

Corporate tax avoidance or corporate responsibility? An examination of the NZX 50 companies

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ABSTRACT

This study provides an empirical analysis to see whether New Zealand companies listed on the NZX 50 between 2015 and 2017 are responsible corporate tax payers or whether they engage in corporate tax avoidance. Our results indicate, after removing companies from the property and retirement and aged care sectors in the analysis, that the remaining companies listed on the NZX 50 have effective tax rates that are close to and similar to the corporate statutory tax rate. For companies in the property and retirement and aged care sectors, we find that these firms have effective tax rates that are much lower than the corporate statutory tax rate, which might initially indicate the prevalence of tax avoidance. However, closer inspection of their financial statements indicates that they are not doing anything that is inconsistent with the statutory tax regime. Their lower effective tax rates are due to differences in the accounting for investment properties, which are a major asset on these companies' balance sheets. Increases in the fair value of these investment properties are part of pre-tax accounting income, but they are not taxed as they are treated as a capital profit on revaluation and on realisation. For the property and retirement and aged care industries, inclusion of increases in the fair value of properties in pre-tax accounting income could be interpreted as a gain arising from an act done in carrying on a business, and there may be grounds to argue that these capital gains ought to be taxed, especially on realisation, just as other business income is taxed. Overall, our study shows that the sample of NZX 50 companies are responsible corporate tax payers, there is no evidence that they are engaged in tax avoidance, and any deviation from the statutory tax rate is because of the exempt nature of the increases in the fair value of investment properties. In turn, this begs the question of whether the property and retired and aged care industries should be advantaged when other industries are not.

1.0 INTRODUCTION

This study examines the amount of corporate income tax paid by New Zealand's largest companies. We examine the effective corporate tax rates of the NZX 50 companies, which are the 50 largest companies by market capitalization trading on the New Zealand Exchange (NZX), New Zealand's only securities exchange. We examine whether the cash tax payments by the NZX 50 companies over the past three years (2015 to 2017) accord with the corporate statutory tax rate of 28 percent or whether they use tax avoidance mechanisms to shirk their tax obligation. The question is whether these large companies engage in corporate tax avoidance or are they responsible corporate citizens?

Our study is motivated by sensational headlines in 2017 that appeared in the New Zealand popular press raising concerns about whether companies, but in particular those domiciled overseas, pay their fair share of taxes in New Zealand. For example, in March 2017, the *New Zealand Herald* reported that Apple paid zero income tax in New Zealand despite New Zealand sales of \$4.2 billion over the last decade. Similarly, the *New Zealand Herald* reported in June 2017 that Google paid \$356,124 in income tax in 2016 on \$400 million of advertising revenue billed to local clients and that foreign companies like Google and Amazon sell their products and services to New Zealand customers at a price that did not then attract GST, making it difficult for New Zealand companies to compete on digital imports. For example, Spark New Zealand Limited, a local telecommunication's company, provides a streaming service called Lightbox that attracts GST whereas global internet television service company Netflix does not as it is delivered from overseas.

Headlines such as these have attracted considerable debate from business commentators about the tax obligations of domestic and international companies. For example, why should Apple

pay income tax in New Zealand? It is not based in New Zealand and does not have a permanent establishment here - it simply ships goods which are sold here. On the other hand, New Zealand retailers sell the Apple products and pay income tax on the profits earned in New Zealand. Some New Zealand companies have also voiced their concerns about the lack of an even-playing field, including the CEO of one of New Zealand's largest corporates, Simon Moutter of Spark New Zealand Limited who stated the following about international companies: "Some of these companies are willing to use every trick in the book to minimise the tax they pay towards the cost of running our schools, hospitals and social infrastructure" (New Zealand Herald, 18 March 2017).

These headlines and tax avoidance issues have also attracted political attention and led to some New Zealand political parties to make tax an issue in the recent 2017 elections. For example, the Labour Party stated that their "tax plan" would take "strong action to ensure that multinational companies pay their fair share of tax, including consulting on the introduction of a Diverted Profits Tax" (<http://www.labour.org.nz/tax>). Similarly, New Zealand First's policies on "Commerce and Tax" stated that they would close loopholes, which include a crackdown on "corporate tax avoidance and base erosion especially with e-commerce providers like Uber and Amazon" (http://www.nzfirst.org.nz/commerce_and_tax). While these attacks were targeted at overseas companies, some New Zealand entities and individuals, particularly those who own rental properties and second homes, were also under the tax avoidance spotlight. The Green Party's policies under its "Love New Zealand: Fiscal Plan" include a provision to raise "a new tax on capital gains, excluding the family home" (<https://www.greens.org.nz/fiscal-plan-2017>). This, too, was the Labour leader Jacinda Ardern's "captain's call" to not rule out introducing a capital gains tax on rental properties or second homes until her party reversed it with a plan not to implement any tax reforms before the 2020 election.

While the question of tax avoidance among corporates has received considerable attention from the popular press and politicians in New Zealand, in particular during 2017, surprisingly there is a lack of empirical studies that examine this topic in New Zealand. Our study is an attempt to remedy this situation. Specifically, our empirical analysis indicates that over the three year period between 2015 and 2017, companies listed on the NZX 50 had effective tax rates that closely approximated the New Zealand corporate statutory tax rate of 28 percent. We conclude that New Zealand's largest companies pay the corporate tax that is mandated in the income tax legislation, suggesting that they were not engaged in tax avoidance and that they are responsible corporate tax payers.

2.0 INCOME NUMBERS AND TAX RATES

Before embarking on a discussion of tax avoidance and our empirical analysis, we provide a brief conceptual discussion of "tax rates" which are used to assess the extent to which a company's pre-tax accounting income is paid in income tax. We discuss and provide examples to illustrate three tax rates: the Statutory Tax Rate (STR), the Generally Accepted Accounting Principles Effective Tax Rate (GAAP ETR), and the Cash Effective Tax Rate (CASH ETR).

While all New Zealand companies face the 28 percent STR, the tax law contains provisions that decrease and increase the rate, and the resulting rate is referred to as the GAAP ETR.¹ For example, a gain on sale of a property above its original cost is a capital gain, and while it is a component of pre-tax accounting income, it is not taxable in New Zealand. This tax provision reduces the GAAP ETR. On the other hand, an impairment of goodwill is recognized as an expense in arriving at pre-tax accounting income, but it is not deductible in New Zealand. This

¹ GAAP ETR is the tax rate based on the total income tax expense divided by the pre-tax accounting income where both numbers are from the GAAP financial statements. See Dyreng et al. (2008) and Hanlon and Heitzman (2010).

tax provision increases the GAAP ETR. These two types of tax provisions are referred to as permanent or exempt differences (Wong and Wong, 2005), and they explain why the GAAP ETR deviates from the STR (see example later for a more detailed illustration of this).

There are also tax provisions that alter the timing of revenue and expense recognition that, in turn, affects the timing of the cash tax payments to the Inland Revenue (Wong and Wong, 2005). For example, a company may depreciate its laptop computer at the 20 percent straight-line method (i.e., depreciated over five years) in computing pre-tax accounting income in the financial statements but chooses the tax approved 40 percent straight-line method (i.e., depreciated over three years) for its tax return. If the laptop computer costs \$2,000, the depreciation amounts recognised in the financial statements and tax returns are set out in Table 1.

Place Table 1 here

The total depreciation recognised in the financial statements and the tax returns is the same over the life of the asset – \$2,000, being the cost of the laptop computer. Note, however, that there is a temporary difference across the years in the timing of the depreciation expense. For the tax return, more (less) depreciation is recognised in the early (later) years, whereas for financial reporting the same amount of depreciation is recognised each year. Hence, there are lower cash tax payments to the Inland Revenue in the earlier years of the asset's life – lower payments of \$112 in each of Years 1 and 2 – and higher cash tax payments to the Inland Revenue in the later years – higher cash tax payments of \$112 in each of Years 4 and 5. In accounting parlance, the CASH ETR (i.e., the cash effective tax rate) (Dyreng et al. 2008, 66

and Goh et al. 2016, 1648), which is based on the cash tax payment in a particular year, would be lower in Years 1 and 2 and higher in Years 4 and 5, assuming all things else are constant.

Table 2 presents an example to illustrate the concepts above about permanent/exempt differences and temporary differences. The example runs over a five-year period and assumes that the pre-tax accounting income (also known as net profit before tax) per the financial statements in each year is \$4,000. Included in each year's pre-tax accounting income are:

- Capital gain of \$1,500, which is not assessable for tax.
- Goodwill impairment of \$500, which is not deductible for tax.
- Depreciation expense of \$400, but the amounts deducted in the tax returns are as indicated in Table 1 above.

Place Table 2 here

The above example demonstrates three points. First, the GAAP ETR in each year is 21%. It is less than the STR of 28% because the capital gain is not assessable, which has the effect of reducing the GAAP ETR by 10.5% (i.e., $[1,500 * 28\%] / 4,000$), and the goodwill impairment expense is not deductible, which has the effect of increasing the GAAP ETR by 3.5% (i.e., $[500 * 28\%] / 4,000$).

Second, the CASH ETR is lower than the GAAP ETR in Years 1 and 2 and higher in Years 4 and 5. This is because of the higher depreciation claimed in the tax return and, hence, the lower cash tax payments in Years 1 and 2, which are offset by the lower depreciation claimed in the

tax return and, hence, the higher cash tax payments in Years 4 and 5.² Over the five-year life of the laptop computer, the overall CASH ETR is 21%, which is the same as the GAAP ETR of 21% over the five-year period.³

Thirdly, the time-series variation in the CASH ETR is captured in a deferred tax liability. The line below Row 8 in Table 2 shows the creation of a deferred tax liability of \$112 in Year 1. This grows to \$224 in Year 2, then stays at \$224 in Year 3 before its starts to decrease to \$112 in Year 4 and to a zero balance in Year 5. The reductions in the deferred tax liability in Years 4 and 5 correspond with the higher cash tax payments in Years 4 and 5 and, hence, the higher CASH ETR in these years. Over the five-year period, the CASH ETR is 21%, which is the same as the GAAP ETR.

3.0 CORPORATE TAX AVOIDANCE

We use the term “corporate tax avoidance” in the manner considered by accounting researchers, where it reflects the outcome of transactions that cause the pre-tax accounting income that is reported to shareholders to differ from the taxable income that is reported to the tax authority. That difference, in turn, shows up in the GAAP ETR and CASH ETR that are discussed in Section 2.0 and elaborated in more detail below in Section 3.1.

Two types of transactions can explain the difference between pre-tax accounting income and taxable income. The first type is legitimate transactions, such as the accelerated depreciation example in Section 2.0, which are permitted by the tax law. The second type comprises transactions that the General Anti-Avoidance Rule (GAAR) attempts to capture, and these may or may not result in a difference between pre-tax accounting income and taxable income.

² In Year 3, the depreciation recognised in the financial statements is the same as that claimed in the tax return. Hence, Year 3’s CASH ETR is 21%, which is the same as the GAAP ETR.

³ Cash tax payments over five years divided by the pre-tax accounting income over five years.

Transactions that may result in a difference between pre-tax accounting income and taxable income could be revenue items that are returned later than they should be, or expenses that are deducted earlier than they should be, and these will show up in a lower CASH ETR. Transactions that may not result in a difference between pre-tax accounting income and taxable income and, hence, not reflected in a lower CASH ETR could be expenses that are deducted in arriving at pre-tax accounting income *and* taxable income so that the tax payer obtains a tax advantage even though they have not suffered an economic cost.⁴ Elliffe (2014) provides a 136-year history of New Zealand's GAAR whose purpose "is to anticipate and defeat the tax planning of clever people".⁵ The same tenor has been echoed by Graetz (2010)⁶ who describes certain deals are "done by very smart people that, absent tax considerations, would be very stupid".⁷ These "deals" are what the GAAR attempts to counter.

Dyreng, Hanlon and Maydew (2008, 62) define tax avoidance as "anything that reduces the firm's cash effective tax rate over a long time period". Hanlon and Heitzman (2010, 137) define tax avoidance as "the reduction of explicit taxes", while Goh, Lee, Lim and Shevlin (2016, 1647) define tax avoidance "to include all tax planning activities that reduce the firm's taxes relative to its pre-tax accounting income."

Dyreng et al. (2008, 62) emphasize that "tax avoidance does not necessarily imply that firms are engaging in anything improper. There are numerous provisions in the tax code that allow and/or encourage firms to reduce their taxes. In addition, in practice there are many areas in

⁴ As per "the Trinity scheme" in the decision of the New Zealand Supreme Court in *Ben Nevis Forestry v CIR* [2008] NZSC 15. See Elliffe and Keating, Tax Avoidance – Still Waiting for Godot?, *New Zealand Universities Law Review* (2009).

⁵ C. Elliffe (2014, p. 148), New Zealand's General Anti-Avoidance Rule – A Triumph of Flexibility over Certainty, *Canadian Tax Journal* (2014) 62:1, 147-64.

⁶ Michael J. Graetz is a Professor at Law at Columbia University Law School and a former Treasury official.

⁷ Michael J. Graetz, *100 Million Unnecessary Returns* (Yale University Press, 2010), p. 116.

which the law is unclear, particularly for complex transactions, and firms may take positions on their returns in which the ultimate tax outcome is uncertain.”

We now operationalise the term “corporate tax avoidance” as it is used in the accounting research literature.

3.1 Measures of tax avoidance

Hanlon and Heitzman (2010) and Goh et al. (2016) identify three measures of tax avoidance used in accounting research. The first measure of tax avoidance is the book-tax difference, which is the gap between pre-tax accounting income (referred to as “book”) and taxable income (referred to as “tax”) and, hence, the book-tax difference. In Table 2, the book-tax difference is between Row 1 (“book”) and Row 5 (“tax”).⁸ Large book-tax differences suggest aggressive tax reporting and increase the probability of tax audits. Mills (1998) and Cho, Wong and Wong (2006) found that tax audit adjustments made by the IRS and Inland Revenue in the United States and New Zealand, respectively, increase as the book-tax differences increase.

Table 2 illustrates that book-tax differences comprise permanent (or exempt) and temporary (or timing) differences. Permanent differences are revenue and expense items that are included in the determination of pre-tax accounting income, but which will not be assessable and deductible, respectively, for tax purposes. For example, capital gains are not assessable and goodwill impairment is not deductible. Shevlin (2002, 433) indicates that an “ideal tax shelter (in addition to not being detectable) is one that permanently reduces taxable income without a similar reduction in book income. That is, the ideal corporate tax shelter gives rise to permanent

⁸ Wong and Wong (2005) document the book-tax differences for the NZSX 50 companies for 2002 and 2003 and identify the permanent and timing differences that make up the book-tax differences.

differences.” Similarly, Hanlon and Heitzman (2010, 143) note that permanent book-tax differences are ideal tax shelters because “a permanent book-tax difference [of an income nature] reduces the firm’s effective tax rate and increases accounting earnings”, thereby yielding financial reporting benefits.⁹ Hence, the second tax avoidance measure is large permanent book-tax differences (Goh et al., 2018, 1648),¹⁰ and this is captured in a low GAAP ETR.

The third measure of tax avoidance is a low CASH ETR as per the Dyreng et al. (2008) definition of tax avoidance indicated above. Koester et al. (2017, 3289) support this measure of tax avoidance because it “reflects permanent and temporary tax deferral strategies, both of which retain cash resources within the firm” which can be reinvested to generate a positive return on the investment.

In summary, the first measure of tax avoidance – the book-tax difference – is captured through two tax rates. One tax rate is GAAP ETR, which captures the effect of permanent differences. This, in effect, captures the second measure of tax avoidance noted by Goh et al. (2016). The other tax rate is the CASH ETR, which captures all book-tax differences, that is, both permanent and temporary differences. For this study, we examine the GAAP ETR and the CASH ETR for the NZX 50 companies listed as of October 2017. We compute and analyse the GAAP ETR and CASH ETR for these companies for 2017, 2016 and 2015.

Dyreng et al. (2008, 67) caution against a single year’s CASH ETR, noting that it is “an imperfect measure of avoidance because it includes payments to (and refunds from) the IRS

⁹ However, Hanlon and Heitzman (2010, 143) caution against referring to these transactions as “aggressive for tax purposes” because certain transactions such as “investments in municipal bonds will lower the GAAP ETR but these investments are not “aggressive” for tax purposes.”

¹⁰ This assumes the non-assessable income items dominate the non-deductible expense items.

and other tax authorities upon settling of tax disputes that arose years ago.” They suggest a long-term measure of the CASH ETR which would align the cash taxes paid over that period with the income over the same period.¹¹ Similarly, Koester (2017, 3289) use three-year and five-year CASH ETR because “a one-year measure can be a noisy proxy for long-run corporate tax avoidance”. Following Dyreng et al. (2008) and Koester (2017), we also compute a three-year CASH ETR, which is the cash tax paid in 2015, 2016 and 2017 divided by the pre-tax accounting income in 2015, 2016 and 2017.

3.2 Limitations with the use of GAAP and CASH ETRs

Hanlon and Heitzman (2010, 137) identify a limitation of the GAAP ETR and CASH ETR measures. These measures capture only “non-conforming tax avoidance” where transactions are accounted for differently for book and tax purposes as illustrated in Table 2. Hanlon and Heitzman point out that “conforming tax avoidance” is not captured. For example, if a company is unconstrained by reporting a lower pre-tax accounting income (for example, as it may for a private firm), then it also reports a lower taxable income (hence, conforming tax avoidance).

We are of the view that this latter form of avoidance is only a matter of timing because sooner or later, deferring income-increasing transactions will eventually “come home to roost” because they cannot be postponed forever. The conforming tax avoidance does not persist forever, but only temporarily by deferring tax payments. And unlike temporary differences where the deferred tax is recognized, the conforming tax avoidance transactions occur outside the accounting system.

¹¹ Dyreng et al. (2008) compute their long-run CASH ETR over five-year and ten-year time periods.

The second limitation is that the GAAP ETR and CASH ETR will not pick up complex expenditure transactions where the law is unclear (Dyregang et al. 2008, 62) and the corporate taxpayer takes a liberal interpretation in treating expenditures as revenue expenditure in arriving at pre-tax accounting income *and* taxable income. That is, the corporate tax payer assumes the accounting and tax treatments are aligned. This liberal interpretation reduces the firm's income tax without red-flagging it in a lower GAAP ETR and a lower CASH ETR. The recent Trustpower Limited case illustrates this point.

Trustpower incurred \$17.7 million of expenditure between 2006 and 2008 in applying for and obtaining resource consents for projects in the "development pipeline" that provided the company with options to build new generation capacity. Trustpower treated this expenditure as revenue expenditure in arriving at pre-tax accounting income *and* taxable income. It was not until 2010 that the Commissioner of Inland Revenue disallowed the deductions.

The matter was then litigated. In 2013, the High Court held that the expenditure was on revenue account and therefore deductible.¹² However, in 2015, the Court of Appeal held that the expenditure was on capital account and therefore not deductible.¹³ Finally, in 2016, the Supreme Court concurred with the Court of Appeal that the expenditure was on capital account and therefore not deductible.¹⁴

What this demonstrates is that Trustpower's 2006 to 2008 GAAP ETR and CASH ETR would not have highlighted the fact that the taxpayer reduced its income tax in those years by regarding the expenditure as deductible for tax in line with its accounting treatment in arriving

¹² Trustpower Ltd v Commissioner of Inland Revenue [2013] NZHC 2970, [2014] 2 NZLR 502.

¹³ Commissioner of Inland Revenue v Trustpower Ltd [2015] NZCA 253, [2015] 3 NZLR 658.

¹⁴ Trustpower Ltd v Commissioner of Inland Revenue [2016] SC 74/2015, [2016] NZSC 91.

at pre-tax accounting income. It took another decade, from the initial expenditure in 2006 to the final Supreme Court determination in 2016, before the matter was finally resolved.

This second limitation can be mitigated, as indicated in section 3.1, by using a very long-term CASH ETR to better capture long-run corporate tax avoidance. For the Trustpower illustration above, an eleven-year CASH ETR from 2006 to 2016 would align the cash taxes paid with the income over that period.

The third limitation of this study is the sole focus on the corporate income tax. Zimmerman (1983) indicates that political costs and benefits can arise from corporate income tax as well as other avenues such as antitrust regulation (Cahan, 1992), government subsidies (Wong, 1988) and contracts, and import quotas and tariffs (Jones, 1991) and these factors or events can also affect firms' accounting and taxation reporting decisions. Hence, the results of this study only partially capture the NZX 50 companies' *total* political costs and benefits because political costs and benefits that arise from other factors or events are not considered in this study.

4.0 SAMPLE AND FINANCIAL DATA

Appendix 1 lists the companies that comprise the NZX 50 as of October 2017, which is obtained from the Thomson Reuters Eikon Database. For our empirical analysis, we exclude three listings:

- Fonterra Shareholders' Fund which is a registered managed investment scheme under the Financial Markets Conduct Act 2013. Units in the fund are traded like a company's shares and the units enable investors to get access to the economic rights of Fonterra.
- Australia and New Zealand Banking Group Limited (ANZ), which is domiciled in Australia and is subject to Australian company tax.

- Westpac Banking Corporation (Westpac), which is domiciled in Australia and is subject to Australian company tax.

The industry classifications of the remaining 47 companies are reported in Table 3.

Place Table 3 here

We comment on the property and retirement and aged care companies, which make up one quarter of the sample. These companies' principal assets are investment properties which are held for rental income and long-term capital appreciation.¹⁵ The investment properties are initially measured at cost; thereafter, on an annual basis, they are measured at fair value based on valuations carried out by independent registered valuers.

Changes in the fair value are recognised in pre-tax accounting income in the year in which they arise, but they are not taxable. Further, because it is assumed that the carrying amounts of investment property will be recovered through sale – not use – there is no need to recognize a deferred tax liability. Wong, Wong and Li (2015) explain this accounting complexity. Because no income tax will be paid when the capital gains are realised on sale, there is no need to recognize a deferred tax liability for the changes in fair value.¹⁶

The capital gains are a permanent difference, and they will lower the GAAP ETR. If the property and retirement and aged care companies are included in the total sample analysis, this could distort the overall picture for the NZX 50 companies in general. Hence, we will conduct

¹⁵ To illustrate, in 2017, the percentage of investment properties to total assets for Goodman Property Trust was 91%, Kiwi Income Property Trust was 99%, and Precinct Properties New Zealand Limited was 98%.

¹⁶ Wong, Wong and Li (2015) note that a deferred tax liability would be required only for the depreciation that would be recovered on the sale of the buildings.

our empirical analysis on two levels: (1) including the property and retirement and aged care companies, and (2) excluding the property and retirement and aged care companies.

Table 4 reports descriptive statistics for the 47 companies in 2017, but only for 46 companies in 2016 and 2015. The reason for this is because a property company was listed in 2017 and it reported only six months' results for 2016 and none for 2015, so it was excluded from the 2016 and 2015 analysis. The financial data are taken from the companies' annual reports on the NZX Annual Reports Database.¹⁷

Place Table 4 here

In spite of the sample comprising the largest companies listed on the NZX, there are, nevertheless, some very large companies in this dataset. This is indicated by the large difference between the mean and median and the large standard deviation for revenues, pre-tax accounting income, GAAP income tax expense, CASH income tax expense, deferred tax expense, and shareholders' funds. For example, in 2017, the mean revenues is \$1.18 billion compared to the median of \$445 million, and 13 companies (28 percent of the sample) have revenues exceeding \$1 billion while three companies (6 percent of the sample) have revenues exceeding \$5 billion.

At this point, we provide some general remarks about the relation between the GAAP income tax expense (and CASH income tax expense) and pre-tax accounting profit because these herald the tenor of the results which are reported in the next section. If we divide the mean

¹⁷ For companies with 30 September and 31 December year ends, their data years for this study are 2016, 2015 and 2014 because the 2017 financial information was unavailable when we conducted the study.

GAAP income tax expense by the mean pre-tax accounting profit, we get a rough indication of the GAAP ETR. These are 22.1% in 2017, 22.4% in 2016, and 20.6% in 2015. Dividing the mean CASH income tax expense by the mean pre-tax accounting profit, we get a rough indication of the CASH ETR, which are 22.5% in 2017, 23.5% in 2016, and 22.3% in 2015.

An interesting picture emerges. First, the CASH ETRs are slightly higher than the GAAP ETRs, which suggest that these companies are not utilizing temporary tax deferral strategies to retain cash resources within the firm (Koester, 2017). This may suggest that, over time, New Zealand tax law has been aligning itself with GAAP rules so that large temporary differences are now few and far between. In fact, Table 4 reports very small amounts for the deferred tax expense, and five of the six mean and median statistics show a deferred tax *credit*, indicating expenses (for example, doubtful debt expense) recognized in pre-tax accounting income are not deductible until a future date.

The second feature of the overview GAAP ETR and CASH ETR is that they are lower than the corporate statutory tax rate of 28%. This is driven by large permanent differences for the property and retirement and aged care firms where the changes to the fair value of their investment properties, while included in pre-tax accounting income, are not subject to tax.

The next section examines the GAAP ETR and CASH ETR in more detail.

5.0 RESULTS

Table 5 presents the GAAP ETR and CASH ETR for 2017 (Panel A), 2016 (Panel B), and 2015 (Panel C), as well as the CASH ETR for the combined 2015 to 2017 period (Panel D).

The results in each panel are for the 47 (46)¹⁸ companies in 2017 (2016, 2015, and the combined three-year window) and are analysed for three subsets of firms: (i) all 47 (46) firms, (ii) the 12 (11) property and retirement and aged care firms as explained in section 4 and shown in table 2, and (iii) the 35 companies indicated in (i) less the companies in (ii) (i.e., all companies on the NZX 50 in our sample less the companies in the property and retirement and aged sectors).

Place Table 5 here

5.1 Annual GAAP ETR and CASH ETR

In 2017, the GAAP ETRs are 22.0% for the sample of 47 companies, 6.8% for the property and retirement and aged care companies, and 27.3% for the sample excluding the property and retirement and aged care companies. As explained in section 4.0, the low GAAP ETR for the property and retirement and aged care companies is due to the inclusion of changes in the fair value of their investment properties in pre-tax operating income, but which are not subject to tax. These capital gains permanently reduce taxable income without reducing pre-tax accounting income. As a result, the property and retirement and aged care companies enjoy the twin financial reporting benefits of reduced effective tax rates and increased reported earnings.

Clearly, the taxation of capital gains is a controversial issue as noted in Section 1.0. For the property and retirement and aged care companies, their accounting policy is to recognise the changes in the fair value of their properties in pre-tax accounting income. This is because they are investment properties as defined in *NZ IAS 40 Investment Property*, being properties held “to earn rentals or for capital appreciation or both” (paragraph 5) and that “a gain or loss arising

¹⁸ The number in parentheses indicates a reduced sample in 2016, 2015, and the combined three years. As explained in section 4.0, a property company was listed in 2017 and there were no data for their 2016 and 2015 years.

from a change in the fair value of investment property shall be recognised in profit or loss for the period in which it arises” (paragraph 35). The underlying premise for this accounting policy is to align revenue recognition with the nature of the business – how its business income is generated and its wealth is created – and, hence, the change in the fair value ought to be reflected in accounting income even though the tax law does not regard it as taxable income.

When the property and retirement and aged care companies are excluded from the analysis, the remaining companies’ GAAP ETR is 27.3%. This is very close to the 28% STR, suggesting an absence of large permanent differences.

The 2017 CASH ETRs are 22.8% for the sample of 47 companies, 6.4% for the property and retirement and aged care companies, and 28.4% for the sample excluding the property and retirement and aged care companies. Again, the property and retirement and aged care companies exhibit a very low CASH ETR for the same reason explained above for the GAAP ETR results. When they are excluded from the analysis, the remaining companies’ CASH ETR is 28.4%. This is very close to the 28% STR, suggesting an absence of large permanent *and* temporary differences.

Panel B reports very similar results for 2016. The tenor of the results in Panel C for 2015 is similar to 2017 and 2016 with one remarkable feature being the GAAP ETR and CASH ETR for the sample that excludes the property and retirement and aged care companies are 31.9% and 32.8%, respectively. First, the GAAP ETR being greater than the 28% STR indicates non-deductible permanent differences such as a goodwill impairment expense. That is, the tax law is stricter than accounting rules in that the former does not regard such items as an expense. This is the opposite of the non-assessable permanent differences, which Goh et al. (2016)

regard as a measure of tax avoidance like what we have seen for the property and retirement and aged care companies.

The 32.8% CASH ETR for 2015 in panel C indicates that the deferrals are working in the opposite direction, namely, that expenses recognized in the pre-tax accounting income are not yet deductible for tax purposes, but would be at a future date. That is, the temporary differences are working in the reverse direction and the cash tax payments are occurring earlier rather than later. This is consistent with the deferred tax credits reported in Table 4.

5.2 Three-year CASH ETR

The previous section focuses on an annual CASH ETR. Dyreng et al. (2008) and Koester et al. (2017) caution against this measure because it could be a noisy proxy for the long-run CASH ETR. Tax adjustments arising from tax audits will be reported in the cash tax expense, but they may relate to past years. Hence, these researchers suggest a longer term CASH ETR to “allow time for uncertain tax positions to be audited and challenged by the IRS” (Dyreng et al, 2008, 62).

Applying the approach in Dyreng et al. (2008) and Koester et al. (2017), we compute a three-year CASH ETR which is the sum of the cash taxes paid in 2015, 2016, and 2017 divided by the pre-tax accounting income in 2015, 2016, and 2017. Panel D reports the three-year CASH ETR of 22.7%, 6.4%, and 27.8% for the 47 companies and the two subsets for (i) the property and retirement and aged care companies, and (ii) excluding the property and retirement and aged care companies. For the 35 companies that exclude the property and retirement and aged care companies, the three-year CASH ETR is 27.8%. This is very close to the 28% STR.

5.3 Summary

Overall, the results indicate that apart from the property and the retirement and aged care companies, the remaining companies in the NZX 50 index do not have permanent tax-reduction items nor use temporary tax deferral strategies. If anything, the 2015 CASH ETR indicates the temporary differences are working in the opposite direction where the tax rules around revenue and expense recognition are stricter than those used in financial reporting. The result is that the temporary differences are working in reverse and causing earlier, rather than later, cash tax payments.

6.0 CONCLUSION

The purpose of this study is to examine whether the cash tax payments by the NZX 50 companies over the past three years are in accord with the 28% STR or whether they use tax avoidance mechanisms (Goh et al. 2016) to shirk their tax obligation. Our results indicate that the property and retirement and aged care companies' GAAP ETR and CASH ETR are substantially less than the 28% STR. However, this perceived tax avoidance does not mean these firms are doing anything improper. Rather, they are simply following the tax code that does not tax changes in the fair value of investment properties. Is there a problem with the tax code in not taxing the change in the fair value of investment properties even though the change is recognised in accounting income to better reflect the entity's financial performance by aligning the revenue recognition for rental income and capital appreciation with the underlying nature of the business? Is there an argument that the property and retirement and aged care industries have a tax advantage over other industries who generate income which, for the most part, is included in taxable income?

Excluding the property and retirement and aged care companies, the cash tax payments by the remaining NZX 50 companies are in line with the 28% STR. The annual CASH ETR in 2017, 2016, and 2015 are 28.4%, 27.3%, and 32.8%, respectively. The last of these suggests that rather than deferring tax payments through temporary differences, these differences result in a prepayment of tax.

Because the one-year CASH ETR is a noisy proxy for the long-run, we also examined the three-year CASH ETR to mitigate the mismatch of cash taxes paid and pre-tax accounting income. Excluding the property and retirement and aged care companies, the three-year CASH ETR for the remaining NZX 50 companies is 27.8%. This is hardly different from the corporate statutory tax rate of 28%.

Overall, there is no evidence that the sample of NZX 50 companies engaged in tax avoidance over the 2015 to 2017 years. To the contrary, they were responsible corporate tax payers. Any deviation from the statutory tax rate is linked to the property and retired and aged care industries because of the exempt nature of the increases in the fair value of their properties. In turn, this begs the question of whether the property and retired and aged care industries should be advantaged when other industries are not.

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Appendix 1
NZX 50 Companies as of October 2017

- 1 Auckland International
- 2 Air NZ
- 3 ANZ Banking Group
- 4 Argosy Property
- 5 Arvida Group
- 6 The a2 Milk Company
- 7 CBL Corporation
- 8 Contact Energy
- 9 Chorus
- 10 Comvita
- 11 Ebos Group
- 12 Fletcher Building
- 13 F&P Healthcare
- 14 Freightways
- 15 Fonterra SHS' Fund
- 16 Goodman Property
- 17 Genesis Energy
- 18 Heartland Bank
- 19 Infratil
- 20 Investore Property
- 21 Kathmandu Holdings
- 22 Kiwi Income Property
- 23 Mercury Energy
- 24 Meridian Energy
- 25 Metlife Care
- 26 Mainfreight
- 27 Metro Perf Glass
- 28 New Zealand Refining
- 29 NZX
- 30 Precinct Properties
- 31 Property for Industry
- 32 Port of Tauranga
- 33 Restaurant Brands
- 34 Ryman Healthcare
- 35 Sanford
- 36 Scales Corporation
- 37 Sky City Entertainment
- 38 Sky Network Television
- 39 Synlait Milk
- 40 Spark New Zealand
- 41 Stride Property
- 42 Summerset Group
- 43 Tourism Holdings
- 44 Trade Me Group
- 45 Trustpower
- 46 Vector
- 47 Vital Healthcare
- 48 Westpac Banking Corporation
- 49 Xero
- 50 Z Energy

Table 1
Depreciation recognised in the financial statements and tax return

Depreciation recognised in:	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Total</u>
Financial statements	400	400	400	400	400	2,000
Tax return	<u>800</u>	<u>800</u>	<u>400</u>	<u>-</u>	<u>-</u>	<u>2,000</u>
Temporary difference	<u>(400)</u>	<u>(400)</u>	<u>-</u>	<u>400</u>	<u>400</u>	<u>-</u>
Statutory tax rate (STR)	28%	28%	28%	28%	28%	28%
(Reduced) Additional tax payment	(112)	(112)	-	112	112	-

Table 2
Computation of taxable income and tax rates

Panel A: Computation of taxable income

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Total</u>
1. Pre-tax accounting income	4,000	4,000	4,000	4,000	4,000	20,000
2. Permanent or exempt items:						
Non-assessable capital gain	(1,500)	(1,500)	(1,500)	(1,500)	(1,500)	(7,500)
Non-deductible goodwill impairment	<u>500</u>	<u>500</u>	<u>500</u>	<u>500</u>	<u>500</u>	<u>2,500</u>
3. Net profit before tax after exempt items	3,000	3,000	3,000	3,000	3,000	15,000
4. Temporary or timing difference:						
Depreciation in financial statements	400	400	400	400	400	2,000
Depreciation in tax returns	<u>(800)</u>	<u>(800)</u>	<u>(400)</u>	<u>-</u>	<u>-</u>	<u>(2,000)</u>
5. Taxable income	<u>2,600</u>	<u>2,600</u>	<u>3,000</u>	<u>3,400</u>	<u>3,400</u>	<u>15,000</u>
6. Income tax expense (Row 3 * 28%)	840	840	840	840	840	4,200
7. Income tax payable (Row 5 * 28%)	728	728	840	952	952	4,200
This is the cash tax expense – the amount paid.						
8. Deferred tax liability (Row 4 items * 28%)	112	112	-	(112)	(112)	-
Deferred tax liability balance	112	224	224	112	-	-

Panel B: Tax rates

STR (as per the Income Tax statute)	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%
Tax effect of permanent (exempt) items:						
Non-assessable capital gain	(10.5%)	(10.5%)	(10.5%)	(10.5%)	(10.5%)	(10.5%)
Non-deductible goodwill impairment	<u>3.5%</u>	<u>3.5%</u>	<u>3.5%</u>	<u>3.5%</u>	<u>3.5%</u>	<u>3.5%</u>
GAAP ETR (Row 6/Row 1)	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%
Tax effect of temp difference (Row 8/Row 1)	<u>(2.8%)</u>	<u>(2.8%)</u>	<u>-</u>	<u>2.8%</u>	<u>2.8%</u>	<u>-</u>
CASH ETR (Row 7/Row 1)	<u>18.2%</u>	<u>18.2%</u>	<u>21.0%</u>	<u>23.8%</u>	<u>23.8%</u>	<u>21.0%</u>

Table 3
Industry classification of a reduced sample of NZX 50 companies

Agriculture and fishing	5
Building	2
Consumer	1
Energy processing	8
Finance and other services	5
Healthcare products	2
Investment	1
Leisure and tourism	2
Media and communications	3
Ports	2
Property	8
Retirement and aged care	4
Textiles and apparel	1
Transport	<u>3</u>
	<u>47</u>

Table 4
Descriptive statistics

\$000	2017	2016	2015
Revenue			
Mean	1,182,003	1,136,367	1,084,627
Median	445,348	414,844	320,532
Std deviation	1,910,181	1,825,537	1,735,438
Pre-tax accounting income			
Mean	155,651	147,753	116,456
Median	139,351	103,137	108,473
Std deviation	129,308	152,716	115,990
GAAP income tax expense			
Mean	34,454	33,130	24,017
Median	20,926	20,494	10,432
Std deviation	34,926	41,115	30,830
CASH income tax expense			
Mean	34,964	34,753	25,944
Median	21,037	20,548	11,356
Std deviation	35,433	44,136	33,066
Deferred tax expense (credit)			
Mean	(509)	(2,379)	(2,491)
Median	188	(1,013)	(405)
Std deviation	11,079	14,340	12,452
Shareholders' funds			
Mean	1,205,668	1,166,310	1,073,834
Median	756,138	750,806	667,755
Std deviation	1,137,898	1,159,140	1,101,278
Number of companies	47	46	46

Table 5
Mean tax rates of NZX companies

	Number of observations	GAAP ETR	CASH ETR
Panel A: 2017			
Excluding Fonterra Shareholders' Fund and two Australian banks	47	22.0%	22.8%
Property and retirement and aged care companies	12	6.8%	6.4%
Excluding property and retirement and aged care companies	35	27.3%	28.4%
Panel B: 2016			
Excluding Fonterra Shs' Fund, two Aust banks, and one Property company	46	23.1%	22.4%
Property and retirement and aged care companies	11	7.1%	7.1%
Excluding property and retirement and aged care companies	35	28.2%	27.2%
Panel C: 2015			
Excluding Fonterra Shs' Fund, two Aust banks, and one Property company	46	25.9%	27.1%
Property and retirement and aged care companies	11	7.0%	8.9%
Excluding property and retirement and aged care companies	35	31.9%	32.8%
Panel D: 2015 to 2017			
Excluding Fonterra Shs' Fund, two Aust banks, and one Property company	46	21.9%	22.7%
Property and retirement and aged care companies	11	6.5%	6.4%
Excluding property and retirement and aged care companies	35	26.7%	27.8%

GAAP ETR = Income tax expense/Pre-tax accounting income

CASH ETR = Cash tax paid/Pre-tax accounting income