

Dividend imputation – its rationale and its impact on superannuation outcomes

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The Association of Superannuation Funds
of Australia (ASFA)

The Association of Superannuation Funds of Australia Limited (ASFA)

PO Box 1485, Sydney NSW 2001

T +61 2 9264 9300 or 1800 812 798 (outside Sydney)

F 1300 926 484

ABN 29 002 786 290

ACN 002 786 290

About Vidler Policy and Research

Vidler Policy and Research (VPR) was founded by Dr Sacha Vidler in 2014. VPR provides independent policy analysis and design, particularly in superannuation and market based environmental instruments.

www.vidler.com.au

About the project

ASFA commissioned vpr to consider the interaction of the dividend imputation system with superannuation tax and superannuation investment.

About ASFA

ASFA is a non-profit, non-politically aligned national organisation that is the peak policy and research body for the superannuation sector. Our mandate is to develop and advocate for policy in the best long-term interest of fund members. Our members – which include corporate, public sector, industry and retail superannuation funds, plus self-managed superannuation funds and small APRA funds through its service provider members – represent more than 90 per cent of the 12 million Australians with superannuation.

www.superannuation.asn.au

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Why was dividend imputation introduced?

Dividend imputation manages the problem of double taxation of company profits relative to the taxation of unincorporated enterprises. It provides shareholders with a franking credit which can be offset against personal income tax liabilities. In the absence of dividend imputation company profits distributed to Australian shareholders would be taxed twice - once at the company level and then again at the personal level.

Dividend imputation has also removed previously existing distortions which provided incentives for debt financing. Interest is deducted from corporate income and therefore is only taxed once, when received at the personal level. During the 1980s many Australian corporations became highly leveraged due in part to a tax bias in favour of debt financing.

How Australia compares to other countries

While only a few countries use dividend imputation, most countries have some structure to manage the issue of double taxation. Other options commonly used include rebates or concessional taxation of dividend income. As well, a number of countries do not treat dividend income as taxable personal income.

The impact of dividend imputation on after-tax returns

Dividend imputation with refundable credits is particularly valuable to superannuation fund members because the tax rates for investment income of superannuation funds (15 per cent for accumulation members and 0 per cent for investment earnings supporting pensions and income streams) are lower than the corporate tax rate (30 per cent).

A franked dividend of \$100 generates an after-tax return of \$122 for an accumulation fund member and \$143 for a pension fund member.

The impact of dividend imputation on overall superannuation fund investment returns

Dividend imputation improves returns on domestic equity by around 1.3 percentage points per year for accumulation members and by 1.5 percentage points for pension members. Assuming an investment allocation of 30 per cent to domestic equities, dividend imputation adds approximately 40 basis points (bps) per year to accumulation fund returns overall and 45 bps per year to pension fund returns.

Over a 35 year accumulation period, the higher investment return results in an improvement in the final accumulation account balance of around 8 per cent. The higher return in retirement phase is consistent with an additional improvement in retirement income of around 5 per cent, giving an estimate of overall increase in final retirement income of 13 per cent.

After a full working life at 9.5 per cent employer contributions, a full-time worker on average wages could expect to accumulate around \$540,000 in today's money, providing an income of around \$40,000, including a part public pension and around \$31,000 from a superannuation pension. A reduction in private income of 13 per cent would cost this member around \$4,000 per annum in superannuation pension income, indexed to wages.

Notably, under current rules, around half of this cost would be borne by the taxpayer as the retiree's part-pension entitlement would increase.

The impact of dividend imputation on share prices

Not all of the benefit in future after-tax yield is priced into current share values as franking credits are not available to foreign investors, who hold 40-45 per cent of the value of shares in the Australian market and are therefore influential in setting marginal prices. As a result, there is ongoing benefit to new Australian investors from dividend imputation.

Dividend imputation may contribute to home bias in equity investment by both APRA regulated funds and self-managed superannuation funds (SMSFs). Increased home bias may increase the availability of equity finance capital for local firms. This effect will be more pronounced for smaller firms less attractive to foreign investors.

What would be the effects of making franking credits non-refundable?

Making franking credits non-refundable would largely remove the benefit of dividend imputation to taxpayers on 0 and 15 per cent tax rates including low to average income earners and superannuation fund members. The impact would be particularly significant for pension fund members who have no earnings tax liability against which to use an offset. The after-tax return from dividends, which have been the main source of return from domestic equities over the last decade, would be reduced by 18 per cent for accumulation fund members and 30 per cent for pension fund members.

The relative attractiveness of debt and equity investment would shift, and some equity price decline would be expected, as the partial inclusion of franking credits in the value of shares is unwound. The price of equity financing for Australian corporations would therefore increase.

Section 1: Introduction

1.1 Dividend imputation

An incorporated company is owned by shareholders, who provide the company with equity capital. Companies generally pay dividends to shareholders from after-tax profits. These dividends represent an important part of the return on equity investment. When shareholders receive dividends, these are treated as taxable income. If the return to equity is taxed as both company and personal income, it is taxed at a much higher level than other income. The profits of an incorporated enterprise would be taxed at a higher rate than for an unincorporated enterprise. Most countries consequently have arrangements to avoid or reduce the 'double taxation' of company income. In Australia, the system used is called dividend imputation.

Dividend imputation works by giving Australian firms the capacity to issue 'franked dividends' to shareholders. These are dividends paid from after-tax profit, for which shareholders receive both the after-tax dividend and a franking credit representing the company tax already paid on that income. The franking credit can be offset against the shareholder's tax liability or, if that liability is exhausted, redeemed in cash from the Australian Taxation Office. Imputation credits work on the principle that the return to equity - company income received as dividends - should be taxed, along with other income, at a taxpayer's marginal income tax rate.

Only Australian residents are eligible for franking credits, and only Australian companies can provide franking credits on profits from Australian investments.

1.2 Double taxation

An important principle in taxation design is efficiency - achieved by reducing distortions to economic decision-making. Double taxation of company income represents a potential distortion of both investor and corporate financing behaviour.

Equity investment is riskier than debt investment because interest is paid by companies before dividends and shareholders rank behind debt providers in the event of a wind-up. Investors need to be fairly compensated for this risk. The tax system should be neutral in relation to the two forms of investment. If it is not, the system favours one form of financing over another, and one form of investment over another.

Interest income is not taxed twice because interest is deducted from company income along with other expenses and accordingly is not subject to company tax. A system that does not avoid double taxation of company income effectively creates a bias in favour of debt financing.

That was precisely the system that Australia had before dividend imputation was introduced. Corporate borrowing increased rapidly after financial deregulation in the mid-1980s. The distortion in the tax system was amplified by the high inflation environment, as company and personal tax was paid on the nominal return to equity. This led to levels of leverage that the Reserve Bank found had 'departed from sound management principles' (Ryan, 1990). In the 1991-1992 recession numerous corporate collapses of highly-leveraged firms support that assessment. Analyses of dividend imputation, including comparative studies with other systems, have found it to be an effective approach to address distortions that favour debt financing (Ryan, 1990; Sheutrim et al, 1993; Jugurnath et al, 2008).

The tax system should be neutral in relation to different forms of investment. If it is not, the system favours one form of financing over another, and one form of investment over another.

Today, levels of corporate leverage are substantially lower. Indeed, the RBA's *Financial Stability Review* for March 2015 indicates average debt to equity ratios of around 50 per cent, implying balance sheets consisting of two-thirds equity on average (RBA, 2015).

1.3 Alternate approaches

Relatively few countries - Australia, New Zealand and Malta - currently have a dividend imputation system. However, most countries have arrangements to prevent double taxation. Canada grosses up dividend income (and capital gains) and then offers federal and state tax credits to prevent double taxation. The US had discounted tax rates for dividend income and capital gains until 2013¹. In Brazil, Singapore, Hong Kong and India, dividends are not taxed as personal income. In the UK, as in a number of other European countries, dividends are taxed as personal income, but at reduced rates².

¹ As dividends in the US are now taxed both at company and individual levels, but capital gains are taxed at a concessional rate, there is now an incentive in the US to return value to investors through share buy-backs rather than dividends.

² In the UK, the rates are 0 per cent for those on the lowest marginal rate (20 per cent), and 25 per cent for those on the next marginal rate (40 per cent).

Section 2: Dividend imputation and superannuation

2.1 Interaction with superannuation taxation

Dividend imputation is designed to ensure that dividend income should be taxed like other income at the taxpayer's marginal rate, and that the tax system should not favour one form of financing over another.

The Australian company tax rate is 30 per cent and the highest marginal rate in Australia is 45 per cent³. For a taxpayer on the highest marginal tax rate, the franking credit of 30 per cent is offset against the 45 per cent marginal rate.

Superannuation funds pay 15 per cent tax on earnings for assets held in accumulation products and 0 per cent for investment earnings supporting pensions and income streams. As the Australian corporate tax rate is higher than these rates, franking credits often exceed the tax liability of superannuation funds on dividend income. As franking credits are refundable, excess credits can be used to offset tax liabilities relating to income on other assets, or be added to returns as cash.

For example, if a superannuation fund receives a \$100 fully-franked dividend, this is grossed up to \$143 ($143 \times 30\% = 43$). For accumulation members, this amount is taxed at 15 per cent, resulting in an after-tax return of \$122. For pension members the return is \$143. The remaining franking credit of \$22 (\$43 for pension members) will be offset against any capital gain tax or tax on investment returns from other asset classes such as interest on cash or bonds, and any excess will be added to returns.

The principle, however, is the same: dividend imputation ensures dividend income is taxed at the taxpayer's marginal rate.

2.2 Fund returns

For accumulation members, franked dividend income attracts franking credits and is then taxed at 15 per cent and realised capital gains are taxed at 10 per cent. For pension members, neither component is taxed.

Under reasonable assumptions, removal of dividend imputation would cost a worker on average wages around \$4,000 p.a. in super income in today's dollars. Around half of this cost would be borne by the taxpayer through increased public pension entitlement.

Dividend income makes an important contribution to total return for domestic listed equity. The 10 year total return on the S&P ASX 200 Index to January 31 2015, was 7.7 per cent, consisting of 3.1 per cent capital gain and 4.6 per cent dividend income⁴.

Using these numbers as the basis for calculation, and assuming 75 per cent of dividends are franked, the 4.6 per cent dividend income is grossed up 1.5 per cent to 6.1 per cent. When taxed at 15 per cent this leaves an after-tax profit (on dividends alone) of 5.2 per cent for accumulation members. This will result in a total after-tax return on domestic equity of 8.0 per cent for accumulation members and 9.2 per cent for pension members. This compares to after-tax returns (without dividend imputation) of 6.7 per cent for accumulation members and 7.7 per cent for pension members. Dividend imputation adds an estimated 1.3 percentage points to accumulation member domestic equity returns and 1.5 percentage points for pension members.

³ Excluding Medicare and Temporary Budget Repair levies.

⁴ SPRD (2015), [Performance and Distribution Summary](#).

⁵ Note: SMSFs have an average allocation to domestic equities of close to 50 per cent, and anecdotally, investments are skewed towards shares that provide franked credits. This makes the estimates of benefit in this calculation conservative.

Assuming an allocation of 30 per cent to domestic equities, dividend imputation adds approximately 0.4 percentage points or 40 basis points (bps) per year to accumulation fund returns overall and 0.45 percentage points or 45 bps per year to pension fund returns⁵. Over a 35 year accumulation period, the additional investment return supported by dividend imputation results in the lump sum amount at retirement being around 8 per cent higher than it would be without dividend imputation. There also is a higher investment return in the retirement phase as a result of dividend imputation, leading to aggregate investment returns over the period of retirement being around 5 per cent higher. The impact of dividend imputation over both the accumulation and retirement stages leads to an overall benefit in terms of an increased retirement income stream of around 13 per cent.

A full-time worker on average wages reliant on compulsory Superannuation Guarantee (SG) contributions introduced in 1992 would currently have an accumulation of around \$155,000 (Appendix A). If that member were at retirement age, that sum could be expected to generate a wage-indexed income of around \$30,500, including nearly a full public pension and around \$8,800 from a superannuation account-based pension⁶. A reduction of 13 per cent in super pension income, would cost this member around \$1,150 per annum, indexed to wages.

After a full working life at 9.5 per cent employer contributions, a fulltime worker on average wages could expect to accumulate around \$540,000 in today's money, providing an income of around \$40,000, including a part public pension and around \$31,000 from a superannuation pension. A reduction in income of 13 per cent, would cost this member around \$4,000 per annum in superannuation pension income, indexed to wages.

Notably, under current rules, around half of this cost would be borne by the taxpayer as the retiree's part-pension entitlement would increase.

2.3 Share prices

Any factor that produces a consistent improvement in after-tax yield should be reflected in share prices. This applies equally to franking credits under the dividend imputation system. However, anecdotal evidence from market participants suggest the proportion of franking credit value reflected in share price varies between 30 and 80 per cent.

Academic empirical studies show similar results: Hathaway and Officer (2004) estimate that 17 to 70 cents in the dollar of the value of franking credits is reflected in the share price and Cannavan and Finn (2004) find a value of 50 cents per dollar⁷.

The reason the value of franking credits are not fully reflected in price is that they are not available to foreign buyers, who are a significant presence in the market, holding 40-45 per cent of local assets (RBA, 2010).

Arguably, the ongoing value of franking credits to local investors including superannuation funds is in part attributable to foreign investors being unable to access them, which implies the benefit is not fully priced into shares, and domestic investors get this benefit at a discount.

⁶ \$155,000 x 0.0566 = ~ \$8,800. 0.0566 is a factor suggested by ASIC in Class Order 11/1227.

⁷ Empirical studies have estimated the pricing of franking credits using the dividend drop-off methodology. The dividend drop-off methodology tests to see whether the amount of franking credits, not just the amount of dividends, reflects in the equity price drop after the ex-dividend date.

However, at least one team of researchers (Feuerherdt et al, 2010) asserts there are methodological problems with these studies. To address these they apply the dividend drop-off method to price franking credits for hybrid securities which are less volatile and mostly traded by domestic residents. They find that franking credits have no effect on price, suggesting that the marginal investor who sets the price of these securities is a non-resident. See also IPART (2011) for a review of other empirical studies.

2.4 Asset allocation

Superannuation investors recoup a significant proportion of the company tax paid by local companies in respect of their shareholdings through dividend imputation. Superannuation investors cannot recover tax paid by foreign companies in respect of their shareholdings. The same dividend from a local and foreign company produce different returns to the superannuation fund.

The example in section 2.1, above, considered the tax treatment of a \$100 dividend from an Australian company in a superannuation fund: the after-tax return was \$122 for the accumulation investor and \$143 for the pension recipient investor.

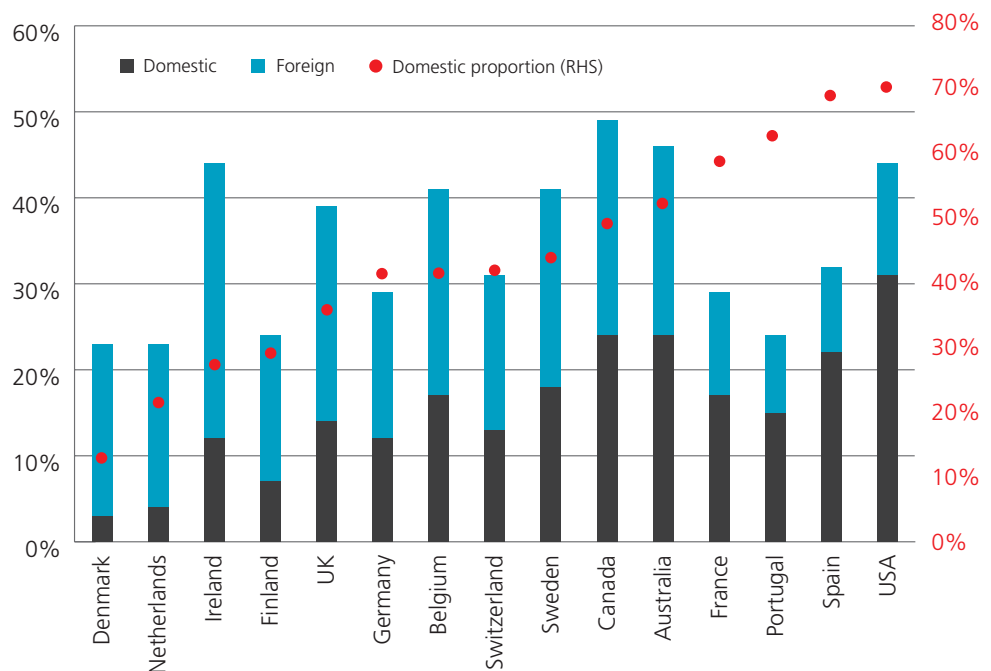
Australian superannuation fund investment on average has a relatively high allocation to domestic equities. APRA-regulated funds have an allocation to domestic equities of 24 per cent and foreign equities of 22 per cent (APRA, 2015). This is higher than the domestic equity allocation of a number of comparable countries, but by no means all (Chart 1). Whether such an allocation demonstrates bias is another question.

Much academic work investigating the decades-old 'home bias puzzle'⁸ assumes the domestic equities allocation should match the contribution of the nation to global economic activity, which in Australia's case is around 3 per cent.

The academic literature recognises theoretical mechanisms through which imputation can cause home country bias (Sorenson and Johnson, 2009). Bond et al (2007) give evidence to support the argument that removing imputation credits, at least in the UK, gave rise to a drop in domestic holdings of domestic equities.

However, it is still difficult to quantify the contribution of dividend imputation to home bias in investment, as it does have other mooted causes, including higher transaction and information costs for foreign investment, cultural and historical biases and regulations in some countries (not Australia) which impose minimum levels of local investment.

Chart 1 Pension fund allocation to domestic and foreign equity



Source: Towers Watson (US, Canada), Mercer (European countries), APRA (Australia).

⁸ See, for example, French and Poterba (1991).

SMSF funds have an allocation to domestic equities of around 50 per cent on average, compared to overseas assets (in all asset classes) of less than 1 per cent on average, although there are wide variations between individuals SMSFs (ATO, 2015). This heavy emphasis also has multiple causes, including difficulties accessing international capital markets (at least until relatively recently) and SMSF trustees having a stronger understanding of local markets.

It is also likely, given that franking credits do feature in SMSF accounting data released by the ATO, that dividend imputation is a factor that has favoured investment in local equities, especially as a high proportion of SMSF assets are held by members in or approaching retirement phase.

It is worth noting that, whatever the future may bring, the home bias in Australian superannuation investment has been very successful, with no developed economy growing more strongly or more consistently since the inception of compulsory superannuation in 1992. And the 'liabilities' of pension and superannuation funds are 100 per cent domestic.

Section 3: Other effects of dividend imputation

3.1 Availability of equity finance

If Australia had only limited access to foreign capital, an imputation system would directly result in higher overall investment as it becomes easier for all firms to obtain capital. However as Australia's economy becomes more integrated to world markets, the rate of return on capital Australian firms face is fixed by the global market. Academic researchers have consequently argued that the level of aggregate investment undertaken by firms with ready access to foreign capital would not depend on the availability of domestic capital (Sorenson and Johnson, 2009).

However, imputation credits still make it easier for small to medium domestic companies to obtain finance through equity, as these firms may not have ready access to global capital markets (Henry Tax Review, 2010, ch. B).

3.2 Integrity benefits

Dividend imputation may result in fewer incentives for corporate tax avoidance. For Australian companies with largely resident shareholders, company income tax acts as a prepayment of the personal income tax liabilities of shareholders on future dividends. The benefit to companies and their shareholders of avoiding or deferring company income tax is therefore reduced. This can increase company income tax revenues and reduce the need for anti avoidance rules in general.

The Henry Review observed anecdotal evidence that some Australian companies bring forward tax obligations and eschew avoidance activities to generate franking credits; especially for companies with a history of paying fully franked dividends. All things equal, imputation provides companies with foreign operations and a significant proportion of resident shareholders with an incentive to shift foreign profits into Australia. It allows them to pay dividends from creditable Australian company income tax rather than non-creditable foreign tax (Henry Review, 2010, ch. B). While there is only anecdotal evidence to suggest that dividend imputation reduces corporate tax avoidance, there is some evidence to suggest that imputation results in greater corporate tax receipts (Shackelford and Markle, 2009).

Furthermore, because only Australian companies' shareholders can receive imputation credits, companies with a large proportion of Australian shareholders may be discouraged from shifting offshore.

Dividend imputation also reduces the incentives for smaller and medium sized firms to operate as unincorporated entities to avoid double-taxation of dividend payments (Dixon, The Australian, 2014).

Section 4: Potential policy changes

If dividend imputation was abandoned in Australia this would likely increase revenue but also raise the issues discussed above associated with the double taxation of company income that were evident in Australia previously.

Another possible policy change is restricting the value of franking credits to the taxpayer's tax liability; that is, allowing credits to be offset against the tax liability, but not to be refunded as cash if the credits exceed the taxpayer's liability. This refunding aspect of the current policy delivers particular value to superannuation fund members because their tax rates are lower than the corporate tax rate.

If franking credits could only be used to offset an existing tax liability, the benefit to accumulation members would be limited to the 15 per cent earnings tax. There would be no benefit for pension fund members.

Table 1 outlines a hypothetical domestic equity investment. It expands on the example discussed in section 2.1. Panel A presents the current effect of dividend imputation on four different taxpayers (with 0, 15, 30 and 45 per cent tax rates). The after-tax return falls as the investors' tax rate rises.

Table 1: After-tax return – by tax rate and treatment

Investment details	Capital value 1,000	Profit before tax 143	Company tax 43	Profit after tax 100	Franked dividend 100
A. Current treatment	Investor 1 (Pension member)	Investor 2 (Accum. member)	Investor 3 (Income \$80-180k)	Investor 4 (Income >\$180k)	
Tax rate	0%	15%	30%	45%	
Franked dividend	100	100	100	100	
Imputation credit	43	43	43	43	
Taxable income	143	143	143	143	
Gross tax payable	0	21	43	64	
Franking credit rebate	43	43	43	43	
Tax payable/(refundable)	-43	-21	0	21	
After-tax income	143	121	100	79	
After-tax equivalent yield	14.3%	12.1%	10.0%	7.9%	
Tax paid on company income	0	21	43	64	
Tax rate on company income	0%	15%	30%	45%	
B. If credit non-refundable					
Franking credit rebate	0	21	43	43	
Tax payable/(refundable)	0	0	0	21	
After-tax income	100	100	100	79	
After-tax equivalent yield	10%	10%	10%	7.9%	
Tax paid on company income	43	43	43	64	
Tax rate on company income	30%	30%	30%	45%	
Impact on after-tax return ⁹	-30%	-18%	0%	0%	
C. If no dividend imputation					
Franking credit rebate	0	0	0	0	
Tax payable/(refundable)	0	15	30	45	
After-tax income	100	85	70	55	
After-tax equivalent yield	10%	8.5%	7%	5.5%	
Tax paid on company income	43	58	73	88	
Tax rate on company income	30%	41%	51%	61.5%	
Impact on after-tax return ⁹	-30%	-30%	-30%	-30%	

Source: vpr modelling.

⁹ This result is independent of the underlying rate of return. 10 per cent return becomes 7 per cent return. 7 per cent return becomes 4.9 per cent return.

Panel B presents the effect on investors if franking credits were non-refundable. For the investors on tax rates of 30 and 45 per cent, there is no impact. Tax rates are the same and after-tax returns are the same. However, investors with tax rates lower than 30 per cent find their tax rates raised to 30 per cent. After-tax returns fall by 30 per cent for the pension member (from 14.3 per cent to 10 per cent), and by 18 per cent for the accumulation member (from 12.1 per cent to 10 per cent). These results are independent of the underlying rate of return. For the superannuation fund members, this would result in domestic equity investments being taxed at a higher rate than debt investments.

Panel C shows the effect on investors if dividend imputation is withdrawn completely. All after-tax rates of return are reduced by 30 per cent relative to current tax treatment, consistent with application of corporate tax on top of existing investor tax rates. Effective tax rates range from 30 per cent up to 61.5 per cent.

The primary impact of making franking credits non-refundable would be to increase the tax on dividend income for taxpayers on 0 or 15 per cent tax rates, including superannuation fund members and low to middle income earners. All Australians receiving dividend income would effectively pay at least 30 per cent tax on that income, regardless of their rate of tax on other income. Pension fund members would see after-tax returns on dividend income fall by 30 per cent. Accumulation fund members would see an 18 per cent fall.

Reduced after-tax profit would be reflected in reduced prices, as the partial equity price effect discussed above is unwound. This is equivalent to a rising cost of equity financing for domestic corporations. From the investor's perspective, the relative attractiveness of debt and equity investment would shift also, potentially reintroducing distortions to Australian capital markets that would encourage increased levels of corporate leverage.

⁹ This result is independent of the underlying rate of return. 10 per cent return becomes 7 per cent return. 7 per cent return becomes 4.9 per cent return.

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Appendix A

Table 2 shows the estimated accumulation to June 2014 for a full-time worker on average wages (both genders), receiving average returns with SG employer contributions only, beginning at 3 per cent in 1992.

Table 2: Accumulation from SG contributions

	SG rate	Rate of return	Wages (annual)	Begin	Contributions	Returns	End
	A	B	C	D	E	F	G
				$D_t = G_{t-1}$	$= A * C$	$= (D + E/2) * B$	$= D + E + F$
1992	3%	10.6%	\$30,614	0	918	49	967
1993	3%	11.5%	\$32,053	967	962	167	2,095
1994	4%	8.8%	\$32,630	2,095	1,305	242	3,642
1995	5%	7.9%	\$33,706	3,642	1,685	354	5,682
1996	6%	10.5%	\$35,038	5,682	2,102	707	8,491
1997	6%	13.3%	\$36,208	8,491	2,172	1,277	11,940
1998	7%	7.0%	\$37,736	11,940	2,642	934	15,515
1999	7%	6.9%	\$38,922	15,515	2,725	1,165	19,405
2000	8%	10.2%	\$40,513	19,405	3,241	2,145	24,790
2001	8%	3.0%	\$42,578	24,790	3,406	795	28,991
2002	9%	-4.9%	\$44,725	28,991	4,025	-1,519	31,497
2003	9%	-2.1%	\$47,466	31,497	4,272	-706	35,063
2004	9%	12.2%	\$48,828	35,063	4,395	4,546	44,003
2005	9%	12.2%	\$51,678	44,003	4,651	5,652	54,306
2006	9%	13.3%	\$53,342	54,306	4,801	7,542	66,649
2007	9%	14.5%	\$55,994	66,649	5,039	10,029	81,718
2008	9%	-8.1%	\$58,219	81,718	5,240	-6,831	80,126
2009	9%	-11.5%	\$61,766	80,126	5,559	-9,534	76,151
2010	9%	8.9%	\$65,005	76,151	5,850	7,038	89,039
2011	9%	7.8%	\$67,844	89,039	6,106	7,183	102,328
2012	9%	0.6%	\$70,158	102,328	6,314	633	109,276
2013	9.25%	13.7%	\$73,887	109,276	6,835	15,439	131,549
2014	9.5%	11.6%	\$75,613	131,549	7,183	15,724	154,456

Source: Wages – ABS Cat. 6302.003 (weekly wages x 52); Returns – APRA (1997-2014); ASFA (1992-96).

The Association of Superannuation Funds of Australia Limited
PO Box 1485, Sydney NSW 2001
T +61 2 9264 9300 or 1800 812 798 (outside Sydney)
F 1300 926 484
W www.superannuation.asn.au
ABN 29 002 786 290 ACN 002 786 290

