

When boards use related parties: outsourcing and superannuation fund performance

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Abstract

Superannuation funds heavily outsource key fund functions to service providers who play a crucial role in superannuation fund operations and affecting Australians' retirement savings. We examine the impact of related party service provider usage and trustee-director affiliation on investment performance. We find that for-profit funds significantly underperform when using related party service providers. The underperformance is more severe when the board is controlled by more affiliated trustee-directors and belongs to a vertically integrated conglomerate group. Our results raise concerns about whether recent regulatory reforms increasing trustee-directors' duties effectively address the conflicts of interest inherent in related party service provider arrangements.

Key words: Investment performance; Related party outsourcing; Superannuation; Trustee-directors

JEL classification: G23, G34

doi: 10.1111/acfi.12379

1 Introduction

Australian superannuation represents a cornerstone of the national economic strategy for funding the retirement of Australia's growing ageing population. The superannuation system now covers more than 90 percent of the Australian

The authors gratefully acknowledge an anonymous reviewer for helpful comments and financial support provided by Industry Super Australia and UNSW Business School for this research. Please address correspondence to: elizabeth.ooi@uwa.edu.au

workforce and manages the world's third largest pension pool with total assets exceeding \$2.5 trillion. The growing importance of superannuation funds, particularly their investment performance, has been a particularly lively issue of academic and regulatory debate in recent years. Prior literature shows that retail (for-profit) funds underperform against their not-for-profit (industry, corporate and public sector fund) peers (Coleman *et al.*, 2006; Ellis *et al.*, 2008), and that they use different outsourcing arrangements due to their distinctive business models (Sy, 2008a; Liu and Arnold, 2010b). We examine the role of related party outsourcing and trustee-director affiliation in driving this underperformance in superannuation fund investment performance.

While superannuation trustees are ultimately responsible for fund operations, they are legally permitted to, and often outsource important fund functions to external service providers to carry out administration, asset consulting, custodial and investment management services (Liu and Arnold, 2010a). Given their involvement in fund operations, these service providers have a significant influence on the costs and performance of superannuation funds, and hence the investment experience of fund members (Liu and Arnold, 2010b, 2012). While the use of service providers allows superannuation funds to access external expertise and economies of scale, the point of contention occurs when related party entities are appointed to carry out these services. These arrangements create a nexus of financial intermediation with multiple layers of principle-agent relationships and potential agency problems between trustee-directors and service providers (Liu, 2013). Furthermore, the fee negotiation process and on-going monitoring may not be conducted on an arm's length basis. These arrangements are also typically fixed at establishment and service providers are unlikely to be dismissed for poor performance (Freeman *et al.*, 2008).

In this paper, we examine the related party outsourcing arrangements and trustee-director affiliation of Australian superannuation funds and their impact on investment performance. We take advantage of the industry's new disclosure regime to construct a dataset on related party outsourcing and trustee-director affiliation for a sample of 101 APRA regulated superannuation funds for the period of 2015–2016. We first document the related party outsourcing landscape. Our findings indicate that while outsourcing is prevalent throughout the industry, retail and not-for-profit funds use different outsourcing models. Not-for-profit funds predominately use unrelated service providers while retail funds tend to outsource to related parties. We also find that retail funds are more likely to use affiliated trustee-directors. These results indicate that the assets and member accounts in the retail sector are predominately managed under a highly affiliated trustee environment, subject to multiple layers of conflicts of interest and duties.

We then examine the impact of related party outsourcing and trustee-director affiliation on investment performance. Our results show that retail funds that use related party service providers and affiliated trustee-directors tend to

significantly underperform their not-for-profit peers. We also show that a higher level of trustee-director affiliation on retail fund boards is associated with lower investment performance. Finally, we find retail funds belonging to vertically integrated conglomerate groups and with higher trustee-director affiliation are associated with more severe underperformance which suggests that they are subject to greater conflicts of interests and duties. Our results are robust to alternative measures of investment performance at both the total fund and investment option levels and to controlling for a range of trustee board governance variables. These results are in line with Freeman *et al.* (2008), which show that where related party service providers control the fund board through affiliated directors, the board becomes 'captive'. Our findings provide further evidence supporting that the profit motivation of retail funds leads to a particular business model where 'captive' boards dominated by affiliated trustee-directors tend to engage in a commercial endeavour through related parties to earn a profit at the expense of fund members' interests. Our results provide evidence which is relevant to the current Productivity Commission Review on Superannuation and Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry.

Our paper is most closely related to studies by Liu and Arnold (2010b, 2012) which both find that related party service providers charge higher fees than unrelated service providers. We extend these papers by testing the impact of related party service provider usage on investment performance, at the fund and investment options levels. While it is arguable that higher fees may be justified by the superior performance provided by related party providers, we find no evidence in support of this argument. Our results show that both the use of related party outsourcing arrangements and trustee-director affiliation in retail funds are associated with significant investment underperformance. This significantly negative relationship is robust to the use of alternative measures of investment performance (i.e. net return, over-benchmark return, risk-adjusted return with asset allocation adjustment) in both the short term and the long term at both the total fund level and MySuper (i.e. default investment option) level.

We contribute to the literature examining superannuation fund investment performance. Prior research finds investment performance differences in the retail and not-for-profit sectors. Coleman *et al.* (2006) examine the fund level while Ellis *et al.* (2008) analyse the default investment option level using data from 2002 to 2006. While these papers document performance differences between retail and not-for-profit funds, we extend their analysis by providing the first empirical examination of the governance drivers of these performance differences.

We also extend the literature examining the effect of governance on superannuation fund performance. While prior literature (Benson *et al.*, 2011; Tan and Cam, 2015) focuses on the impact of governance factors on fees and returns in selected not-for-profit funds, we extend their analysis to

include both not-for-profit and for-profit (i.e. retail) funds. We document the different governance arrangements in these two sectors due to their distinct business models and find that this explains performance differences within the industry.

The rest of the paper is structured as follows. Section 2 provides a background on the institutional setting of this study. Section 3 discusses a literature review and hypothesis development. Section 4 explains the data and sample. Variable measurement is described in section 5 while results are discussed in section 6. Section 7 concludes the paper.

2 Institutional setting

This section provides some background on the institutional setting of this study including an overview of outsourcing and related party service providers, trustee-director duties and the role of trustees in superannuation fund governance.

2.1 Outsourcing and related party service providers

Superannuation funds typically outsource key fund functions to external service providers such as administrators, asset consultants, insurers, custodians and investment managers (Liu and Arnold, 2010a). These service provider companies are predominately financial services institutions run for-profit and with own interests that may not necessarily align with those of funds and their members. The reliance of superannuation funds on service providers means that they play a crucial role in fund operations and have a significant influence on the costs and performance of superannuation funds, and hence the investment experience of fund members (Liu and Arnold, 2010b, 2012).

While outsourcing itself can be a legitimate business practice, the point of contention occurs when related parties are used to carry out these services. As they create multiple layers of principle-agent relationships, there is a greater potential for agency problems between trustee-directors and service providers (Liu, 2013). Conflicts of interest may also arise due to imperfect monitoring of the related parties (Ryngaert and Thomas, 2012). Given that superannuation fund trustee-directors are argued to suffer from resource and expertise constraints (Sy, 2008b), the likelihood of poor monitoring is particularly significant. The fee negotiation process between the fund and service provider is also unlikely to be on an arm's-length basis, and there is virtually little risk of the related party service providers being dismissed for poor performance (Freeman *et al.*, 2008). Overall, superannuation funds can find themselves in disadvantaged positions when managing these related party service provider arrangements leading to inferior performance.

2.2 An overview of trustee-director duties

Australian superannuation funds are governed by trustees. Superannuation trustees hold the legal ownership of superannuation fund assets and assume both common law fiduciary duties and statutory responsibilities for safeguarding fund members' interests. They have ultimate responsibilities for, and broad discretion over, fund operations and investment. In addition, as superannuation trustees predominately take the form of a corporation (i.e. a corporate trustee), they are also subject to Corporations Law.

These two structures mean that superannuation fund trustee-directors have both duties to beneficiaries of the trust (i.e. fund members) as trustees and duties to the shareholders of the company as directors of a corporation. In not-for-profit funds, trustee-directors' shares are generally held by the employer and employee sponsors, who have a non-beneficial shareholding and do not have a right to a dividend. Thus, there is generally no conflict between trustee-directors' two sets of duties in not-for-profit funds. By contrast, the profit motive in retail (i.e. for-profit) funds inevitably creates conflicts between their trustee-directors' duties to shareholders under the *Corporations Act* and their duties to the beneficiaries of the trust (i.e. fund members) under the *Superannuation Industry Supervision (SIS) Act*. Sy (2008a) highlights that retail fund trustee-directors often find themselves in a situation where they must decide on whether company shareholder profits or superannuation fund member benefits should have priority in making decisions.

To resolve this conflict, S52(2)(d) was introduced into the *SIS Act* in 2014 as part of the Stronger Super Reforms arising from the Cooper Review. The provision requires trustees to act in the best interests of beneficiaries and if a conflict of duties arises, to prioritise the interests of beneficiaries above all others. However, it is unclear whether the introduction of the new provision can effectively and completely address the inherent conflicts of duties in retail funds. Furthermore, the use of trustee-directors who are affiliated with service providers in retail funds is likely to give rise to conflicts of interest which escalate these agency issues.

2.3 The role of trustees in superannuation fund governance

The introduction of compulsory superannuation and the increasing adoption of defined-contribution (DC) arrangements place much of the risk and responsibilities associated with retirement income provision on individual retirement savers who typically have limited capacity and willingness to comprehend and engage with the complex superannuation system (Bateman, 2009). The high proportion of disengaged members combined with few investment restrictions, high allocation to growth assets and prevalent use of external service providers (Fear and Pace, 2008; Liu and Arnold, 2010a) drive

the substantial risks to which ordinary superannuation members are exposed. This implies that most superannuation fund members inextricably rely heavily on trustees for effective governance and prudent operation of their superannuation funds.

Superannuation trustees represent the most important governance mechanisms for fund members. Unlike in the corporate sector, where a range of governance mechanisms are available to protect the interests of shareholders, superannuation funds are subject to a very limited number of governance mechanisms (Clark, 2004). Due to the absence of shareholdings and prohibition on borrowing within the trust structure of superannuation funds, the governance mechanisms associated with external monitoring (e.g. monitoring by large shareholders and debt-holders) are not available in the superannuation context. Market discipline through takeover mechanisms is also unavailable at the fund level because of the trust structure. The high proportion of disengaged members (Fear and Pace, 2008) further implies that product-market competition is unlikely to adequately serve as an efficient disciplinary mechanism (Super System Review, 2010). Consequently, the trustee board becomes the predominant means upon which fund members can rely for governance purposes.

3. Literature review and hypotheses

In the Australian superannuation context, Liu and Arnold (2010a) find that not-for-profit funds and retail funds have different models for outsourcing. Not-for-profit funds tend to use independent outsourcing arrangements. This is mainly driven by their needs to access external expertise and economies of scale/scope. Retail funds, on the other hand, are more likely to outsource to related party service providers. Liu (2013) purports that this is motivated by the business model of vertically integrated financial institutions (which offer these retail superannuation funds) to capture margins across their vertically integrated value chain through related entities within the group. Liu (2013) finds evidence to support this argument in that retail fund related party service providers tend to charge much higher fees than their independent counterparts. This is consistent with evidence from the mutual fund industry which shows that related party service providers charge substantially higher fees and earn abnormal economic profits (Freeman *et al.*, 2008). Liu and Arnold (2010b, 2012) also show that it is the combination of related party usage in for-profit funds that leads to higher fees while this is not observed in not-for-profit funds. These conflicts of interest arising from retail funds' related party outsourcing arrangements add to the existing concerns relating to their competing obligations to shareholders and fund members. Thus, we hypothesise that this will translate into negative fund performance:

H1: Superannuation fund performance is negatively associated with the use of related party service providers in retail funds.

The above discussion focuses on ‘relatedness’ between the fund and service providers. The trustee-directors themselves may also be affiliated with service providers. As explained earlier, selecting and monitoring service providers constitutes one of the most important responsibilities of superannuation fund trustee-directors (Liu, 2013). Their affiliation with service providers thus influences their key duty to act in fund members’ best interests.

Affiliated trustee-directors may face conflicts of interest at the service provider selection stage. There is empirical evidence that mutual fund directors preferentially hire service providers based on their past business affiliations (Kuhnen, 2009). Conflicts of interest may similarly arise in the on-going monitoring of service providers. For example, directors who are affiliated with service providers may have incentives to act in ways that align with the service providers given that they were appointed due to their affiliation. They may also have aspirations to obtain more board seats (and thus more compensation) on the boards of the service providers’ other funds. In such a situation, an affiliated director is unlikely to recommend that their service provider be replaced (Fricke, 2015). These findings suggest that there are likely to be high conflicts of interest when trustee-directors are affiliated with fund service providers. The high agency costs can result in excessive outsourcing fees and sub-optimal service quality leading to underperformance. This leads to our next hypothesis:

H2: Superannuation fund performance is negatively associated with trustee-director affiliation to service providers in retail funds.

Finally, evidence from the listed company setting suggests that the value-destroying effect of related party transactions can be stronger in larger conglomerate groups (Kang *et al.*, 2014). Firms which are controlled by a conglomerate group are more likely to engage in related party transactions compared to firms which do not belong to such a group, and this arrangement is associated with negative firm performance (Jian and Wong, 2003). We hypothesise that as vertically integrated conglomerate groups operate across more business lines, they have more opportunities to employ related parties in a greater range of service areas. Thus, we expect to observe a more severe negative relationship between superannuation fund performance and trustee-director affiliation in funds belonging to a vertically integrated conglomerate group. This leads to the final hypothesis:

H3: There is a more severe negative relationship between superannuation fund performance and trustee-director affiliation in funds belonging to a vertically integrated conglomerate group.

4 Data and sample

4.1 Data sources

Our data are manually collected from the following sources. Service provider data come from s29QB *SIS Act* statutory disclosure documents relating to material outsourcing. We download these documents from fund websites and concentrate on five key outsourcing arrangements being administration, asset consulting, custodian services, insurance services and auditing. While funds also engage service providers for investment management, legal services and actuarial services (Liu and Arnold, 2010a), we exclude these arrangements from our analysis due to the lack of adequate disclosure provided by funds. Trustee-director data are sourced from s29QB statutory disclosure documents relating to directors and executive officers and their relevant interests and duties. Finally, fund characteristics and investment performance data are sourced from APRA's statistical publications (APRA, 2017a,b). The performance data for the corresponding period are selected and merged with the service provider and trustee-director data to create the final dataset for the analysis.

4.2 Sample

Our sample selection process began with the universe of 103 superannuation funds and the 116 default investment options (i.e. MySuper) they offer as at 30 June 2015 (APRA, 2017b). We were unable to access the statutory disclosure documents for two non-public-offer corporate funds, and hence they were excluded from the dataset. Given that the s29QB *SIS Act* statutory disclosure requirements for superannuation funds to report service provider and trustee-director information only came into effect on 1 July 2014, our sample covers the period of 2015–2016. Our sample period is consistent with the related party literature in the corporate setting (Gordon *et al.*, 2007; Ryngaert and Thomas, 2012; Kohlbeck and Mayhew, 2017).

The final sample includes 101 funds, for which we identified 1,878 outsourcing arrangements provided by 170 service providers in the five outsourcing areas of focus and 860 unique trustee-directorships (held by 729 trustee-directors). These funds hold \$1,093 billion in total assets and 21.8 million member accounts and represent 77 percent of all APRA regulated superannuation assets and 78 percent of all member accounts (APRA, 2017a).

At the investment option level, there are 114 default products known as 'MySuper'. MySuper is the next generation of default investment options (or 'products') offered by superannuation funds. Fund members who do not make a product choice are allocated into this product. In our sample, MySuper products hold \$470.9 billion in total assets and 14.9 million member accounts. This represents 99 percent of all MySuper assets and member accounts in the population (Australian Prudential Regulation Authority (APRA), 2017b).

Table 1 summarises the sample coverage. Overall, the sample is representative of the superannuation fund population and covers all sectors of the industry (see Australian Prudential Regulation Authority (APRA), 2017a).

5 Variables

5.1 Measuring superannuation fund investment performance

We measure superannuation fund investment performance using both fund level and investment option level measures following Ellis *et al.* (2008) and Sy and Liu (2009) that are specifically designed for superannuation funds.

At the fund level, the first three focus on gross returns: Gross raw investment return (*Gross Return*) is calculated as earnings before tax and expenses divided by cash flow adjusted net assets following Australian Prudential Regulation Authority (APRA) (2017a,b). Gross over-benchmark return (*Gross Value Added*) is

Table 1
Sample coverage

	All funds	Retail funds	Not-for-profit funds
<i>Panel A: Service provider and trustee-director statistics</i>			
Number of service providers	170		
Number of outsourcing arrangements	1,878		
Number of trustee-directors	729		
<i>Panel B: Fund assets by fund type</i>			
Number of funds	101	35	66
Total assets (\$billion)	1,093.00	401.9	691.2
Average total assets (\$billion)	10.8	11.5	10.5
<i>Panel C: Fund member accounts by fund type</i>			
Total number of member accounts (*000)	21,830	8,455	13,376
Average number of member accounts (*000)	216.1	241.6	202.7
Average account balance (*000)	73.1	65.1	300.3
<i>Panel D: MySuper by fund type</i>			
Number of MySuper products	114	46	68
Total MySuper assets (\$billion)	471.0	54.6	416.4
Average MySuper assets (\$billion)	4.1	1.2	6.1
Total Number of MySuper accounts (*000)	14,852	3,289	11,563
Average number of MySuper accounts (*000)	130.3	71.5	170.0

This table provides a breakdown of the sample of 101 unique funds during the period 2015–2016. Panel A presents service provider and trustee-director statistics, whereas Panels B–D presents fund type breakdown of fund assets fund member accounts and MySuper products, respectively.

calculated as gross return minus asset allocation adjusted benchmark returns¹ following Ellis *et al.* (2008) to account for asset allocation differences. Gross over-benchmark risk-adjusted return (*Gross RAVA*) is calculated as gross value added divided by fund volatility following Sy and Liu (2009), which control for both risk and asset allocation differences.²

Next, we calculate three fund-level net returns measures: Net raw investment return (*Net Return*) is calculated as earnings after tax and expenses divided by cash flow adjusted net assets following Australian Prudential Regulation Authority (APRA) (2017a). Net over-benchmark return (*Net Value Added*) is calculated as net return minus asset allocation adjusted benchmark returns following Ellis *et al.* (2008) to again account for asset allocation differences. Net over-benchmark risk-adjusted return (*Net RAVA*) is calculated as net value added divided by fund volatility following Sy and Liu (2009), which also control for both risk and asset allocation differences.

Finally, we consider performance at the investment option level because while fund-level performance gives a holistic view of the performance of the fund based on internal and external factors, returns at the investment option level are the primary concern of fund members. Thus, we measure *MySuper Net Return* as the net return (as explained above) of each fund's default investment option (known as MySuper). We concentrate on the investment performance of MySuper products for three key reasons. First, while superannuation funds typically offer a large number of investment options to members, MySuper as the default investment option accounts for most of the fund members and total assets. For fund members who do not make an active choice of investment options when initially placed in a fund, their superannuation contribution will be invested in a MySuper product nominated by their employer. Given that a large proportion of superannuation fund members do not choose their investment options (Fear and Pace, 2008), their retirement savings are consequently placed in MySuper. Therefore, MySuper holds the majority of fund membership and total assets. Second, MySuper is a simple and cost-effective investment option which is designed to be easily comparable. Third, under the new regulatory regime, trustee-directors have increased and specific duties which they must carry out in relation to the design, implement and delivery of MySuper.³ Superannuation trustees wanting to offer a MySuper

¹ Benchmark return is calculated as the sum of products of the asset weights and the benchmark index returns of each asset class following the methodology developed in Ellis *et al.* (2008).

² Fund volatility is calculated from asset allocation and benchmark index variance-covariance matrix following the RAVA metric methodology developed by Sy and Liu (2009).

³ Further details on the additional obligations of trustees in relation to MySuper products can be found at http://www6.austlii.edu.au/cgi-bin/viewdoc/au/legis/cth/consol_act/sia1993473/s29vn.html.

product are required to hold a specific MySuper licence issued by APRA. MySuper products are also required to be separately accounted for and reported, which means that investment option level performance data for MySuper are publicly available (unlike other investment options, where investment performance data are reported in aggregate). Thus, MySuper investment performance is used in this paper to examine superannuation investment performance at the investment option level.

5.2 Measuring related party service providers

We measure the relatedness between service providers and superannuation funds in the following way. Service providers are deemed ‘related’ (i) if they are owned by the fund trustee, (ii) if the trustee is a subsidiary of the service provider or (iii) if the service provider and trustee are entities of the same conglomerate group⁴. This classification is consistent with Liu and Arnold (2010a).

Following Kohlbeck and Mayhew (2017), we do not assume that all related party dealings suffer from the same conflicts of interest and instead recognise that funds are motivated to use related parties in outsourcing arrangements based on differences in their business model. Therefore, we measure the use of related party service providers with *RPSP-Retail* a binary variable equal to 1 if a retail fund uses a related party service provider and *RPSP-NFP* a binary variable equal to 1 if a not-for-profit (e.g. industry, corporate or public sector) fund uses a related party service provider.

5.3 Measuring trustee-director affiliation

Trustee-director affiliation is determined using data collected on trustee-directors’ current position, duties and interests within and outside the fund’s group. A trustee-director is deemed ‘affiliated’ if (i) the trustee-director is also a director, executive or employee of a service provider of the fund, or (ii) a director, executive or employee of a connected entity or a related body corporate within a service provider group.

Again, we consider that trustee-director affiliation is driven by the different board appointment procedures in the different sectors of the industry. Thus, our primary measures of trustee-director affiliation are *% Affiliated—Retail*, and *% Affiliated—NFP* which are the proportion of affiliated trustee-directors on a retail fund board and not-for-profit (e.g. industry, corporate or public sector) fund board, respectively. For robustness, we also consider the degree of

⁴ This definition includes joint ventures that are collectively owned by multiple industry funds with or without a controlling entity in the structure. For example, Frontier Advisors—an asset consultant jointly owned by Australian Super, Cbus, HESTA and FIRST Super.

affiliation on the board with *Maj. Affiliated—Retail* and *Maj. Affiliated—NFP* which are binary variables equal to 1 if at least 50 percent of trustee-directors are affiliated on a retail fund board and a not-for-profit (e.g. industry, corporate or public sector) fund board, respectively.

5.4 Control variables

We also control for the following control variables. *Fund size* is calculated as the log of total assets under management. As in the mutual fund setting, it is likely that larger pension funds have economies of scale benefits that result in improved fund performance (Tufano and Sevick, 1997). *Retail fund* is a binary variable equal to 1 if the fund is a for-profit retail fund which controls for differences in performance based on fund type. Cummings (2016) finds that retail funds have higher operating expense ratios than other fund types. Furthermore, Coleman *et al.* (2006) and Ellis *et al.* (2008) find a negative association between retail funds and performance. In additional testing, we also control for a range of trustee board governance variables which are discussed in Section 6.5. All variables are summarised in Table A1.

6. Results

6.1 The related party outsourcing landscape

We begin by documenting the current related party outsourcing landscape in the Australian superannuation industry in 2016.⁵ Table 2 shows the extent to

Table 2
Number of outsourcing funds by function

	No. of corporate funds	No. of industry funds	No. of public sector funds	No. of retail funds	Total
Number of funds	14	42	10	35	101
Administration	13 (1)	32 (0)	5 (0)	35 (24)	85 (25)
Asset Consulting	11 (0)	39 (4)	9 (0)	24 (15)	83 (19)
Custodian Services	13 (2)	41 (0)	10 (0)	35 (8)	99 (10)
Insurance	14 (2)	42 (0)	10 (0)	35 (12)	101 (14)
Auditing	14 (0)	42 (0)	10 (0)	35 (0)	101 (0)

This table summarises the number of funds which outsource by fund type and across the five key services. Figures in brackets indicate the number of funds which outsource to a related party.

⁵ The level of outsourcing and the number of related party service provider arrangements is consistent over the 2015–2016 sample period.

which superannuation funds outsource across five reported outsourcing areas by fund type.

Overall, the results show that outsourcing is prevalent in the superannuation industry. All 101 funds in the sample outsource at least two functions, and the vast majority of funds outsource all five functions. Regarding each outsourcing function of interest, 85 funds (84 percent) outsource administration services, 83 funds (82 percent) employ asset consultants, almost all funds use a custodian, and all sample funds outsource insurance and auditing functions. These findings are consistent with those reported in 2006 (Liu and Arnold, 2010a, 2012) highlighting that outsourcing remains an indispensable component of the operation of Australian superannuation funds.

Table 2 also shows that there are clear distinctions in the use of related party service providers in the different types of funds. Not-for-profit funds predominantly use unrelated service providers, whereas retail funds tend to outsource to related parties. In sum, 80 percent of retail funds use at least one related party service provider (excluding investment managers). This compares to 10 percent of not-for-profit funds⁶ that use related party service providers. Retail trustee-directors are more likely to use related party administrators (24 out of 35), asset consultants (15 out of 24) and insurers (12 out of 35). No funds use related party auditors due to regulation which requires funds to use independent auditors.

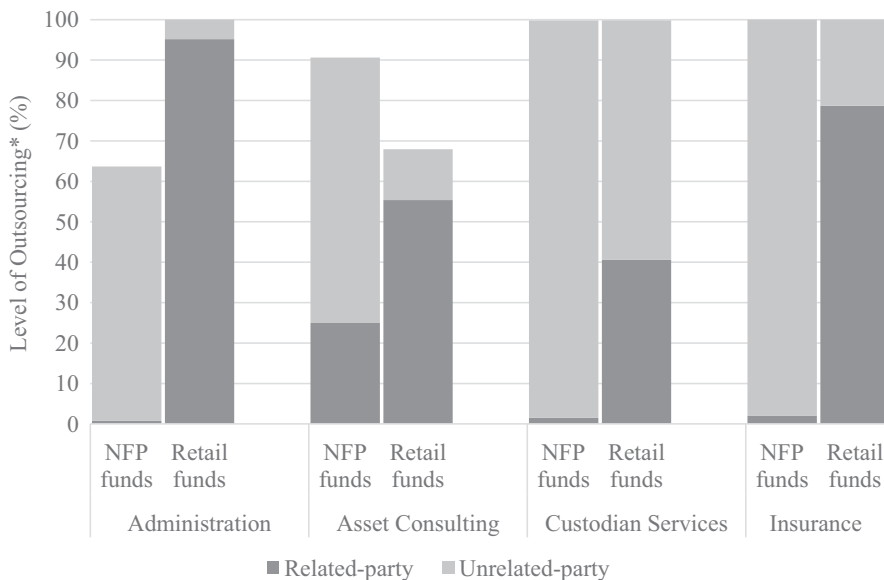
In addition to analyse the number of funds which use related party outsourcing, we also consider the proportion of total fund assets outsourced to related parties compared to unrelated service providers by fund type for the four key functions in Figure 1. In 2016, 95 percent of total fund assets in retail funds are managed by related party administrators. This compares to 67 percent documented in 2006 (Liu and Arnold, 2010a). Similar increases in related party service provider usage in retail funds are also found in insurance (79 percent in 2016 vs. 60 percent 2006), asset consulting (55 percent in 2016 vs. 15 percent in 2006) and custodian (41 percent in 2016 vs. 10 percent in 2016) outsourcing arrangements (Liu and Arnold, 2010a, 2012).

6.2 *The trustee-director affiliation landscape*

As mentioned earlier, the heavy reliance on service providers implies that selecting and monitoring service providers is a key duty of superannuation fund trustee-directors and hence their affiliation to service providers can be used as a proxy for how ‘captive’ the board is to the choice of particular service providers.

Figure 2 illustrates the percentage of affiliated trustee-directors by affiliation type and sector in 2016. The results show that retail fund boards are dominated

⁶ That is, three corporate funds of financial companies and four industry funds that use a collaborative joint venture for asset consulting services.



* Level of outsourcing is calculated based on assets under management of total funds.

Figure 1 The level of related party outsourcing by function and fund type for total assets under management.

This figure depicts the level of outsourcing to related and unrelated service providers for each of the four functions by fund type. The level of outsourcing is calculated based on fund assets under management. *Level of outsourcing is calculated based on assets under management of total funds.

by affiliated trustee-directors—on average, 78 percent of retail fund trustee-directors are affiliated.⁷ In contrast, the presence of affiliated trustee-directors in not-for-profit funds is much lower and predominately observed in corporate funds. On average, 34 percent of corporate fund trustee-directors are affiliated. This is explained by these trustee-directors being employees of these financial companies’ staff corporate funds. The use of affiliated trustee-directors in industry and public sector funds is negligible.

Figure 2 also illustrates the percentage of union-affiliated trustee-directors. Although these trustee-directors are not affiliated with fund service providers, they are highlighted simply for comparison purposes. While union-affiliated trustee-directors are typically portrayed as the dominant force in not-for-profit funds (especially in industry funds), the percentage of

⁷ Of these, 34 percent of these trustee-directors are either executives or employees of a related entity within the service provider group, and the remaining 44 percent are directors of a related entity within the service provider group.

union-affiliated trustee-directors only accounts for 29 percent of trustee-directors in industry funds, 30 percent of trustee-directors in public sector funds and 4 percent of trustee-directors in corporate funds. This comparison reveals that retail funds, which are dominated by affiliated trustee-directors, are more likely to be subject to potential conflicts of interests and duties than their not-for-profit counterparts.

The proportion of fund assets and member accounts managed by retail funds dominated by affiliated trustee-directors is demonstrated in Figure 3. The first ring chart in Figure 3 shows that 93 percent of the total fund assets in the sample retail funds are managed by trustee boards that have more than 75 percent of affiliated trustee-directors, where 80 percent of the total assets are managed by retail trustee boards of a vertically integrated conglomerate group such as the four largest banks in Australia. The second ring chart indicates that 94 percent of retail fund member accounts are managed by trustee boards that have more than 75 percent affiliated trustee-directors, where vertically integrated conglomerate funds account for 85 percent of the member accounts. Similarly, ring charts three and four reveal the same picture when MySuper assets and member accounts are considered.

Overall, over 94 percent of retail assets and member accounts (at both total fund level and MySuper level) are managed by trustee boards that are dominated by affiliated trustee-directors (i.e. have more than 50 percent affiliated trustee-directors). These results reveal that the assets and member accounts in the retail sector are predominately managed under a highly affiliated trustee environment, in which multiple layers of conflicts of interest and duties are likely to be an inherent and acute sector issue rather than an idiosyncratic fund/trustee issue.

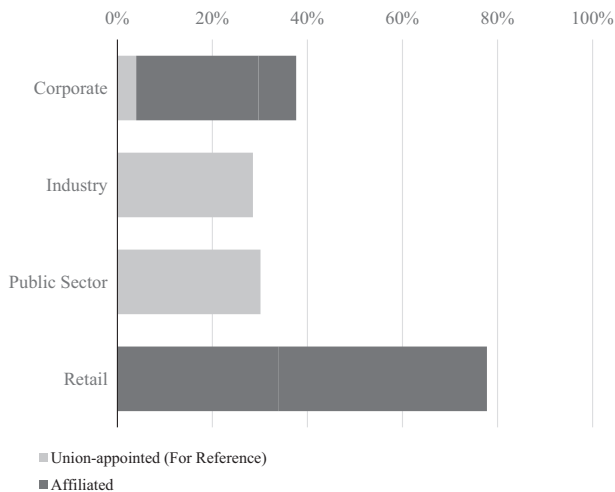


Figure 2 Trustee-director affiliation by affiliation type and fund type

It is also worth noting that all retail funds of vertically integrated conglomerate groups have trustee boards with more than 75 percent affiliated trustee-directors. Having control over the trustee boards through affiliated trustee-directors might be part of the business model of these funds, as it is an effective way of making the board 'captive' and reducing its ability to manage any less-than-arms-length outsourcing arrangements (Freeman *et al.*, 2008).

Overall, this section shows the high usage of related party service providers and affiliated trustee-directors in retail funds. In the next section, we examine whether this has a detrimental impact on retail fund members' investment performance. The analysis provides evidence on whether this issue should be the focus of the current and future governance reforms in the superannuation industry. The descriptive statistics of the variables are reported in Table 3.

6.3 Related party outsourcing and superannuation investment performance

Results of ordinary least squares regressions with year fixed effects are reported in Table 4.⁸ We measure investment performance with the first six alternative measures and related party outsourcing with *RPSP-Retail* and *RPSP-NFP* as described in Section 5.2. We control for fund size, retail funds and year fixed effects in all regressions. As discussed in Section 5, the performance measures used in columns 2 and 4 (Gross Return and Net Value Added) control for fund asset allocation, and the performance measures used in columns 3 and 6 (Gross Return and Net RAVA) control for both fund asset allocation and risk. The results show that *RPSP-Retail* is negatively and statistically significantly related to superannuation fund performance. The effect is consistent across all six measures of fund-level investment performance. The underperformance of retail funds that use related party outsourcing arrangements is also economically significant. For example, column 4 shows that when investment performance is measured using *Net Return*, retail funds that use related party service providers underperform their peers by 1.29 percent per annum at the total fund-level *ceteris paribus*. When investment performance is measured using over-benchmark return (*Net Value Added*) in column 5, the underperformance is 1.32 percent per annum. Overall, the results support H1—that is, superannuation fund performance is negatively associated with the use of related party service providers in retail funds.⁹

⁸ We do not expect there to be any endogeneity concerns in our model specifications as the decision to use related party service providers or to appoint affiliated trustee-directors is independent of the funds' annual performance. Instead, as explained earlier, it is largely a business model related decision.

⁹ In contrast, there is no relation between *RPSP-NFP* and fund performance in Table 4. We test the effect of *RPSP-NFP* on MySuper returns and long-term fund performance in Table 8.

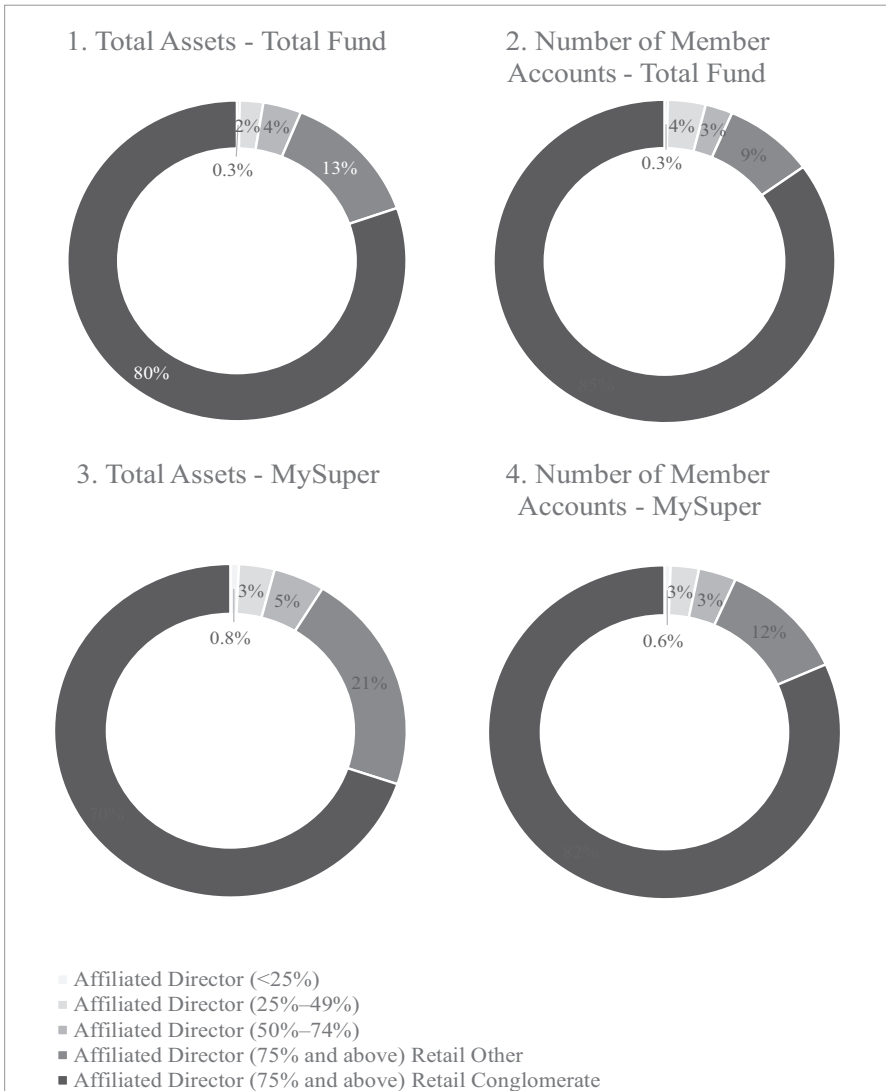


Figure 3 Retail fund assets and member accounts by level of trustee-director affiliation and fund type.

This figure depicts the distribution of retail fund assets and member accounts by the level of trustee-director affiliation and fund type.

The results reveal that the use of related party outsourcing arrangements in retail funds is detrimental to fund member’s investment performance. The underperformance is likely due to their commercial endeavour of earning a

Table 3
Descriptive statistics

Variables	Mean	Median	SD	Min	Max
<i>Dependent variables</i>					
Gross Return	0.065	0.072	0.035	-0.007	0.130
Gross Value Added	0.005	0.008	0.029	-0.072	0.091
Gross RAVA	0.041	0.091	0.302	-0.884	0.822
Net Return	0.057	0.060	0.035	-0.014	0.119
Net Value Added	-0.004	0.001	0.028	-0.085	0.087
Net RAVA	-0.048	0.007	0.300	-0.042	0.646
<i>Independent variables</i>					
RPSP-Retail	0.27	0	0.45	0	1
RPSP-NFP	0.03	0	0.17	0	1
% Affiliated—Retail	0.27	0	0.41	0	1
% Affiliated—NFP	0.05	0	0.19	0	1
Maj. Affiliated—Retail	0.29	0	0.45	0	1
Maj. Affiliated—NFP	0.05	0	0.22	0	1
<i>Control variables</i>					
Fund Size (\$million)	10,841	3,478	17,941	72,417	103,697
Retail Fund	0.35	0	0.48	0	1

This table presents descriptive statistics for the variables used in this study.

profit when operating in a profit-seeking retail fund environment. Our results are consistent with those of Liu (2013) in that the use of related parties in retail funds is motivated by their business model to maintain control of and capture margins in each of the functions in the value chain of their conglomerate groups. The fact that 80 percent of retail funds use at least one related party service provider as discussed above further suggests that this is not an idiosyncratic fund/trustee practice, but an inherent business model of the retail sector. Prior research by Coleman *et al.* (2006) and Ellis *et al.* (2008) finds that retail funds underperform their not-for-profit peers. Our results indicate that this underperformance is mainly driven by related party service provider usage. This reflects the business model of the retail sector which is to employ related party service providers to maintain control of and capture margins in each of the functions in the value chain of their conglomerate groups.

These results have important implications. Given that over 94 percent of the retail assets and member accounts are managed by trustee boards that are dominated by affiliated trustee-directors, these results show that retail fund assets and member accounts are predominately invested in funds that significantly underperform the rest of the superannuation industry.

6.4 Trustee-director affiliation and superannuation investment performance

We next examine trustee-director affiliation. We begin by confirming the relationship between trustee-director affiliation and the likelihood of related

Table 4
Related party service providers and fund investment performance

	(1) Gross Return	(2) Gross Value Added	(3) Gross RAVA	(4) Net Return	(5) Net Value Added	(6) Net RAVA
RPSP-Retail	-0.0216*** (-4.63)	-0.0219*** (-3.91)	-0.2401*** (-4.20)	-0.0129*** (-2.71)	-0.0132** (-2.33)	-0.1479** (-2.54)
RPSP-NFP	0.0061 (1.46)	0.0031 (0.62)	0.0388 (0.76)	0.0062 (1.46)	0.0032 (0.63)	0.0354 (0.68)
Fund Size	0.0031** (2.09)	0.0007 (0.41)	0.0079 (0.43)	0.0039** (2.53)	0.0015 (0.81)	0.0166 (0.88)
Retail Fund	0.0077* (1.76)	0.0144*** (2.75)	0.1578*** (2.95)	-0.0010 (-0.23)	0.0057 (1.08)	0.0623 (1.14)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	192	192	192	192	192	192
Adj. R ²	0.961	0.631	0.653	0.950	0.609	0.637

This table reports the regression results testing the effect of using related party service providers on fund investment performance. The key variables of interest are *RPSP-Retail* (a binary variable equal to 1 if a retail fund uses a related party service provider) and *RPSP-NFP* (a binary variable equal to 1 if a not-for-profit fund uses a related party service provider). The dependent variables are fund-level gross returns (in columns 1–3) and fund-level net returns (in columns 4–6). All variables are summarised in Table 2. T-statistics are reported in parenthesis.

*, ** and *** represent significance at the 10, 5 and 1 percent levels, respectively.

party service provider usage. Results of ordinary least squares regressions with year fixed effects are presented in Table 5. The dependent variable considers a fund's usage of related party service providers which is measured in two alternative ways: *RPSP Usage* is a binary variable equal to 1 if a fund uses a related party service provider, whereas *No. of RPSPs Used* captures the number of related party service providers used by a fund. The results show that both measures of trustee-director affiliation are positively associated with the usage and number of related party service providers in both retail and not-for-profit funds. Furthermore, columns 3 and 4 show that retail funds that use affiliated trustee-directors tend to use a higher number of related party service providers. This provides strong evidence supporting the results of Freeman *et al.* (2008), which suggest that where related party service providers control the fund board through affiliated directors, the board becomes 'captive'.

Following the above analysis, we next examine whether trustee boards that become 'captive' engage in a commercial endeavour through related parties to make a profit at the expense of the interests of their fund members. That is, whether trustee-director affiliation is also associated with fund underperformance. We further examine whether this relationship is sector specific. Results of ordinary least squares regressions with year fixed effects are presented in panel A of Table 6.

Table 5
 Affiliated trustee-directors and related party service provider usage

	(1) RPSP usage	(2) RPSP usage	(3) No. of RPSPs used	(4) No. of RPSPs used
% Affiliated—Retail	2.2188*** (3.18)		3.1463*** (8.38)	
% Affiliated—NFP	1.9988*** (3.56)		1.0016*** (3.16)	
Maj. Affiliated—Retail		1.0440** (2.31)		1.4684*** (4.79)
Maj. Affiliated—NFP		1.9196*** (3.89)		0.9080*** (3.01)
Fund Size	0.2507 (1.26)	0.3411* (1.83)	0.3337*** (4.01)	0.4478*** (5.01)
Retail Fund	1.3542** (2.27)	2.2154*** (4.50)	-0.3244 (-1.00)	0.9453*** (3.21)
Year Fixed Effects	Yes	Yes	Yes	Yes
Model	Logit	Logit	OLS	OLS
Observations	197	197	197	197
Pseudo R^2	0.6118	0.6097		
Adj. R^2			0.742	0.685

This table reports the regression results testing the effect of affiliated trustee-directors on a fund's usage of related party service providers. The key variables of interest are % *Affiliated—Retail* and % *Affiliated—NFP* (the proportion of affiliated trustee-directors on a retail fund board or not-for-profit fund board, respectively) as well as *Maj. Affiliated—Retail* and *Maj. Affiliated—NFP* (binary variables equal to 1 if at least 50 percent of trustee-directors are affiliated on a retail fund board or not-for-profit fund board, respectively). The dependent variables are *RPSP Usage* (a binary variable equal to 1 if a fund uses a related party service provider) in columns 1 to 2 and *No. of RPSPs Used* (the number of related party service providers used by a fund) in columns 3 and 4. All variables are summarised in Table 2. T-statistics are reported in parenthesis.

*, ** and *** represent significance at the 10, 5 and 1 percent levels, respectively.

Here, the key variables of interest are % *Affiliated—Retail* (proportion of affiliated trustee-directors on a retail fund board) and % *Affiliated—NFP* (proportion of affiliated trustee-directors on a not-for-profit fund board).

Results show that the proportion of affiliated trustee-directors on a retail fund board is negatively and significantly associated with all measures of fund investment performance. This suggests that the use of affiliated trustee-directors in retail funds is detrimental to fund member's investment performance. In comparison, the proportion of affiliated trustee-directors on not-for-profit fund boards is positively and marginally significantly associated with net value added returns in column 5.

It is worth noting that *Retail Fund* is positive in columns 1–3 and 5–6, which suggests that retail funds that do not use affiliated trustee-directors tend to

Table 6
Affiliated trustee-directors and fund investment performance

	(1) Gross Return	(2) Gross Value Added	(3) Gross RAVA	(4) Net Return	(5) Net Value Added	(6) Net RAVA
<i>Panel A</i>						
% Affiliated—Retail	-0.0316*** (-4.57)	-0.0390*** (-4.83)	-0.4236*** (-5.13)	-0.0209*** (-2.98)	-0.0283*** (-3.46)	-0.3112*** (-3.69)
% Affiliated—NFP	0.0028 (0.49)	0.0094 (1.42)	0.0595 (0.88)	0.0056 (0.98)	0.0122* (1.84)	0.0895 (1.30)
Fund Size	0.0032** (2.12)	0.0013 (0.73)	0.0125 (0.70)	0.0042*** (2.79)	0.0023 (1.32)	0.0244 (1.34)
Retail Fund	0.0153** (2.54)	0.0285*** (4.06)	0.3056*** (4.25)	0.0052 (0.85)	0.0184** (2.59)	0.1964*** (2.68)
Observations	192	192	192	192	192	192
Adj. R^2	0.960	0.646	0.667	0.950	0.626	0.652
<i>Panel B</i>						
Maj. Affiliated—Retail	-0.0233*** (-4.51)	-0.0276*** (-4.57)	-0.2992*** (-4.84)	-0.0167*** (-3.21)	-0.0210*** (-3.46)	-0.2326*** (-3.71)
Maj. Affiliated—NFP	0.0014 (0.29)	0.0070 (1.23)	0.0438 (0.75)	0.0038 (0.77)	0.0094 (1.64)	0.0688 (1.16)
Fund Size	0.0024 (1.64)	0.0002 (0.13)	0.0015 (0.09)	0.0038** (2.56)	0.0016 (0.93)	0.0168 (0.95)
Retail Fund	0.0097* (1.95)	0.0207*** (3.55)	0.2207*** (3.70)	0.0026 (0.52)	0.0135** (2.31)	0.1446** (2.39)
Observations	192	192	192	192	192	192
Adj. R^2	0.960	0.642	0.662	0.950	0.625	0.652

This table reports the regression results testing the effect of affiliated trustee-directors on fund investment performance. In Panel A, the key variables of interest are % *Affiliated—Retail* and % *Affiliated—NFP*. In Panel B, the key variables of interest are *Maj. Affiliated—Retail* and *Maj. Affiliated—NFP*. The dependent variables are fund-level gross returns (in columns 1–3) and fund-level net returns (in columns 4–6). All variables are summarised in Table 2. Year fixed effects are included in all regressions. T-statistics are reported in parenthesis. *, ** and *** represent significance at the 10, 5 and 1 percent levels, respectively.

outperform in the sample period of 2015–2016. This result may appear to be inconsistent with prior literature (Coleman *et al.*, 2006; Ellis *et al.*, 2008) that retail funds tend to underperform their not-for-profit peers. However, it is important to note that, as Figure 3 indicates, less than 1 percent of the retail assets and member accounts (both total fund and MySuper) are managed by non-affiliated trustee boards. This implies that this apparent positive relationship is driven by a very small number of retail funds that represent a negligible fraction of the retail sector.

For robustness purposes, we re-estimate the above regressions using *Maj. Affiliated—Retail* and *Maj. Affiliated—NFP* as the key variables of interest.¹⁰ Results of ordinary least squares regressions with year fixed effects are reported in panel B of Table 6 which are consistent with those of panel A. That is, retail funds dominated by affiliated trustee-directors are negatively associated with both gross and net fund investment performance.

Regarding the economic significance of the underperformance, the combined impact of retail funds that have a majority of affiliated trustee-directors can be assessed directly by the sum of the coefficients for *Maj. Affiliated—Retail* and *Retail Fund*. e.g. in column 1, retail funds (coefficient of *Retail Fund* is 0.0097) that have a majority of affiliated directors (coefficient of *Maj. Affiliated—Retail* is -0.0233) underperform their not-for-profit peers by 1.36 percent per annum. When investment performance is measured using net over-benchmark return (*Net Value Added*) in column 5, the underperformance is around 1 percent per annum. In contrast, *Maj. Affiliated—NFP* is not associated with fund investment performance. This provides strong evidence that the use of affiliated trustee-directors is only detrimental to retail fund members' investment performance. Overall, these results support H2—that is, superannuation fund performance is negatively associated with trustee-director affiliation to service providers in retail funds. These findings raise serious concerns that conflicts of interest and duties are likely to be an inherent and an acute sector issue rather than an idiosyncratic fund/trustee issue in the retail sector.

It is also possible that more severe conflicts of interest and duties are likely to exist in vertically integrated conglomerate groups. These conglomerate groups operate across more business lines and thus have more opportunities to employ related parties in a greater range of service areas. We, therefore, decompose retail funds with a majority of affiliated trustee-directors into those that are part of a conglomerate group (*Maj. Affiliated—Retail Conglomerate*) and those that are non-conglomerate retail funds (*Maj. Affiliated—Retail Other*). Again, we include *Maj. Affiliated—NFP* in our model specification for comparison purposes. Results of ordinary least squares regressions with year fixed effects are presented in Table 7. The coefficient of *Maj. Affiliated—Retail*

¹⁰ In further robustness tests, we also examine three levels of trustee-director affiliation (25–49 percent, 50–74 percent and 75 percent and above) on each board against investment performance. Unreported results are consistent with the main results.

Conglomerate is significantly more negative than *Maj. Affiliated—Retail Other* in all columns. This suggests that conglomerate retail funds with a trustee board dominated by affiliated trustee-directors have a larger negative effect on all investment performance measures, compared to non-conglomerate retail funds dominated by affiliated trustee-directors. That is, conglomerate retail funds experience higher levels of conflicts of interest and duties. Thus, the results support H3—that is, there is a more severe negative relationship between superannuation fund performance and trustee-director affiliation in funds belonging to a vertically integrated conglomerate group.

6.5 Long-term fund-level performance

We include a number of additional tests for robustness. First, we re-estimate all regressions with long-term fund-level performance (*Net Return*) for the period of 2004–2016 as the dependent variable, assuming the relevant related party outsourcing variables and trustee-director affiliation variables remain consistent at their respective 2015 values.

Regression results are presented in column 1 of Table 8. Each panel represents a different model specification. Overall, results are consistent with the main results and confirm that the use of related party service providers and affiliated trustee-directors in retail funds is detrimental to investment performance in the long term as well as short term. In the case of not-for-profit funds, the results showed no evidence of a negative relationship between related party outsourcing and trustee-director affiliation against fund performance. This provides further evidence that the detrimental effect is only observed in retail funds.

As discussed in Section 5, all these not-for-profit funds are corporate funds for the employees of financial conglomerate companies, which also manage large retail funds. As these conglomerate groups tend to use the same set of related party service providers for both their own staff funds and their retail offerings, the comparison of retail and not-for-profit funds shows that relatedness' *per se* is not detrimental to member performance. Rather, it is the combination of relatedness and profit-orientation that matters. This underperformance of retail funds that use related party service providers is not likely to be driven by the lack of skills or abilities of the related party service providers given that they tend to add value when providing services to their own staff funds.

6.6 Investment option level performance

To investigate the impact of related party outsourcing and trustee-director affiliation on investment option level performance, we use the default investment option—that is, MySuper (as discussed in Section 5.1) and re-estimate all regressions with *MySuper Net Return*. Results of ordinary least

Table 7
Affiliated-trustee-director-dominated board (by retail fund type) and fund investment performance

	(1)	(2)	(3)	(4)	(5)	(6)
	Gross Return	Gross Value Added	Gross RAVA	Net Return	Net Value Added	Net RAVA
Maj. Affiliated—Retail Conglomerate	-0.0323*** (-5.42)	-0.0315*** (-4.42)	-0.3520*** (-4.84)	-0.0261*** (-4.37)	-0.0253*** (-3.54)	-0.2907*** (-3.95)
Maj. Affiliated—Retail Other	-0.0197*** (-3.78)	-0.0261*** (-4.19)	-0.2783*** (-4.38)	-0.0129*** (-2.47)	-0.0193*** (-3.09)	-0.2097*** (-3.26)
Maj. Affiliated—NFP	0.0020 (0.41)	0.0073 (1.27)	0.0471 (0.81)	0.0044 (0.91)	0.0097* (1.69)	0.0724 (1.23)
Fund Size	0.0044*** (2.76)	0.0011 (0.57)	0.0130 (0.67)	0.0058*** (3.65)	0.0025 (1.33)	0.0295 (1.50)
Retail Fund	0.0112** (2.29)	0.0213*** (3.64)	0.2295*** (3.83)	0.0042 (0.84)	0.0143** (2.42)	0.1543** (2.54)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	192	192	192	192	192	192
Adj. R^2	0.962	0.642	0.664	0.952	0.626	0.654

This table reports the regression results testing the effect of affiliated trustee-director-dominated boards (by retail fund type) on fund investment performance. The key variables of interest are *Maj. Affiliated—Retail Conglomerate* and *Maj. Affiliated—Retail Other* which measure conglomerate retail funds with a trustee board dominated by affiliated trustee-directors and non-conglomerate retail funds dominated by affiliated trustee-directors, respectively. The dependent variables are fund-level gross returns (in columns 1–3) and fund-level net returns (in columns 4–6). All variables are summarised in Table 2. T-statistics are reported in parenthesis. *, ** and *** represent significance at the 10, 5 and 1 percent levels, respectively.

*, ** and *** represent significance at the 10, 5 and 1 percent levels, respectively.

squares regressions with year fixed effects are presented in column 2 of Table 8. These results are consistent with the main results and confirm that the use of related party service providers and affiliated trustee-directors in retail funds is detrimental to investment performance at both the default investment option level and the fund level. This analysis further highlights that there is no evidence that the recent reforms increasing trustee duties and responsibilities which were imposed together with the introduction of the new MySuper default product effectively address the conflicts of interest inherent in the retail fund sector.

Table 8

The effect of related party outsourcing and affiliated trustee-directors on long-term and product level investment performance

	(1) Net Return (2004–2016)	(2) MySuper Net Return
<i>Panel A</i>		
RPSP-Retail	−0.0077*** (−2.67)	−0.0171** (−2.43)
RPSP-NFP	0.0032 (1.26)	0.0098 (1.56)
<i>Panel B</i>		
% Affiliated—Retail	−0.0146*** (−3.60)	−0.0362*** (−3.64)
% Affiliated—NFP	0.0222*** (6.53)	0.0082 (0.98)
<i>Panel C</i>		
Maj. Affiliated—Retail	−0.0078*** (−2.59)	−0.0274*** (−3.75)
Maj. Affiliated—NFP	0.0171*** (5.78)	0.0078 (1.08)
<i>Panel D</i>		
Maj. Affiliated—Retail Conglomerate	−0.0245*** (−7.38)	−0.0389*** (−4.52)
Maj. Affiliated—Retail Other	0.0013 (0.42)	−0.0230*** (−3.08)
Maj. Affiliated—NFP	0.0169*** (5.92)	0.0084 (1.19)

This table reports the regression results testing the effect of using related party service providers and affiliated trustee-directors on long-term fund level and investment option level investment performance. Panels A–F represent results of re-estimating models from Tables 4 and 6–9, respectively, with the dependent variable alternatively measured with long-term *Net Return* and *MySuper Net Return* (in columns 1 and 2). Control variables and year fixed-effects are included in all regressions but not reported for the sake of brevity. All variables are summarised in Table 2. T-statistics are reported in parenthesis.

*, ** and *** represent significance at the 10, 5 and 1 percent levels, respectively.

6.7 Additional results

Finally, we include a range of trustee board governance variables to control for their effect on fund investment performance. The main model specification (results of which are reported in Panel A of Table 6) testing trustee-director affiliation and fund performance is re-estimated to include the following control variables: proportion of trustee-directors affiliated with a trade union (e.g. appointed by a trade union or a current/previous trade union official) (*% Union Affiliated*), a binary variable equal to 1 if the chair of the trustee board is independent (SIS Act definition) and unaffiliated (as defined in section 5.3 of this paper) (*Independent Chair*), total number of trustee-directors on the board (*Board Size*), total number of female trustee-directors on the board (*No. of Female Directors*), average age of trustee-directors (*Average Director Age*), average annual remuneration of all trustee-directors (*Total Remuneration*), proportion of trustee-directors with investment expertise (*% Investment EXP*), proportion of trustee-directors with other expertise (i.e. accounting, auditing, insurance, legal, actuarial) that is relevant to fund operations (*% Other EXP*) and finally average percentage of board meetings attended by trustee-directors (*Meeting Attendance*). Ordinary least squares regressions with year fixed effects are performed with results reported in Table A2. The results show that adding these control variables does not change the impact of all key variables of interest. In addition, these findings highlight that trustee-director affiliation is the most important governance factor explaining the performance differences of retail and not-for-profit funds. That is, there is a persistent negative effect of both related party outsourcing and trustee-director affiliation on superannuation fund investment performance in retail funds.

7 Conclusion

In this paper, we examine the impact of related party outsourcing and trustee-director affiliation on investment performance of Australian superannuation funds using a sample of 101 superannuation funds for the period of 2015–2016.

We document a heavy reliance on service providers implying that these external parties have a significant influence on the costs and performance of superannuation funds. We also observe clear patterns of outsourcing in different types of funds where not-for-profit funds predominately use unrelated service providers, and retail funds tend to outsource to related parties. In addition, we find a significant increase in related party service provider usage in retail funds over the last decade. Our analysis of trustee-director affiliation shows that the majority of retail fund assets are governed by trustee boards that are dominated by affiliated trustee-directors. These results suggest that retail fund member accounts are likely to be subject to multiple layers of conflicts of interest and duties.

We then examine the impact of related party outsourcing and trustee-director affiliation on investment performance. We find that both the use of related party outsourcing arrangements and trustee-director affiliation in retail funds is detrimental to fund member's investment performance. The underperformance of these retail funds provides evidence that retail funds which are dominated by affiliated trustee-directors tend to prioritise their self-interests over the interests of fund members when faced with conflicts of interest. Furthermore, we show that there is likely to be more severe conflicts of interests and duties and more significant underperformance with higher levels of trustee-director affiliation and when retail funds are part of a vertically integrated conglomerate group. Given the significant proportion of assets held in retail funds, this represents a major source of inefficiency in the superannuation system. Our results are robust to alternative measures of investment performance (i.e. net return, over-benchmark return, risk-adjusted return with asset allocation adjustment) in both the short term and the long term at both the total fund level and MySuper (i.e. the default investment option) level.

Our study has important practical implications. First, our results suggest that recent regulatory reforms requiring trustees to give priority to the interests of fund members when a conflict of interest arises did not effectively address the conflicts of interest in retail funds. This finding is relevant to the current Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry.

Second, our analysis of trustee-director affiliation highlights the shortcomings of the 'independent director' definition used in the legislation. Under this definition, a trustee-director is classified as 'independent' if he/she is not a member of the fund, and is neither related to an employer-sponsor nor an organisation representing the interests of employer-sponsors or fund members. While this definition recognises trustee-directors' affiliation with key stakeholders of employer-sponsored superannuation funds, it does not capture trustee-directors' affiliation with other interested parties that may have a material financial or business relationship with the fund, such as service providers. As a result, almost all non-executive trustee-directors in retail funds have been reported as 'independent' trustee-directors. This creates a misleading perception that retail funds have a majority of unaffiliated trustee-directors and conceals the fact that real independence is in fact, a scarce commodity in retail funds.

Third, this research is relevant to the examination of alternative models for allocating default fund members as part of the current Productivity Commission Review on Superannuation. Our results show that the retail fund governance structure coupled with trustees' profit-seeking motivations and business model gives rise to agency issues that are significantly detrimental to fund members' investment outcomes. This also represents a major source of inefficiency in the superannuation system. As default members are likely to be dispersed and disengaged, a key consideration in assessing the design of default allocation models should be their effectiveness in safeguarding members against exposure to a high agency cost environment.

References

- Australian Prudential Regulation Authority (APRA), 2017a, *Annual fund-level superannuation statistics* (Australian Prudential Regulation Authority).
- Australian Prudential Regulation Authority (APRA), 2017b, *Annual MySuper statistics* (Australian Prudential Regulation Authority).
- Bateman, H., 2009, *Retirement income provision in Australia—outstanding design issues in a mature system*, Working paper (University of New South Wales, Sydney, NSW).
- Benson, K., M. Hutchinson, and A. Sriram, 2011, Governance in the Australian superannuation industry, *Journal of Business Ethics* 99, 183–200.
- Clark, G. L., 2004, Pension fund governance: expertise and organizational form, *Journal of Pension Economics & Finance* 3, 233–253.
- Coleman, A. D. F., N. Esho, and M. Wong, 2006, The impact of agency costs on the investment performance of Australian pension funds, *Journal of Pension Economics & Finance* 5, 299–324.
- Cummings, J. R., 2016, Effect of fund size on the performance of Australian superannuation funds, *Accounting & Finance* 56, 695–725.
- Ellis, K., A. Tobin, and B. Tracey, 2008, *Investment performance, asset allocation and expenses of large superannuation funds*, Working paper (Australian Prudential Regulation Authority).
- Fear, J., and G. Pace, 2008, *Choosing not to choose: Making superannuation work by default* Discussion Paper No. 103 (The Australia Institute).
- Freeman, J. P., S. L. Brown, and S. Pomerantz, 2008, Mutual fund advisory fees: new evidence and a fair fiduciary duty test, *Oklahoma Law Review* 61, 83–154.
- Fricke, E., 2015, Board holdings, compensation and mutual fund manager turnover, *Journal of Financial Services Research* 47, 295–312.
- Gordon, E. A., E. Henry, T. J. Louwers, and B. J. Reed, 2007, Auditing related party transactions: a literature overview and research synthesis, *Accounting Horizons* 21, 81–102.
- Jian, M., and T. J. Wong, 2003, *Earnings management and tunneling through related party transactions: evidence from Chinese corporate groups*, Working paper (School of Business and Management, Hong Kong University of Science and Technology, London).
- Kang, M., H.-Y. Lee, M.-G. Lee, and J. C. Park, 2014, The association between related-party transactions and control–ownership wedge: evidence from Korea, *Pacific-Basin Finance Journal* 29, 272–296.
- Kohlbeck, M., and B. W. Mayhew, 2017, Are related party transactions red flags?, *Contemporary Accounting Research* 34, 900–928.
- Kuhnen, C. M., 2009, Business networks, corporate governance and contracting in the mutual fund industry, *Journal of Finance* 64, 2185–2220.
- Liu, K., 2013, *Australian superannuation: operational structure, investment performance and trustee governance*, Ph.D. thesis (University of Sydney, Sydney, NSW).
- Liu, K., and B. R. Arnold, 2010a, *Australian superannuation- the outsourcing landscape*, Working paper (Australian Prudential Regulation Authority).
- Liu, K., and B. R. Arnold, 2010b, *Australian superannuation outsourcing- fees, related parties and concentrated markets*, Working paper (Australian Prudential Regulation Authority).
- Liu, K., and B. Arnold, 2012, *Superannuation and insurance: related parties and member cost*, Working Paper (Australian Prudential Regulation Authority).
- Ryngaert, M., and S. Thomas, 2012, Not all related party transactions (RPTs) are the same: Ex ante versus ex-post RPTs, *Journal of Accounting Research* 50, 845–882.

- Super System Review, 2010, Review into the governance, efficiency, structure and operation of Australia's superannuation system.
- Sy, W., 2008a, Pension governance in Australia: an anatomy and an interpretation, *Rotman International Journal of Pension Management* 1, 30–37.
- Sy, W., 2008b, *Superannuation fund governance: an interpretation*, Working paper (Australian Prudential Regulation Authority).
- Sy, W., and K. Liu, 2009, *Investment performance ranking of superannuation firms*, Working paper (Australian Prudential Regulation Authority).
- Tan, M. G. S., and M.-A. Cam, 2015, Does governance structure influence pension fund fees and costs?, *An examination of Australian not-for-profit superannuation funds*, *Australian Journal of Management* 40, 114–134.
- Tufano, P., and M. Sevick, 1997, Board structure and fee-setting in the U.S. mutual fund industry, *Journal of Financial Economics* 46, 321–355.

Appendix

Table A1
List of variables

Variables	Definitions
<i>Dependent variables</i>	
Gross Return	Annual fund level gross investment return calculated as earnings before tax and expenses divided by cash flow adjusted net assets
Gross Value Added	Gross return minus benchmark returns
Gross RAVA	Gross value added divided by fund volatility
Net Return	Annual fund level net investment return calculated as earnings after tax and expenses over cash flow adjusted net assets
Net Value Added	Net return minus benchmark returns
Net RAVA	Net value added divided by fund volatility
MySuper Net Return	Annual default investment option level ('MySuper') net investment return
<i>Independent variables</i>	
RPSP-Retail	A binary variable equal to 1 if a retail fund uses a related party service provider
RPSP-NFP	A binary variable equal to 1 if a not-for-profit fund uses a related party service provider
% Affiliated—Retail	Proportion of affiliated trustee-directors on a retail fund board
% Affiliated—NFP	Proportion of affiliated trustee-directors on a not-for-profit fund board
Maj. Affiliated—Retail	A binary variable equal to 1 if at least 50% of trustee-directors on a retail fund board are affiliated
Maj. Affiliated—NFP	A binary variable equal to 1 if at least 50% of trustee-directors on a not-for-profit fund board are affiliated
<i>Control variables</i>	
Fund Size	Log of total assets under management
Retail Fund	A binary variable equal to 1 if the fund is a for-profit retail fund
% Union Affiliated	Proportion of trustee-directors affiliated with a trade union
Independent Chair	A binary variable equal to 1 if the chair of the trustee board is independent and unaffiliated
Board Size	Total number of trustee-directors on the board

(continued)

Table A1 (continued)

Variables	Definitions
No. of Female Directors	Total number of female trustee-directors on the board
Average Director Age	Average age of trustee-directors
Total Remuneration	Average annual remuneration of all trustee-directors
% Investment EXP	Proportion of trustee-directors with investment expertise
% Other EXP	Proportion of trustee-directors with other expertise (i.e. accounting, auditing, insurance, legal, actuarial) that is relevant to fund operation
Meeting Attendance	Average percentage of board meetings attended by trustee-directors

This table describes each of the variables used in this study.

Table A2
Additional analysis: Trustee board governance and investment performance

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Gross Return	Gross Value Added	Gross RAVA	Net Return	Net Value Added	Net RAVA	MySuperNet Return
% Affiliated—Retail	-0.0255*** (-2.75)	-0.0400*** (-3.82)	-0.4241*** (-4.14)	-0.0168* (-1.79)	-0.0313*** (-2.97)	-0.3328*** (-3.19)	-0.0336*** (-2.41)
% Affiliated—NFP	0.0120* (1.74)	0.0057 (0.73)	0.0160 (0.21)	0.0141** (2.03)	0.0078 (0.99)	0.0506 (0.65)	0.0144 (1.37)
% Union Affiliated	0.0132* (1.66)	0.0037 (0.42)	0.0634 (0.72)	0.0096 (1.19)	0.0001 (0.01)	0.0370 (0.41)	0.0109 (0.89)
Independent Chair	0.0041 (1.58)	0.0014 (0.46)	0.0245 (0.86)	0.0027 (1.02)	-0.0001 (-0.02)	0.0099 (0.34)	-0.0012 (-0.30)
Board Size	-0.0003 (-0.39)	-0.0013 (-1.52)	-0.0122 (-1.47)	-0.0001 (-0.09)	-0.0011 (-1.25)	-0.0106 (-1.25)	-0.0006 (-0.49)
No. of Female Directors	0.0009 (1.00)	0.0019* (1.85)	0.0222** (2.18)	0.0014 (1.52)	0.0024** (2.31)	0.0281*** (2.70)	0.0008 (0.57)
Average Director Age	0.0001 (0.21)	-0.0000 (-0.00)	0.0003 (0.10)	0.0001 (0.44)	0.0001 (0.21)	0.0014 (0.39)	0.0002 (0.34)
Total Remuneration	0.0000 (0.43)	0.0000 (0.03)	-0.0000 (-0.33)	0.0000 (0.45)	0.0000 (0.05)	-0.0000 (-0.19)	0.0000 (0.94)
% Investment EXP	-0.0068	0.0048	0.0642	-0.0095	0.0022	0.0214	-0.0050

(continued)

Table A2 (continued)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Gross Return	Gross Value Added	Gross RAVA	Net Return	Net Value Added	Net RAVA	MySuperNet Return
% Other EXP	(-1.07) -0.0037 (-0.67)	(0.66) 0.0030 (0.49)	(0.91) 0.0385 (0.63)	(-1.47) -0.0007 (-0.12)	(0.30) 0.0061 (0.96)	(0.30) 0.0668 (1.08)	(-0.52) -0.0017 (-0.20)
Meeting Attendance	(-0.0054) (-0.25)	-0.0200 (-0.82)	-0.2232 (-0.94)	-0.0179 (-0.82)	-0.0325 (-1.32)	-0.3449 (-1.42)	-0.0275 (-0.84)
Fund Size	0.0028 (1.38)	0.0017 (0.75)	0.0135 (0.60)	0.0035* (1.70)	0.0024 (1.04)	0.0213 (0.93)	0.0016 (0.53)
Retail Fund	0.0190** (2.01)	0.0265** (2.49)	0.2832*** (2.71)	0.0106 (1.11)	0.0182* (1.69)	0.1999* (1.88)	0.0212 (1.48)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	182	182	182	182	182	182	186
Adj. R^2	0.963	0.660	0.698	0.954	0.632	0.674	0.907

This table reports the regression results testing the effect of affiliated trustee-directors on fund investment performance, controlling for trustee board governance variables. All variables are summarised in Table 2. T-statistics are reported in parenthesis. *, ** and *** represent significance at the 10, 5 and 1 percent levels, respectively.