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Do Investors Value Corporate Tax Return Information? Evidence from Australia

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Do Investors Value Corporate Tax Return Information? Evidence from Australia

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Do Investors Value Corporate Tax Return Information? Evidence from Australia

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Many countries have recently adopted policies to increase corporate tax transparency, including policies requiring public disclosure of tax information. However, little is known about the consequences of these disclosures. I exploit a June 2013 law change requiring the Australian Taxation Office (ATO) to publicly report line items from Australian corporate tax returns to examine (1) the market's expectations of the costs and benefits of public disclosure of tax return information, and (2) the information content of the tax return line items disclosed in the ATO's report. I test market reactions around key legislative event dates and find evidence that the market anticipated an overall net benefit of disclosure. Specifically, cross-sectional analysis provides evidence that the market anticipated benefits from reduced information asymmetry. However, for firms likely to face increased public or regulatory scrutiny as a result of disclosure, the market reaction to legislative events is negative, indicating anticipated net costs. Finally, I find a significant market reaction to the ATO report itself, suggesting the disclosure conveyed incremental information to market participants at the time of its release. This study is a first step toward understanding of the consequences of mandatory tax return information disclosure.

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Chapter 1:

Introduction

Demand for greater tax transparency has grown in recent years as companies have faced increasing scrutiny for their corporate tax planning strategies (Chen, Powers, and Stomberg 2016). Tax transparency encompasses a number of policies, including the exchange of tax information between countries, increased disclosure of taxpayer information to tax authorities, such as Schedule UTP in the U.S. (Towery 2016), and, important to this study, the *public* disclosure of corporate tax return information (EY 2015, OECD 2015). In Australia, lawmakers passed a tax transparency bill in June 2013 to counter tax aggressive behavior. Starting with the 2013/2014 tax year, the Australian Taxation Office (ATO) must publicly report taxable income and taxes paid from corporate tax returns for companies with total income exceeding AUD 100M.[1] Similar to the U.S., Australian tax returns were historically confidential, and due to a number of differences between financial and tax reporting, companies' exact Australian taxable income and tax payments generally are not available in their public financial statements.[2]

I explore the capital market impact of public disclosure of corporate tax return information by exploiting the law change in Australia to examine (1) market expectations of the net costs and benefits of this type of disclosure, and (2) whether there is

[1] Note that for purposes of this rule, "total income" refers to a line item from the Australian corporate tax return that is closer to a gross income figure rather than net income.

[2] For example, the allocation of tax expense between continuing and discontinued operations, differing consolidation rules, the recognition of accounting accruals such as the tax reserve, and tax credits can lead to differences between taxable income estimated from financial statement information and true taxable income. See Tran (2015) for additional discussion of the differences between Australian tax and financial reporting.

incremental information content in reported taxable income and taxes paid. Answering both of these questions is important. First, understanding market perceptions of the costs and benefits of tax disclosure is important because it reveals market expectations of future consequences. Specifically, understanding whether the market reacts positively or negatively to increased tax transparency is a first step in predicting future firm behavior in response to the new disclosure. If firms suffer economic costs in the form of negative market returns, it is more likely firms will respond with real changes in behavior. Second, examining the market's reaction, if any, to the disclosure itself is important because it reveals whether the market finds corporate tax return information to be incrementally useful. Most companies prefer to keep information regarding their actual tax payments private (EY 2015). Thus, evidence regarding the informativeness of this information is important to both regulators and managers.

Several factors likely influence market perceptions of the costs and benefits of tax return disclosure. If market participants believe a salient, public disclosure of tax return information will impose increased net costs on firms, I expect the market to react negatively. For example, the market could anticipate that the disclosure will result in public outcry and backlash if the public perceives that companies do not pay their "fair share" of taxes. Beyond costly protests and boycotts (e.g., scrutiny of Starbucks in the U.K.), this public pressure could force the ATO or lawmakers to increase scrutiny of firms' taxes and lead to more extensive tax audits or new legislation combatting corporate tax avoidance, increasing tax costs.

On the other hand, the market could react positively for two reasons. First, market

participants could anticipate that the public disclosure will incrementally lower the cost of capital by enhancing information transparency and decreasing information asymmetry. As in the U.S. (Hanlon 2003, Lisowsky 2009), it is difficult to estimate Australian taxable income based on financial statement information alone (Tran 2015). Thus, the disclosure of precise Australian tax payments could reduce uncertainty regarding a company's tax position and help investors better forecast future cash flows. Second, the market could expect public disclosure to reveal new information about firms' tax avoidance. Prior studies theorize that firms' tax planning activities are conducive to managerial rent extraction (e.g., Desai and Dharmapala 2006; Desai, Dyck, and Zingales 2007). More precise information regarding tax avoidance would allow shareholders to better monitor firms' tax behavior and constrain managerial opportunism arising from tax avoidance, thus increasing shareholder value. Because it is unclear whether the perceived costs or benefits associated with the public disclosure of tax return information dominate, I examine this question empirically.

To examine these market perceptions, I use the multivariate regression model (MVRM) developed by Schipper and Thompson (1983) to test stock returns in the 3-day window around four key events leading up to the passage of the transparency bill. Starting with the government's announcement of the transparency initiative and ending with final bill passage, each of the four event dates either clarifies details about the disclosure rule or increases expectations of the probability of passage. Across the four events, I find an overall positive, but small, market reaction to the transparency bill, which suggests the market anticipate the net benefits of disclosure exceed the costs. In

cross-sectional analysis, I find evidence consistent with the overall positive market reaction to the passage of the tax transparency bill being driven in part by an anticipated decrease in information asymmetry. However, firms more likely to face increased scrutiny for their corporate taxes experience negative market reactions, though market reactions are generally small in magnitude.

Next, I examine the market's reaction to the issuance of the ATO tax report on December 17, 2015, to test the information content of the disclosure. Whereas my previous tests investigate the market's ex ante perceptions of the costs and benefits of disclosure, this test addresses whether tax return disclosure contained incremental information. If the disclosure reveals new information that changes the market's assessment of firms' tax costs, I would expect a significant short-window market reaction surrounding the release of the ATO tax report. In contrast, if the information contained in the report is redundant, irrelevant, or untimely, then I would not expect a market reaction. Consistent with the former outcome, I find evidence of a significant, though small, negative market reaction in the 3-day window around the ATO report release.

Taken together, these results suggest that, on average, firms did not experience overwhelming negative capital market consequences in relation to the tax transparency bill. Thus, there is little capital market incentive for firms to respond to the tax disclosure rule with real changes in behavior, despite lawmakers' goal of constraining tax aggressiveness. In univariate analysis of changes in tax return line items from the 2013/2014 tax report to the 2014/2015 tax report and tests of firms' effective tax rates using the limited time series data currently available, I do not find evidence that firms

reduced their tax avoidance behavior in reaction to the transparency bill. A more thorough investigation of whether firms change tax avoidance behavior as a result of the bill is an important and interesting avenue for future research once more time series data are available, or using confidential government tax return data.

In a concurrent working paper, Hoopes, Robinson, and Slemrod (2016) also study the impact of the Australian public tax return disclosure legislation. First, the authors test whether the tax return disclosure affected consumer sentiment, including both general consumer sentiment, measured using market research data from YouGov, and tax-specific sentiment measured using a survey they designed and conducted following the disclosure of Australian *private* company tax return information on March 22, 2016. They do not find evidence of changes in consumer sentiment using the YouGov data, but find in their survey covering 30 private firms, 6 of which were subject to disclosure, evidence that public disclosure negatively affected consumer sentiment.

Second, the authors examine investor reaction to two events related to public disclosure: the release of a Treasury discussion paper on April 3, 2013, which is one of my four event dates, and December 17, 2015, the release of the actual tax transparency report, which I also examine. Generally consistent with my findings, the authors find a negative market reaction on their first event date, as well as a negative reaction on the report release date for firms appearing to pay zero tax. However, excluding subsequent legislative events likely overstates the negative market reaction. I find that the market reaction reverses as the probability of legislation passage increases and, overall, there is a small positive market reaction to all legislative events related to the transparency rule.

Lastly, the authors graphically examine aggregate total income and taxes paid data from the ATO. They do not find evidence that aggregate tax payments increased following the adoption of the public disclosure rule, which corroborates my finding that firms did not alter their tax avoidance behavior in reaction to the transparency bill. However, they find some evidence consistent with firms reporting lower total income to avoid disclosure, particularly among private firms.

My study makes several contributions. First, as noted by Leuz and Wysocki (2016), the literature offers limited evidence of the economic effects of novel disclosure regulation. My study is one of the first to examine the capital market consequences of mandatory tax return disclosure and serves as a first step toward answering the call for more research in this area of the disclosure literature. I also advance the growing literature examining the consequences of public disclosure of tax return information. Prior archival studies of public tax return disclosure focus on whether taxpayers change their tax avoidance behavior (e.g., Bø, Slemrod, and Thoresen 2015; Hasegawa et al. 2013). My study differs from these prior studies because it examines how the market reacts to public tax return disclosure and can inform predictions about future firm behavior.

Second, examining the consequences of mandatory tax return disclosure is important for tax policy. Tax avoidance and tax transparency are key areas of concern across many jurisdictions. In April 2016, the European Commission adopted a proposal to require public country-by-country reporting for large multinational companies operating within the European Union (EU) (European Commission 2016). Specifically,

companies with annual global revenues exceeding EUR 750 million must publish a public report disclosing on a country-by-country basis the nature of the company's activities, number of employees, net turnover, pre-tax income, tax accrued, tax paid, and accumulated earnings in each EU member country. Companies must also disclose aggregated information for non-EU operations; however, companies must separately report any operations in tax haven countries (European Commission 2016). In addition, on September 5, 2016, the U.K. Parliament voted to grant the U.K. Treasury the authority to mandate public disclosure of country-by-country tax reporting (Sukhraj 2016). However, nearly a year later, the Treasury has yet to require public disclosure.

In parallel in the U.S., U.S. Representative Mark Pocan (Democrat) introduced legislation on September 22, 2016, titled the *Corporate Transparency and Accountability Act*, that would require publicly-traded companies to disclose country-by-country financial information in their Securities and Exchange Commission (SEC) filings. This legislation followed the U.S. Treasury's issuance of final regulations on June 29, 2016, requiring multinational companies with over $850M of revenue to report to the Internal Revenue Service (IRS) information including intercompany revenues, total income tax paid, total income tax accrued, number of employees, and other details on a country-by-country basis. Supporters of the legislation cited investors' needs to assess investment risk and tax avoidance as motivation for the bill, bringing attention to Apple's recent EU mandate to pay $14.5B in back taxes (Doyle and Bodoni 2016) and warning that "shareholders are increasingly at risk from the dearth of information available to them about the tax practices of the companies in which they invest" (Rep. Pocan 2016).

However, this proposed legislation may struggle to gain traction following the U.S. 2016 elections, which resulted in a Republican-controlled Congress and Republican president.

Finally, understanding the impact of the mandatory tax return disclosure on firm value is also important to managers, particularly those in the U.S., who generally oppose any public disclosure of tax return information and who are increasingly concerned about their firms' tax reputation (EY 2015). My results suggest that, overall, there are small benefits associated with modest increases in tax transparency, which may alleviate some managers' concerns about disclosing corporate tax information to the public and their stakeholders.

Chapter 2:

Background and Hypotheses

2.1 Institutional Details

2.1.1 Australian Financial and Tax Reporting

Financial reporting in Australia is generally similar to the U.S. for public companies. Companies listed on the Australian Securities Exchange (ASX) must file full audited financial statements with the Australian Securities and Investments Commission (ASIC) following Australian accounting standards, which are based on IFRS. Large private companies file limited "special purpose financial statements" with the ASIC that typically do not comply with the full disclosure requirements of Australian accounting standards. A private company is considered large if it meets two or more of the following criteria: (1) consolidated revenue of the company and controlled entities is AUD 25M or more, (2) year-end consolidated gross assets of the company and controlled entities is AUD $12.5M or more, and (3) the company and its controlled entities employ 50 or more employees at year-end. The special purpose financial statements of large private companies are available for purchase from the ASIC website on a per document basis, which provides more transparency for private companies than occurs in the U.S.

Appendix A provides an example of tax information reported in Australian companies' financial statements for Lend Lease Corporation, a firm in my sample that is subject to the tax return disclosure rule. On the face of the financials, the reporting of tax expense and deferred tax assets and liabilities is similar to requirements in the U.S. However, whereas cash taxes paid are typically a supplemental disclosure on a U.S.

company's statement of cash flows, Australian firms using the direct method of reporting cash flows include cash taxes paid to calculate cash flows from operating activities. In the tax footnotes, similar to U.S. financial statements, one can find details on a company's current tax expense, deferred tax expense, effective tax rate (rate reconciliation schedule), deferred tax assets and liabilities, and valuation allowance. In general, Australian firms must provide far more detail on the underlying temporary differences creating deferred tax assets and liabilities than U.S. firms. However, there is no disaggregation of domestic and foreign tax expense or FASB Interpretation No. 48 (FIN 48)-equivalent requirements to recognize and disclose unrecognized tax benefits in Australia. For tax purposes, as of the 2011/2012 tax year, Australian taxpayers are required to file a reportable tax position (RTP) schedule with the ATO if the tax authorities request the filing.[3] Schedule RTP is similar to the IRS' Schedule UTP where taxpayers must report material uncertain tax positions.

In contrast to the U.S. worldwide system of taxation, Australia uses a territorial system that generally exempts foreign source income from taxation (Altshuler et al. 2015). As discussed in more detail in the next section, foreign income that is not subject to Australian corporate tax does not generate imputation tax credits for shareholders. Differences in companies' mix of Australian vs. foreign income and the availability of certain deductions and tax credits lead to variation in companies' effective tax rates (Pattenden and Twite 2008).

[3] Current guidance for Schedule RTP available at https://www.ato.gov.au/Forms/Guide-to-Reportable-Tax-Positions-2017/.

Australian companies operate on a June 30th fiscal year end for financial accounting and tax purposes. The year ending June 30, 2014, is referred to as the "2013/2014 tax year" and the tax return is due on the 15th day of the seventh month following year end. As such, most companies file their return by January 15th. Though extensions of time to file are possible, they are relatively uncommon, particularly in comparison to corporate tax return filings in the U.S., which are frequently extended. Firms may apply to the ATO for a substituted accounting period, i.e., a year end different from June 30th.[4] For example, a company with a December 31st year end would be considered an "early balancer" and its 2013/2014 tax year refers to the year ending December 31, 2013. Conversely, a company with a September 30th year end would be considered a "late balancer" and its 2013/2014 tax year refers to the year ending September 30, 2014.

2.1.2 Australia Dividend Imputation System and Its Effect on Tax Avoidance Incentives

Corporate tax planning incentives differ in Australia compared to the U.S. because Australia's tax system "integrates" the corporate and individual tax.[5] In 1987, Australia implemented a dividend imputation system, which it simplified in 2002. In contrast to a classical system, such as the U.S. dividend taxation system, an imputation system eliminates double taxation on corporate income. When firms pay dividends from earnings that have been taxed, firms assign corporate income taxes to shareholders

[4] Approximately 22% of my sample firms have a substituted accounting period.
[5] Other countries that have implemented a dividend imputation system include the U.K. (1973-1999) and Germany (1977-2000).

through imputation credits. Shareholders can offset personal income tax payable with imputation credits received.

A "franked" dividend indicates the firm has paid the full Australian corporate tax on the income from which the dividends are paid, and shareholders are entitled to full imputation credits. The top corporate statutory tax rate in Australia is 30%. Unfranked dividends are paid from untaxed earnings (e.g., foreign source income) and thus do not include a corresponding imputation credit. Firms may also distribute partially franked dividends, which include both franked and unfranked dividends. Thus, firms subject to high effective tax rates have a greater proportion of imputation credits to distribute than firms subject to low effective tax rates.

Companies record franking credits in their franking account as taxes are paid. As companies typically do not pay out 100 percent of earnings, companies frequently accumulate surplus credits in their accounts. This pool of credits allows companies to frank a dividend even in years of low profits or low tax payable. However, the franking credit cannot exceed the maximum amount of income tax the company could have paid on the profits underlying the distribution. Appendix B provides an example.[6] Finally, a company cannot have a negative balance in its franking account at year end.

Franking credits are only available on dividends paid from Australian resident companies to Australian resident individual shareholders and other eligible shareholders. Intercompany dividends are tax exempt and companies pass on any available imputation tax credits to the ultimate shareholders (Pattenden and Twite 2008). Australian

[6] For an example of a partially franked dividend, see Cannavan et al. (2004) p. 195.

superannuation funds (pension funds), a major investor in public companies, can also use imputation credits because, unlike in the U.S., pension funds are subject to tax. Franked dividends are particularly attractive to this group of institutional investors because these entities have a low marginal rate on investment earnings (15%) and can use excess franking credits to reduce tax payable on other income or receive a refund (Ikin and Tran 2013). On the other hand, companies with a predominantly non-Australian (foreign) or tax-exempt (e.g., charities, certain not-for-profit organizations and associations) shareholder base face less pressure to distribute franked dividends as their shareholders would not realize the tax benefit of imputation credits (Bellamy 1994, Ikin and Tran 2013).

Consequently, a dividend imputation system gives rise to different corporate tax avoidance incentives than a classical system. Firms whose shareholder base prefers franked dividends, such as Australian residents and superannuation funds, and a high dividend payout ratio, have incentives to maximize their pre-tax profits, pay the full amount of tax due, and pass on imputation credits to shareholders. On the other hand, firms with a foreign or tax-exempt shareholder base have incentives to minimize taxes to maximize the after-tax profits (Bellamy 1994). In support of this theory, Ikin and Tran (2013) find evidence that firms paying franked dividends engage in less tax avoidance than firms that do not pay franked dividends. Thus, the imputation system provides interesting cross-sectional variation in how investors could perceive the costs and benefits of the new ATO disclosure. Some shareholders could be concerned about increased tax costs from scrutiny of low tax payments, whereas other shareholders may

be more interested in viewing evidence of high tax payments to support franked dividends.

2.1.3 Australia Tax Transparency Bill

The Australian Parliament passed *Tax Laws Amendment (2013 Measures No. 2) Act 2013* on June 28, 2013. To improve tax transparency, lawmakers adopted three measures: public disclosure of certain taxpayer-level tax return information, elimination of restriction on public disclosure of aggregate tax information when entities' identities are determinable, and increased information sharing between government agencies. In the explanatory memorandum for the bill, lawmakers expressed concern about tax-motivated income shifting and base erosion and other aggressive tax avoidance strategies, reasoning that a perceived "unfair" tax system could harm public confidence and taxpayer compliance.[7] These concerns echo those expressed by Assistant Treasurer David Bradbury in a speech he delivered on November 22, 2012. In his remarks, Bradbury pointed to recent controversies surrounding Google, Apple, and Starbucks for not paying their "fair share" of taxes in jurisdictions around the world. On March 6, 2013, Bradbury referenced the tax transparency bill in a speech to retail leaders, noting that "Transparency in taxation would go a long way to improve not only government's understanding of which taxpayers are pulling their weight, but it would give the community, including the broader business community and Australian retailers, the capacity to engage in an informed debate."

[7] Examples of studies examining tax-motivated income shifting include Chen et al. (2017); Clausing (2003); Collins, Kemsley, and Lang (1998); De Simone (2016); De Simone, Klassen, and Seidman (2016); De Simone, Mills, and Stomberg (2017); Dyreng and Markle (2016); Hines and Rice (1994); Huizinga and Laeven (2008); Klassen, Lang, and Wolfson (1993); Klassen and Laplante (2012); and Markle (2016).

Under the new transparency rule, the ATO must publish the following line items from Australian corporate tax returns for companies with total income exceeding AUD 100M:

- Company name and Australia Business Number (ABN)
- Total income
- Taxable income (if greater than zero)
- Income tax payable (if greater than zero)

The rule is effective starting with the 2013/2014 tax year, and the ATO published its first report on December 17, 2015, about 18 months after the end of the tax year. This report included 1,539 Australian and foreign public companies as well as foreign private entities. The ATO published its second report on March 22, 2016 for 321 Australia-resident private companies with total income exceeding AUD 200M. The 2014/2015 tax year report, published on December 8, 2016, includes 1,904 public and private entities.

Industry and practitioner reactions to the tax transparency bill were generally negative. The Treasury released a discussion paper, *Improving the Transparency of Australia's Business Tax System*, on April 3, 2013, soliciting comments on its proposal to mandate public disclosure. Over the three-week consultation period, Treasury received 25 comment letters, nine of which were confidential.[8] The 16 comment letters published on the Treasury website came exclusively from industry groups and other constituency or policy groups, such as the Australian Financial Markets Association, Corporate Tax Association, Institute of Chartered Accounts, and Group of 100, with the exception of Ernst and Young and private company Godfrey Hirst Australia. No listed companies

[8] Comment letter submissions are accessible here: http://www.treasury.gov.au/ConsultationsandReviews/Consultations/2013/Transparency-of-business-tax

individually submitted a comment letter for public release.

Constituents opposed to the tax transparency proposal cited a number of costs that companies would unduly face. Although the disclosure would require minimal, if any, compliance effort, critics of the policy argued that public disclosure of tax return information is a breach of privacy and could compromise commercial confidentiality or hurt companies' competitive advantages. The rule could discourage business in Australia if foreign companies withdraw from the country or if new companies hesitate to invest for fear of attacks to their reputation by being a part of the disclosure. In particular, no other countries had adopted this type of policy and the OECD has not advocated for tax return disclosure. Further, several comment letters argued that the limited disclosure of three line items from companies' tax return could in fact be misleading to the public, who likely lack tax expertise, and result in sensationalist reports or misleading comparisons. Public companies already file publicly accessible, audited financial statements with details of their tax expense, and to the extent there are differences between financial accounting and tax reporting, many of which are legitimate, companies must then bear the burden of explaining the reported tax return numbers. Finally, assuming the intention of the ATO is to curb tax aggressiveness, critics contend that the tax authorities are ultimately in the best position to identify tax noncompliance and already have access to companies' full tax returns. Thus, the public disclosure would not provide any incremental benefit to the ATO.

Anecdotal evidence suggests that firms were concerned about the public perception of their tax activities leading up to the release of the ATO report, particularly

those previously in the public spotlight for their taxes. For example, the Luxembourg tax leaks in 2014 named AMP Limited as a company using income-shifting strategies to avoid tax, and BHP Billiton, one of the largest companies in Australia, faced a Senate inquiry for using a Singapore haven (Chenoweth 2014, 2015). On March 26, 2015, AMP Limited published its first Tax Report, a separate document from its annual report, highlighting the company's taxes paid and tax strategy.[9] BHP Billiton also announced in 2015 that it would publish a detailed annual tax report. BHP Billiton's chief financial officer directly responded to criticisms of the firm's tax strategies through an opinion piece published in a top-ten Australian newspaper (see Appendix C). Although not direct responses to the tax transparency bill itself, these responses underscore the importance managers place on public perception and market valuation of tax return information disclosure.

Finally, as an extension to the tax transparency bill, the Australian Board of Taxation, a non-statutory advisory group, developed the voluntary Tax Transparency Code (TTC) in 2016 to "guide medium and large business on public disclosure of tax information," stating that the general public, investors, analysts, activist groups, and the media are all potential users of tax information.[10] For TCC purposes, "medium" companies earn between AUD 100-500M in domestic sales and "large" companies earn above AUD 500M in domestic sales. The TCC recommends several items of disclosure, some of which companies already report in their financial statements, such as the details

[9] Accessed: http://shareholdercentre.amp.com.au/phoenix.zhtml?c=142072&p=irol-reports
[10] See http://taxboard.gov.au/consultation/voluntary-tax-transparency-code/ and https://www.ato.gov.au/business/large-business/in-detail/tax-transparency/voluntary-tax-transparency-code/

of temporary and permanent book-tax differences. Other recommend disclosures include outlining the company's overall tax strategy and governance, as well as information about related party transactions. Companies may include these additional disclosures in their financial statements or in a separate tax report and notify of the ATO of their compliance with TCC. The ATO aggregates all URL links to TCC-compliant reports in a spreadsheet available on the government's data website (www.data.gov.au). In the first year of TCC, only 20 companies notified and provided the ATO with their reports. However, the number of participating companies increased to 56 in 2017.

2.2 MANDATORY DISCLOSURE

Accounting information and other disclosures serve two pivotal roles in capital markets: (1) facilitate the efficient allocation of capital by reducing information asymmetry between those inside (e.g., managers) and outside (e.g., investors, creditors) of the firm; and (2) mitigate agency problems that exist when there is separation of control and ownership (Beyer et al. 2010, Healy and Palepu 2001). Beyond the investment context, accounting information and disclosures are also important to other stakeholders, such as competitors, tax authorities, and regulators. However, information is costly to collect and disseminate, disclosures often impose proprietary costs, and disclosures can reveal information that increases external scrutiny, such as from a tax authority.

There are many sources of corporate information, but mandatory disclosures are

most relevant to my study.[11] Studies in this area examine the effects of changes in accounting standards and new disclosure requirements, generally focusing on quantifying economic consequences of disclosure (i.e., stock market reactions) and whether changes in disclosure provide incremental information to users.[12] As an example of a mandatory disclosure study in a tax setting, Frischmann, Shevlin, and Wilson (2008) examine both the economic consequences of adopting FIN 48 and investor valuation of initial FIN 48 disclosures. Contrary to critics' warnings that the mandatory disclosure of tax reserves would impose tax costs, Frischmann et al. (2008) do not find evidence that investors anticipate significant costs of disclosure but find some evidence of a positive market reaction at the release of initial FIN 48 disclosures.

In these prior studies, standard-setters and regulators require *firms* to disclose certain financial information, which leads to the possibility of noncompliance (e.g., Robinson, Xue, and Yu 2011; Ayers, Schwab, and Utke 2015). In the context of my study, a governmental entity – specifically, the tax authority – is the public source of private tax return information. From the user's perspective, this centralization reduces the potential for reporting noncompliance and provides greater confidence in the reliability of the disclosure. The report also allows for direct comparison between companies that

[11] Much research focuses on the determinants and consequences of firms' *voluntary* disclosure, such as management forecasts (Beyer et al. (2010) and Healy and Palepu (2001) review this literature). Information intermediaries, including analysts (e.g. DeFond and Hung (2003) and Givoly and Lakonishok (1979); Ramnath, Rock, and Shane (2008) review the literature) and the media (Bushee et al. (2010); Drake, Guest, and Twedt (2014); Fang and Peress (2009); and Miller (2006)), also provide corporate financial information to firm outsiders.

[12] Studies examining changes in accounting standards or financial statement disclosures include Ayers (1998), Barth (1994), Dhaliwal et al (1999), and Espahbodi et al. (2002). New disclosure regimes include the Sarbanes-Oxley Act of 2002 (e.g., Jain and Rezaee 2006; Li, Pincus, and Rego 2008; Zhang 2007), and the U.S. Securities and Exchange Commission's adoption of enhanced executive compensation disclosures (Robinson et al. 2011) and risk factor disclosures (Campbell et al. 2014).

would be less salient if users must individually collect the same information from different companies' reports. From the firm's perspective, there are no incremental compliance costs because no additional information gathering or effort is required.

Finally, Leuz and Wysocki (2016) posit that mandatory disclosures are increasingly used to incentivize or discourage corporate behavior *in lieu* of explicit regulations.[13] In line with this view, Australian lawmakers specifically stated that a key goal of the tax transparency bill is to discourage tax aggressive behavior. By testing the capital market consequences of tax return disclosure, I provide initial evidence that informs predictions about future firm behavior. Examining the real effects of public tax return disclosure, such as testing for changes in tax avoidance behavior, cost of equity, or cost of debt, is a fruitful avenue for future research.

2.3 PUBLIC DISCLOSURE OF TAX RETURN INFORMATION

A small but growing literature explores the theoretical consequences of public disclosure of tax return information and taxpayer behavioral responses. Advocates of public disclosure name several potential benefits. First, the threat of public "shaming" would discourage tax aggressive behavior (Kornhauser 2005; Lenter et al. 2003). Thorndike (2002) and Pomp (2003) argue that publicity would encourage companies to be honest and forthcoming about their taxes. Recent practitioner surveys of managers

[13] Lawmakers concerned about tax aggressiveness can explicitly prohibit certain tax planning techniques instead of indirectly addressing aggressive behavior by mandating disclosure of tax return information. Australian lawmakers subsequently enacted a comprehensive anti-avoidance bill, *Tax Laws Amendment (Combating Multinational Tax Avoidance) Bill 2015*, effective January 1, 2016, on December 3, 2015. Alternatively, governments can attract taxable income to their jurisdictions through tax incentives, such as lower tax rates on innovation-related income (e.g., Bradley, Dauchy, and Robinson 2015; Chen et al. 2017; Evers, Miller, and Spengel 2015).

find that an increasing proportion of firms are concerned about how the media and the public view their tax activities (EY 2014, PwC 2014, Taxand 2015), suggesting that firms would be sensitive to shaming. However, empirical studies of the reputational consequences of tax aggressiveness and negative publicity surrounding firms' taxes do not find that firms respond by constraining tax avoidance behavior (Chen et al. 2016, Gallemore et al. 2014). Second, disclosure of tax return information would be useful to investors and creditors, echoing the broader roles of accounting information discussed previously (Avi-Yonah and Siman 2014, Lenter et al. 2003). Third, the revelation of corporate tax return information would increase public pressure on politicians and regulators to adopt and enforce good tax policy (Lenter et al. 2003). Finally, disclosing tax return information would enhance the enforcement function of tax authorities by recruiting the public to act as "watchdogs" to detect noncompliance (Blank 2014).

On the other hand, opponents of public tax return disclosure cite several arguments against the policy. First, in contrast to the claim that public disclosure would have a deterrence effect, an unintended consequence of disclosure could be *increased* noncompliance and aggressive behavior (Blank 2009, 2014; Lenter et al. 2003). Specifically, Blank (2014) argues that knowledge of other firms' tax payments would put pressure on managers to similarly minimize their tax obligations. Blaufus, Bob, and Otto (2017) test the effect of public disclosure on tax compliance in an experiment and find that the "contagion" effect of noncompliance dominates the "shaming" effect, suggesting public disclosure would lead to more tax evasion overall. Second, public disclosure of corporate tax return information would expose proprietary information (Blank 2014;

Lenter et al. 2003; TEI 2002, 2006). Finally, the complex nature of tax returns could cause confusion and misinterpretation of tax return information rather than improved transparency, especially when the tax return only covers a portion of the firm's global operations (Blank 2014; Lenter et al. 2003; TEI 2002, 2006).

Two studies empirically examine whether taxpayer behavior changes under a public disclosure regime and provide evidence that the results for one group of taxpayers do not necessarily generalize to other settings. Hasegawa et al. (2013) find that Japanese taxpayers near the disclosure threshold under-report income to avoid disclosure, and corporations subject to disclosure do not reduce their tax avoidance. In Norway, however, Bø et al. (2015) find that business owners *increase* reported taxable income when individual tax payments become publicly available via the internet, which suggests a deterrence effect of disclosure.

These empirical studies do not explore the capital market consequences of public tax return disclosure, however. Only a handful of countries allow public access of individual and/or corporate tax return information. Norway, Finland, Iceland, Sweden, and Denmark are small economies, and several of these countries require that users apply for information access (Bø et al. 2015). Japan, a large economy, initiated public disclosure of both individual and corporate tax return information in 1950 and abolished the disclosure regime in 2004.[14] Thus, the recent Australia initiation of a public disclosure regime provides a unique opportunity to examine capital market implications

[14] The government abolished the regime citing privacy concerns. A tax commission reported that the disclosures led to unintended consequences including crime and harassment (Hasegawa et al. 2013).

of tax return disclosure in a time of heightened public attention regarding corporate tax issues.

2.4 HYPOTHESES

2.4.1 Anticipated Net Costs and Benefits of Disclosure

Several competing factors likely influence whether the market anticipates net costs or benefits of disclosure. Public disclosure of tax return information could be costly for a number of reasons. First, the market could anticipate increased public scrutiny of companies' taxes due to the "name and shame" nature of such a disclosure. This scrutiny could increase public pressure on the tax authority and regulators to better address tax aggressive behavior and ultimately increase tax costs for firms. Second, beyond tax costs, public scrutiny would also be costly if the outrage leads to protests or boycotts and ultimately damages a company's brand. The possibility of costly public backlash, though unlikely, is not improbable. Anecdotally, Starbucks faced tremendous public scrutiny after a *Reuters* report revealed the company's low tax payments relative to its revenues in the U.K. (Bergin 2012, 2014). Starbucks subsequently agreed to "voluntarily" pay over USD 15M in U.K. taxes (Boyle 2013). If market participants are concerned public disclosure will impose these additional costs on firms, then I expect an overall negative market reaction to the bill.

On the other hand, the market could anticipate several benefits of disclosure. First, in line with prior literature that finds evidence that higher reporting quality reduces information asymmetry and thus lowers cost of capital (e.g., Diamond and Verrechia 1991), the market could anticipate that greater tax transparency will also reduce

information asymmetry. Corporate tax law is a complex area and prior studies document that analysts, who are considered to be sophisticated financial statement users, have difficulty incorporating tax-related information into their earnings forecasts (Chen and Schoderbek 2000, Plumlee 2003, Weber 2009). In contrast, more recent research suggests that analysts can forecast effective tax rates more accurately than management when the GAAP requirements for discrete item accounting increases complexity (Bratten et al. 2016), but this level of sophistication likely does not generalize to all market participants. The disclosure of firms' tax payments could reduce uncertainty regarding a company's tax position and improve investors' ability to forecast future cash flows. If market anticipates these informational benefits, then I expect an overall positive market reaction to the transparency bill.

Second, the market could expect the tax return disclosure will reveal new information about firms' tax avoidance. This information would allow shareholders to better monitor firms' tax avoidance activities. If market participants share lawmakers' concerns that firms are engaging in risky and aggressive tax strategies, then they would value information that enables them to constrain unwanted behavior. Further, prior studies theorize that the opaque nature of many tax aggressive strategies provides management the opportunity to extract rents (Desai and Dharmapala 2006, Desai et al. 2007).[15] To the extent that the market anticipates tax return information will increase shareholders' ability to constrain opportunistic managerial behavior, these factors predict

[15] For example, Desai (2005) describes in detail how Tyco's tax avoidance strategies enhanced executives Dennis Kozlowski and Mark Swartz's ability to extract company funds for their personal benefit. However, recent studies challenge the interpretation and generalizability of the theory proposed in Desai and Dharmapala (2006) (e.g., Seidman and Stomberg 2017, Blaylock 2015).

a positive market reaction to public disclosure.

Ex ante, it is unclear which of these competing effects will dominate. Thus, I make no directional prediction of market perceptions of the net costs and benefits of public tax return disclosure and formally state my first hypothesis in the null:

$H1_0$: There is no market reaction to events that increase the probability of mandatory public disclosure of corporate tax return information.

2.4.2 Information Content of Corporate Tax Return Information

Next, I examine whether the market reacts to information contained in the ATO report. I am interested in testing whether the tax return disclosure contains new information for market participants, whereas my previous hypotheses relate to market perceptions in anticipation of the report. If the ATO report contains new information that changes market assessment of firms' tax payments, then I expect a significant market reaction on the date of the report release. This result could be the case if financial accounting rules lead to differences between a company's actual tax payment and taxes reported in the financial statements.

On the other hand, the market would not find the ATO report valuable if it provides information that is redundant, irrelevant, or lacks timeliness, and I would not expect to find evidence of a significant market reaction on the report release date. For example, if financial statement users can accurately predict Australian taxable income or tax payments, then the report will not be an information event. A simple, domestic-only company with few book-tax differences likely reports similar tax payable amounts in

both its financial statements and tax return, leading to little or no surprise on the report release date. However, the market is less likely to find Australian tax return information relevant if companies have extensive foreign operations and pay a large portion of their taxes overseas. In this case, the Australian disclosure would only provide a piece of the full picture of companies' tax activities. Finally, the report could be uninformative because it relates to a reporting period that is already over a year stale. Given these competing predictions, I again state my hypothesis in the null:

$H2_0$: There is no market reaction to the public disclosure of firms' tax return information.

Chapter 3:

Research Design

3.1 Event Selection

I identify four events that provide investors with new information regarding the bill or impact market expectations regarding the probability of bill passage. Each event increases the probability of passage as there is no indication in the legislative process of sufficient opposition to cause the bill to fail to pass.

My first event is the announcement on February 4, 2013, by Assistant Treasurer David Bradbury of the government's intention to improve corporate tax transparency with some form of public tax disclosure. This was a largely unanticipated announcement and practitioners were surprised by the initiative. The *Sydney Morning Herald* reported that the executive director of the Corporate Tax Association "had not heard of any other country targeting taxpayer confidentiality in a bid to pressure firms" (Yeates 2013). To the extent there was any information leakage about the new policy prior to this first event, my tests may fail to detect a significant market reaction because there is no new information by this date. To provide comfort for selecting this event date, I searched the top Australian newspapers for coverage of the tax transparency policy prior to February 4th. The Treasury created a taskforce in late 2012 to examine the tax avoidance of multinational entities, and news coverage indicates the government was most interested in tax reform that would curb the transfer pricing and income shifting strategies used by U.S. technology companies (Ferguson 2012, Walsh 2012). However, there is no mention of public disclosure in articles around this time. Further, I searched Assistant Treasurer

David Bradbury's archive of media press releases, interview transcripts, and speeches from 2012 to 2013 for indications of the government's proposed policy and also did not find any hints of public tax return disclosure.[16]

Second, on April 3, 2013, the Treasury released a discussion paper, *Improving the Transparency of Australia's Business Tax System*, outlining the proposed tax transparency bill. This discussion paper specified the AUD 100M disclosure threshold and proposed reporting of company name and unique Australian Business Number (ABN), total income, taxable income, and income tax payable. The Treasury allowed a three week comment period, which further indicates market participants would have paid attention to the release of the discussion paper. I consider this a major information event, because the disclosure threshold and exact line items to be disclosed were previously unknown.

Third, I include May 29, 2013, the date the House of Representatives introduced the bill. On this date, the Clerk of the House reads the long title of the bill, members of the House receive copies of the bill and explanatory memorandum, and the Parliament publishes the full text of the bill on its website (www.aph.gov.au/bills) (Parliament of Australia 2016). The language of the bill is confidential up this date. However, because the actual transparency bill was not significantly different from the proposed legislation, I consider this an event that increased probability of passage rather than an information event.

My final event date is June 28, 2013, when both Houses passed the transparency

[16] Accessed: http://ministers.treasury.gov.au/Main.aspx?PageID=089&min=djba

bill. The Governor-General's assent of the bill occurred shortly thereafter on June 29, 2013. As the bill moved quickly through the House and Senate with few changes to the tax transparency proposal, I do not include any intermediary dates. The final date of law passage resolves any potential public uncertainty regarding the ultimate nature of the bill or the probability of passage. Table 1 summarizes these events.

I exclude from my study two events that occurred after the transparency bill passed. On November 24, 2014, the Labor Government proposed an amendment to the tax disclosure rule to accelerate the effective date to the 2012/2013 tax year. It is clear from the Finance Minister's immediate dismissal of the proposal that there was little credible probability of bill passage, and the bill did not advance in the legislative process (Khadem 2014). On March 13, 2015, the ATO issued a consultation paper, *Tax Secrecy and Transparency: Administrative Arrangements for Reporting Entity Information*, outlining the administrative process for public disclosure. Because this report simply clarified procedural issues, I do not consider it an information event for market participants.

Lastly, a number of legislative events occurred between August and December 2015 related to the exemption from and subsequent re-inclusion of privately-owned Australian resident companies in the disclosure rule. Although the treatment of private companies could indirectly affect market participants' evaluation of the costs and benefits of disclosure for public companies, I do not include these events because they do not directly affect my sample of interest and significant tax reform proposals also occurred during this time. Specifically, the Australian government passed substantial legislation to

curb tax aggressive strategies, *Tax Laws Amendment (Combating Multinational Tax Avoidance) Bill 2015*, on December 3, 2015, which impacts large, public companies with multinational operations, and would confound any measured market reactions to changes in the public tax disclosure rule. Figure 1 illustrates these events related to the tax transparency bill along with a timeline of Australian financial and tax reporting dates.

3.2 MULTI-EVENT STUDY

I test for market reactions to the events leading up to the passage of the tax transparency bill (H1) using the multivariate regression model (MVRM) proposed by Schipper and Thompson (1983). Examining abnormal returns on a security-by-security basis for contemporaneous events can lead to unreliable statistical inferences due to cross-correlation and cross-sectional heteroscedasticity in residuals (e.g., Campbell, Lo, and MacKinlay 1997; Espahbodi et al. 2002; Frischmann et al. 2008; Sefcik and Thompson 1986). This is most evident in events surrounding legislative or regulatory events as these events occur on the same calendar date for all firms in the sample. Further, firms affected by a legislative or regulatory event are often in the same industry or share other common factors (here, size due to the income threshold for disclosure). To account for these econometric concerns, I test for market reactions on a portfolio basis using MVRM. Specifically, I estimate the following OLS regression:

$$R_{p,t} = \alpha_p + \beta_p R_{m,t} + \sum_{k=1}^{K} g_{p,k} D_{k,t} + e_{p,t} \quad (1)$$

Following Frischmann et al. (2008), $R_{p,t}$ is the portfolio (p) return computed for day t for all firms anticipated to be subject to the disclosure rule based on a financial statement proxy for total income. I calculate companies' daily stock returns using data

from Computat Global Security Daily. $R_{m,t}$ is the daily market return, which I measure using the ASX All Ordinaries Index (from Thomson Reuters Datastream/Worldscope). This index includes the 500 largest listed companies on the ASX by market capitalization and accounts for 76 percent of the Australian equity market as of April 2016.[17] My period of estimation is January 1, 2013 (prior to the initial announcement of the tax transparency initiative) through December 31, 2013, and $D_{k,t}$ is an indicator variable set equal to one for the three-day period surrounding the *k*th event date. Estimated coefficients on $D_{k,t}$ capture the cumulative abnormal returns surrounding each event date. I interpret a positive and significant cumulative reaction to the events as anticipated net benefits of the legislation whereas a negative reaction indicates anticipated net costs.

3.3 RELEASE OF ATO TAX TRANSPARENCY REPORT

I follow the same MVRM event study methodology detailed previously to test for market reactions to the release of the ATO's report (H2) because the common release date of companies' tax return information generates similar econometric concerns discussed previously. Specifically, I estimate equation (1) using a portfolio of publicly listed firms that appear on the ATO's report. $R_{p,t}$ as the equally-weighted daily portfolio return of this sample of firms and $R_{m,t}$ is the daily market return as defined previously. I begin my estimation period on December 7, 2015, and end the estimation period on March 18, 2016, to avoid significant confounding tax events.[18] $D_{k,t}$ is an indicator

[17] Of the firms anticipated to be subject to the disclosure rule, 319 are included on the ASX All Ordinaries Index (i.e., these firms constitute 63.8% of the firms on the index).

[18] Several confounding tax-related legislative events occurred in 2015, including the passage and subsequent reversal of an amendment exempting private Australian companies from the tax return disclosure requirement. Further, as noted in Section 2, Parliament passed the *Combating Multinational Tax*

variable set equal to one for the three-day period surrounding the release of the ATO report on December 17, 2015.

3.4 DATA AND SAMPLE

My sample for testing the stock market reaction to the public disclosure rule includes Australian listed firms at the intersection of Compustat Global Fundamentals Annual and Compustat Global Security Daily. As detailed in Panel A of Table 2, I retain 371 firms with total revenue (REVT) over AUD 100M in my sample of firms expected to be subject to the disclosure rule.[19] After eliminating firms missing daily returns data, my final event study sample includes 348 unique firms. Additional data requirements to test for cross-sectional variation in market reaction reduces my sample to 317 unique firms.

To test the stock market reaction to the release of the ATO report, I begin with the list of 1,539 companies from the report and match the companies to GVKEY identifiers from Compustat Global.[20] I eliminate 912 proprietary limited companies ("Pty Ltd") as these are private companies. For the remaining 627 companies, I match company names and manually inspect the matching procedure for accuracy, including confirming whether any corporate name changes that occurred during 2015 create a discrepancy between

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Avoidance Bill on December 3, 2015, which addresses issues such as country-by-country reporting and transfer pricing and income shifting strategies. Thus, I begin my estimation period on December 7, 2015. I end my estimation period on March 18, 2016, prior to the release of the private company tax transparency report on March 22, 2016.

[19] Alternative sources of financial statement and returns data for non-U.S. firms include the Thomson Reuters Datastream/Worldscope database and BvD's Orbis database. I use data from Compustat Global for my market reaction tests as it provides more detailed variables than the other data sources (e.g., availability of a variety of tax-related variables). However, one caveat in using these data sources is that they report consolidated numbers rather than standalone Australian financial statement information. This imprecise proxy for tax return total income adds noise to my empirical tests.

[20] Report accessed: http://www.data.gov.au/dataset/corporate-transparency

Compustat and the ATO report.[21] Panel B of Table 2 shows I am able to match 336 listed firms appearing on the ATO report to a Compustat GVKEY and generate a final sample of 306 unique firms with daily returns data necessary to conduct my market reaction test.[22] Data requirements for calculating additional descriptive variables reduce my sample to 218 firms on Table 9.

[21] I also confirm unmatched companies do not appear on the Australian Stock Exchange to ensure I am not missing publicly listed companies.

[22] To ensure my match of firms is reasonable, I conduct a match by ABN to the BvD Orbis database and find 341 firms from the report are listed companies in BvD (i.e. valid ticker and ISIN).

Chapter 4:

Results

4.1 Multi-Event Study

4.1.1 Market Reaction to Legislative Events

Table 3, Panel A describes the full sample of firms included in the multi-event study sample. I winsorize all continuous variables at the top and bottom 1 percent to reduce the influence of outliers. By construction, sample firms have total revenue greater than AUD 100M. These firms are also large (by total assets) and profitable, on average. In comparison, the sample of Compustat Global Australian firms with total revenue *less* than AUD 100M report mean total assets of 64.5, pre-tax loss of 3.4, and return on assets of -0.39 (untabulated).

Panel B of Table 3 presents the MVRM market reactions for each event date leading up to the passage of the tax transparency bill. For ease of interpretation, I also include mean raw returns and cumulative abnormal returns (CAR) in the 3-day window surrounding my event dates and the percentage of firms with positive vs. negative 3-day CAR for each date. I calculate CARs using the expected return estimated using a market model:

$$R_{i,t} = \alpha_i + \beta_i R_{m,t} + e_{i,t} \quad (2)$$

$R_{i,t}$ is a firm's daily return and $R_{m,t}$ is the daily market return, which I measure using the ASX All Ordinaries Index. Following Frischmann et al. (2008), I estimate firm-specific parameters over the period [-170, -21] trading days prior to my first event date

and require firms to have at least 36 observations to estimate the regression. I calculate 3-day CARs as the difference between firms' actual continuously compounded return and the expected continuously compounded return derived from the firm-specific estimated coefficients.

The MVRM abnormal returns, raw 3-day returns, and 3-day abnormal returns calculated using a market model (columns 1-3) are consistent across all event dates with respect to the sign of the market reaction and its significance. Descriptively, the percentage of firms with positive (or negative) 3-day CARs is also generally consistent with the MVRM results (columns 4 and 5). The overall market reaction aggregated across all four events is a small, but positive and significant, cumulative abnormal return of .0032 (p-value < 0.001). This result suggests that market participants anticipated overall benefits of the new tax legislation, such as reduced information asymmetry and lower cost of capital or improved ability to monitor firms' tax avoidance behavior.

Interestingly, this positive market reaction is attributable to the last two events, which reverse negative reactions to initial announcements of the transparency rules. In exploring potential explanations for this returns pattern, I find there was far greater media coverage of the initial announcements of the transparency in comparison to the last two events. The tone of the media coverage is generally negative, describing the legislation as an effort to "name and shame" companies. Thus, it is possible that heightened media attention around the first two events led the market to anticipate net costs of disclosure to exceed the benefits. Once the market confirmed that the actual requirements of the bill are no more severe than the proposed rules and absent media influence, it appears the

market re-evaluated the cost and benefits of disclosure.

Table 4 presents robustness tests of my main results. Columns 1-6 show that my results are robust to alternative measures of the market index used in prior studies, including the ASX 100, ASX 200, ASX 300, Dow Jones Total Market Australia, Datastream Australia Total Return, and MSCI Australia Total Return market indices (e.g., Asness, Moskowitz, and Pedersen (2013); Griffin, Kelly, and Nardari (2010); Ogneva and Subramanyam (2007)). Results are also robust to dropping any sample firms with earnings announcements occurring within the 5-day window around my events (column 7). In untabulated results, I do not find a significant market reaction to the two dates that I choose to exclude as event dates: November 24, 2014, the date on which legislators attempted, but failed, to accelerate the effective date of the tax transparency law to the 2012/2013 tax year, and March 13, 2015, the date on which the ATO issued a consultation paper with additional administrative information regarding compliance with the new law.

My use of the AUD 100M revenue threshold to select my sample is motivated by the reporting threshold of the transparency bill. However, Treasury did not disclose this threshold until the second event date. Thus, it is possible that *all* firms presumed they could be subject to the tax transparency rules as of the Treasury announcement on February 4, 2013. To test this possibility, I conduct the same analysis using all public firms and find a negative and significant market reaction on the first event date (Table 4, column 8). This result suggests the market expected all public firms to face net costs of disclosure when it was unclear which firms would be subject to the transparency rule.

Upon revelation of the AUD 100M revenue threshold on the second event date, the market reaction for all firms is again negative and significant. Because this sample includes the large firms that are subject to the rule, it could be the case that the large firms are driving this negative market reaction. To parse this effect, I separately test the market reactions for a sample of firms with total revenue *less* than AUD 100M in column 9. I find that the market reaction is persistently negative and significant on the first two event dates, which indicates that market participants, overall, expected net costs to firms at these dates. In contrast to the significantly positive market reaction experienced by the firms expected to be subject to the disclosure rule on the last two event dates, the market reaction for all firms is insignificant (column 8). Conducting the same analysis using public firms below the disclosure threshold confirms that there is no significant market reaction on the last two event dates for firms that are not expected to be subject to the disclosure rule (column 9). These results provide additional evidence that positive reactions to these last two events are unique to the large firms expected to face disclosure. The overall market reaction to all four events for all firms and firms below the disclosure threshold is negative and significant, which again indicates that the anticipated benefits of disclosure are unique to the large firms expected to be subject to the transparency law, which experienced an overall positive market reaction. Additionally, I do not find a significant cumulative market reaction on any event date for a sample of firms just missing the disclosure threshold with total revenue between AUD 90-100M (column 10). However, this is a very small sample of only 14 firms.

Finally, I estimate equation (1) using an alternative, non-Australian market return

proxy to address concerns that there is disproportionate overlap between my sample firms and the market indices I currently use. Specifically, 319 sample firms are included on the ASX All Ordinaries Index (i.e., these firms constitute 63.8% of the firms on the index). Following Zhang (2007), who examines market reactions in the U.S. to Sarbanes-Oxley by using Canadian, European, and the Asian-Pacific markets to control for economic conditions affecting the U.S. unrelated to Sarbanes-Oxley, I choose the U.S. market as an alternative market return proxy for Australian firms. In column 11, I conduct my analysis using the CRSP value-weighted daily returns index as $R_{m,t}$ and find generally consistent results.[23] Although the positive market reaction on the fourth event date is no longer significant, the overall market reaction continues to be positive and significant and the market reaction at events dates 2 and 3 and consistent with prior results.[24]

4.1.2 Cross-Sectional Analysis

I next consider whether certain firm characteristics affect event-date reactions. Specifically, I predict market reaction to the public tax disclosure rule is negative for firms more likely to face increased tax costs as a result of disclosure.

I use three proxies to capture firms that are likely to face increased tax costs. First, I expect that firms engaging in greater tax avoidance could face greater public scrutiny of their tax strategies. However, in contrast to tax avoidance incentives in the U.S. to

[23] I also generate an alternative market proxy using a value-weighted portfolio of U.S. firms matched to my sample firms based on nearest size (measured using total assets in U.S. dollars) and industry (Fama-French 12 industry classifications). I exclude any Australian cross-listed firms from my match and any U.S. firms missing returns data. However, I chose to conduct my analysis using the CRSP value-weighted returns index because it is more highly correlated with the ASX All Ordinaries Index.

[24] There are fewer daily observations due to differing holidays (i.e., days markets are closed) and because I match U.S. and Australian days on a lag due to the time zone difference across countries.

maximize after-tax profits, the dividend imputation system in Australia gives rise to more nuanced predictions of firm tax avoidance behavior (Bellamy 1994, Ikin and Tran 2013).

An imputation system eliminates double taxation on corporate income by assigning imputation credits to shareholders when the firm pays dividends. Shareholders can use these credits to offset their personal tax liability. Thus, firms whose shareholder base benefits from imputation credits, namely Australian individuals and superannuation funds (pension funds), have incentives to pay the full amount of corporate tax and pass on imputation credits to shareholders. On the other hand, firms whose shareholder base does not benefit from imputation credits, such as foreign investors, have incentives to engage in tax avoidance to maximize after-tax profit.[25]

To capture these nuances in tax avoidance incentives, I use shareholder data obtained from Bureau van Dijk (BvD)'s Orbis database to calculate percentage ownership by non-resident (foreign) shareholders (*PctForeign*) and individuals and superannuation funds (*PctIndSuper*). BvD's detailed categorization of shareholder type is advantageous for purposes of this cross-sectional test. I proxy for prior-year shareholder base using 2016 data because historical ownership information is not available from Orbis. Although this data limitation introduces measurement error, there is evidence that Orbis ownership data is reasonably reliable within a three-year window (Shroff, Verdi, and Yu 2014). Further, I confirm using an alternate source of ownership data, FactSet, which captures institutional ownership, that percent ownership of Australian companies by shareholder type (e.g., foreign vs. domestic, insurance company, bank, investment

[25] See Section 2.1.2 and Appendix B for additional discussion of Australia's dividend imputation system.

company, etc.) is "sticky" over time.

Second, I predict the market reacts more negatively to public disclosure for firms perceived to face greater tax uncertainty. Specifically, if a firm has high effective tax rate volatility, measured as *VOL*, which is the standard deviation of ETR over a 5-year period (Guenther, Matsunaga, and Williams 2016), the market could infer the firm is engaging in risky strategies that lead to varied outcomes. Thus, the market could anticipate increased tax costs as a result of public disclosure.

Finally, I predict the market reacts more negatively to public disclosure for firms subject to negative media coverage of their tax strategies in the three years prior to the passage of the tax transparency bill. If a firm previously experiences public scrutiny for its tax practices, it is likely market participants anticipate a highly salient tax disclosure to lead to further public scrutiny. To identify instances of negative media coverage of taxes in the business press, I gather news articles about companies' taxes published in the top Australian news sources from the *Factiva* database for the period 2010 to 2015.[26,27] I use a text string search and filter by Factiva's company identifiers to find tax-related media mentions of companies anticipated to be subject to the ATO disclosure. Specifically, I search the following text string: ("tax*" near5 (avoid* or dodg* or evasion* or evad* or fraud or shelter* or loophol* or abus* or disput* or investigat* or scandal* or accus*)). This search produces 851 potential negative tax articles. I then read the articles to

[26] I extend my search through 2015 to capture articles published around the actual ATO report release.

[27] I search the following news sources: *Sydney Morning Herald*, *Daily Telegraph*, *Herald Sun*, *The Age*, *Courier-Mail*, *The Australian*, *West Australian*, *Adelaide Advertiser*, *Sunday Times*, and *Financial Review*. These news sources are the top ten newspapers ranked by print and digital readership as of December 2015 and account for over 90% of total readership. Data collected by Roy Morgan Research (Accessed: http://www.roymorgan.com/industries/media/readership/newspaper-cross-platform-audience).

confirm whether the media attention is critical or reveals negative information about a firm's taxes. I set the indicator variable *Media* equal to one for firms that experience any negative media attention for their taxes in years prior to the legislative events and zero otherwise.

4.1.2.1 Methodology

I use the portfolio weighting procedure developed by Sefcik and Thompson (1986) to test for cross-sectional variation, consistent with several prior studies of regulatory events (e.g., Espahbodi et al. 2002; Frischmann et al. 2008; Li, Pincus, and Rego 2008). As discussed in Section 4, the contemporaneous events leading up to the passage of the tax transparency bill affect all sample firms on the same date, and, further, the sample consists of all large firms due to the income threshold imposed by the legislation. This leads to potentially high cross-sectional correlation and heteroscedasticity in the residuals, which results in biased standard errors in pooled, cross-sectional OLS estimation.

First, I form P plus one portfolios for each of my P cross-sectional firm characteristics of interest (i.e., foreign shareholder base, individual and superannuation fund shareholder base, ETR volatility, and negative media attention), a control for firm effective tax rate, and a constant (i.e., P = 6). The daily portfolio return of portfolio P_n is calculated as follows:

$$R_{p,t} = W'_p R_{i,t}, \tag{3}$$

where $R_{p,t}$ is the daily return of portfolio P on day t, W'_p is a 1 x N weighting vector for portfolio P, and $R_{i,t}$ is the N x 1 vector of individual firms' return on day t (N is equal to the total number of firms). The portfolio weights are obtained from the following matrix:

$$W = \begin{bmatrix} W'_1 \\ W'_2 \\ W'_3 \\ W'_4 \\ W'_5 \end{bmatrix} = (F'F)^{-1}F' \tag{4}$$

where F is a N x P matrix consisting of:

$$F = [1\ X_1\ X_2\ X_3\ X_4\ X_5]. \tag{5}$$

In matrix F, each X_p is an N x 1 vector of the pth firm characteristic of interest. Thus, the weighting vector W'_p is the pth row of portfolio weights which are constructed to give exposure to only the pth firm characteristic. This allows me to create a portfolio of ones (the intercept) and five portfolios of returns that are weighted by the firm characteristics I wish to test.

Second, I re-estimate the portfolio-level regression in equation (1) using the weighted portfolio returns generated above to test how each firm characteristic influences the effect of the event dates on portfolio returns. I repeat this estimation for each of my firm characteristics of interest to test each of my cross-sectional predictions.

Because my firm characteristics of interest are each related to firms' expected tax costs, I control for firms' level of tax avoidance using firms' effective tax rate (*ETR*) in my cross-sectional analysis. Consistent with Dyreng, Hanlon, and Maydew (2010), I calculate *ETR* as total tax expense (TXT) divided by pre-tax income (PI) adjusted for special items (SPI) and re-set negative ETRs to zero and ETRs greater than one to one. I

again winsorize all continuous variables at the top and bottom 1 percent to reduce the influence of outliers.

4.1.2.2 Descriptive Statistics and Results

Table 5, Panel A indicates that firms in my sample report mean *ETR* below the Australian statutory corporate tax rate of 30 percent, suggesting firms engage in some tax avoidance, on average. Firms' shareholder base and ETR volatility vary substantially. The large proportion of foreign ownership reflects Australia's economic position as a net importer of direct investment (Altshuler, Shay, and Toder 2015). Finally, only a small fraction of firms (2.84%) were the subject of a critical news article about their taxes in the prior 3-year period. Panel B presents correlations between the cross-sectional variables of interest. Consistent with prior studies documenting the association between shareholder base and tax avoidance, *ETR* and *PctForeign* (*PctIndSuper*) are negatively (positively) correlated.[28] *VOL* is also negatively correlated with *ETR*; however, *Media* is not significantly correlated with other variables of interest.

Table 6, Panel A reports the results of testing for cross-sectional variation in market reaction to the tax transparency bill. Consistent with predictions related to tax avoidance and shareholder base, firms with greater foreign ownership experience an overall negative market reaction to the tax transparency bill. Because these shareholders prefer high levels of tax avoidance, the results suggest the market anticipates increased tax costs – perhaps in the form of public pressure for firms to reduce tax avoidance – as a

[28] The mean *ETR* for firms in the top quartile of foreign shareholder ownership is 21.82 percent whereas the mean *ETR* for firms in the top quartile of domestic individual and superannuation fund ownership is 30.21 percent. This evidence is again consistent with expectations of differing shareholder preferences for tax avoidance.

negative outcome of public disclosure. In contrast, firms with greater individual and superannuation fund ownership experience positive market reactions to the bill. These shareholders prefer companies engage in low levels of tax avoidance. Thus, the market is less concerned about increased tax costs. Instead, the market perceives net benefits of disclosure, such as reduced information asymmetry.

The overall market reaction to a portfolio weighted by *VOL* is negative, consistent with the hypothesis that the market anticipates net costs of public disclosure for firms that appear riskier or exhibit greater tax uncertainty (Guenther et al. 2016; McGuire, Neuman, and Omer 2013). In Panel B, I exclude firms in loss positions (negative or zero PI) because the market may anticipate differential costs and benefits for profitable vs. loss firms. The results for shareholder base and tax uncertainty are consistent with those of the full sample. I find limited evidence consistent with the notion that the market anticipates increased tax costs related to public disclosure for firms previously subject to negative media attention. The overall market reaction for the full sample is insignificant in Panel A. However, the market reaction is negative and significant when I exclude loss firms in Panel B. Given the low occurrence of negative media attention in my sample, I am cautious interpreting this result.

I report robustness tests of my cross-sectional analysis in Table 7. In Panel A, I present results of estimating a simple ordinary least squares CAR regression in place of the Sefcik and Thompson (1986) approach. I calculate CARs following the same methodology described in Section 4.1.1 and estimate the following regression:

$$CAR_{i,t} = a + \beta_1 ETR_{i,t} + \beta_2 PCTForiegn_{i,t} + \beta_3 PctIndSuper_{i,t} + \beta_4 VOL_{i,t} + \beta_5 Media_{i,t} + e_{i,t} \quad (6)$$

where the variables are the same as previously defined. I again include *ETR* as a control variable. Overall, my main results are not robust to using this simpler but less rigorous estimation method.

In Panel B of Table 7, I re-estimate the regressions in Table 6, Panel A using the CRSP value-weighted daily returns index as $R_{m,t}$, similar to my robustness test in the previous section. The market reaction to a portfolio of firms weighted by *PctForeign* is negative and significant, consistent with my main results, but the estimated cumulative abnormal return is significantly smaller in magnitude. Though positive, the overall market reaction for a portfolio of firms weighted by *PctIndSuper* is no longer significant whereas the overall negative market reaction for the *VOL* portfolio is consistent with my main results. Surprisingly, the market reaction for firms experience negative media coverage is positive and significant. Again, I am cautious making interferences from this result because of the low number of firms in my sample with negative attention. Although the results using CRSP returns are not entirely consistent with my main results, they generally do not contradict my previous inferences and may suggest that I need to identify a more refined alternative market return proxy

4.1.2.3 Supplemental Analysis

I explore four additional firm characteristics in supplemental cross-sectional analysis. I report the results of this analysis in Table 8. First, I include *R&D* (XRD/AT) and *LogAnalyst* as proxies for information asymmetry following Armstrong, Core,

Taylor, And Verrecchia (2012). If public tax return disclosure benefits market participants by reducing information asymmetry, then I expect to see a positive market reaction for firms with higher information asymmetry. With respect to these two proxies, firms with high R&D expenditures generally possess intangible assets, which contribute to greater information asymmetry (e.g., Barth, Kasznik, and McNichols 2001). However, to the extent that *R&D* also captures firms with unique income shifting and tax planning opportunities, there could also be a negative market reaction if market participants expect these firms to experience greater scrutiny for their tax avoidance activities. *LogAnalyst*, which is the natural logarithm of the number of analysts issuing earnings-per-share forecasts for the firm obtained from IBES, reflects the firm's information environment. The lower a firm's analyst coverage, the greater the information asymmetry.

The results for a cross-sectional test on *R&D*, an overall negative market reaction, is more consistent with the market anticipating net costs, such as scrutiny for tax avoidance, rather than net benefits of disclosure. This finding could indicate that R&D is not a reliable proxy for information asymmetry in a tax setting because the tax avoidance effects of R&D expenditures dominate. On the other hand, the results for *LogAnalyst* are consistent with the market anticipating net benefits of disclosure for firms with greater information asymmetry. There is an inverse relationship between *LogAnalyst* and information asymmetry. Thus, the negative market reaction for high analyst coverage (i.e., low information asymmetry) correlates to a positive reaction for low analyst coverage (high information asymmetry). This result provides initial evidence that the documented overall positive market reaction to the passage of the tax transparency bill is

in part driven by anticipated decreases in information asymmetry.

Second, I include a measure of institutional ownership, *InstOwn*, as a proxy for investor sophistication. This variable is the total institutional ownership ratio in percentage of market capitalization from FactSet. As discussed in the previous section, it is possible that negative media attention surrounding the initial announcement of the government's intention to increase tax transparency spurred the negative market reactions on the first two event dates. Unsophisticated investors are likely the most susceptible to media influence and examining the cross-sectional variation in investor sophistication could provide evidence of this effect. However, I find an overall negative market reaction for a portfolio weighted by *InstOwn* and the negative and significant market reaction on the second event date, which drew the greatest amount of media attention, persists. On the other hand, this result complements the finding for *LogAnalyst*. To the extent greater institutional ownership contributes to lower information asymmetry and improved governance, the negative market reaction is consistent with the previous finding. There is again an inverse relationship between the variable of interest, *InstOwn*, and information asymmetry. Thus, the negative market reaction for high institutional ownership (i.e., low information asymmetry) correlates to a positive reaction for low institutional ownership (high information asymmetry) and corroborates the theory that the market anticipated net benefits of public tax disclosure related to decreased information asymmetry.

Third, I include *BTD*, a measure of book-tax differences equal to the difference between pre-tax book income (PI) and imputed taxable income (current tax expense divided by the statutory tax rate of 30%) scaled by total assets (AT). For firms with large

book-tax differences, the tax return disclosure could reveal more information or resolve uncertainty about the company's tax position. In contrast, firms with small book-tax differences have smaller variation between book income and taxable income, allowing financial statement users to more accurately estimate taxes paid. However, I do not find a significant market reaction for a portfolio weighted by *BTD*.

Finally, I examine whether consumer-facing firms experience a significant market reaction. I include the variable *Retail*, which is an indicator variable set equal to one for companies in SIC industry codes 5000-5999, 7200-7299, and 7600-7699 following Fama-French 12 industry classifications. Because of their public-facing nature, it is possible that this set of firms is more susceptible to negative attention if included on the ATO's report. Thus, the adoption of a public tax disclosure regime could lead to greater tax costs for these firms, particularly reputational costs and public scrutiny. However, I do not find evidence consistent with this hypothesis and do not find an overall significant market reaction for a portfolio weighted by *Retail*. Instead, there is a small positive market reaction for this portfolio on the second event date, which is indicative of anticipated benefits of disclosure rather than costs. This reaction could be the case if retail firms in Australia typically have effective tax rates near the statutory rate due to limited tax planning opportunities and a public disclosure would actually boost their reputation as "good citizen" taxpayers.

4.2 Release of ATO Tax Transparency Report

4.2.1 Descriptive Statistics

Panel A of Table 9 provides descriptive statistics for all 1,539 companies included

the ATO's Tax Transparency Report released on December 17, 2015. As described previously, this sample includes both publicly listed Australian companies and foreign-owned public and private entities. The ATO amounts are denominated in millions of AUD. As expected, firms report a high amount of gross income (mean of 1,058.4), but 30 percent of firms report zero or negative taxable income and 38 percent report zero or negative tax payable.

Panel B describes reporting firms that I can match to Compustat Global financial statement and daily returns data. The Compustat sample firms report more gross income (mean of 2,659.62) than the full report sample and are overall large companies based on total asset size. Only 25 percent report zero or negative taxable income, but a similar percentage, 37 percent, report zero or negative tax payable.[29]

To descriptively explore differences between taxes reported in firms' financial statements and the ATO's disclosure, I calculate *TaxSurprise_TI* as the difference between taxable income per the ATO report and imputed taxable income based on financial statement disclosures. Imputed taxable income is equal to current tax expense divided by the Australian statutory tax rate of 30 percent. Alternatively, I also calculate the variable *TaxSurprise_TXPD* by subtracting cash taxes paid (TXPD) from the actual income tax payable amount reported by the ATO. Cash taxes paid are a salient benchmark from the company's financial statements because of the Australian financial accounting requirement to report cash flow statements using the direct method.

[29] My proxy for total income, Compustat total revenue (REVT), is not a perfect measure as the minimum total revenue for this sample is less than AUD 100M, likely due to consolidated losses in other jurisdictions. However, gross income from companies' tax returns is highly correlated with total revenue with a correlation of 0.96 ($p < 0.001$).

Nevertheless, cash taxes paid do not perfectly match what a company reports on its tax return. This amount often includes payments and settlements related to other accounting periods or non-Australian jurisdictions.

I report scaled and unscaled values of both measures of *TaxSurprise* in millions of AUD in Panel B. Between the 25th and 75th percentiles, scaled *TaxSurprise* is generally small, indicating firms' imputed taxable income or cash tax payments and actual taxable income and payments are not vastly different. This evidence suggests the ATO report contains redundant tax information for a large proportion of firms. However, the minimum and maximum amounts show that at the tails, *TaxSurprise* can be large – in billions of AUD. In untabulated descriptive statistics, I find that firms with multinational operations have, overall, much larger *TaxSurprise* than domestic firms at both tails and appear more frequently in the bottom quartile of *TaxSurprise*.[30] This descriptive evidence is consistent with the ATO report providing different information than a multinational firm's financial statements (i.e., Australian taxes paid, specifically), but this information could be irrelevant for an investor evaluating the firm's tax position as a whole.

4.2.2 Market Reaction to Report

The results in Table 10, Panel A, columns 1 and 3 indicate that there is a significantly negative market reaction to the ATO's release of the Corporate Tax Transparency Report. Both the CAR calculated using the MVRM methodology and the mean 3-day CAR calculated as defined in Section 4.1.1 are negative and significant.

[30] I obtain variables indicating multinational operations (e.g., foreign assets, foreign sales) from Thomson Reuters Datastream/Worldscope.

However, the mean raw 3-day return is positive and significant, despite the majority of firms experience a negative 3-day CAR (column 5, 62%). This inconsistent result suggests it is important to control for market-wide effects at the report release date.

In Panel B of Table 10, I also test whether the market reacts to salient information such as when the ATO report the firm pays zero tax or when the media name specific firms in their reporting of the public disclosure (columns 1 and 2). Further, I examine other firm characteristics that could lead to cross-sectional variation: information asymmetry (*R&D* and *LogAnalyst* in columns 3 and 4), investor sophistication (*InstOwn*, column 5), book-tax differences (*BTD*, column 6), retail firms (column 7), and magnitude of *TaxSurprise_TI* and *TaxSurprise_TXPD*. I do not find a significant market reaction in these tests with the exception of *TaxSurprise_TXPD*. The negative estimated CAR for the *TaxSurprise_TXPD* cross-sectional test suggests that the market reacted negatively to firms that appeared to have "paid more" tax than expected (i.e., actual tax payable from the ATO report is greater than taxes paid reported in companies' cash flow statements). This result indicates that the market is more concerned about actual tax costs than reputational costs.[31] Overall, the significant market reaction in the days surrounding the release of the ATO report indicates the market finds the disclosure to have some incremental information content. Further, in an untabulated test, I confirm that my main result is robust to using a 5-day event window around the ATO report release.

[31] Further examining this result, in untabulated tests I find that the market reaction is significantly negative for the top quartile of firms ranked by *TaxSurprise_TXPD* (firms appearing to pay more tax than expected) and insignificant for firms in the bottom quartile (firms appearing to pay less tax than expected). With the exception of a small number of firms reporting negative cash taxes paid on their statement of cash flows (i.e., firms receiving a tax refund), the firms in my sample that are disclosed to have paid zero taxes on the ATO report fall into the bottom quartile subsample.

4.3 Analysis of Change in Corporate Tax Avoidance

The preceding tests indicate, on average, fairly small capital market effects of public disclosure of tax return information. The result that the market does not anticipate significant negative consequences of disclosure suggests firms have minimal incentive to change their real activities, whereas costly negative returns may have motivated firms to re-examine their tax avoidance policies and disclosures. As a first step toward understanding the impact of public disclosure of tax return information on firm tax avoidance, I descriptively examine the change in reported tax return numbers from the 2013/2014 tax year (first year of disclosure) to the 2014/2015 tax year (the second and most recent year of disclosure). I then conduct regression analysis of firms' ETRs subsequent to the passage of the public disclosure law.

4.3.1 Comparison of 2013/2014 and 2014/2015 Tax Transparency Reports

Panels A and B of Table 11 compares reported tax return figures from the 2013/2014 tax year report to the second report covering the 2014/2015 tax year. Across the two years, for firms with valid non-missing ABNs, 1,373 firms appear in both reports. A total of 519 firms are newly subject to disclosure in the 2014/2015 tax year, whereas 159 firms subject to disclosure in the first report year do not appear again in the most report. I do not find a significant difference in mean gross income, taxable income, or tax payable across the two tax years for all firms included in the two reports (Panel A). Focusing on firms that appear in both reports, I also do not find a significant difference in reported tax return figures across the two tax years. This simple two-year comparison of tax return data suggests firms did not alter their tax avoidance behavior in the short time

the tax transparency rules came into effect. It is possible that the 159 firms subject to disclosure in 2013/2014 manipulated total income to fall below the AUD 100M threshold to avoid appearing on the report the second year. Upon closer inspection, nearly half of the 159 firms had zero or negative taxable income, suggesting a large proportion could simply be unprofitable or low-performing companies.

4.3.2 Regression Analysis

To examine firms' tax avoidance over a longer window of time, I test for a significant change in firms' ETRs following the adoption of the tax transparency bill. I estimate an ordinary least squares model of *ETR* regressed on an indicator variable, *POST*, and several control variables consistent with prior literature examining Australian corporate tax avoidance (Ikin and Tran 2013). My sample consists of firms included in the 2013/2014 ATO report over the years 2010 to 2015. Specifically, I estimate the following model:

$$ETR_{i,t} = \alpha + \beta_1 POST_{i,t} + \beta_2 Size_{i,t} + \beta_3 R\&D_{i,t} + \beta_4 PPE_{i,t} + \beta_5 ROA_{i,t} + e_{,it}. \quad (7)$$

ETR is calculated following the same definition in Section 4.1.2.2. *POST* is an indicator variable that is set equal to one for tax years subsequent to the effective date of the tax transparency bill and zero otherwise. *Size* is the natural logarithm of lagged total assets ($\log(AT_{t-1})$) and controls for political costs and tax planning opportunities available to large firms with greater resources. *R&D* is research and development expenditures (XRD) scaled by lagged total assets (AT_{t-1}). As described in Ikin and Tran (2013), Australian tax law provides preferential tax treatment to research and development activities, similar to the U.S. I also control for a firm's capital intensity (*PPE*) and

profitability (*ROA*), again following Ikin and Tran (2013). I winsorize continuous variables at the 1st and 99th percentile.

Table 12 present the results of estimating equation (7). For robustness, I also use firms' cash effective tax rate (*CETR*) as a proxy for tax avoidance. *CETR* is equal to cash taxes paid (TXPD) divided by pre-tax income (PI) adjusted for special items (SPI). Across both specifications, I do not find evidence that firms changed their tax avoidance behavior in reaction to the transparency bill.

In untabulated analysis, I expand the sample period to 2016 and continue to find similar (non-)results. I also estimate a model including all other Compustat Australian firms as a control group and a model where all other Compustat firms with REVT greater than AUD 50M are the control group and similarly find insignificant estimated coefficients on *POST*. In sum, the results do not suggest firms changed tax avoidance as a result of the new disclosure rule, but I caveat that there is limited time series data to conduct this test given the recency of the bill. Further, there could be interesting cross-sectional variation in tax avoidance behavior to examine in future work.

Chapter 5:

Conclusion

I exploit a recent tax law change in Australia to examine the capital market consequences of public disclosure of corporate tax return information. First, I examine market reactions to key events leading up to the passage of the tax transparency bill to test if market participants perceive net costs or benefits of tax return disclosure. I find an overall positive (but small) market reaction, which suggests that market participants anticipate net benefits of disclosure. Cross-sectionally, I find evidence indicating the overall positive market reaction to the passage of the tax transparency bill is in part driven by anticipated decreases in information asymmetry. On the other hand, additional cross-sectional tests suggest that firms likely to face increased tax costs as a result of public disclosure experience negative market reactions.

Second, I examine the stock market reaction to the publication of the first transparency report and find a significant negative market reaction. This result indicates that the tax return line items disclosed in the ATO report have incremental information content for market participants. Finally, I conduct early analysis of firms' response to the mandatory disclosure rule by examining changes in corporate tax avoidance following the adoption of the tax transparency bill. The evidence thus far does not indicate firms are reducing tax avoidance in reaction to the new disclosure law.

This study is one of the first to investigate the informational consequences of public corporate tax return disclosure and contributes to both the tax and disclosure literatures. This evidence is a first step toward understanding the effectiveness of such

disclosure policies and are important to a number of stakeholders. Corporate managers should be interested in understanding how the market interprets and values tax return information and determining whether any additional voluntary tax disclosures could be beneficial to the firm. Regulators and policymakers should also be interested in understanding the consequences of mandatory disclosure. The goals of the Australian transparency bill include both constraining tax aggressive behavior and providing useful information about corporate taxation. This study strives to address the latter and finds some evidence suggesting that market participants value tax return information, but more empirical work is needed to evaluate whether using a mandatory disclosure achieves both of lawmakers' goals.

Figures and Tables

FIGURE 1
Timeline of Events

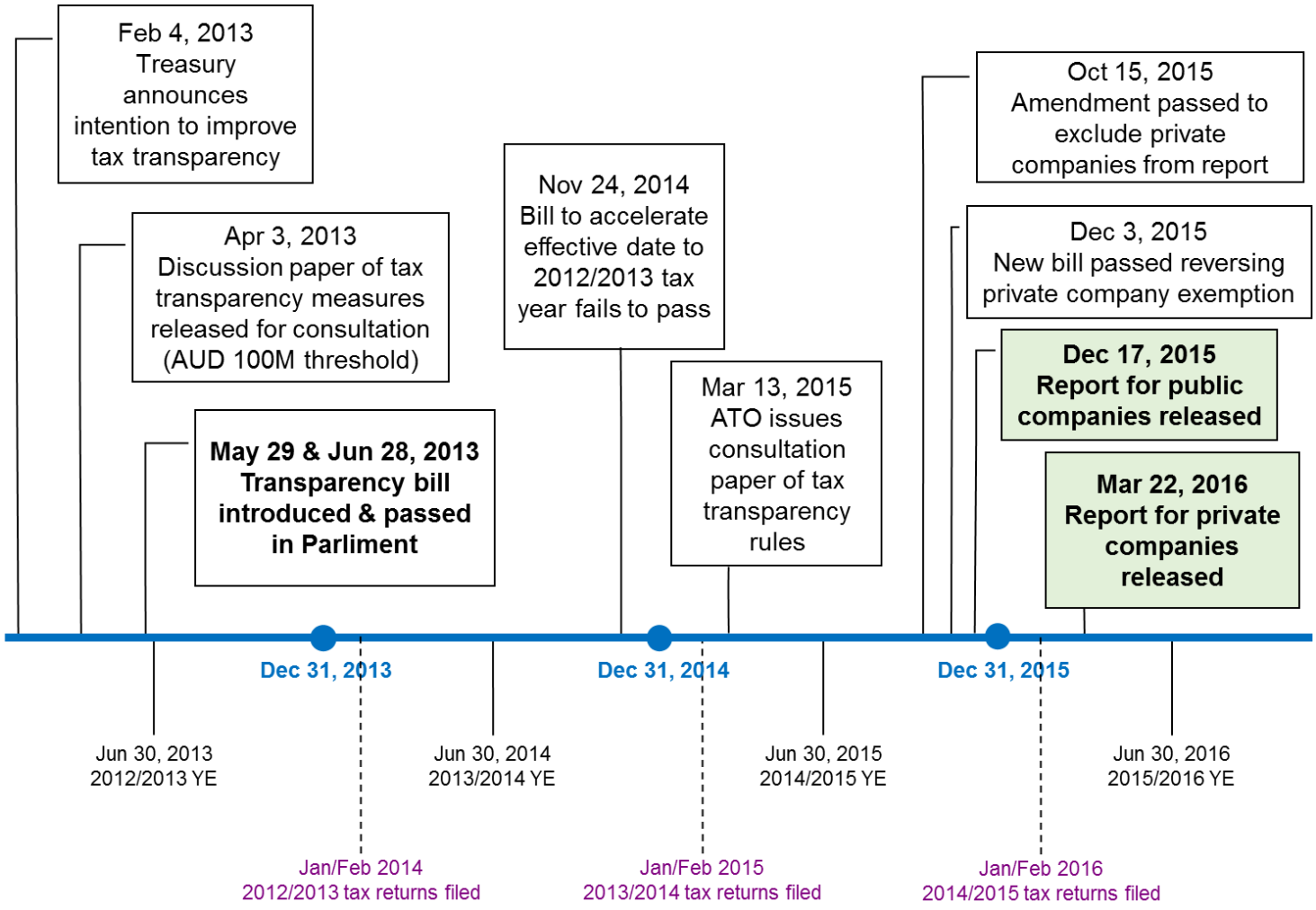

TABLE 1
Events Leading Up to Tax Transparency Bill Passage

Event	Date	Description
E1	2/4/2013	Assistant Treasurer David Bradbury announces government's intention to improve corporate tax transparency with some form of public tax disclosure
E2	4/3/2013	Treasury releases discussion paper, *Improving the Transparency of Australia's Business Tax System*, outlining details of the proposed transparency bill including the reporting threshold and the relevant line items from the corporate tax return
E3	5/29/2013	Introduction and first reading of the transparency bill in the House of Representatives; full text of the bill available online for the first time
E4	6/28/2013	Parliament passes the transparency bill
E5	12/17/2015	Release of ATO Tax Transparency Report for public corporate entities on the Australian government's website

TABLE 2
Sample Selection

This table provides the sample selection criteria for each of the samples for testing the market reaction to key events leading up to the passage of the tax transparency bill (Panel A) and testing the market reaction to the release of the initial ATO Corporate Tax Transparency Report (Panel B).

Panel A: Market Reaction to Legislation Passage	
	N
Australian listed companies from Compustat Global Annual	1,691
Less:	
Companies with total revenue (REVT) less than AUD 100M	(1,320)
Companies missing daily returns data	(23)
Companies in event study sample (Table 3)	**348**
Companies in event study sample	348
Less:	
Companies missing ETR (TXT/PI-SPI)	(9)
Companies missing shareholder ownership data	(21)
Companies missing ETR volatility data	(1)
Companies in additional cross-sectional analysis sample (Table 5)	**317**

Panel B: Market Reaction to ATO Report	
	N
Australian listed companies from Compustat Global Annual	1,691
Less:	
Companies not included in ATO Corporate Tax Transparency Report	(1,355)
Companies missing daily returns data	(30)
Companies in reaction to ATO report sample (Table 9)	**306**

TABLE 3
Market Reaction to Legislative Events

This table presents descriptive statistics for the sample used in testing the market reaction to key events leading up to the passage of the tax transparency bill (Panel A) and the results of estimating equation (1),

$$R_{p,t} = \alpha_p + \beta_p R_{m,t} + \sum_{k=1}^{K} g_{p,k} D_{k,t} + e_{p,t}$$

for an equally-weighted portfolio of publicly listed firms expected to be subject to the tax transparency bill (Panel B). Column 1 reports the cumulative abnormal return estimated from equation (1), column 2 reports raw 3-day returns, and column 3 reports 3-day CARs calculated using the expected return estimated from a market model of returns. Financial information is from Compustat Global and amounts are in millions of AUD. *Total Assets* is total assets (AT). *Total Revenue* is total revenue (REVT). *Pre-Tax Income* is pre-tax income (PI). *Return on Assets* is return on assets (PI/AT). CAR is measured in the 3-day window centered on the event date. In Panel B, t statistics are reported in brackets.

Panel A: Descriptive Statistics

Variable	N	Mean	Std. Dev.	Minimum	P25	Median	P75	Maximum
Total Assets	348	3035.61	5602.64	23.31	220.37	677.80	2722.12	22740.00
Total Revenue	348	1559.86	2679.03	101.46	195.24	416.06	1392.85	10831.80
Pre-Tax Income	348	139.77	291.84	-175.60	10.60	38.25	144.16	1216.80
Return on Assets	348	0.0632	0.1372	-0.9683	0.0188	0.0597	0.1155	0.5266

Panel B: Equally-Weighted Portfolio Returns, Raw Returns, and 3-Day CAR

Event	Date	Description	MVRM CAR	Raw 3-Day Return	3-Day CAR	% Firms Positive 3-Day CAR	% Firms Negative 3-Day CAR
			(1)	(2)	(3)	(4)	(5)
E1	2/4/2013	Treasury announcement	-0.0007	-0.0019	-0.0024	48%	52%
			[-0.58]	[-0.94]	[-1.20]		
E2	4/3/2013	Discussion paper	-0.0042***	-0.0211***	-0.0117***	42%	58%
			[-3.24]	[-8.11]	[-5.00]		
E3	5/29/2013	First reading of bill	0.0036***	0.0087***	0.0106***	52%	48%
			[3.91]	[2.97]	[3.49]		
E4	6/28/2013	Final bill passage	0.0045**	0.0110**	0.0138***	49%	51%
			[2.06]	[2.47]	[3.12]		
Overall market reaction to events			0.0032***				
F-statistic			7.93				
Daily observations			253				
R-squared			0.7200				

TABLE 4
Robustness Tests of Market Reaction to Legislative Events

This table presents the results of robustness tests of the main results in Table 3. Columns 1-6 report results of estimating equation (1) using alternative proxies for market return. Column 7 excludes sample firms with earnings announcements occurring within a 5-day window of my event dates. Column 8 reports results of estimating equation (1) for a sample of all public firms with data availability, whereas column 9 (10) utilizes a sample of firms with total revenue less than AUD 100M (between AUD 90-100M). Column 11 reports results for estimating equation (1) using the U.S. market as a proxy for market return (CRSP value-weighted return). t statistics are reported in brackets.

Event	Date	ASX 100	ASX 200	ASX 300	Dow Jones Total Market	Datastream Australia	MSCI Australia	Exclude Earnings Announce.
		(1)	(2)	(3)	(4)	(5)	(6)	(7)
E1	2/4/2013	-0.0010	-0.0008	-0.0008	-0.0009	-0.0010	-0.0010	-0.0005
		[-0.77]	[-0.66]	[-0.63]	[-0.69]	[-0.83]	[-0.79]	[-0.42]
E2	4/3/2013	-0.0050***	-0.0047***	-0.0045***	-0.0046***	-0.0051***	-0.0048***	-0.0044***
		[-3.33]	[-3.38]	[-3.24]	[-3.16]	[-3.14]	[-3.41]	[-3.18]
E3	5/29/2013	0.0041***	0.0039***	0.0038***	0.0037***	0.0040***	0.0040***	0.0032***
		[3.25]	[3.51]	[3.56]	[2.81]	[2.64]	[4.57]	[3.93]
E4	6/28/2013	0.0046**	0.0046**	0.0046**	0.0047**	0.0047**	0.0047**	0.0048*
		[2.11]	[2.08]	[2.05]	[2.23]	[2.29]	[2.16]	[1.96]
Overall market reaction to events		0.0027***	0.003***	0.0031***	0.0029***	0.0026***	0.0029***	0.0031
F-statistic		6.91	7.40	7.21	6.01	5.84	9.90	7.76
Daily observations		253	253	253	253	253	253	253
R-squared		0.6549	0.6869	0.6972	0.6816	0.6376	0.6829	0.7054

Event	Date	All Firms	Firms < 100M	Firms 90-100M	U.S. Market Index
		(8)	(9)	(10)	(11)
E1	2/4/2013	-0.0019**	-0.0022**	-0.0009	0.0017
		[-2.02]	[-2.52]	[-0.10]	[1.11]
E2	4/3/2013	-0.0103***	-0.0120***	-0.0051	-0.0049*
		[-7.77]	[-8.93]	[-1.09]	[-1.76]
E3	5/29/2013	-0.0004	-0.0015	0.0023	0.0022*
		[-0.50]	[-1.31]	[0.57]	[1.96]
E4	6/28/2013	0.0049	0.0050	0.0083	0.0028
		[0.97]	[0.85]	[0.84]	[0.76]
Overall market reaction to events		-0.0077***	-0.0107***	0.0046	0.0018*
F-statistic		15.85	20.74	0.59	2.23
Daily observations		253	253	253	197
R-squared		0.4149	0.2862	0.0246	0.3491

TABLE 5
Descriptive Statistics of Cross-Sectional Analysis of Market Reaction to Legislative Events

This table presents descriptive statistics for the sample used in testing cross-sectional variation in the market reaction to key events leading up to the passage of the tax transparency bill. *ETR* is total income tax expense divided by pre-tax income adjusted for special items (TXT/(PI-SPI)) where negative values and values greater than 1 are reset to 0 and 1, respectively. *PctForeign* is total percentage ownership by non-Australian shareholders. *PctIndSuper* is total percentage ownership by Australian individual shareholders and superannuation funds. *VOL* is the standard deviation of *ETR* over the prior 5-year period. *Media* is an indicator variable set equal to one for companies that are the subject of at least one article in a top-ten Australian newspaper critical of corporate taxes in the prior 3-year period and zero otherwise. Continuous variables are winsorized at the 1st and 99th percentiles. Panel B reports Pearson correlations (above the diagonal) and Spearman correlations (below the diagonal). Values in bold denote significance at the 0.10 level.

Panel A: Descriptive Statistics

Variable	N	Mean	Std. Dev.	Minimum	P25	Median	P75	Maximum
ETR	317	0.2459	0.1727	0.0000	0.1398	0.2717	0.3065	1.0000
PctForeign	317	26.2178	26.2630	0.0000	5.9500	18.3100	36.6200	100.0000
PctIndSuper	317	4.1348	8.6066	0.0000	0.0000	0.9200	3.1700	45.9700
VOL	317	0.3175	0.7862	0.0005	0.0298	0.0994	0.2525	6.5665
Media	317	0.0284	0.1664	0.0000	0.0000	0.0000	0.0000	1.0000

Panel B: Sample Correlations

Variable	*ETR*	*PctForeign*	*PctIndSuper*	*VOL*	*Media*
ETR		-0.0776	**0.1830**	0.0552	-0.0377
		(0.1683)	**(0.0011)**	(0.3277)	(0.5040)
PctForeign	**-0.1808**		**-0.1966**	**0.0932**	-0.0047
	(0.0012)		**(0.0004)**	**(0.0977)**	(0.9330)
PctIndSuper	**0.1811**	**-0.1667**		-0.0495	-0.0672
	(0.0012)	**(0.0029)**		(0.3800)	(0.2328)
VOL	**-0.1906**	**0.1597**	**-0.1027**		-0.0462
	(0.0006)	**(0.0044)**	**(0.0679)**		(0.4127)
Media	-0.0205	0.0218	-0.0335	-0.0266	
	(0.7166)	(0.6990)	(0.5523)	(0.6375)	

TABLE 6
Cross-Sectional Analysis of Market Reaction to Legislative Events

This table presents the results of estimating equation (1),

$$R_{p,t} = \alpha_p + \beta_p R_{m,t} + \sum_{k=1}^{K} g_{p,k} D_{k,t} + e_{p,t}$$

for portfolios weighted by the firm characteristic indicated in each column. The cumulative abnormal return (CAR) is measured in the 3-day window centered on the event date. *ETR* is total income tax expense divided by pre-tax income adjusted for special items (TXT/(PI-SPI)) where negative values and values greater than 1 are reset to 0 and 1, respectively. *PctForeign* is total percentage ownership by non-Australian shareholders. *PctIndSuper* is total percentage ownership by Australian individual shareholders and superannuation funds. *VOL* is the standard deviation of *ETR* over the prior 5-year period. *Media* is an indicator variable set equal to one for companies that are the subject of at least one article in a top-ten Australian newspaper critical of corporate taxes in the prior 3-year period and zero otherwise. Continuous variables are winsorized at the 1st and 99th percentiles.

Panel A: Weighted Portfolio Returns

	PctForeign		*PctIndSuper*		*VOL*		*Media*	
Predicted Sign	-		+		-		-	
Event	**CAR**	**[t-stat]**	**CAR**	**[t-stat]**	**CAR**	**[t-stat]**	**CAR**	**[t-stat]**
E1	0.0000	[0.97]	0.0002***	[2.93]	-0.0023***	[-3.15]	0.0024	[1.04]
E2	-0.0001***	[-9.59]	0.0000	[0.53]	-0.0010	[-0.70]	-0.0009	[-0.96]
E3	0.0000	[0.68]	-0.0001	[-1.38]	-0.0004	[-0.26]	-0.0034	[-1.49]
E4	0.0000	[0.29]	0.0002***	[4.77]	-0.0002	[-0.14]	-0.0004	[-0.15]
Overall market reaction to events	-0.0001***		0.0003***		-0.0039**		-0.0023	
F-statistic	29.55		8.13		2.60		1.06	
Daily observations	253		253		253		253	
R-squared	0.0154		0.2244		0.0381		0.2361	

TABLE 6, continued
Cross-Sectional Analysis of Market Reaction to Legislative Events

Panel B: Weighted Portfolio Returns - Exclude Loss Firms								
	PctForeign		*PctIndSuper*		*VOL*		*Media*	
Predicted Sign	-		+		-		-	
Event	**CAR**	**[t-stat]**	**CAR**	**[t-stat]**	**CAR**	**[t-stat]**	**CAR**	**[t-stat]**
E1	-0.0000	[-0.94]	0.0002***	[3.41]	-0.0011***	[-5.70]	0.0014	[0.76]
E2	-0.0001***	[-4.65]	0.0001	[1.47]	-0.0008	[-1.08]	0.0008	[0.45]
E3	0.0000	[0.75]	-0.0001	[-1.54]	-0.0007	[-0.33]	-0.0041***	[-3.23]
E4	0.0000	[0.06]	0.0001	[1.26]	0.0007	[0.57]	-0.0011	[-0.28]
Overall market reaction to events	-0.0001***		0.0003***		-0.0019***		-0.0129**	
F-statistic	5.66		4.35		8.44		2.93	
Daily observations	253		253		253		253	
R-squared	0.0741		0.2252		0.0524		0.1709	

TABLE 7
Robustness Tests of Cross-Sectional Analysis of Market Reaction to Legislative Events

This table presents the results of robustness tests of the main cross-sectional results in Table 6. Panel A reports the result of estimating the OLS regression model, equation (6):

$$CAR_{i,t} = a + \beta_1 ETR_{i,t} + \beta_2 PCTForiegn_{i,t} + \beta_3 PctIndSuper_{i,t} + \beta_4 VOL_{i,t} + \beta_5 Media_{i,t} + e_{i,t}$$

where *CAR* is the 3-day cumulative abnormal return calculated using the expected return estimated from a market model of returns. Panel B reports results using the U.S. market as a proxy for market return (CRSP value-weighted return). *ETR* is total income tax expense divided by pre-tax income adjusted for special items (TXT/(PI-SPI)) where negative values and values greater than 1 are reset to 0 and 1, respectively. *PctForeign* is total percentage ownership by non-Australian shareholders. *PctIndSuper* is total percentage ownership by Australian individual shareholders and superannuation funds. *VOL* is the standard deviation of *ETR* over the prior 5-year period. *Media* is an indicator variable set equal to one for companies that are the subject of at least one article in a top-ten Australian newspaper critical of corporate taxes in the prior 3-year period and zero otherwise. Continuous variables are winsorized at the 1st and 99th percentiles and t statistics are reported in parentheses.

Panel A: OLS CAR Regression

Variable	Pred. Sign	Event 1	Event 2	Event 3	Event 4	All Events
PctForeign	-	0.0000	-0.0001	0.0000	0.0001	0.0000
		(0.4430)	(-1.4200)	(0.2482)	(0.7527)	(0.1711)
PctIndSuper	+	0.0006**	0.0001	-0.0006**	0.0009	0.0003
		(2.2390)	(0.3136)	(-1.9739)	(1.1122)	(1.0426)
VOL	-	-0.0069*	-0.0032	-0.0002	0.0027	-0.0019
		(-1.7407)	(-0.9757)	(-0.0476)	(0.3982)	(-0.7413)
Media	-	0.0080*	-0.0002	-0.0127**	-0.0000	-0.0012
		(1.6561)	(-0.0235)	(-2.1277)	(-0.0002)	(-0.3414)
ETR		-0.0142	-0.0329**	0.0154	0.0473	0.0031
		(-0.9346)	(-2.0699)	(0.7526)	(1.4172)	(0.2518)
Observations		317	317	316	315	1265
R-squared		0.0426	0.0266	0.0096	0.0296	0.0027

TABLE 7, continued
Robustness Tests of Cross-Sectional Analysis of Market Reaction to Legislative Events

Panel B: Weighted Portfolio Returns - U.S. Market Proxy								
	PctForeign		*PctIndSuper*		*VOL*		*Media*	
Predicted Sign	-		+		-		-	
Event	**CAR**	**[t-stat]**	**CAR**	**[t-stat]**	**CAR**	**[t-stat]**	**CAR**	**[t-stat]**
E1	0.0000	[1.11]	0.0002	[1.54]	-0.0014**	[-2.48]	0.0055**	[2.38]
E2	-0.0001***	[-7.03]	0.0001	[1.04]	-0.0011	[-0.67]	-0.0012	[-1.25]
E3	0.0001	[0.81]	-0.0002	[-1.23]	0.0012***	[4.32]	-0.0053	[-1.62]
E4	-0.0000	[-1.19]	0.0001*	[1.70]	-0.0011	[-0.54]	0.0033***	[4.80]
Overall market reaction to events	-0.0000***		0.0002		-0.0024***		0.0023***	
F-statistic	40.32		1.97		7.17		0.83	
Daily observations	197		197		197		197	
R-squared	0.0224		0.0446		0.0392		0.1132	

TABLE 8
Supplemental Cross-Sectional Analysis of Market Reaction to Legislative Events

This table presents the results of estimating equation (1),

$$R_{p,t} = \alpha_p + \beta_p R_{m,t} + \sum_{k=1}^{K} g_{p,k} D_{k,t} + e_{p,t}$$

for portfolios weighted by the firm characteristic indicated in each column. The cumulative abnormal return (CAR) is measured in the 3-day window centered on the event date. *R&D* is research and development expenditures (XRD) scaled by total assets (AT). *LogAnalyst* is the natural logarithm of the number of analysts issuing one-year-ahead earnings-per-share forecasts. *InstOwn* is the total institutional ownership ratio in percentage of market capitalization. *BTD* is equal to pre-tax income (PI) less imputed taxable income (current tax expense TXC dividend 30%). *Retail* is an indicator variable set equal to one for companies in SIC industry codes 5000-5999, 7200-7299, or 7600-7699 following Fama-French 12 industry classifications. Continuous variables are winsorized at the 1st and 99th percentiles.

	R&D		*LogAnalyst*		*InstOwn*		*BTD*		*Retail*	
Event	**CAR**	**[t-stat]**	**CAR**	**[t-stat]**	**CAR**	**[t-stat]**	**CAR**	**[t-stat]**	**CAR**	**[t-stat]**
E1	-0.0283***	[-3.07]	0.0001	[0.41]	0.0085	[1.17]	-0.0000	[-0.25]	-0.0003	[-0.11]
E2	0.0008	[0.02]	-0.0005	[-1.59]	-0.0228***	[-2.97]	-0.0000	[-0.50]	0.0060*	[1.75]
E3	0.0366	[0.60]	0.0018	[1.26]	0.0244**	[2.08]	-0.0000**	[-2.04]	0.0004	[0.24]
E4	-0.0234	[-0.61]	-0.0027***	[-2.82]	-0.0117	[-0.65]	0.0000	[0.15]	0.0005	[0.15]
Overall market reaction to events	-0.0143***		-0.0013**		-0.0016***		0.0000		0.0066	
F-statistic	2.54		3.19		3.99		1.10		0.78	
Daily observations	253		253		253		253		253	
R-squared	0.0225		0.5231		0.2176		0.0419		0.0986	

TABLE 9
Descriptive Statistics for ATO Corporate Tax Transparency Report

This table provides descriptive statistics for all firms included in the ATO Corporate Tax Transparency Report (Panel A) and the sample of firms from the report matched to Compustat Global (Panel B). Financial information is from Compustat Global and amounts are in millions of AUD. *Gross Income*, *Taxable Income*, and *Tax Payable* are from the ATO Corporate Tax Transparency Report and correspond to line items on the Australian Company Tax Return. *Total Assets* is total assets (AT). *Total Revenue* is total revenue (REVT). *Pre-Tax Income* is pre-tax income (PI). *Return on Assets* is return on assets (PI/AT). *TaxSurprise* is alternately *Tax Payable* less current tax expense (TXC) or *Taxable Income* less imputed taxable income (TXC divided by 30%). Continuous variables are winsorized at the 1st and 99th percentiles.

Panel A: All Firms Included in Report

Variable	N	Mean	Std. Dev.	Minimum	P25	Median	P75	Maximum
Gross Income	1,539	1058.49	3783.79	100.44	159.47	291.45	716.73	67456.10
Taxable Income	1,539	110.40	764.63	0.00	0.00	9.68	36.07	13760.30
Tax Payable	1,539	25.90	189.61	0.00	0.00	1.62	8.13	3950.83
Percent Firms with Zero or Negative Taxable Income	30%							
Percent Firms with Zero or Negative Tax Payable	38%							

Panel B: Firms Included in Report Matched to Compustat Global

Variable	N	Mean	Std. Dev.	Minimum	P25	Median	P75	Maximum
Gross Income	306	2659.62	7755.16	100.47	213.61	442.34	1378.84	67456.10
Taxable Income	306	356.27	1557.69	0.00	0.09	22.26	99.92	13760.30
Tax Payable	306	88.38	413.56	0.00	0.00	3.42	21.55	3950.83
Percent Firms with Zero or Negative Taxable Income	25%							
Percent Firms with Zero or Negative Tax Payable	37%							
Total Assets	306	15385.87	88889.52	40.22	304.38	793.57	2964.00	770842.00
Total Revenue	306	2918.34	7774.13	23.94	227.89	532.53	1746.60	51171.00
Pre-Tax Income	306	336.36	1372.29	-505.90	6.37	37.28	158.60	10308.00
Return on Assets	306	0.0431	0.1131	-0.3802	0.0120	0.0524	0.0930	0.3353
TaxSurprise_TI (Scaled by Total Assets)	298	0.0245	0.0866	-0.1181	-0.0105	0.0000	0.0305	0.4946
TaxSurprise_TI (Unscaled)	298	-2.34	692.72	-8193.03	-12.89	0.00	19.89	5376.30
TaxSurprise_TXPD (Scaled by Total Assets)	218	-0.0055	0.0137	-0.0504	-0.0121	-0.0040	0.0010	0.0302
TaxSurprise_TXPD (Unscaled)	218	-24.71	137.86	-1642.17	-14.13	-2.61	0.45	587.90

TABLE 10
Market Reaction to Release of ATO Corporate Tax Transparency Report

This table presents the results of estimating equation (1) using the returns for an equally-weighted portfolio of publicly listed firms appearing on the ATO Corporate Tax Transparency Report (Panel A). The cumulative abnormal return (CAR) is measured in the 3-day window centered on the event date. Panel B includes cross-sectional analysis of the market reaction on the report release date.

Panel A: Equally-Weighted Portfolio Returns, Raw Returns, and 3-Day CAR

Event	Date	Description	MVRM CAR	Raw 3-Day Return	3-Day CAR	% Firms Positive 3-Day CAR	% Firms Negative 3-Day CAR
			(1)	(2)	(3)	(4)	(5)
E5	12/17/2015	Release of ATO Report	-0.0024**	0.0219***	-0.0098***	38%	62%
			[-2.39]	[7.70]	[-3.21]		
Daily observations			71				
R-squared			0.8297				

Panel B: Cross-Sectional Analysis - Weighted Portfolio Returns

Event	Date	*Zero Tax*	*Media*	*R&D*	*LogAnalyst*	*InstOwn*	*BTD*	*Retail*
		(1)	(2)	(3)	(4)	(5)	(6)	(7)
E5	12/17/2015	0.0013	-0.0016	0.0206	-0.0012	-0.0250	-0.0000	0.0001
		[0.35]	[-1.10]	[0.37]	[-1.14]	[-1.52]	[-0.60]	[0.07]
Daily observations		71	71	71	71	71	71	71
R-squared		0.3854	0.5789	0.0121	0.6773	0.3435	0.3854	0.0018

Event	Date	*TaxSurprise_TI*	*TaxSurprise_TXPD*
		(8)	(9)
E5	12/17/2015	-0.0126	-0.0674***
		[-1.33]	[-2.84]
Daily observations		71	71
R-squared		0.3854	0.5789

TABLE 11
Comparison of 2013/2014 and 2014/2015 Tax Transparency Reports

This table presents descriptive statistics of the tax return line items disclosed in the tax year 2013/2014 and 2014/2015 ATO Tax Transparency Reports. Panel A reports descriptive statistics for all firm included on the reports and Panel B reports descriptive statistics for firms appearing on both reports (i.e., subject to disclosure in both years).

Panel A: All Firms Included on Reports

	2013/2014 Report			2014/2015 Report			
Variable	**N**	**Mean**	**Median**	**N**	**Mean**	**Median**	**Diff. in Mean p value**
Gross Income	1,532	1061.13	291.33	1,892	935.26	300.09	0.3108
Taxable Income	1,071	158.55	21.95	1,358	124.28	18.62	0.3179
Tax Payable	958	41.61	5.85	1,221	34.28	5.08	0.7560

Panel B: Firms Appearing on Both Reports

	2013/2014 Report			2014/2015 Report			
Variable	**N**	**Mean**	**Median**	**N**	**Mean**	**Median**	**Diff. in Mean p value**
Gross Income	1,373	1140.19	317.62	1,373	1144.06	327.53	0.9796
Taxable Income	988	158.35	22.83	976	161.60	22.44	0.9345
Tax Payable	884	44.57	6.09	866	45.05	6.38	0.9670

TABLE 12
Regression Analysis of Change in Tax Avoidance

This table presents the results of estimating equation (7) over the years 2010 to 2015:

$$ETR_{i,t} = \alpha + \beta_1 POST_{i,t} + \beta_2 Size_{i,t} + \beta_3 R\&D_{i,t} + \beta_4 PPE_{i,t} + \beta_5 ROA_{i,t} + \varepsilon_{,it}.$$

The sample includes firms appearing on the ATO's 2013/2014 Tax Transparency Report that are matched to financial information from Computat Global. *ETR* is total income tax expense divided by pre-tax income adjusted for special items (TXT/(PI-SPI)), where negative values and values greater than 1 are reset to 0 and 1, respectively. *CETR* is cash taxes paid divided by pre-tax income adjusted for special items (TXPD/(PI-SPI)), where negative values and values greater than 1 are reset to 0 and 1, respectively. *Size* is the natural logarithm of lagged total assets ($\log(AT_{t-1})$), *R&D* is research and development expenditures scaled by lagged total assets (XRD/AT_{t-1}), *PPE* is property, plant, and equipment scaled by lagged total assets (PPE/AT_{t-1}), and *ROA* is return on assets calculated as pre-tax income divided by lagged total assets (PI/AT_{t-1}). Continuous variables are winsorized at the 1st and 99th percentiles.

Variable	**ETR**		**CETR**	
	Coefficient	t-stat	Coefficient	t-stat
POST	0.0009	0.1000	-0.0129	-0.9300
Size	0.0024	0.8600	-0.0021	-0.4900
R&D	-0.4359	-1.4600	-0.6264 *	-1.7300
PPE	-0.0030	-0.2400	-0.0230	-1.2000
ROA	0.0522 ***	3.1500	0.1737 ***	4.2000
Adjusted R^2	0.0043		0.0014	
Obs.	1,710		1,228	

Appendices

Appendix A: Example of Tax Information Reported in Australian Financial Statements

Income Statement

Year Ended 30 June 2014

	Note	June 2014 A$m
Revenue	2	13,935.9
Cost of sales		(11,760.7)
Gross profit		**2,175.2**
Other income	3	189.9
Other expenses		(1,319.3)
Results from operating activities		**1,045.8**
Finance revenue	5	37.2
Finance costs	5	(143.7)
Net finance costs		**(106.5)**
Share of profit of equity accounted investments	12	59.3
Profit before Tax		**998.6**
Income tax expense	6	(175.3)
Profit after Tax		**823.3**

Statement of Cash Flows

Year Ended 30 June 2014

	Note	June 2014 A$m
Cash Flows from Operating Activities		
Cash receipts in the course of operations		14,126.7
Cash payments in the course of operations		(13,117.3)
Interest received		23.7
Interest paid		(149.6)
Dividends/distributions received		65.1
Income tax (paid)/refunded in respect of operations		(126.2)
Net cash provided by operating activities	29	**822.4**

Financial Disclosure	June 2014 A$m
a. Income Tax Expense	
Recognised in the Income Statement	
Current Tax Expense/(Benefit)	
Current year	116.1
Adjustments for prior years	(6.9)
Benefits of tax losses recognised	(13.5)
	95.7
Deferred Tax Expense	
Origination and reversal of temporary differences	99.7
Temporary differences recognised/recovered	(27.9)
Net tax losses recognised	(20.6)
Change in tax rate	2.9
Adjustments for prior years	25.5
	79.6
Total income tax expense	**175.3**
Reconciliation of Effective Tax Rate	
Profit before Tax	998.6
Income tax using the domestic corporation tax rate 30%	**299.6**
Adjustments for prior year tax claim	(6.9)
Non assessable and exempt income	(60.1)
Non allowable expenses	31.3
Net recognition of tax losses through income tax expense	(4.6)
Temporary differences recognised through income tax expense	(27.9)
Utilisation of capital losses on disposal of assets	(10.6)
Effect of tax rates in foreign jurisdictions	(40.4)
Other	(5.1)
Income tax expense	**175.3**
Deferred Tax Recognised Directly in Equity	
Relating to:	
Equity issue costs	1.5
Fair value revaluation reserve	3.4
Defined benefit plans remeasurements	(4.5)
Non controlling interest acquisition reserve	3.0
Total deferred tax benefit recognised directly in equity	**3.4**

b. Tax Effect Relating to Other Comprehensive Income

	JUNE 2014		
	Before Tax A$m	Tax (Expense)/ Benefit A$m	Net of Tax A$m
Movements in fair value revaluation reserve	7.6	(3.4)	4.2
Movements in hedging reserve	(12.5)		(12.5)
Movements in foreign currency translation reserve	57.6		57.6
Movements in non controlling interest acquisition reserve	(1.7)	(0.3)	(2.0)
Movements in defined benefit plan remeasurements in retained earnings	(30.1)	4.5	(25.6)
Total other comprehensive income net of tax	**20.9**	**0.8**	**21.7**

c. Deferred Tax Assets and Liabilities

Recognised Deferred Tax Assets and Liabilities

Financial Disclosure	JUNE 2014	
	Assets A$m	Liabilities A$m
Deferred tax assets and liabilities are attributable to the following:		
Loans and receivables	8.1	(150.8)
Inventories	92.4	(188.0)
Other financial assets	0.6	(70.5)
Other assets	0.3	(2.9)
Equity accounted investments	4.5	(41.9)
Investment properties		(109.8)
Property, plant and equipment	22.5	(13.6)
Intangible assets		(1.8)
Net defined benefit plans	26.4	(14.5)
Trade and other payables	127.8	(0.1)
Resident liabilities	138.9	
Provisions	93.1	
Borrowings and financing arrangements	0.6	(0.8)
Other financial liabilities	1.7	
Unused revenue tax losses recognised	242.9	
Unused capital tax losses recognised	12.9	
Items with a tax base but no carrying value	24.4	(7.8)
Total deferred tax assets/(liabilities)	**797.1**	**(602.5)**
Deferred tax set off	(545.8)	545.8
Net deferred tax assets/(liabilities)	**251.3**	**(56.7)**

Movement in temporary differences during the financial year: June 2014	1 July 2013 A$m	Recognised in Income A$m	Recognised in Equity A$m	Other/ Foreign Exchange A$m	30 June 2014 A$m
Loans and receivables	(146.2)	3.4		0.1	(142.7)
Inventories	(107.4)	10.0		1.8	(95.6)
Other financial assets	(53.5)	(13.3)	(3.4)	0.3	(69.9)
Other assets	(0.3)	0.1		(2.4)	(2.6)
Equity accounted investments	(21.4)	(16.1)		0.1	(37.4)
Investment properties	(66.2)	(31.5)		(12.1)	(109.8)
Property, plant and equipment	7.0	0.5		1.4	8.9
Intangible assets	(0.6)	(1.2)			(1.8)
Net defined benefit plans	2.9	4.1	4.5	0.4	11.9
Trade and other payables	128.6	(1.9)		1.0	127.7
Resident liabilities	152.7	(43.8)		30.0	138.9
Provisions	97.1	(4.3)		0.3	93.1
Borrowings and financing arrangements	0.6	(0.8)			(0.2)
Other financial liabilities	6.3	(4.1)		(0.5)	1.7
Unused revenue tax losses recognised	133.4	20.6		88.9	242.9
Unused capital tax losses recognised	10.4	2.6		(0.1)	12.9
Items with a tax base but no carrying value	24.8	(3.9)	(4.5)	0.2	16.6
Total deferred tax assets/(liabilities)	**168.2**	**(79.6)**	**(3.4)**	**109.4**	**194.6**

June 2013	1 July 2012[1] A$m	Recognised in Income A$m	Recognised in Equity A$m	Other/ Foreign Exchange A$m	30 June 2013[1] A$m
Loans and receivables	(3.5)	(145.3)		2.6	(146.2)
Inventories	(291.6)	199.2		(15.0)	(107.4)
Other financial assets	(17.6)	(23.5)	(10.0)	(2.4)	(53.5)
Other assets	(1.0)	0.7			(0.3)
Equity accounted investments	(17.3)	(5.5)		1.4	(21.4)
Investment properties	(41.8)	(24.4)			(66.2)
Property, plant and equipment	9.5	(2.9)		0.4	7.0
Intangible assets	(7.9)	7.3			(0.6)
Net defined benefit plans	13.2	(2.0)	(8.0)	(0.3)	2.9
Trade and other payables	231.5	(101.1)		(1.8)	128.6
Resident liabilities	84.9	(6.7)		74.5	152.7
Provisions	98.1	0.5		(1.5)	97.1
Borrowings and financing arrangements		0.6			0.6
Other financial liabilities	3.7	(0.7)		3.3	6.3
Unused revenue tax losses recognised	37.6	3.2		92.6	133.4
Unused capital tax losses recognised		10.4			10.4
Items with a tax base but no carrying value	14.3	(7.0)	17.6	(0.1)	24.8
Total deferred tax assets/(liabilities)	**112.1**	**(97.2)**	**(0.4)**	**153.7**	**168.2**

c. Deferred Tax Assets and Liabilities continued

Unrecognised Deferred Tax Assets

	June 2014 A$m	June 2013 A$m
Deferred tax assets have not been recognised in respect of the following items:		
Capital losses	41.9	46.7
Revenue losses	35.3	57.5
Deductible temporary differences	74.4	94.3
Total unrecognised deferred tax assets	**151.6**	**198.5**

Of the unrecognised deferred tax asset of A$151.6 million, only A$11.6 million expires by 2034. The remainder of the unrecognised deferred tax asset has no expiry date.

Appendix B: Dividend Imputation Example

Company ABC earns $100 of pre-tax earnings and pays corporate income tax of $25 during the year. The company decides it will pay a dividend equal to 60 percent of after-tax earnings. The calculation of the allocable franking credits is as follows:

Pre-tax earnings	$100
Corporate income taxes paid	($25)
After-tax earnings	$75
Dividend amount (60%)	$45

Maximum franking credit allowed:

Amount of frankable distribution x [Corporate tax rate ÷ (100% - Corporate tax rate)]

Franking credit = $45 x [30% ÷ 70%] = $19.29

Assuming a single shareholder with a 30% marginal tax rate, the shareholder would recognize taxable income of $64.29 (dividend of $45 plus gross-up of taxes of $19.29) and owe personal income tax payable of $19.29. However, the shareholder's tax liability is entirely offset by the imputation credit received of $19.29, and he would not be required to pay any additional shareholder-level taxes.

The remaining balance in the franking account is $25 - $19.29 = $5.71 on undistributed earnings of $30.

Appendix C: BHP Billiton Response in the Media

BHP is proud to pay its fair share of local taxes
Peter Beaven, Chief Financial Officer
18 August 2015

Our tax system continues to ignite debate among individuals, politicians, organisations and businesses – including the contribution from resource and other sectors to Australia's bottom line.

As one of the largest taxpayers in Australia for many years, we welcome this debate.

We are proud to support the economy through royalties, payments to suppliers and wages for more 20,000 Australians who work for us in places as diverse as the Pilbara in Western Australia, the Bowen Basin in Queensland and Melbourne.

In the 2014 financial year this contribution, including tax, was around $27 billion.

This month we celebrate the 130th anniversary of the incorporation of BHP. As the world has advanced, our company has changed and become increasingly global. Like many large Australian companies today, BHP Billiton generates profits from creating a value chain.

For us this includes exploration, production, processing and the sale and freight of products from Australia to markets all over the world, crossing a number of borders on the way.

Just as our company has evolved over the past 130 years, so have global tax rules. Income wasn't even taxed in Australia 130 years ago. Today there are sophisticated tax rules and Australia has some of the most stringent rules in the world to ensure business pays its fair share.

As a major global business, we also engage in policy discussions with major economies to make tax rules against profit shifting even more effective. In the tax contribution debate, there has been some discussion on why BHP Billiton has a presence in Singapore with allegations from some that we set up our marketing operations to avoid paying tax in Australia. This isn't true.

We locate our management and people as close as possible to our operations, plants, ports – and customers.

For example, our Iron Ore division is managed from Perth and our marketing operations are predominantly based in Singapore, one of the great global trading hubs in the world, close to the majority of our customers.

Our marketing organisation was not set up to avoid Australian tax. We have hundreds of employees in Singapore who perform critical functions – customer sales, freight, credit risk and market forecasting for our commodities including iron ore.

Our customers are in Asia – so it makes sense for our marketing team to be based in Singapore supported by regional offices in key customer markets like China, Japan and India.

The vast bulk of our profits come from the production and processing of Australian commodities in Australia and this is all subject to Australian tax.

What's more, the profits we make on our marketing activities in Singapore are taxed back in Australia, through the Controlled Foreign Company rules.

Building on our long-running Sustainability Report, later this year we will also voluntarily publish how much tax we pay for each of our mining projects around the world.

This reflects our commitment to paying our fair share.

Appendix D: Variable Definitions

This appendix details calculations for each variable in my empirical analysis. I obtain all data items from Compustat Global unless otherwise noted. I include Compustat item names in parentheses.

Market Reaction to Legislation Passage

ETR	Total income tax expense divided by pre-tax income adjusted for special items (TXT/(PI-SPI)); negative values and values greater than 1 are reset to 0 and 1, respectively
PctForeign	Total percentage ownership by non-Australian shareholders collected from Bureau van Dijk's Orbis database
PctIndSuper	Total percentage ownership by Australian individual shareholders and superannuation funds collected from Bureau van Dijk's Orbis database
VOL	Standard deviation of *ETR* over a 5-year period
Media	Indicator variable set equal to one for companies that are the subject of at least one article in a top-ten Australian newspaper critical of corporate taxes in the prior 3-year period and zero otherwise
R&D	R&D expense (XRD) scaled by total assets (AT). Missing values of XRD are set equal to zero
LogAnalyst	Natural logarithm of the number of analysts issuing one-year-ahead earnings-per-share forecasts (from IBES)
InstOwn	Total institutional ownership ratio in percentage of market capitalization (from FactSet). Missing values are set equal to zero
BTD	Pre-tax income less imputed taxable income (current tax expense TXC divided by 30%) scaled by total assets (AT)
Retail	Indicator variable set equal to one for companies in SIC industry codes 5000-5999, 7200-7299, 7600-7699 following Fama-French 12 industry classifications

Variables from ATO Transparency Report

Gross Income	Total income as reported on the Company Tax Return (item 6(S))
Taxable Income	Taxable income as reported on the Company Tax Return (item 7(T))
Tax Payable	Tax payable as reported on the Company Tax Return

Market Reaction to ATO Transparency Report

TaxSurprise_TI	*Taxable Income* from ATO Transparency Report less imputed taxable income (TXC divided by 30%)
TaxSurprise_TXPD	*Tax Payable* from ATO Transparency Report less cash taxes paid (TXPD)
Total Assets	AT
Total Revenue	REVT
Pre-Tax Income	PI
Return on Assets	PI/AT

Change in Tax Avoidance

ETR	Total income tax expense divided by pre-tax income adjusted for special items (TXT/(PI-SPI)); negative values and values greater than 1 are reset to 0 and 1, respectively
CETR	Cash taxes paid divided by pre-tax income adjusted for special items (TXPD/(PI-SPI)); negative values and values greater than 1 are reset to 0 and 1, respectively
POST	Indicator variable set equal to one for years subsequent to the effective date of the tax transparency bill and zero otherwise
Size	Natural logarithm of lagged total assets ($\log(AT_{t-1})$)
R&D	R&D expense scaled by lagged total assets (XRD/AT_{t-1}). Missing values of XRD are set equal to zero
PPE	Property, plant, and equipment scaled by lagged total assets ($PPENT/AT_{t-1}$)
ROA	Return on assets calculated as pre-tax income divided by beginning of year total assets (PI/AT_{t-1})

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