



Working Paper

Superannuation and insurance: Related parties and member cost

Kevin Liu and Bruce R Arnold – November 2012



Disclaimer and copyright

While APRA endeavours to ensure the quality of this publication, it does not accept any responsibility for the accuracy, completeness or currency of the material included in this publication and will not be liable for any loss or damage arising out of any use of, or reliance on, this publication.

© Australian Prudential Regulation Authority (APRA)

This work is licensed under the Creative Commons Attribution 3.0 Australia Licence (CCBY 3.0).



This licence allows you to copy, distribute and adapt this work, provided you attribute the work and do not suggest that APRA endorses you or your work. To view a full copy of the terms of this licence, visit www.creativecommons.org/licenses/by/3.0/au/.

Inquiries

For more information on the contents of this publication contact:

Bruce Arnold
Head of Research

Australian Prudential Regulation Authority
GPO Box 9836
Sydney NSW 2001
Tel: 61 62 9210 3000
Email: bruce.arnold@apra.gov.au

Acknowledgements

Authors:
Bruce Arnold, APRA and
Kevin Liu University of New South Wales

Superannuation and insurance: related parties and member cost

by

Kevin Liu

University of New South Wales

Bruce R Arnold

Australian Prudential Regulation Authority

1 November 2012

Abstract: Superannuation trustees nominate insurance companies to provide tax-advantaged coverage to members on an exclusive basis. We compare the premiums paid by members to the benefits received, and investigate whether the ‘relatedness’ of the trustee and insurance provider has an impact on members’ net insurance costs. Focusing on 52 retail sector funds, we find that the most relevant characteristic is whether the trust deed establishing the superannuation fund required the trustee to use a related insurance provider. We find that members of these funds purchase more insurance, and that their coverage is in the form of higher-cost products.

Acknowledgements: The authors thank their APRA colleagues, including Charles Littrell, Denis Wilkinson, Jim O’Donnell, and members of the Life Insurance and Superannuation Industry Groups, for many comments and suggestions. The authors also thank Rachel Lucas of Bond University for her research assistance. Kevin Liu gratefully acknowledges the financial support of the Australian Prudential Regulation Authority and the Capital Markets Cooperative Research Centre.

Disclaimer: The views in this paper reflect the authors’ views and not necessarily the views of APRA. APRA does not accept any responsibility for the accuracy, completeness or currency of the material included in this publication, and will not be liable for any loss or damage arising out of any use of, or reliance on, this publication.

Corresponding author: bruce.arnold@apra.gov.au.

Executive summary

The trustee of a superannuation fund has a moral and legal obligation to act in the best interest of members. This can be interpreted to apply to a trustee's selection of an insurance company to provide tax-advantaged insurance coverage, on an exclusive basis, to the members of the fund. Under this interpretation, the trustee is duty-bound to seek an insurance outcome – the combination of premiums, coverage, terms and conditions, and service – as favourable as possible to members. We examine this premise in the context of superannuation funds where the trustee is related to the insurer nominated to provide coverage to the fund. Using data from APRA's regular collections across a panel of 124 funds over a six-year period, we compare the premiums paid to the benefits received. The focus of this study is on 52 retail sector funds, as none of the 72 not-for-profit funds used related insurance providers.

For 20 of the 52 retail-sector superannuation funds, the trustee was related to an insurance company. In all but one of these cases, the related insurer was nominated to provide insurance to fund members. Our preliminary findings were that coverage obtained from related insurance providers was more costly than coverage obtained from non-related providers, where 'cost' was measured by the difference between the premiums paid and the benefits received. While the finding was statistically significant, though, 'relatedness' alone did not provide the best account for observed differences in insurance coverage.

The key variable proved to lie within the trust deed. Upon examination, eight of the trust deeds governing related funds required the trustee to use the related insurance company; the trust deeds of the other 11 related funds had no such binding instruction. When we revised our analysis to incorporate this factor, the findings were substantially more informative: We found that members of 'bound' funds, where the trustee is required to use a related insurance provider, paid more for insurance coverage than members of funds without a binding tie-up – a finding with both statistical and economic significance.

Members of bound funds purchase more insurance than their counterparts in non-bound funds. As set out in Table 1 below, a member of the median bound fund pays average annual premiums of \$252, or roughly twice the average across all other types of funds. However, the benefits received by the fund are only approximately twenty per cent more on a *per capita* basis. Expressed as the ratio of premiums paid to benefits received, \$2.72 in premiums is collected for every dollar of benefits received by the median bound fund. For the median funds in the three non-bound categories, the same ratio ranges between \$1.57 and \$1.84.

Thus not only do members in bound funds purchase more insurance, their coverage is by way of higher-cost products.¹

Table 1: Comparing funds – regression estimates for median funds

<i>Fund type</i>	<i>Fund assets</i>	<i>Members</i>	<i>Members over 65</i>	<i>Annual premium</i>	<i>Benefits received</i>	<i>Total loading</i>	<i>Premium/\$1 benefit</i>
Retail non-related	\$298M	10,832	3.38%	\$115.25	\$73.64	\$41.61	\$1.57
Retail related, non-bound	\$3,049M	23,064	14.98%	\$139.85	\$79.63	\$60.22	\$1.76
Retail related, bound	\$2,743M	108,443	4.75%	\$252.36	\$92.94	\$159.42	\$2.72
Not-for-profit	\$387M	11,880	1.00%	\$141.53	\$76.85	\$64.68	\$1.84
<p>Notes: <i>Annual premium</i> is calculated as the simple average of estimated premiums paid for each fund member under 65. (Members over 65 generally are ineligible to purchase insurance.)</p> <p><i>Benefits received</i>, also calculated as a simple average, refers to amounts received in the calendar year, inclusive of benefits from previous policy years, but exclusive of benefits from the current policy year to be received in subsequent calendar years.</p> <p><i>Total loading</i> is calculated as the difference between <i>Annual premium</i> and <i>Benefits received</i>.</p> <p><i>Premium / \$1 benefit</i> is the annual premium paid per each dollar of benefit received.</p>							

We note by way of background that the cost of insurance is heavily dependent on the channel by which the insurance coverage is obtained. Individually underwritten policies cost more than group policies, in large part because of sales commissions paid in respect of the former type of policy. An individually underwritten policy also can include an element of personal service, the value of which may offset some or all of the higher cost – this is particularly true where individuals create superannuation accounts solely as a vehicle in which to hold insurance policies. Because APRA’s data does not break out group and individual coverage, we acknowledge that differences in the cost of insurance may be attributable to different policy/channel types, and perhaps to different levels of service or other non-insurance benefits.

We also note that the loading referred to in the table above (*i.e.*, the excess of premium paid over benefits received) should not be conflated with the insurance providers’ gross profits. With individually underwritten policies, a substantial portion of the premium is remitted to financial planners and other sales agents. Again, from the fund member’s perspective, should the loading necessarily be considered a deadweight cost, as members may receive benefits from more personalised service or advice on a wider range of financial

¹ Note that Table 1 estimates the premium/benefit ratios for the median fund within each category. While the premium/benefit ratios estimated for the three non-bound categories are all different, this is largely due to differences in fund size, average balance, and the number and age of members. The regression results, discussed in the body of this paper, do not indicate a statistically significant difference in the cost of insurance across the three non-bound categories.

topics. In effect, there are two insurance markets – lower-cost group policies *vs.* higher-cost individually underwritten policies – each with its unique cost-benefit trade-off. That said, the very existence of bound funds suggests that offering both superannuation and insurance products is part of a single business model. If the insurance arrangements of a given superannuation fund effectively increase the uptake of higher-cost insurance products, best practice requires that the value proposition to fund members be transparent.

Introduction

A trustee has a legal and moral obligation to act in the best interest of the beneficiaries of the trust. The obligation of the trustee of a superannuation fund runs to the benefit of fund members. 'Acting in the best interest of members' is most often associated with the investment function, with the expectation that the superannuation trustee construct a portfolio which prudently balances risk and return. 'Acting in the best interest of members' also relates to any other trust activities which impact the members' net benefit. Thus a trustee properly should optimise the trust's operating costs. Where managerial or administrative functions are outsourced, the trustee has a duty to procure services at the best value for money, remembering that 'cheapest' does not always mean 'best'.

This principle also can be extended to the situation where the trustee is acting, in effect, as a central purchasing agent for the members. Today's superannuation funds generally offer a minimal level of insurance coverage as the default option, with the opportunity for members to obtain additional coverage on a tax-effective basis, and often at a group rate. Each member determines whether and how much additional insurance to purchase, so strictly speaking, the decision to insure is the member's, not the trustee's. However, the trustee selects the insurer from which the coverage can be purchased on an exclusive basis.

Two APRA Working Papers by Liu and Arnold (2010 and 2010a) examined the pattern of outsourcing by superannuation trustees, and the terms on which service providers were retained. The data indicated that some trustees of retail superannuation funds were prone to paying higher fees to related service providers. The impact on fund members was both statistically and economically significant. In those papers, the researchers queried whether this pattern of behaviour was consistent with the legal obligations of the trustees to act in the members' best interest.

This paper focuses on the trustee's selection of an insurance provider. We premise our analysis on the proposition that a trustee properly should select the insurer which offers the best coverage 'package', by reference to the premium paid, the insurance benefits received, the value of any non-claim benefits arising from the insurance relationship, the nature of the policy terms, and the creditworthiness and service level of the insurance provider. We note that some trustees are bound by the terms of the related trust deed to use a related party as the exclusive insurance provider, while other trustees use related providers without being compelled by the trust deed to do so. We compare the cost of coverage from a related-party to the cost from an independent insurer.

The Australian superannuation industry

APRA's research into superannuation funds (*see, e.g.*, Coleman, Esho, and Wong (2003) and Ellis, Tobin and Tracey (2008)) generally distinguishes between 'public-sector' funds established to provide pension benefits to government employees; 'corporate' funds, to the employees of a single company; 'industry' funds, to unionised workers in a single industry; and 'retail' funds sponsored by banks, insurance companies, and other financial service providers. The first three types of funds are collectively designated the 'not-for-profit' sector.²

The most recent APRA statistical release (APRA 2012b) gives a 31 March 2012 figure of \$1.38 trillion held in superannuation funds. Retail funds accounted for 27.4 per cent of the total; industry funds, 19.2 per cent; public-sector funds, 15.9 per cent; and corporate funds, 4.1 per cent. Substantially all of the balance, or 30.3 per cent, was held in self-managed superannuation funds, which are not regulated by APRA.

Trusts, trustees, and fiduciary duty

An Australian superannuation fund is constituted in the form of a trust,³ and in most cases the trustee is a special-purpose corporation. For the trustee of a corporate or industry fund, the board is composed of a predetermined number of employer-, union-, or member-elected representatives. A special-purpose trustee company of this type is run on a not-for-profit basis, where the only fees charged by the trustee are to cover actual operating costs.

Whether not-for-profit or retail, superannuation trustees have a legal duty to act in the best interest of fund members. This obligation relates not only to a trustee's obligation to construct and monitor members' investment portfolios,⁴ but also to a trustee's awarding, negotiating, and monitoring contractual arrangements with third parties. In the case of outsourcing, Liu and Arnold (2010a) find that certain trustees of retail superannuation funds retain related-party service providers at a cost significantly higher (both statistically and economically) than that of independent service providers.

² Many industry funds have elected to become 'public-offer' funds, where membership is open to the general public, and not just to employees in a given industrial sector. While public-offer not-for-profit funds compete with retail funds for members, they still do not earn any profits.

³ The exception to this rule is public-sector schemes established under various state or commonwealth laws, and run under the authority of the respective government or its delegate under the enabling law.

⁴ This specific duty relates to the fund's default option and any other investment options where the trustee is instrumental in determining asset allocation or individual investments, but not to portfolios where the member herself has determined the asset allocation.

Superannuation and insurance

All large superannuation funds offer insurance coverage for members. A low amount of cover is compulsory for default funds,⁵ and a member is allowed also to increase coverage in keeping with general insurance practices (such as submitting to a physical examination in order to obtain coverage over a certain amount). The policy itself is owned by the fund trustee, but the premium is paid out of the member's account, and the policy benefits are distributed or credited directly to the member or her nominated beneficiaries.

Insurance offered through superannuation funds falls into three main categories. Term life policies pay a lump-sum benefit if an insured member dies during the (annual) term of the policy. Total and permanent disablement cover ('TPD') pays a lump sum upon a diagnosis of a condition that prevents an insured member's working ever again. The third is income protection ('IP'), which provides replacement income to a member who is unable to work because of a temporary illness or injury. Most policies provide IP benefits for a period of up to two years,⁶ while some provide for payments until retirement age.

The superannuation sector has become increasingly important to the life insurance industry. Currently, superannuation-related policies account for 42 per cent of all term-life and disability premium income. When looking solely at group policies, the superannuation sector accounts for 87 per cent of gross revenue (APRA 2012a, Table 3b).

The potential for poor practice

The trustee's selection of a company to offer insurance coverage is slightly different from an outsourcing arrangement, given the private nature of the insurance arrangement (*i.e.*, the premium is not paid out of collective assets, nor are benefits shared among all fund members). However, once the trustee nominates the insurance provider, the only way for an individual to obtain coverage is to patronise that company. This is critical, given that (1) there can be a tax advantage to insuring through a superannuation fund, and (2) group rates, to which many fund members have access, are lower than for insurance purchased in the form of an individually underwritten policy. This effectively gives the nominated provider monopoly power *vis-à-vis* fund members, with the potential to extract economic rent.

Thus while each member makes an individual determination whether to obtain coverage, if the trustee fails to negotiate the lowest possible premium structure (all other

⁵ *Superannuation Guarantee (Administration) Act 1992*, section 32C.

⁶ Prior to 2007, premiums on income-protection policies were tax-deductible only if the benefit period was two years or less. Since 2007, premiums on policies with longer benefit periods have been deductible, and superannuation funds are gradually offering more coverage options. However, policies with a two-year benefit period remain the norm.

factors being equal), the trustee may allow the insurer to earn a super-profit to the detriment of members. The temptation for trustees to allow this is greatest when the life insurance company is a related party.

Testing relatedness and member cost

Our examination of the impact of ‘relatedness’ – the relationship between a superannuation trustee and its nominated insurance provider – on member cost is shaped by the nature of the insurance market. Perhaps it is more accurate to say that there are two life-insurance markets.

Group policies are based on the notion that members of a defined group (such as the members of a superannuation fund) are given ready access to standard levels of cover. These policies are characterised by low costs, as administration is centralised and incremental selling costs (*i.e.*, of adding a new member) are minimal. There are indirect savings as well, in that many arrangements provide for automatic enrolment, which reduces adverse-selection costs. In this low-cost environment, group policies have become highly commoditised and fierce competition has kept premiums low. In fact, in its role as the prudential regulator of the life insurance industry, APRA invests considerable effort in monitoring the adequacy of group-life premiums.

The second market is centred on individually underwritten policies, distributed via a relatively expensive channel consisting generally of commissioned sales agents licensed under the *Financial Services Reform Act 2001*. Although distribution costs are high, the process of underwriting individual policies provides a level of personalised service that is not present with group policies.⁷ Furthermore, individual policies may provide a richer mix of coverage and other features than group policies (*e.g.*, the level of coverage up to which no medical examination is required, or the insured’s option to maintain the policy after leaving the fund). This combination of higher costs and a more flexible product typically results in a higher premium scale.

In effect, then, there are two insurance eco-systems: the low-cost commoditised group-policy market, and the high-cost market for highly tailored insurance products. Regardless of the relative merits of the two markets, any examination of relatedness and member cost must consider the difference.

⁷ This personalised service often extends beyond the strict realm of insurance, as financial planners work to integrate an individual’s insurance needs into a more comprehensive investment and retirement strategy. While the financial planner may receive commissions from the sale of insurance, the commissions effectively subsidise the planner’s wider efforts.

Virtually all of the insurance coverage purchased by individuals in not-for-profit funds exists in the form of group policies. Accordingly, the average insurance cost of not-for-profit funds tends to be lower than retail funds, where members often obtain individually underwritten policies. Furthermore, since there are no 'related' insurance providers in the not-for-profit sector, we narrow the focus of this study to the retail sector, where relatedness is a factor. While we are mindful of the need to control for the relative prevalence of group and individual policies, the data at hand do not break out premiums and claims by group/individual policy type. We do, however, use a number of proxies intended to capture differences in policy mix.

Nil-balance members

One final feature of the insurance market potentially impacts the analysis. Insurance coverage is available either within or without the superannuation environment. In many cases, an individual may decide to obtain coverage upon advice from an insurance agent or financial planner. As part of the process, the individual often is given the choice whether to purchase the coverage through the superannuation system. If the individual so elects, a new superannuation fund account is created, through which the insurance premiums are paid. While the insured party is technically a member of the superannuation fund, the individual's benefits balance is nil.

The discussion so far contemplates that the decision to insure is made by an individual member (or trustee acting on behalf of the member) exclusively within a superannuation context. In the case of nil-balance members, though, the election to own the policy through a superannuation account may be made after the decision to insure. In that nil-balance members generally are enrolled in bound superannuation funds, the figures for bound funds will reflect these individually underwritten, higher-cost policies.

Data and methodology

The analysis detailed below is based on annual returns lodged by superannuation funds with assets greater than \$50 million, for fiscal years ending 2005 through 2010 inclusive.⁸

We have access to data which is summary in nature, consisting of four items:

- (i) gross premiums paid (inclusive of both life and disability coverage);
- (ii) premiums rebated to the fund;
- (iii) benefits paid in respect of term-life coverage; and

⁸ Returns were lodged for 2004 as well, but the data quality was inconsistent and has been excluded from this analysis.

- (iv) benefits paid in respect of disability coverage (inclusive of both TPD and IP, and without identifying IP by 'policy year'⁹).

From these data, we calculate a 'net insurance cost' to superannuation fund members, equal to the surplus of net premiums paid (gross premiums less rebates) over benefits received.

The limitations of the data impose a number of constraints on our analysis. First, in that superannuation funds report only a single premium figure, all three insurance lines must be studied at once.¹⁰ Second, the benefits received in a given year can relate to previous policy years, while at the same time, benefits relating to the current policy year can be accrued but not yet received. Accordingly, the benefits received can either overstate or understate the benefits relating to the current-year premiums, and the calculated net insurance cost does not necessarily equal the actual cost of insurance in a proper accrual sense.¹¹

Even these summary data were not available for all funds, with more than half of all funds reporting neither having paid insurance premiums or nor having received insurance benefits.¹² In respect of those funds reporting insurance activity, the return data was less than ideal, and required considerable manual cleansing. Many funds provided insurance premiums and benefits, but did not nominate an insurance company, or nominated someone other than a licensed insurer. In these cases, we reviewed of the fund's annual report and/or product disclosure statement to identify the insurer. Finally, we determined whether the nominated or identified insurer was related to the trustee through the parties' Australian Corporation Numbers, through the National Names Index maintained by the Australian Securities and Investments Commission.

⁹ 'Policy year' refers to the year in which the premium is paid, even if the benefit is paid in subsequent years.

¹⁰ As the three lines of insurance coverage are tested in the aggregate, a statistically significant result may be attributable to one or two lines, rather than all three. It is also possible for a statistically significant result relating to one of the lines to be obscured by having been combined with the others. Thus any finding of statistical significance is conservative.

¹¹ Income protection coverage provides for periodic payments, often for two or more years, thus by construction some current policy-year benefits are deferred until subsequent years. At the same time, not all lump-sum benefits (life insurance and TPD) are received within the current year, due to delays in notifying the insurer and in processing claims; there is anecdotal evidence of tail claims being paid up to ten years after the event. Thus a portion of benefits received in the current year are allocable to tail claims from previous policy years, and premiums paid in the current year give rise to benefits to be received in future years. Net insurance costs are understated (overstated) if previous policy years' tail claims are greater than (less than) the current policy-year's future tail claims. If tail claims grew over the study period at the same rate as total insurance coverage, net insurance costs are likely to have been understated.

¹² Mandatory insurance coverage came into effect 1 July 2005, but under the transition arrangements funds could seek short-term exemptions. At roughly the same time, fund trustees were required to be licensed as Registrable Superannuation Entities, which precipitated a sharp drop in the number of superannuation funds, especially small corporate funds. We believe that a substantial portion of the trustees which reported nil insurance activity consisted of exempted funds which later closed. Funds which do not offer a default option (supplemental funds for highly compensated employees often fall into this category) also are not required to provide mandatory insurance coverage, which we believe constitute the rest of the funds reporting nil insurance activity.

Net cost and measurement error

We calculate net insurance cost equal to the surplus of net premiums paid (gross premiums less rebates) over benefits received, both in respect of a single fiscal year. This calculated net cost is not the actual cost in a strict accounting sense, as the benefits received include monies paid in respect of previous policy years, and do not reflect benefits relating to the current policy year to be received in future years. (For convenience in dealing with this issue, we use the following nomenclature: 'Pre-paid benefits', or 'PRE benefits', refers to benefits received in a given year, but which relate to illness, injury, or death suffered in prior policy years. 'Post-payable benefits', or 'POST benefits', refer to benefits relating to illness, injury, or death suffered in the current year, but which are received in subsequent years.) Thus the calculated net cost reflects not only the random variation arising from the stochastic nature of mortality and disability, but also a measurement error attributable to the difference between our 'net insurance cost' and the actual cost. Nonetheless, we proceed on the basis that net insurance cost indicates the favourableness of the premium structure negotiated by the superannuation trustee on behalf of fund members, subject to the usual caveats relating to measurement with error.

Panel characteristics

To minimise the impact of measurement error, we look only at those funds which reported in each year from 2005 to 2010, and for which the key characteristics remained unchanged over the entire period. By using the multi-year net insurance cost for each fund in the panel (*i.e.*, the aggregate of the net insurance cost across all six years in the study period), we eliminate all measurement errors except PRE benefits received in 2005 and POST benefits payable after 2010.

The winnowing process, illustrated in Table 2, resulted in a balanced panel of 124 funds. The not-for-profit sector was represented by 72 funds, and the other 52 funds were in the retail sector. In 20 cases, the trustee of a retail fund was related to an insurance provider, and in 19 of those cases, the trustee nominated the related insurer to provide insurance to fund members.

Table 2 – Number of unique funds comprising the data sample, 2005-2010			
<i>Fund type</i>	<i>Not-for-profit</i>	<i>Retail</i>	<i>Total</i>
Funds lodging returns	534	151	685
Funds reporting insurance activity	172	119	291
– where the reported insurer was in fact an insurance company	147	72	219
– where an insurer could be identified manually	25	47	72
(Less:) Funds dropped *	(26)	(12)	(38)
Funds suitable for inclusion in the analysis, of which	146	107	253
– data was available for five or fewer years, or status changed over the six years	85	55	140
– data was available and status was consistent for all six years	72	52	124
* Some of the funds were dropped because data relating to control variables in the regression analysis were missing or meaningless. Four corporate funds which acquired insurance from a provider affiliated with the employer were also dropped due to data confidentiality considerations.			

These 124 funds constitute 38 per cent of the funds lodging returns in 2010, and reported paying a total of \$1.463 billion in insurance premiums, representing approximately 51 per cent of the total insurance premiums paid by superannuation funds reporting to APRA. The total insurance premium paid by the 52 retail funds in the dataset sector amounted to \$565 million or 39 per cent of retail superannuation premiums.

Analysis

We calculate the net insurance cost using data lodged with APRA by the panel funds, and specify this as the dependent variable in our regression analysis. The principal independent variables are the total fund assets and number of members in the fund. We utilise a series of dummy variables based on the nature of the fund and the relationship of its trustee to the nominated insurance company. Given the importance of the type of policy (group vs. individual) to member cost, we test a number of other independent variables for their suitability as controls. Once a model is specified, we test the relatedness dummy for both statistical and economic significance.

Base case: balanced panel, multi-year cost

Table 3 sets forth the basic regression results for the balanced panel of the 52 retail funds, using multi-year net insurance costs. In dollar terms, we estimate both the premium

paid and the benefits received. (For robustness, we estimate the total loading, and find that point estimates for loading are satisfactorily close to the difference of the point estimates of premiums and benefits.) We also estimate the loading margin, *i.e.*, the net dollar cost as a percentage of premium dollars.

Table 3: Balanced panel / multi-year – retail funds only				
<i>Variable</i>	<i>Total premium</i>	<i>Benefit received</i>	<i>Total loading</i>	<i>Loading margin</i>
Intercept (<i>t</i> statistic) [†]	-1.241 (-1.05)	-0.318 (-0.70)	-0.935 (-1.10)	0.486 (12.75) ^{***}
Total fund assets (<i>t</i> statistic) [†]	0.621 (-1.01)	0.709 (2.96) ^{***}	-0.087 (-0.19)	3.04 -0.15
Number of members < 65 (<i>t</i> statistic) [†]	0.205 (10.56) ^{***}	0.083 (11.08) ^{***}	0.121 (8.66) ^{***}	-6.40E-04 (-1.02)
Number of members 65+ (<i>t</i> statistic) [†]	-1.131 (-3.18) ^{***}	-0.781 (-5.65) ^{***}	-0.349 (-1.36)	0.011 -0.94
Related-party dummy (<i>t</i> statistic) [†]	5.262 (2.67) ^{**}	2.123 (2.78) ^{***}	3.149 (2.22) ^{**}	0.155 (2.44) ^{**}
Observations	52	52	52	52
Pearson's R^2	0.7992	0.8183	0.7314	0.1987
Adjusted R^2	0.7821	0.8029	0.7085	0.1305
[†] For these and all other regression results, * ** and *** signify that the findings are significant to a confidence level of 90%, 95%, and 99%, respectively.				

Individuals 65 and over are generally ineligible to purchase life coverage, and are often retired and therefore ineligible to purchase disability coverage. Thus in all of the 'dollar' regressions, we find that the number of members under 65 is highly significant. We also find that the number of members 65 and over is also highly significant in respect of both premiums and benefits, but that the coefficient is negative. As we interpret this finding, 65+ members themselves largely do not purchase insurance, and at the same time their number serves as a proxy for the age of the other members in the fund. In other words, a fund with a high number of 65+ members typically has a high number of members in the 60-to-65 age bracket,¹³ a portion of which have retired or otherwise reduced their appetite for insurance coverage.

The total fund size has minimal impact on premiums or loading. If fund size has little impact, then the average member balance has little impact as well. Thus we find that funds with more eligible members buy more insurance, but members with greater wealth (as proxied by account balance) do not.¹⁴ We attribute this in part to limits on the amount of coverage that an individual fund member may purchase before exacting conditions apply, and

¹³ We examined the age profiles of numerous funds, and found this to be generally true.

¹⁴ The use of account balance as a proxy for wealth does not take into consideration nil-balance members, who may well enjoy higher levels of wealth and income notwithstanding their account balances.

in part because of the positive relationship between age and wealth (given that older members tend to buy less insurance).

As expected, the ‘margin’ regression has a substantially lower coefficient of determination (the R^2 statistics), and also as expected, neither the number of members nor the percentage of members older than 65 retains its significance.

Finally, in all regressions, the related-party dummy shows a positive and highly significant coefficient. However, the basic regression does not control for product type, thus at this point we are unable to discern whether related insurers are more costly to members on a like-for-like basis, or simply sell more extensive insurance coverage.

While compiling the panel data, we had noticed that some retail funds did not offer group life insurance. We manually checked all of the panel funds, and found that 31 of the 52 retail funds fell into that category; Table 4 shows the cross-tabulation of funds by relatedness and whether group life was offered.

Table 4: Cross-tabulation by relatedness, product offering			
<i>(Number of funds Ave members <65 Ave fund size (\$M))</i>	<i>Group life offered</i>	<i>No group life</i>	<i>Total</i>
Related party	3 67,600 \$4,060	16 73,700 \$3,110	19 72,700 \$3,260
Non-related party	18 58,800 \$1,936	15 13,700 \$752	33 38,300 \$1,398
Total	21 60,000 \$2,239	31 44,600 \$1,969	52 50,900 2,078

In proportionally more of the related-party arrangements (by both number of funds and aggregate fund size), members are not given a group-life option. Accordingly, the related-party dummy in the Table 3 regression could be drawing its significance from the fact that related-party insurers simply are writing less lower-cost group life coverage. We therefore add a group-life dummy to the regression, to test whether the fund’s product mix is more relevant to the loading factors than relatedness. As Table 5 below shows, though, the dummy coefficient has the expected sign, in that funds with a group-life offering tend to pay lower total premiums and absorb lower total loading. However, the quantum of the coefficient is statistically insignificant and adds very little diagnostic power to the regression. Thus the higher net cost insurance obtained from related providers is persistent, whether or not the fund offers the lower-cost group life option.

Table 5: Balanced panel / multi-year / retail – group-life dummy				
<i>Variable</i>	<i>Total premium</i>	<i>Benefit received</i>	<i>Total loading</i>	<i>Loading margin</i>
Intercept (<i>t</i> statistic)	-0.426 (-0.28)	-0.106 (-0.17)	-0.326 (-0.29)	0.503 (9.99)***
Total fund assets (<i>t</i> statistic)	7.26E-4 (1.15)	7.37E-4 (2.99)***	-8.34E-6 (-0.02)	5.18E-6 (0.25)
Number of Members < 65 (<i>t</i> statistic)	0.207 (10.53)***	0.084 (10.97)***	0.123 (8.67)***	-0.59E-3 (-0.93)
Number of members 65+ (<i>t</i> statistic)	-1.201 (-3.27)***	-0.799 (-5.58)***	-0.401 (-1.51)	0.009 (0.78)
Related-party dummy (<i>t</i> statistic)	4.621 (2.17)**	1.956 (2.36)**	2.670 (1.74)*	0.142 (2.06)**
Group-life dummy (<i>t</i> statistic)	-1.611 (-0.81)	-0.421 (-0.55)	-1.203 (-0.84)	-0.033 (-0.51)
Observations	52	52	52	52
Pearson's R^2	0.8020	0.8195	0.7355	0.2033
Adjusted R^2	0.7805	0.7999	0.7067	0.1167

Expanding the model

A superannuation trustee does not always have unlimited freedom of choice. Many trust deeds impose conditions on the superannuation trustee, such as the requirement that a related-party administrator be appointed. We examined the trust deeds of all funds which used related insurance providers, to determine whether the trust deed mandated the choice of insurance provider. We discovered that eight of the 19 funds which nominated a related insurer were required to do so under the terms of their trust deed. None of these bound funds give members the opportunity to purchase group life coverage. Instead, in these funds insurance is available only in the form of individually underwritten policies.

We add a dummy for whether the fund was bound into the regression. As Table 6A below shows, the 'bound' dummy is positive (*i.e.*, the net insurance cost of bound funds was higher) and highly significant. At the same time, the relatedness dummy loses its statistical significance, and the quantum of the coefficient drops to a fraction of the bound-dummy coefficient. Thus relatedness *per se* has only a minimal impact on insurance cost. A much greater impact – and more statistically significant as well – comes from whether the terms of the trust deed require the fund to use the nominated insurer. Note also that the explanatory power of the regression is higher (the R^2 statistic for loading increased from 0.7314 to 0.7944), so this finding is more than simply shifting the emphasis from relatedness to boundness. Instead, the introduction of the bound dummy increases the amount of information captured by the regression.

Table 6A: Balanced panel / multi-year / retail – ‘bound’ dummy				
<i>Variable</i>	<i>Total premium</i>	<i>Benefit received</i>	<i>Total loading</i>	<i>Loading margin</i>
Intercept (<i>t</i> statistic)	-0.761 (-0.71)	-0.205 (-0.46)	-0.568 (-0.75)	0.486 (12.50)***
Total fund assets (<i>t</i> statistic)	1.000 (2.19)**	0.867 (3.52)***	0.422 (1.02)	0.0277 (0.13)
Number of Members < 65 (<i>t</i> statistic)	0.169 (8.40)***	0.075 (8.88)***	0.094 (6.58)***	-0.62E-3 (-0.85)
Number of members 65+ (<i>t</i> statistic)	-1.225 (-3.81)***	-0.803 (-5.97)***	-0.421 (-1.85)*	0.011 (0.93)
Related party non-bound (<i>t</i> statistic)	1.389 (0.66)	1.206 (1.38)	0.185 (0.12)	0.157 (2.06)**
Related party bound (<i>t</i> statistic)	11.950 (4.57)***	3.708 (3.38)***	8.269 (4.46)***	0.153 (1.60)
Observations	52	52	52	52
Pearson's R^2	0.8410	0.8324	0.7944	0.1988
Adjusted R^2	0.8237	0.8142	0.7720	0.1117

Table 6B keeps the bound dummy, but adds back the dummy indicating whether the fund offers group-life coverage. As in the case prior to the introduction of the bound dummy (*cf.* Table 5 above), the group-life dummy coefficient has the expected sign but is statistically insignificant and of little incremental diagnostic power. Thus we find that boundness is a persistent indicator of higher net insurance cost insurance, with a greater explanatory power than relatedness alone. However, we note that insurance policies owned by nil-balance members are generally reflected in the figures reported by bound arrangements. In that these policies generally are of higher cost, their inclusion necessarily increases the total loading estimated for the bound-fund category.

Table 6B: Balanced panel / multi-year / retail – bound and group-life dummies				
<i>Variable</i>	<i>Total premium</i>	<i>Benefit received</i>	<i>Total loading</i>	<i>Loading margin</i>
Intercept (<i>t</i> statistic)	-0.724 (-0.51)	-0.175 (-0.30)	-0.555 (-0.56)	0.504 (9.87)***
Total fund assets (<i>t</i> statistic)	1.000 (2.16)**	0.869 (3.47)***	0.424 (1.00)	0.0414 (0.19)
Number of members < 65 (<i>t</i> statistic)	0.17 (8.08)***	0.075 (8.55)***	0.094 (6.33)***	-0.53E-3 (-0.69)
Number of members 65+ (<i>t</i> statistic)	-1.228 (-3.69)***	-0.806 (-5.77)***	-0.422 (-1.79)*	0.009 (0.78)
Related party non-bound (<i>t</i> statistic)	1.371 (0.63)	1.191 (1.31)	0.178 (0.12)	0.148 (1.89)*
Related party bound (<i>t</i> statistic)	11.900 (4.08)***	3.667 (3.00)***	8.251 (3.99)***	0.129 (1.22)
Group insurance dummy (<i>t</i> statistic)	-0.077 (-0.04)	-0.061 (-0.08)	-0.027 (-0.02)	-0.036 (-0.53)
Observations	52	52	52	52
Pearson's R^2	0.8410	0.8324	0.7944	0.2038
Adjusted R^2	0.8198	0.8101	0.7670	0.0976

Examining annual costs

We also perform our analysis on annual net insurance costs. Over the data period, the total amount of insurance obtained through superannuation funds increased substantially, as shown in Table 7.

Table 7: Growth in insurance business				
<i>Year</i>	<i>Premiums paid (\$M)</i>	<i>Benefits received (\$M)</i>	<i>Total loading (\$M)</i>	<i>Premium/\$1 benefit</i>
2005	267.61	98.64	167.87	\$2.71
2006	318.08	118.14	199.60	\$2.69
2007	342.14	146.28	195.50	\$2.34
2008	439.46	178.03	261.07	\$2.47
2009	495.44	213.59	281.37	\$2.32
2010	565.06	235.47	329.22	\$2.40

With this increase in overall business, we would expect the end-of-period POST benefits (where illness, injury, or death occurs during the data period, but the benefits are not received as at the end of the last policy year) to be much larger than beginning-of-period PRE benefits (where benefits are received during the data period in respect of events occurring in prior policy years) – a claims 'tail'. By expanding the 52 funds' multi-year figures into 312 annual observations, we effectively calculate the claims tail annually. Although this both increases the impact of random variation and introduces PRE and POST benefit measurement

errors for each year in the sample,¹⁵ using annual data allows us to control for another factor: the creditworthiness of the insurance provider, on the basis of which more secure insurers arguably should be able to command higher premiums.¹⁶

All findings are robust with those using multi-year data, and we find that there is no statistically significant relationship between the insurer's creditworthiness (as measured by APRA's own Probability and Impact Rating System) and either premiums or total loading. Furthermore, using annual data also allows us to expand our data to an unbalanced panel, and again our findings are robust. (Regression results with annual data are not reported.)

Assessing economic significance

In previous APRA Working Papers, we sought to test economic significance by estimating average per-member figures for the median superannuation fund. In the case here, our panel is divided into four groups – non-related, related-but-not-bound, and bound insurers. Unfortunately, the funds with non-related insurers are so much smaller than the other funds that the median for the entire population is considerably larger than even the largest non-related fund. Accordingly, instead of estimating the figures for a single median fund, we estimate the figures for the median fund of each group. While this represents a slight break from our past practice, it proves particularly valuable here where the pattern of insurance coverage is as distinct by group as the net insurance cost.

Table 1 below (previously set out in the summary) shows the estimated net insurance cost for the four fund groups, using median figures for policy year 2010 in a reduced-form model. On average, the member of a bound fund pays annual premiums in excess of \$250, and receives benefits of slightly more than \$90. Thus the average *per capita* net insurance cost is just short of \$160. Members of non-bound funds pay considerably less in premiums, but receive benefits that are not much less. Thus the average net insurance cost for members of non-related funds are only \$40 – one quarter of the loading paid by members of bound funds, while receiving benefits only roughly 20 per cent less. Members in related funds pay on average \$60 in loading, but their benefits are only 14 per cent less than those received by bound-fund members.

¹⁵ While increasing the number of measurements obviously increases the measurement errors, the net measurement error for each fund is the same as in the multi-year case.

¹⁶ Annual data is necessary because of changes in creditworthiness during the data period.

Table 1: Comparing funds – regression estimates for median funds

<i>Fund type</i>	<i>Fund assets</i>	<i>Members</i>	<i>Members over 65</i>	<i>Annual premium</i>	<i>Benefits received</i>	<i>Total loading</i>	<i>Premium/\$1 benefit</i>
Retail non-related	\$298M	10,832	3.38%	\$115.25	\$73.64	\$41.61	\$1.57
Retail related, non-bound	\$3,049M	23,064	14.98%	\$139.85	\$79.63	\$60.22	\$1.76
Retail related, bound	\$2,743M	108,443	4.75%	\$252.36	\$92.94	\$159.42	\$2.72
Not-for-profit	\$387M	11,880	1.00%	\$141.53	\$76.85	\$64.68	\$1.84
<p>Notes: <i>Annual premium</i> is calculated as the simple average of estimated premiums paid for each fund member under 65. (Members over 65 generally are ineligible to purchase insurance.)</p> <p><i>Benefits received</i>, also calculated as a simple average, refers to amounts received in the calendar year, inclusive of benefits from previous policy years, but exclusive of benefits from the current policy year to be received in subsequent calendar years.</p> <p><i>Total loading</i> is calculated as the difference between <i>Annual premium</i> and <i>Benefits received</i>.</p> <p><i>Premium / \$1 benefit</i> is the annual premium paid per each dollar of benefit received.</p>							

The above table should be interpreted in light of the fact that we estimate the premium/benefit ratios for the median fund within each category, and not for a single characteristic fund across all categories. The regression results set out earlier in this paper establish the statistical significance of the ‘boundness’ attribute; the purpose of this table is to assess its economic impact. While the premium/benefit ratios estimated for the three non-bound categories are all different, this is largely due to differences in fund size, average balance, and the number and age of members. By the same token, the ratio for bound funds also reflects not just a higher loading, but also the different characteristics of the median fund in the ‘bound’ category.)

Conclusion

Under the terms of some superannuation trust deeds, the trustee is required to use a related insurance company to provide exclusive coverage to fund members. Where this is the case, the results of this study show that fund members incur a higher net insurance cost, where 'net insurance cost' is defined as the excess of premiums paid over benefits received. The higher cost has both statistical and economic significance, especially given that members in bound funds tend to purchase more insurance, as well as more expensive insurance.

One reason for the cost difference is self-selection. For tax and other reasons, some individuals seek to hold his or her insurance coverage through a superannuation account. To accommodate such an individual, an insurance company may facilitate the creation of a new superannuation account, the only asset in which is the insurance policy. Because these accounts generally are established with bound funds, and because these policies are of the more costly, individually underwritten type, bound funds will show higher costs than if these arrangements were not made available.

There may be two other explanations for the cost difference, but they cannot be fully investigated with the data at hand. First, the analysis does not take into consideration product features, especially those related to the payment of benefits in multiple policy years. In theory, a member could purchase what appears to be more costly coverage, but which over time delivers a comparable level of benefit. However, we believe that by looking over a six-year period, most of the variation in benefits paid to members would be evident. Second, the analysis is based on the cash amount of benefits received, not the benefits incurred. Some or all of the cost differential could then be attributable to a larger claims tail for bound funds. We do not believe this is the case, however. In most of the bound funds, the insurance company is the fund's administrator. One of the purported advantages of this arrangement is that insurance claims are processed seamlessly and more quickly. All other things being equal, we would expect the claims tail for bound funds, and related-but-not-bound funds as well, to be proportionately smaller than the claims tail for non-related funds.

For most superannuation funds, securing favourable insurance terms is within the scope of a superannuation trustee's legal and moral duty to act in the best interest of fund members. The trustee's duty arguably is less where the trust-deed requires the trustee to use a related insurance provider. Our analysis indicates that, in these cases, members end up with insurance arrangements that are more costly compared to coverage obtained where the trustee is not so bound. In light of this empirical evidence, trustees should consider their duty to negotiate as favourable a premium structure as possible, and to empower members to make informed decisions as to the package of benefits – monetary and otherwise – that a

member's premium underwrites. A trustee may wish to keep this in mind when formulating its fund's insurance strategy – a new requirement under the Stronger Super reforms.¹⁷

The trustee of a bound fund may argue that, under the restrictive terms of the trust deed, it has limited leverage to negotiate premiums, or to obtain a true breakdown of where the premium goes. If this is truly the case, we note that insurance companies themselves are regulated entities. Under Section 48 of the *Life Insurance Act 1995*, the directors of a life company are obligated to give priority to the interest of policyholders. Thus even if a bound insurance provider were in a commercial position to extract rent from superannuation fund members, its directors' duties to policyholders would discourage such conduct.

Finally, we note the latest tranche in the Australian Government's ongoing superannuation reform initiative. In keeping with Recommendation 2.14 of the Cooper Review, a current exposure draft proposes that the SIS Act be amended to specify that any provision in the governing rules of a superannuation fund which purports to limit choice of service providers to a specified person or persons be void.¹⁸ This study provides empirical support for this proposed reform, with the prospect of more cost-efficient insurance coverage for members of currently bound superannuation funds.

¹⁷ *Superannuation Legislation Amendment (Trustee Obligations and Prudential Standards) Act 2012*, section 12, adding a new section 52(7) to the *Superannuation Industry (Supervision) Act 1993*.

¹⁸ *Superannuation Legislation Amendment (Further Measures) Bill 2012*, section 68, adding a new section 58A to the *Superannuation Industry (Supervision) Act 1993*.

References

- Australian Prudential Regulation Authority, 'Quarterly Life Insurance Performance, March 2012', *APRA Statistics*, 24 May 2012, available via [http://www.apra.gov.au/Super/Publications/Documents/LI Quarterly Performance 2020120331.pdf](http://www.apra.gov.au/Super/Publications/Documents/LI%20Quarterly%20Performance%2020120331.pdf).
- Australian Prudential Regulation Authority, 'Quarterly Superannuation Performance, March 2012', *APRA Statistics*, 7 June 2012, available via [http://www.apra.gov.au/Super/Publications/Documents/Super Quarterly Performance 2020120331.pdf](http://www.apra.gov.au/Super/Publications/Documents/Super%20Quarterly%20Performance%2020120331.pdf).
- Coleman, Anthony, Neil Esho. and Michelle Wong, 'The Investment Performance of Australian Superannuation Funds', Working Paper, Australian Prudential Regulation Authority, February 2003, available via <http://www.apra.gov.au/AboutAPRA/Research/Documents/The-Investment-Performance-of-Australian-Superannuation-Funds-Feb-2003.pdf>.
- Commonwealth of Australia, 'Stronger Super – Government response to the Super System Review', 16 December 2010, available via http://strongersuper.treasury.gov.au/content/Content.aspx?doc=publications/government_response/default.htm.
- Commonwealth of Australia, 'Review of the Governance, Efficiency, Structure and Operation of Australia's Superannuation System, 30 June 2010, available via <http://www.supersystemreview.gov.au>.
- Ellis, Katrina, Alan Tobin, and Belinda Tracey, 'Investment Performance, Asset Allocation and Expenses of Large Superannuation Funds', Working Paper, Australian Prudential Regulation Authority, October 2008, available via http://www.apra.gov.au/AboutAPRA/Documents/APRA_WP_LSF_102008-3.pdf.
- Liu, Kevin and Bruce R Arnold, 'Australian superannuation – the outsourcing landscape', *Working Paper*, Australian Prudential Regulation Authority 12 July 2010, available via http://www.apra.gov.au/AboutAPRA/Documents/SA_WP_ASOL_072010_overview-3.pdf.
- Liu, Kevin and Bruce R Arnold, 'Australian superannuation outsourcing – fees, related parties, and concentrated markets', *Working Paper*, Australian Prudential Regulation Authority 12 July 2010, available via http://www.apra.gov.au/AboutAPRA/Documents/SA_WP_ASOFRP_072010_complete.pdf.

Notes



Telephone
1300 55 88 49

Email
info@apra.gov.au

Website
www.apra.gov.au

Mail
GPO Box 9836
in all capital cities
(except Hobart and Darwin)