

## **An Examination of the Legitimacy of the Aggregate View of the Corporation**

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### Abstract

Capitalising on Australia's unique position, this study examines the legitimacy of the 'aggregate' view of the corporation (Avi-Yonah, 2014) and argues that tax aggressive behaviour does not necessarily translate into a higher return for shareholders as the payment of tax is a company's social responsibility (Zummo et al., 2017; McCredie and Sadiq, 2017). The results of this study confirm this assertion with returns to shareholders (both capital growth and income streams), positively related to the level of income tax, thereby contesting the aggregate view of a corporation which predicts a negative response. This relationship however, in terms of capital growth only, appears to be decreasing in magnitude and significance. As a result, this study suggests that extant legislation to address corporate tax avoidance and minimisation requires a firmer and more transparent approach, a continuous bright light shone on the tax behaviours of corporations to ensure their continued performance with regards to tax and a fair and just system for all.

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## 1. Introduction

In US and European jurisdictions, under a classical corporate tax system, both a company and its shareholders are taxed separately on the profits earned and distributed by the company. In Australia however, an imputation tax system applies to prevent double taxation. That is, companies are taxed at the corporate tax rate and when dividends are distributed, company tax paid is refunded to shareholders via a franking offset. This franking offset allows shareholders to reduce their income tax, which would be due and payable on dividend income, ensuring ultimately that the profits of the company are taxed at the shareholders marginal tax rate. Consequently, since the introduction of the imputation regime in Australia in 1987, company tax acts as a proxy for taxing shareholders. Although, this is a premise arguably established in 1982 with the introduction of the 'Recoupment Tax'<sup>1</sup> which imposed a tax liability on shareholders for lost company tax under 'bottom of the harbour' schemes.

Australia's dividend imputation system suggests that shareholders are ultimately responsible for many of the actions of the corporate, with companies adhering to the 'aggregate' view of a corporation where the company is simply the sum of its shareholders (Avi-Yonah, 2014; Gindis, 2009). Under this theory, tax aggressive behaviour is not only acceptable but expected as the company's main purpose is to maximise profits and value for shareholders. This study however argues that tax aggressive behaviour does not necessarily translate into a higher return for shareholders as the payment of tax is a company's social responsibility (Zummo et al., 2017; McCredie and Sadiq, 2017). Consequently, to aggressively minimise tax in order to increase

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<sup>1</sup> The 'Recoupment Tax' introduced in 1982 via the Taxation (Unpaid Company Tax) Assessment Act established that shareholders of corporates that engage in and benefit from tax avoidance schemes will be liable for the company tax that should duly be paid.

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profitability in the short term would be detrimental to a company's reputation (Marriage, 2014; Lavermicocca and Buchan, 2016). This argument is further supported by extant literature which demonstrates that news on tax aggressive behaviour has a negative impact on a company's stock price (Hanlon and Slemrod, 2009)<sup>2</sup>. To date however, the legitimacy of the 'aggregate' view of the corporation has not been extensively examined (Avi-Yonah, 2014).

This study capitalises on Australia's unique position and tests whether corporate tax behaviour impacts returns to shareholders (both capital growth and dividends) as expected under the aggregate view of the corporation. It provides evidence of the impact of extant company tax practices on shareholders and aids in the development of domestic tax reform measures designed to ameliorate tax minimisation and aggression.

This paper proceeds as follows. Section 2 presents the data and research design. Section 3 presents the results. Section 4 summarises the paper.

## 2. Data and Research Design

### 2.1 Data

Share price data for the constituents of the S&P ASX 200 was obtained from SIRCA's Thomson Reuters Tick History (TRTH) database for the 2012-13 to 2016-17 financial years. This data is

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<sup>2</sup> Hanlon and Slemrod (2009) examine stock price reaction to news on corporate involvement in tax shelters. They find, in aggregate, that the corporates stock price declines on discovery.

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reported on a daily basis, as such annual returns were constructed by calculating the percentage change in share price over each financial year.

Dividend and tax rate data for the constituents of the S&P ASX 200 were obtained from Thomson Reuters Datastream for the 2012-13 to 2016-17 financial years. Dividend data represents the dividend income paid per share. This data is reported on a quarterly basis, therefore the second quarter figure (April-June) was employed to enable comparison with other datasets. Tax rate data is reported annually in the statement of financial position and was determined by calculating the percentage of net sales and revenues paid as income tax.

## 2.2 Research Design

### *2.2.1 Modelling the relationship between corporate tax behaviour and shareholder returns*

We begin our analysis by examining the relationship between corporate tax behaviours and shareholder returns via both capital growth and income streams (dividends). To model this relationship we employ two separate regression models as follows:

$$R_{i,t} = \alpha + \beta(\text{REV\_TAX}_{i,t}) \quad (1)$$

$$\text{DPS}_{i,t} = \alpha + \beta(\text{REV\_TAX}_{i,t}) \quad (2)$$

Where  $R_{i,t}$  represents the annual return of firm  $i$  at time  $t$ ,  $\text{DPS}_{i,t}$  represents the annual dividend per share of firm  $i$  at time  $t$ <sup>3</sup> and  $\text{REV\_TAX}_{i,t}$  represents the percentage of net sales and revenues paid as

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<sup>3</sup> Dividend yield was also employed as an alternate proxy for calculating shareholder returns via an income stream. The results obtained from these regressions are qualitatively similar to those reported.

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income tax by firm  $i$  at time  $t^4$ . This regression was conducted using the constituents of the S&P ASX 200 for the 2012-13 to 2016-17 financial years collectively, and then separately for each financial year. This sample period was chosen to examine whether changes in corporate tax behaviour has occurred, thereby testing the efficacy of extant legislation since the initiation of the base erosion and profit shifting program (BEPS) headed by the OECD in June 2012, to today.

Firm observations missing share price, dividend or tax rate data were excluded from the sample to ensure completeness and accuracy<sup>5</sup>. In addition, heteroskedasticity in all OLS regressions was controlled for by applying a Huber-White adjustment and trimming extreme outliers from the data<sup>6</sup>.

### 2.2.2 *Modelling changes in corporate tax behaviour*

To statistically determine whether changes in corporate tax behaviour have occurred during the sample period, the sample was partitioned to include only the first (2012-13) and last (2016-17) financial years. An interacted regression was then employed to test for differences in tax behaviour between these two years as follows:

$$R_{i,t} = \alpha + \beta_1(\text{REV\_TAX}_{i,t}) + \beta_2(d_{2016-17}) + \beta_3(\text{REV\_TAX}_{i,t} \times d_{2016-17}) \quad (3)$$

$$\text{DPS}_{i,t} = \alpha + \beta_1(\text{REV\_TAX}_{i,t}) + \beta_2(d_{2016-17}) + \beta_3(\text{REV\_TAX}_{i,t} \times d_{2016-17}) \quad (4)$$

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<sup>4</sup> Gross, operating and pre-tax income were also employed as an alternate proxy for calculating corporate tax rates. The results obtained from these regressions are qualitatively similar to those reported.

<sup>5</sup> The exclusion of firm observations missing return or tax rate data resulted in 28, 25, 14, 8 and 34 observations being excluded from the 2012-13, 2013-14, 2014-15, 2015-16 and 2016-17 financial years respectively.

<sup>6</sup> The impact of trimming the data is minimal with 4, 4, 4, 4 and 1 observations being excluded from the 2012-13, 2013-14, 2014-15, 2015-16 and 2016-17 financial years respectively.

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Where  $R_{i,t}$  represents the annual return of firm  $i$  at time  $t$ ,  $DPS_{i,t}$  represents the annual dividend per share of firm  $i$  at time  $t$ ,  $REV\_TAX_{i,t}$  represents the percentage of net sales and revenues paid as income tax by firm  $i$  at time  $t$  and  $d_{2016-17}$  is a dummy variable which is set to one if the observation pertains to the 2016-17 financial year and zero otherwise. Of note, a significant coefficient at  $\beta_3$  will provide evidence of a change in corporate tax behaviour.

### 3. Results

This section is divided into two parts. First the relationship between corporate tax behaviours and shareholder returns via both capital growth and income streams (dividends) is examined in Section 3.1. Secondly, in Section 3.2 this study provides evidence of a change in corporate tax behaviour.

#### 3.1 The relationship between corporate tax behaviour and shareholder returns

##### 3.1.1 Capital growth

The results presented in Table 1 demonstrate the relationship between corporate tax behaviour and shareholder returns via capital growth. As expected intuitively, this relationship is a positive one, that is, as profits increase, income tax increases as do returns to shareholders via capital growth.

**Table 1**

The relationship between corporate tax behaviour and returns to shareholders via capital growth.

Financial Year	$\alpha$	$\beta$ (REV_TAX)
<i>Panel A</i>		
2012-17	0.0368 (2.32)*	1.4773 (6.78)**
<i>Panel B</i>		
2012-13	-0.0006 (-0.02)	2.2296 (3.36)**

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2013-14	0.0983 (3.89)**	0.8358 (2.33)*
2014-15	-0.0495 (-1.84)	1.6282 (5.68)**
2015-16	0.1062 (2.02)*	0.9506 (1.37)
2016-17	0.0834 (2.74)**	0.4400 (1.04)

Note: \*, \*\* denote significance at 5% and 1% respectively.

Results reported are from the OLS regression model described in Equation (1):

$$R_{i,t} = \alpha + \beta(\text{REV\_TAX}_{i,t}) \quad (1)$$

Where  $R_{i,t}$  represents the annual return of firm  $i$  at time  $t$ , and  $\text{REV\_TAX}_{i,t}$  represents the percentage of net sales and revenues paid as income tax by firm  $i$  at time  $t$ .

This is apparent across the full sample period as evidenced in Panel A, by the  $\beta$  coefficient of 1.4773 (significant at the 1% level). This indicates that a 1% increase in corporate income taxes results in a 1.4773% increase in the annual return of the firm. Notably however, when the sample is partitioned into each financial year, as reported in Panel B, the coefficients, whilst still indicating a positive relationship, decrease in magnitude and lose their significance in the latter half of the sample. For example, the magnitude of the relationship between the level of corporate income tax paid and the annual return of the firm appears to decrease from 2.2296 in the 2012-13 financial year (significant at the 1% level) to 0.4400 in the 2016-17 financial year (insignificant), overall a 1.7896% decrease. Taken together these results demonstrate that the level of income tax paid by corporations was positively viewed, fundamental to the pricing of their stocks in the 2012-13, 2013-14 and 2014-15 financial years and indicative of a transition from the aggregate to the real entity view of the corporation, where the firm's responsibilities to society via the payment of tax was considered alongside their obligations to shareholders. However, since the easing of the senate inquiry into corporate tax avoidance and the adoption of the voluntary tax transparency code (TTC) in the

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2015-16 and 2016-17 financial years, this transition appears stymied with tax no longer considered a moderating factor.

### 3.1.2 Income Streams (dividends)

The results presented in Table 2 demonstrate the relationship between corporate tax behaviour and shareholder returns via income streams or dividends. Consistent with the intuition described in Section 3.1.1, this relationship is a positive one.

**Table 2**

The relationship between corporate tax behaviour and returns to shareholders via income streams (dividends).

Financial Year	$\alpha$	$\beta$ (REV_TAX)
<i>Panel A</i>		
2012-17	0.3410 (12.92)**	1.7750 (4.91)**
<i>Panel B</i>		
2012-13	0.2826 (9.24)**	0.9752 (2.83)**
2013-14	0.3315 (7.61)**	1.6842 (3.00)**
2014-15	0.3684 (7.00)**	2.0511 (3.69)**
2015-16	0.3900 (4.70)**	1.6760 (1.40)
2016-17	0.2778 (6.60)**	3.6331 (3.26)**

Note: \*, \*\* denote significance at 5% and 1% respectively.

Results reported are from the OLS regression model described in Equation (2):

$$DPS_{i,t} = \alpha + \beta(REV\_TAX_{i,t}) \quad (2)$$

where  $DPS_{i,t}$  represents the annual dividend per share of firm  $i$  at time  $t$  and  $REV\_TAX_{i,t}$  represents the percentage of net sales and revenues paid as income tax by firm  $i$  at time  $t$ .



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This is apparent across the full sample period as evidenced in Panel A, by the  $\beta$  coefficient of 1.7750 (significant at the 1% level). This indicates that a 1% increase in corporate income taxes results in a 1.7750 cent increase in dividends per share. When the sample is partitioned into each financial year, as reported in Panel B, this result holds. Notably however, the magnitude of the relationship between the level of corporate income tax paid and the dividend per share appears to increase, from 0.9752 in the 2012-13 financial year to 3.6331 in the 2016-17 financial year, overall a 2.6579 cent increase. Taken together, these results do not support the aggregate view of the corporation, with an increase in income tax matched by a corresponding increase in returns to shareholders.

### 3.2 Evidence of a change in corporate tax behaviour

To test whether the changes in corporate tax behaviour suggested by the results in Sections 3.1.1 and 3.1.2 are statistically significant, we rerun regressions isolating the 2012-13 and 2016-17 financial year observations and test for difference via interacted regression models. The results of this analysis are presented in Sections 3.2.1 and 3.2.2.

#### 3.2.1 Capital growth

The results reported in Table 3 provide supporting evidence of the transitory change in corporate tax behaviour suggested in Section 3.1.1.

**Table 3**

Evidence of a change in corporate tax behaviour and shareholder returns via capital growth

	$\alpha$	$\beta_1(\text{REV\_TAX}_{i,t})$	$\beta_2(d_{2016-17})$	$\beta_3(\text{REV\_TAX}_{i,t} \times d_{2016-17})$
Coefficient	-0.0006	2.2296	0.0840	-1.7896
t-statistic	(-0.02)	(3.36)**	(1.90)	(-2.28)*

Note: \*, \*\* denote significance at 5% and 1% respectively.

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Results reported are from the OLS regression model described in Equation (3):

$$R_{i,t} = \alpha + \beta_1(\text{REV\_TAX}_{i,t}) + \beta_2(d_{2016-17}) + \beta_3(\text{REV\_TAX}_{i,t} \times d_{2016-17}) \quad (3)$$

where  $R_{i,t}$  represents the annual return of firm  $i$  at time  $t$ ,  $\text{REV\_TAX}_{i,t}$  represents the percentage of net sales and revenues paid as income tax by firm  $i$  at time  $t$  and  $d_{2016-17}$  is a dummy variable which is set to one if the observation pertains to the 2016-17 financial year and zero otherwise

This is demonstrated by the negative (-1.7896) and significant (at the 5% level) coefficient at  $\beta_3$  which indicates a statistically significant decrease in the magnitude of the relationship between corporate income tax rates and returns to shareholders via capital growth from 2012-13 ( $\beta_1$ ) to 2016-17 ( $\beta_1 + \beta_3$ ). That is, a 1% increase in the income tax rate in 2012-13 (2016-17) results in a 2.2296% (0.4400%) increase in the annual return of the firm, overall a reduction of 1.8296%. This result confirms the decreasing significance of tax as a moderating factor in the pricing of stocks and a reversion to the aggregate view of the corporation.

### 3.2.2 Income Streams (dividends)

The results reported in Table 4 provide supporting evidence of corporate tax behaviours as suggested in Section 3.1.2.

**Table 4**

Evidence of a change in corporate tax behaviour and shareholder returns via income streams (dividends)

	$\alpha$	$\beta_1(\text{REV\_TAX}_{i,t})$	$\beta_2(d_{2016-17})$	$\beta_3(\text{REV\_TAX}_{i,t} \times d_{2016-17})$
Coefficient	0.2826	0.9752	-0.0048	2.6579
t-statistic	(9.24)**	(2.83)**	(-0.09)	(2.28)*

Note: \*, \*\* denote significance at 5% and 1% respectively.

Results reported are from the OLS regression model described in Equation (4):

$$\text{DPS}_{i,t} = \alpha + \beta_1(\text{REV\_TAX}_{i,t}) + \beta_2(d_{2016-17}) + \beta_3(\text{REV\_TAX}_{i,t} \times d_{2016-17}) \quad (4)$$

where  $\text{DPS}_{i,t}$  represents the annual dividend per share of firm  $i$  at time  $t$ ,  $\text{REV\_TAX}_{i,t}$  represents the percentage of net sales and revenues paid as income tax by firm  $i$  at time  $t$  and  $d_{2016-17}$  is a dummy variable which is set to one if the observation pertains to the 2016-17 financial year and zero otherwise

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This is demonstrated by the positive (2.6579) and significant (at the 5% level) coefficient at  $\beta_3$  which indicates a statistically significant increase in the magnitude of the relationship between corporate income tax rates and returns to shareholders via income streams (dividends) from 2012-13 ( $\beta_1$ ) to 2016-17 ( $\beta_1+\beta_3$ ). That is, a 1% increase in the income tax rate in 2012-13 (2016-17) results in a 0.9752 (2.6579) cent increase in the annual dividends per share, overall an increase of 1.6827 cents. This result reiterates the lack of support for the aggregate view of the corporation, with increases in income tax matched by a corresponding increase in returns to shareholders.

#### 4. Conclusion

Capitalising on Australia's unique position, this study examines the legitimacy of the 'aggregate' view of the corporation (Avi-Yonah, 2014) and argues that tax aggressive behaviour does not necessarily translate into a higher return for shareholders as the payment of tax is a company's social responsibility (Zummo et al., 2017; McCredie and Sadiq, 2017).

The results of this study confirm this assertion with returns to shareholders, including both capital growth (proxied by annual share returns) and income streams (proxied by dividends per share), positively related to the level of income tax. That is, an increase in income tax is matched by an increase in the returns to shareholders, thereby contesting the aggregate view of a corporation which predicts a negative response. Of note however, it is suggested that this relationship, with a specific reference to capital growth, is decreasing in magnitude and significance with tax no longer a moderating factor in the pricing of stocks, indicating a reversion to the aggregate view of a corporation.

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En masse, the results of this study suggest that extant legislation to address corporate tax avoidance and minimisation, requires a firmer and more transparent approach. The spotlight that once shone on corporations during the senate inquiry into corporate tax avoidance has now dimmed, with corporates and stakeholders returning to their old ways. It is therefore suggested that a continuous bright light be shone on the tax behaviours of corporations to ensure their continued performance with regards to tax and a fair and just system for all.

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