Evaluation of Taxation of Australian Industry Superannuation Funds

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Certificate of Original Authorship

I, Thulaisiharan Sivapalan, declare that this thesis is submitted in fulfilment of the requirements of the award of Doctor of Philosophy, at the UTS Business School at the University of Technology Sydney.

This thesis is wholly my own work unless otherwise referenced or acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

This document has not been submitted for qualifications at any other academic institution.

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Abstract

The objective of this dissertation is to evaluate the incidence of taxation in industry superannuation funds. In the long-term, the Australian Government relies on Superannuation funds to adequately provide working Australians with enough money to fund their retirement, thereby contributing significantly to Australia's three pillar retirement income system (AFTS, 2008). However, concerns have been raised in separate government reviews as to whether funds are managing taxation effectively, and thereby maximising after tax returns to members (Cooper et al., 2010; Productivity Commission, 2016). Conversely, in the short-term, the Government relies on tax payments to contribute to overall government revenues. Industry superannuation funds are economically significant with assets under management in excess of $630 billion, generating pre-tax income of $47 billion annually (APRA, 2019). At present, governments are concerned with declining tax revenues (U.S. Congress, 1999; Levin, 2013) and this may be exacerbated by concerns expressed in the media about the tax practices employed by industry superannuation funds which have been identified in various 'leak documents' (i.e. Luxembourg Leaks, Panama Papers and Paradise Papers). Critically, these issues appear to have competing objectives and therefore provide tension to evaluate taxation of industry superannuation funds. Collectively, this dissertation provides the first empirical evaluation of taxation in industry superannuation funds in an attempt to address these issues. First, attention is directed to whether industry superannuation funds adopt tax aggressive practices to potentially benefit members of the fund. Second, attention is given to whether industry superannuation funds manage the incidence of tax effectively in a complex tax environment. There is little conclusive evidence of tax aggressiveness, and while there is variation across the taxation reported in the financial statements of industry superannuation funds, there is little statistically significant evidence of effective tax management. However, effective tax management has recently become a regulatory requirement, and will likely become observable in the future.

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Abbreviations

AAS	Australian Accounting Standards
AASB	Australian Accounting Standards Board
ABS	Australian Bureau of Statistics
ADI	Authorised Deposit-Taking Institution
AFS	Australian Financial Services
AFSS	Annual Fund-level Superannuation Statistics
APRA	Australian Prudential Regulatory Authority
ASIC	Australian Securities and Investments Commission
ASX	Australian Securities Exchange
ATO	Australian Taxation Office
BEPS	Base Erosion and Profit Shifting
CEO	Chief Executive Officer
CETR	Cash Effective Tax Rate
CGT	Capital Gains Tax
CIO	Chief Investment Officer
Cooper Review	Superannuation System Review
CPM	Centralised Portfolio Management
DB	Defined Benefit
DC	Defined Contribution
DIY	Do It Yourself
EET	Exemption (on contributions), Exemption (of investment income), Tax (on retirement)
ESG	Ethical, Sustainable and Governance
ETR	Effective Tax Rate
GDP	Gross Domestic Product
ISC	Insurance and Superannuation Commission
ITAA36	*Income Tax Assessment Act 1936 (Cth*)
ITAA97	*Income Tax Assessment Act 1997 (Cth)*
OECD	Organisation for Economic Co-operation and Development
OFC	Offshore Financial Centres
OSSA	*Occupational Superannuation Standards Act 1987 (Cth)*
PC Review	Productivity Commission Review

ROA	Return on Assets
RSE	Registerable Superannuation Entity
SAF	Small APRA Fund
SEC	Securities and Exchange Commission
SG Act (1992)	*Superannuation Guarantee Act 1992 (Cth)*
SIS Act (1993)	*Superannuation Industry (Supervision) Act 1993 (Cth)*
SMSF	Self-Managed Superannuation Fund
SRF	Superannuation Reporting Framework
TAIM	Tax Aware Investment Management Framework
TFN	Tax File Number
TTE	Tax (on contributions), Tax (of investment income), Exemption (on retirement)

Chapter 1

Introduction

Abstract

This chapter introduces the research objectives of this dissertation, which is to evaluate the incidence of taxation in industry superannuation funds. First, attention is directed to whether industry superannuation funds adopt tax aggressive practices to potentially benefit members of the fund. Second, attention is given to whether industry superannuation funds manage the incidence of tax effectively in a complex tax environment. There is little conclusive evidence of tax aggressiveness, and while there is variation across the taxation reported in the financial statements of industry superannuation funds, there little statistically significant evidence of effective tax management. However, as effective tax management has recently become a regulatory requirement, it is likely any resulting impact will become observable in the future.

1.1 Research questions

Since the introduction of the compulsory contributions in 1992, the Australian superannuation industry[1] has seen a period of exponential growth in the number of members, the size of their contributions and consequently, funds under management (Productivity Commission, 2016). Superannuation is a pillar of Australia's retirement income system (AFTS, 2008), consequently there is ongoing media scrutiny about its ability to continue to meet the requirements of its members (Cooper et al., 2010; Productivity Commission, 2018). While it is important that the general public is properly informed about the superannuation system, there is a paucity of empirical literature that considers taxation of superannuation funds. Notwithstanding, this dissertation aims to contribute to informing public discourse with both development of theory, and empirical evidence on these critical issues. Specifically, the objective of this dissertation is to address two issues relating to the taxation regime for Australian industry superannuation funds.[2] First is the level of tax aggressiveness in the superannuation industry and second is the effectiveness of its tax management.

Superannuation funds are economically significant with assets in excess of $2.7 trillion under management (APRA, 2018). The tax obligations they generate are material to Government finances, which is increasingly concerned with the erosion of tax revenues (Bankman, 1999; U.S. Congress, 1999; Levin, 2013). In addition, fund members are concerned with after tax returns,[3] because these are necessary to fund their retirement (Cooper et al., 2010; Productivity Commission, 2018). Notably, industry reviews recognise that tax is typically the

[1] For a more complete discussion of the Australian superannuation system, refer to Appendix 2.A.

[2] Industry superannuation funds are not for profit and are multi-employer schemes that have members across a single industry or a group of related industries (Bateman, 2003; Sy, 2008; Liu, 2013)

[3] After tax returns refer to returns net of fees and tax. This is important as members retire on the aggregated after tax returns which are compounded annually throughout their working life (Cooper et al, 2010)

single, largest expense in the income statements of funds (Cooper et al., 2010; Productivity Commission, 2018).[4]

Concerns have recently been expressed about rising levels of corporate tax aggressiveness and this has been evaluated extensively in the literature (Hanlon & Heitzman, 2010). More recently, similar concerns have been expressed in the media about superannuation funds (Seccombe, 2014; Crowe, 2015; Davis, 2017). Doubtless a catalyst for this concern has been the identification of entities in the various 'leak documents' (i.e. Luxembourg Leaks, Panama Papers and Paradise Papers), controlled by industry superannuation funds, and located in offshore financial centres (OFCs) (Danckert & Butler, 2015; Mather & Kehoe, 2019). However, there is a paucity of empirical tax research examining tax aggressiveness in relation to superannuation funds, as prior studies typically exclude financial services firms (due to different reporting requirements and regulation), are limited to only listed firms (which excludes industry superannuation funds), and are hampered by the lack of publicly available data (Shackelford & Shevlin, 2001; Graham, 2003; Hanlon & Heitzman, 2010). Chapter 2 addresses this by empirically evaluating the incidence of tax[5] by industry superannuation funds in order to resolve the question of whether industry superannuation funds are tax aggressive.

Concerns have also been expressed about the effective operation and administration of superannuation funds, and in particular whether they are being managed as beneficially as possible for members (Cooper et al., 2010; Productivity Commission, 2018). These concerns were repeated recently in the Financial Services Royal Commission (Hayne Royal Commission, 2018). A central theme was the issue of whether they are operating efficiently and maximising after tax returns to fund members. An important consideration in evaluating these concerns is understanding practical difficulties in operationalising the tax legislation

[4] For history and characteristics of Industry Super refer to Appendix 2.A.

[5] The incidence of tax in this dissertation refers to the magnitude of tax obligations of the superannuation fund. This might be evaluated in terms of tax payments (cash) or all tax expenses (accruals) payments.

across large funds with diverse investment strategies, income categories and membership characteristics (Cooper et al., 2010; Productivity Commission, 2018). Building on the findings from Chapter 2, I address these concerns in Chapter 3. I evaluate the incidence of tax across industry superannuation funds in order to provide empirical evidence as to whether there are systematic differences in tax payments across superannuation funds that could potentially indicate whether tax obligations are being effectively managed.

1.2 Motivation

This dissertation is motivated by a number of factors, not the least of which is the paucity of research considering the operations of industry superannuation funds, including their tax operations (Graham, 2003; Hanlon & Heitzman, 2010). Although the assets under management exceed annual Gross Domestic Product (GDP) in Australia (ABS, 2009; ASX, 2017), there is little empirical research on the taxation of industry superannuation funds, and this does not just appear to be a consequence of low economic significance. Rather, it is the result of the sample selection criteria used across the extant tax literature (Shackelford & Shevlin, 2001; Graham, 2003; Hanlon & Heitzman, 2010). The prior literature typically excludes financial services firms, which includes superannuation funds. Plausible explanations for this include separate regulatory environments, differences in the structure of their financial statements, and the limited availability of financial statement information on financial databases (Shackelford & Shevlin, 2001; Graham, 2003; Hanlon & Heitzman, 2010). A further barrier to accessing data is due to limitations in the regulation of financial reporting by industry superannuation funds. Specifically, access to financial statements is restricted, due to an inadequate disclosure regime, resulting in a lack of transparency in the industry. A challenge in undertaking any tax research is controlling for differences in the operations of firms, the financing of firms, and differences in the impacts of the tax laws across firms. Studies endeavour to address this with controls but

it creates potential econometric issues (Dyreng et al., 2008; Frank et al., 2009; Wilson, 2009; Lisowsky et al., 2010).[6] This does not rule out conducting insightful empirical research in this setting, as there are significant advantages in undertaking tax research related to superannuation funds. Industry superannuation funds have relatively homogeneous operations in contrast to corporations. They have uniform business operations, financial structures and governance mechanisms, often because of regulation. This potentially provides a more powerful context to evaluate tax aggressiveness in general.

The first motivation for this dissertation is to provide insights into whether tax payments by industry superannuation funds are symptomatic of industry superannuation funds adopting tax aggressive practices as identified in the corporate tax avoidance literature (Hanlon & Heitzman, 2010). In the corporate tax aggressiveness literature, there is evidence of an association between OFCs and tax avoidance, and the role of OFCs in aggressive tax practices is well documented (U.S. Senate, 2013; Citizens for Tax Justice, 2014). However, attention here is focused on industry superannuation funds. Despite a lower statutory tax rate than corporations, there are documents contained in various leaks – including the Luxemburg Leaks, the Panama Papers and the Paradise Papers – which show OFCs are being employed by industry superannuation funds both directly and indirectly by global investment fund managers (Crowe, 2015; Danckert & Butler, 2015; Davis, 2017; Mather & Kehoe, 2019).[7] This study is the first to examine whether industry superannuation funds are tax aggressive. This is

[6] Such as multi-collinearity.

[7] Offshore financial centres have been referred to as tax havens. OFCs are located in jurisdictions that contain a relatively large number of financial institutions that engage in business transactions with non-residents. OFCs are domiciled in regions ranging from the Caribbean, the British Isles, Europe and South America. In the mainstream media there has been an influx of investigative journalism that has highlighted the use of OFCs by multinational organisations, banks, financial intermediaries and high net worth individuals to minimise their tax obligations. The OFC structures have legitimate commercial purposes and promote global investing among institutional investors. OFCs promote efficiency, mitigate risk, assist capital flows and reduce the duplication of tax; however, due to the complexity and lack of transparency, these structures provide an opportunity for skilful individuals and corporations to evade tax authorities. OFCs are an attractive proposition to non-residents because of low or zero taxation, moderate or light financial regulation, and anonymity" (IMF, 2000 – Offshore Financial Centres).

particularly salient given the exemptions that industry superannuation funds are now seeking from the disclosures required under tax transparency legislation (Danckert & Butler, 2015).

The second motivation for this dissertation is the significant press coverage of industry superannuation funds that has identified effective tax rates materially below the 'media benchmark rate'[8] of 15%. Importantly, a similar observation was the catalyst for much of the current research in corporate tax avoidance amongst large firms (Bankman, 1999; Manzon & Plesko, 2002; Desai, 2003; Desai & Dharmapala, 2009; Lisowsky, 2010). A rudimentary analysis of the financial statements of industry superannuation funds identifies tax payments at rates substantially lower than the already low media benchmark tax rate. Further, there is anecdotal evidence of significant variation in the incidence of taxation across industry superannuation funds (Cooper et al, 2010). In combination, this suggests a need to undertake empirical analysis of whether industry superannuation funds are tax aggressive.

The third motivation for this dissertation is to understand the consequence of changes made to the legislation that governs the superannuation industry.[9] The *Superannuation Industry Supervision (SIS) Act 1993 (Cth)* (SIS Act) was amended on 1 July 2013 and directs trustees of superannuation funds to consider the taxation consequences of investment strategies.[10] The changes highlighted inherent deficiencies[11], which have likely long existed, concerning the

[8] This is the rate generally used by the media when discussing the incidence of tax for Superannuation funds. For a more complete explanation of benchmark rates and their importance to this dissertation, refer to Appendix 1.A.

[9] An industry wide review of the superannuation industry, the Super System Review commonly referred to as the Cooper Review 2010, examined pivotal aspects of the industry such as governance, efficiency, structure and operation (Cooper et al., 2010).

[10] Section 52(6)(a)(vi) SIS Act (1993). These legislative changes follow suit from the U.S. where the Securities and Exchange Commission (SEC) introduced legislation in 2001 with a requirement for mutual funds to report both pre-tax and after-tax returns.

[11] The Cooper Review highlighted two problems that led to the ineffective management of taxes. The first problem stems from a lack of tax awareness from the trustees. This is caused by the perception that the potential tax leakage in the superannuation industry is minimal due to the relatively low tax rate, reducing the appetite to be tax aggressive. However, in an industry that manages approximately $2.6 trillion funds under management, a few basis points can equate to an economically significant leakage of tax revenue. The second problem is a by-product of the outsourcing arrangements that superannuation funds have with the investment fund management practice. The investment fund managers do not exclusively serve superannuation funds; they oversee a variety of investments for their diverse clientele. As tax issues between superannuation and other clientele differ, fund

effective management of the taxation of superannuation funds (Cooper et al., 2010). Prior to these amendments, there was no legislative or regulative guidance as to how a trustee should structure operations to effectively manage tax so as to benefit the interests of fund members. Subsequently, it is not known whether there is evidence of industry superannuation funds effectively managing tax obligations to maximise returns to fund members.

A fourth motivation for this dissertation arises from concerns about the efficiency of some industry superannuation funds; this has manifested in the Australian Prudential Regulatory Authority (APRA) encouraging industry consolidation through mergers (Yeates, 2015; Dunn, 2017; Dunn, 2018).[12] Any assessment that proposes for industry consolidation should incorporate the funds' ability to effectively manage its largest expense. As tax is the single largest expense for industry superannuation funds (Productivity Commission, 2016)[13], it may be prudent to evaluate the efficiency of a fund on its ability to manage tax. Notably, complexities in the tax legislation, and difficulties in operationalising it, makes compliance problematic[14], contributing to concerns about managing tax obligations. For example, gains on investments held for less than one year are taxed at 15%, those held for more than one year at 10%, and there is no tax payable on gains attributable to members in retirement phase.[15] Further, this treatment of gains extends to gains in the pre-retirement phase, but not realised until the retirement phase. This makes decisions about the timing of realisation of investment

managers may not be motivated to manage superannuation investment mandates in a tax aware manner (Cooper et al., 2010).

[12] The rationale for mergers is targeted at superannuation funds that are frequently referred to as small, inefficient and sub-scale (Yeates, 2015). The focal point of industry consolidation can be positioned as the pursuit of efficiency.

[13] The impact of taxes has been acknowledged by the Productivity Commission as the "biggest item to detract from net returns and ultimately from member balances" (Productivity Commission, 2016: p. 7).

[14] The Productivity Commission also acknowledge that superannuation taxation is complex due to numerous changes made to tax legislation (Productivity Commission, 2016).

[15] "Retirement phase" is used throughout the chapter. However, it can be used interchangeably with "Pension phase".

gains difficult, and complicates the ultimate determination of tax obligations. This inherent complexity provides superannuation funds the opportunity to implement tax aware investment management (TAIM) activities (Mackenzie & McKerchar, 2014).[16] However, the advantages provided by employing TAIM activities may not be attainable by all funds due to varying fund characteristics.[17] If the trustees' ability to employ TAIM is determined simply by a size dimension, then there is potential support for APRA's industry consolidation agenda. Therefore, this dissertation aims to provide insights into whether TAIM related activities are associated with superannuation funds effectively managing tax.

1.3 Contributions

This dissertation makes a number of contributions to tax avoidance and superannuation literature that highlight the importance of tax and its management within industry superannuation funds, as well as the reporting practices that are relevant to regulators, fund managers and fund members. First, examining the incidence of tax by industry superannuation funds provides insights to extend the tax literature and can also be used by regulators to assess the existence of systematic utilisation of tax aggressive practices. These findings will also be relevant to the current discourse concerning whether industry superannuation funds should be granted dispensation from providing extensive country by country tax disclosures.

Second, a challenge in the extant tax literature is that measures of corporate tax aggressiveness are developed and used across firms with divergent economic characteristics. Examining tax aggressiveness in the superannuation setting, where industry superannuation

[16] TAIM is broadly defined as the "active management of taxes of a fund by incorporating tax consequences into the investment process" (Mackenzie & McKerchar, 2014: p. 253).

[17] The Productivity Commission note that the complexity of the super tax legislation "... makes it difficult to evaluate these differences and the impact they have on member balances, but each type of fund is likely to have advantages and disadvantages." (Productivity Commission, 2016: p. 132).

funds are operationally homogeneous compared to corporations, provides a rich opportunity to explore issues associated with these measures, and contribute to the tax literature generally with an evaluation of the efficacy of these measures, and the identification of their potential sensitivities.

Third, compared to publicly listed companies, there is a general lack of transparency in financial reporting of industry superannuation funds.[18] Further, the disclosure requirements are significantly different, driven in particular by the regulation guiding reporting practices. This has limited the information available to researchers and subsequently restricted the progress of research into the financial reporting of industry superannuation funds. This dissertation will identify whether limitations in the provision of financial reports are problematic, and aim to establish whether regulatory change is necessary. A related issue is that until 2016, accounting practices were prescribed by *AAS 25 Financial Reporting by Superannuation Plans.* These are now addressed in the Australian Accounting Standards Board (AASB) *AASB 1056 Superannuation Entities.* This dissertation will provide insights into the relevance and reliability of information presented in superannuation general purpose financial statements, as prescribed by *AAS 25 Financial Reporting by Superannuation Plans.*

Finally, by examining differences in the incidence of taxation across industry superannuation funds, this dissertation contributes to the regulatory debate concerning the operation of superannuation funds. Specifically, whether suggestions that smaller funds may be unable to meet the members' needs, and whether industry consolidation is justified on the basis of a size dimension.

[18] The funds are unincorporated and hence fall outside the scope of the Corporations legislation (*Corporations Act, 2001 (Cth)*). Accordingly, general purpose financial reports are not lodged with the Australian Investments and Securities Commission (ASIC). Nor is there alternative legislation requiring the provision of financial reports to members or their lodgement with a public repository.

1.4 Structure

Chapter 2, for the first time, examines the incidence of taxation of industry superannuation funds. The Australian superannuation system provides an economically significant and unique context to examine tax aggressiveness. Given the benefits of investing in domestic equity markets, due to dividend imputation (Ellis et al., 2008), industry superannuation funds have become increasingly exposed to Australian equities. A consequence of this has been a shift in the investment strategies of the superannuation industry which has led to an upward trend in allocation of funds to foreign assets.[19] This emergent trend in foreign investment assets presents new and emerging complexities, as well as opportunities for tax management. The Australian Tax Office (ATO) has flagged the upward trend in foreign investments in superannuation and believes that there are tax aggressive opportunities,[20] which can be utilised directly, or indirectly, by superannuation funds (ATO, 2017). The findings from Chapter 2 provide valuable insights into tax aggressiveness in the superannuation industry. It also provides insights that contribute to the ongoing debate about the inclusion of superannuation funds in the Organisation for Economic Cooperation and Development (OECD) initiative to tackle base erosion and profit shifting (BEPS).[21] In addition, the findings from Chapter 2 suggests further research, and it also provides the foundation for the second part of this dissertation.

Chapter 3 develops the findings and analysis from Chapter 2 by examining an alternative perspective. Critically, Chapter 2 identifies variation in the effective tax rates across industry superannuation funds which cannot be explained by the extant literature. Accordingly,

[19] In 1988 the superannuation industry asset allocation composition was 93% domestic assets and 7% foreign assets. In 1996 the superannuation industry asset allocation composition was 88% domestic and 12% foreign assets. In 2016 the superannuation industry asset allocation composition was 81% domestic and 19% foreign assets (ABS, 2016: Table 4).

[20] ATO Alerts have acknowledged the use of schemes targeting self-managed superannuation funds.

[21] The BEPS framework aims to increase the transparency of OFC transactions by implementing country by country reporting.

the focus in Chapter 3 is the examination of alternative explanations for this variation. In particular, whether certain fund characteristics directly or indirectly related to tax aware investment management (TAIM) activities can explain the variation in the effective tax rates across industry superannuation funds. The findings from this chapter will provide valuable insights into whether superannuation funds effectively manage tax in a complex tax regime, while concurrently acting in the best interests of their members. This research question is set against the backdrop of APRA's current mandate to increase the number of mergers in the sector (Yeates, 2015; Dunn, 2017; Dunn, 2018). The findings from this chapter will therefore provide valuable insights into the validity of APRA's pursuit of industry consolidation by assessing superannuation funds ability to effectively manage the most complex and largest cost to net returns and members' balances.

Chapter 4 concludes the dissertation and identifies avenues for further research, as well as any limitations encountered. The dissertation is supported by appendices; the first discusses the intricacies of the tax rates in superannuation, and develops the benchmark tax rates, and the second outlines in detail the background of the Australian superannuation industry. The third includes tax transparency reports from superannuation funds.

Chapter 2
Are industry superannuation funds exhibiting tax aggressiveness?

Abstract

The objective of this chapter is to empirically examine the incidence of tax recognised by industry superannuation funds to identify whether they exhibit tax aggressiveness, as defined in the extant tax avoidance literature (Hanlon & Heitzman, 2010). A further aim is to understand whether any variation in the tax aggressiveness can be explained by the traditional antecedents of corporate tax avoidance. This unique setting provides an opportunity to examine the benefits and costs of tax aggressiveness, when mediated by lower tax rates compared to a corporate setting. Additionally, it provides the opportunity to assess the applicability of widely used measures of tax aggressiveness in a context that has been excluded from prior corporate tax avoidance literature. The findings of this chapter suggest that industry superannuation funds are not tax aggressive and that the traditional antecedents are not associated with the variation of tax aggressive measures across the funds. This finding provides valuable insights to current debates regarding the exclusion of superannuation funds from the OCED's Base Erosion and Profit Shifting (BEPS) initiative.

2.1 Introduction

In this chapter I empirically evaluate the incidence of taxation[22] for industry superannuation funds to resolve the question of whether they are tax aggressive, as defined in the extant tax avoidance literature (Hanlon & Heitzman, 2010). This is an important issue as industry superannuation funds are economically significant with assets in excess of $630 billion (APRA, 2018)[23] and are not addressed in the extant tax literature[24] (Hanlon & Heitzman, 2010). Critically, tax aggressiveness may benefit members who rely on fund assets to fiscally support them in retirement (Halon & Slemrod, 2009) or provide additional liquidity to the fund (Saavedra, 2013). Hence, the incentives[25] to engage in tax aggressiveness are unequivocal. Consistent with this, concerns are expressed in the media about industry superannuation funds adopting practices that appear to be tax aggressive (Seccombe, 2014; Crowe, 2015; Davis, 2017). A likely catalyst is the identification in the various 'leak documents' (i.e. Luxembourg Leaks, Panama Papers and Paradise Papers) of entities located in offshore financial centres (OFCs)[26] and controlled by the industry funds. However, when compared to corporate tax rates, the benefits of tax aggressiveness are significantly reduced by the relatively low rate of tax of

[22] The incidence of tax in this dissertation refers to the magnitude of tax obligations of the superannuation fund and this might be identified in terms of tax payments (cash) or all tax expenses (accruals) payments.

[23] At present, the Australian superannuation industry has $2.7 trillion of assets under management (APRA, 2018), which has surpassed the market capitalisation of the Australian Stock Exchange (ASX) ($1.98 trillion) (ASX, 2018).

[24] Excluded from empirical studies in the extant tax literature due to different reporting requirements of financial institutions and separate regulatory environments.

[25] The incentives can extend to having increased levels of cash, which provides increased liquidity (Saavedra. 2013). Liquidity management is an important aspect in the role of a trustee of a superannuation fund, especially being able to manage the outflows of funds due to the retirement of the large cohort known in Australia as the baby boomer generation. In addition, benefits of engaging in tax aggressiveness will reduce the tax liability and consequently provide increased after-tax returns (Hanlon & Slemrod, 2009). The reduction in tax outflows increases the pool of funds available to members accounts which, when compounded over the long investment horizon, will provide greater benefits to members on retirement. Further, an additional incentive for superannuation funds is the ability to advertise members' abnormal returns and subsequently attract further contributions from new entrants or coerce members from competing funds to join the fund.

[26] Offshore financial centres (OFCs) have been referred to as tax havens. OFCs are located in jurisdictions that contain a relatively large number of financial institutions that engage in business transactions with non-residents. OFCs are an attractive proposition to non-residents because of low or zero taxation, moderate or light financial regulation and anonymity. (IMF, 2000).

industry superannuation funds (Refer to Appendix 1.A.). Hence, evaluation of tax aggressiveness in a setting where there is a clear tension between the benefits and costs provides a rich contribution to the tax avoidance research. In addition, it generates evidence that will inform the Australian Government's response to industry superannuation funds' seeking exemptions from the recently legislated country by country tax reporting (implementing the OECD's recommendations about disclosures) (KPMG, 2015). Currently, industry funds claim that it would achieve little and impose additional costs on members.[27] Hence, the issue of whether industry superannuation funds are tax aggressive is a question that requires investigation. This chapter also examines whether there is variation in the incidence of taxation across funds and examines if the traditional antecedents of tax aggressiveness account for such a variation.

There are a number of motivations for this chapter. First, there is an increasing academic and public interest in the tax aggressiveness of large multi-national corporations; this is evidenced by growing literature on corporate tax avoidance (Hanlon & Heitzman, 2010) as well media interest (Brusden, 2016; Aston, 2017; West, 2017). However, the financial services sector and non-corporate entities have received very little attention in the extant tax avoidance literature due to the differences in reporting requirements and separate regulatory environments (Shackelford & Shevlin, 2001; Graham, 2003; Hanlon & Heitzman, 2010). This is largely a consequence of sample selection criteria that typically exclude firms in the financial services sector and the limited availability of financial information (Graham, 2003; Hanlon & Heitzman, 2010). This chapter presents the first empirical study of potential tax aggressiveness by industry superannuation funds. This is particularly salient due to the low tax rate for

[27] It is acknowledged that this claim is ambiguous, possibly intentionally. It could be interpreted as industry funds not perceived to be tax aggressive, or the disclosures would not identify or constrain tax aggressiveness. It may also be that the industry superannuation funds are trying to conceal tax aggressive practices.

superannuation funds[28] (15% compared to a corporate tax rate of 30%) that limits the potential benefits for engaging in tax aggressiveness. Evaluating tax aggressiveness in this setting may provide insights into the effectiveness of a global trend that encourages governments to reduce corporate tax rates in order to reduce the incidence of tax aggressiveness (Slemrod, 2007).

Second, there is anecdotal evidence of industry superannuation funds adopting tax aggressive practices in the mainstream media (Seccombe, 2014; Crowe, 2015; Davis, 2017). This anecdotal evidence has been substantiated by the identification of entities in OFCs controlled by industry superannuation funds in document leaks such as the Luxembourg Leaks, the Panama Papers and the Paradise Papers. Just as this has been the catalyst for rigorous analysis of tax aggressiveness in the corporate sector (Bankman, 1999; U.S. Congress, 1999; Manzon & Plesko, 2002; Slemrod, 2004; Desai, 2003; Desai & Dharmapala, 2009; Lisowsky, 2010), it also suggests the need for an analysis of industry superannuation funds.

Third, industry superannuation funds have requested an exemption from requirements of an OECD initiative to tackle base erosion and profit shifting (BEPS) by multinational organisations and investment houses. The BEPS framework aims to increase the transparency of OFC transactions by implementing country by country reporting. Superannuation funds contend that if they are subjected to the BEPS framework it would significantly increase administration and compliance costs, which would consequently erode member benefits generated by the investments (KPMG, 2015). The results from this analysis may provide insights, which will inform government's response to superannuation funds claims.

Finally, while there has historically been a 'domestic bias' in asset allocation by Australian industry superannuation funds (Ellis et al., 2008), this bias is shifting, as the domestic equity market doesn't have the capacity to satisfy the needs of superannuation fund's

[28] The statutory rate of tax is 15% for contributions and income generated within the fund (SIS Act, 1993). There are additional conditions which will be discussed below and discussed in detail in Appendix 1.A.

asset allocation requirements (Cleary, 2016). Critically, there has been an increase in foreign investment assets, which presents new and emerging complexities and opportunities for tax management (ATO, 2014). The Australian Tax Office (ATO) is cognisant of this and is currently examining the increase in foreign investments by superannuation funds, identifying the potential for aggressive tax practices (ATO, 2014; 2016; 2017)[29] to be implemented directly or indirectly by superannuation funds. This threat has been noted in public documents such as speeches and alerts made by ATO high ranking officials (ATO, 2016). Together, these provide compelling motivations to examine whether industry superannuation funds are tax aggressive.

An empirical evaluation of tax aggressiveness in the context of industry superannuation funds is suggested for a number of reasons. First, industry superannuation funds are economically significant with assets in excess of $630 billion under management. Individually they are also significant, with the largest fund, Australian Super, having 2.15 million members and approximately $124 billion in assets under management (Super Guide, 2018). Notwithstanding their economic significance, to date industry superannuation funds have been excluded in the extant tax literature. Second, an issue in evaluating tax aggressiveness is how to measure tax aggressiveness across entities that are diverse both in business operations and financial structures (Hanlon & Heitzman, 2010). Tax aggressiveness is typically identified by the divergence between a benchmark rate of tax (typically the statutory tax rate) and measures of the incidence of taxation (Hanlon & Heitzman, 2010); yet, there is a requirement to adopt measures that are appropriate for the specific research context and question. In this setting, industry funds are relatively homogenous, having similar business operations and limited variation in asset allocation (Liu, 2013; Liu & Ooi, 2016). Further, there are limited differences in financial and governance structures, as dictated by legislation (SIS Act, 1993). This is likely to simplify the identification of tax aggressiveness, simplify the methods used to evaluate them,

[29] ATO Alerts have acknowledged the use of schemes targeting self-managed superannuation funds.

and reduce problems potentially arising from omitted correlated variables. Critically, there are difficulties in reliably estimating the proxy measures[30] for financial sector firms in the extant tax avoidance literature as these are typically excluded (Graham, 2003; Hanlon & Heitzman, 2010) – this likely extends to industry superannuation funds.[31]

Data for a sample of 60 fund-year observations (representing 26 individual industry funds) over the period of 2014–2016 are hand collected from general purpose financial reports and APRA's publicly available annual fund level superannuation statistics. This sample exceeds 50% of all industry superannuation funds by number and over 80% by value of assets under management.[32] I find that in this setting, the most reliable proxy measure of tax aggressiveness is the effective tax rate (ETR), when it is adjusted for transactions with members, contributions taxes and recognition of dividends with franking credits on a net basis. This measure identifies a mean ETR of 8.5% which is significantly less than the media benchmark rate of 15% for superannuation funds (refer to Appendix 1.A.). The preliminary results from this chapter indicate the presence of tax aggressiveness due to a significant divergence between the benchmark rates and a measure of the incidence of taxation. However, caution must be applied when making such an inference, as not all income of superannuation funds is taxed consistently.[33] Accordingly, the media benchmark rate of 15%, which is often publicised by the funds, regulators and the government as to how superannuation is taxed, is

[30] I find material differences in alternative measures of the incidence of taxation classified generally as effective tax rate (ETR) and cash effective tax rates (CETR).

[31] Variations of these proxy measures are suggested by issues associated with *AAS 25 Financial reporting by superannuation funds* which guided financial reporting by superannuation funds and necessitates adjustments being made for, (i) transactions with members; (ii) contribution taxes; and (iii) recognition of dividends with franking credits on a net basis.

[32] There are 41 industry superannuation funds represents the total population during the sample period.

[33] For example, income earned from fixed interest assets attract a 15% tax rate. However, income earned through a realised capital gain held for more than 12 months is taxed at 10%, due to the two-thirds capital gains discount applicable for superannuation funds. Additionally, income earned through dividends payments may attract 0% tax rate where franking credits can be applied. Further, income attributable to members in retirement phase is not taxed at all.

complex and problematic. This is due to the varying range of tax rates applicable to the categories of income generated within a fund. Therefore, an ETR of less than the media benchmark rate of 15% should be expected. Analysis based on fund characteristics generally suggests a benchmark of 10.6% or possibly less (refer to Appendix 1.A.). In light of this there is a lack of conclusive evidence of systematic tax aggressiveness among industry superannuation funds. This is supported by qualitative analysis undertaken of the financial statement note disclosures supporting the determination of tax. Notwithstanding, there is evidence of some variation in the incidence of taxation across the fund-year observations. However, it is not possible to determine whether these are outliers or the result of variations occurring in particular years. Further investigation is beyond the scope of this chapter.

The results in this chapter make a number of significant contributions to the literature considering tax aggressiveness and methods for examining tax aggressiveness in a unique setting. In addition, this chapter provides practical insights into the financial reporting of superannuation funds, which will be valuable to legislators and regulators alike.

First, there is lack of conclusive evidence of systematic tax aggressiveness across industry superannuation funds and caution should be exercised in describing a deviation from the benchmark rate as being tax aggressive. While the average ETR (8.5%) is much lower than the media benchmark rate commonly discussed (15%), a more appropriate benchmark rate would be 10.6% or less (refer to Appendix 1.A.). However, there is still variation in measures of tax aggressiveness across fund year observations; this is not explained by the traditional antecedents found in the corporate tax avoidance literature (Gupta & Newberry, 1997; Graham & Tucker, 2006; Wilson, 2009; Lisowsky, 2010) and is further explored in Chapter 3.

Second, a range of measures of tax aggressiveness are considered, including those calculated from information from the funds' financial reports and more traditional measures (Hanlon & Heitzman, 2010). Notwithstanding, measures prepared from information in the

financial statements are subject to measurement error for the reasons identified below. Further, issues are also identified with another commonly used measure of tax aggressiveness, the cash effective tax rate (CETR) (Chen et al., 2010). In a corporate entity, this is typically calculated as tax payments reported in the Statement of Cash Flows over profit before tax in the Statement of Profit or Loss (Chen et al., 2010). The timing of tax payments is determined by the tax legislation, and payments in Australia are generally reflective of prior year net profit, either as a final tax payment for the prior year or interim payment for the current period. Further, interim payments may be impacted by requirements or restrictions on revision of tax payments. The result is that the CETR measure may be calculated as tax payable, which is more reflective of the prior year profit relative to the current year profit. This will not be an issue if profit is consistent across periods; however, where profits are subject to variability (including those arising from increases in asset realisations), this will manifest in biased measures that overstate tax aggressiveness. These impacts might be ameliorated by adjusting CETR for changes in current tax payable.

Third, the information provided in general purpose financial reports and prepared in accordance with *AAS 25 Financial Reporting by Superannuation Plans* contains a number of limitations. These stem from limitations in the definition of equity in the AASB conceptual framework, *Framework for the Preparation and Presentation and Financial Statements.* Specifically, items are classified as liabilities if there is a present obligation (AAS 25, para 60). As a consequence, member interests in superannuation funds are classified as liabilities rather than equity, and transactions with members are considered income and expenses rather than transactions with equity holders. This leads to the recognition of member transactions in the income statement, and contributions taxes being recognised as tax expenses. This results in measures of profit or loss which might not be relevant for members. Additionally, it also creates issues with the estimation of measures of tax aggressiveness. Many of these issues are now

addressed in a revised standard, *AASB 1056 Superannuation Entities*, with the exception of the recognition of franked dividend revenue on a net basis rather than a gross basis. This was considered as an agenda item by the AASB in November 2007, but rejected (AASB, 2007). It may be appropriate for this to be revisited.

Finally, a major difficulty in undertaking research on industry superannuation funds is accessing general purpose financial reports of industry superannuation funds. The funds are unincorporated and hence fall outside the scope of the corporation's legislation (*Corporations Act 2001 (Cth)*). Accordingly, general purpose financial reports are not lodged with the Australian Investments and Securities Commission (ASIC). Nor is there alternative legislation requiring the provision of financial reports to members or their lodgement with a public repository. While financial reports are provided to APRA, these are used for supervisory purposes only and they are not publicly available. This is surprising in light of both public interest and the likely demand for such reports. Accordingly, a contribution of this chapter is the identification of limitations in the existing legislation governing industry superannuation funds relating to the lodgement and dissemination of general-purpose financial reports.

The remainder of chapter is arranged as follows: Section 2 reviews the literature and develops the hypotheses; Section 3 outlines the research design; Section 4 describes the sample; Section 5 presents the results of the tests; and Section 6 concludes.

2.2 Literature review and hypothesis development

2.2.1 Institutional background: industry superannuation funds in Australia

There is a long history of industry superannuation funds in Australia. Many were established in the 1970s (or earlier) in accordance with industrial awards negotiated by unions, either individually or collectively, to receive payments on behalf of employees (Bateman & Ablett, 2000). It is probably for this reason that they are still today commonly referred to as

'union funds'. The economic significance of these funds increased with the negotiation of a *Prices and Wages Accord* in 1983 between the government and the unions, when a 3% pay increase was forgone in exchange for superannuation contributions of 3% of wages and salaries (OSSA, 1987). The significance of industry superannuation funds further escalated with the *Superannuation Guarantee Act 1992 (Cth)* (SG Act, 1992) which broadened the scope of the requirement to make superannuation contributions. These are now required for all employees, and the rate of employer contributions has increased and now stands at 9.5% (APRA, 2018). While superannuation contributions are not necessarily made to industry funds, many employment agreements identify a default fund that is generally an industry fund (Bateman & Ablett, 2000). As a consequence of increasing workplace coverage, increases in the contribution rates and the accumulation of fund assets, the value of assets held by industry superannuation funds is now economically significant ($630 billion).

The operation of superannuation funds is legislated in the first instance by the *Superannuation Industry (Supervision) Act 1993 (Cth)* (SIS Act, 1993). Compliance with the requirements of the SIS Act is obligatory for recognition of the fund as a complying fund and for it to be eligible to hold and receive superannuation contributions (s. 13A, SIS Act, 1993). Failure to comply with these requirements attracts punitive financial (tax) penalties[34] (SIS Act, 1993). The SIS Act addresses most aspects of fund operations, including administration, accounting, auditing, reporting and governance. For example, the SIS Act prescribes an equal representation of employer and employee trustees, and it is for this reason the funds are probably more appropriately described as industry superannuation funds. The SIS Act also makes provisions for accounting, auditing and reporting requirements (Part 4, SIS Act, 1993);

[34] Non-complying superannuation funds and non-complying ADFs are taxed at 47% on all taxable income, 4% prior to 1 July 2014. (Thomson Reuters, 2016).

however, it should be noted that the reporting requirements are limited.[35] A consequence of this legislation is that industry superannuation funds are operationally homogeneous (Liu, 2013; Tan & Cam, 2015).

2.2.2 Prior literature and hypotheses development

There are increasing political and public concerns about the tax aggressiveness of corporations that reduce tax payments, not only in Australia but globally (Slemrod, 2007; Desai & Dharmapala, 2006, 2009; Hanlon & Heitzman, 2010; Rego & Wilson, 2012; Richardson et al., 2013). Tax aggressive practices often exploit weaknesses in international tax treaties which allows 'double non-taxation or less than single taxation' of income (OECD, 2013).[36] Consequently, the resulting impact on government revenues have been pronounced (U.S. Congress, 1999; Bankman, 2004; Slemrod, 2004). For example, in the U.S., corporate contributions to total tax revenues declined by a quarter between 1996 and 2012, while non-repatriated profits held by large U.S. corporations in low tax jurisdictions increased fourfold to over $1.9 trillion in the decade to 2012 (Levin, 2013).

These concerns have been a catalyst for a growing literature investigating corporate tax aggressiveness (e.g. Slemrod, 2004; Desai & Dharmapala, 2006; Hanlon & Heitzman, 2010). In this literature a range of definitions of tax aggressiveness have been developed (e.g. Lopez et al., 1998; Dyreng et al., 2008; Hanlon & Heitzman, 2010), and this is doubtless a reflection of the influence of the divergent research agendas in accounting, economics and finance[37]

[35] This is in reference to general purpose financial statement reporting. Despite this, APRA require reporting under s. 13 of the *Financial Sector (Collection of Data) Act 2001 (Cth)*. These fall under APRA's *Prudential Reporting Framework* available on APRA's website http://www.apra.gov.au/Super/Pages/RSE-Reporting-forms-instructions.aspx.

[36] This refers to overlaps between tax systems (domestic) where in some instances both the originating and the opposite side are not subject to tax as a result of the differences between the tax rules and the effect of tax treaties. These loopholes are used to give effect to tax avoidance schemes such as the Double Irish/Dutch Sandwich. (McClure, R.W. 2018).

[37] Tax research in accounting frequently focuses on the magnitude, determinants and consequences of tax aggressiveness, whereas in economics, the focus is on the tax burden and where the incidence of that burden is

(Graham, 2003; Slemrod, 2004; Slemrod, 2007; Hanlon & Heitzman, 2010). A critical point of difference across the definitions of tax aggressiveness is how egregious the reduction of taxation must be, and this usually takes into account the entity's degree and scope, which requires the exercise of judgement (Lisowsky, 2010). At issue here is that one person may conceptualise tax aggressiveness entirely differently to someone else. The result is increasingly broad definitions of tax aggressiveness in the various literatures (Hanlon & Heitzman, 2010). This is apparent in the accounting tax literature where increasingly broad definitions of tax aggressiveness have been adopted (Lanis & Richardson, 2013; Lennox et al., 2013; Donohoe & Knechel, 2014; Gallemore et al., 2014). Within tax research in accounting there is no generally accepted definition of "tax aggressiveness" (Hanlon & Heitzman, 2010; Lisowsky et al., 2013). However, recently a consensus has formed around the concept of a "continuum" of tax minimising activities (Lisowsky et al., 2013). It ranges from benign behaviours that were envisioned by legislators when tax policies were developed, to outright tax evasion and fraud (Hanlon & Heitzman, 2010). Tax aggressiveness, therefore, covers a broad spectrum of tax planning activities with outcomes that range from certain to uncertain tax positions (Frischmann et al., 2008). In this study, attention is focused on those activities closer to illegal, and representing the more aggressive end of the continuum (Lisowsky et al., 2013). Finally, the term "tax aggressiveness" is used throughout the chapter. However, it can be used interchangeably with "tax avoidance", "tax management", "tax planning" and "tax shelters" (Lanis & Richardson, 2012). Typically, tax aggressiveness in the extant literature is evaluated by the divergence between a benchmark (statutory tax rate) and the ETR (Hanlon & Heitzman, 2010). However, in this setting, there is significant scope for tax rates below the media benchmark rate of 15% (Williams, 2014; Reddy, 2016), although whether this represents

situated (Graham, 2003). In finance, the focus is frequently upon the evaluation of taxes on firm value, expected returns and leverage (Hanlon & Heitzman, 2010).

tax aggressiveness can be contested. Notwithstanding, there are some critical differences that must be addressed when evaluating tax aggressiveness in this setting. The taxation of industry superannuation funds differs significantly from corporations, which is what the extant tax aggressiveness literature addresses. The current Australian superannuation tax regime is uniquely structured[38] in the manner that taxes are assessed on contributions, earnings made on investments and exemptions granted when members retire (TTE Structure) (Williams, 2013). Compulsory superannuation contributions[39] are generally taxed at a media benchmark rate of 15% when transferred to the fund.[40] Despite contributions being taxed, they should not be recognised as income. Subsequently, taxes resulting from contributions should be labelled as contributions taxes (not income taxes) and therefore should be excluded in the evaluation of tax aggressiveness of industry superannuation funds. Problematically, not all of the net profit is taxed at the same rate. For instance, the net profit in superannuation funds where members are in the 'accumulation phase' is generally taxed at the media benchmark rate of 15%, but this can be reduced to 10% for capital gains realised on investments held for more than 12 months. A further complexity is that members in 'retirement phase' attract a zero rate of tax, so no tax is payable on net profits generated within the fund for these members. Another tax related

[38] In the U.S. and U.K., the taxation structure for retirement income systems are Exemption on contributions, Exemption on investment income and Taxed on withdrawal (EET) structures. The EET structure provides an exemption on contributions; an exemption on investment income and the benefits are taxable on withdrawal (William, 2013).

[39] Members are also able to make after tax contributions, which are referred to as non-concessional contributions. These types of contributions are encouraged by the Australian Government, where in certain circumstances they provide assistance to low income taxpayers (government co-contributions and low income contributions). Note as of 2018 that there is a non-concessional contributions cap, which is $180,000 per individual per year (or $540,000 every 3 years for people under the age of 65). The individual is liable to pay a tax rate of 49% for contributions that exceed the non-concessional contributions cap.

[40] The 15% concessional contribution tax rate is available to individuals with an annual income below $300,000 from 2012–13 and is payable by the fund. If the member earns an annual income above $300,000 then the individual is liable to pay an extra 15% contributions tax on top of the concessional contribution tax rate (Div 293 ITAA97). If the member does not disclose or quote their tax file number (TFN) the tax rate is 49% and is payable by the fund.

complication arises from the application of dividend imputations.[41] It is evident that superannuation taxation requires fund trustees to navigate a number of considerable complexities. However, the complex nature of the superannuation tax regime also presents a range of opportunities for legitimate management of taxation by considering the potential tax consequences during the investment decision making process.[42] The different and more complex tax arrangements of superannuation funds warrant separate analysis of tax aggressiveness in comparison to public companies. The most obvious and observable difference is that the tax rate for industry superannuation funds is much lower than that of corporations (i.e. 15% or less compared to 30%). The extant literature typically evaluates tax aggressiveness in settings with higher tax rates, which ranges approximately from 30–35% (Hanlon & Heitzman, 2010). In contrast, the setting in this chapter has significantly lower tax rate.

In evaluating tax aggressiveness, this chapter follows the recommendation in the literature that consideration be given to the costs and benefits of tax aggressiveness (Gergen, 2002; Crocker & Slemrod, 2005; Desai & Dharmapala, 2007; 2009; Hanlon & Slemrod, 2009). The benefits of tax aggressiveness are typically portrayed as managers extracting benefits from governments for the benefit of shareholders (e.g. Rego & Wilson, 2012). These benefits are an increase in cash, liquidity, and after tax performance, with the latter included in performance metrics such as earnings per share (Hanlon & Slemrod, 2009). Additionally, a reduction in a firm's ETR achieved by tax aggressiveness is potentially a positive signal to investors, reducing the cost of equity capital (Chi et al., 2014; Inger, 2014; McGuire et al., 2014). Critically, these economic benefits provide incentives for firms to be tax aggressive. While there is an extensive

[41] This is applicable to only to dividend distributing Australian equities that attach franking credits. Franking credits are a tax benefit that are provided to Australian equity shareholders who receive a dividend from the respective company that can be used to offset taxes payable and are fully refundable (McClure et al., 2018).

[42] Mackenzie and McKerchar (2014) outline a range of practices implemented by Chief Investment Officers (CIO) of superannuation funds referred to as tax aware investment management practices.

literature evaluating corporate tax aggressiveness (Shackelford & Shevlin, 2001; Graham, 2003; Hanlon & Heitzman, 2010), there is no empirical evidence evaluating tax aggressiveness of industry superannuation funds. However, such an evaluation is warranted by the increasing anecdotal evidence (Seccombe, 2014; Crowe, 2015; Davis, 2017) of organisational structures that are consistent with the adoption of tax aggressive practices (i.e. the use of OFCs), the economic significance of industry superannuation funds, and the complexity in the determination of tax expenses (discussed below).

There are also significant costs associated with tax aggressiveness, such as the direct costs of establishing the necessary operational structures and processes to reduce tax payments (Wilson, 2009; Lisowsky, 2010; Rego & Wilson, 2012). In addition, the adoption of tax aggressive practices may cause collateral damage. For instance, in the event of tax authorities redetermining tax liabilities, firms may incur substantial fines and penalties following unsuccessful litigation challenges to tax aggressive interpretations (Desai & Dharmapala, 2009; Hanlon & Slemrod, 2009). There may also be indirect costs of tax aggressiveness. For example, there may be reputational consequences for firms being perceived to be applying egregious tax aggressiveness (Lanis & Richardson, 2012; Boone et al., 2013). Further, those responsible may be impacted by the costs of tax aggressiveness to managers (Lanis et al., 2018). For example, following increased media scrutiny, there has been a conscious effort within the superannuation investment management landscape to consider employing an Ethical, Sustainable and Governance (ESG) framework (Thomson, 2019).

Critically, the incentives for tax aggressiveness by industry superannuation funds are broadly similar to those considered for corporate organisations and the structures underpinning corporate tax aggressiveness are comparable for industry superannuation funds. Further, while shareholders hold the residual interest in corporations and benefit from increases in after tax returns, members of industry superannuation funds hold a comparable position and benefit

from increases in after tax performance. Consequently, the after tax performance of the fund features prominently in marketing material for industry superannuation funds and can be considered an important and credible performance metric.[43] In addition to directly increasing member funds, higher returns may attract new members to the fund; this is beneficial for current members as it reduces administration and operational costs per member due to economies of scale. This potentially allows further diversification and broader investments to be made due to increased assets under management. Additionally, trustees will have access to increased levels of cash, which ensures liquidity (Saavedra, 2013). The management of liquidity[44] for a fund is an important operational concern that requires consideration when superannuation funds devise investment strategies. This is particularly topical as the first cohort of working Australians that benefited from compulsory contributions and superannuation over their entire working life – the so-called baby boomers – are nearing maturity (Commonwealth of Australia, 2016). Consequently, funds face the responsibility of transitioning the baby boomer generation[45] from working life to retirement. This would require superannuation funds to be able to disburse their members with the benefits accrued during their working lives, without compromising the funds' current investment strategies.

Industry superannuation funds commonly control operations or investments in foreign markets, and hence foreign sourced income. The adoption of foreign investments has increased as domestic investment opportunities have become increasingly limited or constrained

[43] The superannuation industry is competitive, with funds purchasing advertising on all media platforms and sponsoring major sporting events and teams.

[44] Liquidity refers to the ability to meet obligations when due. For superannuation funds it refers to the ability to pay members' benefits, rollover and retirement payments as and when required. The threat for superannuation funds exists where a large segment of the population, such as the 'baby boomer' generation (referred to the generation born between 1946 and 1965), approaches retirement age.

[45] According to the Australian Bureau of Statistics (ABS) "the number of people aged 65 years and over will increase rapidly over the next 50 years, from 2.6 million in 2004 to between 7 and 9 million people in 2051. By then, slightly more than one in four Australians will be aged 65 years and over (around one in 8 at 2004)" (ABS, 2005).

(Edmonds & McBain, 2016). Industry superannuation funds have greater ability to consider investing offshore than most corporations because they have a greater ability employ free cash flows as there is no requirement to purchase inventory or equipment. They also have reduced costs associated with adopting tax aggressiveness. Concerns have been expressed in the media (Seccombe, 2014; Crowe, 2015; Davis, 2017) relating to investments held in offshore entities linked to nations which have been linked to the more egregious end of tax aggressiveness spectrum. Additionally, external investment managers are often appointed to undertake and manage offshore investments. An unresolved issue is whether the use of OFCs provides beneficial tax outcomes to Australian industry superannuation funds; or are they simply necessary to ensure profits are taxed once only.[46] An alternative is that an OFC is used at the behest of or to the benefit of the investment manager, often a multinational financial corporation.

Importantly, tax aggressiveness is typically examined in the context of corporations that are taxed at relatively high rates (i.e. 30%). However, the tax rate generally applied to industry superannuation funds is much lower than that of corporations (i.e. 15% or less). In this setting it remains uncertain whether the impact of this variation in tax rates reduces the benefits, to a level where tax aggressiveness is not economical. Accordingly, as it is unclear as to whether costs exceed the benefits, and therefore whether there are lower incentives for tax aggressiveness across industry superannuation funds, I evaluate the following null hypothesis:

H_1 *Industry superannuation funds are not tax aggressive.*

[46] Australia's sovereign wealth fund (Future Fund) also use OFC structures to hold certain investments and cite the use of these structures is to build a diversified portfolio, access efficient investment opportunities whereby multiple investors can pool capital and avoid the duplication of taxes (Future Fund, 2015). The OFC structures have legitimate commercial purposes and promote global investing amongst institutional investors. OFCs promote efficiency, mitigate risk, assist capital flows and reduce the duplication of tax.

In this setting it is reasonable to presume managers in a low tax rate environment would not be incentivized to be tax aggressive because the benefit would be insignificant. Alternatively, despite this presumption, there is evidence of companies domiciled in low tax jurisdictions engaging in aggressive tax behaviour, whereby managers aim to have an effective tax rate of close to 0% (Gravelle, 2009; 2013; Wood, 2014). Further, there is Australian evidence that even with the benefits of imputation reducing tax, companies that pay dividends with full tax credits attached still seem to avoid tax (McClure et al., 2017). Therefore, if industry superannuation funds are tax aggressive it is prudent to consider whether the traditional antecedents identified in the corporate tax aggressive literature also apply in this setting.

In the literature evaluating corporate tax aggressiveness, considerable attention has been directed at firm characteristics and the factors that are relevant to the determination of the benefits and costs of such practices (Hanlon & Heitzman, 2010). This is relevant as it will impact the incentives for, and the relative magnitude of tax aggressiveness. The benefits of tax aggressiveness are presumed greater for more profitable firms as there is greater potential to reduce tax (Gupta & Newberry, 1997; Graham & Tucker, 2006; Wilson, 2009; Lisowsky, 2010). There are also significant costs associated with engaging in aggressive tax practices (Wilson, 2009; Lisowsky, 2010; Rego & Wilson, 2012). These would be fixed costs and hence larger firms are more likely to be tax aggressive (Desai & Dharmapala, 2009; Amiran et al., 2016). However, industry superannuation funds, and in particular the large funds, are subject to increasing scrutiny by both the tax authority and in the media. Potentially in this setting, fund members may be more concerned about unfavourable consequences than shareholders who are relatively insensitive to such outcomes (Armstrong et al., 2012). While there is an association between profitability and size for corporations, this remains untested for industry superannuation funds. Hence, the following hypotheses are evaluated:

H₂ *There is an association between industry superannuation fund returns (profitability) and tax aggressiveness.*

H₃ *There is an association between the size of industry superannuation funds and tax aggressiveness.*

Further, tax aggressiveness might be impacted by governance mechanisms, and in particular independent directors, and there is extensive evidence of this in the corporate sector (Desai & Dharmpala, 2006; Lanis & Richardson, 2012; Rego & Wilson, 2012; Armstrong et al., 2015). The traditional view is that well governed firms are more likely to have extensive internal control mechanisms that would limit tax aggressiveness (Desai & Dharmapala, 2006). Conversely, there is evidence that well governed firms may advocate more aggressive practices in order to increase after tax outcomes (Crocker & Slemrod, 2005). In this setting, there are some important differences that must be considered. For instance, in contrast to corporate directors, the trustees of industry superannuation funds are not elected by members. Equal numbers of trustees are appointed by employee and employer organisations, and additional independent trustees may be appointed by the trustees. Hence, they are limited in number and whether they represent the interests of members is less clear. To evaluate whether governance characteristics are relevant to tax aggressiveness, I test the following hypothesis:

H₄ *There is an association between the corporate governance characteristics of superannuation funds and tax aggressiveness.*

2.3 Research design

The objective of this chapter is to evaluate whether industry superannuation funds are tax aggressive as defined in the extant tax avoidance literature (e.g. Hanlon & Heitzman, 2010). Accordingly, attention is initially directed at the evaluation of the tax expense and tax payments recognised by industry superannuation funds. Specifically, I analyse the divergence between

the measures of the incidence of taxation and (1) the media benchmark rate (15%), and (2) an alternative benchmark rate (10.6%), both of which are determined on the basis of statutory tax rates (refer to Appendix 1.A.). This is consistent with prior literature that identifies tax aggressiveness on the basis of this divergence (Hanlon & Heitzman, 2010). Specifically, tax aggressiveness is determined having regard to the degree that these measures are less than a benchmark.

In this setting, it is imperative to consider the comments of Hanlon and Heitzman (2010) about the suitability of proxy measures when evaluating tax aggressiveness; particularly relating but not limited to the research question and context, and the policy implications applicable to the setting (Hanlon & Heitzman, 2010). Accordingly, there are difficulties in reliably estimating the proxy measures that are consistent with the extant literature, which typically exclude financial sector firms, including industry superannuation funds (Shackelford & Shevlin, 2001; Graham, 2003; Hanlon & Heitzman, 2010). This is likely due to variations in financial statement disclosures made by firms in the finance sector (including superannuation funds) compared to public companies, possibly leading to the exclusion of these firms when calculating such proxy measures. Historically, accounting of superannuation funds was prescribed by *AAS 25 Financial Reporting by Superannuation Plans,* which was initially issued in 1993. The principal concern stems from the recognition of contributions as income in the statement of financial performance. It can be argued that in a corporate setting, shareholders are equivalent to members in a superannuation setting. Accordingly, the classification of shareholders in general purpose financial statements is treated as a part of the equity – and any movements in equity are therefore, excluded in calculations of operating income. However, in the superannuation setting, members are classified as liabilities of the fund. As liabilities, member transactions (e.g. contributions) are included in calculations determining fund income. Consequently, this misstates general purpose financial reports because member transactions

that are unrelated to fund performance are included in the statement of financial performance.[47] Consequently, financial performance is likely to be misstated in general purpose financial statements of industry superannuation funds as it includes member transactions. As a result, the inclusion of contributions in pre-tax profit biases the measures of the incidence of tax, as it now includes what may be recognised as capital. This likely results in misspecification of tax aggressiveness measures if they are calculated in the same way as identified in the corporate tax literature.[48]

Based on the differences in superannuation accounting compared to corporate accounting, alternative measures are needed to capture the incidence of taxation which can then be used to capture tax aggressiveness (*TaxAgg*). These are, in the first instance, based upon information disclosed in the financial statements (*ETR*) and that have been the catalyst for public and political concerns. Adjustments are then made to address issues with the disclosures in the financial report that undermine this simple measure of the incidence of taxation. A similar process is undertaken with cash-based measures of tax aggressiveness (*CETR*), and adjustments are again made to address issues with the disclosures in financial statements. These measures of tax aggressiveness will then form the basis for tests of the hypotheses.

The evaluation of tax aggressiveness (H_1) is undertaken initially with univariate analysis, by conducting a one tailed one sample *t*-test. This test evaluates whether the mean of the measures of the incidence of tax (ETR/CETR) are significantly lower than the benchmark tax rates. A challenge in undertaking this analysis is the determination of a suitable benchmark

[47] It is important to note that this regulation prescribes the recognition of fund assets to be at net market value (AAS 25, para 37), and this provides a basis for recognizing investment performance on a timely basis. Consistent with this, revenues are defined to include changes in the net market value of investments (AAS 25, para 29).

[48] More recently, accounting for superannuation funds has been superseded by the application of *AASB 1056 Superannuation Entities*, which had application for financial years beginning on or after 1 July 2016. This creates a number of opportunities and challenges. It addresses some of the deficiencies in AAS 25 relating to member contributions. It also constrains the sample period, as it is difficult to evaluate accounting information prepared under different accounting standards. However, prior year disclosures made in accordance with AASB 1056 may permit more detailed analysis and evaluation of disclosures made in accordance with AAS 25 in the final year of its application.

tax rate due to complexities in the taxation legislation. Accordingly, in this chapter, I recognise two benchmark tax rates as being suitable to conduct the analysis upon and these are discussed in detail in Appendix 1.A.. The first is a media benchmark rate of 15% and the second is an alternative benchmark rate of 10.6% estimated on the samples' fund characteristics. A consequence of the outcomes of evaluating H_1 is that any result either 'fails to reject' or 'rejects' the null hypothesis (Meehl, 1978).[49] Notably, the rejection of the null hypothesis alone may not be sufficient to infer that industry superannuation funds are in fact tax aggressive.

Therefore, in the absence of evidence to the contrary, and assuming the presence of tax aggressiveness, I consider the following hypotheses (H_2), (H_3) and (H_4) to evaluate the antecedents of tax aggressiveness. Accordingly, superannuation fund profitability (H_2), size (H_3) and governance (H_4) are evaluated with the following model:

$$TaxAgg = \alpha_0 + \alpha_1 ROA_{it} + \alpha_2 Size_{it} + \alpha_3 Ind_{it} + \alpha_4 Chair_{it} + \sum^{k}{}_{j=5} \alpha_j Controls_{it} + \varepsilon_{it} \quad (1)$$

Variables and controls are as defined below.

Tax Aggressiveness (TaxAgg)

In the tax literature a range of measures of tax aggressiveness have been developed and used (e.g. Dyreng et al., 2008; Chen et al., 2010; Kim et al., 2011; McGuire et al., 2012; Rego & Wilson, 2012; Boone et al., 2013; Hoi et al., 2013; Khurana & Moser, 2013). A common theme is that the measures typically identify the incidence of taxation and rely on the deviation

[49] "When the null is true, the *t* values do not converge to any limit with increasing sample size. For sample sizes greater than 30 or so, the distribution of *t* values is well approximated by a standard normal distribution. Corresponding *p* values are also distributed; when the null is true, all *p* values are equally likely—that is, they are distributed uniformly between 0 and 1. This distribution holds regardless of sample size. The consequence of this fact is that researchers cannot increase the sample size to gain evidence for the null, because increasing the sample size does not affect the distribution of *p* values. Of course, this behaviour is part of the design of significance tests and reflects Fisher's view that null hypotheses are only to be rejected and never accepted (Meehl, 1978)." (Rouder et al., 2009: p. 226)

between these measures and a benchmark (typically statutory rates) to capture tax aggressiveness. However, each of the measures has limitations; Hanlon and Heitzman (2010) note that the measure used must be determined having regard to the research question being addressed and the context.

Attention is directed in the first instance at a measure of tax aggressiveness identified in the media and which is the catalyst for public and political concerns. Although this is a naïve measure, it will identify whether concerns are motivated by isolated instances or systemic behaviours. This measure emphasises information presented on the face of the statement of profit or loss and relates reported tax expense to reported profit before tax. Such a measure resembles one widely used in the early tax accounting research that is typically labelled the 'effective tax rate' (ETR) (Hanlon & Heitzman, 2010). However, a consequence of the requirements of *AAS 25 Financial Reporting by Superannuation Plans,* and accounting practices for franking credits attached to dividends (discussed above in Section 2.2.1), means that claims of tax aggressiveness are likely overstated. Accordingly, this measure is labelled *ETR1*, and is measured as:

$$ETR1_{it} = \frac{TaxExpense_{it}}{PreTaxIncome_{it}}$$

Recognising potential limitations in this measure, an alternative measure is estimated with adjustments made to the information reported in the statement of profit or loss, and where the accounting treatments prescribed in *AAS 25 Financial Reporting by Superannuation Plans* might be considered inconsistent with typical accounting treatments. Of particular concern are the inclusion of contribution taxes as taxes of the superannuation fund, and recognition of transactions with members as income and expenses. Information about these impacts are discernible from the notes to the financial statements and in filings with APRA's *Annual Fund-level Superannuation Statistics 2017* (AFSS, 2017). The consequences of this are as follows.

First, inclusion of contributions taxes in the numerator leads to the overstatement of the tax on superannuation fund profits. Contribution taxes are calculated at 15% of all concessional (untaxed) contributions, and these typically include guaranteed employer superannuation contributions (AFSS, 2017, Table 3, SRF[50] 330 Item 1.1.1) and contributions made pursuant to salary sacrifice arrangements (AFSS, 2017, Table 3, SRF 330 Item 1.1.2). There are no taxes on non-concessional (taxed) superannuation contributions. Hence, adjustment of income tax expense for this is as follows:

$$InvestTaxExpense_{it} = Tax\ Expense_{it} - (Concessional\ Contibutions_{it} \times 0.15)$$

Second, inclusion of transactions with members (i.e. contributions and distributions) in the denominator leads to the misstatement of fund profit. Transactions with members includes guaranteed employer superannuation contributions (AFSS, 2017, Table 3, SRF 330 Item 1.1), member salary sacrifice contributions (AFSS, 2017, Table 3, SRF 330 Item 1.2), personal contributions (AFSS, 2017, Table 3, SRF 330 Item 1.2.2), government co-contributions (AFSS, 2017, Table 3, SRF 330 Item 1.2.3), low income super contributions (AFSS, 2017, Table 3, SRF 330 Item 1.2.4), and other member contributions (AFSS, 2017, Table 3, SRF 330 Item 1.2.5). Hence, profit before tax is adjusted for these transactions with members as follows:

$$InvestPreTaxIncome_{it} = PreTax\ Income_{it} - Contributions_{it} + Distributions_{it}$$

This leads to the calculation of an adjusted *ETR* measure (*ETR2*) that is likely to more closely reflect traditional ETR measures as follows:

$$ETR2_{it} = \frac{InvestTaxExpense_{it}}{InvestPreTaxIncome_{it}}$$

A further complication in the determination of an ETR arises from the accounting treatment afforded to franking credits attached to dividends received. These are recognised on

[50] SRF refers to APRA's Superannuation Reporting Framework.

a net basis, and this has the effect of understating both *InvestTaxExpense* and *InvestPreTaxIncome.* This is addressed by the addition of franking credits which are disclosed in the notes to the financial statements. Hence, a third ETR measure is calculated as follows:

$$ETR3_{it} = \frac{InvestTaxExpense_{it} + Franking\ Credits_{it}}{InvestPreTaxIncome_{it} + Franking\ Credits_{it}}$$

All ETRs are winsorized between 1 and 0 (Gupta & Newberry, 1997; Dyreng et al., 2008).

An alternative approach that is commonly adopted to evaluate tax strategies focuses on tax payments, rather than tax expenses, and is typically labelled the 'cash effective tax rate' or *CETR* (Cheng et al., 2010). With the emphasis being placed on cash this might be considered a more appropriate measure, but it too is problematic. Tax payments are often made provisionally based on prior year income, with the balance payable in the subsequent year. A consequence of this is a potential misalignment of tax payments and income. Where income is stable from one period to the next this might not have a material impact. However, if income is volatile the effects might be exaggerated. Volatility of investment returns suggests this may be an issue in this context.

Similar issues in the calculation of ETRs discussed above are also relevant to the calculation of CETRs. Consistent with this, alternative measures are calculated. The first emphasises tax payments reported in the statement of cash flows and profits before tax reported in the statement of profit or loss. Hence, this measure, *CETR1*, is calculated as follows:

$$CETR1_{it} = \frac{TaxPaid_{it}}{PreTaxIncome_{it}}$$

Issues with the recognition of contributions, distributions and contributions taxes are equally relevant to the calculation of cash effective tax rates. To address this, adjustments to *TaxPaid* are necessary, and this is made as follows:

$$InvestTaxPaid_{it} = Tax\ Paid_{it} - (Concessional\ Contibutions_{it} \times 0.15)$$

The adjustments to *PreTaxIncome* are consistent with those above. Hence, a second cash effective tax measure, *CETR2*, is calculated as follows:

$$CETR2_{it} = \frac{InvestTaxPaid_{it}}{InvestPreTax\ Income_{it}}$$

It is more difficult to discern the appropriate treatment of franking credits attached to dividends received. The franking credits do not constitute a direct cash flow, but they do reduce the tax that would otherwise be payable. This issue is best resolved by estimating an additional cash effective tax rate measure, *CETR3*, and revisiting this issue if the results are sensitive to this adjustment.

$$CETR3_{it} = \frac{InvestTaxPaid_{it} + Franking\ Credits_{it}}{InvestPreTax\ Income_{it} + Franking\ Credits_{it}}$$

All measures are winsorized between 1 and 0 (Gupta and Newberry, 1997; Dyreng et al., 2008).

Fund Profitability (ROA)

Return on assets (ROA) is used as a measure of fund profitability to evaluate an association of performance and tax aggressiveness (H_2). This particular measure is considered appropriate given the limited leverage of industry superannuation funds and the absence of financing impacts. Further, there are potential differences in the recognition of investment management expenses, which may bias measures based on revenues.[51] The numerator is consistent with the abovementioned calculation of *InvestPreTaxIncome* and data for total assets are obtained from AFSS 2017 (Table 2, SRF 320 item 11). Hence, the variable *ROA* is measured as:

$$ROA_{it} = \frac{InvestPreTaxIncome_{it}}{Total\ Assets_{\ it}}$$

[51] For example, with managed funds, returns may be recognized net of manager expenses.

Fund Size (Size)

There are likely significant costs associated with the establishment and operation of tax aggressive practices. For larger funds these mostly fixed costs are likely to be less significant (e.g. Omer et al., 1993; Zimmerman, 1983). To evaluate the association between fund size and tax aggressiveness (H_3) a variable *Size* is included which is measured as the log of total fund assets. Data for total assets are obtained from AFSS 2017 (Table 2, SRF 320 item 11)

$$SIZE = Log\ of\ Total\ Assets_{\ it}$$

Governance – Independent trustees and Chair (Ind & Chair)

There is evidence in the literature that governance mechanisms mediate the adoption of tax aggressive practices (Lanis & Richardson, 2013). Consideration is typically given to independent directors and independent chairs (e.g. Richardson et al., 2014). To evaluate the association between governance mechanisms and tax aggressiveness (H_4) the variables *Ind* and *Chair* are included. The data is obtained from annual reports to members or s29QC disclosures publicly available on the superannuation fund's website and are measured as follows:

$$Ind_{it} = \frac{Number\ of\ Independent\ Trustees}{Total\ Number\ of\ Trustees}$$

$$Chair_{it} = 1\ if\ the\ chair\ is\ an\ indpendent\ trustee, 0\ if\ otherwise$$

Controls

As previously identified above, there is potentially significant scope for realised tax rates to be less than media benchmark rate of 15%.[52] Addressing the concern that these are

[52] This is due to the varying range of tax rates applicable to the distinct categories of income generated within a fund.

potentially correlated with the any of the explanatory variables, controls are included for fund characteristics likely associated with a lower realised tax rate due to the complexity of the superannuation taxation regime.

A feature of the taxation legislation is that it focuses on cash measures of performance rather than accrual measures. Further, there is a substantial literature suggesting that accruals are employed by corporate managers in managing disclosed profits (Jones, 1991; Bradshaw at. al., 2001; Dechow & Dichev, 2002). There are reasons to believe that they may be used for similar purposes by trustees. Accordingly, accruals may impact the apparent incidence of taxation, although this will be more problematic for measures of tax aggressiveness based on tax expenses. Notwithstanding, to control for this *Accruals* is included and measured as profit before tax less cash flows from operations. The data is obtained from the cash flow statement which is available in the unabridged audited financial statements of superannuation funds.

Whereas tax is generally levied on the income of superannuation funds at 15%, capital gains arising on the sale of assets held for more than 12 months are only taxed at 10%. As a consequence, trustees may alter the mix of long held assets compared to short held assets in order to defer the payment of tax and attain a tax rate reduction that is available for capital gains tax (Ellis et al., 2008; Fong et al., 2009; Reddy, 2016). To address this, a control is included for the proportion of assets that are more likely to be held for more than one year (*Long*). *Long* is measured as the proportion of investments in equity, property and infrastructure. Accordingly, data for *Long* is obtained from AFSS 2017 (Table 9, SRF 530 Item 2(9) + item 3(8) and Table 9, SRF 320.0 item 2). When members are in their retirement phase there is no tax on superannuation fund profit attributable to these members. Clearly, this will reduce the incidence of taxation, and this component of the fund would not be considered as tax aggressive. To address this a control variable is included (*Retirement*) which is calculated as the proportion of total members' funds held for members in their retirement phase at year

end. The data obtained for this control variable is obtained from AFSS 2017 (Table 11, SRF 610.1 item 4. (2)).

Tax may also be deferred where income is foreign sourced, and this would further impact the incidence of taxation. To address this a further control is included for foreign investments (*Foreign*). Accordingly, the data is obtained from the unabridged audited financial statements, balance sheet items or in the notes to the financial statements.

Finally, to control for the influence of external investment managers, which may or may not impact the ability of the fund to optimise the recognition of income as capital gains, a control is included for the proportion of assets held directly. Superannuation funds disclose the percentage of investments directly held *(Held)* within the fund in AFSS 2017 (Table 9, SRF 530.0 item 2).

2.4 Sample selection and descriptive statistics

2.4.1 Sample selection

This chapter focuses on industry superannuation funds and there are limitations on broadening the sample to superannuation funds more generally.[53] Preliminary data is collected from APRA's Fund-level Superannuation Statistics (AFSS), which is publicly available on their website.[54] While there is some financial information available, this data set is insufficient to address the research objectives of this chapter. Consequently, there is a reliance on funds with available general purpose financial reports. With respect to two other not-for-profit categories of funds, public sector and corporate funds, these funds only disclose abridged

[53] Refer to Appendix 2.A. for complete discussion on limitations of broadening the sample to all superannuation funds.

[54] APRA data contains detailed profile and structure, financial performance and financial position, conditions of release, fees and membership information for APRA-regulated superannuation funds. It also provides profile and structure information for the trustees of APRA regulated superannuation funds (APRA, 2017). APRA data is available on their website and is contained in a single electronic format. The specific file is named *Annual Fund-level Superannuation Statistics back series* which was issued on 1 February 2017.

audited financial statements[55] to members; there is no specific legal requirement for these funds to lodge general purpose financial reports with APRA.[56] Similar issues arise with respect to retail superannuation funds, and in addition, analysis is further complicated for these funds by the complexity of their structural arrangements and profit orientation. Critically, the abridged financial statements do not contain sufficient disclosure notes required to address the research objectives of this chapter. Identification of the limitations in the provision of general purpose financial reports to members (and the public more generally) inhibits transparency and the deficiency in the regulation relating to reporting to members of superannuation funds generally is a valuable contribution in this chapter.

Obtaining general purpose financial reports for industry superannuation funds is nonetheless problematic, and hence is limited to the years 2014 to 2016.[57] Funds were contacted directly and from a population of 41 industry superannuation funds, general purpose financial reports are obtained for three years for 32 funds and two years for three funds.[58] This reduced the sample to 102 fund-year observations.

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[55] Reg 2.38 (2)(f) of the SIS Act requires RSE to make publicly available the annual report for the previous financial year. The annual report may only contain abridged versions of the financial statements of the RSE.

[56] A high-ranking officer within APRA confirmed that superannuation funds do not have any legislative or regulative requirement to lodge unabridged fund financial statements with any regulator. This includes APRA, ASIC and the ATO. However, APRA does have the expectation that the unabridged fund financial statements will be lodged voluntarily by the superannuation fund. Still, APRA declined to provide the unabridged fund financial statements, citing a secrecy requirement under s56 of the APRA Act 1998.

[57] The unabridged financial statements for the sample period were prepared under Australian Accounting Standard 25 (AAS 25). AAS 25 was introduced in 1993 and is being replaced. From 1 July 2016 AAS 1056 is effective and applicable to regulated superannuation funds governed by the SIS Act. The requirement under AAS 25 is that superannuation funds at least annually prepare general purpose financial statements of superannuation plan (AAS, 25). Paragraph 21 of AAS 25 stipulates that for defined contribution plans the superannuation fund provides a statement of financial position, an operating statement and a statement of cash flows and notes, with the exception of those superannuation funds that elect the transitional provision which is set out in paragraph 70 (AAS 25). The transitional provision provides an alternative reporting format where the superannuation fund provides a statement of net assets, a statement of changes in net assets and notes to the financial statements. Of the 32 superannuation funds with unabridged fund financial statements, 5 superannuation funds have elected to use the transitional provision prescribed by paragraph 70 of AAS 25. This reduces the sample size of the study by five individual superannuation funds. The statement of cash flow provides the dollar value of income tax paid, which is imperative for the calculation of the dependent variable (ETR). I have been able to generate an estimate of income tax paid and will try to recover those five funds into the sample at a later stage.

[58] Of which two funds had unabridged fund financial statements for financial years 2014–15 and 2015–16, and one fund had unabridged fund financial statements for financial years 2013–14 and 2014–15.

Information is manually collected from the reports. In 2016 a number of funds reported losses. From a tax perspective these losses would be carried forward, and evidence of accounting recognition / treatment (i.e. deferred tax assets) is mixed. This makes measures of tax aggressiveness unreliable, and hence these observations are excluded. It would also render measures of tax aggressiveness in subsequent years unreliable, but as these are outside the sample period it is not problematic. Determination of the various measures of tax aggressiveness required extensive disclosures relating to the determination of the tax expense (generally obtained from the reconciliation of prima facie tax expense on profit before tax to tax payments). Where insufficient information is available observations are excluded.

To obtain trustee governance information, I follow Tan and Cam (2015) who examine the trustee governance of industry and public-sector superannuation funds; trustee governance information is collected from annual reports to members or s29QC disclosures publicly available on the superannuation fund's website. One fund[59], out of the 32 funds in the audited unabridged financial statements sample, did not have publicly available governance information required for the study. This resulted in a final unbalanced pooled sample of 60 fund-year observations

2.4.2 Descriptive statistics

Descriptive statistics for sample firms are provided in Table 2.1. Across all measures of tax aggressiveness (i.e. *ETR1, ETR2, ETR3, CETR1, CETR2, CETR3*) it is notable that there is considerable variation, and these are in line with expectations. For example, when *ETR1* (mean = 8.3%) is adjusted for contribution taxes, the magnitude of the adjusted measure *ETR2* (mean = 4.4%) is significantly lower. Similarly, adjusting *ETR2* for franking credits results in

[59] This superannuation fund merged with another industry superannuation fund that did not provide information for this study. The merger took place on 1 December 2016.

a significantly higher *ETR3* (mean = 8.5%). While the minimum and maximum values indicate variation across the sample, the relatively low standard deviation suggests clustering around the mean for most observations. A comparable relationship is observed and persistent for the *CETR1* (mean = 5.5%), *CETR2* (mean = –1.1%) and *CETR3* (mean = 3.2%) measures, albeit at lower levels.

Correlations between the various measures of ETR and CETR are presented in Table 2.2, Panel A. The correlation between the various measures are high and statistically significant, and this is strongest for *ETR3*. This is not altogether unexpected, given the manner in which the variables are estimated. However, it does suggest that the impact of the adjustments is relatively consistent.

The mean *ROA* is 8.7%, and there is significant variation across the sample firm years. This is consistent with the expected volatility of investment returns and confirms the evaluation of alternative measures of tax aggressiveness in this context as discussed previously. The mean value of accruals (*Accruals)* is 8.4% and may be potentially considered high. However, this is consistent with the deferral of unrealised income gains, and an implication of the lower tax rate applied for capital gains held for longer than 12 months. Accordingly, funds are likely to have better oversight of the realisation of capital gains when funds manage investments directly. Across the sample, the mean direct ownership is 41.1%; however, there is considerable variation, likely due to the systematic outsourcing of the investment function within the superannuation industry (Liu, 2013). The proportion of assets held long term (mean = 70.5%) is reasonably high and reflects a long-term investment horizon of superannuation.

It should also be noted that the proportion of member balances in the retirement phase (*Retirement*) is 7.3% and that there is considerable variation – the maximum value is 25.0%. There is an upward trend of retirement phase members, which is likely due to more Australians transitioning towards retirement. This trend has raised concerns by APRA relating to the

liquidity and sustainability of some funds where a disproportionate asset is attributable to members in retirement phase. Further, this is important as there is no tax payable on the income of fund members in their retirement phase and this will materially impact the tax outflows to the government. An interesting question is whether this would constitute tax aggressiveness. To the extent that it does not involve artificial transactions or structures, this would more likely be considered an idiosyncrasy of the tax system rather than tax aggressiveness per se.

There are relatively few independent trustees of funds (mean = 14.5%) and limited cross-sectional variation. In 55.6% of fund-year observations there is an independent chair (*Chair)*; this is likely to be a result of the governing legislation.[60]

Correlations between the explanatory and control variables are presented in Table 2.2, Panel B. With the exception of the governance variables (*Ind* and *Chair*) there are only limited correlations across the explanatory variables. However, across the control variables there are many significant correlations, and it is notable that *Size* is generally significantly correlated with all the control variables. The consequences of this are that collinearity will likely be an issue in the multivariate analysis, but, to the extent that it is generally limited to the controls, it should not impact testing of the hypotheses except for H_3.

2.5 Results

2.5.1 Main results

Attention is directed in the first instance to test H_1, where initially I conduct a one tailed one sample *t*-test. This test evaluates whether the mean of the measures of the incidence of taxation (ETR/CETR) is lower than the benchmark tax rates. As this is the first examination of

[60] Industry superannuation is subject to equal representation rule, where trustee boards must have the equal number of member and employer trustee-directors.

tax aggressiveness in this setting, considerations relating to the measures of the incidence of taxation are acknowledged.

The mean value for *ETR1* is 8.3% (see Table 2.1) is considerably lower than the media benchmark rate of 15%. However, concerns with this measure of the incidence of taxation are identified above in Section 2.3. Accordingly, to address potential biases, *ETR2* and *ETR3* are calculated. *ETR2* (mean = 4.4%), which adjusts for member transactions and contribution taxes, is as expected much lower. In contrast *ETR3* (mean = 8.5%) is much higher as it recognises the benefit of franking credits. The *ETR3* measure might be considered the most appropriate as this is adjusted for the impact of contributions, contribution taxes, and franking credits on dividend income. Fortuitously, these adjustments are largely offsetting. There is, however, cross sectional variation across observations, and this is possibly exacerbated by funds not recognising deferred tax assets arising from tax losses carried forward. The various cash-based measures of tax aggressiveness (*CETR1, CETR2* and *CETR3)* are consistently lower than the corresponding expense-based measures. This is probably a consequence of volatility of fund profit, and the complexities within the tax legislation. Specifically, tax payments are in the first instance based on prior year profit, and if profit is increasing it will be rectified after year end when the actual tax liability is determined. Therefore, cash tax payments do not totally align with the income year of the tax (Hanlon & Heitzman, 2010). Critically, if profit is increasing there are no incentives (or penalties) requiring adjustment of expected profit or realising higher tax obligations. In contrast, if profit is decreasing there is an incentive to adjust expected profit downwards and hence lower tax payments. Therefore, CETRs will be biased downwards due to this anomaly of the tax administration process. This effect will be pronounced if funds are growing and profits are increasing. Consequently, emphasis is given in this chapter to expense-based measures of tax aggressiveness, and the cash-based measures (unreported) are considered as additional analysis.

It is notable that the mean value of the most reliable measure for identifying the incidence of taxation (i.e. *ETR3*) is materially less than the media benchmark tax rate for superannuation funds (i.e. 15% – 8.5% = 6.5%). Accordingly, evaluation (unreported) of the difference between this measure and the media benchmark rate are statistically significant (*t*-stat = –29.976, p = 0.000). However, such a comparison may not be conclusive, as discussed in Appendix 1.A., where the 15% media benchmark rate is likely overstated due to idiosyncrasies of the tax legislation. Allowing for investment in long-term assets that give rise to capital gains, taxed at only 10% (mean = 70.5% of total assets) and income attributable to members in retirement phase not being taxed (mean =7.3% of total assets), an alternative benchmark rate of only 10.6% is suggested (refer to Appendix 1.A.). Employing the alternative benchmark rate, the difference is reduced (i.e. 10.6% – 8.5% = 2.1%) and is statistically significant (*t*-stat = –7.002, p = 0.000) (unreported). This is a smaller variation than reported for the media benchmark rate (2.1% < 6.5%).

Accordingly, the difference between *ETR3* and both the media and alternative benchmark rates are found to be statistically significant, suggesting rejection of the null hypothesis of H_1. However, caution should be exercised when drawing inferences from the above evaluations. Specifically, rejecting H_1 does not necessarily allow the inference that industry superannuation funds are tax aggressive (Rouder et al., 2009).

Despite these significant results there are still issues in using these measures. In Figure 2.1, the measures of *ETR3* appear to be clustered; this could be explained by at least two distinct scenarios. One possible scenario suggests that the estimated alternative benchmark tax rate is adequate for the purpose of analysing tax aggressiveness. This assumes systematic adoption of tax aggressiveness across most industry superannuation funds. As there is considerable diversity in the provision of tax services (in-house, outsourced and different providers) (Gallagher & Warren, 2016), the probability of all funds arriving at a common ‘strategy’ is

unlikely. In an alternative scenario, the estimated alternative benchmark rate is not adequate for the purpose of analysing tax aggressiveness. This is because the estimate for the alternative benchmark is a conservative 10.6% based on assumptions referred to in Appendix 1.A. There is scope for the benchmark rate to be lower than is identified in Appendix 1.A. This is demonstrated by a fund's ability to strategically manage its investment portfolio mix in order to maximise realisation of capital gains (taxed either at 10% or not taxed if realisation deferred until retirement phase) and income losses (with a tax benefit at 15%). In addition, a handful of superannuation funds have recently adopted the *Voluntary Tax Transparency Code*.[61] In doing so, these funds were encouraged to publicly disclose their tax affairs in a tax transparency report. This provides first hand evidence that these funds have an effective tax rate well below the alternative benchmark with no suggestion of tax aggressiveness.[62]

[61] Developed by the Board of Taxation and endorsed by the Australian Government in the Federal Budget 2016–2017.

[62] The tax transparency reports are attached in Appendix 3.A.

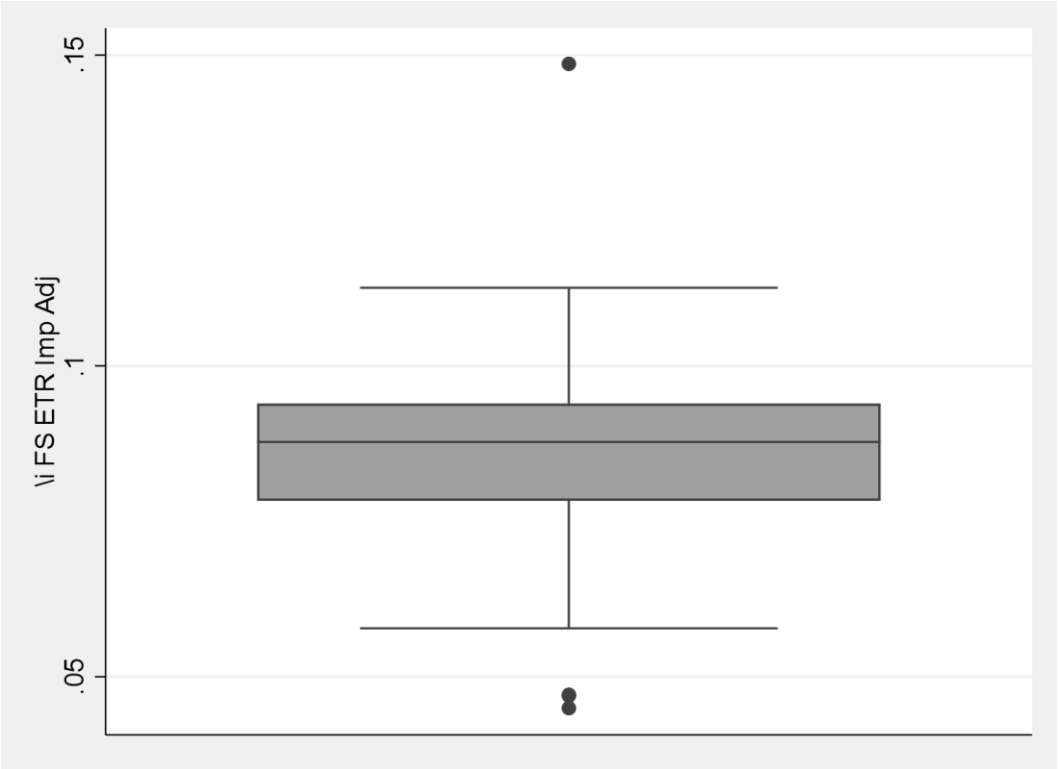


Figure 2.1 – Box plot of ETR3

Hence, the above results provide no significant evidence that industry superannuation funds are tax aggressive. Despite this, and given the research objectives the significant variation between benchmark tax rates and *ETR3* may be associated with tax aggressiveness. In order to improve the ability to draw a conclusive inference, and resolve the research question there is an opportunity available in this setting that allows an in-depth exploration of the source data (Kinney, 1986). An advantage of the relatively small sample size allows for more detailed examination of individual industry superannuation funds. This is further enhanced as the financial statement reporting within this setting provides a detailed note disclosure of the tax reconciliation. Hence, I undertake a detailed analysis of the following footnote tax disclosures.

2.5.2 Additional analysis

As outlined above, there are a number of challenges in undertaking the analysis above. Recognising this, qualitative evaluation of the financial statements was undertaken, in particular the notes disclosing the determination of tax expense, to determine if there is any evidence of tax aggressiveness. The notes to the reconciliation of media benchmark (statutory) tax rates to ETR are individually analysed for every fund-year observation within the sample in order to identify potential tax aggressiveness or for an alternative explanation. Accordingly, I examine the individual line items to better identify whether the differences between the ETR and the media benchmark rate are a consequence of tax aggressiveness. [63]

An overview of this additional analysis is provided in Figures 2.2 to 2.5. Critically this shows that while there are significant deviations in the ETR from a 15% media benchmark rate (Figure 2.2), this is less so for an alternative benchmark rate at 10.6% (Figure 2.3). An analysis of the deviations is presented in Figure 2.4 and 2.5. This shows that the differences arise largely from idiosyncrasies in the operation of the tax legislation. Further, Tables 2.5.A through to 2.7.A, provides a detailed breakdown of the reconciliation of media benchmark tax rate to ETR and supports the aforementioned view relating to the idiosyncrasies of the tax legislation. Collectively, there has been no support for the finding of tax aggressiveness. Despite this, the cross-sectional variation identified in *ETR3* suggests further investigation is required. Accordingly, I undertake an analysis of the antecedents associated with corporate tax avoidance in the extant literature to determine if these provide a possible alternative explanation for these variations.

The results of the multivariate analysis, based on ETR measures, are provided in Table 2.3. Irrespective of the measure of ETR used, the models are all significant and the adjusted R2

[63] UniSuper (financial reporting and tax departments) provided extensive insights during consultations to better understand the categorisation of line items contained within note disclosures.

ranges from 78.8% to 51.8%. Notwithstanding, there are few significant coefficients for any of the measures and this is likely a consequence of the high correlations between the controls and size. Focusing on the results for *ETR3* in this and the subsequent analysis as it is the most reliable measure, the coefficient on *Accruals* is negative and significant ($\alpha_7 = -1.321$, *t*-stat = –4.079). The significance of this control is likely attributable to this variable being least correlated with the other controls. It is also perhaps surprising as the impacts of accruals would be mitigated by the recognition of tax expense on an accruals basis. However, it is consistent with *Accruals* being associated with the recognition of unrealised capital gains in income which are subject to a lower tax rate.

Shifting attention to the testing of the other hypotheses, the coefficient on *ROA* is positive and significant ($\alpha_1 = 1.394$, *t*-stat = 2.967). This is inconsistent with the expectation of more profitable funds being more likely to adopt aggressive tax strategies, as a consequence of there being greater benefits from such strategies. As such there is no support for H_2. An alternative potential explanation for this outcome would be that relatively higher gains from short-term investments in the sample period contributed to higher profitability, and hence there is a higher overall ETR. It is impossible with the information available to further evaluate this, and it is acknowledged as a limitation in this chapter. However, such an interpretation is consistent with the results discussed above.

The coefficient on *Size* while negative is not significant ($\alpha_2 = -0.065$, *t*-stat = –0.924) and this is inconsistent with expectations. Accordingly, there is no support for H_3. This result was surprising given the significance of firm size in the literature on corporate tax aggressiveness. However, there are a number of competing explanations for this. First, *Size* is highly correlated with the various controls and this biases against finding a significant control. Second, based on discussion with industry superannuation fund managers, there is considerable diversity in the sourcing of tax advice. Large funds are more likely to rely on in-house tax

advice, while smaller funds are more likely to rely on outsourced. A consequence of the relative homogeneity of funds (with consistent and replicable tax strategies) is that outsourcing is able to provide comparable and consistent tax advice on a cost-effective basis. Accordingly, the costs of adopting aggressive tax strategies are not impacted by size. Third, industry superannuation funds do not generally adopt aggressive strategies, hence there is no relation.

Finally, attention was focussed on the impact of governance on the adoption of corporate tax aggressiveness (H_4). Critically, neither of the coefficients on *Ind* ($\alpha_3 = 0.028$, *t*-stat = 0.248) or *Chair* ($\alpha_4 = 0.019$, *t*-stat = 0.174) is significant, and hence there is no support for this hypothesis. Again, there are potential explanations for this result. It was noted earlier that the proportion of independent directors is low (mean = 13.8%) and they are not elected by members. Hence the representativeness and the effectiveness of independent directors in this context is low. Additionally, notwithstanding the relatively low proportion of independent directors there is a relatively high proportion of independent chairs (mean = 0.550). This, together with the basis on which independent directors are appointed, limits the potential impact on tax strategies.

The results for alternative measures of ETR (*ETR1* and *ETR2*) are also presented and they do not provide results that are materially different. Accordingly, based on ETR measures of tax aggressiveness, there is only limited evidence of industry superannuation funds adopting aggressive tax strategies (H_1). Nor is there evidence that the tax strategy is impacted by fund characteristics (H_2 and H_3) or governance (H_4).

The analysis undertaken relies upon measures of tax aggressiveness based on tax expense. However, cash-based measures are common in the literature and the sensitivity of the results above to these alternative measures is addressed in Table 2.4. Given the correlation between ETR3 and the cash-based measures (i.e. *CETR1*, *CETR2* and *CETR3*) it is not surprising that the results are consistent. This extends to the association with *Accruals*;

however, in light of the results above, this is less likely to reflect deferral of tax payments, and more likely to lower the tax rate applicable to capital gains when realised. Accordingly, there is still little evidence of tax aggressiveness being employed by industry superannuation funds.

2.6 Conclusions

The objective in this chapter is to empirically evaluate the tax payments by industry superannuation funds to resolve the question of whether they are tax aggressive. An additional concern is whether there is variation in ETRs across funds and whether the traditional antecedents of corporate tax avoidance can explain the tax behaviour of the superannuation funds.

The focus of this chapter was industry superannuation funds from 2014 to 2016. Financial reports were obtained and the necessary information is hand collected. This provides a final sample of 60 fund-years observations. Various measures of the incidence of taxation are used to calculate differences with a benchmark rate that captures tax aggressiveness. These are calculated using information from general purpose financial statements. Some are adjusted for factors likely contributing to mismeasurement, as well as both expense and cash flow based measures (*ETR1, ETR2, ETR3, CETR1, CETR2* and *CETR3*). The CETR measures identify persistently lower rates of taxation and suggest higher degrees of tax aggressiveness. However, these are likely to be biased by aspects of the tax legislation whereby tax payments are deferred if income is increasing. In combination, the quantitative and qualitative analyses provide very little evidence of tax aggressiveness in industry superannuation funds.

The results in this chapter make a number of significant contributions to the literatures considering financial reporting by superannuation funds generally, as well as tax aggressiveness and methods for evaluating tax aggressiveness.

First, there is little evidence of tax aggressiveness across industry superannuation funds that is explained by typical indicators of such behaviours. However, there remains variation in ETRs across funds that is not explained by typical indicators – this will be addressed further in Chapter 3. A limitation in this analysis is that complexities in the tax system make it difficult to determine individual industry superannuation fund benchmark rates of taxation, but it is likely much less than 15%. At such low rates of taxation, the costs of aggressive tax strategies likely exceed the benefits and evaluation of tax aggressiveness in these contexts is unlikely to find significant results.

Second, in this setting a range of measures of tax aggressiveness are considered. These include measures such as effective tax rates (ETR, CETR), requiring information found in financial reports that are not generally publicly available. Some of these measures are likely to be subject to measurement error because of a range of factors, not limited to differences between corporate financial disclosures and superannuation financial disclosures. Although, the CETR (Chen et al., 2010) is commonly adopted in contemporary corporate tax aggressiveness literature, it is not found to be a reliable measure because of the timing of tax payments. CETR is calculated as tax payments reported in the Statement of Cash Flows over profit before tax in the Statement of Profit or Loss. However, the timing of tax payments is determined by the tax legislation, and payments are often more reflective of prior year net profit than the current year net profit. For example, payment of tax for industry superannuation funds is disbursed in advance, on a quarterly or monthly basis. This requires the fund to estimate current year profits so that it can make reliable quarterly disbursements to the tax authorities. A suitable estimate of current year profits, is usually determined on prior year profits, adjusted for expected variations in the current year profit projections. Problematically, while there are incentives to decrease estimates of profit and hence current period tax payments when profit is decreasing, there are few incentives for increasing estimates of profit and hence current period

tax payments when profit is increasing. A manifestation of this is that in Australia, CETR measures will be systematically biased and this will be most pronounced if profit is increasing (i.e. tax payments based on the prior year profit relative to current year profit). This is an issue with industry superannuation funds where returns are volatile, and this would also apply to estimation of tax aggressiveness in other contexts.

Third, a major difficulty in undertaking research on industry superannuation funds is accessing general purpose financial reports. The funds are unincorporated and hence fall outside the scope of the Corporations Act. Accordingly, general purpose financial reports are not lodged with ASIC. Nor is there alternative legislation requiring the provision of financial reports to members, or their lodgement with a public repository. While financial reports are provided to the APRA these are used for supervisory purposes only and they are not publicly available. This is perhaps surprising given the likely demand for such reports based on public interest. Accordingly, this chapter identifies limitations in the existing legislation governing industry superannuation funds specifically relating to the lodgement and dissemination of general purpose financial reports.

Finally, the information provided in general purpose financial reports prepared in accordance with *AAS 25 Financial Reporting by Superannuation Plans* has a number of limitations. Doubtless, these stem from limitations in the definition of equity in the AASB conceptual framework, the *Framework for the Preparation and Presentation and Financial Statements.* Specifically, items are classified as liabilities if there is a present obligation. A consequence of this is that member interests in superannuation funds are classified as liabilities rather than equity, and transactions with members are considered income and expenses, rather the transactions with equity holders. This leads to the recognition of member transactions in the income statement, and contributions taxes being recognised as tax expenses, resulting in measures of profit or loss that might not be relevant for members. It also creates distortions

with the estimation of measures of tax aggressiveness. Many of these issues would now be addressed in the revised standard, *AASB 1056 Superannuation Entities*, with the exception of the recognition of franked dividend revenue on a net basis rather than a gross basis. This was considered by the AASB in November 2007 but was rejected (AASB, 2007). However, an unresolved issue is that while there is little evidence of aggressive tax strategies being employed by industry superannuation funds, there is material cross-sectional variation in the incidence of taxation that remains unexplained.

Table 2.1 – Descriptive statistics

	Observations	Mean	Std Dev	Min	Median	Max
ETR1	60	0.083	0.018	0.046	0.081	0.163
ETR2	60	0.044	0.023	–0.016	0.048	0.080
ETR3	60	0.085	0.017	0.045	0.088	0.149
CETR1	60	0.055	0.021	0.021	0.049	0.122
CETR2	60	–0.011	0.040	–0.104	–0.013	0.148
CETR3	60	0.032	0.042	–0.030	0.024	0.228
ROA	60	0.087	0.023	0.032	0.091	0.119
Size	60	15.309	1.409	13.039	14.907	18.367
Ind	60	0.138	0.188	0.000	0.100	1.000
Chair	60	0.550	0.502	0.000	1.000	1.000
Accruals	60	0.084	0.025	–0.003	0.086	0.131
Long	60	0.705	0.050	0.570	0.710	0.850
Foreign	60	0.223	0.126	0.000	0.242	0.477
Retirement	60	0.073	0.058	0.000	0.054	0.250
Held	60	0.411	0.264	0.010	0.385	1.000

Where:

ETR1	:	Tax expense/PreTaxIncome
ETR2	:	InvestTaxExpense/InvestPretaxIncome
ETR3	:	InvestTaxExpense + Franking Credits/ InvestPretaxIncome + Franking Credits
CETR1	:	TaxPaid/PreTaxIncome
CETR2	:	InvestTaxPaid/PreTaxIncome
CETR3	:	InvestTaxPaid + Franking Credits/PreTaxIncome + Franking Credits
ROA	:	InvestPretaxIncome/TotalAssets
Size	:	Log of TotalAssets
Ind	:	No. of Independent Directors/Total No. of Directors
Chair	:	1 if the chair is an independent director, 0 if otherwise
Accruals	:	InvestPretaxIncome – Net Cashflows
Long	:	Proportion of investments in property and infrastructure
Foreign – Short	:	Proportion of foreign short investments
Foreign – Long	:	Proportion of foreign long investments
Retirement	:	proportion of member's funds held by members in retirement phase at year end
Held	:	percentage of investments directly held *(Held)* within the fund

Table 2.2 – Correlation matrices

Panel A: Measures of the incidence of taxation						
	ETR1	*ETR2*	*ETR3*	*CETR1*	*CETR2*	*CETR3*
ETR1	1	**0.485*****	**0.475*****	**0.478*****	0.157	0.045
		0.000	0.000	0.000	0.230	0.736
ETR2	**0.366*****	1	**0.737*****	–0.013	**0.326****	–0.015
	0.004		0.000	0.919	0.011	0.911
ETR3	**0.314****	**0.701*****	1	0.121	**0.350*****	**0.269****
	0.015	0.000		0.356	0.006	0.037
CETR1	**0.582*****	–0.025	**0.217***	1	**0.486*****	**0.552*****
	0.000	0.847	0.095		0.000	0.000
CETR2	0.206	**0.309****	**0.480*****	**0.652*****	1	**0.839*****
	0.114	0.017	0.000	0.000		0.000
CETR3	0.118	0.018	**0.457*****	**0.689*****	**0.921*****	1
	0.371	0.889	0.000	0.000	0.000	

All variables are as defined in Table 2.1
* p<0.10, ** p<0.05, *** p<0.010

Table 2.2 – Correlation matrices

Panel B: Explanatory variables and control variables									
	ROA	*Size*	*Ind*	*Chair*	*Accruals*	*Long*	*Foreign*	*Retirement*	*Held*
ROA	1	0.165	0.034	0.063	0.954***	0.131	0.075	–0.012	0.186
		0.209	0.794	0.633	0.000	0.320	0.569	0.927	0.154
Size	0.162	1	–0.023	0.069	0.182	0.448***	0.213	0.560***	0.464***
	0.217		0.863	0.602	0.163	0.000	0.102	0.000	0.000
Ind	0.010	–0.137	1	0.706***	0.008	0.046	–0.173	–0.211	–0.055
	0.939	0.298		0.000	0.949	0.727	0.187	0.106	0.675
Chair	0.021	0.040	0.457***	1	0.022	0.051	0.061	–0.023	0.085
	0.875	0.760	0.000		0.866	0.697	0.644	0.860	0.518
Accruals	0.958***	0.180	–0.025	–0.017	1	0.172	0.117	–0.002	0.083
	0.000	0.170	0.848	0.899		0.189	0.374	0.988	0.527
Long	0.128	0.329***	0.009	–0.038	0.140	1	0.142	–0.015	0.08
	0.330	0.010	0.945	0.776	0.285		0.279	0.908	0.544
Foreign	0.053	0.170	–0.299**	0.032	0.093	0.224*	1	0.251*	–0.065
	0.688	0.195	0.021	0.811	0.481	0.085		0.053	0.621
Retirement	0.050	0.478***	–0.158	–0.016	0.062	–0.026	0.195	1	0.388***
	0.707	0.000	0.229	0.902	0.637	0.842	0.136		0.002
Held	0.135	0.507***	–0.206	0.007	0.081	–0.127	–0.014	0.298**	1
	0.304	0.000	0.115	0.957	0.536	0.333	0.918	0.020	

All variables are as defined in Table 2.1
* p<0.10, ** p<0.05, *** p<0.010

Table 2.3A – The association between reported effective tax rates (*ETR1 ETR2 ETR3*) and determinants of tax strategy and controls

	Sign	ETR1	ETR2	ETR3
ROA	-	0.486	2.136***	1.394***
		(1.318)	(4.731)	(2.967)
Size	-	–0.067**	0.019	–0.065
		(–2.149)	(0.294)	(–0.924)
Ind	+	–0.058	0.023	0.028
		(–0.943)	(0.265)	(0.248)
Chair	+	0.028	0.174	0.019
		(0.525)	(1.666)	(0.174)
Long	-	–0.082	–0.084	–0.085
		(–0.976)	(–0.510)	(–0.561)
Foreign	-	–0.051	–0.039	–0.125
		(–0.579)	(–0.255)	(–0.848)
Accruals	-	–0.254	–1.157***	–1.321***
		(–1.160)	(–3.694)	(–4.079)
Retirement	-	0.452	0.752	0.242
		(1.054)	(0.826)	(0.292)
Held	-	0.097	0.172	0.104
		(1.307)	(1.274)	(0.802)
Constant		1.026**	–0.523	1.099
		(2.009)	(–0.593)	(0.948)
Year Effects		Yes	Yes	Yes
Fund Effects		Yes	Yes	Yes
Observations		60	60	60
Adjusted R^2		0.788	0.752	0.518
F-Stat.		1.712	4.650	3.301

All variables are as defined in Table 2.1
t statistics in parentheses
* p<0.10, ** p<0.05, *** p<0.010

Table 2.3B – VIF Table for explanatory variables

Variable	VIF	1/VIF
ROA	66.85	0.015
Size	5707.98	0.000
Ind	174.07	0.006
Chair	1861.76	0.001
Long	20.54	0.048
Foreign	192.12	0.005
Accruals	32.98	0.030
Retirement	950.59	0.005
Held	488.48	0.002
MEAN VIF	631.32	

Table 2.4 – The association between reported cash effective tax rate (*CETR1 CETR2 CETR3*) and determinants of tax strategy and controls

	Sign	(1) CETR1	(2) CETR2	(3) CETR3
ROA	-	–0.384	1.611	0.757
		(–0.832)	(1.123)	(0.552)
Size	-	0.090	0.425*	0.313
		(1.093)	(2.017)	(1.544)
Ind	+	–0.036	0.031	0.029
		(–0.281)	(0.113)	(0.100)
Chair	+	0.128	0.418	0.233
		(1.051)	(1.253)	(0.681)
Long	-	–0.045	–0.032	–0.024
		(–0.338)	(–0.077)	(–0.059)
Foreign	-	0.148	0.538	0.404
		(1.010)	(1.286)	0.757
Accruals	-	–0.370	–2.364**	–2.379**
		(–1.249)	(–2.075)	(–2.235)
Retirement	-	0.133	–0.374	–0.883
		(0.149)	(–0.150)	(–0.351)
Held	-	0.088	0.184	0.103
		(0.752)	(0.463)	(0.279)
Constant		–1.361	–6.666*	–4.588
		(–1.045)	(–1.998)	(–1.416)
Year Effects		Yes	Yes	Yes
Fund Effects		Yes	Yes	Yes
Observations		60	60	60
Adjusted R^2		0.718	0.443	0.497
F-Stat.		2.233	1.870	2.032

All variables are as defined in Table 2.1
t statistics in parentheses
* p<0.10, ** p<0.05, *** p<0.010

Table 2.5.A. – Breakdown of tax reconciliation from statutory (media benchmark) to effective

Id	Year	Statutory Tax Rate (%)	ETR (%)	Difference between statutory & effective (%)	Imputations credits (%)	Adjustments captured (%)	Adjustments not captured (%)
100	2014	15.00	7.83	7.17	–1.56	–3.10	–2.51
100	2015	15.00	7.31	7.69	–1.67	–3.49	–2.53
102	2014	15.00	8.82	6.18	–1.03	–2.40	–2.74
102	2015	15.00	8.62	6.38	–1.40	–2.81	–1.45
102	2016	15.00	10.05	4.95	–1.70	–3.06	–0.19
103	2014	15.00	6.90	8.10	–1.43	–4.32	–2.36
103	2015	15.00	5.78	9.22	–1.76	–4.82	–2.64
104	2014	15.00	8.52	6.48	–1.48	–2.43	–2.57
104	2015	15.00	6.59	8.41	–1.57	–2.76	–4.08
105	2014	15.00	8.93	6.07	–0.90	–2.71	–2.47
105	2015	15.00	7.60	7.40	–1.66	–3.01	–2.73
106	2014	15.00	7.50	7.50	–1.96	–3.78	–1.76
106	2015	15.00	6.52	8.48	–1.75	–3.84	–2.90
107	2014	15.00	8.48	6.52	–1.41	–3.13	–2.03
107	2015	15.00	5.68	9.32	–1.04	–6.66	–1.36
108	2014	15.00	8.71	6.29	–1.66	–3.15	–1.48
108	2015	15.00	8.16	6.84	–1.88	–2.98	–1.98
111	2015	15.00	9.52	5.48	–2.41	–1.71	–1.35
112	2014	15.00	8.55	6.45	–1.65	–2.34	–2.46
112	2015	15.00	7.86	7.14	–2.04	–2.92	–2.18
112	2016	15.00	6.91	8.09	–2.80	–3.37	–1.92
114	2014	15.00	7.63	7.37	–0.75	–2.24	–4.38
114	2015	15.00	7.15	7.85	–2.37	–2.49	–2.99
114	2016	15.00	6.90	8.10	–2.49	–3.10	–2.51
115	2014	15.00	8.73	6.27	–1.37	–2.59	–2.31
115	2015	15.00	5.51	9.49	–0.71	–2.92	–5.86
115	2016	15.00	6.98	8.02	–0.01	–3.62	–4.39
116	2014	15.00	8.52	6.48	–1.72	–2.32	–2.44
116	2015	15.00	7.80	7.20	–2.07	–2.99	–2.14
117	2014	15.00	7.76	7.24	–1.82	–2.93	–2.50
117	2015	15.00	7.42	7.58	–1.63	–3.31	–2.64
118	2014	15.00	8.77	6.23	–1.41	–2.62	–2.20
118	2015	15.00	7.88	7.12	–1.32	–4.01	–1.80
120	2014	15.00	8.04	6.96	–2.58	–2.36	–2.01
120	2015	15.00	7.48	7.52	–1.94	–3.02	–2.57
120	2016	15.00	7.61	7.39	–2.46	–3.93	–1.00
122	2014	15.00	9.13	5.86	–2.72	–1.06	–2.08
122	2015	15.00	7.38	7.62	–3.80	–2.24	–1.58
122	2016	15.00	7.51	7.49	–3.52	–2.37	–1.60
123	2014	15.00	7.06	7.94	–2.19	–2.80	–2.95

Table 2.5.A. – Breakdown of tax reconciliation from statutory (media benchmark) to effective (continued)

Id	Year	Statutory Rate (%)	ETR (%)	Difference between statutory & effective (%)	Imputations Credits (%)	Adjustments captured (%)	Adjustments not captured (%)
123	2015	15.00	4.62	10.38	–2.67	–3.10	–4.60
126	2014	15.00	9.12	5.88	–1.58	–1.30	–3.00
126	2015	15.00	6.42	8.58	0.00	–1.84	–6.70
128	2014	15.00	9.56	5.44	–1.83	–2.45	–1.16
128	2015	15.00	8.44	6.56	–2.24	–2.58	–1.74
132	2014	15.00	8.93	6.07	–1.05	–2.89	–2.13
132	2015	15.00	8.74	6.26	–0.69	–3.52	–2.05
132	2016	15.00	9.00	6.00	–1.58	–2.97	–1.45
133	2014	15.00	8.34	6.66	–1.50	–3.03	–2.13
133	2015	15.00	7.07	7.93	–1.77	–3.78	–2.39
134	2014	15.00	16.27	–1.27	–2.67	8.35	4.41
134	2015	15.00	11.19	3.81	–2.23	3.23	–4.82
134	2016	15.00	12.80	2.20	–4.02	6.28	–4.47
137	2014	15.00	8.79	6.21	–1.46	–2.54	–2.21
137	2015	15.00	8.41	6.59	–0.86	–2.80	–2.93
140	2014	15.00	8.57	6.43	–3.58	–1.59	–4.44
140	2015	15.00	8.34	6.66	–3.91	1.44	–4.19
140	2016	15.00	7.63	7.37	–4.64	1.46	–4.20
141	2014	15.00	11.98	3.02	–2.65	3.44	–3.82
141	2015	15.00	12.21	2.79	–4.23	6.52	–5.08
142	2014	15.00	7.30	7.70	–1.41	–3.32	–2.97
142	2015	15.00	6.17	8.83	–2.55	–3.93	–2.34
142	2016	15.00	7.54	7.46	–2.38	–5.12	0.04

Table 2.5.A. – Breakdown of tax reconciliation from statutory (media benchmark) to effective (continued)

Sample Descriptive	Statutory Rate (%)	ETR (%)	Difference between statutory and effective (%)	Imputations Credits (%)	Adjustments captured (%)	Adjustments not captured (%)
Average	15.00	8.21	6.79	–1.95	–2.19	–2.54
Median	15.00	7.88	7.12	–1.75	–2.89	–2.44
Max		16.27	10.38	0.00	8.35	4.41
Min		4.62	–1.27	–4.64	–6.66	–6.70
25th Quartile		7.30	6.23	–2.46	–3.31	–2.97
75th Quartile		8.77	7.70	–1.41	–2.34	–1.92

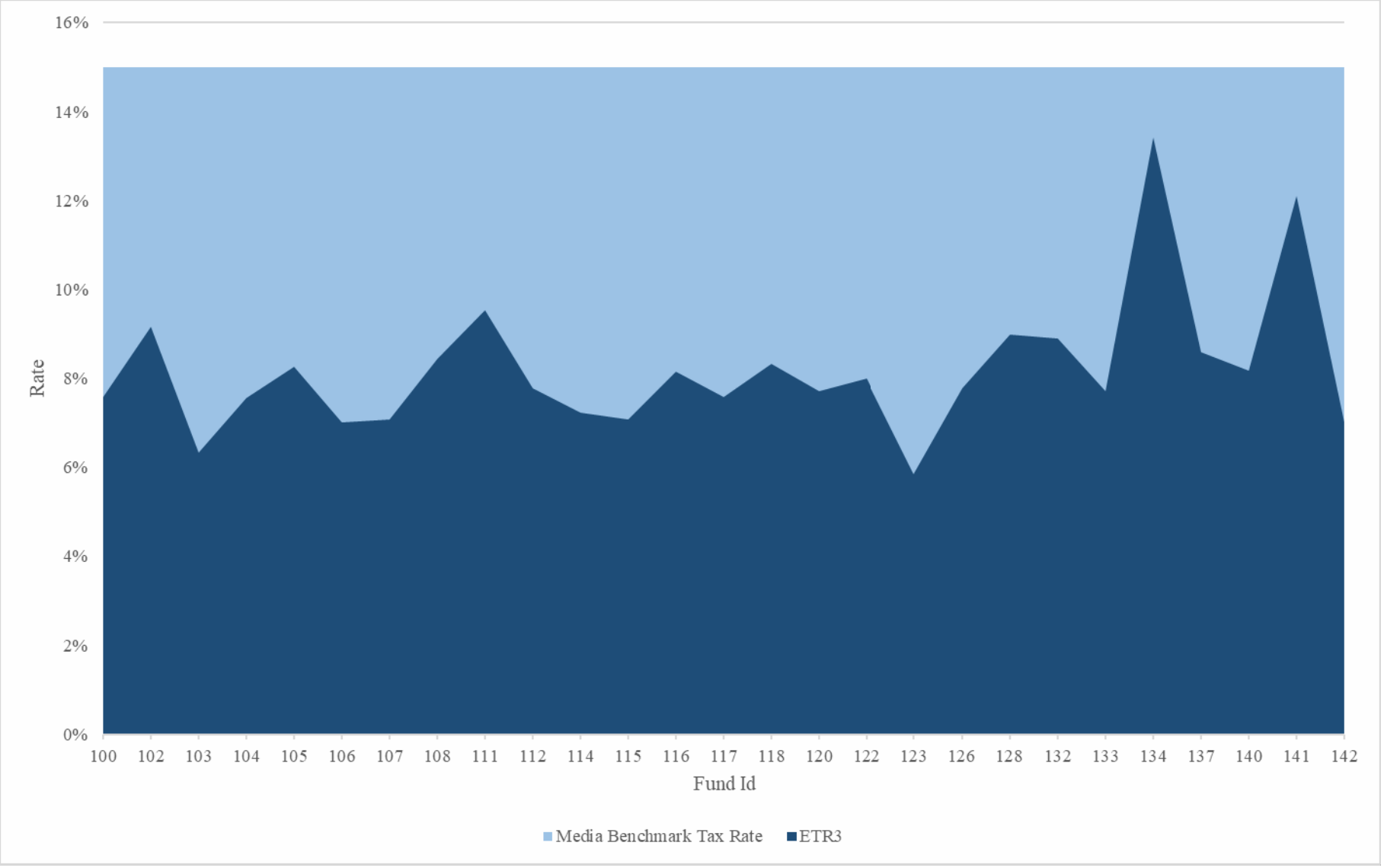


Figure 2.2 – Comparison of Media Benchmark Tax Rate (15%) and average ETR3 for the sample of funds

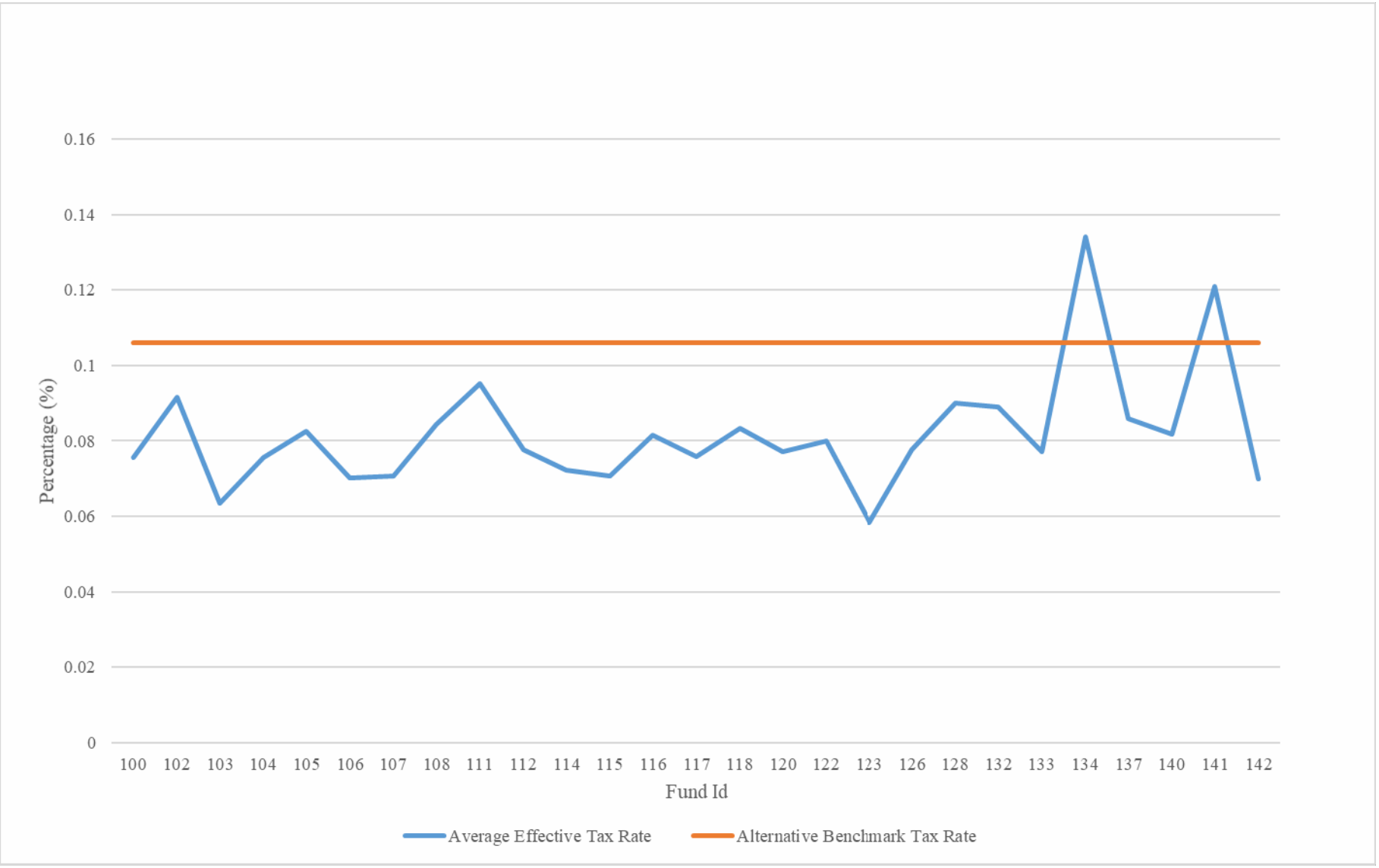


Figure 2.3 – Comparison of alternative benchmark tax rate (10.6%) and average ETR3 for the sample of funds

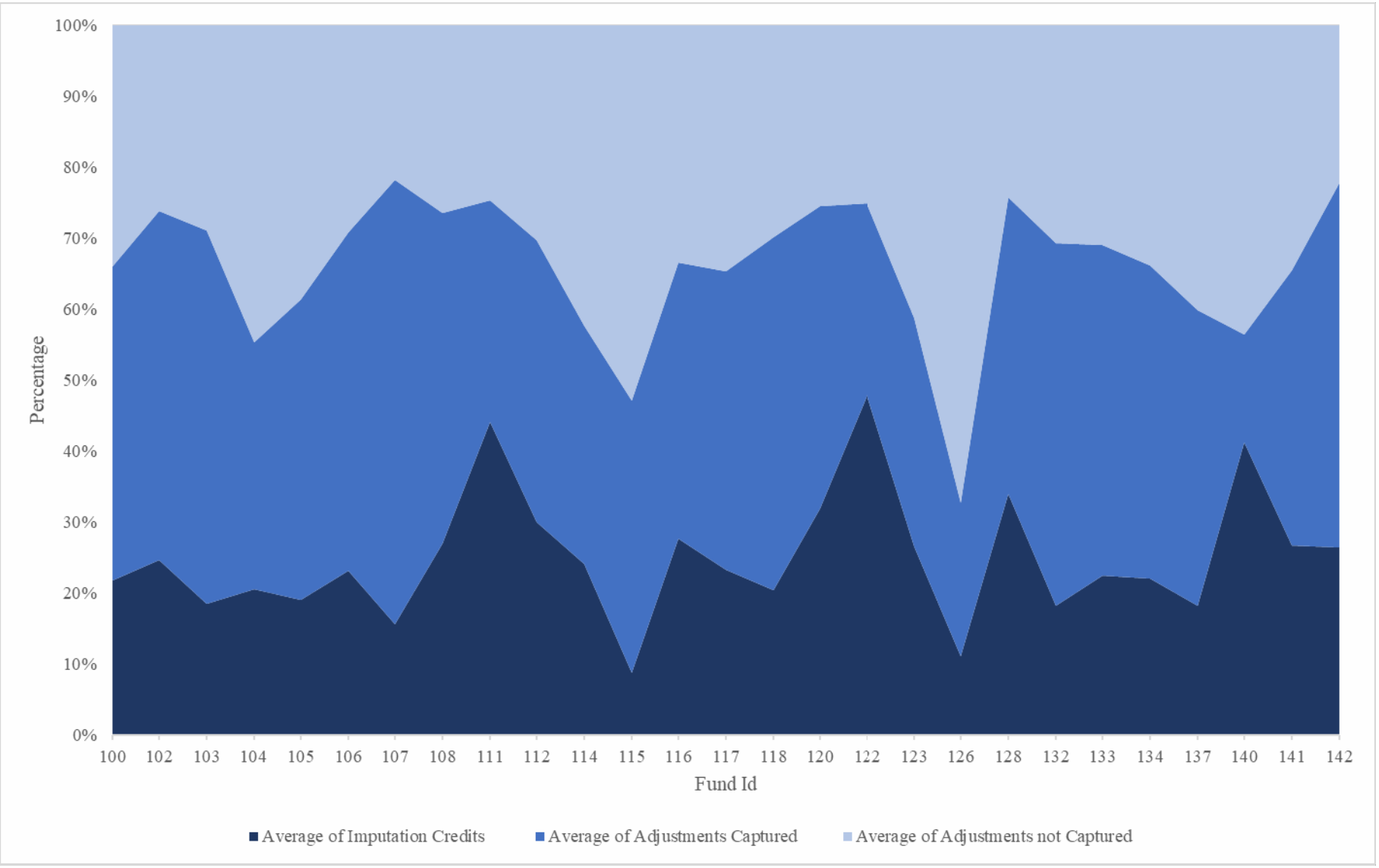


Figure 2.4 –Percentage breakdown of difference between media benchmark (15%) tax rate and ETR3 (average)

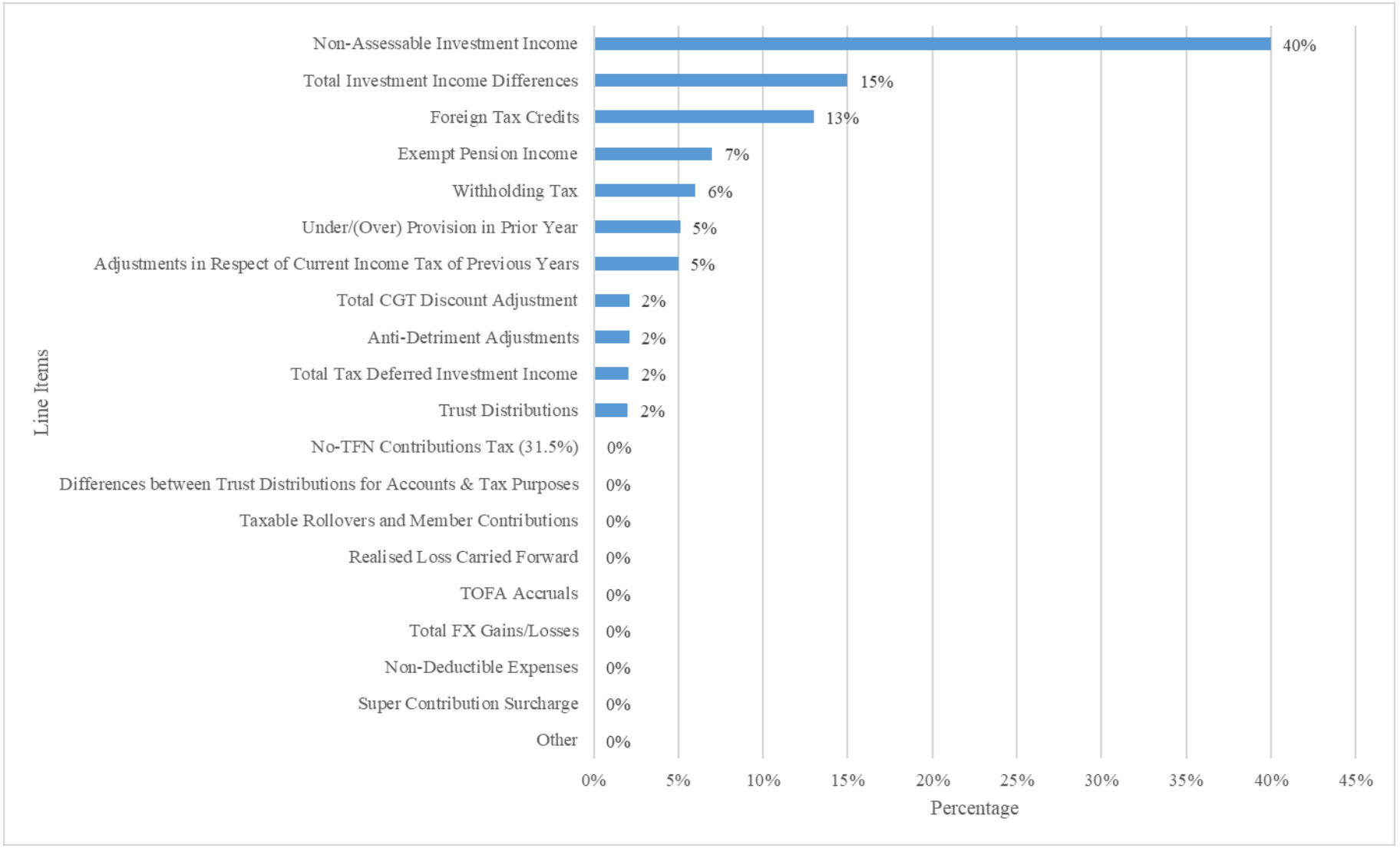


Figure 2.5 – Line items in the financial statement note disclosures that comprise adjustments not captured (Average)

Table 2.6.A. – Breakdown of adjustments not captured for the sample funds

Id	100	100	102	102	102	103	103	104	104	106	106	107	107	108	108	111	112	112	112	114	114
Year	2014	2015	2014	2015	2016	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2015	2014	2015	2016	2014	2015
Adjustments in Respect of Current Income Tax of Previous Years			–0.43	0.00	0.00			–0.09	–1.58	–0.05	–0.14	0.00	–0.31	–0.30	0.13						
Total Tax Deferred Investment Income	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	–2.48	–3.37	0.00	0.00	0.00	0.00	0.00	0.00
Total Investment Income Differences	–1.51	–0.82	–1.96	–0.55	2.10	0.00	0.00	0.00	0.00	0.00	0.00	–1.29	–0.72	1.07	1.74	–1.98	–2.35	–1.37	–1.02	–0.49	–0.91
Total CGT Discount Adjustment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.18	0.00	0.00	0.00	0.00	0.00
Exempt Pension Income	–0.73	–0.88						–0.14	–0.31			–0.01	0.06				–0.05	–0.11	–0.15		
Non Assessable Investment Income			–0.22	–0.66	–1.89	–2.33	–2.45	–3.83	–4.30	–1.67	–1.90	–0.43	–0.40			–2.55				–3.88	–2.08
No-TFN Contributions Tax (31.5%)	0.01	0.00	0.01	–0.01	–0.02	0.04	–0.07	–0.04	0.01								0.02	–0.09	0.07		
Anti-Detriment Adjustments	–0.06	–0.06	–0.07	–0.12	–0.15	–0.06	–0.08	–0.11	–0.09			–0.05	–0.06	–0.07	–0.11		–0.07	–0.09	–0.12		
Super Contribution Surcharge	0.07	0.02										0.00	–0.01								
Withholding Tax	–0.28	–0.85	–0.11	–0.14	–0.27							–0.25	–0.25	–0.20	–0.31						
Non Deductible Expenses																					
Under/ (Over) Provision in Prior Year	0.00	0.06				–0.01	–0.06										–0.02	–0.53	–0.70		
Total FX Gains/Losses	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47	–0.08	0.00	0.00	0.00	0.00	0.00	0.00
Foreign Tax Credits								–0.19	0.06												
TOFA Accruals								0.00	–0.37												
Realised Loss Carried Forward																					

Table 2.6.A. – Breakdown of adjustments not captured for the sample funds (continued)

Id	114	115	115	115	116	116	117	117	118	118	120	120	120	122	122	122	123	123	126	126	128
Year	2016	2014	2015	2016	2014	2015	2014	2015	2014	2015	2014	2015	2016	2014	2015	2016	2014	2015	2014	2015	2014
Taxable Rollovers and Member Contributions			0.03	0.02	0.03			0.16	0.26			0.05	0.06	0.02	0.02						
Differences Between Trust Distributions for Accounts & Tax Purposes																					
Trust Distributions																					
Other						–0.01	0.02	1.66	2.25	–0.04	–0.86										
Total	–2.51	–2.53	–2.75	–1.46	–0.19	–2.36	–2.64	–2.57	–4.07	–1.76	–2.90	–1.99	–1.64	–1.48	–1.98	–1.35	–2.46	–2.18	–1.92	–4.38	–2.99

Table 2.6.A. – Breakdown of adjustments not captured for the sample funds (continued)

Id	114	115	115	115	116	116	117	117	118	118	120	120	120	122	122	122	123	123	126	126	128
Year	2016	2014	2015	2016	2014	2015	2014	2015	2014	2015	2014	2015	2016	2014	2015	2016	2014	2015	2014	2015	2014
Adjustments in Respect of Current Income Tax of Previous Years							–1.09	–0.31											0.01	0.45	0.01
Total Tax Deferred Investment Income	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	–0.01	0.00	0.00
Total Investment Income Differences	–0.55	0.00	0.00	0.00	–1.95	–2.01	0.00	0.00	–2.17	–1.61	0.00	0.00	0.00	–1.65	–0.77	–0.71	0.00	0.00	–2.13	–7.10	–2.63
Total CGT Discount Adjustment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.10	1.78	–0.84	0.00	0.00
Exempt Pension Income		–0.12	–0.05	0.00							–0.37	–0.28	–0.24	–0.10	–0.17	–0.22	–0.15	–0.25	–0.01	0.00	
Non Assessable Investment Income	–1.96	–2.07	–5.30	–4.36			–1.31	–2.25			–1.20	–1.67	–0.19				–5.82	–3.79	0.00	0.00	
No-TFN Contributions Tax (31.5%)		0.00	–0.06	0.07	0.01	–0.10			0.05	–0.02	–0.23	0.00	–0.07	0.06	–0.07	–0.02	–0.08	–0.23	0.00	–0.03	–0.02
Anti-Detriment Adjustments		–0.04	–0.05	–0.09	–0.05	–0.07			–0.01	–0.05	–0.10	–0.06	–0.11	–0.14	–0.33	–0.32	–0.06	–0.12	–0.01	–0.04	
Super Contribution Surcharge																					
Withholding Tax																					
Non Deductible Expenses																					
Under/ (Over) Provision in Prior Year		–0.09	–0.40	–0.01	–0.44	–0.07			–0.18	–0.76	–0.11	–0.56	–0.39	0.00	0.00	0.00	–0.93	–1.99			
Total FX Gains/Losses	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Foreign Tax Credits																					
TOFA Accruals																					
Realised Loss Carried Forward																					

Table 2.6.A. – Breakdown of adjustments not captured for the sample funds (continued)

Id	114	115	115	115	116	116	117	117	118	118	120	120	120	122	122	122	123	123	126	126	128
Year	2016	2014	2015	2016	2014	2015	2014	2015	2014	2015	2014	2015	2016	2014	2015	2016	2014	2015	2014	2015	2014
Taxable Rollovers and Member Contributions									0.05	0.08											
Differences Between Trust Distributions for Accounts & Tax Purposes																					1.60
Trust Distributions									0.06	–0.42				0.00	–0.01	–0.10					
Other					0.00	0.11	–0.10	–0.08	0.00	0.99				–0.25	–0.23	–0.23					–0.13
Total	–2.51	–2.31	–5.86	–4.39	–2.44	–2.14	–2.50	–2.64	–2.19	–1.79	–2.01	–2.57	–1.00	–2.08	–1.58	–1.60	–2.95	–4.60	–3.00	–6.71	–1.16

Table 2.6.A. – Breakdown of adjustments not captured for the sample funds (continued)

Id	128	132	132	132	133	133	137	137	140	140	140	141	141	142	142	142	105	105	134	134	134
Year	2015	2014	2015	2016	2014	2015	2014	2015	2014	2015	2016	2014	2015	2014	2015	2016	2014	2015	2014	2015	2016
Adjustments in Respect of Current Income Tax of Previous Years	0.00						0.11	–0.09						–1.15	–0.98	0.13					
Total Tax Deferred Investment Income	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	–0.07	0.00	0.00	0.00
Total Investment Income Differences	–1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.04	–3.35	–2.75	–2.45	–0.16	0.04	0.00	0.00	0.00	–3.01	1.47	0.00	0.00	0.00
Total CGT Discount Adjustment	0.00	–1.97	–1.78	–1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	–3.13	–3.88	0.00	0.00	0.00	–1.07	–1.70	0.00	0.00	0.00
Exempt Pension Income		–0.04	–0.02	–0.04	–0.30	–0.39			–0.74	–0.80	–1.23	–0.32	–0.75				–0.26	–0.44	–1.57	–1.09	–1.27
Non Assessable Investment Income					–2.01	–1.89	–2.26	–1.77						–1.80	–0.65	0.34	–0.07	–0.02	–3.82	–3.00	–1.86
No-TFN Contributions Tax (31.5%)	–0.06	–0.05	–0.10	–0.04	0.05	–0.10													0.23	0.05	–0.09
Anti-Detriment Adjustments		–0.05	0.00	–0.07	–0.04	–0.05			–0.20	–0.19	–0.22	–0.08	–0.09				–0.07	–0.08	–0.15	–0.10	–0.33
Super Contribution Surcharge																					
Withholding Tax																					
Non Deductible Expenses																			0.03	0.02	0.04
Under/ (Over) Provision in Prior Year		0.00	0.00	–0.12	0.18	0.04			–0.17	–0.46	–0.20	–0.12	–0.41						0.87	–0.90	–0.71
Total FX Gains/Losses	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	–0.17	0.00	0.00	0.00
Foreign Tax Credits																	–0.23	–2.21			
TOFA Accruals																	0.37	0.41			
Realised Loss Carried Forward																	1.63	0.00			
Taxable Rollovers and Member Contributions																	0.06	0.08			
Differences Between Trust Distributions for Accounts & Tax Purposes	0.34																				
Trust Distributions		–0.01	–0.14	–0.02																	

Table 2.6.A. – Breakdown of adjustments not captured for the sample funds (continued)

Id	**128**	**132**	**132**	**132**	**133**	**133**	**137**	**137**	**140**	**140**	**140**	**141**	**141**	**142**	**142**	**142**	**105**	**105**	**134**	**134**	**134**
Year	2015	2014	2015	2016	2014	2015	2014	2015	2014	2015	2016	2014	2015	2014	2015	2016	2014	2015	2014	2015	2016
Other	–0.12						–0.06	–1.12	0.02	0.00	–0.10			–0.02	–0.71	–0.42			0.00	0.20	–0.25
Total	–1.74	–2.13	–2.05	–1.45	–2.13	–2.39	–2.21	–2.94	–4.44	–4.19	–4.20	–3.82	–5.08	–2.97	–2.34	0.04	–2.47	–2.74	–4.41	–4.82	–4.47

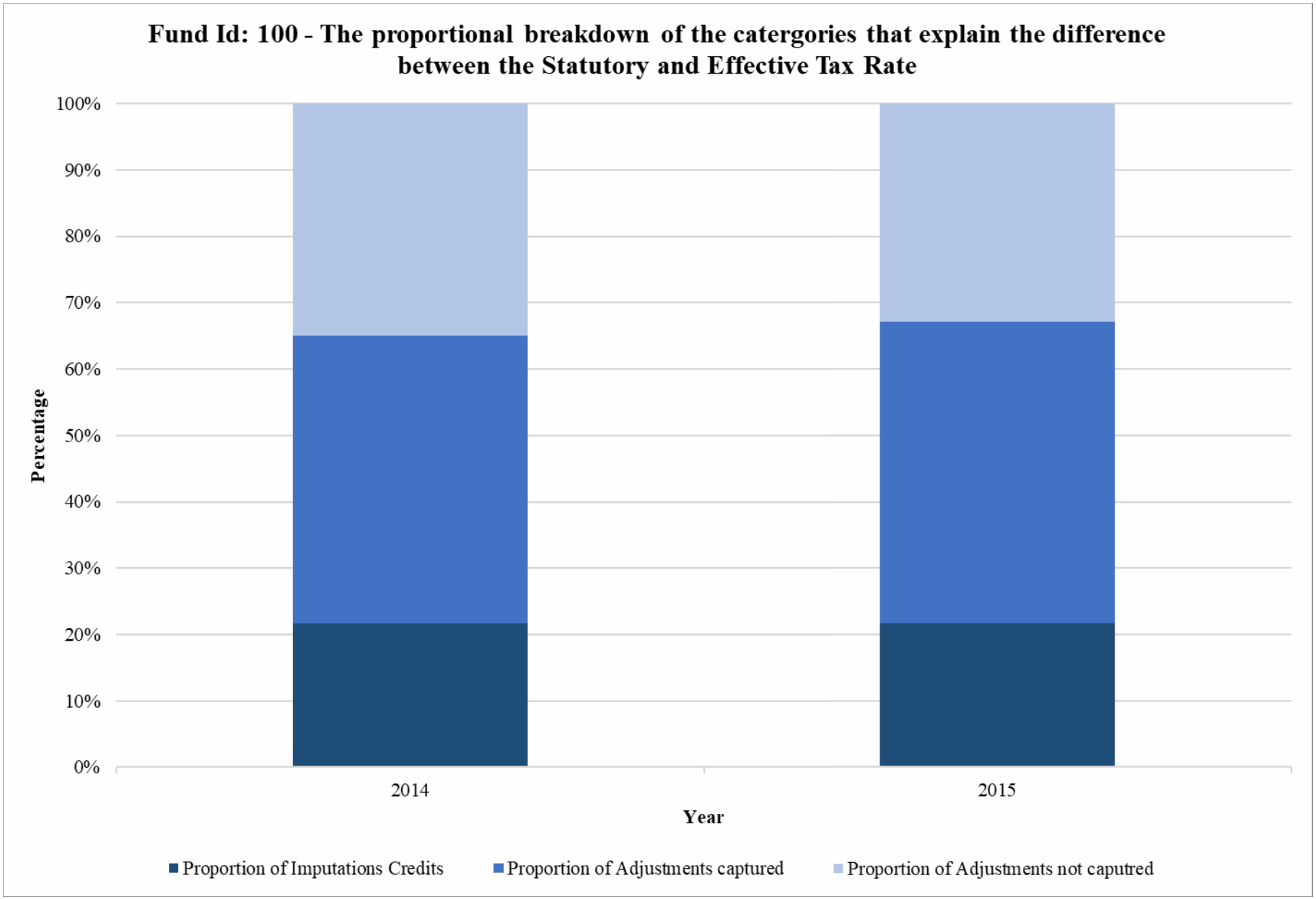
Table 2.7.A. – Disaggregation of the tax reconciliation from fund note disclosures

Tax reconciliation for Fund Id 100

	2014		2015	
	Relative	Total	Relative	Total
Statutory Tax Rate		15.00%		15.00%
Effective Tax Rate		7.83%		7.31%
Difference Between Effective and Statutory		7.17%		7.69%
Imputation Credits	–21.71%	–1.56%	–21.69%	–1.67%
Adjustments Captured	–43.27%	–3.10%	–45.42%	–3.49%
Adjustments Not Captured	–35.02%	–2.51%	–32.90%	–2.53%

Adjustments not captured for Fund Id 100

	2014		2015	
	Relative	Total	Relative	Total
	($,000)	%	($,000)	%
Investment Income Differences	–18,631	–21.04%	–10,924	–10.70%
Superannuation Contributions Surcharge	1	0.00%		0.00%
Non-Deductible Expenses	810	0.91%	330	0.32%
No-TFN Contributions Tax (31.5%)	73	0.08%	3	0.00%
Allocated Pension Income	–9,052	–10.22%	–11,652	–11.41%
Anti-Detriment Adjustments	–764	–0.86%	–798	–0.78%
Withholding Tax	–3,424	–3.87%	–11,327	–11.09%
Under/ (Over) Provision in Prior Year	–25	–0.03%	772	0.76%


Fund Id: 100 - The proportional breakdown of the catergories that explain the difference between the Statutory and Effective Tax Rate
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage
2014
2015
Year
Proportion of Imputations Credits
Proportion of Adjustments captured
Proportion of Adjustments not caputred

Tax reconciliation for Fund Id 102

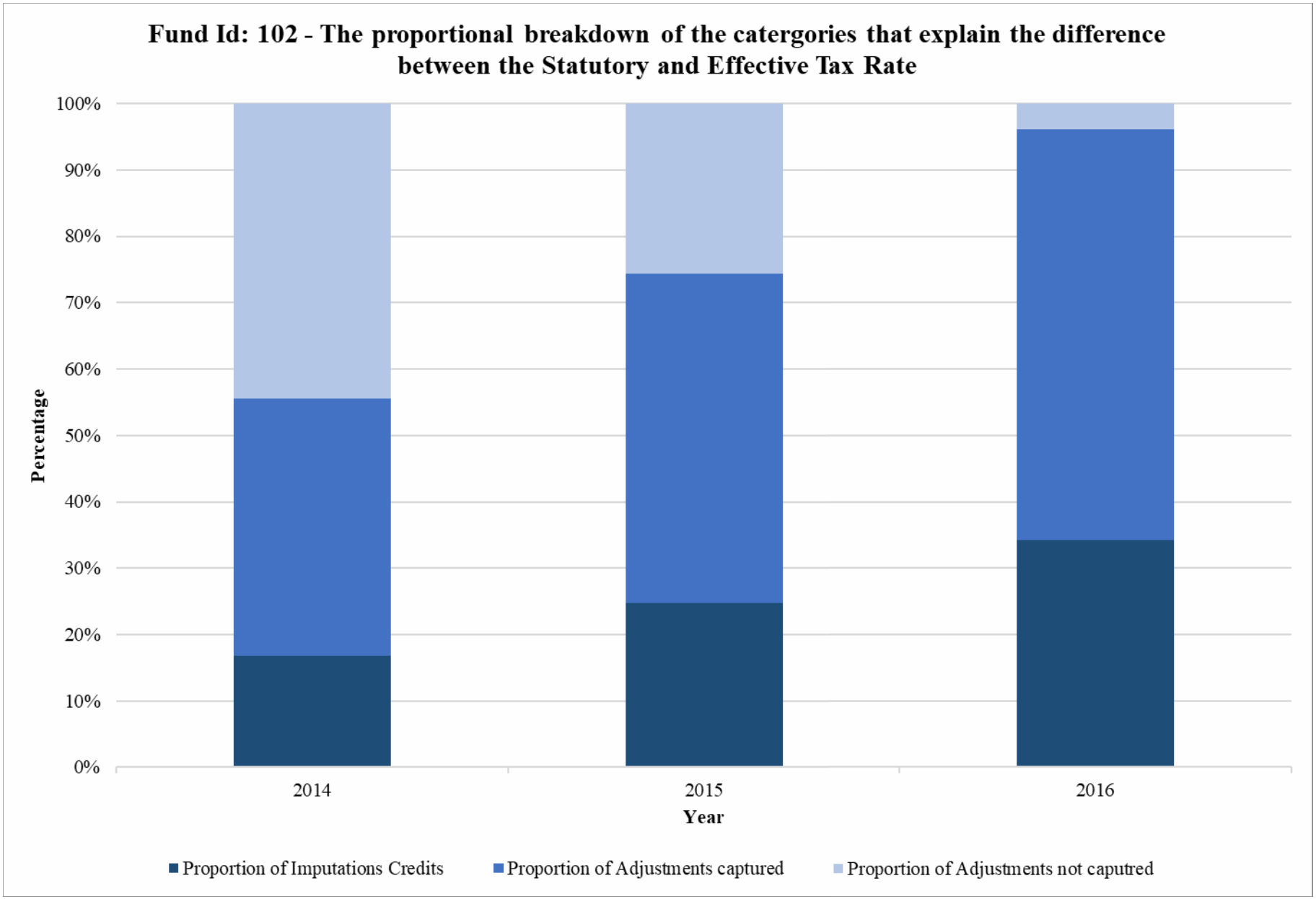
	2014		2015		2016	
	Relative	Total	Relative	Total	Relative	Total
Statutory Tax Rate		15.00%		15.00%		15.00%
Effective Tax Rate		8.82%		8.62%		10.05%
Difference Between Effective and Statutory		6.18%		5.66%		4.95%
Imputation Credits	–16.75%	–1.03%	–24.77%	–1.40%	–34.25%	–1.70%
Adjustments Captured	–38.83%	–2.40%	–49.56%	–2.81%	–61.86%	–3.06%
Adjustments Not Captured	–44.42%	–2.74%	–25.67%	–1.45%	–3.90%	–0.19%

Adjustments not captured for Fund Id 102

	2014		2015		2016	
	Relative	Total	Relative	Total	Relative	Total
	($,000)	%	($,000)	%	($,000)	%
Tax Effect of Withholding Tax	58	0.30%	70	0.42%	113	0.05%
Non Assessable Investment Income	–693	–3.58%	–1,953	–11.71%	–4,447	–1.89%
Adjustments in Respect of Current Income Tax of Previous Years	–1,343	–6.93%		0.00%		
No-TFN Contributions Tax (31.5%)	46	0.24%	–24	–0.14%	–41	–0.02%
Realised Gains/Losses Per Accounts	–18,359	–94.72%	–13,975	–83.77%	–4,362	–1.85%
Realised & Unrealised Capital Gains and Losses	12,199	62.94%	12,351	74.03%	9,319	3.95%
Taxable Rollovers and Member Contributions	89	0.46%	61	0.37%	75	0.03%

Adjustments not captured for Fund Id 102 (Continued)

	2014		2015		2016	
	Relative	Total	Relative	Total	Relative	Total
	($,000)	%	($,000)	%	($,000)	%
Anti-Detriment Adjustments	–217	–1.12%	–342	–2.05%	–360	–0.15%
Withholding Tax	–389	–2.01%	–470	–2.82%	–752	–0.32%

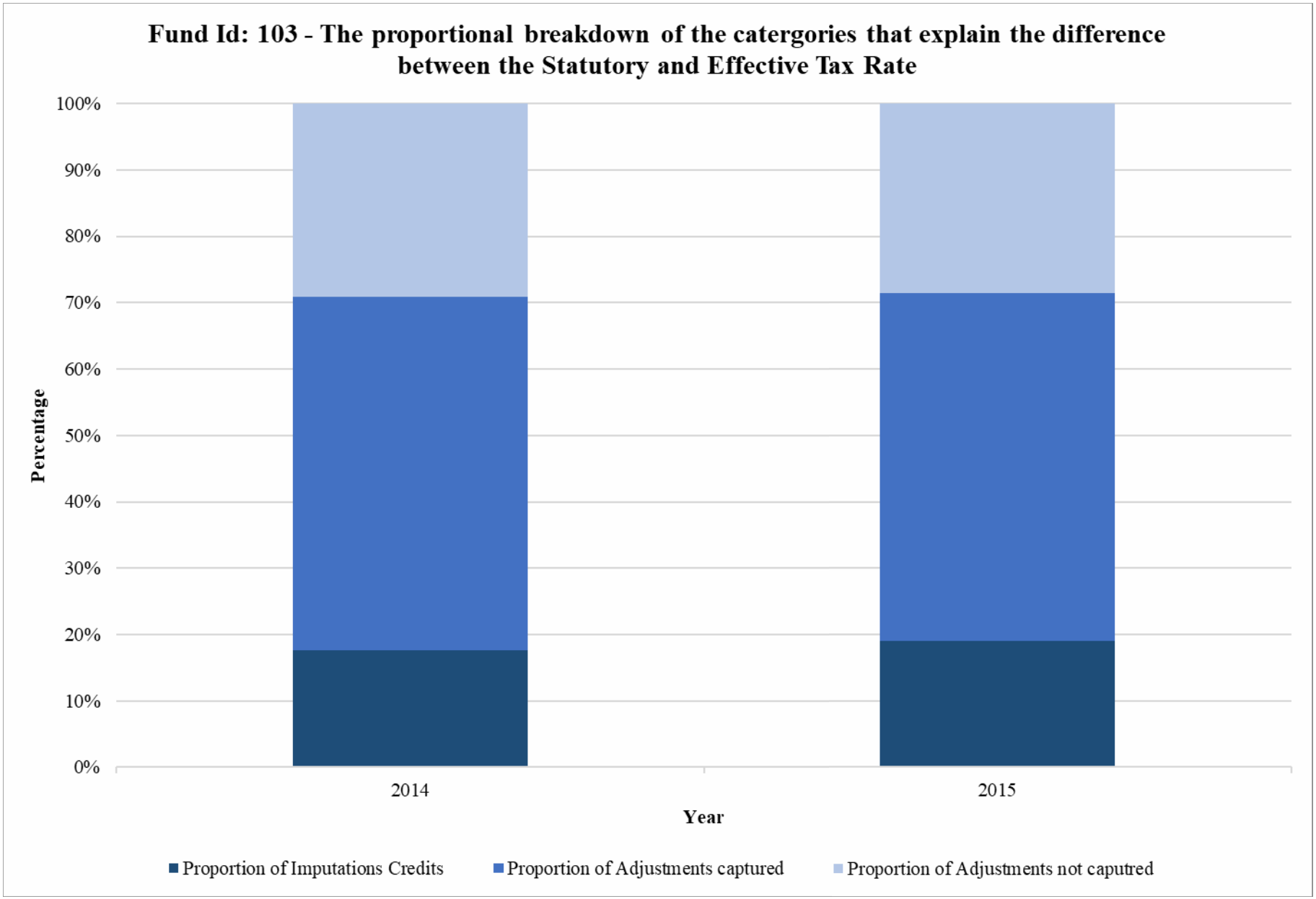

Fund Id: 102 - The proportional breakdown of the catergories that explain the difference between the Statutory and Effective Tax Rate
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage
2014
2015
2016
Year
Proportion of Imputations Credits
Proportion of Adjustments captured
Proportion of Adjustments not caputred

Tax reconciliation for Fund Id 103

	2014		2015	
	Relative	Total	Relative	Total
Statutory Tax Rate		15.00%		15.00%
Effective Tax Rate		7.06%		5.95%
Difference Between Effective and Statutory		8.30%		9.49%
Imputation Credits	–17.61%	–1.46%	–19.10%	–1.81%
Adjustments Captured	–53.26%	–4.42%	–52.29%	–4.96%
Adjustments Not Captured	–29.13%	–2.42%	–28.62%	–2.72%

Adjustments not captured for Fund Id 103

	2014		2015	
	Relative	Total	Relative	Total
	($,000)	%	($,000)	%
Superannuation Contributions Surcharge	2	0.00%	1	0.00%
Non Assessable Investment Income	–473,779	–28.77%	–517,835	–26.62%
No-TFN Contributions Tax (31.5%)	8,629	0.52%	–13,756	–0.71%
Anti-Detriment Adjustments	–12,256	–0.74%	–16,026	–0.82%
Under/ (Over) Provision in Prior Year	–1,138	–0.07%	–12,828	–0.66%
Other	–1,193	–0.07%	3,810	0.20%

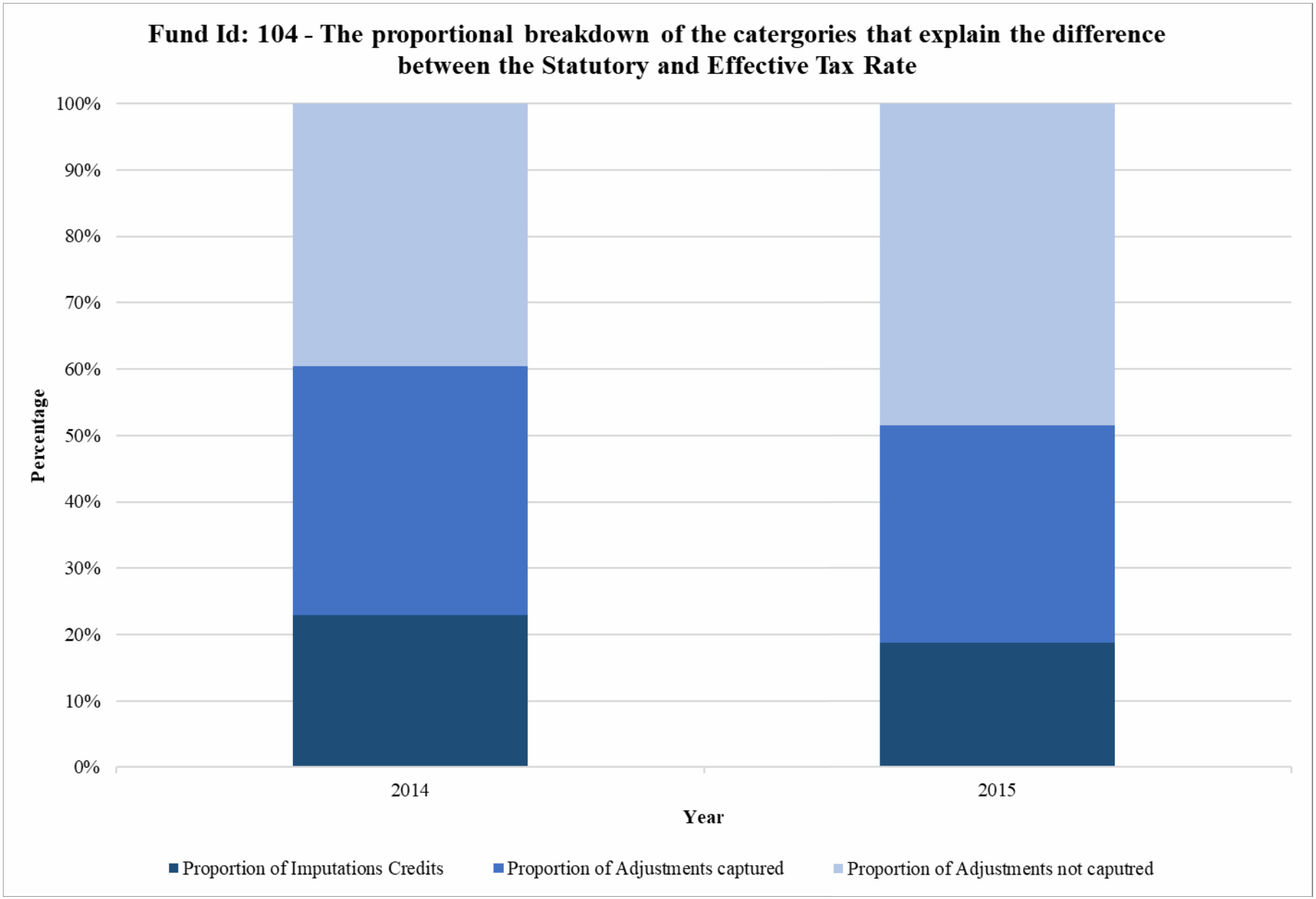

Fund Id: 103 - The proportional breakdown of the catergories that explain the difference between the Statutory and Effective Tax Rate
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage
2014
2015
Year
Proportion of Imputations Credits
Proportion of Adjustments captured
Proportion of Adjustments not caputred

Tax reconciliation for Fund Id 104

	2014		2015	
	Relative	Total	Relative	Total
Statutory Tax Rate		15.00%		15.00%
Effective Tax Rate		8.52%		6.59%
Difference Between Effective and Statutory		6.48%		8.41%
Imputation Credits	–22.90%	–1.48%	–18.70%	–1.57%
Adjustments Captured	–37.47%	–2.43%	–32.84%	–2.76%
Adjustments Not Captured	–39.64%	–2.57%	–48.46%	–4.08%

Adjustments not captured for Fund Id 104

	2014		2015	
	Relative	Total	Relative	Total
Tax Effect of Foreign Tax Credits	120	0.51%	206	0.66%
Adjustments in Respect of Current Income Tax of Previous Years	–323	–1.38%	–5,841	–18.75%
No-TFN Contributions Tax (31.5%)	–149	–0.64%	25	0.08%
Foreign Tax Credits	–798	–3.40%		0.00%
TOFA Accruals		0.00%	–1,374	–4.41%
Exempt Pension Income	–489	–2.08%	–1,136	–3.65%
Taxable Rollovers and Member Contributions	569	2.43%	952	3.06%
Non Assessable Investment Income	–13,843	–59.01%	–15,935	–51.15%
Anti-Detriment Adjustments	–399	–1.70%	–316	–1.01%
Deferred Tax Assets Upon Transition	0	0.00%		0.00%
Other	6,014	25.64%	8,320	26.71%


Fund Id: 104 - The proportional breakdown of the catergories that explain the difference between the Statutory and Effective Tax Rate
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage
2014
2015
Year
Proportion of Imputations Credits
Proportion of Adjustments captured
Proportion of Adjustments not caputred

Tax reconciliation for Fund Id 105

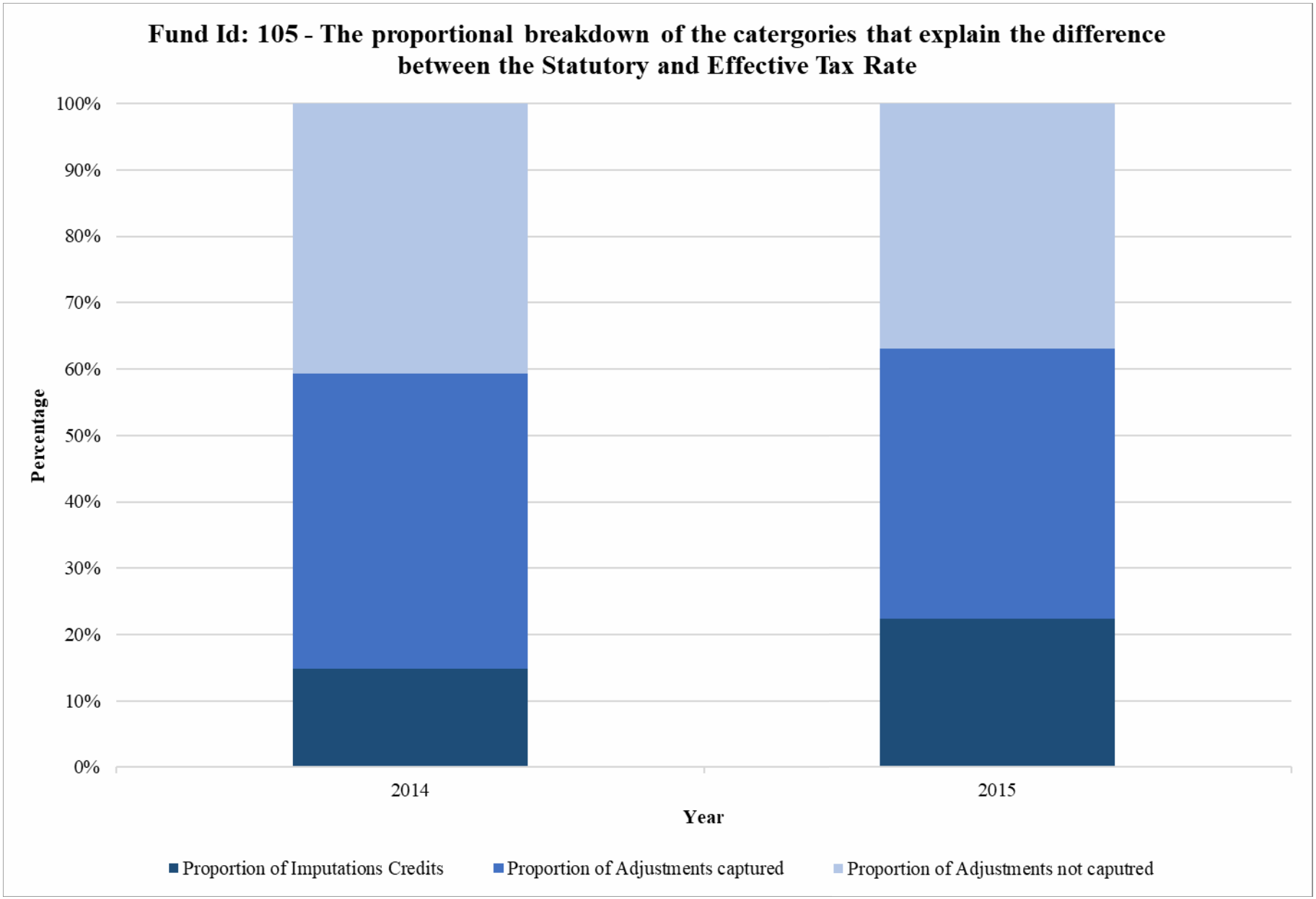
	2014		2015	
	Relative	Total	Relative	Total
Statutory Tax Rate		15.00%		15.00%
Effective Tax Rate		8.93%		7.60%
Difference Between Effective and Statutory		6.07%		7.40%
Imputation Credits	–21.71%	–1.56%	–21.69%	–1.67%
Adjustments Captured	–43.27%	–2.71%	–45.42%	–3.49%
Adjustments Not Captured	–16.46%	–2.47%	–18.23%	–2.73%

Adjustments not captured for Fund Id 105

	2014		2015	
	Relative	Total	Relative	Total
	($,000)	%	($,000)	%
No-TFN Contributions Tax (31.5%)	24	0.02%	0	0.00%
Realised Gains/Losses Per Accounts	–7,456	–7.20%	–1,601	–1.64%
Realised Gains/Losses Per CGT	1,213	1.17%	10,359	10.63%
Tax Deferred Investment Income	–374	–0.36%	–493	–0.51%
Unrealised Gains/Losses Per Accounts	–19,708	–19.03%	–11,349	–11.65%
Unrealised Gains/Losses Per CGT	5,183	5.01%	12,133	12.45%
Realised FX Gains/Losses	671	0.65%	–1,791	–1.84%
Unrealised FX Gains/Losses	37	0.04%	675	0.69%
Discounted Gains	–3,899	–3.77%	–6,182	–6.34%
Foreign Tax Credits	–1,606	–1.55%	–14,370	–14.74%
TOFA Accruals	2,549	2.46%	2,678	2.75%
Unrealised Gains Revenue from Fixed Interest Securities	946	0.91%	20	0.02%

Adjustments not captured for Fund Id 105 (Continued)

	2014		2015	
	Relative	Total	Relative	Total
	($,000)	%	($,000)	%
Exempt Pension Income	–1,804	–1.74%	–2,854	–2.93%
Realised Loss Carried Forward	11,240	10.85%	0	0.00%
CGT Discount Adjustment	–3,511	–3.39%	–4,879	–5.01%
Taxable Rollovers and Member Contributions	371	0.36%	451	0.46%
Non Assessable Investment Income	–489	–0.47%	–126	–0.13%
Assessable Transfers In	50	0.05%	78	0.08%
Anti-Detriment Adjustments	–461	–0.45%	–516	–0.53%

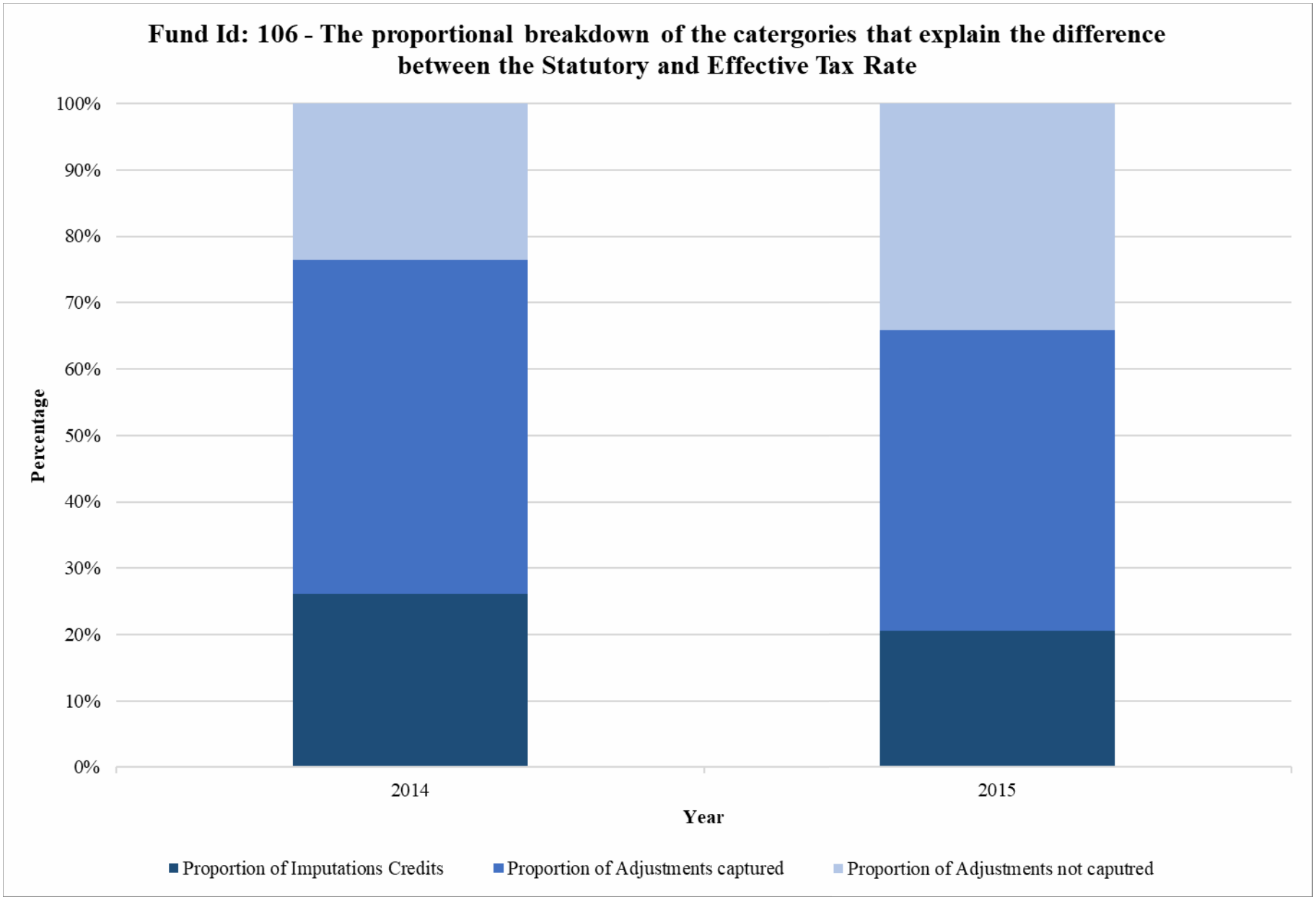

Fund Id: 105 - The proportional breakdown of the catergories that explain the difference between the Statutory and Effective Tax Rate
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage
2014
2015
Year
Proportion of Imputations Credits
Proportion of Adjustments captured
Proportion of Adjustments not caputred

Tax reconciliation for Fund Id 106

	2014		2015	
	Relative	Total	Relative	Total
Statutory Tax Rate		15.00%		15.00%
Effective Tax Rate		7.50%		6.52%
Difference Between Effective and Statutory		7.50%		8.48%
Imputation Credits	–26.10%	–1.96%	–20.59%	–1.75%
Adjustments Captured	–50.39%	–3.78%	–45.21%	–3.84%
Adjustments Not Captured	–23.51%	–1.76%	–34.20%	–2.90%

Adjustments not captured for Fund Id 106

	2014		2015	
	Relative	Total	Relative	Total
	($,000)	%	($,000)	%
Adjustments in Respect of Current Income Tax of Previous Years	–1,076	–0.70%	–2,946	–1.68%
Non Assessable Investment Income	–34,181	–22.30%	–39,405	–22.43%
Other	–791	–0.52%	–17,743	–10.10%

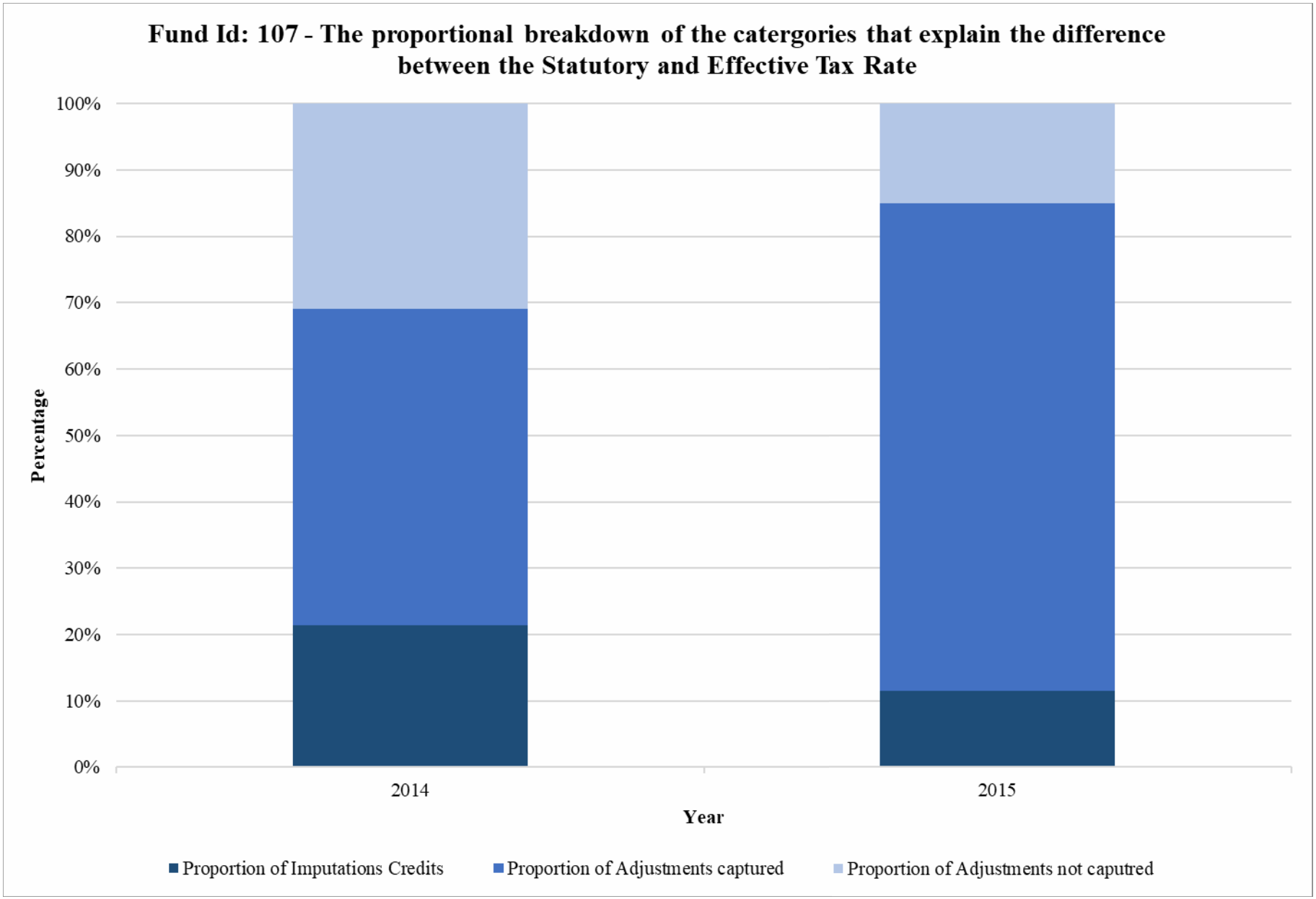

Fund Id: 106 - The proportional breakdown of the catergories that explain the difference between the Statutory and Effective Tax Rate
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage
2014
2015
Year
Proportion of Imputations Credits
Proportion of Adjustments captured
Proportion of Adjustments not caputred

Tax reconciliation for Fund Id 107

	2014		2015	
	Relative	Total	Relative	Total
Statutory Tax Rate		15.00%		15.00%
Effective Tax Rate		8.48%		5.68%
Difference Between Effective and Statutory		6.57%		9.06%
Imputation Credits	–21.42%	–1.41%	–11.43%	–1.04%
Adjustments Captured	–47.64%	–3.13%	–73.51%	–6.66%
Adjustments Not Captured	–30.94%	–2.03%	–15.06%	–1.36%

Adjustments not captured for Fund Id 107

	2014		2015	
	Relative	Total	Relative	Total
	($,000)	%	($,000)	%
Tax Effect of Withholding Tax	86	0.68%	116	0.48%
Adjustments in Respect of Current Income Tax of Previous Years		0.00%	–838	–3.45%
Tax Effect of Permanent Difference – Changes in Net Market Values	–2,485	–19.68%	–1,897	–7.81%
Superannuation Contributions Surcharge	5	0.04%	–38	–0.16%
Exempt Pension Income	–18	–0.14%	166	0.68%
Taxable Rollovers and Member Contributions	89	0.70%	170	0.70%
Non Assessable Investment Income	–826	–6.54%	–1,082	–4.45%
Investment Income	–2	–0.02%	–35	–0.14%
Anti-Detriment Adjustments	–99	–0.78%	–172	–0.71%
Tax Credits	–570	–4.51%	–772	–3.18%

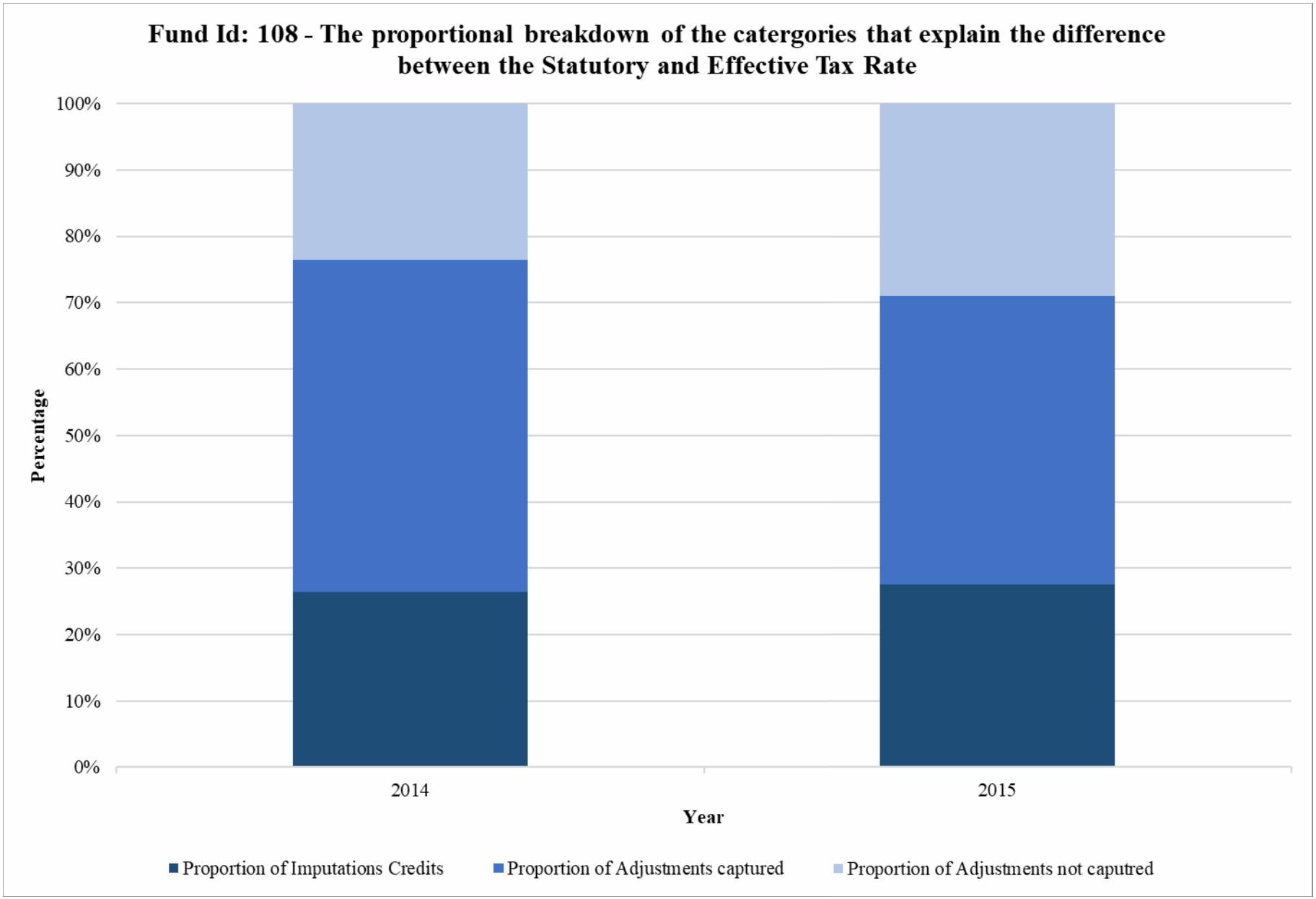

Fund Id: 107 - The proportional breakdown of the catergories that explain the difference between the Statutory and Effective Tax Rate
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage
2014
2015
Year
Proportion of Imputations Credits
Proportion of Adjustments captured
Proportion of Adjustments not caputred

Tax reconciliation for Fund Id 108

	2014		2015	
	Relative	Total	Relative	Total
Statutory Tax Rate		15.00%		15.00%
Effective Tax Rate		8.71%		8.16%
Difference Between Effective and Statutory		6.29%		6.84%
Imputation Credits	–26.35%	–1.66%	–27.51%	–1.88%
Adjustments Captured	–50.07%	–3.15%	–43.50%	–2.98%
Adjustments Not Captured	–23.58%	–1.48%	–29.00%	–1.98%

Adjustments not captured for Fund Id 108

	2014		2015	
	Relative	Total	Relative	Total
	($,000)	%	($,000)	%
Tax Effect of Withholding Tax	148	0.56%	192	0.79%
Adjustments in Respect of Current Income Tax of Previous Years	–1,235	–4.69%	446	1.84%
No-TFN Contributions Tax (31.5%)	–1	0.00%	–11	–0.05%
Realised & Unrealised Accounting Gains and Losses	–13,531	–51.44%	–4,648	–19.23%
Realised & Unrealised Capital Gains and Losses	18,017	68.49%	10,784	44.61%
Tax Deferred Investment Income	–10,366	–39.41%	–11,919	–49.30%
Realised FX Gains/Losses	0	0.00%	4	0.02%
Unrealised FX Gains/Losses	1,967	7.48%	–266	–1.10%
Taxable Rollovers and Member Contributions	67	0.25%	82	0.34%
Anti-Detriment Adjustments	–282	–1.07%	–396	–1.64%
Withholding Tax	–986	–3.75%	–1,278	–5.29%

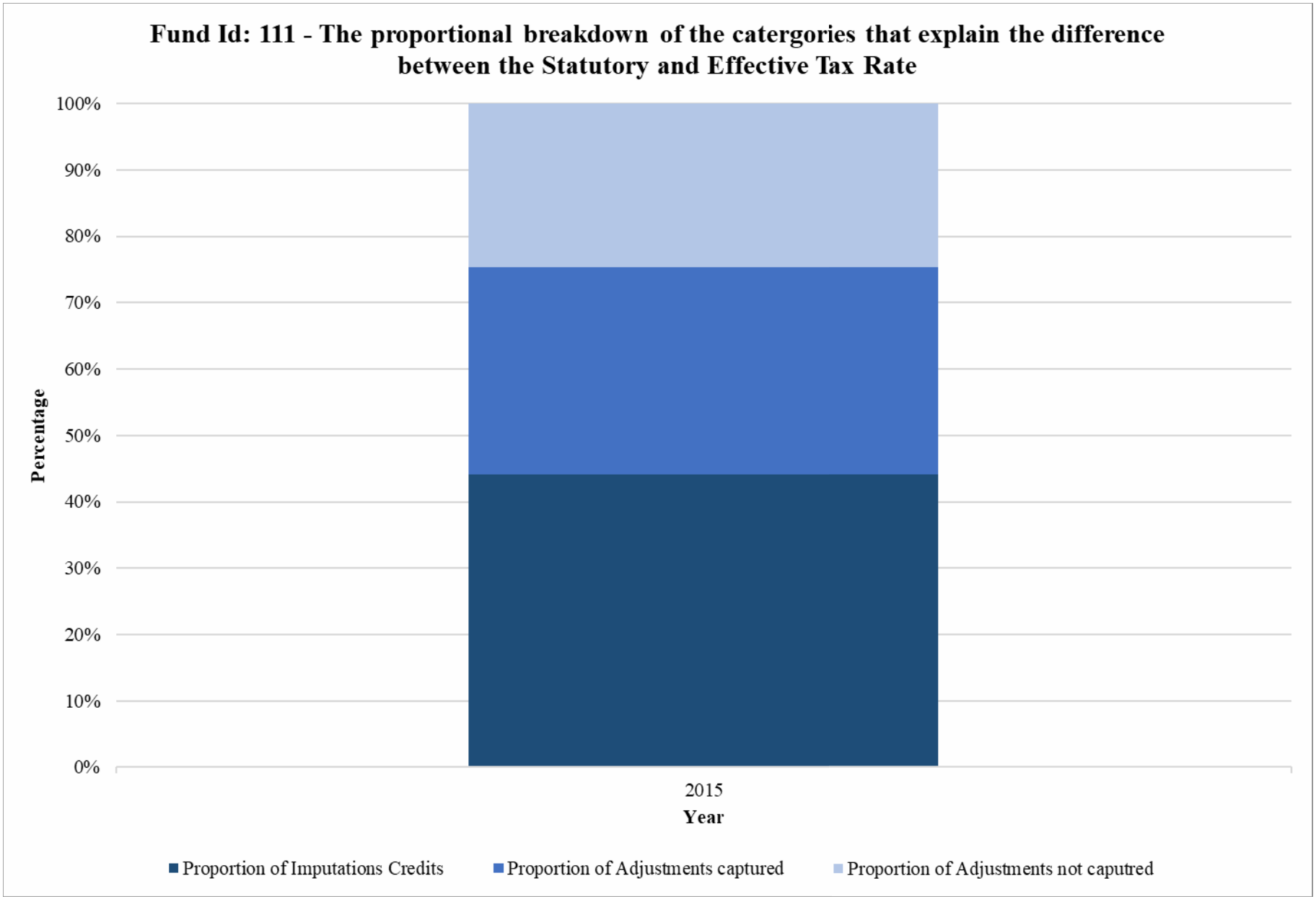

Fund Id: 108 - The proportional breakdown of the catergories that explain the difference between the Statutory and Effective Tax Rate
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage
2014
2015
Year
Proportion of Imputations Credits
Proportion of Adjustments captured
Proportion of Adjustments not caputred

Tax reconciliation for Fund Id 111

	2015	
	Relative	Total
Statutory Tax Rate		15.00%
Effective Tax Rate		9.52%
Difference Between Effective and Statutory		5.48%
Imputation Credits	–44.06%	–2.41%
Adjustments Captured	–31.24%	–1.71%
Adjustments Not Captured	–24.71%	–1.35%

Adjustments not captured for Fund Id 111

	2014	
	Relative	Total
	($,000)	%
Tax Effect of Permanent Difference – Changes in Net Market Values	–1,668	–36.18%
Superannuation Contributions Surcharge		0.00%
No-TFN Contributions Tax (31.5%)	–1	–0.02%
Discounted Gains	2,678	58.09%
Non Assessable Investment Income	–2,146	–46.55%
Under/ (Over) Provision in Prior Year	–2	–0.04%

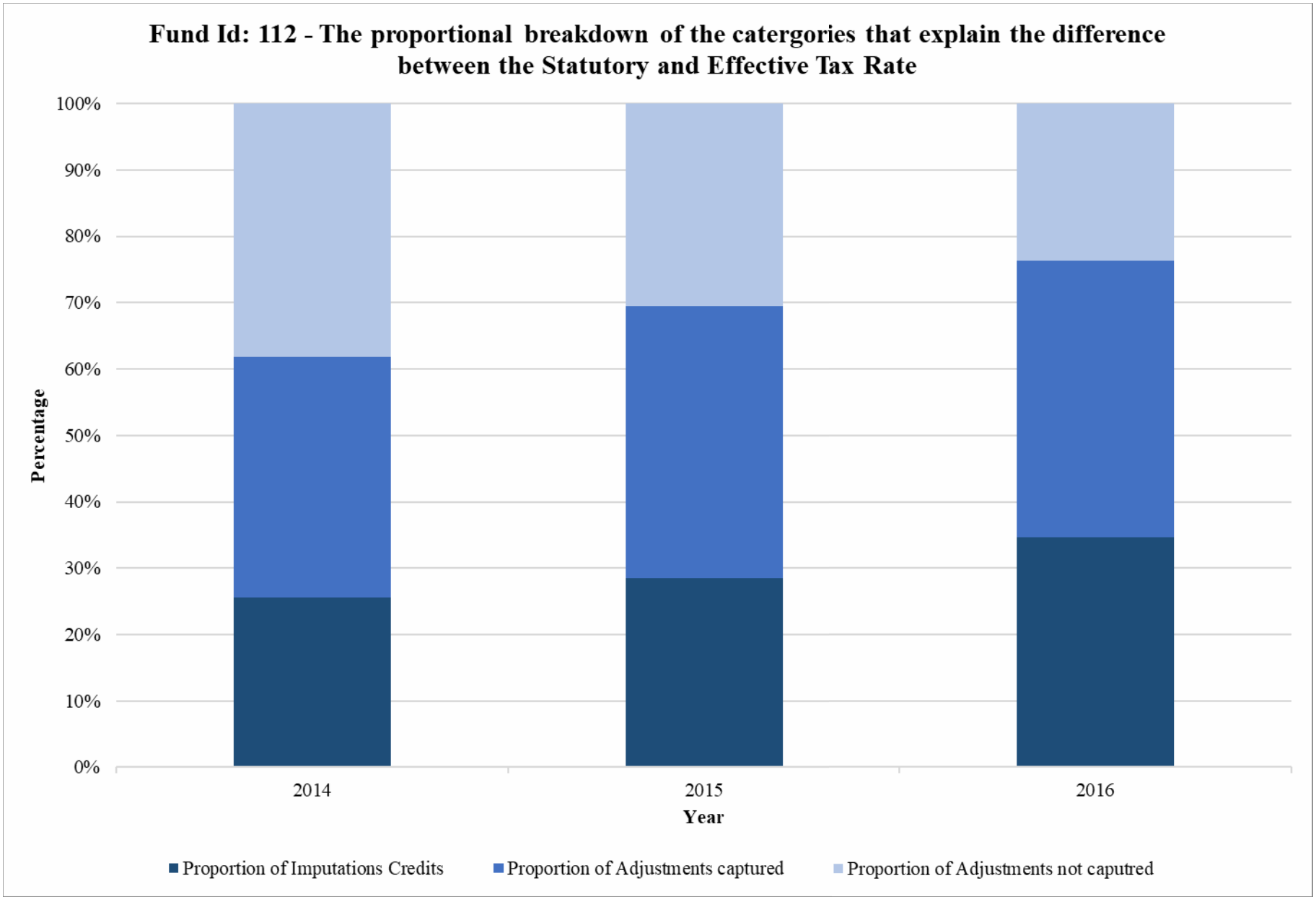

Fund Id: 111 - The proportional breakdown of the catergories that explain the difference between the Statutory and Effective Tax Rate
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage
2015
Year
Proportion of Imputations Credits
Proportion of Adjustments captured
Proportion of Adjustments not caputred

Tax reconciliation for Fund Id 112

	2014		2015		2016	
	Relative	Total	Relative	Total	Relative	Total
Statutory Tax Rate		15.00%		15.00%		15.00%
Effective Tax Rate		8.78%		8.13%		6.91%
Difference Between Effective and Statutory		6.62%		7.39%		8.09%
Imputation Credits	–25.54%	–1.69%	–28.59%	–2.11%	–34.61%	–2.80%
Adjustments Captured	–36.24%	–2.40%	–40.91%	–3.02%	–41.68%	–3.37%
Adjustments Not Captured	–38.23%	–2.53%	–30.50%	–2.25%	–23.71%	–1.92%

Adjustments not captured for Fund Id 112

	2014		2015		2016	
	Relative	Total	Relative	Total	Relative	Total
	($,000)	%	($,000)	%	($,000)	%
Superannuation Contributions Surcharge	0	0.00%	1	0.00%		0.00%
No-TFN Contributions Tax (31.5%)	1,497	0.37%	–5,204	–1.21%	3,367	0.84%
Exempt Pension Income	–3,025	–0.75%	–6,783	–1.58%	–7,326	–1.82%
Investment Income	–147,983	–36.47%	–81,898	–19.11%	–50,717	–12.58%
Anti-Detriment Adjustments	–4,500	–1.11%	–5,110	–1.19%	–6,019	–1.49%
Under/ (Over) Provision in Prior Year	–1,110	–0.27%	–31,742	–7.41%	–34,874	–8.65%


Fund Id: 112 - The proportional breakdown of the catergories that explain the difference between the Statutory and Effective Tax Rate
100%
90%
80%
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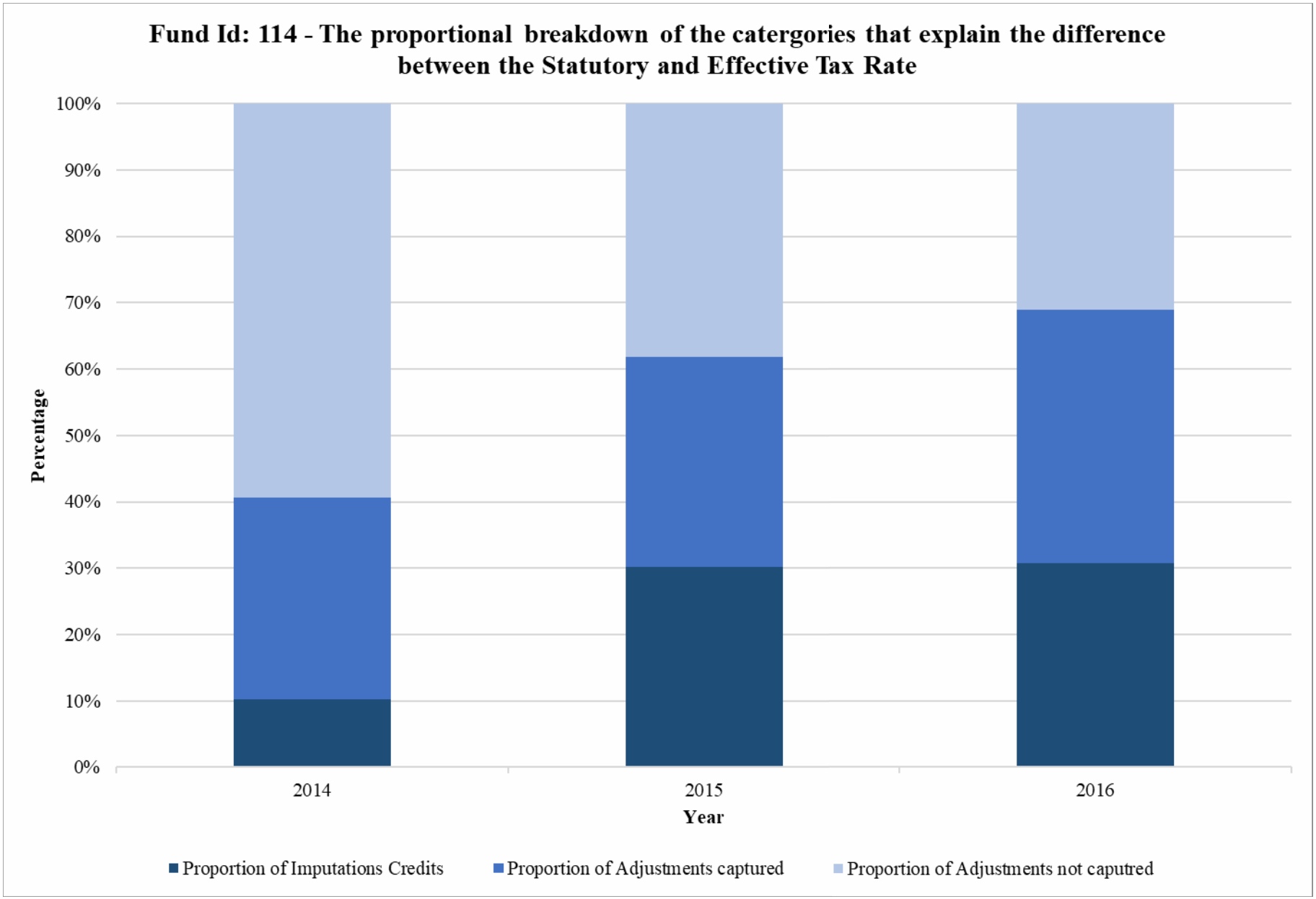
60%
50%
40%
30%
20%
10%
0%
Percentage
2014
2015
2016
Year
Proportion of Imputations Credits
Proportion of Adjustments captured
Proportion of Adjustments not caputred

Tax reconciliation for Fund Id 114

	2014		2015		2016	
	Relative	Total	Relative	Total	Relative	Total
Statutory Tax Rate		15.00%		15.00%		15.00%
Effective Tax Rate		7.63%		7.15%		6.90%
Difference Between Effective and Statutory		7.37%		7.85%		8.10%
Imputation Credits	–10.21%	–0.75%	–30.19%	–2.37%	–30.73%	–2.49%
Adjustments Captured	–30.38%	–2.24%	–31.66%	–2.49%	–38.25%	–3.10%
Adjustments Not Captured	–59.41%	–4.38%	–38.15%	–2.99%	–31.02%	–2.51%

Adjustments not captured for Fund Id 114

	2014		2015		2016	
	Relative	Total	Relative	Total	Relative	Total
	($,000)	%	($,000)	%	($,000)	%
Differences Between Tax and Accounting Gains	–1,924	–6.71%	–3,227	–11.62%	–1,522	–6.80%
Non Assessable Investment Income	–15,113	–52.70%	–7,372	–26.54%	–5,417	–24.22%


Fund Id: 114 - The proportional breakdown of the catergories that explain the difference between the Statutory and Effective Tax Rate
100%
90%
80%
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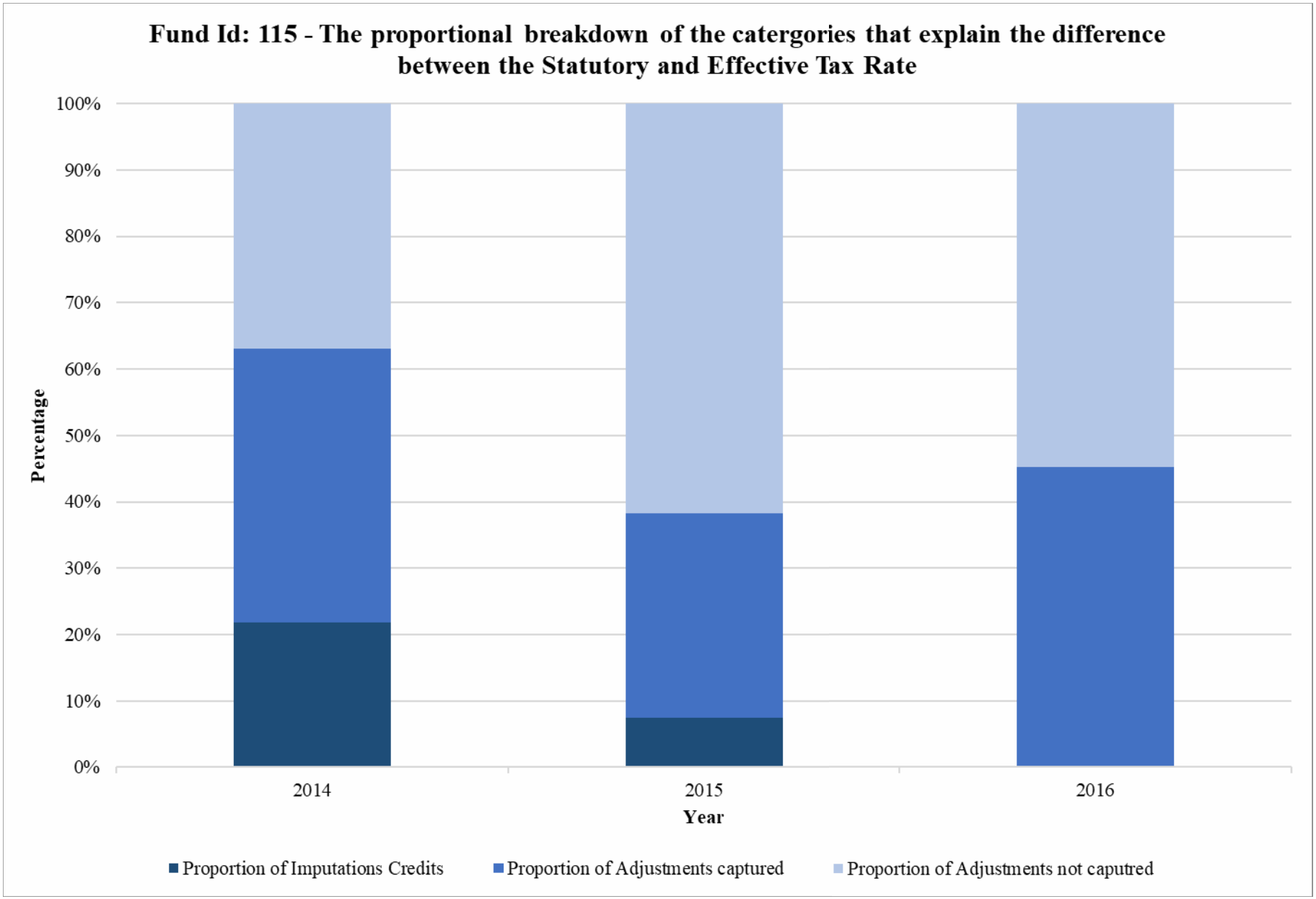
60%
50%
40%
30%
20%
10%
0%
Percentage
2014
2015
2016
Year
Proportion of Imputations Credits
Proportion of Adjustments captured
Proportion of Adjustments not caputred

Tax reconciliation for Fund Id 115

	2014		2015		2016	
	Relative	Total	Relative	Total	Relative	Total
Statutory Tax Rate		15.00%		15.00%		15.00%
Effective Tax Rate		8.73%		5.51%		6.98%
Difference Between Effective and Statutory		6.27%		9.49%		8.02%
Imputation Credits	–21.80%	–1.37%	–7.45%	–0.71%	–0.17%	–0.01%
Adjustments Captured	–41.33%	–2.59%	–30.76%	–2.92%	–45.12%	–3.62%
Adjustments Not Captured	–36.87%	–2.31%	–61.79%	–5.86%	–54.71%	–4.39%

Adjustments not captured for Fund Id 115

	2014		2015		2016	
	Relative	Total	Relative	Total	Relative	Total
	($,000)	%	($,000)	%	($,000)	%
Non-Deductible Expenses	2	0.00%	1	0.00%	0	0.00%
No-TFN Contributions Tax (31.5%)	–65	–0.03%	–2,300	–0.64%	2,249	0.88%
Exempt Pension Income	–4,525	–1.93%	–2,066	–0.58%	3	0.00%
Investment Income	–77,097	–32.95%	–199,632	–55.87%	–139,504	–54.38%
Anti-Detriment Adjustments	–1,394	–0.60%	–1,698	–0.48%	–2,831	–1.10%
Under/ (Over) Provision in Prior Year	–3,194	–1.37%	–15,125	–4.23%	–264	–0.10%

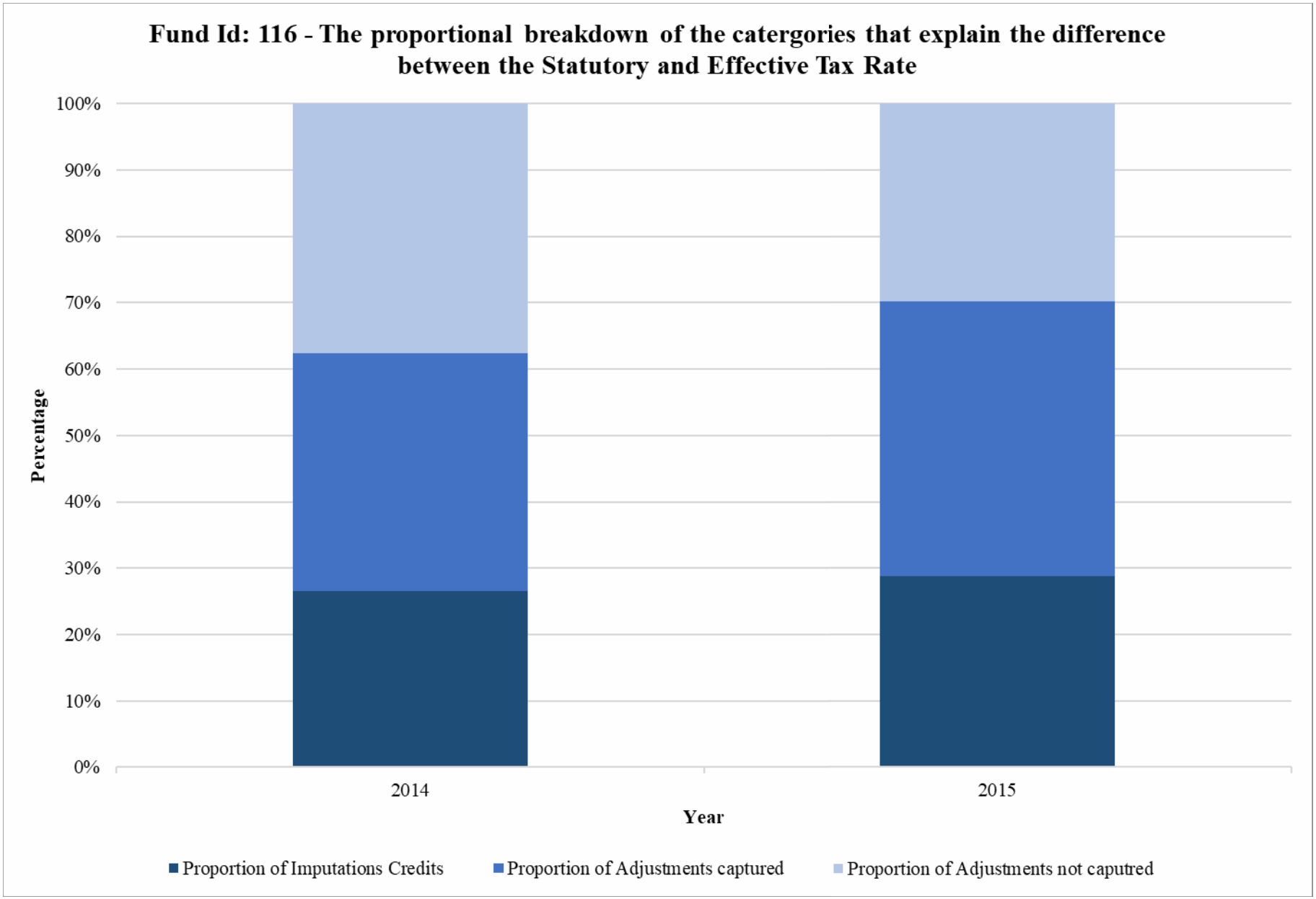

Fund Id: 115 - The proportional breakdown of the catergories that explain the difference between the Statutory and Effective Tax Rate
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage
2014
2015
2016
Year
Proportion of Imputations Credits
Proportion of Adjustments captured
Proportion of Adjustments not caputred

Tax reconciliation for Fund Id 116

	2014		2015	
	Relative	Total	Relative	Total
Statutory Tax Rate		15.00%		15.00%
Effective Tax Rate		8.52%		7.80%
Difference Between Effective and Statutory		6.48%		7.20%
Imputation Credits	–26.50%	–1.72%	–28.73%	–2.07%
Adjustments Captured	–35.88%	–2.32%	–41.51%	–2.99%
Adjustments Not Captured	–37.62%	–2.44%	–29.76%	–2.14%

Adjustments not captured for Fund Id 116

	2014		2015	
	Relative	Total	Relative	Total
Non-Deductible Expenses	19	0.00%	–21	0.00%
No-TFN Contributions Tax (31.5%)	337	0.08%	–6,699	–1.40%
(Gains)/Losses Not (Assessable)/Deductible	–127,997	–30.05%	–133,309	–27.90%
Anti-Detriment Adjustments	–3,370	–0.79%	–4,689	–0.98%
Under/ (Over) Provision in Prior Year	–29,241	–6.86%	–4,771	–1.00%
Other Assessable Income		0.00%	7,261	1.52%

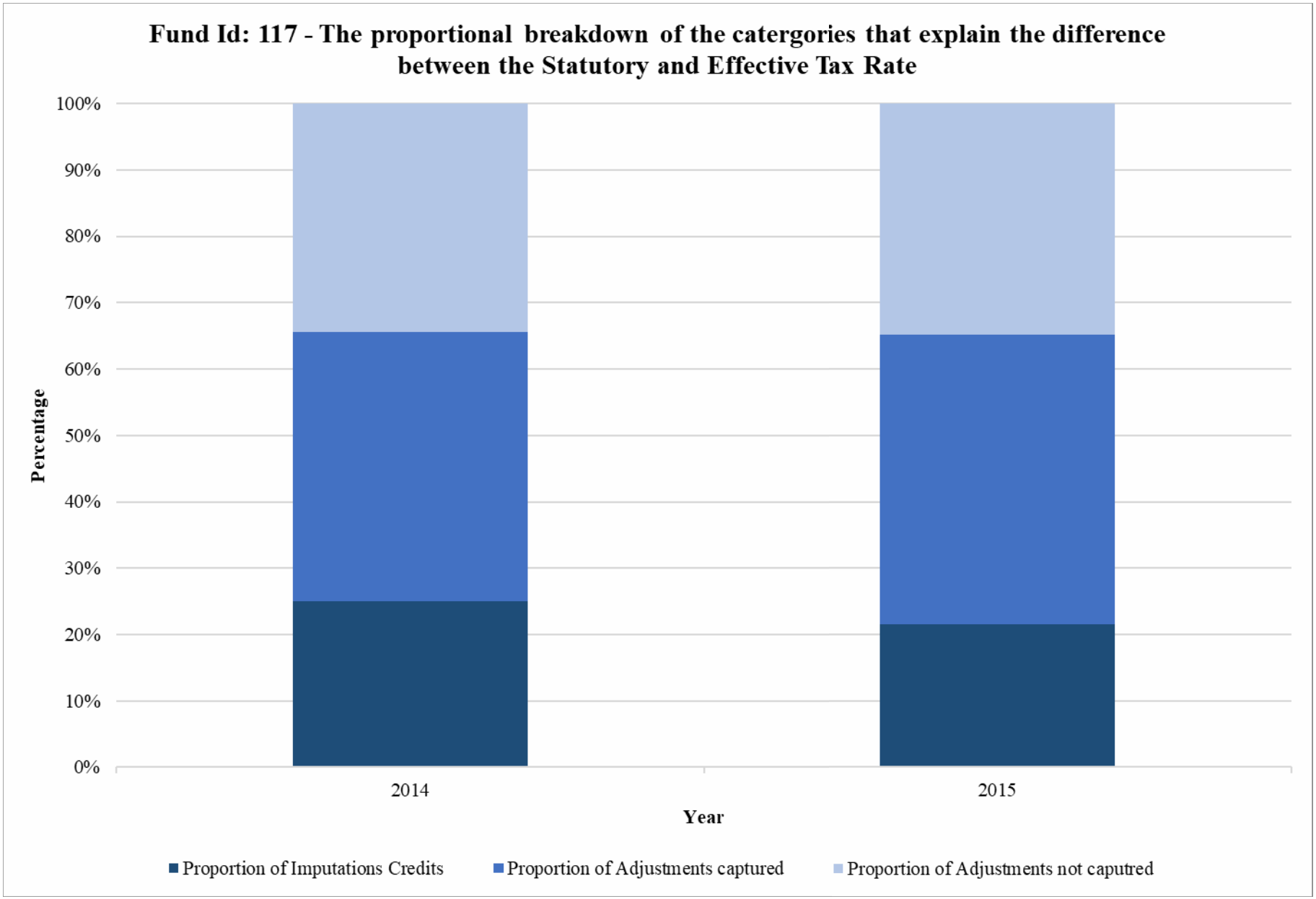

Fund Id: 116 - The proportional breakdown of the catergories that explain the difference between the Statutory and Effective Tax Rate
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage
2014
2015
Year
Proportion of Imputations Credits
Proportion of Adjustments captured
Proportion of Adjustments not caputred

Tax reconciliation for Fund Id 117

	2014		2015	
	Relative	Total	Relative	Total
Statutory Tax Rate		15.00%		15.00%
Effective Tax Rate		7.76%		7.42%
Difference between Effective and Statutory		7.24%		7.58%
Imputation Credits	–25.06%	–1.82%	–21.49%	–1.63%
Adjustments captured	–40.49%	–2.93%	–43.68%	–3.31%
Adjustments not captured	–34.45%	–2.50%	–34.82%	–2.64%

Adjustments not captured for Fund Id 117

	2014		2015	
	Relative	Total	Relative	Total
	($,000)	%	($,000)	%
Adjustments in Respect of Current Income Tax of Previous Years	–4,144	–15.10%	–1,230	–4.06%
Non Assessable Investment Income	–4,949	–18.04%	–9,007	–29.72%
Other	–360	–1.31%	–316	–1.04%

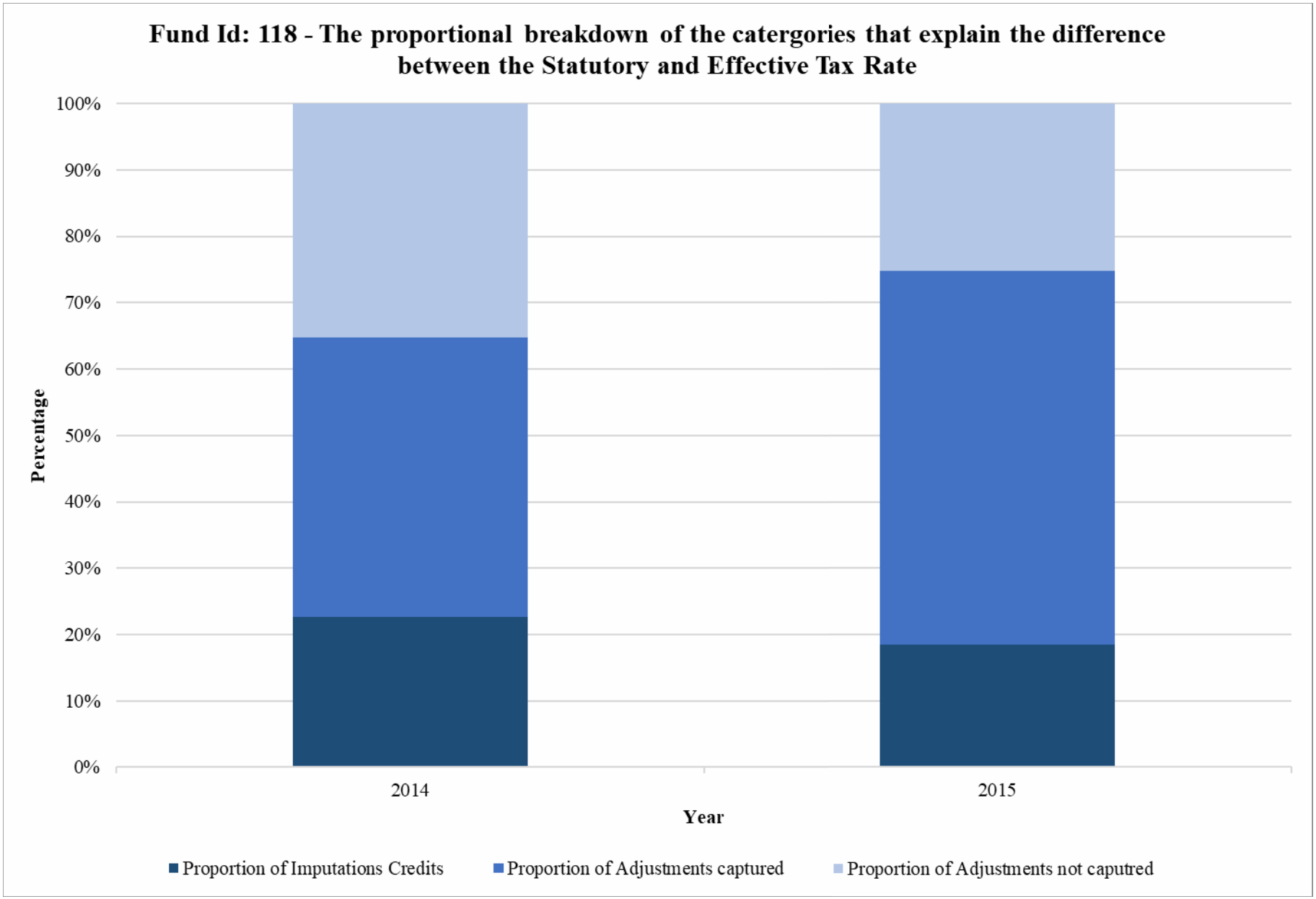

Fund Id: 117 - The proportional breakdown of the catergories that explain the difference between the Statutory and Effective Tax Rate
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage
2014
2015
Year
Proportion of Imputations Credits
Proportion of Adjustments captured
Proportion of Adjustments not caputred

Tax reconciliation for Fund Id 118

	2014		2015	
	Relative	Total	Relative	Total
Statutory Tax Rate		15.00%		15.00%
Effective Tax Rate		8.77%		7.88%
Difference Between Effective and Statutory		6.23%		7.12%
Imputation Credits	–22.61%	–1.41%	–18.47%	–1.32%
Adjustments Captured	–42.14%	–2.62%	–56.29%	–4.01%
Adjustments Not Captured	–35.26%	–2.20%	–25.24%	–1.80%

Adjustments not captured for Fund Id 118

	2014		2015	
	Relative	Total	Relative	Total
	($,000)	%	($,000)	%
No-TFN Contributions Tax (31.5%)	342	0.85%	–125	–0.27%
Realised Gains/Losses Per Accounts	1,688	4.19%	6,283	13.45%
Unrealised Gains/Losses Per CGT	–15,725	–39.01%	–16,839	–36.05%
Assessable Concessional Member Contributions	245	0.61%	328	0.70%
Trust Distributions	408	1.01%	–2,786	–5.96%
Unallocated Contributions	–29	–0.07%		0.00%
Assessable Transfers in	98	0.24%	170	0.36%
Anti-Detriment Adjustments	–86	–0.21%	–303	–0.65%
Under/ (Over) Provision in Prior Year	–1,155	–2.86%	–4,986	–10.67%
Current Year Present Entitlement Estimate		0.00%	6,468	13.85%

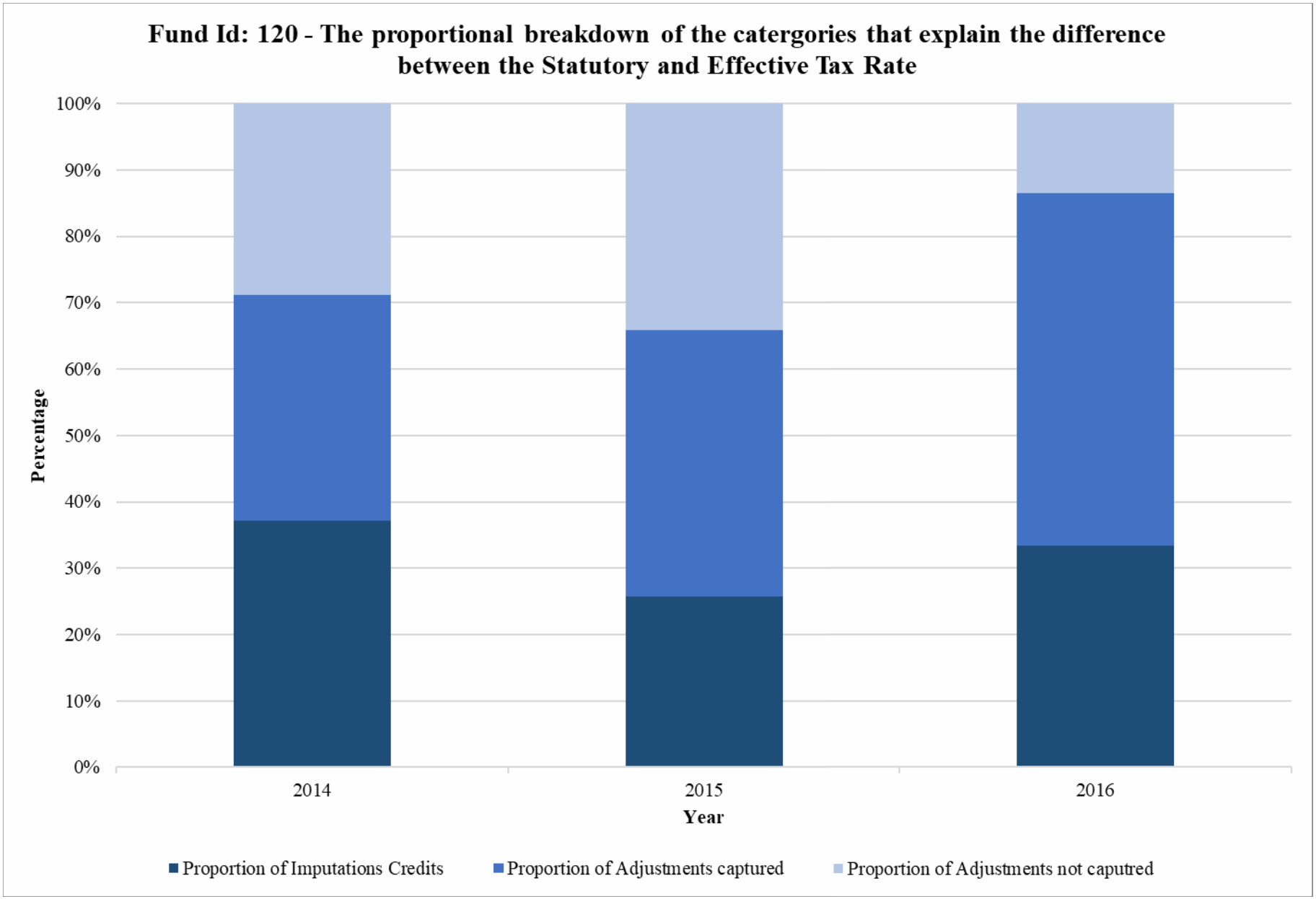

Fund Id: 118 - The proportional breakdown of the catergories that explain the difference between the Statutory and Effective Tax Rate
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage
2014
2015
Year
Proportion of Imputations Credits
Proportion of Adjustments captured
Proportion of Adjustments not caputred

Tax reconciliation for Fund Id 120

	2014		2015		2016	
	Relative	Total	Relative	Total	Relative	Total
Statutory Tax Rate		15.00%		15.00%		15.00%
Effective Tax Rate		8.04%		7.48%		7.61%
Difference Between Effective and Statutory		6.96%		7.52%		7.39%
Imputation Credits	–37.16%	–2.58%	–25.75%	–1.94%	–33.34%	–2.46%
Adjustments Captured	–33.96%	–2.36%	–40.13%	–3.02%	–53.17%	–3.93%
Adjustments Not Captured	–28.88%	–2.01%	–34.12%	–2.57%	–13.49%	–1.00%

Adjustments not captured for Fund Id 120

	2014		2015		2016	
	Relative	Total	Relative	Total	Relative	Total
	($,000)	%	($,000)	%	($,000)	%
No-TFN Contributions Tax (31.5%)	–3,825	–3.27%	–47	–0.03%	–971	–0.94%
Exempt Pension Income	–6,272	–5.37%	–5,342	–3.76%	–3,372	–3.25%
Investment Income	–20,187	–17.28%	–31,442	–22.15%	–2,652	–2.56%
Anti-Detriment Adjustments	–1,687	–1.44%	–1,065	–0.75%	–1,546	–1.49%
Under/ (Over) Provision in Prior Year	–1,765	–1.51%	–10,539	–7.42%	–5,455	–5.26%


Fund Id: 120 - The proportional breakdown of the catergories that explain the difference between the Statutory and Effective Tax Rate
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage
2014
2015
2016
Year
Proportion of Imputations Credits
Proportion of Adjustments captured
Proportion of Adjustments not caputred

Tax reconciliation for Fund Id 122

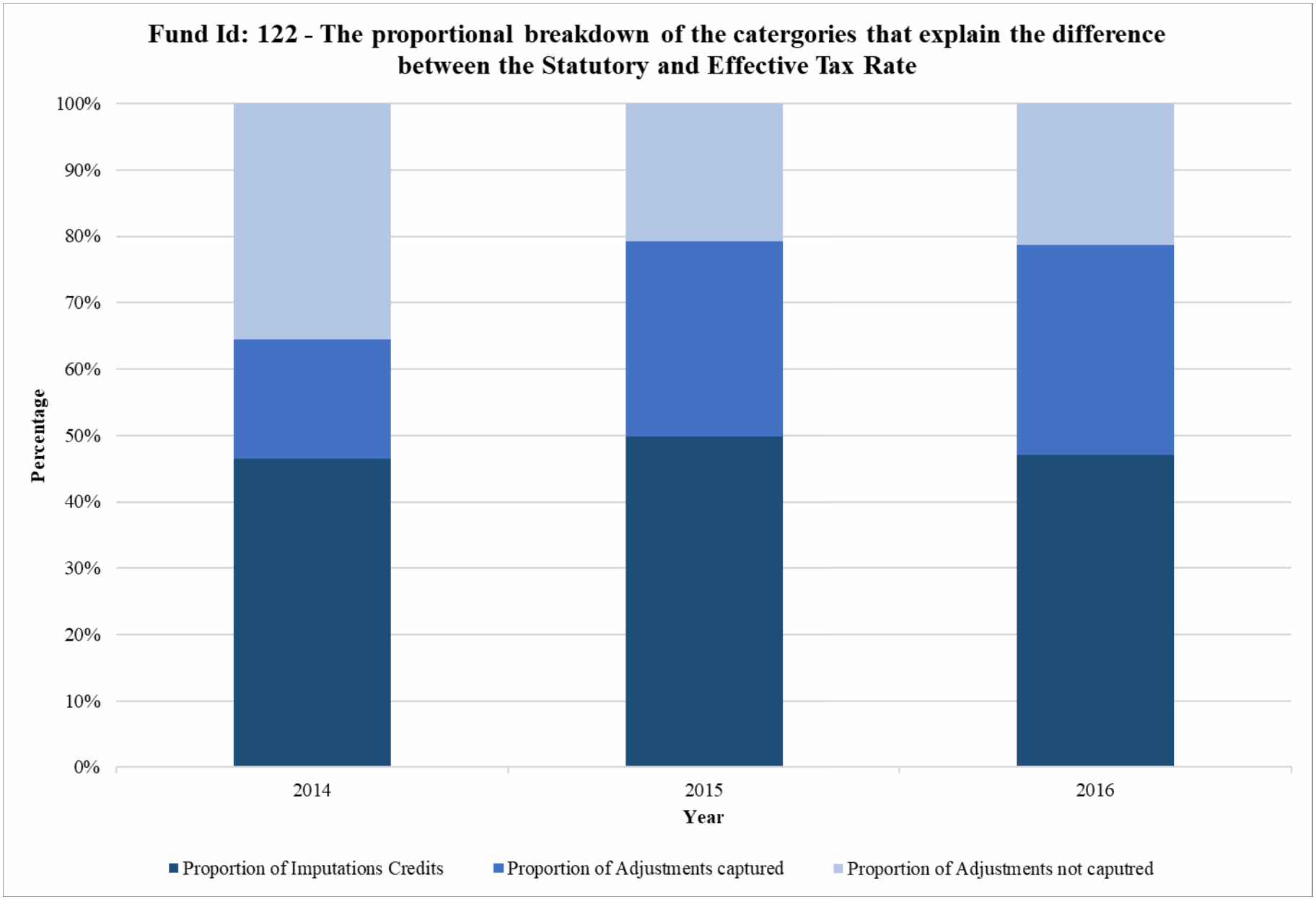
	2014		2015		2016	
	Relative	Total	Relative	Total	Relative	Total
Statutory Tax Rate		15.00%		15.00%		15.00%
Effective Tax Rate		9.32%		7.59%		7.75%
Difference Between Effective and Statutory		5.98%		7.84%		7.73%
Imputation Credits	–46.36%	–2.77%	–49.88%	–3.91%	–47.00%	–3.63%
Adjustments Captured	–18.15%	–1.09%	–29.42%	–2.31%	–31.62%	–2.44%
Adjustments Not Captured	–35.49%	–2.12%	–20.70%	–1.62%	–21.38%	–1.65%

Adjustments not captured for Fund Id 122

	2014		2015		2016	
	Relative	Total	Relative	Total	Relative	Total
	($,000)	%	($,000)	%	($,000)	%
Tax Effect of Permanent Difference – Changes in Net Market Values	–6,.397	–93.43%	–1,389	–19.48%	–1,153	–17.31%
No-TFN Contributions Tax (31.5%)	72	1.05%	–63	–0.88%	–17	–0.26%
Net Realised/Unrealised Gains for Income Tax	4,475	65.36%	670	9.40%	518	7.78%
Exempt Pension Income	–120	–1.75%	–155	–2.17%	–192	–2.88%
Trust Distributions		0.00%	–14	–0.20%	–87	–1.31%
Direct Investment Expenses		0.00%	3	0.04%	0	0.00%
Anti-Detriment Adjustments	–169	–2.47%	–310	–4.35%	–286	–4.29%
Under/ (Over) Provision in Prior Year		0.00%	0	0.00%	1	0.02%

Adjustments not captured for Fund Id 122 (Continued)

	2014		2015		2016	
	Relative	Total	Relative	Total	Relative	Total
	($,000)	%	($,000)	%	($,000)	%
Deduction Allowed for Property Depreciation	–247	–3.61%	–169	–2.37%	–159	–2.39%
Other Tax Offsets		0.00%	–49	–0.69%	–49	–0.74%
Other	–44	–0.64%		0.00%		0.00%

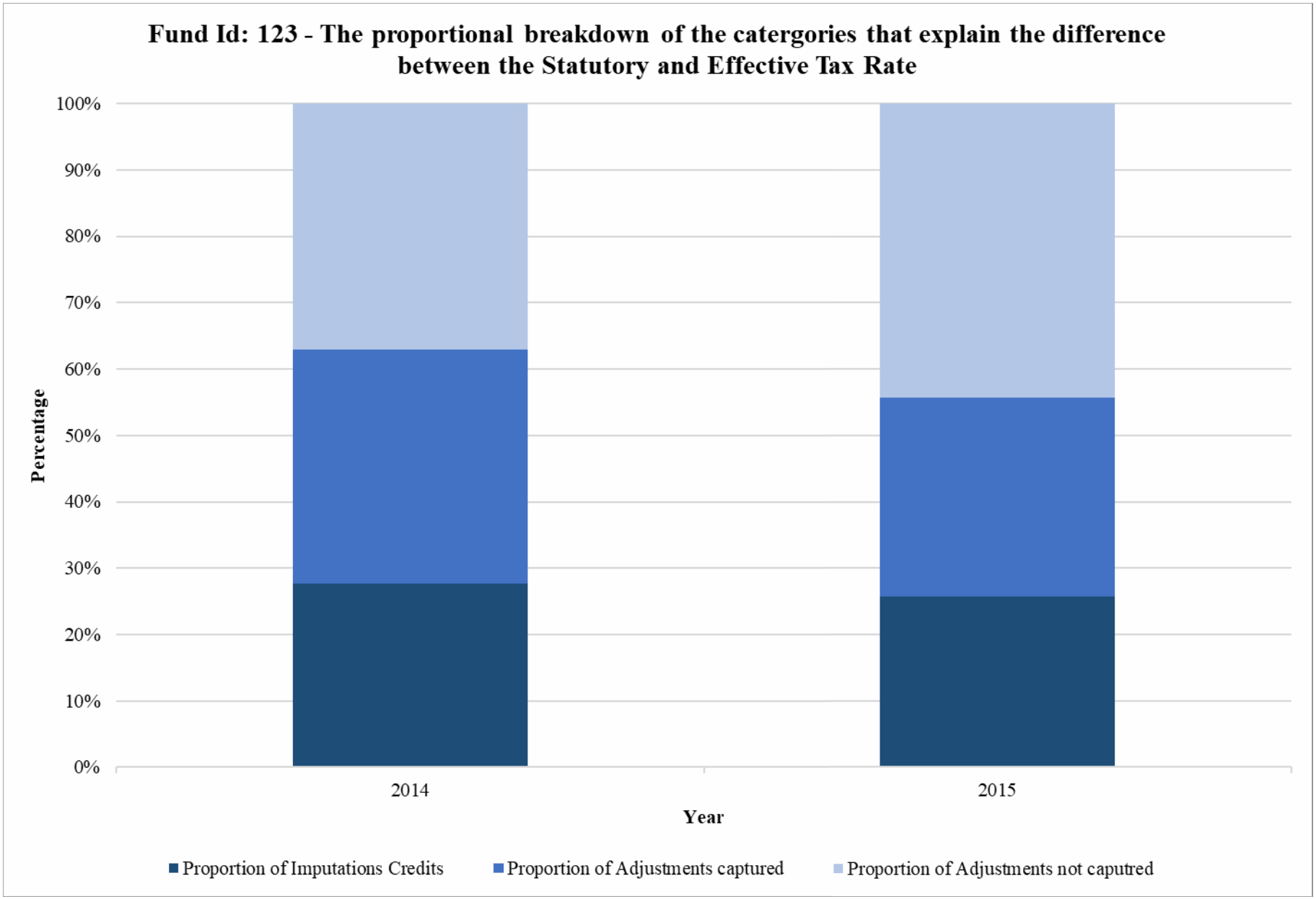

Fund Id: 122 - The proportional breakdown of the catergories that explain the difference between the Statutory and Effective Tax Rate
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage
2014
2015
2016
Year
Proportion of Imputations Credits
Proportion of Adjustments captured
Proportion of Adjustments not caputred

Tax reconciliation for Fund Id 123

	2014		2015	
	Relative	Total	Relative	Total
Statutory Tax Rate		15.00%		15.00%
Effective Tax Rate		7.06%		4.62%
Difference Between Effective and Statutory		7.94%		10.38%
Imputation Credits	–27.62%	–2.19%	–25.77%	–2.67%
Adjustments Captured	–35.29%	–2.80%	–29.89%	–3.10%
Adjustments Not Captured	–37.09%	–2.95%	–44.34%	–4.60%

Adjustments not captured for Fund Id 123

	2014		2015	
	Relative	Total	Relative	Total
	($,000)	%	($,000)	%
No-TFN Contributions Tax (31.5%)	–623	–1.04%	–1,546	–2.18%
Discount in Capital Gains/Losses	30,826	51.66%	12,155	17.11%
Exempt Pension Income	–1,144	–1.92%	–1,726	–2.43%
Non Assessable Investment Income	–43,737	–73.29%	–25,917	–36.48%
Anti-Detriment Adjustments	–458	–0.77%	–845	–1.19%
Under/ (Over) Provision in Prior Year	–6,997	–11.73%	–13,626	–19.18%


Fund Id: 123 - The proportional breakdown of the catergories that explain the difference between the Statutory and Effective Tax Rate
100%
90%
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40%
30%
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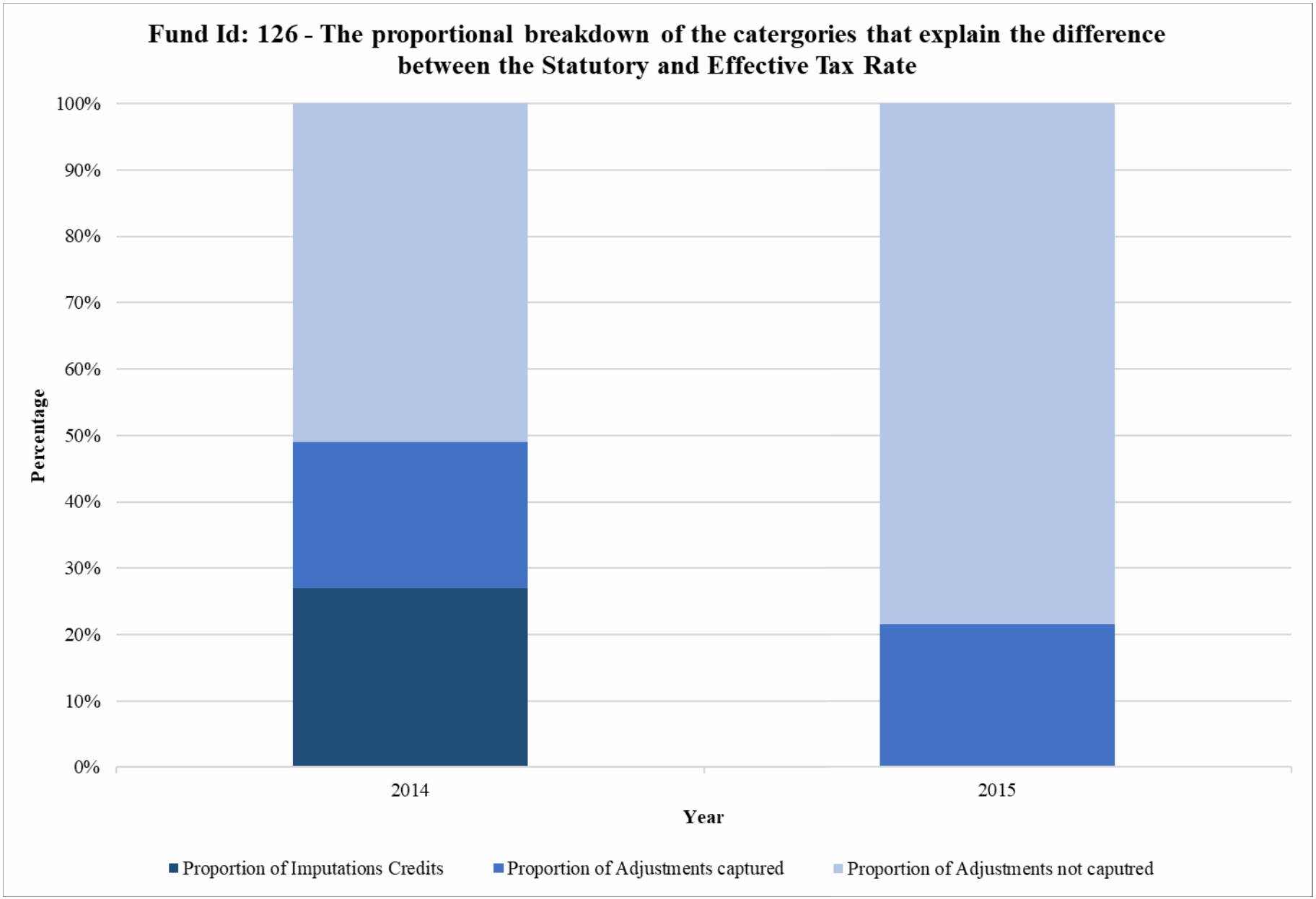
10%
0%
Percentage
2014
2015
Year
Proportion of Imputations Credits
Proportion of Adjustments captured
Proportion of Adjustments not caputred

Tax reconciliation for Fund Id 126

	2014		2015	
	Relative	Total	Relative	Total
Statutory Tax Rate		15.00%		15.00%
Effective Tax Rate		9.12%		6.42%
Difference Between Effective and Statutory		5.88%		8.55%
Imputation Credits	–26.94%	–1.58%	–0.02%	0.00%
Adjustments Captured	–22.12%	–1.30%	–21.55%	–1.84%
Adjustments Not Captured	–50.94%	–3.00%	–78.43%	–6.70%

Adjustments not captured for Fund Id 126

	2014		2015	
	Relative	Total	Relative	Total
Adjustments in Respect of Current Income Tax of Previous Years	12	0.19%	449	5.26%
Tax Effect of Permanent Difference – Changes in Net Market Values	–3,426	–53.63%	–12,830	–150.25%
No-TFN Contributions Tax (31.5%)	–2	–0.03%	–26	–0.30%
Realised Gains/Losses Per CGT	1,111	17.39%	5,742	67.24%
Tax Deferred Investment Income	–15	–0.23%	0	0.00%
Discount on Unrealised Gains Per CGT	–914	–14.31%	0	0.00%
Exempt Pension Income	–6	–0.09%	3	0.04%
Non Assessable Investment Income	–4	–0.06%		0.00%
Anti–Detriment Adjustments	–10	–0.16%	–35	–0.41%

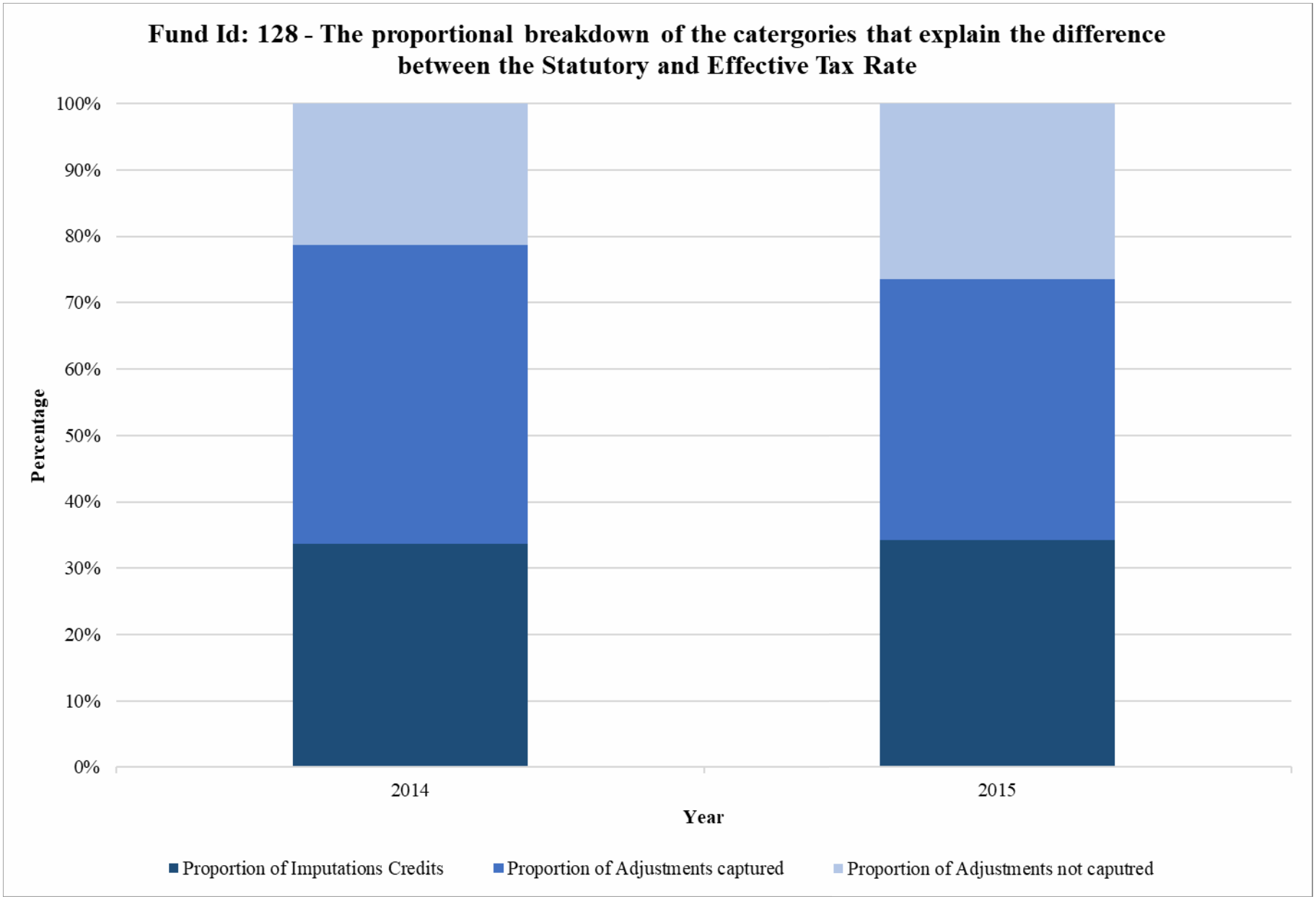

Fund Id: 126 - The proportional breakdown of the catergories that explain the difference between the Statutory and Effective Tax Rate
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage
2014
2015
Year
Proportion of Imputations Credits
Proportion of Adjustments captured
Proportion of Adjustments not caputred

Tax reconciliation for Fund Id 128

	2014		2015	
	Relative	Total	Relative	Total
Statutory Tax Rate		15.00%		15.00%
Effective Tax Rate		9.56%		8.44%
Difference Between Effective and Statutory		5.44%		6.56%
Imputation Credits	–33.66%	–1.83%	–34.15%	–2.24%
Adjustments Captured	–44.97%	–2.45%	–39.32%	–2.58%
Adjustments Not Captured	–21.37%	–1.16%	–26.53%	–1.74%

Adjustments not captured for Fund Id 128

	2014		2015	
	Relative	Total	Relative	Total
	($,000)	%	($,000)	%
Adjustments in Respect of Current Income Tax of Previous Years	7	0.13%	–3	–0.05%
Tax Effect of Permanent Difference – Changes in Net Market Values	–2,606	–48.25%	–1,703	–28.98%
No–TFN Contributions Tax (31.5%)	–21	–0.39%	–52	–0.88%
Differences Between Trust Distributions for Accounts & Tax Purposes	1,591	29.46%	302	5.14%
Other	–125	–2.31%	–103	–1.75%

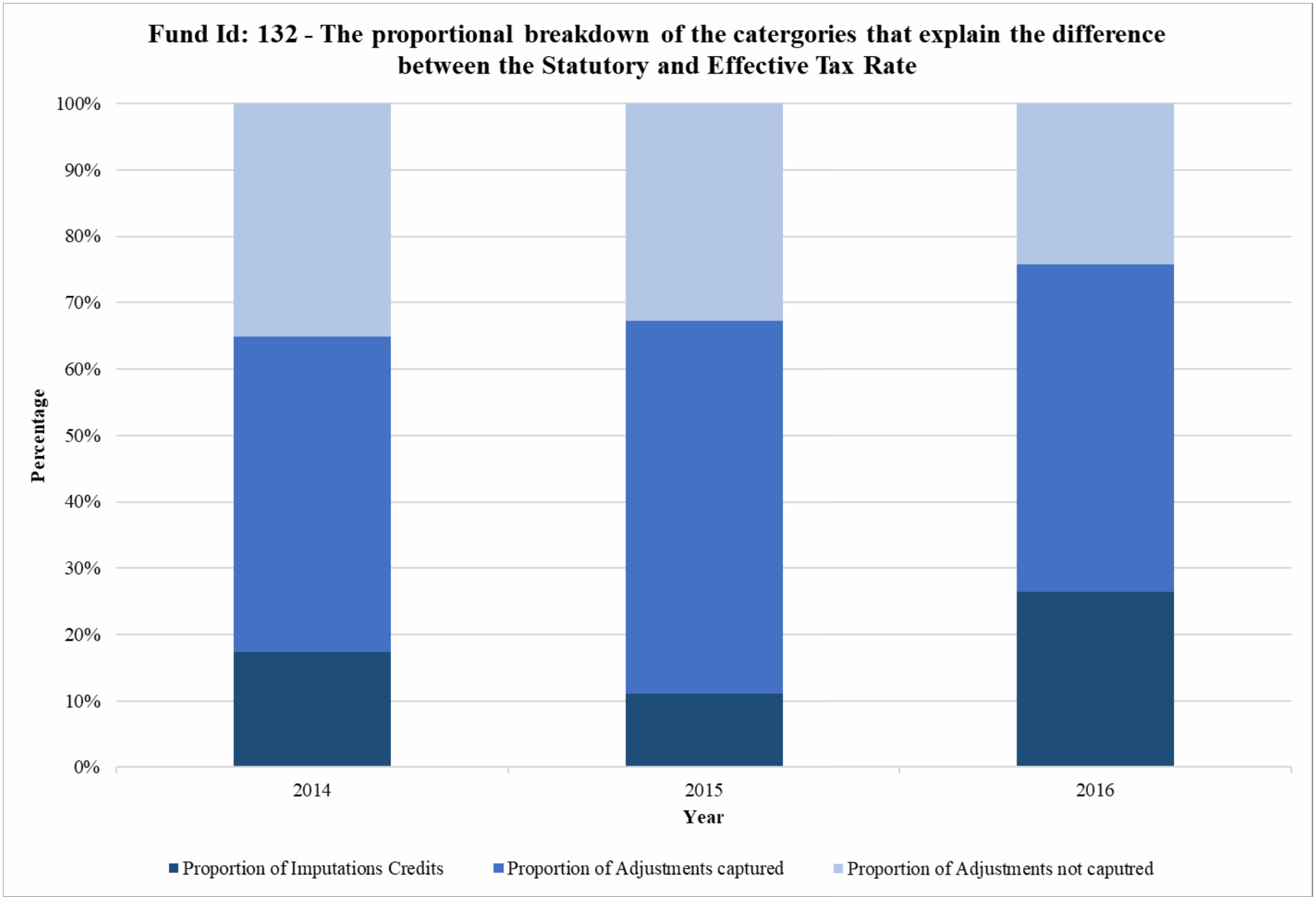

Fund Id: 128 - The proportional breakdown of the catergories that explain the difference between the Statutory and Effective Tax Rate
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage
2014
2015
Year
Proportion of Imputations Credits
Proportion of Adjustments captured
Proportion of Adjustments not caputred

Tax reconciliation for Fund Id 132

	2014		2015		2016	
	Relative	Total	Relative	Total	Relative	Total
Statutory Tax Rate		15.00%		15.00%		15.00%
Effective Tax Rate		8.93%		8.74%		9.00%
Difference Between Effective and Statutory		6.07%		6.26%		6.00%
Imputation Credits	–17.34%	–1.05%	–11.06%	–0.69%	–26.36%	–1.58%
Adjustments Captured	–47.58%	–2.89%	–56.22%	–3.52%	–49.44%	–2.97%
Adjustments Not Captured	–35.08%	–2.13%	–32.72%	–2.05%	–24.20%	–1.45%

Adjustments not captured for Fund Id 132

	2014		2015		2016	
	Relative	Total	Relative	Total	Relative	Total
	($,000)	%	($,000)	%	($,000)	%
Superannuation Contributions Surcharge	1	0.01%	0	0.00%		0.00%
No-TFN Contributions Tax (31.5%)	–135	–0.89%	–296	–1.68%	–73	–0.60%
Exempt Pension Income	–105	–0.69%	–46	–0.26%	–74	–0.60%
CGT Discount Adjustment	–4,914	–32.52%	–5,034	–28.49%	–2,393	–19.55%
Tax Free Distribution Income	–28	–0.19%	–409	–2.31%	–37	–0.30%
Anti-Detriment Adjustments	–114	–0.75%	0	0.00%	–149	–1.22%
Under/ (Over) Provision in Prior Year	–7	–0.05%	3	0.02%	–236	–1.93%

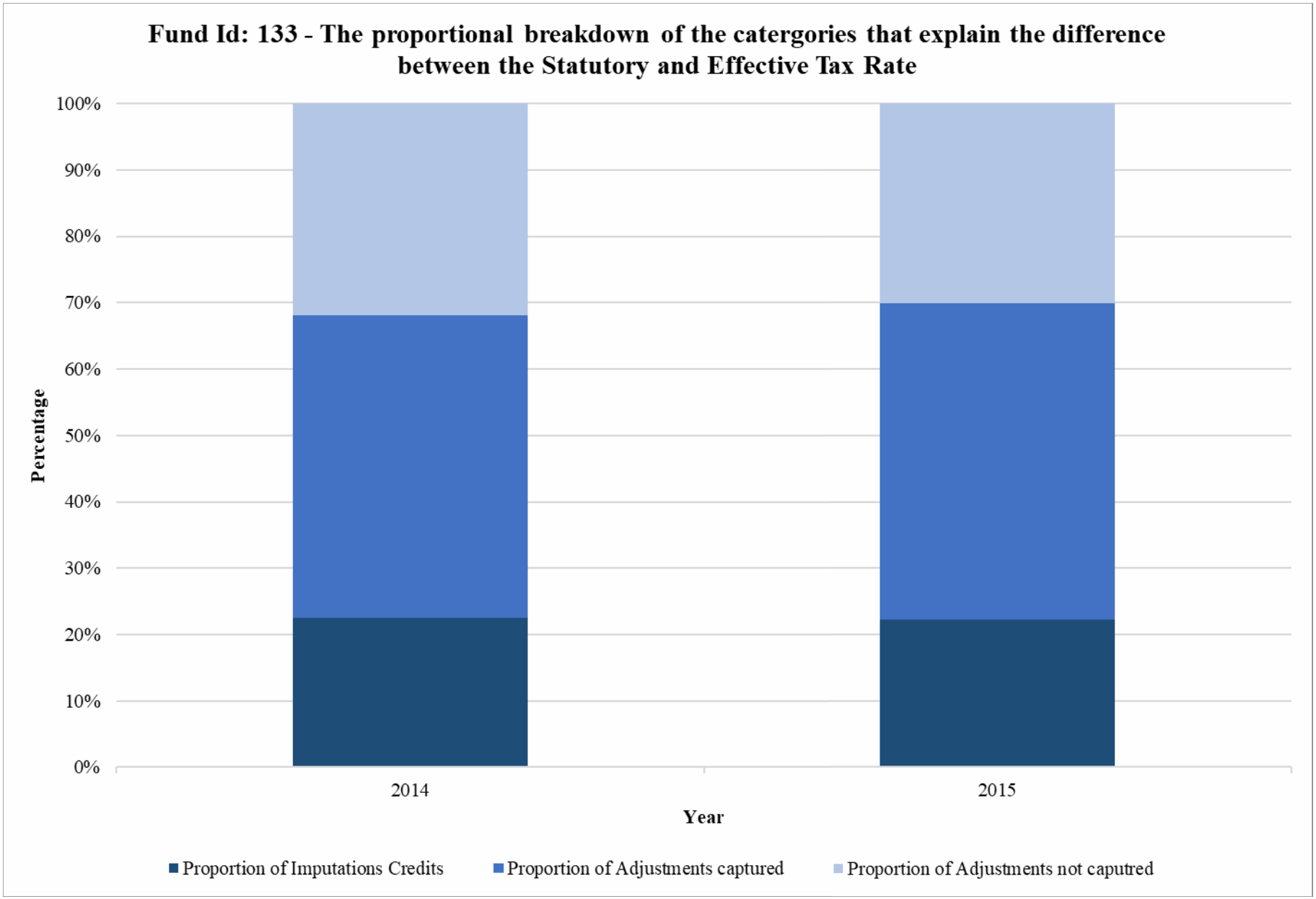

Fund Id: 132 - The proportional breakdown of the catergories that explain the difference between the Statutory and Effective Tax Rate
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage
2014
2015
2016
Year
Proportion of Imputations Credits
Proportion of Adjustments captured
Proportion of Adjustments not caputred

Tax Reconciliation for Fund Id 133

	2014		2015	
	Relative	Total	Relative	Total
Statutory Tax Rate		15.00%		15.00%
Effective Tax Rate		8.34%		7.07%
Difference Between Effective and Statutory		6.66%		7.93%
Imputation Credits	–22.55%	–1.50%	–22.28%	–1.77%
Adjustments Captured	–45.52%	–3.03%	–47.65%	–3.78%
Adjustments Not Captured	–31.92%	–2.13%	–30.07%	–2.39%

Adjustments not captured for Fund Id 133

	2014		2015	
	Relative	Total	Relative	Total
	($,000)	%	($,000)	%
Non-Deductible Expenses	41	0.01%	110	0.02%
No-TFN Contributions Tax (31.5%)	3,457	0.68%	–7,739	–1.27%
Exempt Pension Income	–23,006	–4.54%	–30,154	–4.94%
Non Assessable Investment Income	–152,758	–30.12%	–145,614	–23.83%
Anti-Detriment Adjustments	–2,976	–0.59%	–3,592	–0.59%
Under/ (Over) Provision in Prior Year	13,347	2.63%	3,243	0.53%

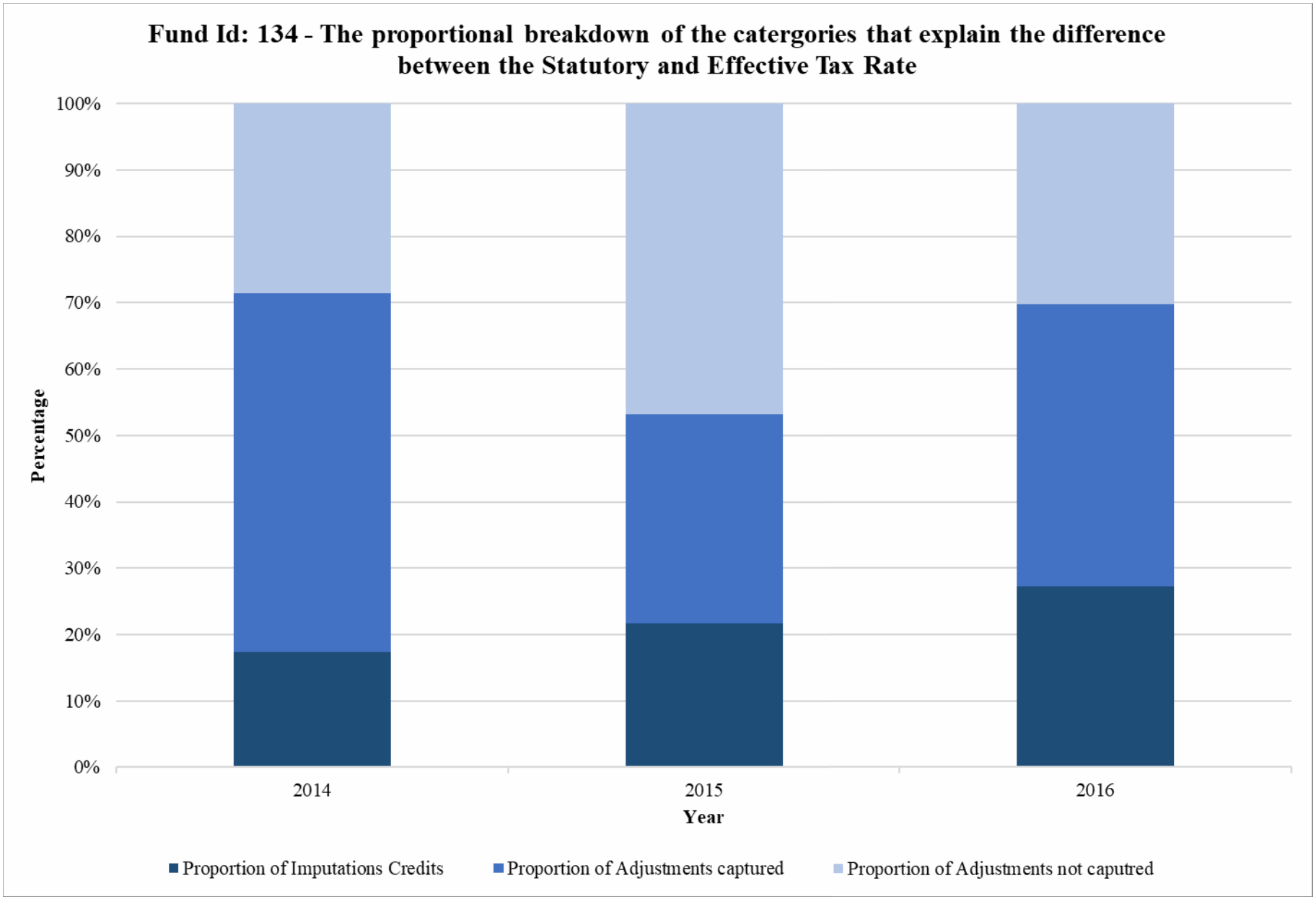

Fund Id: 133 - The proportional breakdown of the catergories that explain the difference between the Statutory and Effective Tax Rate
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage
2014
2015
Year
Proportion of Imputations Credits
Proportion of Adjustments captured
Proportion of Adjustments not caputred

Tax reconciliation for Fund Id 134

	2014		2015		2016	
	Relative	Total	Relative	Total	Relative	Total
Statutory Tax Rate		15.00%		15.00%		15.00%
Effective Tax Rate		16.28%		11.14%		12.97%
Difference Between Effective and Statutory		1.27%		3.80%		2.24%
Imputation Credits	–210.46%	–2.67%	–58.39%	–2.22%	–182.19%	–4.07%
Adjustments Captured	658.26%	8.35%	84.74%	3.22%	284.76%	6.37%
Adjustments Not Captured	–347.80%	–4.41%	–126.36%	–4.80%	–202.57%	–4.53%

Adjustments not captured for Fund Id 134

	2014		2015		2016	
	Relative	Total	Relative	Total	Relative	Total
	($,000)	%	($,000)	%	($,000)	%
Non-Deductible Expenses	192	2.43%	190	0.65%	162	1.61%
No-TFN Contributions Tax (31.5%)	1,439	18.20%	370	1.27%	–431	–4.27%
Exempt Pension Income	–9,806	–124.03%	–8,321	–28.65%	–5,803	–57.55%
Non Assessable Investment Income	–23,794	–300.96%	–22,852	–78.68%	–8,489	–84.19%
Anti-Detriment Adjustments	–965	–12.21%	–781	–2.69%	–1,489	–14.77%
Under/ (Over) Provision in Prior Year	5,437	68.77%	–6,832	–23.52%	–3,230	–32.03%
Other		0.00%	1,524	5.25%	–1,145	–11.36%

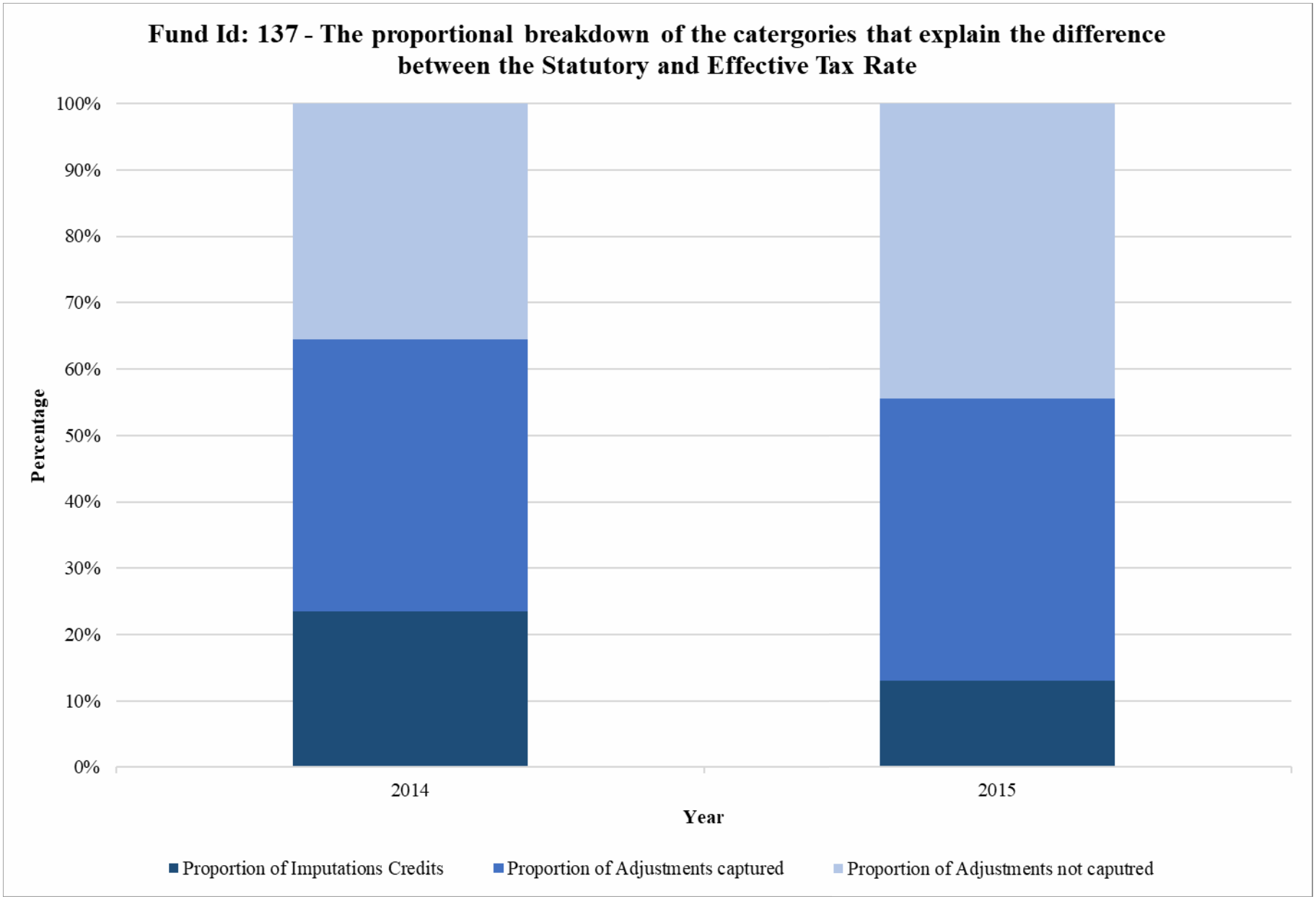

Fund Id: 134 - The proportional breakdown of the catergories that explain the difference between the Statutory and Effective Tax Rate
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage
2014
2015
2016
Year
Proportion of Imputations Credits
Proportion of Adjustments captured
Proportion of Adjustments not caputred

Tax reconciliation for Fund Id 137

			2015	
	Relative	Total	Relative	Total
Statutory Tax Rate		15.00%		15.00%
Effective Tax Rate		8.79%		8.41%
Difference Between Effective and Statutory		6.21%		6.59%
Imputation Credits	–23.49%	–1.46%	–13.09%	–0.86%
Adjustments Captured	–40.93%	–2.54%	–42.44%	–2.80%
Adjustments Not Captured	–35.58%	–2.21%	–44.47%	–2.93%

Adjustments not captured for Fund Id 137

	2014		2015	
	Relative	Total	Relative	Total
	($,000)	%	($,000)	%
Adjustments in Respect of Current Income Tax of Previous Years	562	1.84%	–460	–1.41%
Realised Gains/Losses Per CGT		0.00%	212	0.65%
Non Assessable Investment Income	–11,122	–36.48%	–8,746	–26.79%
Non-Application of DTA Valuation		0.00%	–3,100	–9.50%
Other	–286	–0.94%	–2,423	–7.42%

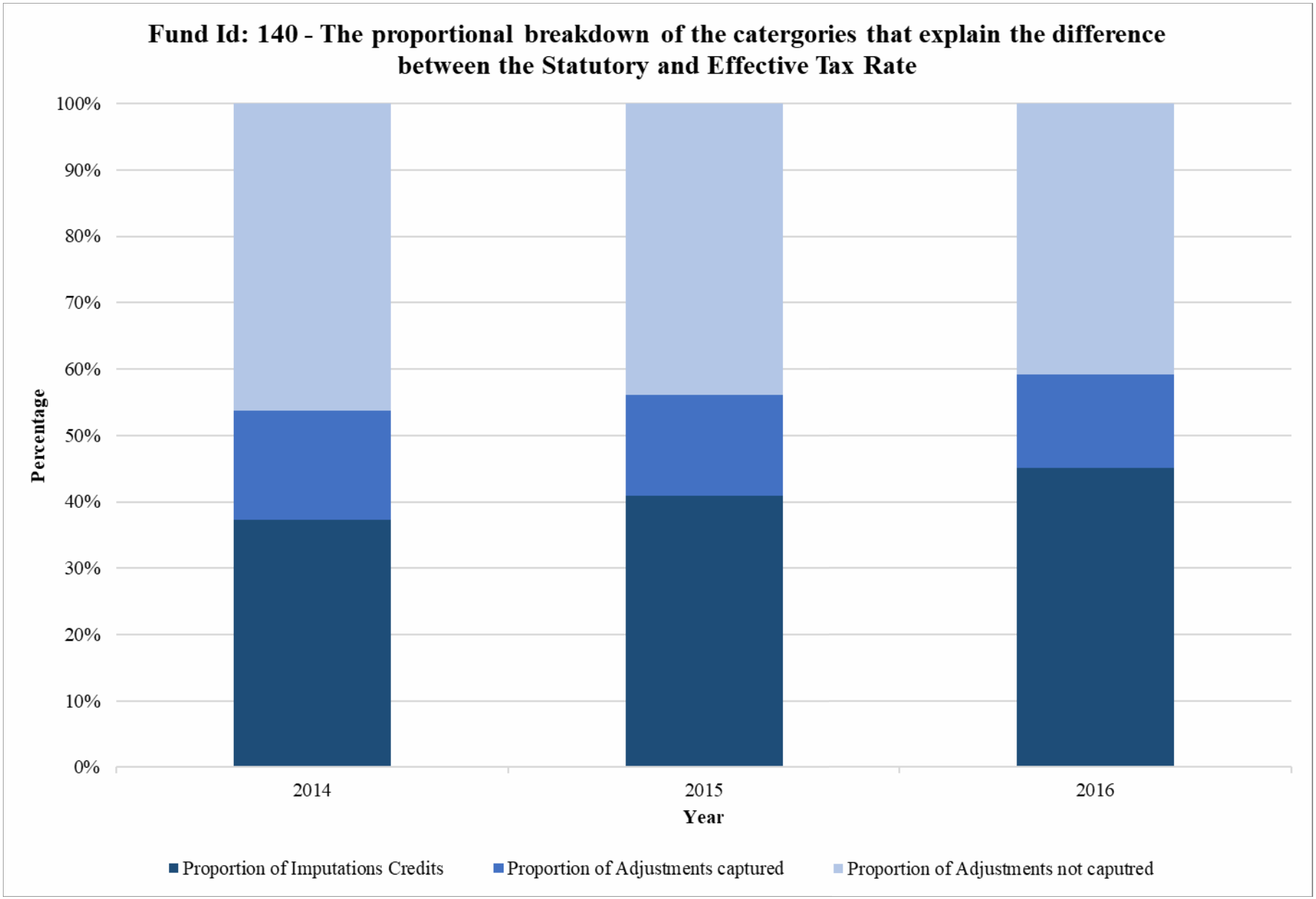

Fund Id: 137 - The proportional breakdown of the catergories that explain the difference between the Statutory and Effective Tax Rate
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage
2014
2015
Year
Proportion of Imputations Credits
Proportion of Adjustments captured
Proportion of Adjustments not caputred

Tax reconciliation for Fund Id 140

	2014		2015		2016	
	Relative	Total	Relative	Total	Relative	Total
Statutory Tax Rate		15.00%		15.00%		15.00%
Effective Tax Rate		8.82%		8.35%		7.63%
Difference Between Effective and Statutory		6.61%		6.66%		7.38%
Imputation Credits	–55.62%	–3.68%	–58.67%	–3.91%	–62.87%	–4.64%
Adjustments Captured	24.72%	1.63%	21.63%	1.44%	19.82%	1.46%
Adjustments Not Captured	–69.10%	–4.57%	–62.96%	–4.19%	–56.95%	–4.20%

Adjustments not captured

	2014		2015		2016	
	Relative	Total	Relative	Total	Relative	Total
	($,000)	%	($,000)	%	($,000)	%
Differences Between Tax and Accounting Gains	–234,694	–52.16%	–193,000	–41.33%	–146000	–33.26%
Exempt Pension Income	–51,510	–11.45%	–56,000	–11.99%	–73000	–16.63%
Death and Disablement Benefit Deductions	–14,313	–3.18%	–13,000	–2.78%	–13000	–2.96%
Under/ (Over) Provision in Prior Year	–11,574	–2.57%	–32,000	–6.85%	–12000	–2.73%
Controlled Entity Tax Rate Differential	3,103	0.69%	3,000	0.64%	0	0.00%
Sundry Items	–1,924	–0.43%	–3,000	–0.64%	–6000	–1.37%

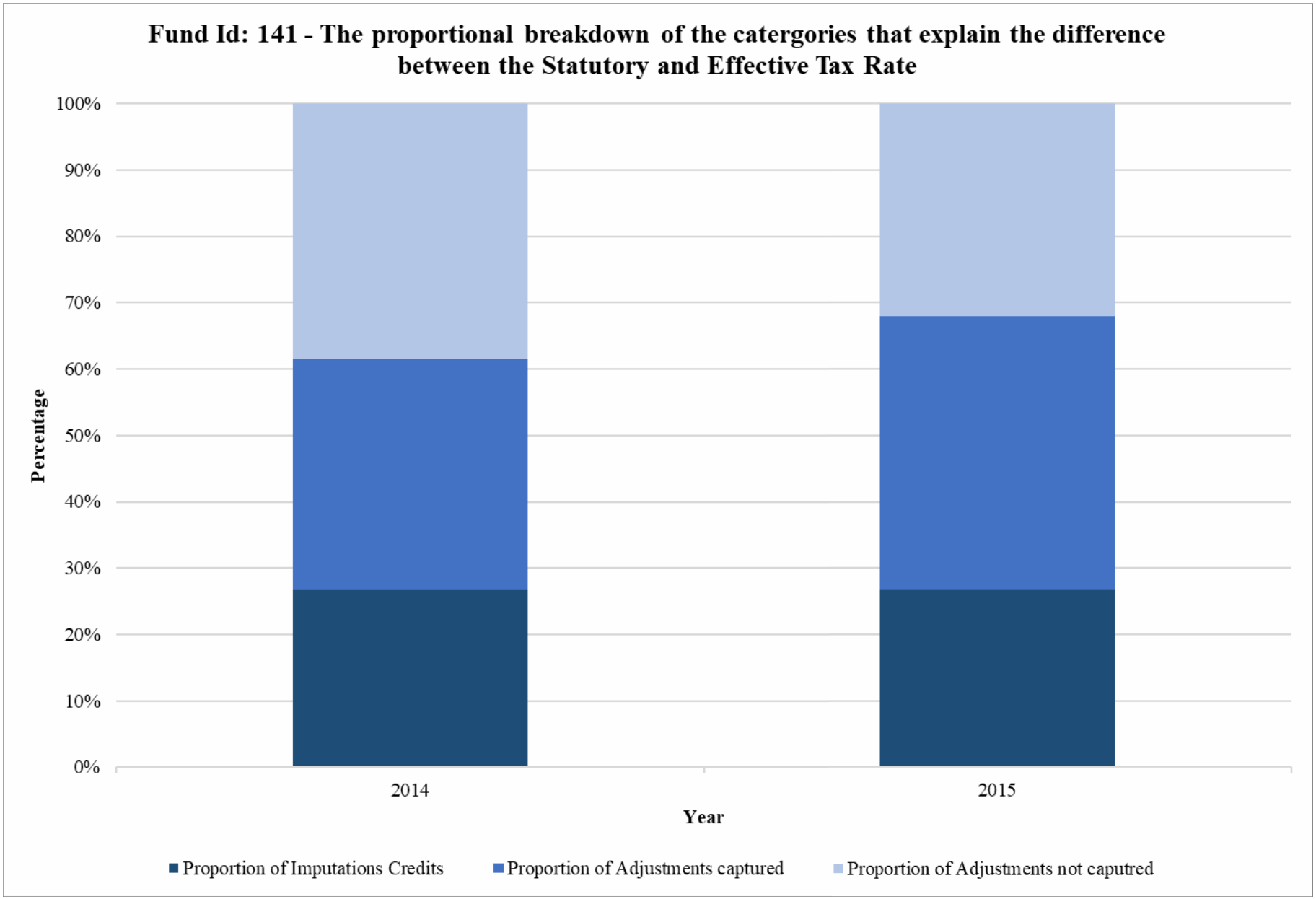

Fund Id: 140 - The proportional breakdown of the catergories that explain the difference between the Statutory and Effective Tax Rate
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage
2014
2015
2016
Year
Proportion of Imputations Credits
Proportion of Adjustments captured
Proportion of Adjustments not caputred

Tax reconciliation for Fund Id 141

	2014		2015	
	Relative	Total	Relative	Total
Statutory Tax Rate		15.00%		15.00%
Effective Tax Rate		11.98%		12.21%
Difference Between Effective and Statutory		3.02%		2.79%
Imputation Credits	–87.64%	–2.65%	–151.48%	–4.23%
Adjustments Captured	114.07%	3.44%	233.62%	6.52%
Adjustments Not Captured	–126.43%	–3.82%	–182.14%	–5.08%

Adjustments not captured for Fund Id 141

	2014		2015	
	Relative	Total	Relative	Total
	($,000)	%	($,000)	%
Superannuation Contributions Surcharge	2	0.01%	1	0.01%
Differences Between Tax and Accounting Gains	–1,431	–5.44%	285	1.52%
Exempt Pension Income	–2,798	–10.63%	–5,007	–26.70%
CGT Discount Adjustment	–27,288	–103.65%	–26,049	–138.93%
Anti-Detriment Adjustments	–708	–2.69%	–626	–3.34%
Under/ (Over) Provision in Prior Year	–1060	–4.03%	–2,756	–14.70%


Fund Id: 141 - The proportional breakdown of the catergories that explain the difference between the Statutory and Effective Tax Rate
100%
90%
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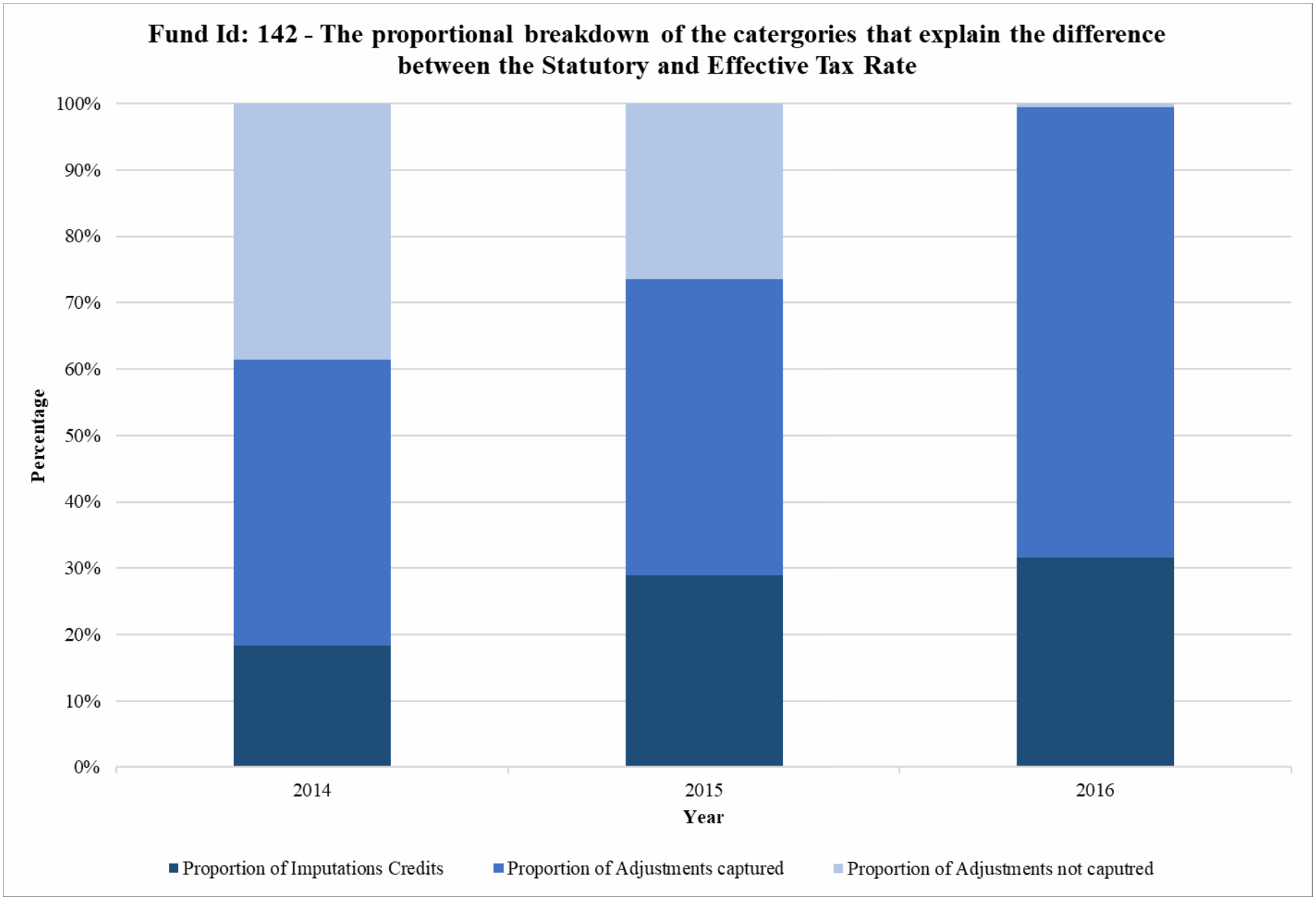
40%
30%
20%
10%
0%
Percentage
2014
2015
Year
Proportion of Imputations Credits
Proportion of Adjustments captured
Proportion of Adjustments not caputred

Tax reconciliation for Fund Id 142

	2014		2015		2016	
	Relative	Total	Relative	Total	Relative	Total
Statutory Tax Rate		15.00%		15.00%		15.00%
Effective Tax Rate		7.34%		6.17%		7.54%
Difference Between Effective and Statutory		7.73%		8.83%		7.46%
Imputation Credits	–18.30%	–1.42%	–28.92%	–2.55%	–31.93%	–2.38%
Adjustments Captured	–43.07%	–3.33%	–44.58%	–3.93%	–68.63%	–5.12%
Adjustments Not Captured	–38.63%	–2.99%	–26.50%	–2.34%	0.55%	0.04%

Adjustments not captured for Fund Id 142

	2014		2015		2016	
	Relative	Total	Relative	Total	Relative	Total
	($,000)	%	($,000)	%	($,000)	%
Adjustments in Respect of Current Income Tax of Previous Years	–5,859	–14.98%	–4937	–11.09%	510	1.71%
Non Assessable Investment Income	–9,164	–23.43%	–3290	–7.39%	1,339	4.50%
Other	–86	–0.22%	–3563	–8.01%	–1,684	–5.66%


Fund Id: 142 - The proportional breakdown of the catergories that explain the difference between the Statutory and Effective Tax Rate
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage
2014
2015
2016
Year
Proportion of Imputations Credits
Proportion of Adjustments captured
Proportion of Adjustments not caputred

Chapter 3
Effective tax management of industry superannuation funds

Abstract

This chapter evaluates the incidence of taxation of industry superannuation funds in their pursuit of maximising after tax returns to members in the context of fund efficiency. The Cooper Review and Productivity Commission Review highlight the need for efficiency, specifically to eliminate excessive costs (Cooper et al., 2010). Accordingly, this study evaluates the largest explicit cost to the fund– tax. Further, concerns have been raised about the management of taxes within the superannuation system; however, the analysis of tax has not yet been rigorously pursued (Cooper et al., 2010; Productivity Commission, 2016–2018). The findings from this study suggest that the size of the fund does not impact the funds' ability to manage tax. In addition, this chapter contributes the first Tax Aware Investment Management (TAIM) framework, which will enable more focused research into the tax aware investment strategies of superannuation funds.

3.1 Introduction

Chapter 2 highlights the ability of industry superannuation funds to materially reduce taxation payments below a benchmark rate of 15%. However, a thorough examination of the divergence between this rate and the effective tax rates (ETR) suggests that this difference is not significantly associated with tax aggressiveness. Rather, that this may be a consequence of the inherent complexity of the superannuation taxation regime.[64] Accordingly, the complex nature of superannuation taxation presents a range of opportunities to effectively manage taxation by incorporating potential tax consequences into the investment decision making process. However, this is not straightforward and may require sophisticated fund administration, expertise and management based on the funds' circumstances. For example, a handful of funds have enhanced their internal operational capabilities and expertise (Gallagher & Warren, 2016). Alternatively, a fund may consider the effective management of taxation to be an unproductive operational activity. Such a perspective may be persistent in the investment industry, which previously did not consider the impact of tax in performance benchmarks and metrics (Cooper et al., 2010). In addition, funds' may have considered that the costs to implement such sophisticated systems simply outweigh any potential benefits. Further, it may be just beyond the funds' awareness to consider the implications of taxation and it may simply be a case of tax naivety (Williams, 2017).

Accordingly, the objective of this chapter is to determine whether industry superannuation funds are effectively managing taxation for the benefit of members[65] (i.e. not

[64] Variation in the rate of tax applied to different categories of income (i.e. income is taxed 15%, capital gains at 10%, and income attributable to members in retirement phase is not taxed).

[65] This is an economically significant issue as tax is the largest explicit cost for funds (approximately $3.25 billion in 2014) and outcomes materially impact the returns to fund members. The impact of taxes has been acknowledged by the Productivity Commission as the "biggest item to detract from net returns and ultimately from member balances" (Productivity Commission, 2016: p. 7).

making excess tax payments) and whether the various opportunities[66] to effectively manage taxation are associated with the variation in the effective tax rates of industry superannuation funds. There is a statutory obligation[67] Superannuation Industry Supervision Act, 1993 (SIS Act, 1993) for trustees of superannuation funds to maximise member returns, net of both fees and taxes. A natural consequence of this is that attention has been directed in the academic literature at evaluating whether funds are maximising the returns to members (Gallagher, 2001; Drew et al., 2001; Drew et al., 2002; Coleman et al., 2003; Ellis et al., 2008 & Basu & Andrew, 2014). However, a challenge when evaluating returns is that these are in the first instance a function of revenues, and it is difficult to distinguish the impact of differences in investment strategies and the inherent risks attached to these strategies (Ellis et al., 2008 & Basu & Andrew, 2014). This is certainly raised by fund trustees when explaining or justifying differences in returns across funds (Australian Super, 2017).[68] Additionally, fund returns are also a function of expenses, with tax being the largest single expense (Cooper et al., 2010; Williams, 2014; Productivity Commission, 2018).[69] Thus, management of taxation may significantly impact the magnitude of after-tax returns and consideration of the possible divergent approaches to the management of tax may also explain the variation in ETRs.

The application of the tax legislation to the income of superannuation funds is not straightforward. While net income is subject to tax at a rate of 15%, this is reduced to 10% for capital gains and the income attributable to members in retirement phase is not subject to tax.

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[66] These opportunities have previously been raised in Chapter 2 when discussing the incorporation of taxes in investment decision making, and is referred to as Tax Aware Investment Management (TAIM) (Mackenzie & McKerchar, 2014).

[67] This was an amendment made to the SIS Act on 1 July 2013.

[68] Ian Silk (Australian Super CEO) discusses that the "balanced option returned 12.44% after taxes and fees" and that "over the three years to 2016–17 the funds' preferred measurement period, the performance was a strong 9.23%p.a". He further notes that "these results were pleasing, given they were achieved against a backdrop of slow economic growth and global political uncertainty" (Australian Super Annual Report, 2016–17: p. 5).

[69] Qantas Super CEO, Michael Clancy, identifies that "tax is one of the largest costs …so managing our members' assets in a tax efficient way is really important" (Exchange News Direct, 2018: p.1).

The impact of investment taxes on after tax returns is greater than that of investment fees and other costs (Cooper et al., 2010; Williams, 2014; Productivity Commission, 2018). In 2014, investment taxes were approximately $3.25 billion while investment fees and other costs accounted for $2.542 billion (APRA 2014, Williams, 2014).[70] This is economically significant and therefore it is a fundamental concern because management of tax by industry superannuation funds impacts a significant number of Australians and the government because members' entitlements are based on the aggregated after-tax returns which are compounded annually. Accordingly, there are opportunities to reduce tax through decisions relating to the realisation of income, losses and capital gains (Mackenzie & McKerchar, 2014; Williams, 2014; Reddy, 2016). These opportunities establish significant potential for funds to be cognisant of preventable tax liabilities, thereby maximising fund member returns through effective tax management.

Chapter 2 demonstrates that there is variation across ETRs of industry superannuation funds. If management of tax exists, then the utilisation of such opportunities may be divergent between funds due to the complexity of the super tax legislation which "... makes it difficult to evaluate these differences and the impact they have on member balances, but each type of fund is likely to have advantages and disadvantages." (Productivity Commission, 2016: p. 132). Accordingly, complexity of the superannuation taxation landscape also contributes to concerns about whether tax is being managed effectively. This has been identified in the media and public discourse following the *Super System Review 2010* (hereinafter referred to as the Cooper Review) that highlighted the need for efficiency in the sector, and in particular elimination of excessive costs. This includes taxation, which was clearly identified in a submission from KPMG that indicated tax was the largest expense which, "... should be constantly monitored

[70] The impact of taxes has been acknowledged by the Productivity Commission as the "biggest item to detract from net returns and ultimately from member balances" (Productivity Commission, 2016: p. 7).

and be part of an appropriate risk framework. Poor tax governance can mean diminished after-tax returns to fund members, while compliance breaches can result in losses to present and future members" (Cooper et al., 2010: p. 84).

The threat of losses to members due to inefficient tax governance may most likely occur in small funds due to restricted resources available to them. This raises concerns about other limitations of smaller funds. These potential inefficiencies in small funds might be addressed by outsourcing tax operations, and there is evidence of smaller funds 'outsourcing' investment management (Liu, 2013). Despite this, there have been calls for mergers of small superannuation funds to minimise inefficiencies (Yeates, 2015; Dunn 2017; Dunn, 2018), and as a consequence the regulator, APRA, has been actively encouraging mergers within the sector (Yeates, 2015). However, there is little theoretical justification and empirical evidence to support these calls either on the basis of size or any other fund characteristic. Additionally, the Cooper Review[71] and the Productivity Commission Review (the PC Review)[72] both acknowledge the need to develop a theoretical framework that is supported by empirical evidence. Unfortunately, both reviews recognise that complexities (coupled) along with a lack of sufficient data prevented them from taking this further. Hence, this chapter is motivated to evaluate whether inefficiencies may lead to overpayment of tax by small funds that would support the policy encouraging industry consolidation.

Based on a sample of 60 fund-year observations over the period 2014 to 2016, there is no evidence to suggest that variables such as tax propagation, fund size, and the introduction of My Super are associated with effective tax management. Multivariate analysis is conducted;

[71] The Cooper Review, (2010) excluded "system inputs such as the level of superannuation contributions, taxation including taxation concessions and other incentives" (Cooper et al., 2010: p vi).

[72] The Productivity Commission Review included making an assessment of whether the superannuation system is efficiently managing tax for members. This is despite the fact that no research was undertaken because the extant data from APRA did not "allow the Commission to draw firm conclusions on whether funds are optimising tax management." (Productivity Commission, 2018: p. 321).

however, a concern in the multivariate analysis undertaken is the degree of collinearity that exists across the explanatory variables and the control variables. This makes it difficult to evaluate any associations with the dependent variable and will bias against finding significant results in tests of research propositions. Additional analysis is conducted and no evidence is found to support the research propositions.

This study makes a number of significant theoretical and empirical contributions to the literature focused on superannuation funds generally, and the taxation of superannuation funds in particular. Additionally, this study provides insights that address the regulatory debate surrounding the efficient operation of superannuation funds, suggestions that smaller funds may be inefficient and that mergers may be justified (Yeates, 2015; Goh, 2017; Gluyas, 2018; Dunn, 2018).

Empirically evaluating whether industry superannuation funds are effectively managing fund tax obligations to maximise benefits for members is difficult, and requires granular information about the funds' trading data, and the internal investment management memos that provide the rationale for particular investment strategies and the acquisition of technology to support the funds' operational activities. Recognising these difficulties, Mackenzie and McKerchar (2014) provide qualitative evidence that builds the foundation of this literature. However, as a consequence of the lack of available data this literature has progressed little. There is some consideration of effective tax management by mutual funds in the finance literature (Jeffery & Arnott, 1993; Dickson & Shoven, 1995; Apelfeld et al., 1996; Israel & Moslowitz, 2010; Bergstresser & Pontiff, 2013) and the benefits for members have been identified. However, this is largely focused on U.S. mutual funds. These studies also are highly dependent upon simulated asset portfolios and therefore the results and findings are sensitive to discretion in methodology and are continually disputed (Israel & Moslowitz, 2010).

This chapter first develops a framework of Tax Aware Investment Management (TAIM) activities employed by superannuation funds to manage tax effectively. Mackenzie and McKerchar (2014) outline a range of practices implemented by Chief Investment Officers (CIOs) of superannuation funds. However, they do not organise the practices into a framework. Jeffery and Arnott (1993) also discuss the impact of tax in the investment decision making process. However, they neglect to develop a framework of applicable strategies that mutual funds could employ, possibly as their study primarily focuses on realised capital gains taxes. The development of a TAIM framework, which links taxation payments by superannuation funds and elements, provides a rudimentary theoretical basis for answering the research questions and propositions; this approach also provides potential for further theoretical development and empirical analysis that is critical to superannuation funds.

Additionally, this chapter develops an empirical measure for tax propagation in order to test the research propositions.[73] The practitioner literature and media discusses the potential benefits of employing tax propagation for positive impacts (Williams, 2014; Rose, 2015). However, the impact of propagation on ETRs has not been empirically examined. Superannuation funds do not explicitly publish internal operating procedures; therefore, it has been difficult to ascertain whether tax propagation is an effective TAIM activity.

Finally, the analysis from this chapter contributes to the regulatory debate (Bateman & Thorp, 2007; Chan et al., 2009; Cummings, 2016) surrounding the operation of superannuation funds. APRA advocates industry consolidation through mergers (Yeates, 2015; Dunn 2017; Dunn, 2018) based on their concern that the small superannuation funds are inefficient and sub-scale (Chan et al., 2009; Yeates, 2015). The rationale for mergers has also been highlighted in the reports of both the Cooper Review and the PC Review. As tax is the largest expense for

[73] Tax propagation is an ex-post tax management practice that aims to reduce the funds' capital gains tax obligations on realisation of domestic equities (Williams, 2014).

industry superannuation funds, any examination of inefficiencies in these funds should logically first focus on the management of tax.[74]

The remaining sections of this chapter are as follows. Section 3.2 discusses the background, literature review and hypothesis development. Section 3.3 outlines the research design. Section 3.4 discusses the sample selection and provides descriptive statistics. Section 3.5 reports the results of the study and discusses and reports the additional analysis. Section 3.6 discusses the implications of the findings, limitations, conclusions and future research.

3.2 TAIM theoretical framework and hypothesis development

The Australian superannuation taxation structure is unique in comparison to retirement income systems around the world.[75] Within this structure, taxes are levied on contributions and on earnings from accumulated investments within the fund. Exemptions are provided for withdrawal on retirement (TTE Structure) (Bateman & Piggot, 1997; Gollier, 2000; Koch, 2004; Williams, 2014). Compulsory contributions are taxed at 15%. Non-concessional contributions[76], government co-contributions, and low income contributions, all have a zero tax rate (Cortese & Glynn, 2005). However, these may be alternatively categorised as contribution taxes and should be excluded in the evaluation of superannuation fund tax management, as trustees have no influence on these taxes. This chapter focuses on the tax payments made on investment earnings within the fund.

[74] The Productivity Commission also acknowledge that superannuation taxation is complex due to numerous changes made to tax legislation (Productivity Commission, 2016).

[75] In the U.K. and US, the taxation structure for retirement income systems are EET structures. The EET structure provides an exemption on contributions, an exemption on investment income, and the benefits are taxable on withdrawal (William, 2013).

[76] The non-concessional contributions cap is $180,000 per individual per year (or $540,000 every 3 years for people under the age of 65). The individual is liable to pay a tax rate of 49% for contributions that exceed the non-concessional contributions cap.

Investment earnings are effectively taxed at 15% (Thomson Reuters, 2016); however, this is reduced to 10% for capital gains when realised if the investment is held for more than 12 months (Thomson Reuters, 2016). Similarly, tax benefits are available from dividend distributing Australian equities that attach imputation credits to offset the corporate tax already incurred by the dividend paying entity (Thomson Reuters, 2016, McClure et al., 2018). Additionally, superannuation funds are able to access an income tax exemption on fund earnings from assets attributable to current members in retirement[77] (Thomson Reuters, 2016). The consequence of differential tax rates is that there is no single optimal investment strategy across all investors groups (Gardner & Hamson, 2013). Hence, this requires trustees to incorporate the fund memberships' tax rate[78], the trade-off between risk and return, and the nature of the income from the investment during the investment strategy decision making process (Gardner & Hamson, 2013). The convergence of all these factors increases the level of complexity in an already complex superannuation tax regime. A fundamental concern is whether the funds are operating efficiently and maximising returns to fund members, and whether further regulatory reform is necessary (Cooper et al., 2010; Productivity Commission, 2018).[79] Thus, the importance of tax awareness was recently incorporated within the legislation, where the SIS Act[80] charges trustees to have regard to the expected taxation consequences of investment strategies, in light of the circumstances of the fund (Cooper et al.,

[77] To qualify for the exemption, superannuation funds must segregate the assets that are categorised to meet current retirement liabilities from all other assets within the fund, or attain a certificate from an actuary to acknowledge the proportion of fund investments allocated to retirement and accumulation (SIS Act).

[78] Such as differential tax rates for accumulation and retirement phases.

[79] Additionally, the superannuation system has been prone to constant regulatory and legislative changes, including taxation (Liu, 2013). Accordingly, this also increases the level of complexity and thereby makes compliance inherently difficult for all superannuation funds. Further, the superannuation system is extremely politicised and, subsequently, has been subject to a number of regulatory reviews backed by the government.

[80] Section 52(6)(a)(vi) SIS Act (1993). These legislative changes follow suit from the U.S. where the Securities and Exchange Commission (SEC) introduced legislation in 2001 to require mutual funds to report both pre-tax and after-tax returns. The legislation further highlights the inherent inefficiencies that likely have long existed involving the (mis)-management of taxation of superannuation funds.

2010). The impetus for these legislative amendments stem from findings established in The Cooper Review, where tentative estimates suggest costs of tax mismanagement can range from "5 basis points per annum … up to some 200 basis points per annum on a more holistic basis" (Cooper et al., 2010: p. 87). Additionally, the findings acknowledge that "there is a wide variation in the extent to which most trustees and investment managers have regard to the optimisation of tax outcomes for members" (Cooper et al., 2010: p. 13). This variation potentially stems from how performance of the fund had been previously measured based on pre-tax returns (Cooper et al., 2010).

While there is a legislative requirement for trustees to maximise returns to fund members, and this would include TAIM[81], there is limited qualitative evidence of this occurring (Mackenzie & McKerchar, 2014; Reddy, 2016). Further, the issue of whether all funds are complying and able to adequately and effectively manage tax has been raised. This is supported by the recent findings of the PC Review, where it was mentioned that tax mismanagement is a contributing factor to the erosion of member balances and it is the "biggest item to detract from net returns and ultimately member balances" (Productivity Commission, 2016: p. 7). Accordingly, the PC's concern manifested as an assessment of whether the superannuation system is efficiently managing tax for members.[82] Despite the PC's efforts to quantify the leakage from members' balances, the magnitude of this loss remains unknown and in the final report it states that "the available evidence does not allow the Commission to draw firm conclusions on whether funds are optimising tax management." (Productivity Commission, 2018: p. 321). In light of the concerns raised by both of these reviews with relation to tax

[81] I acknowledge there is potential for alternative practices for a superannuation fund to comply with the legislation requiring them to maximise after tax returns. However, an exploration of alternative methods is outside the scope of this chapter.

[82] One of the PC's criteria to assess the whether the superannuation system maximises long-term net returns on members balances is: "Is the system effectively managing tax for members, including in transition" (Productivity Commission, 2016: p. 113).

management, there is a lack of empirical analysis regarding tax management and the efficiency thereof, and whether this is associated with ETRs. As already indicated, the main reasons for the paucity of research relate to the lack of data and the complexity of the superannuation tax regime (Productivity Commission, 2016).

There is *ad hoc evidence* (Rose, 2015; Rose, 2016; Francis, 2017) these legislative requirements prompted a paradigm shift in the measurement of superannuation fund performance, from merely member returns net of fees to member returns net of both fees and taxes.[83] Consequently, this has incentivised several superannuation funds to implement and operationalise TAIM activities (Mackenzie & McKerchar 2014).[84] The nearest related research is found in the finance literature which attempts to incorporate taxes in the investment decision making process (Garland, 1987; Jeffrey & Arnott, 1993; Dickson & Shoven, 1995; Apelfeld et al., 1996; Israel & Moslowitz, 2010; Bergstresser & Pontiff, 2013). However, this literature is limited to the U.S. mutual fund industry and predominately examines the impact of unrealised capital gains on after tax performance (Garland, 1987; Jeffrey & Arnott 1993). It does not empirically examine TAIM, specifically in the Australian setting. However, aspects of TAIM are discussed as an explanatory factor in the variation of performance between active and passive trading strategies (Israel & Moslowitz, 2010). Further, these studies are highly dependent upon simulated asset portfolios and therefore the results and findings are sensitive to discretion in the research methods used and are continually disputed (Israel & Moslowitz, 2010).

[83] FTSE Russell's Managing Director Asia has said "FTSE Russell has a strong track record of calculating net of tax total return indexes for different investor types, the newest of which is for Australian superannuation funds" (Exchange New Direct, 2018).

[84] TAIM is broadly defined as the "active management of taxes of a fund by incorporating tax consequences into the investment process" (Mackenzie & McKerchar 2014: p.253). Subsequently, this has led funds exploring opportunities to facilitate the application of TAIM in order to comply with their obligation to maximise after-tax returns to their members.

Australian studies which implicitly examine TAIM (Fong et al., 2009; Chen et al., 2016) are sparse. The few that exist examine Australian equity fund managers, and the findings highlight the importance of considering tax when deciding between active and passive investment styles (Chen et al., 2016; Fong et al., 2009). Specifically, the management of tax varies due to the type of investment style used by the investment manager (Chen et al., 2016). Active fund managers do not commonly optimise after tax returns for fund investors because tax is not a factor central to their investment decision making process (Fong et al., 2009). A recent qualitative study conducted by Mackenzie and McKerchar (2014)[85] explored the operationalisation of TAIM by public offer superannuation funds in Australia and found that CIOs implement TAIM in their investment decision making process. However, although their findings support Chen et al. (2016) and Fong et al. (2009)[86], their results are problematic because of the notable difficulties and complexities that arise that are beyond the control of the superannuation fund[87] (Mackenzie & McKerchar, 2014).

Mackenzie and McKerchar, (2014) provide limited theoretical formulation that is helpful to inform this chapter's research objective. [88] Hence, the following section outlines a more detailed preliminary TAIM framework that provides an initial *a priori* context to evaluate whether fund characteristics associated with TAIM (Mackenzie & McKerchar 2014) practices

[85] The study is set against the backdrop of the recent amendments made to the SIS Act where trustees are required to consider the taxation consequences of the investment strategies implemented by the superannuation fund.

[86] The findings suggest that superannuation funds that employed active managers found it difficult to take tax into account as active managers considered risk/returns characteristics prior to issues with taxation (Mackenzie & McKerchar, 2014).

[87] There were responses where a minority of CIOs indicated logistical issues in being able to manage imputation credits due to the lack of ability from service providers; however, this was limited.

[88] The findings of Chapter 2 demonstrate that there is little evidence of tax aggressiveness. Critically, there is evidence of significant cross-sectional variation found in the after-tax rates of industry superannuation funds. This variation is perplexing in light of the relative operational homogeneity of industry superannuation funds as fund trustees are bound by statutory obligations to have regard to the expected tax consequences of their investment strategies (Cooper et al., 2010). This suggests that there are systematic differences in expenses, including tax payments, across superannuation funds; this suggests the potential for systematic inefficiency in maximising after tax returns to members.

explain the extent to which differences between ETR's are reflected in fund characteristics and can act as useful efficiency proxies.

3.2.1 Tax aware investment management framework (TAIM)

Figure 3.1 demonstrates TAIM practices and activities employed by the superannuation industry and further outlines the indirect opportunities that allow funds to facilitate TAIM. Figure 3.1 is organised into four sections. The top half of the diagram reiterates what has previously been discussed about after-tax returns. Critically, the bottom half is an illustrative description of TAIM and the indirect opportunities that facilitate effective management of tax. The first level of TAIM has previously been broadly addressed in the literature (Mackenzie & McKerchar, 2014). This is split into two broad categories – capital gains tax (CGT) and imputation management. The management of these two broad categories is discussed by Mackenzie and McKerchar (2014). However, the authors do not delve into specific features or practices, nor do they organise this into a framework to promote further empirical research. Accordingly, this chapter examines the second level, which relates to known[89] TAIM practices that are integral to the management of capital gains tax. The second level is further split into sub-categories of TAIM practices which have not been previously identified. Finally, Figure 3.1 outlines the indirect opportunities that enable funds to facilitate TAIM that have not been previously addressed in any literature. The aim here is to provide a preliminary framework to formulate propositions related to the research objective of this chapter.

[89] This process required me to read both academic and practitioner literature to gain insights into practices adopted by superannuation funds. I was also invited to a Forum at the International Business Review Conference (20–21 August 2018), titled Super Fund Tax: Ideas to improve member outcomes 2018. This conference provided a rich source of information and contacts from Superannuation funds, tax specialists from the Big 4, and investment fund managers that I followed up with to discuss and validate the ideas presented in this chapter.

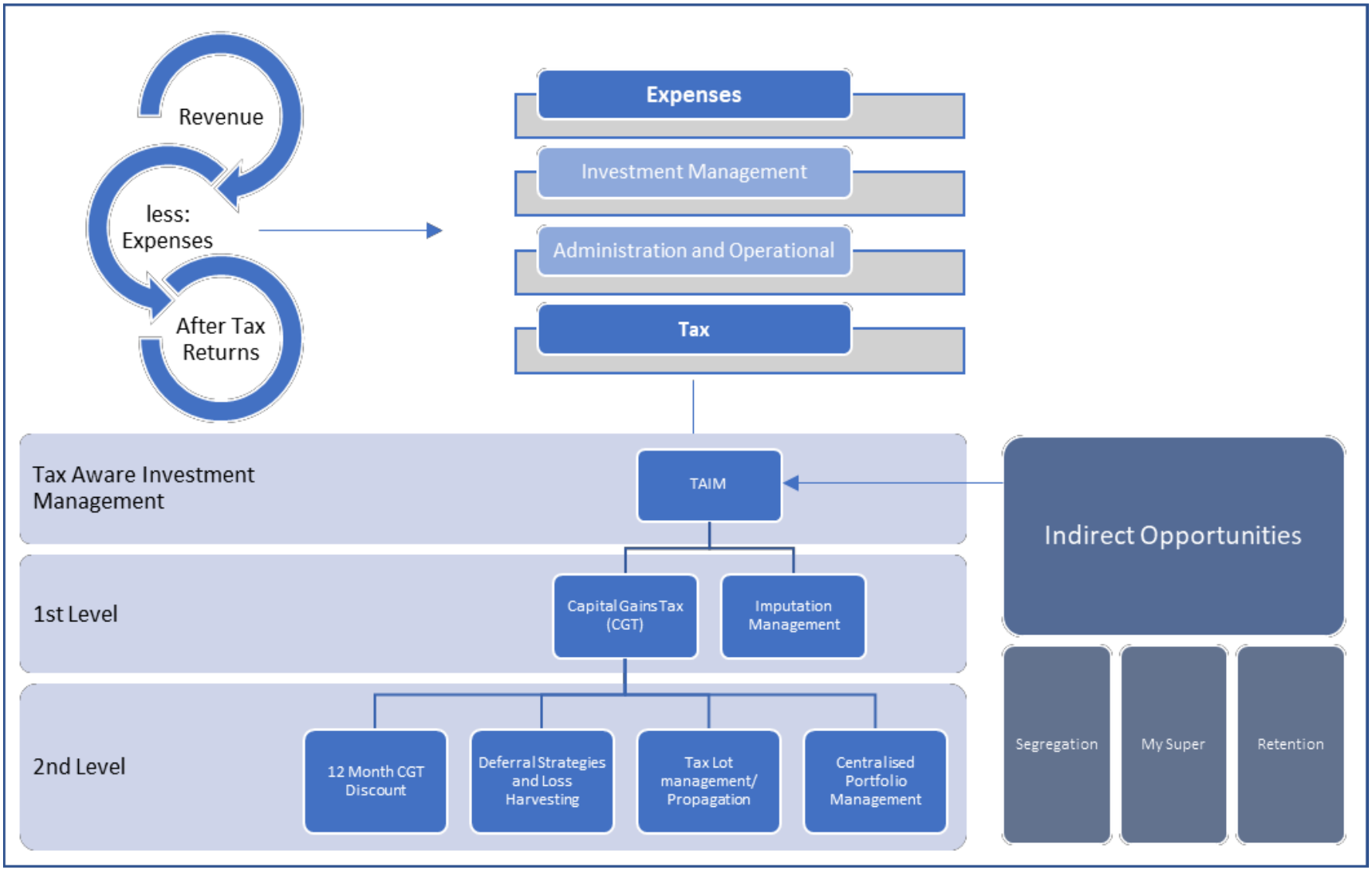

Figure 3.1 – Tax Aware Investment Management (TAIM) Framework

Figure 3.1 illustrates how after tax returns are generated. They are a function of revenues less expenses; therefore, superannuation funds can (i) increase revenues or (ii) reduce expenses in order to maximise after tax returns to their members. However, when evaluating revenues, it is difficult to distinguish the individual investment strategies and the inherent risks attached to them. This is due to the lack of disaggregated proprietary data available from the superannuation funds and their agents. Notwithstanding, a handful of studies have attempted to examine fund performance (Gallagher, 2001; Drew et al., 2001; Drew et al., 2002; Coleman et al., 2003; Ellis et al., 2008 & Basu & Andrew, 2014). In this chapter, only the expenses component of after-tax returns is evaluated, as superannuation funds have a greater ability to influence their costs (Coleman et al., 2003). Examining the impact of the revenues component on after tax returns is beyond the scope of this study.[90] The Cooper Review identified that the impact of tax management compared to both investment and administration fees has greater magnitude on after tax returns, yet this remains empirically untested (Cooper et al., 2010). Critically, greater emphasis had been placed on examining investment and administration fees (Clare, 2001; Rice, 2003; Bateman & Mitchell, 2004; Coleman et al., 2006). The findings from these studies led to extensive public debate and scrutiny of operating expenses for superannuation funds (Bateman & Mitchell, 2004). This intensified in 2002 as members became sensitive to expenses during a period of negative returns (Coleman et al., 2006).[91] Tax expense for superannuation funds has not had the same level of scrutiny. This

[90] Figure 3.1 also lists the material expenses that impact after tax returns. The three significant expense categories that impact after tax returns are investment, administrative and tax expense (Cooper et al., 2010).

[91] Over the past decade total fees for administration and investment management services have been trending down (Productivity Commission, 2018). Further, this is evidenced in APRA's disclosure in the 2017/18 annual report that total administration and operating expenses have decreased over the past decade (APRA Annual Report, 2018). This downward trend in administration and investment management fees can be plausibly explained by the consequences of in-sourcing. Recently, a number of superannuation funds started directly managing their investments in-house (Gallagher & Warren, 2016). The benefits of in-sourcing may range from access to certain assets or markets, better alignment, lower agency costs, better performance due to lower costs, and sustainability (Clarke & Monk, 2012). Concurrently, this creates supply pressures on external service providers who operate in a highly competitive and concentrated environment (Liu & Arnold, 2010; Liu, 2013). Hence, market forces would enable competitive pricing for outsourcing arrangements across the industry.

may be due to a lower concessional tax rate on superannuation of 15%. Two problems have been previously highlighted, the first stems from a lack of tax awareness from the trustees who have historically come from the finance and investment community with limited training and exposure to tax management. Second, there has been a commonly held the perception that the potential tax leakage in the superannuation industry is minimal, due to the relatively low tax rate, reducing the appetite for tax awareness (Cooper et al., 2010) as well as holding a belief that any tax leakage will be more than offset by achieving abnormal returns. However, in an industry that manages approximately $630 billion in funds, which generate $47 billion annually (APRA, 2019) in revenues, a few basis points are an economically significant leakage. Hence, the lack of careful tax management will reduce members' after-tax returns year on year.[92]

3.2.1.1 Imputation management and franking credits

Superannuation funds have a domestic bias when acquiring equities (Ellis et al., 2008). Apart from asset selection criteria, an additional factor that superannuation funds must consider is the benefits of imputation (franking) credits attached to dividend distributing Australian equities. Superannuation funds must ensure that the 45-day rule[93] is not breached, so as to protect the funds' entitlement to claim imputation credits. Superannuation funds receive a refund from the Australian Tax Office (ATO) for the dividend income received as taxes are paid based on the ultimate shareholders' tax rate. Accordingly, Australian companies' profits are taxed at 30% and remit tax obligations to the ATO. Superannuation funds have concessional tax rates for accumulation (15%) and retirement phase (0%) members. Therefore, since the

[92] The outsourcing arrangements that superannuation funds have with investment fund managers is another potential explanation for the lack of scrutiny and analysis (Liu & Arnold, 2010; Liu, 2013). The investment fund managers do not exclusively serve superannuation funds; they oversee a variety of investments for a diverse clientele (Liu & Arnold, 2010; Liu, 2013). As tax issues between superannuation and other clientele differ, fund managers may have previously not been motivated to manage superannuation investment mandates in a tax aware manner (Cooper et al., 2010).

[93] Section 177EA, *Income Tax Assessment Act 1997 (Cth)*.

fund has a lower tax rate than the company tax rate and is the ultimate shareholder, the ATO will refund the difference as long as the franking credits are attached to the dividend distribution.

3.2.1.2 Capital gains

Superannuation funds and investment funds have been known to employ strategies to effectively manage capital gains and losses so as to lower their capital gains tax (CGT) liabilities (Mackenzie & McKerchar, 2014). This section will list and discuss some of the known TAIM activities that assist superannuation funds to effectively manage CGT.

Deferral strategies and 12 month CGT discount

One way to increase the after tax return is to maximise the deferral and limit portfolio turnover.[94] Deferring the tax liability allows the security to grow undiminished, increases the impact of compounding, and reduces the funds' tax liability. The Australian tax legislation incentivises the employment of deferral as a consequence of the CGT discount[95] if the security is held for 12 months[96] by the taxable entity.

Tax loss harvesting

Tax loss harvesting[97] is when a fund sells a loss-making investment to crystallise a capital taxable loss. The purpose of crystallising the loss is to generate taxable losses to offset

[94] Prior literature demonstrates empirically that in certain instances fund managers engage in limiting turnover and deferring the realisation of gains to access the capital gains discount (Faff et al., 2005; Fong et al., 2009).

[95] Superannuation funds receive a one-third discount on the statutory tax rate of 15% on taxable capital gains upon realisation after 12 months.

[96] Responses from CIOs of superannuation funds in a recent study suggested that they pay close attention to the 12-month holding period and manage turnover as it adds value in the long-term (Mackenzie & McKerchar 2014).

[97] Also referred to as tax loss selling (Berkin & Ye, 2003).

capital taxable gains realised in the financial year and thus reducing the overall tax outflows (Berkin & Ye, 2003). This strategy[98] is beneficial whenever the tax loss harvesting opportunity is larger than the trading cost (Berkin & Ye, 2003).[99]

Tax propagation

Tax propagation is a term adopted by custodians to describe the tax parcel selection process (ATO, 2018), an ex-post tax management technique that aims to reduce the superannuation fund's CGT obligations on the realization of equities.[100] Tax propagation is an additional service that custodians provide and requires a complex tax record keeping process to reduce tax inefficiency[101] during the realisation of a specific equity within funds' equity portfolios (Williams, 2015). The tax legislation recognises that the superannuation fund is the legal owner of the equities, even though the equities are held by multiple fund managers. The ownership of the equities is an important distinction as the superannuation fund is liable for tax liabilities as a consequence of trading activities incurred by the multiple fund managers. Tax propagation utilises the custodian's ability to have oversight over multiple managers' trading

[98] There is some risk in employing this strategy. The risk is that upon the repurchase of the asset the taxpayer may be in contravention of the "wash sale" rule (Part IVA, ITAA, 1936). A wash sale is a sale of a security (stocks, binds, options) at a loss and repurchase of the same or substantially identical security shortly before or after. A wash sale contravention is where a tax payer disposes of, or otherwise deals with CGT assets to generate a capital or revenue loss, but where in substance, there is no significant change in the taxpayer's economic exposure in the asset (Part IVA ITAA36). If in contravention, the tax loss credits attained from the sale would be void and the taxpayer maybe liable for penalties for the contravention.

[99] In practice, upon selling the investment the benefit arises from utilising the tax loss credits to offset against taxable gains recognised in that financial year. The next step would be to repurchase the asset or a similar asset at a later time if the asset has the opportunity to provide future gains.

[100] The typical arrangement is that a superannuation fund has multiple equity fund managers who conduct operational investment activity on behalf of the fund. The custodian usually establishes a discrete custody account for each manager (Williams, 2015). This is an operationally simple arrangement; however, the cost is tax inefficiency when fund managers conduct trading activity on behalf of the fund.

[101] The tax inefficiency is due to multiple fund managers conducting trading activity without knowledge of the overall superannuation funds' equities holding position. This information is pivotal to the superannuation funds' ability to manage the funds' tax position from a CGT perspective. Accordingly, lack of knowledge of the funds' equity holding position can lead to sub optimal management of CGT liabilities.

activity and allocates the appropriate equity holding to optimise the CGT position for the superannuation fund; this consequently lowers the overall CGT outflows to the ATO.

Centralised portfolio management

Centralised portfolio management (CPM)[102] is a simple concept where portfolio implementation and execution is separated from investment idea generation (Towers Watson, 2014).[103] The trustee employs a range of specialist fund managers to implement and execute a number of investment mandates, some of which may overlap.[104] A concern for superannuation funds in this arrangement is whether transactions costs, specifically tax, are being managed by fund managers (William, 2015). The benefit of CPM is that it increases the visibility and accountability of all aspects of the investment value chain (Towers Watson, 2014). This is particularly important when managing tax. The benefit of having a single platform is that the CPM manager has the ability to track all investment taxes of the portfolio's underlying investment managers' equity mandates. This will include income tax, CGT, imputation credits, and foreign income tax offsets (Williams, 2015).[105]

[102] CPM is designed to minimise the inefficiencies by managing the funds' underlying specialist fund managers through a single platform via a centralised provider (Towers Watson, 2014).

[103] The common approach to institutional investing is where a board of trustees or investment committee are charged with the responsibility to allocate the funds under management to investments that will generate a return for the members of the fund. The asset allocation function is typically outsourced, as evidenced by Liu (2014), to specialist fund managers who oversee the day-to-day investing activities.

[104] These overlaps do not impact the specialist fund managers; however, there is a material impact on the superannuation funds' ability to have oversight across the funds' investment activity. In addition, this is exacerbated as specialist fund managers work independently of one another and there is a lack of communication between them (Towers Watson, 2014).

[105] The added benefit of a CPM environment is that it is a natural propagation environment as CPM manager imitates the same role as the custodian would play.

3.2.1.3 Indirect opportunities Segregation

The structural composition of the trust[106] is important from a taxation perspective due to the differential tax rates for accumulation and pension members. Segregation[107] of the fund facilitates the tailoring of investment strategies to the tax profile of the member. The benefit[108] of segregating the fund is advantageous to members that are in the retirement phase. Accordingly, the separation of accumulation and pension members allows superannuation funds to employ investment strategies that may not be prudent in an unsegregated environment[109] as it may not be equitable for accumulation members. However, when the investments are segregated there is potential for the superannuation fund to actively pursue investment strategies that have better outcomes for their members in the retirement phase.[110]

Retention strategies

Recently, a handful of superannuation funds have initiated 'retention strategies' targeted at members approaching transition to or in the retirement phase. The aim of these strategies is to provide a 'pension bonus' so that members in the retirement phase can be

[106] Superannuation fund investments are held in an investment holding vehicle referred to as a trust (Drew & Stanford, 2003). This investment holding vehicle pools the assets of the fund in either an unsegregated or segregated environment.

[107] In an unsegregated environment, assets are held for all members in accumulation, transition and retirement phase in a single pool. In contrast, a segregated environment has two separate pools which are segregated by accumulation and retirement phase members. In an unsegregated environment the superannuation fund is required to attain a certificate from an actuary to certify the proportion of the fund investments allocated to retirement and accumulation phase members for the financial year. The increase of aging Australians that are nearing the retirement phase requires superannuation funds to consider whether a segregated environment may be beneficial.

[108] The benefit arises due to the tax profile of members in the retirement phase as they have zero tax rate, removing some of the transaction costs attributed to investment strategies.

[109] For example, Q Super, a state public sector superannuation fund, recently implemented segregation. Q Super was able to cover the cost of segregation by taking advantage of a share buyback with Telstra (Rowley, 2015).

[110] Prior to employing segregation, the fund must first evaluate whether it has the appropriate proportion of retirement to accumulation fund assets to employ segregation. If the proportion is too low, then the benefits of segregation may not be realised due to the lack of ability to invest in a diversified portfolio of investments. Second, the benefits of segregation should outweigh the cost of implementing segregation.

retained by the fund.[111] The advantage of retaining retirement phase members is that it will sustain the pension fund assets within the fund and thereby reduce the funds' net outflows. Accordingly, superannuation funds are cognisant of fund liquidity; therefore, the funds are trying to incentivise pension members to not withdraw lump sums or contemplate managing their own retirement through a self-managed super fund (SMSF). Consequently, in doing so, the fund can consider the ability to segregate and provide tailored tax aware investment strategies to maximise after tax returns to its members.

My Super

My Super[112] is a single investment strategy product that promotes simplicity and provides a standard set of fees which is broken down into the applicable costs. Accordingly, superannuation research and ratings firms provide in-depth analysis of My Super products provided by the superannuation funds.[113] The significant focus on the performance of the My Super products by superannuation rating firms and APRA would provide the impetus for superannuation funds to encourage and highlight their My Super offering. Promoting and herding new clientele into a single investment strategy has the benefit of reducing complexity and streamlining the calculation of tax obligations. As My Super is simplified, an indirect advantage is that it reduces the inherent complexity in recognising the appropriate tax outflows for the fund. In contrast, funds with numerous investment options are administratively complex and the propensity to miscalculate tax outflows is increased. Therefore, superannuation funds

[111] Q Super refer to this pension bonus as 'income account transfer bonus', which is calculated based on the "length of time the member has been with the fund and the performance of growth assets within the fund." (Q Super, submission to the Productivity Commission: p. 4). The bonus is essentially an estimate of the tax provisioned during the accumulation (deferred tax liability) that is not realised upon transition to retirement. Sun Super also have a similar offering as mentioned in their promotional material (Q Super, 2016).

[112] Since its implementation on 1 January 2014 the My Super product is the most scrutinized product offering in the superannuation industry (APRA, 2018).

[113] APRA published a substantial amount of data on My Super products that are readily comparable.

with a greater proportion of My Super clientele are inherently less administratively complex, and thereby have the ability to prevent the confusion of multiple investment strategies impacting the calculation of taxation and reduce the propensity to miscalculate and overstate tax obligations.

The above is the first attempt to develop a TAIM framework that will enable more focused research into the tax aware investment strategies of superannuation funds. This will help researchers and government understand the antecedents, moderators and consequences of the 1st and 2nd level TAIM variables and the potential interrelationships between them. The emerging literature evaluating TAIM and superannuation funds has not advanced since the qualitative study conducted by Mackenzie and McKerchar (2014), possibly due to the general lack of data transparency. As this is the first study of its type, I employ proxies to evaluate my research propositions because there are no directly observable variables disclosed in the available data. Accordingly, the following propositions are used to examine research objectives in this emerging field.

2.3.1 Research proposition development

Tax Aware Investment Management (TAIM) is broadly defined as the "active management of taxes of a fund by incorporating tax consequences into the investment process" (Mackenzie & McKerchar 2014: p. 253). However, attempting to evaluate whether funds are employing TAIM is problematic because it is not externally observable.[114] Therefore, I employ proxy measures that best capture whether the fund is employing TAIM.

One strategy that has been linked to TAIM and is promoted to industry superannuation funds as a means of effectively managing tax and contributing to the attainment of TAIM is

[114] Which requires granular information about the funds' trading data, and the internal investment management memos that provide the rationale for particular investment strategies and acquisition of technology to support the funds' operational activities.

'tax propagation'. For funds adopting tax propagation there is likely greater complexity in custodian functions; therefore, the level of custodian fees might be considered indirect evidence of the use of tax propagation. Hence, while it is not possible to directly observe TAIM, there may be indirect evidence of a TAIM activity with tax propagation being employed. Thus, a reasonable supposition is that an association between propagation, as a proxy for tax efficiency, from the TAIM framework developed herein and ETRs exists. In this context the first research proposition is as follows:

> *RP1: Funds employing tax propagation manage tax more effectively than funds not employing tax propagation and have a lower incidence of taxation*.

A common criticism superannuation funds in Australia are subjected to is that they offer too many investment options (Sy, 2009; Roddan, 2017).[115] This criticism was outlined in the Cooper Review, where concerns were raised about the requisite proficiency of the members' to comprehend the myriad of investment options available to them. Equally, the increased investment options will amplify the overall operational fund complexity. Doubtless, this exacerbates the complexity of their tax management. An alternative is to simplify the investment options and lower the funds' overall operational complexity, thereby streamlining the management of tax. This likely reduces this complexity. 'My Super' accounts could be considered as a response to simplify such complexities. My Super provides a simplified investment strategy and has an indirect advantage of streamlining the calculation of the appropriate tax outflows for the fund. Therefore, simplifying potential complexities can be

[115] APRA's Deputy Chairwoman, has been quoted asking "At what point does the level of choice members become more a headache than help?" She further outlined that "Australians in 2017 have the option of choosing between 209 super funds, and within those funds there are an astonishing 41,000 investment options" and having this many options "is certainly not in the best interests of those fund members" (Roddan, 2017).

achieved by reducing the number of investment options available to members. In this case it is also reasonable to utilise My Super accounts as a proxy for tax efficiency (see the TAIM Framework). In this context the second research proposition is as follows:

> *RP2: Funds with a higher proportion of My Super accounts are able to manage tax more effectively than funds with a lower proportion of My Super accounts.*

Currently, there is an ongoing debate regarding the consolidation of the superannuation industry (Bateman & Thorp, 2007; Chan et al., 2009; Cummings, 2016). APRA is publicly endorsing industry consolidation via mergers, specifically to address concerns that small superannuation funds are inefficient and sub-scale (Chan et al., 2009; Yeates, 2015).[116] Further, the rationale for mergers have also been highlighted and supported by both the Cooper Review and the PC Review.[117] This suggests that it is more likely that larger (smaller) funds will have greater (less) access to economies of scale. I conjecture that all superannuation fund trustees will comply with the legislative requirements outlined in the SIS Act and will therefore strive to provide the benefits arising from TAIM to members. However, smaller funds, having less resources, are more likely to be constrained in their ability to use TAIM. This is supported by the PC Review, where it is noted that "each type of fund is likely to have advantages and disadvantages" (Productivity Commission, 2018: p. 132) when managing the complexity of

[116] Specifically, APRA advocated for mergers to address the concerns, where the realisation of scale has not been systematically passed on to members either as lower fees or higher returns. Interestingly the Productivity Commission outlined that many funds lack scale, with 93 APRA regulated funds – half the total – having assets under $1 billion (Productivity Commission, 2018).

[117] The Productivity Commission's report criticises small funds for not providing economies of scale and ultimately better retirement entitlements to members (Productivity Commission, 2018). The analysis highlighted a large number of small funds are imposing large costs on members due to unrealised economies of scale and persistent underperformance (Productivity Commission, 2018). The Productivity Commission believes that scale in the superannuation industry is elusive due to the lack of merger activity (Productivity Commission, 2018). Consequently, the Productivity Commission proposes a number of steps designed to encourage superannuation trustees to consider mergers, so as not to disadvantage the financial interests of their members.

superannuation taxation. Implicit in these comments, and subsequent comments about economies of scale, is that larger superannuation funds have a cost advantage over smaller superannuation funds (Productivity Commission, 2018).[118] As taxation management is complex, it requires the development of sophisticated systems. Consequently, large superannuation funds are expected to have greater resources and expertise to develop and employ the requisite technology, personnel and internal processes that enable implementation of TAIM. Conversely, small superannuation funds are less likely to afford, or able to justify the costs to their members to implement the necessary requirements to adopt TAIM as comprehensively as a large fund. Therefore, it is reasonable to propose that there is an association between size and ETR, which suggests consideration of the following research proposition as follows:

RP3: Large superannuation funds are more effective in tax management than small funds, with this being reflected in lower ETRs

However, there is an issue with evaluating whether funds adopt TAIM activities on the basis of fund size; while large funds may have more resources, it is impossible to determine whether those resources are allocated to the management of taxation. A further complication is that complexities in the management of taxation may be increasing with fund size. Thus, all of the above propositions and specific research questions need to be considered in combination in order to achieve the aims of this chapter.

[118] The criticism stems from evidence attained through the Productivity Commission's analysis of economies of scale. The analysis highlighted how a large number of small funds are imposing large costs on members due to unrealised economies of scale and persistent underperformance (Productivity Commission, 2018).

3.3 Research design

Chapter 2 provides evidence that industry superannuation funds are able to reduce the rate of taxation materially below the benchmark rates (media and alternative) of 15% (10.6%). However, a thorough examination of the divergence between benchmark and the ETRs suggests that this difference is not significantly associated with tax aggressiveness. Rather it is a consequence of variations in the rate of tax applied to different categories of income (i.e. income is taxed at 15%, capital gains at 10%, and income attributable to members in retirement phase is not taxed). Accordingly, the complex nature of superannuation taxation presents a range of opportunities to effectively manage taxation by addressing potential tax consequences during the investment decision making process. However, this is not straightforward and may require sophisticated fund administration, expertise and management based on the funds' circumstances.

The primary concern of this chapter is to understand whether industry superannuation funds are effectively managing taxation for the benefit of members (i.e. not making excess tax payments), and if the various opportunities available to effectively manage taxation are associated with the variation in the ETRs of industry superannuation funds. This is addressed by examining whether tax propagation (RP_1) is associated with the variation in ETRs across funds; whether the proportion of My Super (RP_2) is associated with the variation in ETRs across funds; and whether the size of the fund (RP_3), as a proxy for ability of fund to enable TAIM, is associated with the variation in the ETRs across funds.

In Chapter 2, I evaluate tax aggressiveness by examining the divergence in the ETR from the benchmark rate. This difference identifies the magnitude of tax aggressiveness. Although the dependent variable remains the same in this chapter (i.e. ETR), I examine the variation of the ETR between funds as this provides an insight into whether funds employ

opportunities that allows the effective management of tax (TAIM). This distinction is critical in understanding the following equation and how it is evaluated.

$$ETR = \beta_0 + \beta_1 Prop_{it} + \beta_2 MySuper_{it} + \beta_3 Size_{it} + \sum^{k}{}_{j=4} \beta_j Controls_{it} + \varepsilon_{it} \quad (1)$$

These variables are defined as follows.

Effective tax rate (ETR)

Insights into the evaluation of taxation for industry superannuation funds are provided in Chapter 2. This identifies issues with measures of taxation based on information reported in financial statements and suggests adjustment for the treatments afforded to transactions with members, contributions taxes, and imputation credits. Issues were also identified with cash-based measures. Reflecting this, the incidence of taxation is evaluated with an adjusted ETR measure, *ETR*, which corresponds with *ETR3* in Chapter 2. This is calculated as follows:

$$InvestTaxExpense = Tax\ Expense_{it} - (Concessional\ Contibutions_{it} \times 0.15)$$

$$InvestPreTaxIncome_{it} = PreTax\ Income_{it} - Contributions_{it} + Distributions_{it}$$

$$ETR_{it} = \frac{InvestTaxExpense_{it} + Franking\ Credits_{it}}{InvestPreTaxIncome_{it} + Franking\ Credits_{it}}$$

As a sensitivity test, additional analysis is undertaken with the incidence of taxation evaluated on the basis of a cash effective tax rate (CETR), adjusted on the same basis outlined above, and consistent with *CETR3* in Chapter 2.

Tax Propagation (TaxProp)

A strategy commonly identified as enabling TAIM is tax propagation. This is aservice conducted by custodians and is an ex-post tax management technique aimed at reducing CGT obligations on the realization of equities. For a fund to employ a tax propagation strategy, it

would likely manifest in higher custodian fees due to increased complexity in custodial activities. The evaluation of tax propagation is initially measured as the natural log of custodian fees, scaled by the proportion of equities for the funds' total investments. Data is obtained from APRA's *Annual Fund-level Superannuation Statistics 2017* (AFSS, 2017) for custodian fees (Table 3 SRF[119] 330.0 Item 9.3) and the proportion of equity (Table 9 SRF 530 Item 2 (9) and Item 3 (8)).

$$PROP_{it} = \frac{Log\ of Custodian\ Fees_{it}}{\%\ of\ Equities_{it}}$$

However, this is problematic due to extreme observations. To address this, a dichotomous variable is determined based on values above and below the 75th percentile.[120] The resulting dichotomous variable is equal to 1 if the observation is equal to or above the 75th percentile and it is therefore more likely that the fund uses tax propagation, and zero otherwise.

My Super (MySuper)

MySuper is a single investment strategy product that promotes simplicity and provides a standard set of fees, broken down into the applicable costs. The primary aim of MySuper is to provide Australians with a simple, cost-effective product that provides transparency for members, employers and market analysts to evaluate and compare funds across the industry. Critically, the simplicity of a single investment strategy also reduces the inherent complexity involved in managing tax effectively. This might be considered an alternative to adopting a 'systems' approach, and with more funds in MySuper accounts it may be easier to facilitate TAIM. This is captured by the variable *MySuper* which is calculated as follows:

[119] SRF refers to APRA's *Superannuation Reporting Framework*.

[120] The study also conducted a sensitivity test and partitioned at the 50th percentile; however, the results are unreported as they hold similar to the 75th percentile partition.

$$MySuper_{it} = \%\ of\ MySuper\ assets\ allocation\ of\ Total\ Fund\ assets_{it}$$

The proportion of My Super is obtained from AFSS 2017 (Table 2, SRF 533.0 Item 2.2, SRF 410.0 item 1(2) and SRF 320.0 Item 11).

Resources available for TAIM (Size)

The ability to manage tax effectively and avoid overpayment will inevitably be impacted by the resources available to develop and implement the necessary systems. The resources available will we impacted by the size of the fund, and this is undoubtedly an area where there are potentially economies of scale. This is recognised in the extant literature where size features prominently, and is typically included to capture scale and the impact this has on investment opportunities and economies of scale (Bateman & Mitchell, 2004; Ellis et al., 2008; Lui, 2014; Cummings, 2016; Gallagher & Warren, 2016; Ooi, 2016). Consequently, size is an important determinant in the superannuation literature as it proxies for different capabilities and constraints due to variations in resourcing (Gallagher & Warren, 2016). In the context of this study, size captures the resources available to facilitate TAIM activities. Accordingly, large superannuation funds are more likely to have the resources and expertise to employ required technology, personnel and internal processes to facilitate TAIM activities. In contrast, smaller superannuation funds are less likely to afford, or be able to justify the costs to their members to implement the necessary requirements to facilitate TAIM activities. The log of total assets is used to measure size of the fund[121] as follows:

$$SIZE_{it} = Log\ of\ Total\ Assets_{it}$$

[121] Size measured by the natural log of the number of member accounts is highly positively correlated (0.9280***) with the proxy for size used in this study.

Control variables

The impact of fund performance on the incidence of taxation is well documented and is commonly included as a control in the tax literature *(*Zimmerman, 1983; Gupta & Newberry, 1997; Graham & Tucker, 2006; Lanis & Richardson, 2007; Wilson, 2009*)*. Accordingly, fund profitability, measured as return on assets (*ROA*), is included as a control. This variable is calculated as:

$$ROA_{it} = \frac{Net\ Pre-Tax\ Income_{it}}{Total\ Assets_{\ it}}$$

Where *Net Pre-Tax Income* is as calculated previously, and *Total Assets* are obtained from AFSS 2017 (Table 2 SRF 320 Item 11).

Governance is also commonly considered an important determinant of the incidence of taxation (Lanis & Richardson, 2013). There is some evidence in Chapter 2 that this might not hold for industry superannuation funds. However, concerns have been expressed about governance in industry superannuation funds (Liu & Arnold, 2010; Tan & Cam, 2015) and, in the interests of consistency with the tax literature generally, governance controls are included. This is addressed with the inclusion of a variable *Ind* that recognises the governance role of independent trustees, measured as follows:

$$Ind_{it} = \frac{Number\ of\ Independent\ Trustees_{it}}{Total\ Number\ of\ Trustees_{it}}$$

Consideration is also given to whether the fund has an independent chair, and this is captured with the variable *Chair*, which assumes the value of 1 if the chair is independent, and 0 otherwise. Data for these variables is hand collected from annual reports to members or disclosures publicly available on the superannuation fund's website.

$$Chair_{it} = 1\ if\ the\ chair\ is\ an\ indpendent\ trustee,\ 0\ if\ otherwise$$

A feature of the taxation legislation is that it focuses on cash measures of performance rather than accrual measures. Further, there is a substantial literature suggesting that accruals are employed by corporate managers in managing disclosed profits (Jones, 1991; Bradshaw et al., 2001; Dechow & Dichev, 2002). There are reasons to believe that they may be used for similar purposes by trustees. Accordingly, accruals may impact the computation of taxation, although this will be more problematic for measures of tax aggressiveness based on tax expenses. Notwithstanding, to control for this *Accruals* is included and measured as profit before tax less cash flows from operations. The data is obtained from the cash flow statement which is available in the unabridged audited financial statements of superannuation funds.

Whereas tax is generally levied on the income of superannuation funds at 15%, capital gains arising on the sale of assets held for more than 12 months are only taxed at 10%. As a consequence, trustees may alter the mix of long held assets compared to short held assets in order to gain the tax reduction advantages available from capital gains tax (Ellis et al., 2008; Fong et al., 2009; Reddy, 2016). This would result in a reduction in the incidence of taxation. To address this, a control is included for the proportion of assets that are more likely to be held for more than one year (*Long*). *Long* is measured as the proportion of investments in equity, property and infrastructure. Data for *Long* is obtained from AFSS 2017 (Table 9 SRF 530 Item 2(9) + item 3(8) and Table 9 SRF 320.0 Item 2).

When members are in the retirement phase there is no tax on superannuation fund profit attributable to these members. Clearly this will reduce the incidence of taxation, but it would not be considered an aggressive strategy. To address this, a control variable is included (*Retirement*) which is calculated as the proportion of member's funds held by members in retirement phase at year end. The data obtained for this control variable is obtained from AFSS 2017 (Table 11 SRF 610.1 Item 4. (2)).

Tax may also be deferred where income is foreign sourced, and this would further impact the incidence of taxation. To address this, a further control is included for foreign investments (*Foreign*). Accordingly, the data is obtained from the unabridged audited financial statements, balance sheet items or in the notes to the financial statements.

Finally, to control for the influence of external investment managers, which may or may not impact the ability of the fund to optimise the recognition of income as capital gains, a control is included for the proportion of assets held directly. Superannuation funds disclose the percentage of investments directly held *(Held)* within the fund in AFSS 2017 (Table 9 SRF 530.0 Item 2).

3.4 Sample and data description

3.4.1 Sample funds

As with Chapter 2, the focus of this chapter is on industry superannuation funds and there are constraints on broadening the sample to superannuation funds more generally. While some financial information on superannuation funds generally is publicly available from APRA, this is limited, and insufficient information is disclosed to address the research questions in this chapter. Hence, there is a reliance on funds with available general purpose financial reports, these are industry superannuation funds. With respect to two other not-for-profit categories funds, public sector and corporate funds, these funds only disclose abridged audited financial statements[122] to members and there is no specific legal requirement for a fund to lodge general purpose financial reports with APRA.[123] Critically, the abridged financial

[122] Reg 2.38 (2)(f) of the SIS Act requires RSEs to make publicly available the annual report for the previous financial year. The annual report may only contain abridged versions of the financial statements of the RSE.

[123] A high-ranking officer within APRA confirmed that superannuation funds do not have any legislative or regulative requirement to lodge unabridged fund financial statements with any regulator. This includes APRA, ASIC and the ATO. However, APRA does have the expectation that the unabridged fund financial statements will be lodged voluntarily by the superannuation fund. Still, APRA declined to provide the unabridged fund financial statements, citing a secrecy requirement under s56 of the APRA Act, 1998.

statements do not contain sufficient disclosures. Similar issues arise with respect to retail superannuation funds, and analysis is further complicated for these funds by the complexity of their arrangements and their profit orientation. Identification of the limitations in the provision of general purpose financial reports to members (and the public more generally) inhibits transparency; identifying the deficiency in the regulation relating to reporting to members of superannuation funds generally is the first contribution in this chapter.

Obtaining general purpose financial reports for industry superannuation funds is nonetheless problematic, and hence is limited to the years 2014 to 2016.[124] Funds were contacted directly and from a population of 41 industry superannuation funds general purpose financial reports are obtained for three years for 32 funds and two years for three funds.[125] This reduced the potential sample of 102 funds years.

Information is manually collected from the reports. In 2016, a number of funds reported losses. From a tax perspective these losses would be carried forward, and evidence of accounting recognition / treatment (i.e. deferred tax assets) is mixed. This makes measures of tax aggressiveness unreliable, and hence these observations are excluded. It would also render measures of tax aggressiveness in subsequent years unreliable, but as these are outside the sample period it is not problematic. Determination of the various measures of tax

[124] The unabridged financial statements for the sample period were prepared under Australian Accounting Standard 25 (AAS 25). AAS 25 was introduced in 1993 and has been replaced. From 1 July 2016, AAS 1056 is applicable to regulated superannuation funds governed by the SIS Act 1993. The requirement under AAS 25 is that superannuation funds at least annually prepare general purpose financial reports of superannuation plan (AAS, 25). Paragraph 21, AAS 25 stipulates that for defined contribution plans the superannuation fund provide a statement of financial position, an operating statement and a statement of cash flows and notes, with the exception of those superannuation funds that elect the transitional provision which is set out in paragraph 70 (AAS 25). The transitional provision provides an alternative reporting format where the superannuation fund provides a statement of net assets, a statement of changes in net assets and notes to the financial statements. Of the 32 superannuation funds with unabridged fund financial statements, five superannuation funds have elected to use the transitional provision prescribed by paragraph 70, AAS 25. This reduces the sample size of the study by five individual superannuation funds. The statement of cash flow provides the dollar value of income tax paid[124], which is imperative for the calculation of the dependent variable (ETR). I have been able to generate an estimate of income tax paid and will try to recover those five funds into the sample at a later stage.

[125] Of which two funds had unabridged fund financial statements for financial years 2014–15 and 2015–16, and one fund had unabridged fund financial statements for financial years 2013–14 and 2014–15.

aggressiveness required extensive disclosures relating to the determination of the tax expense (generally obtained from the reconciliation of prima facie tax expense on profit before tax to tax payments). Where insufficient information is available observations are excluded. This resulted in a final sample of 60 fund years.

3.4.2 Descriptive statistics

Table 3.1. provides the descriptive statistics for the variables used in this chapter. The dependent variable (*ETR*) has a mean of 8.5%, which is significantly below a media benchmark tax rate of 15%, suggesting that the industry superannuation funds are able to reduce their rate of tax. Further, there is considerable variation with a minimum value of 4.5% and a maximum of 14.9%. However, caution should be exercised as this may be influenced by the circumstances of the fund.

There is also considerable variation in relation to the explanatory variables (*TaxProp, MySuper and Size*). Tax Propagation (*TaxProp*) has a slightly lower number of observations (n = 58) than the other explanatory variables. This is due to two fund-year observations having no custodian fees recorded in the data; it is unknown whether this is due to the funds not having custodian fees or that they have not reported custodian fees to APRA.[126] *TaxProp* is a rudimentary measurement that aims to determine whether a superannuation fund employs tax propagation. Examining the mean and median of this variable does not provide information as to whether the fund employs propagation. Interestingly, 25.9% of funds are reporting relatively high custodian fees (*TaxProp*), consistent with tax propagation. Figure 3.2. Illustrates the distribution of *TaxProp*, indicating that there is high likelihood for propagation to be present in the observations occurring at the right hand side extreme (i.e. right hand tails).

[126] It should be noted that custodian fees are not reported in the annual reported financial statements or the unabridged audited financial statements.

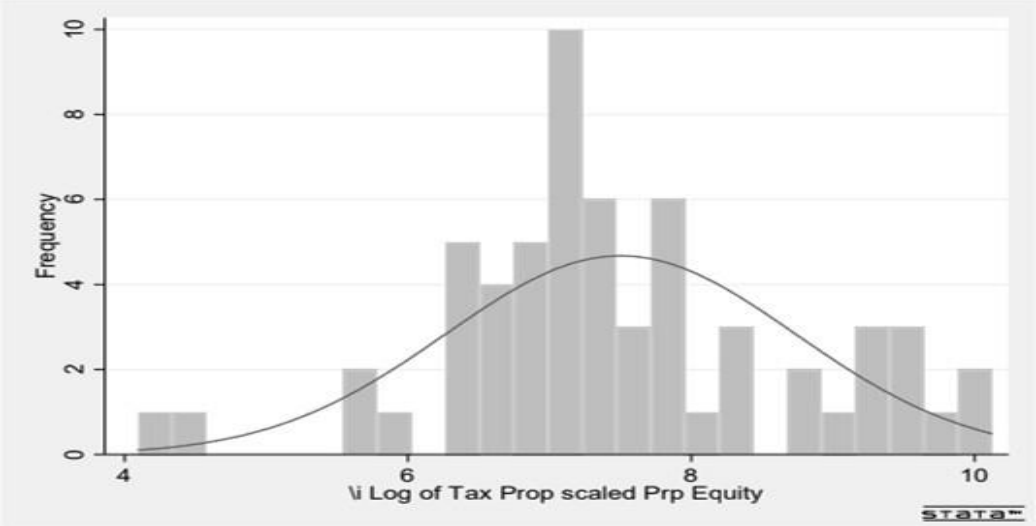

Figure 3.2 – Distribution of tax propagation

This shows relatively distinct high values for a range of funds, broadly consistent with the 75th percentile.[127] Observations that are equal or above the 75th percentile represent those funds that have a higher likelihood to employ tax propagation. Further, it is also noted that the funds within the sample that have publicly available information on engaging in tax propagation are captured above the 75th percentile.[128] This provides some assurance that the tax propagation variable is capturing whether a fund employs tax propagation. Further, while tax propagation is a relatively recent phenomenon, there is evidence of its adoption and this will also allow insights to be provided into whether marketing claims that it facilitates the management of taxation are justified.

[127] The study was also partitioned at the 50th percentile for sensitivity; however, the results are not tabulated as they hold similar to the 75th percentile partition.

[128] Informal discussion with employees of three of the larger superannuation funds (their names have been withheld at the request of confidentiality) confirm this assertion.

There is also evidence of the extensive use of *MySuper* accounts to simplify superannuation fund management – this includes tax management. The mean value of *MySuper* is 72.3%, while the maximum and minimum values are 98.0% and 18.2% respectively. With such a wide dispersion, the impact of simplification on tax management should be readily apparent.

Correlation between the variables are presented in Table 3.2. The correlations between *ETR* and *CETR* are consistent with expectations. The correlations between *Size* and *TaxProp* are positive and significant. This is consistent with expectations as the implementation of tax propagation is relatively expensive. Further, there would be likely economies of scale available in larger firms due to greater resources required for implementation. It also provides some assurance that these variables are capturing the same phenomenon. In contrast, the correlations of *Size* and *TaxProp* with *MySuper* are negative and significant. This would suggest that simplification is an indirect opportunity to implement TAIM, which may lead to similar outcomes and effective tax management. The correlation between the explanatory variables is problematic as it suggests potential multi-collinearity in the equation.

3.5 Results

3.5.1 Main results

Attention is initially directed at the association between a measure of the incidence of taxation (*ETR)* and variables associated with TAIM, either through the implementation of systems associated with the effective management of taxation (*TaxProp, Size*), or through the simplification of fund operations (*MySuper).* The results are reported in Table 3.3. As a consequence of collinearity between *Size, TaxProp* and *MySuper,* the association between these variables and *ETR* is in the first instance evaluated separately (Columns 1–3). Critically, the coefficients on *TaxProp* ($\beta_1 = -0.003$, *t*-stat = –0.446), *MySuper* ($\beta_2 = 0.010$, *t*-stat = 0.768),

and *Size* ($\beta_3 = -0.001$, *t*-stat = –0.812) are not significant. Further, when the three variables are all included (Column 4) none of the coefficients are significant. Accordingly, there is no evidence to support any of the research propositions (i.e. RP_1, RP_2, and RP_3). It is however notable that the adjusted R^2 which is relatively consistent across the regressions with the explanatory variables separately decreases to 13.5% when all three variables are included. This is consistent with collinearity across the explanatory variables and a reduction in degrees of freedom.

With respect to the control variables, the results across the four columns are consistent. In the interests of brevity discussion will be limited to Column 4. The coefficient on ROA *(*β_4 = 0.1.159, *t*-stat = 2.240) is positive and significant. This is consistent with expectations that more profitable funds pay more tax. It is also consistent with the results in Chapter 2. The coefficients on *Ind* ($\beta_5 = -0.002$, *t*-stat = –0.182) and *Chair* ($\beta_6 = 0.004$, *t*-stat = 0.913) are not significant and this is also generally consistent with the results in Chapter 2. The coefficient on *Accruals* ($\beta_8 = -0.958$, *t*-stat = –1.805) is negative and consistent with expectation and accruals being associated with a reduction of tax. This result is also consistent with the result in Chapter 2. Finally, the coefficient on *Retirement* ($\beta_9 = 0.126$, *t*-stat = 1.995) is positive and significant. This is inconsistent with expectations given that income attributable to members in the retirement phase is not subject to taxation. However, it is notable in Table 3.2 that there are high correlations of *Retirement* with *Size, TaxProp* and *MySuper.* This may bias against finding a significant result in tests of the research propositions.

A concern in the multivariate analysis undertaken is the degree of collinearity that exists across the explanatory variables, and the control variables. This makes it problematic when evaluating associations with the dependent variable and will bias against finding significant results in tests of the research propositions. This might be addressed with univariate analysis,

although the limitations of this are acknowledged. It should be noted that collinearity identified above makes inferences problematic.

3.5.2 Additional analysis

Due to the limitations of the analysis undertaken above, additional non-parametric analysis is undertaken.

Results from additional analysis

There are a number of limitations in the analysis undertaken above such that additional analysis was undertaken. These are largely univariate and involve consideration of differences across partitions of sample funds. The inherent limitations of the additional tests are also acknowledged.

To further evaluate RP_1, the differences in ETR across funds partitioned on the basis of *TaxProp* are reported Table 3.6. In Panel A, a comparison is made between ETR for funds with the low and medium values of *TaxProp*. For low *TaxProp* funds the mean *ETR* is 0.084, while for the medium *TaxProp* funds the mean ETR is 0.084. These are not statistically different. In Panel B, a comparison is made between funds with medium and high values of *TaxProp*. For medium funds the mean *ETR* is 0.084, while for the large funds the mean ETR is 0.085. These are not statistically different. Finally, in Panel C, a comparison is made between funds with low and high values of *TaxProp*. For low *TaxProp* funds the mean *ETR* is 0.084, while for the high *TaxProp* the mean ETR is 0.085. Again, these are not statistically different. Hence there is no evidence that ETR is materially impacted by firms utilising tax propagation, RP_1. Critically, the results of these tests pose more questions than they answer, as they do not reflect the expectation that employing *TaxProp* may enable industry superannuation funds to

effectively manage tax. A detailed discussion of these results is provided in the conclusion section. Future research may be able to attain more refined proxies.

The differences in ETR across funds partitioned on the basis of *MySuper* are reported in Table 3.6 to further evaluate RP_2. In Panel A, a comparison is made between ETR for funds with low and medium values of *MySuper*. For low *MySuper* funds the mean *ETR* is 0.089, while for the medium *MySuper* funds the mean ETR is 0.081. These are not statistically different. In Panel B, a comparison is made between funds with medium and high values of *MySuper*. For medium *MySuper* funds the mean *ETR* is 0.081, while for the high *MySuper* funds the mean ETR is 0.084. These are not statistically different either. Finally, in Panel C, a comparison is made between funds with low and high values of *MySuper*. For low *MySuper* funds the mean *ETR* is 0.089, while for the high *MySuper* funds the mean ETR is 0.084. Again, these are not statistically different. Hence there is no evidence that ETR is materially impacted by the proportion of *MySuper* (RP_2). Although the results are statistically insignificant, it suggests the simplification may provide scope for effective management of taxes. In addition, the insignificant result is potentially a combination of the small sample size and that this is an emerging trend in the early stages of implementation. Subsequently, significant results may materialize through future research that use a longer sample period comprising of more observations over a longer duration.

To further evaluate RP_3 the differences in ETR across funds partitioned on the basis of size are reported Table 3.8. In Panel A, a comparison is made between ETR for the small and medium partitions of funds. In Panel B, a comparison is made between medium sized funds and large funds. For small funds the mean *ETR* is 0.086, while for the medium funds the mean ETR is 0.082. For medium funds the mean *ETR* is 0.082, while for the large funds the mean ETR is 0.085. Finally, in Panel C, a comparison is made between small funds and large funds. For small funds the mean *ETR* is 0.086, while for the large funds the mean ETR is 0.085. None

of the results are statistically different. Hence, there is no evidence that ETR is materially impacted by fund size (RP_3). The implication of using *Size* to test effective tax management is more likely to bias against a statistically significant finding, and the results show that there are variations present even though they are small. An alternate explanation is that that larger funds will engage in more complex investment strategies and provide a multitude of investments options so that it can attract potential clientele that require choice. A consequence is that funds who adopt this strategy may require sophisticated fund administration, expertise and management based on the funds' circumstances. In comparison, smaller funds may not incorporate a multitude of investment options as it is beyond its ability to manage the complexities that may arise. Either way, due to the magnitude of funds under management of industry superannuation, this is likely to mean economically significant outcomes are occurring.

ANOVA analysis[129] is used to supplement the two sample *t*-tests to (i) accommodate a small sample size; and (ii) remove the restriction of the requirement of a normal distribution. Accordingly, the results from the ANOVA analysis are reported in Table 3.9, Panel A, B and C. The independent between-groups ANOVA yields a statistically insignificant result for all explanatory variables, *TaxProp* ($F(2, 55) = 0.02$, $p = 0.982$), *MySuper* ($F(2, 57) = 1.21$, $p = 0.306$), *Size* ($F(2, 57) = 0.33$, $p = 0.718$). Thus, the results of the between-groups ANOVA is consistent with two sample *t*-test conducted on the tertiles of *TaxProp*. *MySuper and Size.* Hence, the results support the rejection of all research propositions stated in Section 3.2.2.

[129] Unreported Man Whitney U Tests are consistent with the findings stated in additional analysis.

3.6 Conclusion

The objective of this chapter is to determine whether industry superannuation funds are effectively managing taxation for the benefit of members (i.e. not making excess tax payments) and if the various opportunities to effectively manage taxation are associated with the variation in ETRs of industry superannuation funds. This is suggested first, by the legislated requirement for trustees to maximise after tax returns to members; second, by variation in the incidence of taxation across funds identified in Chapter 2; and finally, third, by concerns expressed in various reviews (i.e. Cooper Review, Productivity Commission) about whether some industry superannuation funds are effectively managing taxation.

The complexity of the taxation regime for industry superannuation funds has been highlighted in the abovementioned reviews. The complex nature of superannuation taxation presents a range of opportunities to effectively manage taxation by incorporating the potential tax consequences during the investment decision making process. However, this same complexity makes it difficult to determine a level of taxation where tax is being effectively managed. Specifically, while income (and expenses) are generally subject to taxation at 15%, capital gains are only subject to tax at 10%, and income attributable to members in retirement phase is not subject to tax. This makes effective management of taxation problematic, and not straightforward, as it may require sophisticated fund administration, expertise and management based on the funds' circumstances.

Accordingly, the focus in this chapter is on the level of taxation and evaluating whether variation in the incidence of taxation is associated with variables that might be associated with effective tax management. Broadly speaking these variables are associated with TAIM activities to managing tax effectively (i.e. *Size* and *TaxProp*) or simplifying the requirements for managing tax effectively (*MySuper*).

Critically, while there is variation in the incidence of taxation across industry superannuation funds, based on a sample of 60 funds over the period 2014 to 2016, there is no evidence in the multivariate analysis that this is associated with fund size (*Size*) and the resources available to manage tax, evidence of strategies associated management of tax such as tax propagation (*TaxProp*), or simplification of the requirements for managing tax effectively (*MySuper*). A concern in the multivariate analysis undertaken is the degree of collinearity that exists across the explanatory variables, and the control variables. This makes it difficult to evaluate any associations with the dependent variable and will bias against finding significant results in tests of the research propositions. However, it is notable that there is a negative correlation of *Size* and *TaxProp* with *MySuper.* This is consistent with alternative strategies to managing tax effectively, with 'systems-based' approaches being adopted by larger funds and simplification by smaller funds. There was also evidence in subsequent discussions with the management of industry superannuation funds of outsourcing being used for tax management services by smaller funds, in much the same manner that they outsource investment management. Recognising this challenge, additional non-parametric analysis was undertaken; however, the results suggest that there is a lack of statistically significant evidence that the variation of the incidence of tax is due to the employment of TAIM activities.

This chapter makes a number of contributions to the literature focused on industry superannuation funds, and the taxation of industry superannuation funds in particular. Empirically evaluating whether industry superannuation funds are effectively managing fund tax obligations to maximise benefits for members (i.e. TAIM) is difficult and requires granular information about funds' trading data, and the internal investment management memos that provide the rationale for particular investment strategies and the acquisition of technology to support the funds' operational activities. It is a consequence of this that Mackenzie and McKerchar (2014) undertook qualitative evidence that builds the foundation of this literature.

This is the first study to consider quantitatively, whether industry superannuation funds are managing tax effectively, and whether there are systematic differences in the incidence of taxation across funds. While there is variation in the incidence of taxation across funds there is no evidence that this is associated with tax management. Rather it is likely a consequence of innate firm characteristics. This is likely a consequence of alternative approaches to tax management, systems-based approaches and simplification.

A further contribution from this chapter is to the regulatory debate surrounding industry superannuation funds, and in particular the concern expressed by the PC that small funds have insufficient scale, contributing to the ineffective management of taxation. In this chapter there is no evidence of this and hence no empirical evidence supporting the recommendation in the PC report. This is likely a consequence of small funds using alternative approaches to tax management (i.e. simplification) and the ability to outsource specialised tax services.

Table 3.1 – Descriptive statistics

	Observations	Mean	Std. Dev.	Min	Median	Max
ETR	60	0.085	0.017	0.045	0.088	0.149
CETR	60	0.032	0.042	–0.030	0.024	0.228
Size	60	15.309	1.409	13.039	14.907	18.367
TaxProp	58	0.259	0.442	0.000	0.000	1.000
MySuper	60	0.723	0.182	0.230	0.785	0.980
ROA	60	0.087	0.023	0.032	0.091	0.119
Ind	60	0.138	0.188	0.000	0.100	1.000
Chair	60	0.550	0.502	0.000	1.000	1.000
Accruals	60	0.084	0.025	–0.003	0.086	0.131
Long	60	0.705	0.050	0.570	0.710	0.850
Foreign	60	0.223	0.126	0.000	0.242	0.477
Retirement	60	0.073	0.058	0.000	0.054	0.250
Held	60	0.411	0.264	0.010	0.385	1.000

Where:

ETR	:	InvestTaxExpense + Franking Credits/ InvestPretaxIncome + Franking Credits
CETR	:	InvestTaxPaid + Franking Credits/PreTaxIncome + Franking Credits
Size	:	Log of TotalAssets
MySuper	:	% of MySuper asset allocation of Total fund assets
TaxProp	:	Log of Custodian Fees/% of Equities
ROA	:	InvestPretaxIncome/TotalAssets
Ind	:	No. of Independent Directors/Total No. of Directors
Chair	:	1 if the chair is an independent director, 0 if otherwise
Accruals	:	(InvestPretaxIncome – Net Cashflows)/ TotalAssets
Long	:	Proportion of investments in property and infrastructure
Foreign	:	Proportion of foreign investments
Retirement	:	proportion of member's funds held by members in retirement phase at year end
Held	:	percentage of investments directly held *(Held)* within the fund

Table 3.2 – Correlation matrices

Pearson and Spearman correlation matrices of dependent and explanatory variables

	ETR	*CETR*	*Size*	*MySuper*	*TaxProp*	*TaxPropHI*	*ROA*	*Ind*	*Chair*	*Accruals*	*Long*	*Foreign*	*Retirement*	*Held*
ETR	1	0.236*	–0.081	–0.121	–0.054	0.102	0.328**	–0.031	0.136	0.275**	–0.290**	–0.165	0.204	0.135
		0.075	0.547	0.367	0.69	0.445	0.012	0.816	0.308	0.037	0.027	0.216	0.124	0.311
CETR	0.457***	1	0.385***	–0.294**	0.364***	0.436***	–0.045	0.115	0.236	–0.068	0.034	–0.098	0.457***	0.359***
	0.000		0.003	0.025	0.005	0.001	0.737	0.391	0.074	0.613	0.801	0.465	0.000	0.006
Size	–0.063	0.212	1	–0.263**	0.832*	0.702***	0.196	–0.036	0.007	0.213	0.432***	0.131	0.516***	0.519***
	0.633	0.104		0.046	0.000	0.000	0.141	0.786	0.957	0.108	0.001	0.328	'0.000	'0.000
MySuper	–0.171	–0.3791***	–0.350***	1	–0.255*	–0.113	–0.084	0.179	0.009	–0.088	0.112	–0.070	–0.664***	–0.062
	0.192	0.003	0.006		0.053	0.398	0.530	0.178	0.944	0.513	0.403	0.604	0.000	0.644
TaxProp	0.032	0.267**	0.836***	–0.327**	1	0.759***	0.222*	–0.032	–0.105	0.206	0.298**	–0.077	0.475***	0.670***
	0.811	0.043	0.000	0.012		0.000	0.094	0.813	0.433	0.122	0.023	0.568	'0.000	'0.000
TaxPropHI	0.075	0.304	0.788***	–0.220*	0.803***	1	0.208	–0.088	–0.043	0.173	0.311**	–0.147	0.435***	0.613***
	0.575	0.020**	0.000	0.097	0.000		0.117	0.511	0.751	0.194	0.018	0.271	0.001	0.000
ROA	0.140	–0.198	0.162	–0.092	0.198	0.199	1	–0.006	0.076	0.954***	0.117	0.099	0.000	0.249*
	0.287	0.130	0.217	0.487	0.137	0.135		0.964	0.571	0.000	0.380	0.460	1	0.059
Ind	0.052	–0.049	–0.137	0.114	–0.029	–0.088	0.010	1	0.737***	–0.035	0.057	–0.183	–0.231*	0.009
	0.696	0.711	0.298	0.385	0.830	0.510	0.939		0.000	0.797	0.669	0.169	0.082	0.950

All variables are as defined in Table 3.1
* p<0.10, ** p<0.05, *** p<0.010

Table 3.2 – Correlation matrices (Continued)

	ETR	*CETR*	*Size*	*MySuper*	*TaxProp*	*TaxPropHI*	*ROA*	*Ind*	*Chair*	*Accruals*	*Long*	*Foreign*	*Retirement*	*Held*
Chair	0.121	0.201	0.040	–0.115	–0.015	–0.043	0.021	0.457***	1	0.036	0.039	0.007	–0.081	0.099
	0.358	0.125	0.760	0.381	0.914	0.751	0.875	0.000		0.786	0.774	0.957	0.544	0.460
Accruals	0.015	–0.315**	0.180	–0.076	0.184	0.174	0.958***	–0.025	–0.017	1	0.153	0.146	0.009	0.145
	0.909	0.014	0.170	0.564	0.167	0.191	0.000	0.848	0.895		0.251	0.275	0.946	0.277
Long	–0.220*	–0.088	0.501***	0.067	0.260**	0.251*	0.130	0.132	0.126	0.137	1	0.035	–0.099	0.183
	0.092	0.506	'0.000	0.612	0.049	0.058	0.322	0.314	0.338	0.298		0.793	0.458	0.169
Foreign	–0.096	–0.036	0.170	–0.130	–0.076	–0.075	0.053	–0.299**	0.032	0.093	0.157	1	0.174	–0.076
	0.464	0.785	0.195	0.323	0.570	0.577	0.688	0.021	0.811	0.481	0.232		0.191	0.573
Retirement	0.203	0.324**	0.478***	–0.759***	0.430***	0.522***	0.050	–0.158	–0.016	0.062	–0.054	0.195	1	0.429***
	0.121	0.012	0.000	0.000	0.001	0.000	0.707	0.229	0.902	0.637	0.682	0.136		0.001
Held	0.130	0.290**	0.507***	–0.177	0.670***	0.612***	0.135	–0.206	0.007	0.081	0.062	–0.014	0.298**	1
	0.323	0.025	'0.000	0.175	'0.000	0.000	0.304	0.115	0.957	0.536	0.638	0.918	0.021	

All variables are as defined in Table 3.1
* p<0.10, ** p<0.05, *** p<0.010

Table 3.3A – The association between ETR and TAIM and indirect opportunities

	Sign	ETR (1)	ETR (2)	ETR (3)	ETR (4)
Size	-	–0.001			0.000
		(–0.812)			(0.044)
TaxProp	-		–0.003		–0.005
			(–0.446)		(–0.572)
MySuper	-			0.010	0.016
				(0.768)	(1.013)
ROA	-	1.059**	1.110**	1.112**	1.159**
		(2.122)	(2.309)	(2.230)	(2.240)
Ind	+	–0.001	–0.000	–0.001	–0.002
		(–0.077)	(–0.011)	(–0.125)	(–0.182)
Chair	+	0.003	0.004	0.004	0.004
		(0.766)	(0.730)	(0.910)	(0.913)
Long	-	–0.053	–0.053	–0.073	–0.049
		(–0.993)	(–0.972)	(–1.642)	(–0.848)
Foreign	-	–0.008	–0.008	–0.009	–0.011
		(–0.535)	(–0.464)	(–0.600)	(–0.632)
Accruals	-	–0.881*	–0.924*	–0.928*	–0.958*
		(–1.702)	(–1.863)	(–1.800)	(–1.805)
Retirement	-	0.076**	0.081*	0.089**	0.126*
		(2.079)	(1.781)	(2.074)	(1.995)
Held	-	0.002	–0.002	–0.001	–0.002
		(0.180)	(–0.141)	(–0.147)	(–0.123)
Constant		0.119***	0.098**	0.104***	0.079*
		(4.113)	(2.627)	(3.455)	(1.732)
Year Effects		Yes	Yes	Yes	Yes
Fund Effects		Yes	Yes	Yes	Yes
Observations		60	58	60	58
Adjusted R^2		0.171	0.160	0.171	0.135
F-Stat.		2.149	2.009	2.220	1.778

All variables are as defined in Table 3.1
* p<0.10, ** p<0.05, *** p<0.010

Table 3.3B – VIF Table for explanatory variables

Variable	VIF	1/VIF
Size	5590.76	0.000
TaxProp	307.68	0.003
MySuper	639.33	0.002
ROA	68.57	0.015
Ind	213.93	0.004
Chair	2156.69	0.001
Long	18.73	0.053
Accruals	33.11	0.006
Retirement	998.72	0.001
Held	437.49	0.002
MEAN VIF	751.94	

All variables are as defined in Table 3.1

Table 3.4 – Descriptive of tertiles of explanatory variables (*TaxProp, MySuper, Size)*

Panel A: Comparison of tertiles of *TaxProp*

Tertiles of TaxProp		**(N)**	**Mean**	**Min**	**Max**	**SD**	**p50**
Low Probability TaxProp	1	20	6.309	4.094	7.053	0.789	6.519
Moderate Probability TaxProp	2	19	7.328	7.069	7.814	0.229	7.250
High Probability TaxProp	3	19	8.918	7.825	10.124	0.739	9.144
Total		58	7.497	4.094	10.124	1.255	7.231

Panel B: Comparison of tertiles of *MySuper*

Tertiles of *MySuper*		**(N)**	**Mean**	**Min**	**Max**	**SD**	**p50**
Low	1	20	0.512	0.230	0.680	0.149	0.560
Medium	2	21	0.780	0.700	0.820	0.042	0.790
High	3	19	0.883	0.830	0.980	0.047	0.870
Total		60	0.723	0.230	0.980	0.182	0.785

Panel C: Comparison of tertiles of *Size*

Tertiles of *Size*		(N)	Mean	Min	Max	SD	p50
Small	1	20	13.908	13.039	14.575	0.525	14.002
Medium	2	20	15.049	14.660	15.713	0.396	14.907
Large	3	20	16.969	15.765	18.367	0.834	17.226
Total		60	15.309	13.039	18.367	1.423	14.907

Table 3.5 – Univariate tests of *TaxProp* and *ETR*

Panel A: Low & Medium *TaxProp – ETR*						
	Group	(N)	Mean	Std. Dev.	*t*	*df*
Low	1	20	0.084	0.015		
Medium	2	19	0.084	0.022		
Combined		39	0.084	0.019	0.002	37
Difference			0.000			

Panel B: Medium & High *TaxProp – ETR*						
	Group	(N)	Mean	Std. Dev.	*t*	*df*
Medium	2	19	0.084	0.022		
High	3	19	0.085	0.014		
Combined		38	0.085	0.018	–0.158	36
Difference			–0.001			

Panel C: Low & High *TaxProp – ETR*						
	Group	(N)	Mean	Std. Dev.	*t*	*df*
Low	1	20	0.084	0.015		
High	3	19	0.085	0.014		
Combined		39	0.085	0.014	–0.201	37
Difference			–0.001			

Table 3.6 – Univariate tests of *MySuper* and *ETR*

Panel A: Low &Medium *MySuper – ETR*						
	Group	(N)	Mean	Std. Dev.	*t*	*df*
Small	1	20	0.089	0.019		
Medium	2	21	0.081	0.015		
Combined		41	0.086	0.017	1.493	39
Difference			0.008			

Panel B: Medium & High *MySuper – ETR*						
	Group	(N)	Mean	Std. Dev.	*t*	*df*
Medium	2	21	0.081	0.015		
Large	3	19	0.084	0.016		
Combined		40	0.083	0.015	–0.567	38
Difference			–0.003			

Panel C: Low & High *MySuper – ETR*						
	Group	(N)	Mean	Std. Dev.	*t*	*df*
Small	1	20	0.089	0.019		
Large	3	19	0.084	0.016		
Combined		39	0.087	0.018	0.935	37
Difference			0.005			

Table 3.7 – Univariate tests of *Size* and *ETR*

Panel A: Small & medium *Size – ETR*						
	Group	(N)	Mean	Std. Dev.	*t*	*df*
Small	1	20	0.086	0.013		
Medium	2	20	0.082	0.025		
Combined		40	0.084	0.020	0.656	38
Difference			0.004			

Panel B: Medium & large *Size – ETR*						
	Group	(N)	Mean	Std. Dev.	*t*	*df*
Medium	2	20	0.082	0.025		
Large	3	20	0.085	0.010		
Combined		40	0.083	0.019	– 0.581	38
Difference			–0.003			

Panel C: Small & large *Size – ETR*						
	Group	(N)	Mean	Std. Dev.	*t*	*df*
Small	1	20	0.086	0.013		
Large	3	20	0.085	0.010		
Combined		40	0.086	0.117	0.171	38
Difference			0.001			

Table 3.8 – ANOVA tests of the explanatory variables (*TaxProp, MySuper, Size)*

Panel A: ANOVA (*TaxProp)*					
Source	df	SS	MS	F	p
Between groups	2	0.000	0.000	0.02	0.982
Within Groups	55	0.016	0.000		
Total	57	0.053	0.000		

Panel B: ANOVA (*MySuper)*					
Source	df	SS	MS	F	p
Between groups	2	0.001	0.000	1.21	0.306
Within Groups	57	0.016	0.000		
Total	59	0.017	0.000		

Panel C: ANOVA (*Size)*					
Source	df	SS	MS	F	p
Between groups	2	0.000	0.000	0.33	0.718
Within Groups	57	0.017	0.000		
Total	59	0.017	0.000		

Chapter 4

Conclusions and limitations

Abstract

This chapter outlines the conclusions reached from the objective of this dissertation to evaluate the incidence of taxation in industry superannuation funds and the limitations. First, attention is directed to whether industry superannuation funds adopt tax aggressive practices to potentially benefit members of the fund. Second, attention is given to whether industry superannuation funds manage the incidence of tax effectively in a complex tax environment. I find little evidence of tax aggressiveness and while there is variation across the taxation reported in the financial statements of industry superannuation funds, I find little statistically significant evidence of effective tax management (TAIM). However, as this a recent regulatory requirement, it is likely the impact will observable in the future.

4.1 Conclusions

In the long-term, the Australian Government relies on Superannuation funds to adequately provide working Australians with enough money to fund their retirement thereby, contributing significantly to Australia's three pillar retirement income system (AFTS, 2008).[130] However, concerns have been raised in separate government reviews as to whether funds are managing taxation effectively, and thereby maximising after tax returns to members (Cooper et al., 2010; Productivity Commission, 2016). Maximising returns to members is necessary for the superannuation system to remain sustainable and to adequately provide long-term retirement funding for an aging population. The superannuation system is also designed to reduce the tax burden by supporting Australians in their retirement. Conversely, in the short-term, the Government relies on tax payments to contribute to overall government revenues. As previously discussed, industry superannuation funds are economically significant with assets under management in excess of $630 billion and generate pre-tax income of $47 billion annually (APRA, 2019). At present, governments are concerned with declining tax revenues (U.S. Congress, 1999; Levin, 2013) and this may be exacerbated by concerns expressed in the media about the tax practices employed by industry superannuation funds which have been identified in various 'leak documents' (i.e. Luxembourg Leaks, Panama Papers and Paradise Papers). Critically, these issues appear to have competing objectives. Collectively, this dissertation provides the first empirical evaluation of taxation in industry superannuation funds in an attempt to address these issues.

Chapter 2 evaluates whether there is evidence of tax aggressiveness in industry superannuation funds, consistent within the corporate tax avoidance literature, using a sample of 60 funds-years over the period 2014 to 2016. General purpose financial statements and other

[130] The current retirement income system in Australia consists of three pillars. The first pillar is the public pension or commonly referred to as the age pension. The second pillar is compulsory savings via superannuation and the third is voluntary savings via superannuation and/or other long term savings (AFTS, 2008).

data are hand collected as there remains no publicly available transparent repository of industry superannuation funds. A variety of measures were considered to capture the incidence of taxation[131] of industry superannuation funds, in order to examine tax aggressiveness. Notably, these measures require adjustments for factors likely to contribute to mismeasurement, considering both expense and cash flow based measures (*ETR1, ETR2, ETR3, CETR1, CETR2* and *CETR3*).

All measures suggest that industry superannuation fund tax rates are considerably lower than the media benchmark rate of 15%, with cash flow based measures indicating higher levels of tax aggressiveness than the accrual based measures. However, care should be taken when interpreting these results as they are likely to be biased due to aspects of the tax legislation allowing tax payments to be deferred if income is increasing. Evaluation of tax aggressiveness is typically undertaken by a comparison of measures of the incidence of taxation with an appropriate benchmark. In this setting, identification of a suitable benchmark is problematic due to complexities of the tax legislation as it applies to superannuation (see Appendix 1.A). In combination, the quantitative and qualitative analyses provide very little conclusive evidence of tax aggressiveness by industry superannuation funds.

Critically, the media often cite a much higher level of tax aggressiveness and is likely due to their misunderstanding of the superannuation taxation regime. For example, there are different tax rates for member contributions, net income before tax, capital gains, as well as imputation credits and tax free income attributable to the retirement phase (see Appendix 1.A). The results in this chapter make a number of important contributions to the literature on tax aggressiveness and the methods for evaluating tax aggressiveness, as well as to the financial reporting by superannuation funds generally.

[131] The incidence of tax in this dissertation refers to the magnitude of tax obligations of the superannuation fund and this might be evaluated in terms of tax payments (cash) or all tax expenses (accruals) payments.

The in-depth examination of tax note disclosures has also produced little conclusive evidence of tax aggressiveness across industry superannuation funds. This is possibly a reflection that the costs of tax aggressiveness likely exceed the benefits, and this reduces the incentive for funds to undertake actions considered to be tax aggressive. It is also likely an artefact of lower rates of taxation in superannuation compared to corporate tax rates. However, there is evidence of variation in measures of tax aggressiveness across funds, which are unexplained by traditional antecedents found in the corporate taxation literature. Hence, alternative explanations are evaluated in Chapter 3.

There are a number of limitations to this study that must be considered. The first limitation in this analysis is that complexities of the tax system make it problematic to determine an unqualified, theoretical benchmark rate of taxation, although it is likely much lower than the benchmark of 15% generally referred to in the media (see Appendix 1.A). A second limitation is possible measurement error in the range of measures of tax aggressiveness that are considered. These include measures such as effective tax rates (ETR, CETR), requiring information found only in financial reports that are not publicly available. The measurement error may occur because of a range of factors such as differences between corporate financial disclosures and superannuation financial disclosures that are identified in Chapter 2. Although the cash effective tax rate (CETR) (Chen et al., 2010) is commonly adopted in contemporary corporate tax aggressiveness literature, it is found to be an unreliable measure in this setting because of the timing of tax payments as discussed in Chapter 2.[132] The implication is that

[132] CETR is calculated as tax payments reported in the Statement of Cash Flows over profit before tax in the Statement of Profit or Loss. However, the timing of tax payments is determined by the tax legislation, and payments are often more reflective of prior year net profit than the current year net profit. For example, payment of tax for industry superannuation funds is disbursed in advance, on a quarterly or monthly basis. This requires the fund to estimate current year profits, so that it can make reliable quarterly disbursements to the tax authorities. A suitable estimate of current year profits is usually determined on prior year profits, adjusted for expected variations in the current year profit projections. Problematically, while there are incentives to decrease estimates of profit and hence current period tax payments when profit is decreasing, there are few incentives for increasing estimates of profit and hence current period tax payments when profit is increasing.

CETR measures in an Australian superannuation setting will be systematically biased, and this will be most pronounced if profit is increasing (i.e. tax payments based on the prior year profit relative to current year profit). Further, this issue is exacerbated within industry superannuation funds where returns are volatile, and this would also apply to estimation of tax aggressiveness in other contexts.

A third limitation in undertaking research on industry superannuation funds is accessing general purpose financial reports. The funds are unincorporated and hence, fall outside the scope of the Corporations Act. Accordingly, general purpose financial reports are not lodged with ASIC. Nor is there alternative legislation requiring the provision of financial reports to members, or their lodgement with a public repository. While financial reports are provided to APRA, they are used for supervisory purposes only and are not publicly available. This is perhaps surprising given the likely demand for such reports and the level of public interest. Accordingly, a contribution this chapter makes is identifying the limitations in the existing legislation governing industry superannuation funds relating to the lodgement and dissemination of general purpose financial reports.

Finally, the information provided in general purpose financial reports prepared in accordance with *AAS 25 Financial Reporting by Superannuation Plans* has a number of limitations. Doubtless this stems from limitations in the definition of equity in the Australian Accounting Standards Board (AASB) conceptual framework, *Framework for the Preparation and Presentation and Financial Statements.* Specifically, items are classified as liabilities if there is a present obligation. As a consequence, member interests in superannuation funds are classified as liabilities rather than equity, and transactions with members are considered income and expenses, rather than transactions with equity holders. This leads to the recognition of member transactions in the income statement, and taxes on contributions by members being recognised as tax expenses, resulting in measures of profit or loss that might not be relevant

for members. It also creates issues with the estimation of measures of tax aggressiveness, as discussed above. Many of these issues would now be addressed in a revised standard, *AASB 1056 Superannuation Entities*, with the exception of the recognition of franked dividend revenue on a net basis rather than a gross basis. This was considered as an agenda item by the AASB in November 2007, but rejected (AASB, 2007). However, inspection of tax note disclosures under the current requirements (AASB 1056) indicate the in-depth analysis undertaken in Tables 2.6.A and 2.7.A would not be able to provide similar insights due to the opaque nature of the disclosures.

While there was little conclusive evidence of tax aggressiveness found in Chapter 2, a cross-sectional variation is identified in the effective tax rates across funds. In Chapter 3, having ruled out potential explanations provided by the traditional antecedents of tax avoidance suggested by the extant literature, I attempt to identify alternative explanations of this variation. Notably, from 1 July 2013 the SIS Act requires superannuation funds to effectively manage taxation and maximise after tax returns to members. This follows from concerns raised by the government and media as to whether trustees maximise after tax returns to members (i.e. Cooper Review, Productivity Commission Report), and whether superannuation funds in general are effectively managing taxation for the benefit of members through higher returns (i.e. not making excess tax payments).

Evidence of various avenues of effective tax management is suggested by this analysis, and this may be due to complexity in the taxation of industry superannuation funds. While income (and expenses) are generally subject to tax at 15%, capital gains are only subject to tax at 10%, and income attributable to members in retirement phase is not subject to tax at all. This makes effective tax management problematic to identify, and whether funds are doing this is an interesting question. This same complexity makes it difficult to determine the level of taxation where tax is being effectively managed. Accordingly, the focus in this chapter is on

the level of taxation[133], and evaluating whether variation of the ETRs is associated with variables that might be involved in effective tax management. Mostly, these variables are associated with TAIM related activities to managing tax effectively or simplifying the requirements for managing tax effectively (My Super).

Critically, there is variation across the ETRs for industry superannuation funds, and this is consistent with alternate tax management 'systems' (TAIM) being adopted by larger funds, and simplification (i.e. My Super) by smaller funds. Subsequent discussions reveal industry superannuation funds outsource various operating functions, including tax management, in the same manner that they have historically outsourced investment management. However, based on a sample of 60 fund-year observations over the period 2014 to 2016, there is no evidence to suggest that variables such as tax propagation, fund size, and My Super are associated with TAIM. Multivariate analysis is conducted; however, a concern in undertaking the multivariate analysis is there exists a high degree of collinearity across the explanatory variables, and the control variables. This makes it difficult to evaluate any associations with the dependent variable and will bias against finding significant results in tests of research propositions.

Chapter 3 makes a number of contributions to the literature focused on industry superannuation funds, and in particular, the taxation of industry superannuation funds. I empirically evaluate whether industry superannuation funds comply with the legislation requiring them to effectively manage tax obligations to maximise benefits for members (i.e. TAIM). Conducting this research is difficult, as it requires granular information that is not readily available such as the funds' trading data, the internal investment management memos that provide the rationale for particular investment strategies, and the acquisition of technology to support the funds' operational activities. As a consequence, Mackenzie and McKerchar

[133] Chapter 2 addresses the divergence between the ETR and the benchmark tax rate, whereas in contrast, Chapter 3 evaluates the variation of the ETR across the sample, and the two should not be confused.

(2014) provide qualitative evidence that forms the foundation of this literature. This is the first study to consider quantitatively, whether industry superannuation funds are managing tax effectively and whether there are systematic differences explaining the variation in ETRs across funds. While there is variation in the ETRs across funds, there is no evidence that this is associated with TAIM. Rather it is likely a consequence of innate fund characteristics and alternative approaches to tax management, or systems-based approaches and simplification. This is consistent with the findings of the PC Review, which cited data restrictions as an obstacle. Hopefully, future researchers may be able to obtain the relevant data which is unavailable at this current stage.

As a further contribution, this chapter addresses the regulatory debate regarding the need for industry consolidation. In particular, the concerns expressed in the PC Review that small funds have insufficient scale, which may limit their ability to comply with legislative and compliance requirements, renders them unable to meet the needs of their members. Critically, I find no empirical evidence supporting the recommendation of the PC Review. Whether a fund is small or large, there is no statistically significant variation found using non-parametric tests. This is likely a consequence of alternative approaches to tax management by small funds (i.e. My Super) and the ability to employ outsourced tax specialists.

This dissertation acknowledges that there are competing demands from stakeholders on the superannuation system such as governments, policy makers, regulators and market participants, and these must be considered in order to provide broader insights from the outcomes of this dissertation. In particular, there are competing objectives between the Government's need to maintain revenues generated through tax, and the need to maximise growth of members' superannuation balances, which requires reducing transaction costs such as tax to maximise after tax returns. This dissertation provides valuable insights into the competing objectives of government policies that can create divergent incentives, leading to

distortions in the operationalisation of tax legislation. The interaction between tax legislation and the superannuation system has therefore become highly complex, and the results from this dissertation are potentially reflective of this complexity.

In managing a superannuation fund, trustees face three major areas of complexities. First, the difficulty of developing and managing a diversified portfolio of investments, with suitable risk and return characteristics. This process requires the engagement of specialist investment consultants and managers across multiple asset classes. Accordingly, this presents an additional principal-agent layer that requires time sensitive information, so that trustees have the ability to make informed judgements. Second, the governing legislation, the SIS Act, has repeatedly been amended, which has made administration and compliance of superannuation funds costly and problematic. This is evidenced by the reduction in the number of corporate and public sector superannuation funds. Finally, there is a need to also incorporate tax consequences of investment strategies, in light of the circumstances of the fund and the different categories of income. Collectively, it may just be beyond the current capabilities of the industry to address all these complexities concurrently, specifically relating to the management of taxes.

4.2 Limitations

A number of limitations are identified while undertaking the analysis in this dissertation, and these include issues as fundamental as (i) the availability of general purpose financial reports, and (ii) the relevance of information in financial reports to users of financial reports.

Increasing availability of general purpose financial reports would require regulatory change. The limitations of information provided in financial reports is generally addressed by *AASB 1056 Superannuation Entities*. However, there are still unresolved issues and this

includes the recognition of dividends with tax credits attached on a net basis. It is beyond the scope of this dissertation to directly evaluate whether the information provided in accordance with *AASB 1056 Superannuation Entities* is more relevant than provided in accordance with *AAS 25 Financial Reporting by Superannuation Plans.* Further, research in this setting requires proxies that provide unambiguous (non-collinear) information. This requires APRA to recognise that a more transparent approach to financial reporting of superannuation is required. Specifically, policy makers need to acknowledge the importance of incorporating the audited financial statements of superannuation funds into a publicly available repository.

Finally, a major limitation in this dissertation and any future study considering either the tax strategies employed by industry superannuation funds, or whether they manage tax effectively, is the ability to determine a benchmark tax rate on which to then identify tax aggressive behaviour.

Appendix 1.A. – Taxation of industry superannuation fund income

Evaluation of whether a firm's tax strategies are aggressive[134] is typically undertaken by comparison of measures of the incidence of taxation[135] with an appropriate benchmark. This benchmark is generally the statutory tax rate applied to taxable income; while there is variation across countries, it is generally consistent within countries for large corporations which are the focus of most studies (Hanlon & Heitzman, 2010). For example, in the 2016/17 tax year the rate applied to the taxable income of Australian corporations with turnover in excess of $25m was a flat rate of 30% (McClure et al., 2017).

However, identification of an appropriate benchmark rate for industry superannuation funds is problematic. While a benchmark of 15% is commonly relied upon in the media (media benchmark rate) this is misleading as a 15% tax rate is only applicable to certain categories of income.[136] Complexity in the taxation of income for industry superannuation funds is well recognised (Cooper et al., 2010; Productivity Commission, 2018) and one aspect of this arises from the varying rates of tax applied to different categories of income. Income that is not capital in nature generally attracts a 15% tax rate. Income that is a capital gain because it arises on the sale of an asset held for more than 12 months is generally taxed at 10%. However, income attributable to members in the retirement phase is not taxed. These differences will significantly impact the appropriate benchmark.[137]

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[134] The consequences of taxation refers to all possible actions that can be taken along the tax 'continuum' (Lisowsky et al., 2013: p. 590). These can "span from perfectly legitimate positions … to tax sheltering" (Lisowsky et al., 2013: p.590)

[135] The incidence of tax in this study refers to the magnitude of tax obligations of the superannuation fund and this might be evaluated in terms of tax payments (cash) or all tax expenses (accruals) payments. This study employs measures commonly labelled effective tax rate (*ETR*) (Hanlon & Heitzman, 2010) or cash effective tax rate (*CETR*) (Chen et al., 2010).

[136] Investment income that is not capital in nature and meets the criteria for the Capital Gains Tax (CGT) discount.

[137] The net effect of these variations may be reflected in a lower benchmark rate than the well-publicised 15% 'statutory' tax rate.

The aim of this appendix is to estimate a benchmark rate of tax that can be relied upon to evaluate whether industry superannuation funds are tax aggressive. This is challenging due to limited public information; therefore, any calculation determining a benchmark will require assumptions to be made about the relative proportions of different categories of income as each category attracts a different rate of tax. The calculation to determine an alternative benchmark, is undertaken based on descriptive statistics provided in Chapter 2, Table 2.1. For example, members in retirement phase hold on average 7.3% of fund assets, and therefore it might be assumed that this is the proportion of income that is attributable to these members and is therefore not subject to tax. Members in the accumulation phase hold 92.7% of fund assets and are subject to tax. Capital gains are more likely to arise from long-term assets and these represent 70.5% of fund assets. Hence, it might be assumed that 70.5% of the income attributable to members in the accumulation phase will only be taxed at 10%. The remaining investment income will be taxed at 15%. The combined effect is demonstrated in the table below.

Table 1.A.1. – Estimation of an alternative benchmark rate

Category of income	Tax Rate	% of Income	Benchmark Tax Rate
Retirement Phase	0%	7.3%	0.0%
Accumulation Phase			
– Capital Gains	10%	65.4%	6.5%
– Income	15%	27.3%	4.1%
		100.0%	10.6%

Critically, this identifies a benchmark rate of tax (10.6%) which is materially less than the media benchmark rate of 15%. I acknowledge that there are many limitations to this benchmark, as it involves broad assumptions and therefore caution must be applied when

making any inferences.[138] However, as this is the first empirical evaluation of taxation in this setting, rather than using the potentially misleading media benchmark rate of 15%, an alternative benchmark of 10.6% is considered more appropriate and forms the basis for evaluating tax aggressiveness in this dissertation.

[138] Fund managers must make a multitude of complex decisions which have competing objectives, only one of which relates to tax consequences. For example, the realisation of long-term assets requires consideration of factors including but not limited to risk and return. Therefore, the allocation of income on the basis of asset allocation is potentially unsuitable. Further, there are also assumptions about how income is realised. For example, there are incentives for the realisation of capital gains on assets held more than 12 months (taxed at 10%) and income losses on assets held for less than 12 months (with a tax benefit at 15%). In addition, a deferral of the recognition of capital gains to periods where members (or a higher proportion members) are in the retirement phase. In this circumstance the unrealised capital gain that would have been subject to tax at the rate of 10% will not be subject to tax when ultimately realised. This would likely result in a benchmark rate materially below the 10.6% calculated. This limitation is acknowledged, and it is for this reason that this process is not undertaken for individual funds.

Appendix 2.A. – Historical Background of Superannuation in Australia

Superannuation[139] is a key pillar to Australia's retirement income system (AFTS, 2008).[140] Superannuation has a long history in Australia, dating back to the mid-1800s when it was only available to a limited few[141] (AFTS, 2008). The first superannuation fund was established in 1862 when the Bank of New South Wales created a defined benefit pension fund for their employees (Dunn, 2004; Sy, 2008). The superannuation landscape remained structurally unchanged for over 100 years[142]; however, the 1980s was a significant transition period for superannuation funds. The first iteration of institutionalised employee superannuation occurred in 1986.[143] This arrangement was negotiated between the Australian Government and the trade unions and was governed by the *Occupational Superannuation Standards Act 1987 (Cth)* (OSSA) (Bateman & Ablett, 2000).[144] The Award superannuation[145] was a 3% wage-equivalent contribution provided by the employer. The award superannuation was a shift in the right direction for the Australian retirement income system as it increased the coverage of employees' pension accounts from 40% in 1987 to 79% in 1991 (APRA 2007a). The award superannuation, while beneficial to a number of Australians, excluded those who were not covered by industrial awards (Liu, 2013). Further, the 3% contribution rate was

[139] Superannuation is one pillar of the Australian retirement income system that allows Australians to save for their retirement. It is comparable to the 401 K in the United States and pension fund in the United Kingdom. In 2016 the Australian Superannuation system ranked third behind Denmark and Netherlands for adequacy, sustainability and integrity (MMGPI, 2016).

[140] The current retirement income system in Australia consists of three pillars. The first pillar is the public pension or commonly referred to as the age pension. The second pillar is compulsory savings via superannuation and the third is voluntary savings via superannuation and/or other long term savings (AFTS, 2008).

[141] Available to employees of large corporations and public service organisations.

[142] Consisted of defined benefit pension funds for some employees in the corporate and public sector (ComSuper, 2008; Sy, 2008).

[143] The award superannuation was endorsed by the Conciliation and Arbitration Commission in February 1986 and later affirmed by the High Court of Australia (Bateman & Piggot, 2001; Treasury, 2001).

[144] It is probably for this reason that they are still today commonly referred to as 'union funds'.

[145] The award superannuation was endorsed by the conciliation and arbitration commission in February 1986 and later affirmed by the High Court of Australia (Bateman & Piggot, 2001; Treasury, 2001).

considered to be an insignificant savings rate for employees' retirement (APRA, 2007a), which is why the Australian Government subsequently implemented the *Superannuation Guarantee (SG) Act 1992 (Cth)* on 1 July 1992. The SG Act (1992) requires employers to make compulsory monetary contributions on behalf of their employees into complying superannuation funds (Bateman & Ablett, 2000).[146] The government's primary motive was to accelerate the growth in superannuation so that Australia's aging population could draw upon a larger pool of post-employment benefits (Bateman & Ablett, 2000; Cummings, 2016).

The current Australian superannuation landscape – Post superannuation guarantee (SG) 1992

The past two and a half decades have experienced a period of exponential growth[147] in the superannuation industry since the implementation of the SG Act (1992) (Liu, 2013). There has been an increase in the number of members, coupled with a substantial increase in the contributions rate, resulting in a considerable amount of funds under management. Originally the SG Act (1992) stipulated that all employees receive 3% of gross wages, and it was gradually increased to the present rate of 9.5% and is scheduled to rise to 12% in the future (Productivity Commission, 2016). The compulsory contributions are allocated to individual superannuation accounts and the funds are invested on behalf of the employees by the trustee of the superannuation fund (Bateman & Ablett, 2000).[148] Compulsory contributions are referred to as concessional contributions, which are made into the employees' superannuation fund before tax, and include the following employer contributions:

[146] The SG applies to all employees aged 18 to 70 earning more than $450 per month.

[147] During the last two decades, superannuation assets under management have grown. This has been because of a combination of increases in compulsory contribution rate, average wages, and the number of people in the workforce (KPMG, 2010). Total superannuation assets have increased from approximately $250 billion in 1996 to $2.2 trillion in 2016 (KPMG, 2015). Current conservative projections expect the assets under management to reach $6.1 trillion by 2035 (Cooper et al., 2010).

[148] Employers must make at least quarterly contributions of a minimum of 9.5% to a superannuation fund of the employees' choice. In the event an employee does not elect a superannuation fund, then the employer is required to make contributions to a fund nominated by the employer, referred to as a default fund (Liu, 2013).

- *Compulsory employer contributions*
- *Any additional concessional contributions that an employer makes*
- *Salary sacrifice payments made to the employees' fund, and*
- *Other amounts paid by the employer from the employee's before-tax income to their superannuation fund, such as administration fees and insurance premiums.*

Concessional contributions are taxed at 15% within the fund and there are caps on the concessional contributions that an employee receive each financial year. In the event that an individual exceeds the concessional contribution cap, they are liable to pay extra tax up to 46.5% (ATO, 2019). Employees can also make contributions from their after-tax income; these are referred to as non-concessional contributions. These contributions are not taxed within the superannuation fund. There are, however, caps on the non-concessional contributions that an individual can make each financial year. If an individual surpasses the cap on non-concessional contributions, they will be liable to pay extra tax (ATO, 2019).

There are two types of retirement benefit structures and the distinction between the two structures is the allocation of investment risk (Drew & Standford, 2003a). Defined Benefit (DB) schemes guarantee beneficiaries an income stream (pension) or a lump sum payout at retirement. The retirement benefit is calculated based on certain employment factors[149]. The distinguishing characteristic of defined benefit schemes is that the employer sponsor bears the investment risk. If the fund has inadequate assets to meet its obligation of paying retirement benefits, then the employer sponsor is liable for the shortfall. In contrast, Defined Contribution (DC) schemes assign the investment risk upon the beneficiary. The employer provides contributions as a percentage of the employees' salary and discharges the pension responsibility to a fund that is charged with the fiduciary duty to administer and manage

[149] The employment factors range years of service, age at retirement, level of salary at retirement, and other factors (APRA, 2014).

employees' retirement benefits. The implementation of the SG Act (1992) has increased the number of DC plans and in contrast, there has been a decrease in the number of DB schemes (Liu, 2013). Table 2.A.1 below provides a snapshot of the inverse relationship between defined benefit and contribution plans in the Australian superannuation industry.

Table 2.A.1. – Comparison of DB and DC funds from 1982 to 2008

Year	Members in DB funds (%)	Members in DC funds (%)
1982–83	81.8	18.2
1991–92	24.3	73.2
1999–00	13.9	86.1
2007–08	6	94

Source: Treasury (2001: p.85); ABS (2009b, 4102.0: p.45)

There are three phases which an individual with superannuation passes through and they are delineated by the age of the individual. The three phases are accumulation, transition to retirement. The accumulation phase occurs during the individual's working life, commencing at approximately at the age of 16 to 18 (SIS Act, 1993). There are specific rules that demarcate the accumulation phase. The specific rules stipulate that contributions are compulsory, balances cannot be withdrawn[150], and balances and contributions are taxed on a concessional tax basis. The transition phase is the period when members approach retirement (Productivity Commission, 2016), where members have reached their preservation age and can access their benefit but may be taxed on certain withdrawals. The final phase is the retirement phase. In this phase individuals can either take an income stream or request a lump sum benefit or combination thereof. If the individual takes an income stream, then the balance of their

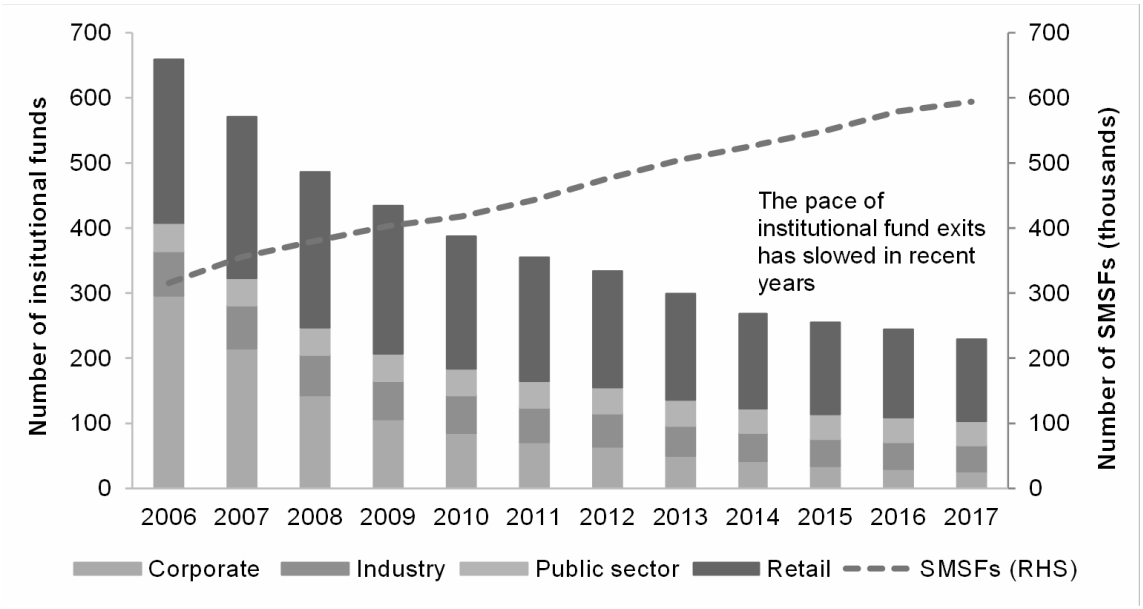
[150] Early access may be granted for exceptional circumstances e.g. medical/financial hardship (SIS Act, 1993).

superannuation benefit is generally invested, and investment income generated within the fund in the retirement phase is tax exempt.

Structural composition of superannuation funds

A superannuation fund operates as a trust (Drew & Standford, 2003) that is able to accept compulsory contributions from employers on behalf of their employees (Donald et al., 2016). There are two major categories of superannuation funds that are regulated by two separate government authorities. The first category is the large APRA regulated superannuation funds[151] which are further classified as corporate, public sector, industry and retail. The second category is the Self-Managed Superannuation Funds, more commonly known as SMSF, which are regulated by the Australian Tax Office (Raftery, 2014). SMSF's are do it yourself (DIY) funds with less than five members, who all are classified as member-trustees. The superannuation landscape has changed since the inception of SMSF. There has been a decline in the number of APRA Regulated Funds through either consolidation or exit (funds winding up or merging) (Productivity Commission, 2018); however, fund consolidation has slowed down in recent years. In contrast, the number of SMSFs has witnessed an upward trajectory in the acceptance of SMSF styled superannuation. Figure 2.A.1 provides an overview of the current trends in both categories.

[151] APRA also regulate 'small' APRA funds (SAFs) involving four members or less. SAFs are different from SMSFs.



[a] This figure includes both APRA-regulated funds and exempt public sector schemes that collectively are 'institutional funds'. SMSFs include small APRA-regulated funds.

[b] Data are the for the June quarter of each year.

Source: PC analysis of APRA confidential data and APRA (2017g).

Figure 2.A.1. – Trends in the number of funds [a, b], 2006–2017

Table 2.A.2. – Overview of superannuation

Type of Fund	Total Assets ($ billion)	No. of Funds	No. of Accounts (June 16)
Corporate	59	27	0.3 million
Industry	545	41	11.1 million
Public Sector	379	37	3.5 million
Retail	588	128	13.0 million
Funds with less than 5 members	703	598,599	1.1 million
Total	**2,274**		**29 million**

Source: APRA Statistics – June quarter 2017 and APRA annual statistics for no. of accounts.

Table 2.A.2 above provides an overview of the superannuation industry as of June 2016. The following section will provide a general overview of the sector.

Corporate funds

Corporate funds are employer sponsored schemes that are predominately sponsored by a single employer and, in a limited number of cases, by a group of usually related employers. Corporate funds are classified as 'not for profit' and membership is restricted to the employees of the employer sponsor (APRA, 2005). The early corporate funds were established for the private sector professional working class and usually arranged as defined benefit schemes that provided death and disability benefits (Bateman, 2003). At present corporate funds are not a significant participant in the superannuation industry, the numbers of this type of fund having decreased substantially.[152] The primary reason is due to the increased regulatory requirements and compliance costs required to manage the fund in house (Liu, 2013). This dissertation does not examine and investigate these types of funds as these funds are dwindling in number, size and are not economically significant.

Public sector funds

Public sector funds are similar to corporate funds; however, the sponsoring employer is a government agency or state owned government business enterprise. Public sector funds are classified as not for profit and membership is restricted to the employees of the employer sponsor (APRA, 2005). Public sector funds were primarily set up as defined benefit schemes and financed via consolidated revenues from the government. These funds have followed the trend towards providing employees with defined contribution schemes and the defined benefit division of these funds is now closed to new employees in Australia (Bateman, 2003; Liu, 2013). This dissertation does not examine and investigate these types of funds as these funds are dwindling in number, size and are not economically significant.

[152] In 1996 there were 4,100 corporate funds and in 2017 there were 27. Corporate funds represent approximately 2% of the superannuation industry by assets (APRA, 2017).

Retail

Retail superannuation funds are 'for profit' public offer funds and usually run by financial institutions. The inception of the SG Act (1992) increased the number of retail superannuation funds. Prior to this, the retail sector focused on offering collective investment products through unit trusts (Mees et al., 2005). Retail funds were the only alternative for employees that were not allocated to any of the 'not for profit' superannuation funds before industry superannuation funds gained public offer status. Retail superannuation funds have received criticism for underperformance (Coleman et al., 2006; Ellis, 2008). This dissertation does not examine and investigate these types of funds. Retail funds are economically significant; however, these funds have a profit orientation linked to shareholders and have fund structures that are not consistent across the population of retail superannuation funds which make analysis of the funds complex.

Industry

Industry superannuation funds are 'not for profit' and are similar to corporate funds; however, instead of a single employer sponsor, industry funds are multi-employer schemes that have members across a single industry or a group of related industries (Bateman, 2003; Sy, 2008; Liu, 2013). Industry superannuation funds were established by trade unions in response to the previous iteration of superannuation commonly known as the award superannuation. Initially these types of funds were restricted to individuals that were employed by the particular industry sponsor; however, in recent years a large proportion of industry funds have become public offer, which allows them to include employees from all industries (Bateman, 2003; Sy, 2008; Liu, 2013). The attainment of public offer status by a large number of industry superannuation funds witnessed a strong growth rate of members with regular superannuation contributions. Further, industry superannuation funds have historically had relatively strong

investment returns making them an attractive proposition to join or switch to. In 2011 there were 61 industry funds managing approximately $A250 billion in assets, which represented 19% of the industry (Liu, 2013). In 2017 there were 41 industry superannuation funds managing approximately $A545 billion, which represents 24% of the industry (APRA, 2017).

Trust structure

Australian superannuation funds operate under a trust structure.[153] A trust is a legal arrangement where assets are held and managed by one party (the trustee) for the benefit of another (the beneficiary) for the advancement of certain purposes (Law Reform Commission, 1992). The trustee is the legal owner of the superannuation fund assets and is governed by the trust deed. The trust deed is a legal document establishing the powers, duties and responsibilities of the trustees as well as the rights and interests of beneficiaries. A principal feature of a trust is the separation of legal and beneficial ownership of the assets (Bateman, 2003; Liu, 2013).

Trustee's responsibilities and duties

The trustee[154] is a corporate entity and the legal owner of the assets within the superannuation fund (Drew & Standford, 2003). The directors of the trustee company are considered to be 'the trustees'. The board of trustee directors assumes the responsibility to run the fund. Superannuation fund trustees are stipulated to have both common law fiduciary duties and statutory responsibilities to members. The fiduciary duties of a trustee are:

[153] "A trust exists when the holder of a legal or equitable interest in certain property is bound by an equitable obligation to hold his interest in that property not for his own exclusive benefit, but for the benefit, as to the whole or part of such interest, of another person or persons or some object or purpose permitted by law" (Meagher & Gummow, 1986: p. 7).

[154] Trustees of superannuation funds are predominately set up as a corporate entity. The corporate entity elects a board of directors who is charged with the responsibility of administration and oversight of the trustee company, the executive management and overall strategy. The executive management is charged with the responsibility of the day to day operation of the superannuation fund.

- *To act honestly*
- *To avoid conflict of interest*
- *Not to act for the trustee's own benefit or the benefit of a third party, and*
- *To exercise diligence and care that they would express when dealing with the trustee's own affairs in carrying out its functions under the trust deed (Law Reform Commission, 1992).*

The fiduciary duties also include duties:

- *To treat beneficiaries of the same class equally*
- *To treat beneficiaries of different classes fairly, and*
- *To keep proper accounts and records.*

Superannuation trustees have obligations under relevant state trust law. The trustee directors can be held personally liable to fund members for any loss or damage from a failure to meet their obligations (Bateman, 2009).

Legislation

The superannuation industry is governed by the *Superannuation Investment Supervision Act 1993 (Cth)* (SIS Act).[155] The main objective of the SIS Act is to protect the members' benefit (ISC, 1997). The SIS Act[156] establishes that the' trustee act in a prudent manner and provides a set of covenants in relation to trustees fiduciary and statutory duties (Thomson, 2008; Liu, 2013). In addition to the SIS Act, the superannuation industry is also governed by the *Corporations Act 2001 (Cth)* (trustee director duties and disclosure requirements), the *Income Tax Assessment Act 1997 (Cth)* (tax obligations), and the *Superannuation Guarantee Act 1992 (Cth)* (compulsory contributions)[157].

[155] The SIS Act replaced the OSSA Act 1987 from 1 July 1994.

[156] Complying superannuation funds that meet the SIS Act standards qualify for a concessional tax rate of 15%.

[157] The *Portability Act, 1989 (Cth) Privacy Act, 1988 (Cth); Family Law Act, 1975 (Cth); Trust Law*.

Regulators

There are multitude of government organisations and industry stakeholders that have an oversight function of the superannuation industry. The primary regulators that have legislative and prudential authority over the superannuation industry are the Australian Prudential Regulatory Authority (APRA), Australian Securities and Investment Commission (ASIC), and the Australian Tax Office (ATO).

Australian Prudential Regulatory Authority (APRA)

APRA was established in 1998 and is the administrator[158] of the SIS Act. APRA is considered to be the primary regulator of the superannuation system and since 2004 was charged with the responsibility of licencing Responsible Superannuation Entities (RSE) and monitoring the funds' compliance with the SIS Act to ensure the integrity of the industry. APRA, as a government organisation, is not just focused on regulating superannuation funds. The Australian Government Treasury defines APRA's role to "regulate relevant financial institutions[159] in accordance with the laws of the Commonwealth that provide for prudential regulation or retirement income standards." (Australian Government Department of Treasury, 2018: p. 123). Furthermore, APRA's core mission "is to establish and enforce prudential standards and practices designed to ensure that, under all reasonable circumstances, financial promises made by institutions APRA supervises are met within a stable, efficient and competitive financial system" (Australian Government Department of Treasury, 2018: p. 123). In essence, APRA's primary aim is to protect the interests of consumers of Australian financial institutions.

[158] APRA absorbed the Insurance and Superannuation Commission (ISC) on 1 July 1998 under the *Australian Prudential Regulation Authority Act 1998 (Cth)*.

[159] This includes authorised deposit-taking institutions (ADI), insurance companies, superannuation funds and other financial institutions.

Australian Securities and Investment Commission (ASIC)

Australian Securities and Investment Commission (ASIC)[160] was established in 1998. ASIC is charged with the responsibility of administering the *Corporations Act 2001 (Cth)*. ASIC's role is defined as the regulator of "financial markets, Australian companies, disclosure, financial services organisations and professionals who deal and advise in investments, superannuation, insurance, deposit taking and credit" (Australian Government Department of Treasury, 2018: p. 143). Primarily, ASIC has oversight over market integrity, disclosure and other consumer protection matters across the entire corporate and financial services industry.[161] ASIC's role in the superannuation industry is primarily focussed on the wholesale side of the superannuation system; however, it also has oversight of the retail aspect of the system.

Australian Tax Office (ATO)

The Australian Tax Office (ATO) is responsible for administering the *Income Tax Assessment Act (ITAA) 1936 and 1997 (Cth).* The ATO is a government organisation that is charged with the responsibility of collecting and monitoring Australia's tax system. From a superannuation perspective, the ATO administer the collection of tax from superannuation contribution and earnings under ITAA97 and in addition the ATO administer the *Superannuation Guarantee Administration Act 1992 (Cth)*. The ATO's role is to make sure that employers comply with the Superannuation Guarantee Charge. Further, the ATO also have regulatory responsibility of the self-managed superannuation industry which is beyond the scope of this dissertation.

[160] ASIC absorbed the Australian Securities Commission on 1 July 1998.

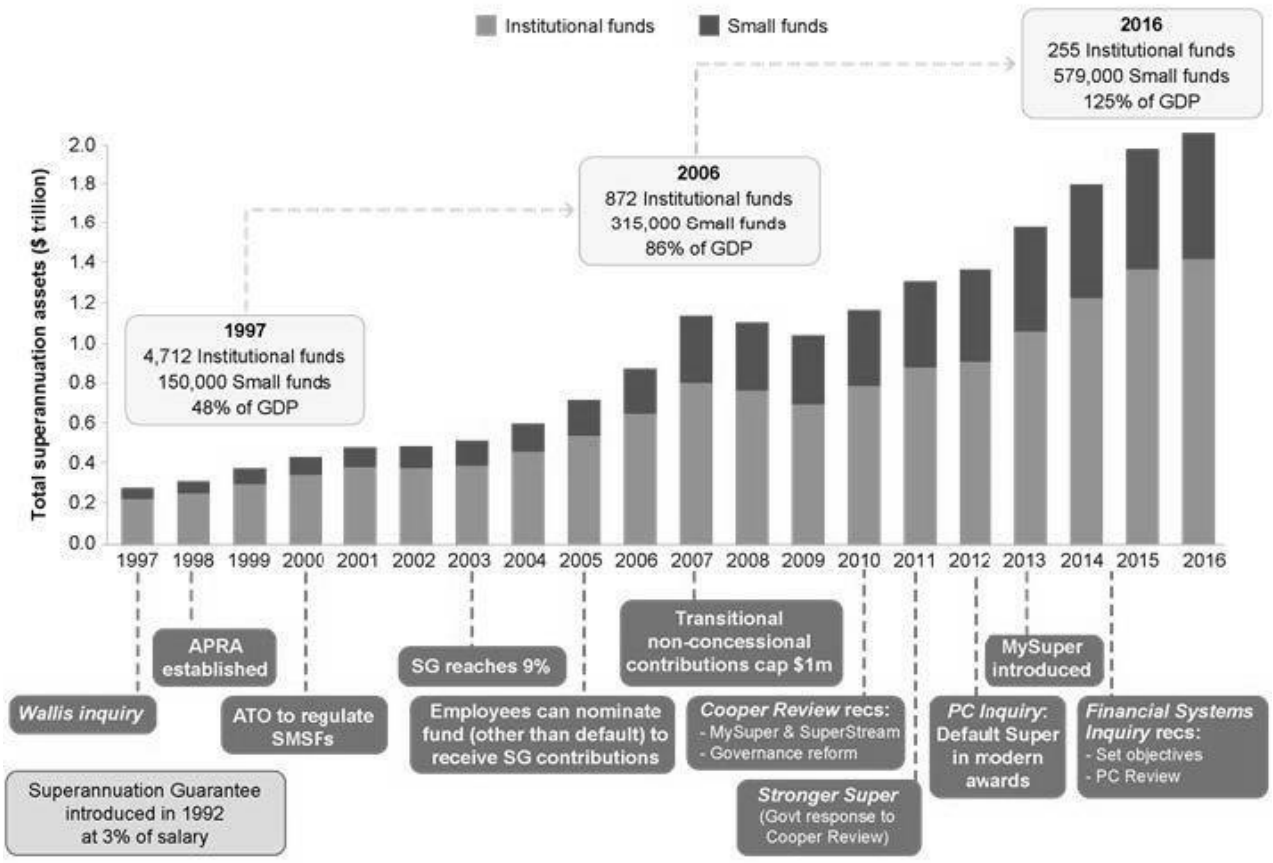
[161] ASIC also administer the Australian financial services (AFS) and credit licensing regime and monitors financial services and credit businesses (Australian Government Treasury, 2018).

Summary – Regulation and legislation

The evolution of the superannuation system has been rapid since the implementation of the SG Act in 1992. As the system evolves with growth of funds under management there is more scrutiny applied from the stakeholders of the superannuation system. In 2010, the Australian Government commenced an industry wide review – the Super Systems Review, commonly known as the Cooper Review. As a result of the Cooper Review, wide ranging reforms were implemented by the Australian Government, referred to as the Stronger Super Reforms. The main themes of the Stronger Super Reforms related to cost, efficiency, governance and oversight of the superannuation system.[162] The most significant change was the introduction of the My Super initiative which aimed to provide a new low cost and simple superannuation product (Cooper et al., Du2010). My Super commenced on 1 July 2013 and provided members with a simple set of investment products that allow comparison across the industry based on cost, investment performance and insurance coverage. The essence of My Super is to reduce the complexity faced by members and reduce unnecessary costs within the superannuation system.

The regulatory landscape of the superannuation system is complex in relation to the amount of economic and financial significance. In essence, there are three regulators of the superannuation system; however, the level of oversight of the system may be considered to be stretched. This is due to the competing demands of the other responsibilities that the abovementioned authorities are charged with. Figure 2.A.2 provides an illustrative summary of the evolution of superannuation system regulation relative to the growth of funds under management.

[162] The four reforms were the MySuper initiative; Superstream; SMSF initiatives and Governance.



a 'Institutional funds' comprise corporate, industry, public sector and retail funds. 'Small funds' comprise small APRA funds, single-member approved deposit funds and SMSFs.
Data sources: ABS (*Australian National Accounts: National Income, Expenditure and Product, Australia, June 2016*, Cat. no. 5206.0); APRA (2007, 2014a, 2016e, 2016h).
Sourced from the Productivity Commission, 2016.

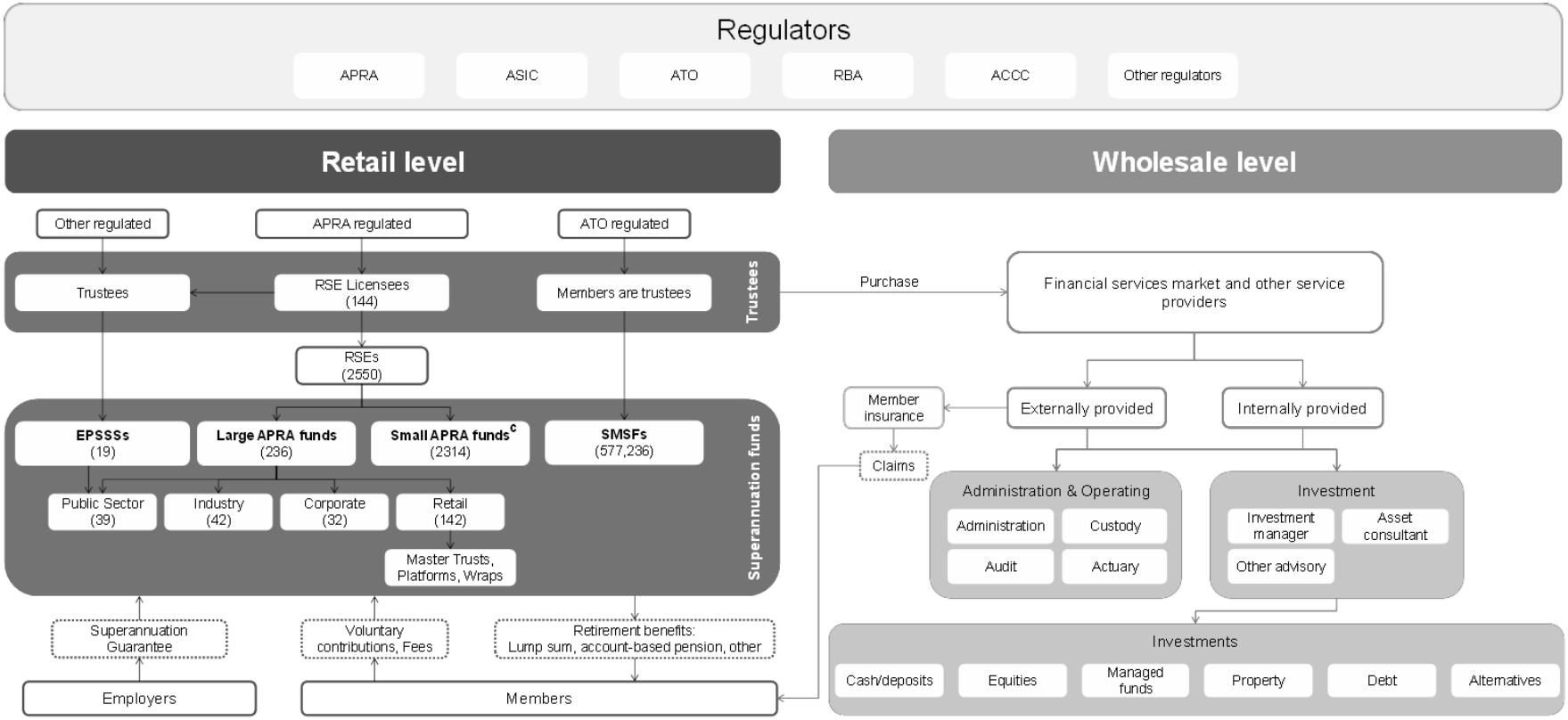
Figure 2.A.2. – Key developments in the modern superannuation system [a]

Market structure of the superannuation industry

The superannuation industry has a complex market structure. There are many diverse participants with varying roles and responsibilities. There are two distinct components of the superannuation industry, which are the retail and wholesale level. The retail level is regarded as the front office of the superannuation industry. The wholesale level is the back office, which is broad and has a multitude of service providers ranging from investment managers, asset consultants and auditors (APRA 2016). A superannuation fund is predominately set up to operate as a trust (Drew & Standford, 2003), able to accept compulsory contributions from

employers on behalf of their employees (Donald et al., 2016). There are two major categories of superannuation funds that are regulated by two separate government authorities. The first category is the large APRA regulated superannuation funds[163] which are further classified as corporate, public sector, industry and retail. The second category is the self-managed superannuation funds, more commonly known as SMSFs, which are regulated by the Australian Tax Office. SMSFs are do it yourself (DIY) funds with less than 5 members, who are all classified as member-trustees. This study focuses on APRA regulated superannuation funds, specifically industry funds. APRA regulated funds must apply to be a Registerable Superannuation Entity (RSE) and its trustees must be RSE licensees as defined under the SIS Act. Figure 2.A.32 provides an overview of the superannuation system.

[163] APRA also regulate 'small' APRA funds (SAFs) involving four members or less. SAFs are different from SMSFs.



a Numbers in brackets denote number of trustees or superannuation funds as reported by APRA as of June 2016.

b RSEs are Registrable Superannuation Entities; EPSSSs are exempt public sector superannuation schemes; and SMSFs are self-managed superannuation funds.

c Small APRA funds include pooled superannuation trusts and single-member approved deposit funds for the purposes of this figure.

Source: APRA (2016h).
Sourced from the Productivity Commission, 2016.

Figure 2.A.3. – An overview of the superannuation system [a, b, c]

Tax structure of the superannuation industry

The Australian superannuation industry tax structure is unique in comparison to retirement income systems around the world.[164] The taxation structure in the Australian superannuation sector taxes contributions, investment income within the fund, and grants exemptions upon withdrawal (TTE Structure) (Williams, 2013). There are however quite complex rules imbedded within the tax system that govern the superannuation industry. The first taxing point within superannuation is on contributions. Compulsory contributions made by employers are treated as assessable income and are effectively subject to a 15% tax payable by the fund.[165] Contributions made by members after tax, referred to as non-concessional contributions[166], government co-contributions, and low income contributions, all have a zero tax rate. The second tax point is on superannuation earnings within the fund. The earnings that a superannuation fund makes on its investments are effectively taxed at 15% on a net basis (Thomson Reuters, 2016). Superannuation funds are able to access an income tax exemption on fund earnings on assets attributable to current pension members[167] (Thomson Reuters, 2016). The third and final point that requires attention is withdrawal of benefits. Lump sum benefits and pension income streams are not taxed when the benefit is paid from a taxed source to an individual aged 60 or above; however, an individual aged below 60 may be liable to tax at rates ranging from 0% to 20% based on their financial circumstances (Thomson Reuters, 2016). Superannuation is a highly effective savings and investment vehicle for retirement

[164] In the U.S. and U.K. the taxation structure for retirement income systems are EET structures. The EET structure provides an exemption on contributions; an exemption on investment income and the benefits are taxable on withdrawal (William, 2013).

[165] The 15% concessional contribution tax rate is available to individuals with an annual income below $300,000 from 2012–13 and is payable by the fund. If the member earns an annual income above $300,000 then the individual is liable to pay an extra 15% contributions tax on top of the concessional contribution tax rate. If the member does not disclose or quote their tax file number (TFN) the tax rate is 49% and is payable by the fund.

[166] Non concessional contributions cap is $180,000 per individual per year (or $540,000 every 3 years for people under the age of 65). The individual is liable to pay a tax rate of 49% for contributions that exceed the non-concessional contributions cap.

[167] To qualify for the exemption, superannuation funds must segregate the assets that are categorised to meet current retirement liabilities from all other assets within the fund.

which provides favourable tax concessions to members. The superannuation industry is made up of corporate entities for the benefit of its members; however, it has different and complex tax arrangements. In light of this, superannuation funds warrant separate analysis of tax behaviour in comparison to public companies. Unfortunately, there is no literature that is focused towards that goal and the aim here is to start the discourse on whether there is an incidence of tax aggressiveness in the superannuation industry.

Appendix 3.A. – Tax transparency reports

Australian Government
Commonwealth Superannuation Corporation

Commonwealth Superannuation Corporation

Tax Transparency Report

For the year ended 30 June 2017

1. Introduction

I am pleased to provide the Commonwealth Superannuation Corporation's ("CSC") Tax Transparency Report for the year ended 30 June 2017 (FY17). This report has been prepared in accordance with the Voluntary Tax Transparency Code ("TTC"), which was introduced by the Board of Taxation in May 2016.

CSC was established on 1 July 2011 to meet the superannuation needs of Australian Government employees and members of the Australian Defence Force ("ADF"). CSC's vision is to build, support and protect better retirement outcomes for all of our members and their families.

For the purpose of this report, CSC comprises five regulated public sector and ADF superannuation funds, as well as a single regulated pooled vehicle (known as the ARIA Investments Trust or "AIT") that is used to make investments for these funds. The single regulated pooled investment vehicle has $41 billion funds under management as at 30 June 2017. The five regulated public sector and ADF superannuation funds are:

- Commonwealth Superannuation Scheme ("CSS");
- Public Sector Superannuation Scheme ("PSS");
- Military Superannuation and Benefits Scheme ("MilitarySuper");
- Public Sector Superannuation accumulation plan ("PSSap"); and
- Australian Defence Force Superannuation scheme ("ADF Super").

CSC is committed to meeting its Australian and overseas tax obligations. This report forms part of its ongoing work to maintain strong tax governance and transparency.

Andy Young
General Manager, Finance
5 December 2017

2. Assurance regimes applicable to the business

CSC is a holder of a Registrable Superannuation Entity licence and an Australian Financial Services licence, meaning it is regulated by the Australian Prudential Regulation Authority under the *Superannuation Industry (Supervision) Act 1993* (Cth) and the Australian Securities and Investments Commission under the *Corporations Act 2001* (Cth).

3. Tax Strategy

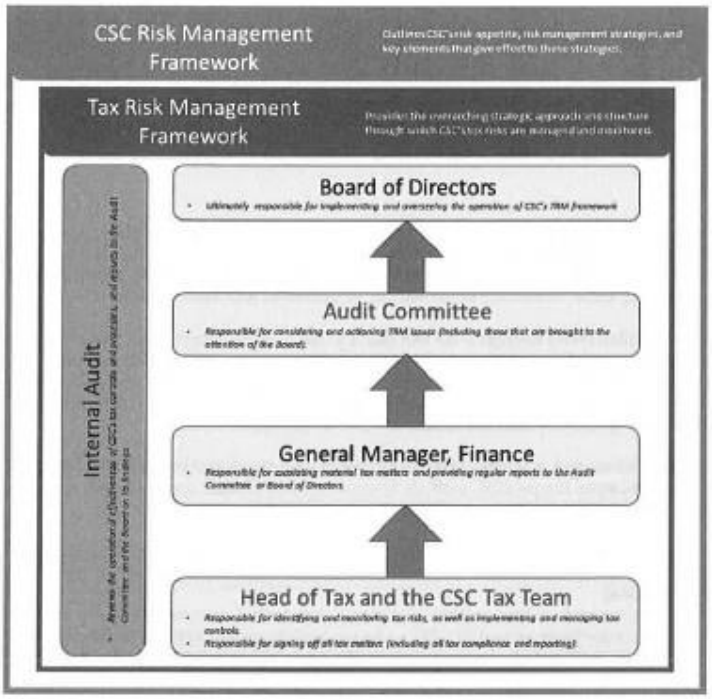
CSC's tax strategy is to maintain a high level of diligence and accountability through tax policies and procedures that reflect 'best practice' as determined by the Australian Taxation Office ("ATO"). CSC considers that its focus on achieving strong tax compliance, certainty and integrity is consistent with its long-held objective of building, supporting and protecting better retirement outcomes for its members and their families.

CSC's tax strategy is implemented through a tax risk management ("TRM") framework that ensures a high degree of transparency and accountability. Tax risk extends beyond CSC's relationship with tax authorities, and has an impact on almost every area of the organisation, including: investments, investment operations, finance, member and employer services, people, scheme administration and legal and compliance. A negative impact in any one of these areas can have a significantly adverse impact on CSC's reputation.

CSC's TRM framework forms part of a wider risk management framework that incorporates clear risk management procedures and responsibilities across CSC staff, its internal risk and compliance functions, and its Board. In line with this wider Risk Management Framework, CSC's TRM framework is supported by:

- Documented tax controls that facilitate the appropriate management and oversight of tax risks and issues;
- Reporting and sign-off procedures for all transactions involving tax (including all tax compliance and reporting obligations);
- Regular reporting of significant tax matters and risks to the Audit Committee and/or to the Board; and
- Regular reviews (undertaken as part of CSC's internal audit program) of the effectiveness of CSC's tax policies, procedures and controls. Internal audit findings and recommendations are reported to the Audit Committee and the Board.

The below diagram illustrates the relationship between CSC's TRM framework and its wider Risk Management Framework.



CSC's TRM framework has been subject to an independent review, which concluded that it is consistent with the ATO's tax corporate governance expectations, as set out in its *Tax Risk Management and Governance Review Guide*.

4. CSC's Attitudes to Tax Planning

In accordance with CSC's TRM framework, CSC maintains a low tax risk appetite. This means that CSC will only adopt tax positions where the application of the tax law is straightforward or where there is clear authority to support the tax position adopted. CSC proactively engages with its external tax advisers and the ATO to ensure the positions adopted accord with those stated objectives. CSC considers that being proactive in managing these positions supports a robust tax strategy, and a strong relationship with the ATO that is built on integrity and transparency.

CSC holds investments in Australia as well as in various overseas jurisdictions. In doing so:

- CSC does not shift or accumulate profits in low tax jurisdictions;
- Investment income and gains are repatriated back to Australia (and are subject to Australian tax);
- CSC fully complies with overseas tax laws and filing obligations; and
- CSC does not use the laws of overseas jurisdictions to avoid the disclosure of income or assets.

5. Tax Contribution

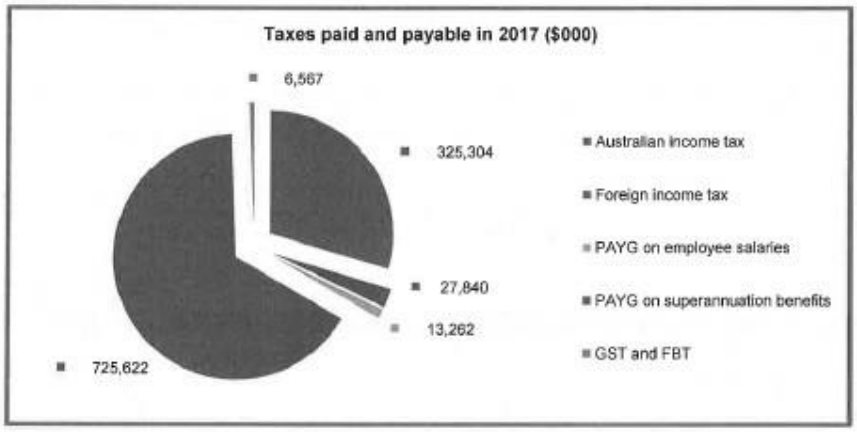
CSC is subject to Australian income tax at a rate of 15%, which is the standard rate for superannuation funds in Australia. However, differences can arise depending on the nature of the income. For example, long-term capital gains and franking credits reduce this headline rate of 15%.

In addition to Australian income tax, CSC pays various foreign income taxes in relation to its overseas investment income. The rate of foreign income tax may be different to the standard 15% income tax rate in Australia. Given that these gains are also subject to Australian income tax, CSC's foreign investments give rise to a risk of double tax. To mitigate double taxation, Australian tax law permits CSC to claim a foreign income tax offset ("FITO") in Australia for these foreign income taxes paid.

The difference between CSC's effective income tax rate and the superannuation rate of 15% is illustrated at part 5.1 of this report.

CSC also pays Goods and Services Tax ("GST") and employment taxes (including Fringe Benefits Tax ("FBT") where applicable). In addition, CSC remits Pay-As-You-Go ("PAYG") withholding tax from superannuation benefit payments to members and remits PAYG withholding tax deducted from employee salaries.

The following is a summary of the taxes that were paid or remitted in 2017. Refer to Appendix A for further details.



5.1 Effective income tax rate

The effective income tax rate is calculated as total income tax expense, divided by the sum of net investment and contribution income (after subtracting related expenses). This calculation is not based on accounting profit, as superannuation funds now exclude certain revenue and expense items from the income statement (such as superannuation contributions and other items affecting member liabilities).[1] These items may be regarded as assessable income or deductible expenses for income tax purposes and as such, should be included in calculating the effective income tax rate.

Taxpayers often report both an Australian effective income tax rate (which covers taxes paid on Australian operations), as well as a 'global' effective income tax rate that also includes taxes paid on overseas operations. While CSC has international investments that affect its financial performance, these foreign interests are of a minority and passive nature, and neither CSC nor any controlled entities have any international operations. Therefore international operations do not affect the overall effective income tax rate. CSC's effective income tax rate is set out below.

	CSC ($000)	
	2017	2016
Benefits accrued as a result of operations before income tax	6,621,779	3,508,357
Total tax expense (based on the Profit and Loss Statements)	549,505	153,494
Effective income tax rate under the TTC requirements	**8%**	**4%**

The difference between CSC's income tax rate and the standard superannuation fund tax rate is largely due to the following:

	Percentage difference	
	2017	2016
Contributions not subject to income tax[A]	3.0%	5.6%
Franking credits from franked dividends received	1.6%	3.1%
Investment revenue already taxed	1.6%	2.7%
Foreign income tax offsets	0.3%	0.8%
Other adjustments	0.2%	(1.4%)
Total difference from the standard income tax rate of 15%	**7%**	**11%**

[A] Under Australian tax law, certain types of contributions received by superannuation funds are not subject to income tax (such as personal superannuation contributions where the member has not claimed an income tax deduction, contributions made on behalf of a spouse, government co-contributions and rolled-over superannuation benefits).

[1] This relates to the introduction of accounting standard AASB 1056 *Superannuation Entities* which replaced AAS 25 *Financial Reporting by Superannuation Plans* with effect from the year ended 30 June 2017.

6. Reconciliation of accounting profit and income tax expense

The table below is a reconciliation of CSC's aggregated accounting profit against CSC's total income tax expense and current income tax expense. As mentioned in part 5.1 above, CSC's calculation of income tax includes taxes paid on CSC's accounting profits on investments, as well as superannuation contributions (net of related expenses).

In determining CSC's current income tax expense, differences arise between 'benefits accrued as a result of operations before income tax' (as determined under accounting standards) and 'taxable income' (which is used to determine income tax expense). These differences are called non-temporary differences and temporary differences.

Non-temporary differences are differences between accounting and tax that do not arise from the timing of when revenue and expenses should be recognised. These differences can arise because the tax law may include (or exclude) an item in (or from) taxable income that would not be treated the same for accounting purposes. For instance, an expense that is never deductible for tax purposes.

Temporary differences occur because the tax and financial accounting rules operate differently in determining the timing of when revenue and expenses are recognised. For example, CSC's 2017 accounting income may include revenue and expense transactions that have already been included in CSC's 2016 taxable income (or vice versa).

	CSC ($000)	
	2017	**2016**
Benefits accrued as a result of operations before income tax		
Superannuation contributions net of related expenses (including insurance premiums and scheme administration fees)	2,859,296	2,788,882
Investment income	3,762,483	719,475
Total	**6,621,779**	**3,508,357**
Initial income tax calculated at 15%	993,267	526,254
Non-temporary differences (investments)		
Net change in member benefits from investing activities[A]	519,559	103,215
Investment revenue already taxed[B]	(625,429)	(197,877)
Non-deductible expenses	1,615	1,527
Franking credits from franked dividends received[C]	(107,141)	(110,264)
Foreign income tax offsets[D]	(20,677)	(21,018)
Capital gains adjustments	(16,949)	48,031
Under / (over) provision for income tax relating to prior income years[E]	6,836	303
Other items[F]	(80)	(287)
Non-temporary differences (contributions)		
Contributions not subject to tax[G]	(199,605)	(195,500)
Amounts transferred from other funds[H]	(1,349)	65
Notional employer contributions subject to tax	53	0
No-TFN-quoted contributions subject to additional tax	243	19
Anti-detriment deduction	(865)	(775)
Under / (over) provision for income tax relating to prior income years	26	407
Total income tax expense (current income tax and deferred income tax)	**549,505**	**153,494**
Temporary differences:		
Interest receivable	10	5
Unrealised taxable capital gains[I]	(238,975)	164,133
Accrued income and expenses[J]	10,711	(21,475)
Unrealised investment losses	(171)	(9,332)
Deferred franking credits and foreign income tax offsets	532	3,808
Adjustments recognised in the period for current tax of prior periods[K]	4,285	17,709
Deductible insurance premiums and scheme administration fees (deferred movement)	(596)	(66)
Insurance premiums charged to members' accounts (deferred movement)	3	(28)
Current income tax expense (income tax paid and payable in respect of the current income year)	**325,304**	**308,248**

[A] This amount represents 'inter-group' movements in the fair value of units in the AIT that are held by CSC's five regulated public sector and ADF superannuation funds.

[B] These amounts largely represent trust distributions that have already been subject to income tax in prior income years. An adjustment is made to prevent them from being taxed twice.

[C] Franking credits arise from Australian income taxes that have been paid by companies. These are passed onto shareholders through franked dividends, thereby reducing the incidence of double taxation. Franking credits are applied to reduce income tax expense.

[D] CSC pays various foreign taxes in relation to its overseas investment income. This income is also subject to Australian income tax. To prevent double taxation, Australian tax law permits CSC to claim a tax offset in Australia for these foreign taxes paid.

[e] *These adjustments relate to differences between the current and deferred income tax expense recorded in the current and prior years, against the tax actually paid in respect of that year. These differences generally arise due to additional adjustments made as part of preparing and lodging CSC's income tax returns.*

[f] *These amounts represent other adjustments that are required under the tax law, but are not recognised for accounting purposes.*

[g] *Under Australian tax law, certain types of contributions received by superannuation funds are not subject to income tax (such as personal superannuation contributions where the member has not claimed an income tax deduction, contributions made on behalf of a spouse, government co-contributions and rolled-over superannuation benefits).*

[h] *Amounts that have been transferred from other superannuation funds are generally not recognised as 'superannuation contributions' and are not subject to income tax. If these amounts have not yet been taxed however, an adjustment is required to increase income tax expense.*

[i] *This amount represents unrealised capital gains on investments held in the AIT. Under Australian tax law, this amount is not subject to income tax until the investment is realised. As such, an adjustment is required to reduce current income tax expense. However, because the unrealised gain gives rise to tax in the future, there is no impact on total income tax expense.*

[j] *These adjustments represent investment income and expenses that have been recognised for accounting purposes, but are not yet recognised for income tax purposes (either because the revenue has not yet been received, or because the expenses have not yet been paid). These amounts are not immediately reflected in current income tax expense, but will be reflected for income tax purposes in later income years (hence there is no change to total income tax expense).*

7. International related party dealings

CSC did not enter into any international related party dealings during FY16 and FY17.

8. Material tax risks or at risk tax positions

CSC has not identified any material tax risks or at risk tax positions for FY16 and FY17.

Appendix A - Tax contribution

	Income tax paid and payable to the ATO and to overseas tax authorities ($000)	GST remitted to the ATO ($000)	FBT paid by CSC to the ATO[2] ($000)	PAYG withholding remitted to the ATO (from employee salaries) ($000)	PAYG withholding remitted to the ATO (from member benefits) ($000)	Total ($000)
2017						
Australian federal taxes	325,304	6,469	98	13,262	725,622	1,070,755
Other jurisdictions	27,840					27,840
Total (2017)	**353,144**	**6,469**	**98**	**13,262**	**725,622**	**1,098,594**
2016						
Australian federal taxes	308,248	6,848	133	14,160	676,127	1,005,515
Other jurisdictions	24,727					24,727
Total (2016)	**332,975**	**6,848**	**133**	**14,160**	**676,127**	**1,030,243**

[2] This includes FBT paid by CSC on non-cash benefits provided to its employees for the FBT years ended 31 March 2017 and 31 March 2016.

Tax Report

For the year ended 30 June 2017

QSuper

Contents

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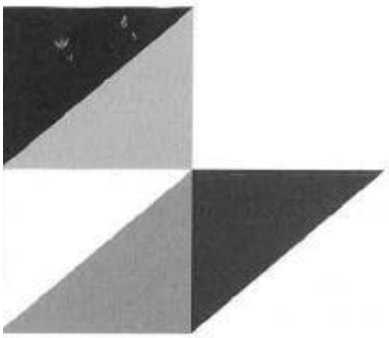


Introduction

The QSuper Board is committed to the highest standards of governance.

Each year, the QSuper Board contributes almost $800 million on behalf of our members in taxes to federal and state governments in Australia. In addition, The QSuper Group[1] pays taxes in many other countries through our global investment activities.

The Tax Transparency Code (TTC) is a set of principles and 'minimum standards' developed by the Board of Taxation to guide the public disclosure of tax information. For large organisations such as QSuper, it is designed to:

1. encourage public disclosure of our tax affairs, and in particular, highlight that we are paying our fair share; and
2. ensure we are transparent and help educate the public about our compliance with Australia's tax laws.

The QSuper Board supports the TTC and is pleased to publish its first report for the year ended 30 June 2017. While adoption of the TTC is voluntary, the QSuper Board has decided to participate, to provide our members and other interested parties with insight into:

- The tax strategy that the QSuper Board pursues
- The governance arrangements that the QSuper Board has implemented and follows in pursuit of that strategy
- The substantial extent to which QSuper and its members contribute to taxes paid in Australia and elsewhere

Above all, this report provides a clear picture of how much tax we pay in Australia and overseas.

About the QSuper Group

QSuper is one of Australia's largest superannuation funds, with more than $72 billion in funds under management. From humble beginnings over a century ago, today we manage the retirement savings of more than 566,000 members.

QSuper is a profit-for-member organisation and exists solely for the benefit of its members. Though we've grown significantly, we still care about our members more than anything else. Everything we do is designed to help our members achieve better financial outcomes.

From industry-leading products and award-winning service, to our great range of seminars and innovative tools that focus on our members' overall financial wellbeing, we're constantly looking at better ways to do things so our members can feel confident we're putting their financial future first.

QSuper's products and services are made up of a range of diverse superannuation fund services, including the financial advice business QInvest and the mortgage broking advice service QInvest LoanFinder. We manage much of our end-to-end administration and investments in-house, and on 1 July 2016, we launched QInsure, our own life insurance company, providing QSuper members with a tailored insurance offering.

We are proud of our heritage and the role we play in building a better Queensland and a better nation. This includes ensuring we make a meaningful and fair contribution to public finances through the appropriate payment of tax, not only in Australia, but in all countries we invest in and generate returns for our members.

In 2017, the QSuper Group paid in excess of $835 million in taxes and duties to governments, with the vast majority paid here in Australia.

1. When we say 'we' or 'us' or 'our' and 'the QSuper Group', we're referring to the QSuper Board, QInvest Limited (QInvest) (ABN 35 063 511 580 AFSL and Australian Credit Licence 238274), QInsure Limited (QInsure) (ABN 79 607 345 853, AFSL 483057) and QSuper Limited (ABN 50 125 248 286, AFSL 334546), unless the context we're using it in suggests otherwise. QInvest, QInsure and QSuper Limited are ultimately owned by the QSuper Board as trustee for QSuper.

Tax strategy and governance

Tax strategy

The QSuper Board has a fiduciary obligation to act in the best interests of the members of the Fund and pursues organisational strategies consistent with that obligation. In addition, the QSuper Board has a statutory obligation to have regard to expected tax consequences when developing investment strategies. Therefore, QSuper's tax strategy seeks to ensure that it pays the right amount of tax due under a reasonable interpretation of tax laws. The QSuper Board considers this approach meets its regulatory obligations as a taxpayer, as well as its fiduciary obligation to maximise the value of members' superannuation account balances over time, consistent with its duty to members. To this extent, the QSuper Board has endorsed the Fund's tax strategy.

QSuper invests members' monies across a diverse range of asset classes, geographic locations, and structures. Legal structures can vary depending on asset type and location, and are implemented to manage risk and maximise post-tax returns for our members. Typically, QSuper will establish an entity or entities in a foreign location in order to acquire assets in that location. For example, QSuper has established a considerable number of entities in the United States of America that own its extensive real estate and infrastructure assets in that country. QSuper has also established or invested in entities located in countries with low effective income tax rates, including Jersey, Guernsey, and Luxembourg.

The QSuper Board does not sanction aggressive tax structures. In undertaking its offshore investments, QSuper does not seek to shift profits to low tax rate jurisdictions or rely on secrecy provisions in any foreign locations to hide income or gains. QSuper typically invests in a limited number of entities in low tax rate jurisdictions, in order to access investments offered by collective investment vehicles. These vehicles are common investment structures established by overseas fund managers to aggregate equity from investors around the world to invest for a specific purpose. Aggregating funds in these locations means that no income tax is paid in the location where the funds are aggregated, but tax will still be payable where the asset and economic activity is located, as well as in the investor's home country, which in QSuper's case is Australia.

QSuper maintains an open, transparent relationship with the Australian Taxation Office (ATO), and as a key taxpayer, we participate in real time reporting on a quarterly basis. We maintain an open, transparent relationship with tax authorities through participation in regular reviews of our tax returns, as well as actively seeking advice from revenue authorities where tax positions are significant and unclear.

Tax governance

The QSuper Board has established a risk management framework and a tax governance policy.

The purpose of the tax governance policy is to establish a framework within which QSuper's tax liabilities are managed from an operational and risk management perspective. The tax governance policy has, at its heart, the objective of ensuring that tax positions that QSuper takes are appropriate, and that appropriate levels of third party review, including consultation with revenue authorities, are undertaken.

International related party dealings

QSuper's international related party dealings are limited to acquiring ownership interests in investments made on behalf of our members. These ownership interests are structured as either debt or equity, and are always structured on arm's length terms. QSuper has no other international related party transactions.

Tax contribution

The QSuper Group of entities is a significant contributor to government revenues in Australia. The Group pays more than half a billion dollars of tax annually for superannuation contributions it receives for members. It also pays significant levels of income tax and duties for investment returns and insurance premiums.

The tables below provide important information about taxes paid in Australia and overseas for the year ended 30 June 2017.

Summary of taxes paid – Australia

The following table outlines taxes paid by the QSuper Group in Australia:

Tax type	$ million
Income Tax – Fund	740
Income Tax – Corporate	5
GST	10
FBT	-
Payroll Tax	7
Duties	34

Summary of taxes paid – foreign

The following table outlines taxes paid by the QSuper Group in foreign jurisdictions:

Tax type	$ million
Income Tax – Investments	39

Foreign taxes paid by country

Country	$ million
Australia	796.2
United States of America	11.6
France	4.7
Germany	2.8
United Kingdom	2.7
New Zealand	1.1
South Korea	0.8
Belgium	0.8
Spain	0.5
Denmark	0.5
Sweden	0.6
Japan	0.5
Taiwan	0.4
Chile	0.3
The Netherlands	0.3
Hong Kong	0.2
Canada	0.2
Mexico	0.1
South Africa	0.1
Finland	0.1
Other	9.9
Total	**834.6**

Income tax reconciliations

Reconciliation of accounting profit to income tax expense

The TTC requires a reconciliation of accounting profit to the income tax expense disclosed in QSuper's financial statements for the year ended 30 June 2017. The reconciliation is outlined below:

	$ million
Change in net assets before income tax	4,866
Prima facie income tax expense at the tax rate of 15%	730
Imputation and foreign income tax offsets	(193)
Allocated income earnings exempt from tax	(268)
Other[3]	(231)
Notional deduction for self-insurance	(16)
Income tax expense	22
Effective tax rate[1,2]	0.4%

Key items to note are:

1. The effective tax rate of 0.4% relates mainly to tax on net investment revenue. It includes tax exempt earnings on assets supporting income accounts, tax offsets for franking credits received, and the one-third capital gains tax discount applicable to capital gains derived from assets held for more than 12 months.
2. The effective tax rate for Net Contribution Revenue is not included in the above calculation, as Australian Accounting Standards no longer require it be included. The effective tax rate for Contributions is:

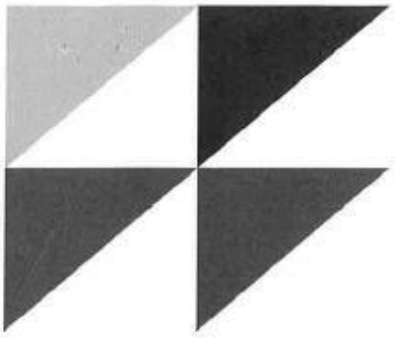
	$ million
Gross contributions	7,973
Less: Member and other non-taxable contributions (incl. deductions relating to contributions)	(3,507)
Taxable contributions	4,466
Tax on taxable contributions at 15%	670
Effective tax rate on contributions	8.4%

3. Other includes capital gains tax discount of $164 million.

Reconciliation of income tax expense to income tax paid

The TTC also requires participants to disclose a reconciliation of the differences between income tax expenses disclosed in the 2016/2017 financial statements and actual tax paid in the 2016/2017 financial year. The reconciliation is as follows:

	$ million
Income tax expense	**22**
Add tax effect of:	
Taxable contributions	670
Unrealised (gains)/losses on investments	54
Income due but not received	11
Carry forward losses	(8)
Accrued franking credits and foreign income tax offsets	(4)
Other	(5)
Balance of 2015/2016 income tax liability paid	210
Balance of 2016/2017 income tax liability to be paid	(134)
Income tax paid in the 2016/2017 financial year	**816**



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QSuper

Appendix 4.A. – Taxation of Investment Income

Taxation of Investment Income (Accumulation Phase)

	Interest Income	Capital Income with CGT Discount*	Capital Income without CGT	Unfranked Dividend
	($)	($)	($)	($)
Income	100	100	100	70
Less: Tax @ 15%	(15)		(15)	(10.50)
Less: Tax @ 10%		(10)		
Fund Member Income	85	90	85	59.50

* If the capital asset is realised after being held for greater than 12 months then there is a 1/3 discount on the tax rate available. The discount equates to approximately 5%, therefore the total tax on a capital asset that eligible for a CGT discount is 10%.

Fully Franked Dividend Income

	(Accumulation Phase)		(Pension Phase)	
	($)	($)	($)	($)
Cash Component of dividend	70		70	
Franking Credit of dividend	30		30	
Grossed up franked dividend*		100		100
Tax already paid at company level @ 30%	(30)		(30)	
Refund of Tax @ 15%**	15			
Refund of Tax @ 30%***			30	
Less: Tax at the Fund level		15		0
Fund Member Income		85		100

* Grossed Franked Dividend includes Cash of $70 and Franking Credit of $30. Franking Credit can only be accessed if the entity's marginal tax rate is less than the corporate tax rate of 30%.
** As the fund has a marginal tax rate of 15%. The franking credits can be accessed to the difference between of the corporate tax rate of 30% and the statutory fund tax rate 15%. Which means that the superannuation fund will receive $15 back from the ATO.
*** As the fund has a marginal tax rate of 0% at the pension phase the franking credits can be accessed to the difference between of the corporate tax rate of 30% and the statutory fund tax rate 0%. Which means that the superannuation fund will receive $30 back from the ATO in this example.

Appendix 5.A. - Glossary[1]

AAS 25 Financial Reporting by Superannuation Plans

This accounting standard applied to Superannuation Entities within this study and initially issued in 1993.

AASB 1056 Superannuation Entities

Is the new accounting standard that addresses Superannuation Entities, which began for financial years, beginning on or after 1 July 2016.

AASB Australian Accounting Standards Board

The Australian Accounting Standards Board (AASB) is the Australian Government agency responsible for developing, issuing and maintaining accounting standards that apply under Australian company law. The Board's functions and powers are set out in the Australian Securities and Investments Commission Act 2001

Abridged Financial Statements

These are condensed financial statements that cover the accounting period, however omit detailed financial information such as the notes to the financial statements.

Accumulation Phase

The accumulation phase occurs during the individual's working life, commencing at approximately at the age of 16 to 18 (SIS Act, 1993).

APRA

The Australian Prudential Regulation Authority (APRA) is an independent statutory authority that supervises institutions across banking, insurance and superannuation, and is accountable to the Australian Parliament.

ASIC Australian Securities Investment Commission

Australian Securities and Investment Commission (ASIC) was established in 1998. ASIC is charged with the responsibility of administering the Corporations Act 2001 (Cth). Primarily, ASIC has oversight over market integrity, disclosure and other consumer protection matters across the entire corporate and financial services industry.

Asset Allocation

Is an investment strategy that aims to balance risk and reward by apportioning a portfolios' assets according to an individual's goals, risk tolerance and investment horizon. (Investopedia)

Assets Under Management (AUM)

Also referred to as Funds Under Management (FUM) measures the total market value of all the financial assets which a superannuation manages on behalf of their members.

[1] The definitions for the glossary are sourced from various documents located on the internet.

Australian Equities

These are shares in Australian (ASX) listed companies.

ATO Australian Tax Office

The Australian Tax Office (ATO) is responsible for administering the Income Tax Assessment Act (ITAA) 1936 and 1997 (Cth). The ATO is a government organisation that is charged with the responsibility of collecting and monitoring Australia's tax system.

CIO – Chief Investment Officer

The Chief Investment Officer is the executive responsible for managing the superannuation funds investment portfolio.

Compulsory Contributions

Compulsory contributions are referred to as concessional contributions, which are made into the employees' superannuation fund before tax as part of the Superannuation Guarantee. Current rate of the Superannuation Guarantee is 9.5%.

Cooper Review

On 29 May 2009, the Minister for Superannuation and Corporate Law* announced the Super System Review into the governance, efficiency, structure and operation of Australia's superannuation system. The Review was initiated with the support of the superannuation industry.

Directly Held Investments

Directly Held Investments refers to investments that are directly held and manage by the superannuation fund instead of through an external third party.

Diversification

Diversification is a risk management strategy that mixes a wide variety of investments within a portfolio. A diversified portfolio contains a mix of distinct asset types and investment vehicles in an attempt at limiting exposure to any single asset or risk (Investopedia).

Dividend Imputation

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

Domestic Assets/Investments

Australian investments are domestic assets. These range from government bonds, corporate bonds, equities and infrastructure assets domiciled in Australia.

Economies of Scale

Economies of scale refers to the phenomenon where the average costs per unit of output decrease with the increase in the scale or magnitude of the output being produced by a firm.

ESG Ethical Sustainable and Governance Framework

An investment style that takes into consideration of the environmental, social and governance aspect of organisations.

External Investment Managers

Independent external organisations manage and monitor assets on behalf of the superannuation funds' investments.

Foreign Assets/Investments

Assets not domiciled in Australia are foreign assets.

Franked Dividend

A franked dividend is a dividend that has franking credits attached to the dividend.

Franking Credits

Franking credits are a tax benefit that are provided to Australian equity shareholders who receive a dividend from the respective company that can be used to offset taxes payable and are fully refundable (McClure et al., 2018).

Foreign Equities

Foreign equities are shareholding in non-domestic

Gross Domestic Product (GDP)

The financial value of all finished goods and services made within a country during a specific period.

Interest Income

Interest Income is the income generated from interest bearing assets such as money market instruments and fixed income securities, where the interest rates are key determinant of how much income is generated.

Investment Strategies

An investment strategy are a set of rules, behaviours or procedures that assist in the design of a funds' investment portfolio which contain a number of asset classes.

Liquidity

Financial liquidity refers to how easily assets can be converted into cash.

My Super Accounts

My Super is a single investment strategy product that promotes simplicity and provides a standard set of fees which is broken down into the applicable costs.

Non-Concessional Contributions

Individuals make these contributions to their superannuation account from after tax income. These contributions are not taxed in your superfund.

OFC – Offshore Financial Centre

Offshore financial centres have been referred to as tax havens. OFCs are located in jurisdictions that contain a relatively large number of financial institutions that engage in business transactions with non-residents. OFCs are domiciled in regions ranging from the Caribbean, the British Isles, Europe and South America.

Pension Phase (Retirement)

This is when the member is retired. In this phase, individuals can either take an income stream or request a lump sum benefit or combination thereof.

Productivity Commission

The Productivity Commission was created as an independent authority by an Act of Parliament in 1998, to replace the Industry Commission, Bureau of Industry Economics and the Economic Planning Advisory Commission. However, its roots go deeper, to the establishment of the Industries Assistance Commission in 1974 (which itself replaced the Australian Tariff Board) and, later, the Industry Commission in 1989.

Superannuation Industry Supervision (SIS) Act

The SIS Act addresses most aspects of fund operations, including administration, accounting, auditing, reporting and governance. Compliance with the requirements of the SIS Act is obligatory for recognition of the fund as a complying fund and for it to be eligible to hold and receive superannuation contributions (s. 13A, SIS Act, 1993). Failure to comply with these requirements attracts punitive financial (tax) penalties (SIS Act, 1993).

TAIM

TAIM is broadly defined as the "active management of taxes of a fund by incorporating tax consequences into the investment process" (Mackenzie & McKerchar, 2014: p. 253).

Tax Propagation

Tax propagation is an ex-post tax management practice that aims to reduce the funds' capital gains tax obligations on realisation of domestic equities

Transition Phase

The transition phase is the period when members approach retirement (Productivity Commission, 2016), where members have reached their preservation age and can access their benefit but may be taxed on certain withdrawals

Trustee

The trustee is the legal owner of the superannuation fund assets and is governed by the trust deed. The charged with the fiduciary responsibility to manage and administer the superannuation fund.

Unabridged Audited Financial Statements

This is the full financial statements with all the full note disclosures.

Voluntary Contributions

Contributions by individuals from post-income or savings and do not attract the 15% contribution tax.

Voluntary Tax Transparency Code

The Tax Transparency Code (TTC) is a set of principles and minimum standards to guide medium and large businesses on public disclosure of tax information. The TTC was developed by the Board of Taxation and endorsed by the Government in the federal Budget 2016–17.

Adoption of the TTC is voluntary and intended to complement Australia's existing tax transparency measures. The TTC is designed to encourage greater transparency within the corporate sector, particularly by multinationals, and to enhance the community's understanding of the corporate sector's compliance with Australia's tax laws.

Bibliography

Ainsworth, A. B., Akhtar, S. M., Corbett, A. J., Lee, A. D., & Walter, T. S., 2016. Are Australian Superannuation Industry Fees Too High?. *CIFR Paper*, (116).

Amiran, D., Bauer, A.M., Frank, M.M., 2016. Tax Avoidance at Public Corporations Driven by Shareholder Taxes: Evidence from Changes in Dividend Tax Policy. Unpublished working paper. Darden School of Business, The University of Virginia, VA.

Apelfeld, R., Fowler Jr, G.B. and Gordon Jr, J.P., 1996. Tax-aware equity investing. *Journal of Portfolio Management*, *22*(2), p. 18.

Armstrong, C. S., Blouin, J. L., & Larcker, D. F. 2012. The incentives for tax planning. *Journal of Accounting and Economics*, *53*(1–2), pp. 391–411.

Arnott, R. D., Berkin, A. L., & Ye, J. 2001. Loss harvesting: What's it worth to the taxable investor? *Journal of Wealth Management*, *3*(4), pp. 10–18.

Association of Superannuation Funds Australia (ASFA) 2017. *Superannuation Statistics*, *August 2017*. Retrieved from: https://www.superannuation.asn.au/resources/superannuation-statistics.

Aston, H. 2017. ATO wants $1b from oil giant Chevron in massive tax case. *Sydney Morning Herald*. 8 June 2007. Retrieved from http://www.smh.com.au.

Australia's Future Tax System (AFTS), 2018. *Retirement Income Consultation Paper*, 2008. Retrieved from: http://taxreview.treasury.gov.au/content/downloads/retirement_income_consultation_summary/Retirement_Incomes_Consultation_Paper.pdf.

Australian Accounting Standards Board (AASB), 2007. 'Proposed agenda rejection statement – Recognition of franked dividend revenue'. Retrieved from https://www.aasb.gov.au/admin/file/content105/c9/PropAgendaDecision_FrankedDivRevenue.pdf.

Australian Bureau of Statistics (ABS), 2004. *Media Release: Australia in 2051: almost half the population older than 50 years*. Retrieved from: https://www.abs.gov.au/ausstats/abs@.nsf/mediareleasesbytitle/7BC2291979320950CA2570C7007DA2D7?OpenDocument.

Australian Bureau of Statistics (ABS), 2009. *4102.0 Trend in Superannuation Coverage, Australia, March 2009*.

Australian Bureau of Statistics (ABS), 2016. *5655.0 Managed Funds – Superannuation, Australia, March 2016,* Table 4.

Australian Prudential Regulation Authority (APRA), 2005. 'Classification of Superannuation Entities', *APRA Statistics, 4 May 2005*.

Australian Prudential Regulation Authority (APRA), 2007. A recent history of superannuation in Australia, *APRA Insight*, Issue 2.

Australian Prudential Regulation Authority (APRA), 2014. APRA Statistics – December quarter 2014 Quarterly Superannuation Performance.

Australian Prudential Regulation Authority (APRA), 2016. APRA Statistics and APRA annual statistics for no. of accounts – June quarter 2016.

Australian Prudential Regulation Authority (APRA), 2017. Annual Fund-level Superannuation Statistics (AFSS, 2017). Retrieved from: http://www.apra.gov.au/Super/Publications/Pages/superannuation-fund-level publications.aspx.

Australian Prudential Regulation Authority (APRA), 2017. APRA Statistics and APRA annual statistics for no. of accounts – June quarter 2017.

Australian Prudential Regulation Authority (APRA), 2018. APRA Annual Report – September 2018.

Australian Prudential Regulation Authority (APRA), 2019. APRA *Quarterly Superannuation Performance Statistics* – March 2019.

Australian Stock Exchange (ASX) 2017. *Market Statistics*, 2017.

Australian Super. 2016-17. 2016-17 *Annual Report to Members.* Melbourne, VIC.

Australian Taxation Office (ATO) 2017. ATO warnings — schemes and superannuation. *Tax Alert.* Retrieved from: https://www.ato.gov.au/General/Tax-planning/Tax-avoidance-schemes/Super-Scheme-Smart/.

Australian Taxation Office. 2016. *Voluntary Tax Transparency Code*. Retrieved from: https://www.ato.gov.au/Business/Large-business/In-detail/Tax-transparency/Voluntary-Tax-Transparency-Code/.

Australian Taxation Office. 2017. *ATO warnings — schemes and superannuation*. ATO Media Release.

Australian Taxation Office. 2018. *Tax risk management and governance review guide.* Retrieved from: https://www.ato.gov.au/Business/Large-business/In-detail/Key-products-and-resources/Tax-risk-management-and-governance-review-guide/.

Australian Taxation Office. 2019. *Non-concessional contributions*. Retrieved from: https://www.ato.gov.au/Individuals/Super/In-detail/Growing-your-super/Super-contributions---too-much-can-mean-extra-tax/?page=3.

Bankman, J., 1999. The tax shelter problem. *National Tax Journal*, pp. 925–936.

Basu, A. and Andrews, S., 2014. Asset allocation policy, returns and expenses of superannuation funds: Recent evidence based on default options. *Australian Economic Review*, *47*(1), pp. 63–77.

Bateman, H. and Ablett, J., 2000. Compulsory superannuation and Australian generational accounts. *Economic Analysis and Policy*, *30*(1), pp. 33–48.

Bateman, H. and Mitchell, O. 2004. New evidence on pension plan design and administrative expenses: The Australian experience. *Journal of Pension Economics & Finance. 3*(1), pp. 63–76.

Bateman, H. and Piggot, J., 2001, Australia's Mandatory Retirement Saving Policy: A View from the new millennium. *Social Protection Discussion Paper, No. 23160*, The World Bank.

Bateman, H. and Thorp, S. 2007. Decentralized investment management: An analysis of non-profit pension funds. *Journal of Pension Economics and Finance, 6*(1), pp. 21–44.

Bateman, H., 2003. Regulation of Australian superannuation. *Australian Economic Review*, 36: pp. 118–127.

Bateman, H., and Piggott, J., 1997, Private pensions in OECD countries – Australia, *OECD Occasional Papers,* 23, pp. 1–89.

Bateman, H., and Piggott, J., 1997. *Private pensions in OECD countries: Australia* (No. 23). OECD Publishing.

Bergstresser, D., and Pontiff, J. 2013. Investment taxation and portfolio performance. *Journal of Public Economics*, *97*, pp. 245–257.

Berkin, A. L., and Ye, J. 2003. Tax management, loss harvesting, and HIFO accounting. *Financial Analysts Journal*, *59*(4), pp. 91–102.

Boone, J.P., Khurana, I.K., Raman, K.K., 2013. Religiosity and tax avoidance. *Journal of the American Taxation Association,* 35 (1), pp. 53–84.

Bradshaw, M.T., Richardson, S.A. and Sloan, R.G., 2001. Do analysts and auditors use information in accruals? *Journal of Accounting Research*, *39*(1), pp. 45–74.

Brusden, J., 2016. Multinational companies face tax avoidance EU crackdown. *Financial Times,* 8 February 2016, retrieved from http://ft.com.

Bui, Y., 2013. Measuring efficiency of Australian superannuation funds using data envelopment analysis. Working Paper, Flinders University.

Chan, H. W. H., R. W. Faff, D. R. Gallagher, and A. Looi, 2009, *Fund size, transaction costs and performance: size matters!*, Australian Journal of Management 34, pp. 73–96.

Chen, S., Chen, X., Cheng, Q., Shevlin, T., 2010. Are family firms more tax aggressive than non-family firms? *Journal of Financial Economics,* 95, pp. 41–61.

Chen, Z., Gallagher, D. R., and Warren, G. J. 2019. The effect of data availability in measuring fund managers' after-tax alphas. *Accounting & Finance*, *59*, pp. 411–448.

Chen, Z., Gallagher, D. R., Harman, G., Warren, G. J., & Xi, L., 2018. How much does tax erode fund excess returns?. *Accounting & Finance*.

Cheng, C.S.A., Huang, H.H., Li, Y., Stanfield, J., 2012. The effect of hedge fund activism on corporate tax avoidance. *The Accounting Review,* 87 (5), pp. 1493–1526.

Chi, S., Huang, S. X., & Sanchez, J. M., 2014. *CEO inside debt incentives and corporate tax policy*. *Available at SSRN 2410454*.

Chincarini, L. B., & Kim, D., 2001. The advantages of tax-managed investing. *The Journal of Portfolio Management*, 28(1), pp. 56-72.

Citizens for Tax Justice, 2014. Inverting corporations should be required to pay taxes owed on profits held offshore. www.ctj.org, Published 11 Sep 2014.

Clare, R., 2001. Are administration and investment costs in the Australian superannuation industry too high?. *ASFA Research Centre, www. superannuation.asn.au*.

Clark, G. L., Monk, A. H., Orr, R., Scott, W., 2012. The new era of infrastructure investing. *Pensions: An International Journal*, *17*(2), pp. 103–111.

Clark, G.L. and Monk, A.H., 2012. Principles and policies for in-house asset management. Working paper, Global Projects Center, Stanford University.

Cleary, P., 2016. Norway, Canada hold lessons for our funds. *The Australian, 1 October 2016.* Retrieved from https://www.theaustralian.com.au.

Coleman, A. D., Esho, N., Wong, M. 2003. *The investment performance of Australian superannuation funds* (No. wp0010).

Coleman, A.D.F., Esho, N. Wong, M. 2006. The impact of agency costs on the investment performance of Australian pension funds. *Journal of Pension Economics and Finance*, 5 (3), pp. 299 –324.

Commonwealth of Australia, 2019. *Royal Commission into misconduct in the Banking, Superannuation and Financial Services Industry: Final Report.* Commonwealth of Australia.

ComSuper, 2008. *A History of Commonwealth Superannuation*. Belconnen: Australian Government. Retrieved from: http://www.comsuper.gov.au/pages/about/history.htm.

Cooper, J., Casey, K., Evans, G., Grant, S., Gruen, D., Heffron, M., Martin, I. and Wilson, B., 2010. *Super System Review: Final Report*. Barton: Commonwealth of Australia.

Cortese, C. L. and Glynn, J. 2005. Taxing our future: The burden of the Australian Superannuation Taxation System. 4th Global Conference of Business and Economics, 26–28 June 2005 (pp. 1–7). Conference Proceedings: Global Conference of Business and Economics. Oxford, U.K.: Oxford University.

Crocker, K and Slemrod, J., 2005. Corporate tax evasion with agency costs. *Journal of Public Economics,* 89, pp. 1593–1610.

Crowe, D., 2015. Industry super funds pouring into Cayman Islands. *The Australian, 19 October 2015.* Retrieved from

http://www.theaustralian.com.au/nationalaffairs/industrialrelations/industrysuperfundspourin gintocaymanislands.

Cummings, J.R., 2016. Effect of fund size on the performance of Australian superannuation funds. *Accounting & Finance*, *56*(3), pp. 695–725.

Danckert, S. and Butler, B., 2015. Super, wealth funds plead to OECD for exemption from new global tax rule. *The Australian, 14 January 2015.* Retrieved from http://www.theaustralian.com.au/business/wealth/superwealthfundspleadtooecdfortaxruleexe mption/newsstory.

Davis, K., 2017. Despite superannuation changes, one tax loophole remains. *The Conversation "Sydney", 1 March 2017*. Retrieved from https://theconversation.com/despite-superannuation-changes-one-tax-loophole-remains-73673.

Dechow, P.M. and Dichev, I.D., 2002. The quality of accruals and earnings: The role of accrual estimation errors. *The Accounting Review*, *77*(s–1), pp. 35–59.

Desai, M. A., and Dharmapala, D., 2009. Taxes, institutions and foreign diversification opportunities. *Journal of Public Economics*, *93*(5–6), pp. 703–714.

Desai, M.A. and Dharmapala, D., 2006. Corporate tax avoidance and high-powered incentives. *Journal of Financial Economics*, *79*(1), pp. 145–179.

Desai, M.A. and Dharmapala, D., 2009. Corporate tax avoidance and firm value. *The review of Economics and Statistics*, *91*(3), pp. 537–546.

Desai, M.A., 2003. The divergence between book income and tax income. *Tax Policy and The Economy*, *17*, pp. 169–206.

Dickson, J. and Shoven, J., 1995.Taxation and mutual funds: An investor perspective. *Tax Policy and the Economy*. 9, pp. 151–180.

Dickson, J.M. and Shoven, J.B., 1993. *Ranking Mutual Funds on an After-Tax Basis* (No. w4393). National Bureau of Economic Research.

Donald, S., Bateman, H., Buckley, R., Liu, K. and Nicholls, R., 2016. Too connected to fail: The regulation of systemic risk within Australia's superannuation system. *Journal of Financial Regulation*, *2*(1), pp. 56–78.

Donohoe, M.P. and Robert Knechel, W., 2014. Does corporate tax aggressiveness influence audit pricing? *Contemporary Accounting Research*, *31*(1), pp. 284–308.

Drew, M.E. and Stanford, J.D., 2001. The impact of fund attrition on superannuation returns. *Economic Analysis and Policy*, *31*(1), pp. 25–32.

Drew, M.E. and Stanford, J.D., 2003. Principal and agent problems in superannuation funds. *Australian Economic Review*, *36*(1), pp. 98–107.

Drew, M.E. and Stanford, J.D., 2003. *A Review of Australia's Compulsory Superannuation Scheme after a Decade* (No. Discussion Paper No 322).

Drew, M.E., Stanford, J.D. and Veeraraghavan, M., 2002. Efficiency with costly information: A study of Australian wholesale superannuation fund performance. *Economic Analysis & Policy*, *32*(1), pp. 35–47.

Dunbar, A., Higgins, D.M., Phillips, J.D. and Plesko, G.A., 2010. What do measures of tax aggressiveness measure? Conference Paper, 103rd Annual Conference on Taxation, National Tax Association.

Dunn, J., 2017. The merger option for small super funds. *The Australian Financial Review, 6 June 2017*. Retrieved from: https://www.afr.com/news/special-reports/wealth-solutions/the-merger-option-for-small-super-funds-20170604-gwk5mt

Dunn, J., 2018. Struggling super funds pushed to merge. *In the Black "Australia", 20 March 2018*. Retrieved from https://www.intheblack.com/.

Dyreng, S. D., Hanlon, M. and Maydew, E.L. 2008. Long-run corporate tax avoidance. *The Accounting Review*, *83*(1), pp. 66–82.

Edmonds, M. and McBain, M., 2016. Foreign investment by superannuation funds [presentation]. *The Tax Institute.* Retrieved from https://www.taxinstitute.com.au/.

Ellis, K., Tobin, A. and Tracey, B., 2008. Investment performance, asset allocation and expenses of large superannuation funds. *APRA Insight*, *3*(2), p. 20.

Faff, R., Gallagher, D. R., and Wu, E., 2005. Tactical asset allocation: Australian evidence. *Australian Journal of Management*, *30*(2), pp. 261–282.

Fong, K.Y., Gallagher, D.R., Lau, S.S. and Swan, P.L., 2009. Do active fund managers care about capital gains tax efficiency? *Pacific-Basin Finance Journal*, *17*(2), pp. 257–270.

Francis, S., 2017. New path to cutting capital gains tax. *The Australian, 21 November 2017.* Retrieved from https://www.theaustralian.com.au.

Frank, M., Lynch, L., Rego, S., 2009. Tax reporting aggressiveness and its relation to aggressive financial reporting. *The Accounting Review,* 84, pp. 467–496.

Frischmann, P. J., Shevlin, T., & Wilson, R., 2008. Economic consequences of increasing the conformity in accounting for uncertain tax benefits. *Journal of Accounting and Economics*, *46*(2-3), pp. 261-278.

Future Fund Board of Guardians, 2016. *Future Fund Annual Report* 2015/16. Retrieved from: https://www.futurefund.gov.au/-/media/future-fund---documents/annual-reports/2015-16-future-fund-annual-report.pdf?la=en&hash=9E1110FC83AE6B7BB2F28608A2AF352DB581A2B3

Gallagher, D. R., 2001. Attribution of investment performance: An analysis of Australian pooled superannuation funds. *Accounting & Finance*, *41*(1-2), pp. 41–62.

Gallagher, D. R., Gapes, T. M., & Warren, G. J. 2019. In-house asset management in the Australian superannuation industry. *Accounting & Finance*, *59*, pp. 615-655.

Gallagher, D. R., Gapes, T., and Warren, G. 2016. In-house investment management: Making and implementing the decision. *CIFR Paper* (094).

Gallemore, J., Maydew, E.L. and Thornock, J.R., 2014. The reputational costs of tax avoidance. *Contemporary Accounting Research*, *31*(4), pp. 1103–1133.

Gardner, P. and Hamson, D., 2013. After tax investing: One size does not fit all! *The Australian Journal of Financial Planning, 8*(2)*,* pp. 45.

Garland, J. P. 1987. Taxable portfolios: Value and performance. *The Journal of Portfolio Management*, *13*(2), pp. 19–24.

Gergen, M. P. 2001. The logic of deterrence: corporate tax shelters. *Tax L. Rev.*, *55*, 255.

Gluyas, R., 2018. Bigger the better in super. *The Australian, 27 September 2018.* Retrieved from https://www.theaustralian.com.au.

Goh, J., 2017. Scale is not just about size when it comes to mergers. *Super Review "Australia", 23 October 2017*. Retrieved from https://www.superreview.com.au.

Gollier, J. J. 2000. Insurance and Private Pensions Compendium for Emerging Economies Private Pensions: Regulatory Issues.

Graham, J. R., 2003. Taxes and corporate finance: A review. *The Review of Financial Studies*, *16*(4), pp. 1075–1129.

Graham, J.R. and Tucker, A.L., 2006. Tax shelters and corporate debt policy. *Journal of Financial Economics*, *81*(3), pp. 563–594.

Gravelle, J., 2013. Corporate tax incidence: A review of general equilibrium estimates and analysis. *National Tax Journal*, *66*(1), pp. 185.

Gravelle, J.G., 2009. Tax havens: International tax avoidance and evasion. *National Tax Journal*, pp. 727–753.

Gupta, S. and Newberry, K., 1997. Determinants of the variability in corporate effective tax rates: Evidence from longitudinal data. *Journal of Accounting and Public Policy*, *16*(1), pp. 1–34.

Hanlon, M. and Heitzman, S., 2010. A review of tax research. *Journal of Accounting and Economics*, *50*, pp. 127–178.

Hanlon, M., & Slemrod, J., 2009. What does tax aggressiveness signal? Evidence from stock price reactions to news about tax shelter involvement. *Journal of Public Economics*, *93*(1-2), pp. 126-141.

Hayne, K. M., 2018. Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry. *Interim report, Commonwealth of Australia, Canberra, ACT, Australia*.

Hoi, C. K., Wu, Q., & Zhang, H., 2013. Is corporate social responsibility (CSR) associated with tax avoidance? Evidence from irresponsible CSR activities. *The Accounting Review*, *88*(6), pp. 2025-2059.

Inger, K.K., 2014. Relative valuation of alternative methods of tax avoidance. *Journal of the American Taxation Association*, *36*(1), pp. 27-55.

International Monetary Fund (IMF), Monetary and Exchange Affairs Department, *Offshore Financial Centers IMF Back Ground Paper*. June 23, 2000. Retrieved from: https://www.imf.org/external/np/mae/oshore/2000/eng/back.htm.

Israel, R., & Moskowitz, T. J., 2010. *How Tax Efficient are Passive Equity Styles*. Working Paper.

Jacobs, K. S., Meagher, R. P., & Gummow, W. M. C., 1986. *Jacobs' Law of trusts in Australia*. Butterworths.

Jeffrey, R.H. and Arnott, R.D., 1993. Is your alpha big enough to cover its taxes? *Journal of Portfolio Management*, *19*(3), p. 15.

Jones, J.J., 1991. Earnings management during import relief investigations. *Journal of Accounting Research*, pp. 193-228.

Khurana, I. and Moser, W., *2013*. Institutional shareholders' investment horizons and tax avoidance. *The Journal of the American Taxation Association, 35*(1) Spring 2013, pp. 111-134.

Kim, J.B., Li, Y., Zhang, L., 2011. Corporate tax avoidance and stock price crash risk: Firm-level analysis. *Journal of Financial Economics, 100*, pp. 639–662.

Kinney Jr, W.R., 1986. Empirical accounting research design for PhD students. *The Accounting Review*, pp. 338-350.

Koch, D., 2004, It's time to sort out this super mess. *The Sun-Herald 'Sydney',* 1 February, p. 4.

KPMG, 2010. *Superannuation Insights Report*, 2010. KPMG Australia.

KPMG, 2015. *Superannuation Insights Report*, 2015. KPMG Australia.

Lanis, R and Richardson, G., 2007. Determinants of the variability in corporate effective tax rates and tax reform: Evidence from Australia. *Journal of Accounting and Public Policy*, *26*(6), pp. 689-704.

Lanis, R. and Richardson, G., 2012. Corporate social responsibility and tax aggressiveness: a test of legitimacy theory. *Accounting, Auditing & Accountability Journal*, *26*(1), pp. 75-100.

Lanis, R., Richardson, G., Liu, C., & McClure, R. (2018). The impact of corporate tax avoidance on board of directors and CEO reputation. *Journal of Business Ethics*, pp. 1-36.

Law Reform Commission, 1992. *Collective Investments: Superannuation*. Report No.59, Canberra.

Lennox, C., Lisowsky, P., Pittman, J., 2013. Tax aggressiveness and accounting fraud. *Journal of Accounting Research*, *51*(4), pp. 739-778.

Lisowsky, P., 2010. Seeking shelter: Empirically modelling tax shelters using financial statement information. *The Accounting Review*, *85*(5), pp. 1693-1720.

Lisowsky, P., Robinson, L., Schmidt, A., 2013. Do publicly disclosed tax reserves tell us about privately disclosed tax shelter activity? *Journal of Accounting Research*, *51*(3), pp. 583-629.

Liu, K. and Arnold, B.R., 2010. *Australian Superannuation Outsourcing: Fees Related Parties and Concentrated Markets*, Working Paper, APRA, Sydney.

Liu, K., & Ooi, E. (2016, December). What Drives Trustee-Director Compensation in Australian Superannuation Funds?. In *29th Australasian Finance and Banking Conference*.

Liu, K., 2013. Australian superannuation: Operational structure, investment performance and trustee governance. Retrieved from: https://ses.library.usyd.edu.au/bitstream/2123/9264/1/Liu_K_THesis_2013.pdf

Lopez, T.J., Regier, P.R., Lee, T., 1998. Identifying tax-induced earnings management around TRA 86 as a function of prior tax-aggressive behavior. *The Journal of the American Taxation Association*, *20*(2), pp. 37-56.

Mackenzie, G. and McKerchar, M., 2014. Tax-aware investment management by public-offer superannuation funds in Australia: Attitudes practices and expectations. *Australian Tax Forum*, *29*(2), pp. 249–280.

Manzon Jr, G.B. and Plesko, G.A., 2002. The relation between financial and tax reporting measures of income. *NYU Tax Law Review*, *55*, p. 175.

Mather, J. and Kehoe, J., 2019. Got an industry super fund? You've benefited from a Cayman trust. *The Australian Financial Review, 8 May 2019*. Retrieved from https://www.afr.com/news/policy/tax/got-an-industry-super-fund-you-ve-benefited-from-a-cayman-trust-20190508-p51l8j.

McClure, R. W., 2018. *The Effectiveness of the Regulatory Response to Corporate Tax Aggressiveness in Australia.* (Doctoral dissertation).

McClure, R., Lanis, R., Wells, P., Govendir, B., 2017. The impact of dividend imputation on corporate tax avoidance and controlling for outside director monitoring. *Journal of Corporate Finance*, (In Press).

McClure, R., Lanis, R., Wells, P.A., Govendir, B., 2018. The impact of dividend imputation on corporate tax avoidance: The case of shareholder value. *Journal of Corporate Finance*, *48*, pp. 492-514.

McGuire, S.T., Omer, T.C., Wang, D., 2012. Tax avoidance: Does tax-specific industry expertise make a difference? *The Accounting Review, 87*(3), pp. 975–1003.

McGuire, S.T., Omer, T.C., Wilde, J.H., 2014. Investment opportunity sets, operating uncertainty, and capital market pressure: Determinants of investments in tax shelter activities? *Journal of the American Taxation Association*, *36*(1), pp. 1-26.

Meehl, P. E., 1978. Theoretical risks and tabular asterisks: Sir Karl, Sir Ronald, and the slow progress of soft psychology. *Journal of Consulting and Clinical Psychology*, *46*(4), 806.

Mees, B. T., Wehner, M. S., Hanrahan, P. 2005. *Fifty Years of Managed Funds in Australia.* Sydney: IFSA/Melbourne, University of Melbourne.

Melbourne Mercer Global Pension Index (MMGPI) Report, 2016. Retrieved from: https://www.mercer.at/our-thinking/mercer-melbourne-global-pension-index.html.

O'Halloran, J. and O'Reilly, P., 2016. *ATO Presentation: APRA-regulated funds – A regulator's perspective*. National Superannuation Conference, August 2016, Melbourne. Commonwealth of Australia.

O'Halloran, J. Australian Taxation Office. 2018. *Assurance and governance for large superannuation funds - ATO perspective*. Retrieved from: https://www.ato.gov.au/Media-centre/Speeches/Other/Assurance-and-governance-for-large-superannuation-funds---ATO-perspective/.

O'Reilly, P. Australian Taxation Office. 2014. *ATO audits and reviews of super funds in 2014*. Retrieved from: https://www.ato.gov.au/mediacentre/speeches/other/atoauditsandreviewsofsuperfundsin2014/?page=1#.

Omer, T. C., Molloy, K. H., Ziebart, D. A., 1991. Using financial statement information in the measurement of effective corporate tax rates. *Journal of the American Taxation Association*, *13*(1), pp. 57-72.

Omer, T. C., Molloy, K. H., Ziebart, D. A., 1993. An investigation of the firm size-effective tax rate relation in the 1980s. *Journal of Accounting, Auditing & Finance*, *8*(2), pp. 167-182.

Productivity Commission, 2016. *How to Assess the Competitiveness and Efficiency of the Superannuation System*, Research Report, Canberra.

Productivity Commission, 2016a. *Issues Paper – How to Assess the Competitiveness and Efficiency of the Superannuation System*, Research Report (2016, March 16), Canberra.

Productivity Commission, 2016b. *Final Report – How to Assess the Competitiveness and Efficiency of the Superannuation System*, Research Report (2016, November 25), Canberra.

Productivity Commission, 2018, *Final Report – Superannuation*: *Assessing Efficiency and Competitiveness*, Report no. 91. Canberra.

Q Super, 2017. Submission to the Productivity Commission. p. 4.

Q Super. 2016) *Q Super Income Account Transfer Bonus*. Retrieved from: https://qsuper.qld.gov.au/-/media/pdfs/qsuper-public/disclosure/march-2016-sen-db.pdf?la=en.

Raftery, A. M., 2014. *The Size, Cost, Asset Allocation and Audit Attributes of Australian Self-Managed Superannuation Funds* (Doctoral dissertation).

Reddy, W., 2016. Evaluation of Australian industry superannuation fund performance: Asset allocation to property. *Journal of Property Investment & Finance*, *34*(4), pp. 301-320.

Rego, S.O. and Wilson, R., 2012. Equity risk incentives and corporate tax aggressiveness. *Journal of Accounting Research, 50*(3), pp. 775–809.

Rice, M., 2003. *Superannuation Fees: Market Segment Analysis*. Report prepared by RiceWalker for the Investment and Financial Services Association, April, Sydney.

Richardson, G., Lanis, R., Leung, S.C., 2014. Corporate tax aggressiveness, outside directors, and debt policy: An empirical analysis. *Journal of Corporate Finance*, *25*, pp. 107–121.

Richardson, G., Taylor, G., Lanis, R., 2013. The impact of board of director oversight characteristics on corporate tax aggressiveness: An empirical analysis. *Journal of Accounting and Public Policy*, *32*(3), pp. 68–88.

Roddan, M., 2017. APRA calls for simpler super choice. *The Australian, 30 November 2017.* Retrieved from https://www.theaustralian.com.au.

Rose, S., 2015. Super funds hunt tax wins. *Australian Financial Review, 28 July 2015*. Retrieved from https://www.afr.com/.

Rose, S., 2016. Catholic Super's strategy aims to save members $1.8m tax. *Australian Financial Review, 16 March 2016*. Retrieved from https://www.afr.com/.

Rouder, J. N., Speckman, P. L., Sun, D., Morey, R. D., Iverson, G., 2009. Bayesian *t*-tests for accepting and rejecting the null hypothesis. *Psychonomic Bulletin & Review*, *16*(2), pp. 225–237.

Rowley, D., 2015. Q Super's pension members win from Telstra buy back. *Investment Magazine "Australia", 12 January 2015*. Retrieved from https://www.investmentmagazine.com.au/.

Saavedra, D., 2013. *Analysis of Unsuccessful Tax Avoiders.* (Working Paper, September 30, 2013). University of California Los Angeles.

Seccombe, M., 2014. Super funds benefit from corporate tax avoidance. *The Saturday Paper "Sydney", 14 June 2014*. Retrieved from https://www.thesaturdaypaper.com.au/business/markets/2014/06/14/super-funds-benefit-corporate-tax-avoidance.

Shackelford, D. A. and Shevlin, T., 2001. Empirical tax research in accounting. *Journal of Accounting and Economics*, *31*(1–3), pp. 321–387.

Shepherd, J. Australian Taxation Office. (2014). *Tax Institute National Superannuation Conference 'ATO audits and reviews of large super funds in 2014'*. Retrieved from: https://www.ato.gov.au/mediacentre/speeches/other/atoauditsandreviews/.

Shevlin, T., 2007. The future of tax research: From an accounting professor's perspective. *Journal of the American Taxation Association*, *29*(2), pp. 87–93.

Slemrod, J. 2004. *The Economics of Corporate Tax Selfishness.* National Bureau of Economic Research, Working Paper No.10858.

Slemrod, J., 2007. Cheating ourselves: The economics of tax evasion. *The Journal of Economic Perspectives*, *21*(1), pp. 25–48.

Stickney, C.P. and McGee, V.E., 1982. Effective corporate tax rates the effect of size, capital intensity, leverage, and other factors. *Journal of Accounting and Public Policy*, *1*(2), pp. 125–152.

Super Guide, 2018/19. Super Guide. Retrieved from: https://www.superguide.com.au/newsletter/2018-2019-super-guide.

Sy, W. 2009. Towards a national default option for low-cost superannuation. *Accounting Research Journal*, *22*(1), pp. 46–67.

Tan, M. G. and Cam, M. A. 2015. Does governance structure influence pension fund fees and costs? An examination of Australian not-for-profit superannuation funds. *Australian Journal of Management*, *40*(1), pp. 114–134.

The Australian Government Depart of Treasury. 2018. Budget – Portfolio Budget Statements 2017-18; Budget Related Paper No. 1.16. Retrieved from: https://treasury.gov.au/publication/portfolio-budget-statements-2017-18

Thompson, G. 2008) *Risk-based supervision of pension funds in Australia*. The World Bank.

Thomson J., 2019. Australians flock to ESG as debt investors follow. *The Australian Financial Review*, 19 June 2019. Retrieved from http://aftr.com.au.

Thomson Reuters, *Editor* Stuart Jones (2016). *Australian Superannuation Handbook 2016–17*. Thomson Reuters (Professional) Australia Limited.

Towers Watson, 2014. Centralised Portfolio Management. December 2014.

Treasury, 2001. *Towards Higher Retirement Income for Australians: A History of the Australian Retirement Income System since Federation, Economic Roundup Centenary Edition.* Australian Government Publishing Service, Canberra, 14 May.

U.S. Congress, Joint Committee on Taxation, 1999. Description and Analysis of Present-Law Tax Rules and Recent Proposals Relating to Corporate Tax Shelters, Appendix II to JCX-82-99.

U.S. Senate, Permanent Subcommittee on Investigations, 2013. Offshore Profit Shifting and the U.S. Tax Code Part 2 (Apple Inc.), Exhibits for Hearing, Washington, DC.

West, M., 2017. Chevron: A game-changer for multinational tax avoiders. *The Conversation Australia, 24 April 2017.* The Conversation Media Group. Retrieved from http://www.factiva.com.

Williams, R. 2017. Expanding horizons. *Superfunds Magazine*, (425), p. 24.

Williams, R., 2014. *What Should Managers Manage?* Parametric White Paper July 2014.

Williams, R., 2015. The road to reward: For better after-tax returns, should super funds turning to their custodian or a specialist investment manager for help? The *Journal of Superannuation Management, September 2015,* pp. 21–25.

Wilson, R., 2009. An examination of corporate tax shelter participants. *The Accounting Review*, *84*(3), pp. 969–999.

Wood, RW 2014. Ireland corks double Irish tax deal, closing time for Apple, Google, Twitter, Facebook. Retrieved from: https://www.forbes.com/sites/robertwood/2014/10/14/ireland-corks-double-irish-tax-deal-closing-time-for-apple-google-twitter-facebook/#27249b5e6c7c

Yeates, C., 2015. APRA backs more super fund mergers. *Sydney Morning Herald, 29 April 2015*. Retrieved from https://www.smh.com.au.

Zimmerman, J.L., 1983. Taxes and firm size. *Journal of Accounting and Economics*, *5*, pp.119–149.