset Price Bubbles? The 'Lean' versus 'Clean' Debate after the GFC, *RBA Bulletin*, June Quarter: 59-70
- O'Brien, M. and Burgess, J. (2004) Workforce Developments Affecting the Adequacy of Superannuation, *Journal of Australian Political Economy*, 53 June: 179-190.
- OECD (2016a) *Pension Markets in Focus 2016*, OECD, available at [www.oecd.org/daf/pensions/pensionmarkets](http://www.oecd.org/daf/pensions/pensionmarkets)
- OECD (2016b) *Annual Survey of Large Pension Funds and Public Pension Reserve Funds: Report on Pension Funds' Long-Term Investments, 2015*, OECD, <http://www.oecd.org/daf/fin/private-pensions/2015-Large-Pension-Funds-Survey.pdf>
- OECD (2017) *Pension Markets in Focus 2017*, OECD, available at [www.oecd.org/daf/pensions/pensionmarkets](http://www.oecd.org/daf/pensions/pensionmarkets)
- OECD (2018) OECD Data, [accessed on 04 May 2018, available at [data.oecd.org](http://data.oecd.org)]
- Phillips, K. (2013) *Australia's strange history of superannuation*, ABC 23 April 2013, available at <http://www.abc.net.au/radionational/programs/rearvision/superannuation>, on 22 April 2017.
- Olsberg, D. (2004). Women and superannuation: still missing out, *Journal of Australian Political Economy*, 53 June: 161-178.
- Orenstein, M.A. (2008). *Privatizing Pensions: the Transnational Campaign for Social Security Reform*. Princeton University Press.
- Orenstein, M.A. (2013) Pension Privatization: Evolution of a Paradigm, *Governance: An International Journal of Policy, Administration, and Institutions*, 26(2): 259-281.
- Orszag, P.R. and Stiglitz, J.E. (1999) *Rethinking Pension Reform: Ten Myths About Social Security Systems*, Presented at the conference on "New Ideas About Old Age Security" The World Bank Washington, D.C. September 14-15, 1999.
- Poljak, V. (2017) *Credit Suisse's Hasan Tevfik equity insurance drought undermines ASX*, Australian Financial Review [accessed on 22 Sept. 2018 at [www.afr.com/markets/credit-suisse-hasnan-tevfik-says-equity-insurance-drought-undermines-asx-20170802-gxnv4k](http://www.afr.com/markets/credit-suisse-hasnan-tevfik-says-equity-insurance-drought-undermines-asx-20170802-gxnv4k)]
- PwC (2015) *Beyond their borders: Evolution of foreign investment by pension funds*, PricewaterhouseCoopers, Luxembourg.
- RBA (2018) Reserve Bank of Australia [accessed on 04 Dec. 2018, available at <https://www.rba.gov.au/statistics/historical-data.html>].
- Smith, W. (2013) Australia's first compulsory Ponzi scheme, *Overland*, [accessed on 22 Sept. 2018 at [overland.org.au/2013/07/australias-first-ponzi-scheme/](http://overland.org.au/2013/07/australias-first-ponzi-scheme/)].
- Spies-Butcher, B., & Stebbing, A. (2011). Population ageing and tax reform in a dual welfare state, *The Economic and Labour Relations Review*, 22(3): 45-64. <https://doi.org/10.1177/103530461102200304>
- Treasury (2014) *Financial System Inquiry: Final Report*, The Australian Government the Treasury, Langton Crescent Parkes, ACT, Australia.

Treasury (2017) *Tax Expenditures Statement 2017*, The Australian Government the Treasury, Langton Crescent Parkes, ACT, Australia.

World Bank (2017, 2018, 2019) DataBank World Development Indicators, available at <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators>

Wray L.R. (2008) *The Commodities Market Bubble: Money Manager Capitalism and the Financialization of Commodities*, The Levy Economics Institute of Bard College, Public Policy Brief, No 96.

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