

Public Tax-Return Disclosure

April 2017

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Abstract. We investigate the effect of public disclosure of information from corporate tax returns filed in Australia on consumers, investors, and the corporations themselves that were subject to disclosure. Supporters of more disclosure argue that increased transparency will improve tax compliance, while opponents argue that it will divulge sensitive information that is, in many cases, misunderstood. Our results show that large private companies are likely to experience consumer backlash and are also, perhaps as a consequence, more likely to act to avoid disclosure. We also fail to detect any material increase in tax payments, one objective of legislating the disclosure regime. Finally, we find that investors react negatively to anticipated and actual disclosure of tax information, most likely due to anticipated policy backlash than the revelation of negative tax information. These findings are important for both managers and policymakers as the trend towards increased tax disclosure continues to rise globally.

We thank the Office of Tax Policy Research at the University of Michigan and the Tuck School of Business for financial support to administer our survey through TurkPrime and to purchase YouGov data for our analyses of consumer sentiment in Australia. We also thank the Australian Taxation Office (ATO) for providing anonymous and aggregated tax data that enabled much of the analysis contained within this report to be undertaken; the views expressed here are those of the authors, and not necessarily the ATO. We thank for helpful comments: Malcolm Allen, Jeremy Hirschhorn, Tom Neubig, Adam Olson, Terry Shevlin and John Treu, as well as participants in workshops at University of California at Los Angeles, University of Pennsylvania Law School, University of Pennsylvania Wharton School, University of Wisconsin, and participants at the 2016 BYU Accounting Symposium, 2016 NTA Meetings, 2016 Duke/UNC Fall Camp, and the 2016 MaTax Conference.

1. Introduction

The tax affairs of large corporations have recently come under intense scrutiny, and corporate managers are wary of facing the reputational costs associated with facing such scrutiny (Graham, Hanlon, Shevlin and Shroff, 2014). One symptom of this scrutiny has been increasing disclosure requirements. In a recent E&Y survey, approximately 80 percent of tax directors globally report experiencing increased disclosure requirements in the past two years, and virtually none of them expect these requirements to diminish in the future (Ernst & Young 2011). One form of increased disclosure includes putting more information about the firm's tax affairs in the hands of the public. In this paper, we consider the recent case wherein the Australian Taxation Office (ATO) disclosed for the first time items from the tax return, including taxable income and taxes payable, for the tax year ended June 30, 2014 reported by large corporations on their Australian tax returns. We analyze a variety of effects of public disclosure of tax-return data such as changes in consumer sentiment, investor reaction, and responses by the firms subject to the public disclosure mandate.

Policy discussions regarding public disclosure of tax information of large firms have generally proceeded in a near-absence of evidence about the actual impacts of such requirements.¹ For instance, public release of tax data in the form of public country-by-country reporting is a possibility in the U.S. and all European Union member states by 2017 but there is significant disagreement and little empirical evidence on which to base policy choices.² This paper seeks to

¹ Analysis of the Norwegian and Japanese experience with public tax disclosure has provided what up to now is known about its consequences. For instance, some attention has been paid to small firms in Norway and Japan (Bø et al. 2015; Hasegawa et al. 2013) and individuals in Japan (Hasegawa et al. 2013). We discuss the findings below.

² Although country-by-country (CBC) reports may not be part of the tax return per se, these reports will enable taxing authorities to evaluate tax strategies of multinational firms. If released to the public (in whole or in part), these reports will allow citizens to assess how much taxes corporations paid in the countries in which they operate. The data points contained in the CBC reports are similar in scope to the tax return data we examine in this paper. For public disclosure of CBC reporting in the United Kingdom, see

fill that void by examining in detail the consequences of a recently implemented public disclosure of tax-return information. Our results show that large private companies experience only relatively minor consumer backlash, but are nevertheless anxious to avoid disclosure. We fail to detect any material increase in tax payments, often a motivation for introducing such a disclosure regime. Finally, we find a small negative reaction among investors to anticipated and actual disclosure of tax information, most likely due to anticipated backlash, rather than the revelation of negative tax information.

We investigate the public disclosure of tax return information using the recent case of Australia. In 2013, the Australian legislature began debating making public certain tax-return data items that were previously available only to the taxing authority. Required public financial statement information about taxes does not generally provide much insight into the information reported on corporate tax returns, including about the bottom-line tax liability. Moreover, financial information is often consolidated, thus leaving shareholders and the public stymied by opaque international tax practices, which may use a different basis of consolidation than financial reporting. Proponents of public disclosure of tax-return data argue that increasing transparency of tax systems may constrain aggressive tax planning and evasion by shaming companies to pay their “fair share” (Bradbury 2013). Opponents of such disclosure argue that it will not deliver greater understanding to a firm’s stakeholders but will instead create compliance burdens, divulge sensitive information to competitors, generate confusion, and impose risks on business owners (Chartered Accountants Australia and New Zealand 2015; Hurst 2015).

<https://www.theguardian.com/politics/2016/sep/01/mps-back-for-plan-to-force-global-firms-to-publicly-disclose-income-and-tax>. In the United States, see <https://www.sec.gov/news/pressrelease/2016-70.html>. In the European Union see http://ec.europa.eu/finance/company-reporting/country-by-country-reporting/index_en.htm#cbcr-tax.

The debate surrounding Australian tax disclosure and aggressive tax strategies continued, and, in mid-2013, the legislature passed the *Tax Laws Amendment Bill 2013*. The legislation was motivated by “the Government’s broader efforts to maintain the integrity of Australia’s tax base and crack down on profit shifting” with respect to multinational corporations (Bradbury 2013). The law eventually mandated disclosure for foreign-owned firms and Australian public firms with “total income” reported on the Australian company tax return over 100 million AUD, with disclosure on December 17, 2015 for the first year covered by the legislation (2013-2014). Total income is a technical tax term in Australia, and is the sum of 13 different income items on the Australian tax return, including, for example, sales, interest received and dividends received.³ After some legislative twists and turns (discussed later), the same policy went into effect for Australian private firms with total income over 200 million AUD, with disclosure on March 22, 2016 for the first year covered by the legislation.

While there were 1.1 million corporate taxpayers in Australia during the 2013-2014 tax year, the population of 1,859 firms subject to disclosure in the first year of the legislation account for 63 percent of all corporate tax revenue collected by the ATO during this same year. The disclosure of this information generated an outpouring of media attention. Figure 1 graphs the number of media articles discussing taxpayers that “paid no tax”, or the ATO generally, and a sharp surge is apparent on December 17, 2015. Further, many Australians took to social media sites such as Twitter© to voice their dismay at Australian corporations not having paid their “fair share” of taxes. Table 2 documents examples of tweets expressing these concerns.

³ See line 6S here: <https://www.ato.gov.au/uploadedFiles/Content/MEI/downloads/Company-tax-return-2016.pdf>. Its closest analog in the US would likely be line 11 of the 1120, which is also called “total income.” However, in financial accounting terminology, its closest analog would likely be something akin to gross income. To maintain technical accuracy, we use the Australian term “total income” throughout the paper.

Chen (2016) uses the Australian setting to examine whether investors value corporate tax return information and, like us, searches for investor reaction around changes in anticipated and actual disclosures.⁴ While the focus of her study is on investor reaction, legislating public disclosure of tax-return data has several important potential economic effects that are all interconnected. For instance, one cannot fully understand investor reaction without considering consumer reaction. Investors, for example, will try to price consumer responses and firm responses (Hanlon and Slemrod 2009), as well as price relevant information about tax planning in the firms' disclosure that they do not already have from financial statements (Hanlon et al. 2005). Moreover, firms' responses will depend on managers' beliefs about consumer and investor reaction. Firms, for example, may try to avoid disclosure because they fear a consumer response, or they may change their tax behavior as a result of public pressure (Dyreng et al. 2016). We consider each of these effects in our study to provide a more holistic analysis of the impact of increased disclosure of tax return data.

First, we investigate how Australian consumers responded to the disclosed information by analyzing two sources of consumer sentiment data generated from surveys. Our first source is from YouGov, a pollster that regularly asks questions about perceptions of brands. We use these data to search for changes in brand perception of Australian residents following the disclosure on December 17, 2015. We find no evidence of changes in brand perception, reputation of the brand, or general "buzz" about the brand, after the disclosure event, regardless of whether the disclosure reveals no tax paid. One possibility is that the disclosure event does not substantially alter the

⁴ Chen (2016) finds a negative reaction around two early legislative dates, including the April 3, 2013 date that we examine. She finds a positive reaction around two later legislative dates, and no reaction around the actual disclosure date of December 17, 2015. When we condition on the unexpected taxpaying status of the firm, we find a small negative reaction to the actual tax disclosure on December 17, 2015.

transparency of these firms' financial affairs given that many of them are public, and have very large, established brands.⁵

To obtain our second source of consumer sentiment data, we design and administer a survey of Australian consumers surrounding the March 22, 2016, release of tax data for Australian private firms.⁶ We measure consumer sentiment using responses to questions about individual views towards these businesses along five dimensions: overall impression, business practices, firm ethics, tax practices, and negative news. We find evidence of a small decline in consumer sentiment after the disclosure event for firms that are subject to disclosure, unconditional on the content of the disclosure (our sample size is insufficient to estimate these results). This provides empirical support for the notion that tax publicity in general can generate (at least short-term) small amounts of consumer backlash, especially among private firms.

Second, we investigate investor reaction towards public firms impacted by the legislation by examining market returns around a pivotal legislative date, April 3, 2013, and the disclosure event itself, December 17, 2015. On April 3, 2013, discussion of the legislation included for the first time the specific thresholds that would determine which firms would be subject to disclosure. On December 17, 2015, the ATO made available on its website the tax return information for 1,538 of the largest companies operating in Australia, about a third of which are Australian public companies (the balance are foreign-owned). Within the set of firms subject to the legislation, we search for differential market returns across taxpaying and non-taxpaying firms.⁷ On both dates, we find a significantly negative market reaction for expected non-taxpaying firms, though the

⁵ Because of its international focus, brands covered by YouGov tend to be owned by large global public companies.

⁶ We embarked on this project too late to administer a survey surrounding the December 17, 2015 disclosure date.

⁷ Note that for the April 3, 2013 we examine the set of firms that investors expected would be subject to disclosure. In addition, the taxpaying status of firms was an expectation as well at this point.

magnitude of the negative reaction is much larger on April 3, 2013. These results suggest that the market did anticipate a reduction in firm value from consumer or policy backlash arising from a disclosure of no tax paid in Australia.

Finally, we examine the effects of disclosure on firm behavior. First, we examine whether firms sought to avoid disclosure and thereby its anticipated costs. Using aggregated data prepared for us by the ATO, we examine the distribution around the applicable disclosure threshold of total income reported on the Australian company tax return. We find evidence of an increase in the frequency of reported total income just below the disclosure threshold, consistent with some firms adjusting their reported income to fall below the threshold and avoiding disclosure. This pattern is stronger among private companies, and is concentrated among taxpaying firms, suggesting that firms are concerned about divulging sensitive information about income, perhaps more so than tax payments.

Our paper contributes to two streams of literature and has important policy implications for public disclosure of tax information. First, our findings speak to the potential costs and benefits of limited public disclosure of corporate tax return information (Blank 2014; Bø et al. 2015; Hasegawa et al. 2013; Lenter et al. 2003). For instance, we highlight potential issues with interpreting certain tax return information in isolation, such as distinguishing among reasons for low or no tax liability as well as understanding how tax income relates to accounting income. We also highlight how mandatory disclosure can ignite a movement towards legislation that improves tax systems and improves transparency. Indeed, many firms (74 as of March 2017) have adopted a voluntary tax transparency code introduced in May 2016 that requires reconciliation of accounting and tax return information, as well as reasons for low or no tax liabilities, such as tax losses or the utilization of loss carry-forwards.

Second, our paper contributes to the literature on the reputational effects of tax avoidance. Surveys of tax directors have found that one pervasive fear associated with tax planning is garnering negative attention (Graham, Hanlon, Shevlin and Shroff 2014). Relatedly, several studies have searched for evidence on reputational consequences associated with tax planning (Austin and Wilson 2015; De Simone et al. 2016; Dyreng et al. 2016; Gallemore et al. 2014; Graham et al. 2014; Hanlon and Slemrod 2009). The focus of much of this literature is on tax shelters in particular and the evidence ranges from no costs (Gallemore et al. 2014) to moderate costs (Hanlon and Slemrod 2009; Dyreng et al. 2016). Our evidence suggests that there can be costs for firms to disclosure – even when firms are not doing anything wrong. For instance, we find that public disclosure of limited tax information without the necessary context in which to interpret and understand the data likely leaves many firms doing the right thing in a situation where they experience negative consumer, investor, or policy attention. This is important for policymakers to consider in the design of mandatory disclosure regimes.

2. Background on Tax Disclosure

2.1 Examples of Tax Disclosure Policies

Tax disclosure policies take many forms, with mandatory disclosures made privately to the taxing authority, but not released publicly, the most common. Aside from the calculation of taxable income, supplementary disclosure often seeks to improve compliance by increasing transparency – e.g., disclosure of uncertain tax positions (i.e., Schedule UTP in the United States, Form RC312 in Canada, etc.), reconciliations between financial and tax accounting (Schedule M-3 in the U.S.), country-by-country reporting (planned adoption in 85 countries participating in OECD BEPS initiative). Evidence on the effectiveness of these disclosures is mixed, with many mandates being too recent to allow a full analysis. Whether these disclosures improve compliance is yet to be fully

seen, and will depend on the details of the regime. One documented behavioral response is that some firms will find ways to avoid disclosure (Towery 2015), and some disclosure regimes might actually increase tax avoidance behaviors (Henry, Massel and Towery 2016).

Though less common, some countries have introduced public disclosure of information shared between a taxpayer and the taxing authority, such as Sweden, Finland, Iceland, Norway, and Japan. Putting more information in the hands of the public has the potential, among other things, to improve tax compliance by shaming firms that do not pay tax. Bø et al. (2015) explore the effect of public tax disclosure of individual taxpayers in Norway where, beginning in 2001, anyone with access to the Internet could obtain individual information on other Norwegians' income and tax liability. Bø et al. (2015) observe income changes consistent with public disclosure improving compliance. Hasegawa et al. (2013) examine public disclosure in Japan, taking advantage of the fact that disclosure applied only to taxable incomes above 40,000,000 JPY (about 400,000 USD). They find strong evidence, based on bunching of observations right below the disclosure threshold, that taxpayers actively avoided disclosure.

2.2 The Australian Tax Disclosure Policy

Table 1 depicts a timeline of the passage and implementation of Australia's tax disclosure policy. On February 4, 2013, the Australian government announced that they intended to improve corporate tax transparency with some form of public tax disclosure, but with no details provided regarding what that disclosure might be. On April, 3, 2013, details of the intended disclosure regime were announced including items to be disclosed and the threshold above which firms would be subject to disclosure. The formal legislation, consistent with that initially proposed on April 3, 2013, was introduced on May 29, 2013, and on June 29, 2013, the *Tax Laws Amendment (2013 Measures No. 2) Bill 2013* (TLAA) was enacted and applied to tax years ending after July 1, 2013.

Under TLAA, all companies filing a company tax return in Australia with total income of 100 million AUD (about 75 million USD) or more in a year would be subject to the regime, with the ATO releasing its first annual *Corporate Tax Transparency Report* in December of 2015 (herein referred to as the “ATO report” or “report”). The legislation applies to public and private companies, whether Australian- or foreign-owned and discloses total income, taxable income, and tax payable from the company tax return.⁸

There were heated arguments on whether such disclosure was warranted. Some felt firms should disclose the amount of tax they remit and that, absent inappropriate behavior, they should have nothing to fear. Indeed, some noted that “If you’re not doing anything dishonest then you should have no fear of public disclosure (Lanis et al. 2015).” Others pointed out the costs. Some referenced the anticipated media coverage surrounding what is ultimately a complex issue, and feared it would turn into “name and shame reporting” that would be costly for firms as they “seek to mitigate the reputational damage of ill-informed reporting” (Chartered Accountants Australia and New Zealand 2015). Another fear was that disclosure of firms paying little or no tax, in most cases for legitimate reasons, could undermine confidence in the tax system, with individual taxpayers wondering why they paid taxes, while large corporations did not (Chartered Accountants Australia and New Zealand 2015).⁹ Others feared the increased transparency would make Australia a less favorable business environment.

⁸ See <https://www.data.gov.au/dataset/corporate-transparency>. Total income is before deductions and comes from line 6S of the Australian corporate tax return. Australian-owned is defined as a company that is not more than 50 percent owned by a foreign shareholder.

⁹ This issue was also raised by the OECD Base Erosion and Profit Shifting (BEPS) project report: “... if other taxpayers (including ordinary individuals) think that multinational corporations can legally avoid paying income tax it will undermine voluntary compliance by all taxpayers – upon which modern tax administration depends.” (OECD 2013, p. 8).

Private companies argued resolutely against being subject to disclosure. They argued that, because of forgoing the level of transparency required to access public capital markets, the disclosure would be more costly, relative to their public counterparts. Australian-owned private firms argued further that, because their controlling owners were individuals, as opposed to corporations like their foreign-owned counterparts, the costs of disclosure were even greater, as they would involve revealing personal details of their owner's financial situation.¹⁰ Indeed, some argued that the owners of private firms could even face personal abduction once criminals learned of their wealth from the tax reports (Hurst 2015); others treated such fears (and all other arguments against disclosure) with disdain (Knapp 2015).¹¹

In response to these arguments, on June 4, 2015, the Treasury released for public consultation a draft amendment to the legislation that would exempt Australian private companies. The amendment was enacted on November 12, 2015. Reflecting disagreement surrounding the amendment, the exemption was amended on December 3, 2015, to increase the disclosure threshold to 200 million AUD (about 150 million USD) rather than offer a complete exemption. Due to the late nature of the final decision on the amendment, the Commissioner released the first report on December 17, 2015, that included information only on 1,538 Australian public and foreign-owned companies. The March 22, 2016, report included information on 321 Australian private companies.

¹⁰ Indeed, much of the media coverage following the disclosure centered on wealthy Australians who controlled the disclosed private firms. For example, Gina Rinehart, chairman of Hancock Prospecting (a privately owned mineral and exploration company) with estimated personal wealth in 2015 of \$12.3 billion per *Forbes Asia*, was covered extensively. Furthermore, the ATO notes in its tax transparency report that "Some private groups are not consolidated for tax purposes and may channel income to flow-through entities such as trusts and partnerships or have other profit making companies that do not meet the reporting threshold. This can result in tax being paid either by one entity in the group, for the whole group, with others showing nil tax payable, or can result in taxes being ultimately borne by individual beneficiaries or companies below the threshold for inclusion in the report."

¹¹ Such assertions about personal safety also shaped the debate over tax disclosure in Japan and the United States. The Lindbergh kidnapping helped bring down public tax disclosure that existed in the U.S. (Lenter et al. 2003).

2.3. Disclosed Data

Table 3 shows descriptive statistics for the disclosed data in both December (Australian public and foreign-owned) and March (Australian private). We rely on Bureau van Dijk Orbis data to identify Australian public firms because Orbis contains both the Australian Business Number (ABN) included in the ATO report and information about the listing status of firms.¹² The data show that about 36 percent report a zero-tax liability. This statistic featured very prominently in the media with headlines such as “Almost 600 major corporations did not pay tax in 2013-14 financial year, Australian Taxation Office says” and “Tax office reveals list of 98 private companies that paid no tax.” The media does not generally probe into the reasons for a zero-tax liability, instead noting, “The data highlights a number of companies that paid little to no tax, but does not outline how they minimized their tax bill.”¹³ The ATO notes in their report, that 81 percent of no-tax firms experienced losses or used loss carry forwards. Other reasons for a zero tax liability include franking credits on dividends or offsets on foreign income or R&D.

The bottom of Table 3 provides statistics for the tax return data items – total income (on which the disclosure thresholds were defined), taxable income, and tax payable. Total income is highly skewed in the sample with a mean (median) of 1,118 (297) million AUD. The median effective tax rate (ETR) is the statutory tax rate in Australia of 30 percent, with public firms showing the lowest rate among the three groups at 27 percent. Interestingly, the ATO also notes in its report that, even for taxpaying entities, the disclosed data “do not themselves indicate whether an entity is paying a high or low rate of tax. Measuring a company’s ETR requires more information than that included in the report and comparing ETRs across single entities does not

¹² Of the 1,859 firms in the ATO data, we are able to match 1,854 to Orbis.

¹³ See, for example, <http://www.abc.net.au/news/2015-12-17/almost-600-companies-did-not-pay-tax-in-2013-14/7036324>

take into account related-party transactions, the broader economic group, or a number of other factors.” The ATO states that for privacy reasons it cannot release publicly any of the additional information that would be required to evaluate the tax rates of these entities and instead adopted a Voluntary Tax Transparency Code to complement the disclosed data, whereby firms may voluntarily release information to help interested users better interpret the data.¹⁴

3. Consumer Reaction to Tax Disclosure

As the potential costs of disclosure is reputational damage to firms that are subject to disclosure, we investigate consumer reaction to the disclosure. For example, The Group of 100, a government-policy-oriented organization of Australian CFOs, suggested in a letter to the ATO on April 24, 2013 that the disclosure presented “significant risk of reputational damage even for taxpayers with excellent compliance history and a conservative approach to tax risk.” EY opined that the disclosure had “the potential to unfairly tarnish the reputation of Australian businesses in the eyes of the public, even if those entities have good standing and relationships with the ATO and other countries’ revenue authorities.”¹⁵ It is also possible that, if consumers are unaware of how firms were chosen for disclosure (i.e., the legislative total income threshold), that simply being subject to disclosure might cause reputational damage as consumers suspect that the company is under heightened scrutiny, possibly due to suspected wrongdoing. In this case, consumer sentiment could decline regardless of what information is ultimately disclosed.

Whether firms bear reputational costs from engaging in *aggressive* tax avoidance has been examined in prior literature. Hanlon and Slemrod (2009) find that the stock market impounds tax

¹⁴ See <http://taxboard.gov.au/consultation/voluntary-tax-transparency-code/> for the Voluntary Tax Transparency Code.

¹⁵ Both the EY letter and the The Group of 100 letter can be accessed here: <http://www.treasury.gov.au/ConsultationsandReviews/Consultations/2013/Transparency-of-business-tax/Submissions>.

evasion more negatively for consumer-focused firms than for other firms. Gallemore et al. (2014) examines outcomes such as lost sales, increased advertising, and decreased media reputation, resulting from public scrutiny for having engaged in tax shelters. They fail to find evidence that firms bear reputational costs, and that negative capital market reaction to the news reverses within a few weeks of public scrutiny, perhaps because consumers do not react as strongly as anticipated. Austin and Wilson (Austin and Wilson 2015) finds mixed evidence on reputational costs of tax avoidance. Specifically, they find firms with valuable brands are more likely to report higher GAAP ETRs, but not less likely to operate in tax havens.

We analyze data from two measures of consumer sentiment. The first is based on a survey conducted on an ongoing basis by YouGov, an international market research firm. The second is a survey that we designed ourselves and administered through a third party surrounding the March 22, 2016 disclosure for Australian private firms. The YouGov data showed that consumers had noticed an earlier tax-related episode; claims of abusive tax avoidance leveled in 2012 at Starbucks in the U.K.¹⁶ Figure 2 shows that Starbucks's *Buzz Score* (a metric YouGov uses that captures the extent to which respondents have heard anything positive or negative about the brand) declined sharply around three key dates of this episode. By June of 2013, when Starbucks remitted its first payment related to the allegations, the *Buzz Score* had bounced back, but was still short of its value prior to the allegations.

3.1 General Consumer Sentiment

The Starbucks episode suggests that tax disclosure can affect consumer sentiment, at least in the case of a company receiving significant negative political and media attention. But does a disclosure, such as the one in Australia, where objective tax data for 1,859 firms are exposed

¹⁶ For more detail, see <https://yougov.co.uk/news/2013/06/26/starbucks-uphill-battle-resuscitate-its-brand/>.

simultaneously, have the same impact? To answer this question, we first examine changes in consumer sentiment surrounding the December disclosure using YouGov data, which monitors sentiment daily for thousands of well-known brands across the world. YouGov administers online surveys that ask participants if they are familiar with a set of brands, and then asks questions about the set of brands with which they are familiar. We obtained data at the respondent level for 230 brands in Australia from June of 2015 to June of 2016.

While YouGov asks several questions about consumer sentiment, we focus on three constructs we deem to be most relevant to our research questions. Our first variable, *Reputation*, is -1 if the consumer indicated the brand had a negative reputation, 0 if they did not believe it had a negative or positive reputation (but were still aware of the brand), and +1 if the consumer believed the reputation was positive. *Impression* is -1 if the consumer answers that the brand has a negative impression, 0 if they did not have a positive or negative impression, or (but were still aware of the brand), and +1 if the consumer had a positive impression of the brand.¹⁷ *Buzz* is -1 if over the last two weeks the consumer has heard anything negative about the brand, 0 if had heard nothing about the brand, and +1 if had heard something positive about the brand.

We explore several consequences of the disclosure regime on these three measures of consumer sentiment, beginning with the impact of being subject to disclosure:

$$\begin{aligned}
 \textit{YouGov Measure} = & \beta_0 + \beta_1 \textit{Subject to Disclosure} + \beta_2 \textit{Subject to Disclosure} \times \\
 & \textit{December 17, 2015} + \textit{Firm Fixed Effects}
 \end{aligned}
 \tag{1a},$$

where *YouGov Measure* is either *Reputation*, *Impression*, or *Buzz*. As YouGov data capture consumer sentiment daily, *December 17, 2015* is equal to one for December 17, 18 or 19, 2015, and zero otherwise. This allows us to test for any effect on consumer sentiment immediately after

¹⁷ Some of the YouGov measures are not necessarily independent of each other. For example, across the population of YouGov data, *Reputation* and *Impression* have a correlation of 50.06%.

the disclosure. *Subject to Disclosure* is equal to one if the firm was subject to disclosure, and zero otherwise. As a single survey respondent provides responses for many different brands, we cluster standard errors at the respondent level, and include respondent and day fixed effects. We estimate this regression on the panel of brands covered by YouGov for December 2015, retaining brand/day observations only when at least 30 individuals answered the question, for November and December of 2015, and January of 2016.¹⁸

Table 4 Panel A displays the descriptive statistics for the sample used to estimate model (1a). There are 218,087 survey respondent/day/brand observations. Table 4 Panel B tabulates the results of estimating model (1a). Across all models, the positive and significant coefficients on *Subject to Disclosure* suggests the brands of firms that were disclosed had a higher mean value of all three dependent variables, consistent with disclosure being based on the volume of sales and brands of companies with more sales having higher reputations. Across all three measures, in Columns 1, 2 and 3, for *Reputation*, *Impression*, or *Buzz*, we estimate a value of β_2 that is not statistically different from zero at any conventional level, consistent with disclosure not meaningfully changing public perception for the average firm subject to disclosure.

Next, we examine the effect on sentiment towards firms reported as paying no tax. As we only know whether a firm paid no tax if the firm was disclosed, the sample for this test is constrained to firms for which *Subject to Disclosure* equals one. We alter model (1a) as follows:

$$\begin{aligned} \text{YouGov Measure} = & \beta_0 + \beta_1 \text{Paid No Tax} + \beta_2 \text{Paid No Tax} X \\ & \text{December 17, 2015} + \text{Firm Fixed Effects} \end{aligned} \quad (1b),$$

where *Paid No Tax* is equal to one if the brand belongs to a firm that was disclosed in the ATO data as having paid no tax, and zero otherwise. We tabulate results from model (1b) in columns 4

¹⁸ Our inference is unchanged if we use all the time-series of data we have, or only the month of December.

through 6 of Table 4 Panel B. Across all three dependent variables, *Reputation*, *Impression* and *Buzz*, the coefficients are small in magnitude and statistically indistinguishable from zero. Thus, we fail to document a significant consumer response to being disclosed as paying no tax.

Finally, we examine whether media coverage leads consumers to have systematically different reactions to the disclosure. Like the above, we alter model (1a) as follows:

$$\begin{aligned} \text{YouGov Measure} = & \beta_0 + \beta_1 \text{Covered by Media} + \beta_2 \text{Covered by Media} \times \\ & \text{December 17, 2015} + \text{Firm Fixed Effects} \end{aligned} \quad (1c),$$

where *Covered by Media* is equal to one if the firm was covered negatively in the major Australian media, and zero otherwise.¹⁹ We tabulate results from model (1c) in columns 7 through 9 of Table 4 Panel B. In Column 7, we find a small and marginally significant increase in *Reputation*. In Columns 8 and 9 we find no differential response to the disclosure for either *Impression* or *Buzz* for firms that experienced media coverage. That we obtain no result in Column 9, where firms literally received more *Buzz* (having been covered in the media, if observed by the survey participant, should elicit a higher value of *Buzz*) suggests that the increase in media attention we document in Figure 1 did not register with the average Australian.

Several factors may be relevant here. It could be that, although the average consumer is not affected by these tax events, enough consumers are affected to concern firms. It may be the case that for the large, influential brands that YouGov covers, public perception is not easily shaken by tax disclosure. Finally, it may be the case that for some firms, especially the large, multinational firms that YouGov covers, there was already a widespread belief that these firms did not pay their

¹⁹ Specifically, we search Factiva, in the geographic region of Australia, on December 17th and 18th, for news type equal to “Corporate/Industrial News”, “Political/General News”, or “Selection of Top Stories/Trends/Analysis,” in the top of highest circulating newspapers (*Herald-Sun*, *Daily Telegraph*, *Courier Mail*, *The Sydney Morning Herald*, and *The West Australian*), plus the Australian Broadcast Corporation, for the search string (ATO OR “paid no tax”). We then read all the resulting articles and recorded the names of firms/brands we judged to have received negative coverage in the media.

“fair share” of taxes, and thus the disclosure did not constitute “new news.” Indeed, it was widespread public outrage of aggressive tax planning by multinationals that provided the political impetus to pass the disclosure legislation in the first place.

3.2 Tax-Specific Consumer Sentiment

While the YouGov survey results fail to find a change in sentiment, these surveys did not include questions specific to tax compliance and did not mention the possibility of a scandal. The YouGov surveys also captured only a handful of brands owned by Australian private firms. To obtain additional evidence regarding consumer responses, we designed and administered a survey in Australia through TurkPrime, Amazon’s online platform, surrounding the March 22, 2016 disclosure to examine changes in sentiment in Australian private firms.²⁰ To measure consumer sentiment, we asked Australians about their impression of 30 firms just before and after the disclosure. The survey was administered on five days, two prior to the March 22 disclosure (March 17 and March 20) and three after (March 23, March 27, April 21). For each survey date, TurkPrime ensured a minimum of 1,400 respondents per every one or two days (e.g., March 17 or 18, March 20 or 21). Thus, the number of responses per firm varies depending on the level of familiarity respondents have with that firm and whether, conditional upon being familiar with that firm, they were willing to answer all the questions. No respondent could participate more than once.

TurkPrime, the survey platform we contracted with to conduct our survey, guarantees its customers that they survey panel, which are all Australian residents, are representative of the general Australian population. From what we observe, their attempts were successful. Survey respondents report some demographic information on their survey, and provide a range of income,

²⁰ We embarked on this project too late to administer a survey around the December 17, 2015 disclosure asking specific questions about ethics, taxes, or scandals.

a range of age, and their gender. According to the Australia Bureau of Statistics, 49.7% of Australian's are male.²¹ In our sample, 49.5% are male. Using the midpoint of a range for age (e.g., respondents who answered they are between 20 and 29 are assumed to be 25), the average age of our respondents is 36, whereas the median age in Australia is 37.4. Finally, assuming incomes in a range are equal to the range's midpoint, our respondents have average income of 75,000 AUD, whereas average income in Australia is 81,920 AUD.²² From all indications, our sample is reflective of the Australian population.

We identified 30 Australian private companies for our survey in two steps. First, we collected information on financial accounting sales from Bureau van Dijk's Orbis database, as the ATO report states that "the total income figure is similar to gross accounting revenue." We selected the largest 100 firms over the 200 million AUD threshold based on accounting data. Note that in Australia, private firms must file audited financial statements with the Australian Securities & Investment Commission under the Corporation Act of 2001. These reports are the primary source of accounting data for Australian companies in Orbis. Second, we ran an initial survey to gauge consumer familiarity with these 100 companies, and chose the 30 firms on the list with the highest level of familiarity among Australians.²³

To obtain the largest number of responses per firm, and like the YouGov survey methodology, the respondent was initially asked the following question about the list of 30 companies: "Here is a list of Australian companies. Which of these companies are you generally familiar with? (Highlight all that you know of)" From the subset of companies with which they

²¹ See <http://www.abs.gov.au/ausstats/abs@.nsf/0/151AA7593B394934CA2573210018DA4A?Opendocument>

²² See, for example, here: <http://www.abs.gov.au/ausstats/abs@.nsf/mf/6302.0>.

²³ The ATO shared the anticipated disclosure date with us, but not the list of companies subject to disclosure.

were familiar, and for a maximum of 15 companies, we then asked, “For those companies you are generally familiar with, answer the following questions:

- (1) In your personal opinion, how favorable is your perception of X?
- (2) Assuming you were in a position to need to do business with a company like X, how likely is it that you would do business with X, instead of one of its competitors?
- (3) How ethical do you think X is?
- (4) Do you feel that X pays as much in taxes as it should?
- (5) Have you heard of any recent scandals involving X?”

We measure *General Perception*, *Willing to do Business*, *Ethical Perception*, and *Pays Sufficient Tax* along a seven-point Likert scale according to how respondents answered questions (1) through (4), respectively. A response of one indicates “Not Favorable”, “Not Likely”, “Not Ethical”, or “No” while a response of seven indicates “Very Favorable”, “Very Likely” “Very Ethical” or “Yes” depending on the question being asked. We measure *Heard of Scandal* as an indicator variable equal to one if the respondent indicates that they have heard of a recent scandal involving the company, and zero otherwise. We designed our survey to obtain responses for 30 of the largest Australian private firms that would be subject to disclosure. However, only 6 of the 30 firms were ultimately subject to disclosure on March 22, which constrains our empirical tests (described below).²⁴ Notwithstanding these constraints, with our survey data, we explore two

²⁴ There are two, not mutually exclusive, explanations for our low “hit rate.” First, private firms had a heightened ability to avoid disclosure. Second, total income, the tax return number on which the disclosure threshold was based, and accounting revenue, are sometimes very different. The ATO discusses both issues in its report, noting that many private companies, who may be expected to feature in the data, do not appear. Financial accounting groups will often include entities outside of the Australian tax group, and many private groups are not consolidated for tax purposes and may channel income to flow-through entities such as trusts and partnerships or have other profit making companies that do not meet the reporting threshold. The ATO reports that the 321 companies subject to disclosure are linked to private groups that include approximately 11,000 entities. Many other reasons why tax total income and accounting revenue will differ are included in the report (these explanations were not available in March, but were added several months later).

consequences of disclosure on our measures of consumer sentiment, beginning with the impact of being subject to disclosure:²⁵

$$\begin{aligned} \textit{Sentiment Measure} = & \beta_0 + \beta_1 \textit{March 22, 2016} + \beta_2 \textit{Subject to Disclosure} \\ & + \beta_3 \textit{March 22, 2016} \times \textit{Subject to Disclosure} \end{aligned} \quad (2),$$

where *Sentiment Measure* is either *General Perception*, *Willing to do Business*, *Ethical Perception*, *Pay Sufficient Tax*, or *Heard of Scandal*. The variable *March 22, 2016* is equal to one for survey responses collected after the March 22, 2016 disclosure, and zero otherwise. *Subject to Disclosure* is equal to one if the firm's tax return data was included in the March 22, 2016 disclosure, and zero otherwise. As respondents respond for multiple firms, and responses are collected across multiple dates, the assumption of independence is tenuous within respondent and within firm. Thus, we cluster standard errors by firm and respondent.

We also examine the effect on sentiment towards firms revealed as paying no tax, and whether this effect varies with media coverage:

$$\begin{aligned} \textit{Sentiment Measure} = & \beta_0 + \beta_1 \textit{Covered by Media} + \beta_2 \textit{Paid No Tax} \\ & + \beta_3 \textit{Covered in the Media} \times \textit{Paid No Tax} \end{aligned} \quad (3),$$

where *Sentiment Measure* is as defined in model (2). *Covered by Media* is equal to one if the firm was highlighted in an Australian news source based on a search of all Factiva articles on March 22, 2016 for either "ATO" or "tax transparency", and zero otherwise. *Paid No Tax* is equal to one if the ATO disclosure reveals a zero-tax payable for the firm, and zero otherwise. Again, we cluster standard errors by firm and respondent.

Of our total sample of 30 firms, those used to estimate Equation (2) (14 firms) differs from those used to estimate Equation (3) (12 firms). Because only 6 firms from our initial set of 30 were

²⁵ The specification here varies from the model used with the YouGov data. YouGov has daily data on over 200 brands, allowing for an extensive set of date and brand fixed effects. Due to limitations of our surveying procedure, our sample was more modest, and a different model is required.

subject to disclosure, we maximized the inferences we could draw from our post-disclosure surveys by changing the sample included in the survey as follows. First, from our initial 30 firms, we dropped 12 firms not subject to disclosure and that had the lowest level of respondent familiarity. Second, we replaced the dropped firms with 12 new firms subject to disclosure that captured variation in our variables of interest – i.e., media coverage and a zero-tax liability. Specifically, we choose the largest 12 firms (based on total income) subject to disclosure - 6 covered in the media (3 tax and 3 no-tax) and 6 not covered in the media (3 tax and 3 no-tax). This left us with 14 firms for which we have sentiment data both before and after the disclosure, and 12 firms for which we have sentiment data only after the disclosure.²⁶

Table 5 Panel A displays the descriptive statistics for the samples used to estimate models (2) and (3). We report the results of estimating model (2) in columns 1 through 5 of Table 5 Panel B. The estimated coefficient on the interaction term is negative and statistically significant in columns 1 through 4, suggesting that, on average, consumer sentiment declined on the disclosure date for firms that are subject to disclosure. In terms of magnitude, results on *Pay Sufficient Tax* are the largest. The coefficient of -0.146 suggests that this sentiment measure declines by 0.146 (compared to one standard deviation of 1.866) more after the disclosure event, and only for firms that are subject to disclosure. That is, regardless of the content of the disclosure, consumer sentiment towards Australian private firms declined. This result is consistent with consumers being uninformed about why some firms are subject to disclosure, and believing that these firms are subject to increased scrutiny perhaps because of suspected wrongdoing. In column 5, we see that whether the respondent has heard of the firm being involved in a scandal increases in frequency

²⁶ We are not able to estimate regressions that interact *Paid No Tax* or *Covered by Media* with *Subject to Disclosure* as we did with the YouGov data because only 1 of the 6 firms subject to disclosure paid no tax.

after the disclosure, but—surprisingly—not more so for firms that are subject to disclosure. This suggests that public discourse surrounding the disclosure may have led consumers to associate companies more generally with a scandal, rather than disclosed firms specifically.

We report the results of estimating model (3) in columns 6 through 10. The results suggest that media coverage of the disclosure reduces respondents' ethical perception of firms that are subject to disclosure, but has no effect on any of the other sentiment measures. In column 10, we find that media coverage has no impact on whether the respondent has heard of the firm being involved in a scandal. This suggests that consumers learned about the disclosure from other sources, such as social media or blogs. Finally, we find no significant effect on consumer sentiment of Australian private firms that are disclosed as not paying tax. Overall, these tests suggest that simply being subject to disclosure negatively affected consumer sentiment regardless of the information that was disclosed. We conjecture that this occurred because the public dialogue surrounding the disclosure was difficult for most people to draw clear conclusions from.

4. Investor Response to Tax Disclosure

We now examine to what extent the disclosure legislation was perceived by capital markets as having any implications for firm value by studying stock returns in the three-day window surrounding two key dates. The first is a key legislative event—April 3, 2013, leading up to the disclosure event. Although the Australian government issued a press release on February 4, 2013 suggesting that it was considering proposals to mandate public disclosure of tax information, at that time they did not provide any information regarding which firms would be subject to disclosure. On April 3 specific income thresholds were proposed, and it was these thresholds that were ultimately included in the final legislation. The reaction on April 3 represents the market's prediction not only about which firms would ultimately be subject to disclosure, but also the

content of the disclosure, consumer reaction to the disclosure, firm responses to the disclosure, and potential policy backlash from the disclosure. The second is the disclosure event for public firms—December 17, 2015. The reaction on December 17 represents the response to actual information about a known set of firms, but still with some uncertainty regarding the longer-term implications of the disclosure.

4.1 Market Reaction Tests around the Legislative Date of April 3, 2013

This section explores the investor response surrounding the key legislative date of April 3, 2013 to the anticipated costs associated with the disclosure revealing that certain Australian public firms paid no tax. The naïve test would be to examine whether firms most likely subject to disclosure had different returns than other firms on April 3, 2013. While this would be informative, the test is not well identified.²⁷ As the disclosure threshold is based on total income, which is highly correlated with firm size, any economy-wide factor that affected large firms differently from small firms could spuriously manifest on the date of the disclosure.²⁸ To avoid this challenge, we use a sample of firms that are likely to be subject to disclosure, and examine whether firms most likely to be disclosed as paying no tax had a negative market response. Unlike the disclosure threshold, paying no taxes is relatively uncorrelated with firm size, and seems less likely to be correlated with general market conditions.²⁹

For these tests, we use financial accounting data as a proxy for the set of information used by investors to both predict which firms would be subject to disclosure (we use reported sales in 2012) and predict whether the disclosure would reveal a zero-tax liability (we use reported income

²⁷ This specification generates similar results—there is a negative market response for disclosed firms on April 3.

²⁸ One potential way to help alleviate this concern is to linearly control for size, and analyze only firms of a size around the disclosure threshold. These methods produce similar results as what we report.

²⁹ That *Paid No Tax* is generally uncorrelated with market returns is consistent with the coefficient on *Paid No Tax* in Table 6, Panels B and C, column 1 being no different than zero.

tax expense in 2012).³⁰ On April 3, 2013, the investor can only be reacting to anticipated consumer or policy backlash the firm might experience because no incremental tax information has been disclosed at this point. For instance, investors might anticipate that firms revealed as not paying tax in Australia will send a negative signal to consumers, resulting in lower future sales as consumers boycott ‘tax avoiders’. We assume that consumers are uninformed about firms’ taxes prior to the media coverage of the disclosure event—they do not look at tax information in financial statements.

Investors might also anticipate a policy backlash that is harmful to the firm. For instance, the disclosures may feed the political discussion in a way that jeopardizes the viability of certain forms of corporate tax planning, reducing expected future cash flows that result from tax planning. Indeed, the statistics ultimately generated by the disclosure event, that more than one-third of firms remitted no tax, resonated with the Australian public, and is being used as part of the political debate. The media highlighted this fact just after the disclosure event: The West Australian carried a story on December 18, 2015, “Pressure on for company tax reform”, that noted how the disclosure was pressuring the Turnbull government to reform the corporate tax law. Labor unions have referenced the statistic to criticize corporations (International Transport Workers’ Federation 2016; Australian Council of Trade Unions 2016). Tax activist groups have used the statistic to encourage tax reform (GetUp! 2016; Oxfam 2016). The disclosure has been tied to talk of criminalization of some forms of tax planning, including using jail sentences as punishment

³⁰ We focus on zero-tax liability as the content of the disclosure because in many previous situations, including the Starbucks example in the UK, the media has focused on firms that paid zero tax. For example, a typical story headline covering the Starbucks affair in the U.K. read, “Good bean counters? Starbucks has paid no tax in UK since 2009 (Hickman 2012).” The correlation between the disclosed sales in Orbis and the Total Income in the ATO disclosure is 0.977. The correlation between tax expense from Orbis and taxes paid in the ATO data is 0.792.

(Passant 2016). And, perhaps most importantly, the statistics have been referred to in advocating for several pieces of legislation (e.g., Leigh 2016a; Leigh 2016b; Ludwig 2016; Wardell 2016).

We estimate the following regression, restricting the period to March 1 – May 31, 2013:

$$\begin{aligned} \text{Three Day Buy and Hold Return} = & \beta_0 + \beta_1 \text{Paid No Tax} + \beta_2 \text{April 3, 2013} \\ & + \beta_3 \text{Paid No Tax X April 3, 2013} \end{aligned} \quad (4a),$$

where *Three Day Buy and Hold Return* is the three-day buy-and-hold return. *April 3, 2013* is equal to one for April 3, and zero otherwise. *Paid No Tax* is equal to one if the firm had zero tax expense in 2012, and zero otherwise.

We document the results of estimating model (4a) in Table 6, Panel B. In Column 1, *Paid No Tax* is estimated to be no different than zero, consistent with *Paid No Tax* being generally uncorrelated with market movements. *April 3, 2013* is negative, suggesting that relative to other days, April 3 produced lower stock returns. This may be a manifestation of investors' general distaste for the legislation or of some other economy-wide factor affecting larger firms. Finally, the interaction of *Paid No Tax* and *April 3, 2013*, is negative, suggesting that firms that had zero tax expense in 2012 had three-day returns surrounding the April 3 event date that were 1.18 percentage points lower than other firms on other dates. This suggests that investors perceived a higher cost of disclosure for the set of firms likely to be disclosed as not paying tax.

To explore the mechanisms through which we obtain this result, we perform several tests that consider cross-sectional variation in anticipated backlash. First, we consider differences between firms' accounting (i.e., economic) and tax (i.e., legal entity) groups. The ATO legislation stipulates that any disclosed tax information will be "at the corporate tax entity level (for income tax purposes), however these entities may represent economic groups, and some economic groups

contain two or more tax groups and other non-consolidated entities within them.”³¹ This means that because of differences in consolidation rules across accounting and tax, accounting groups will often be larger than tax groups represented by the ATO data.

Using the BvD ownership database, we measure the number of legal entities in listed firms’ economic groups. We consider our variable *Number of Entities in Group* as a proxy indicating when the tax group disclosed in the ATO data is most likely to represent fewer entities than is represented by the economic group in which an investor holds shares (and is thus reacting to in our market reaction test). Thus, while the ATO provides actual tax information (as opposed to accounting information about taxes), it does so for a smaller portion of the firm in some cases, and so we expect a muted reaction to the ATO disclosure. However, if the public does not understand the difference between a legal entity and an economic group, then this variable will have no differential effect on returns. In Column 2, we report that the point estimate of the reaction is indeed less negative for larger groups, but the difference is not statistically significant.

Next, again using the BvD ownership data, we examine the *Share of Institutional Shareholders*, a measure of the proportion of the firm’s shareholders that are institutions. We expect that firms with a large institutional shareholder base enjoy more sophisticated investors that are relatively better at evaluating the potential economic effects of the legislation and not being unduly persuaded by negative media attention. For instance, Chen (2016) documents a significant amount of negative media coverage surrounding the April 3, 2013 date, implying that investors

³¹ Per the ATO report: “Entities listed in Report of entity tax information may not be directly comparable to entities reporting as financial groups under corporation law. Many economic groups are made up of multiple entities and lodge returns for each entity in the group, even though they may all be included in one set of financial statements. This can also result in the tax being paid by one entity in the group, for the whole group, and others in the group showing nil tax payable.” See <https://www.ato.gov.au/Business/Large-business/In-detail/Tax-transparency/Tax-transparency--reporting-of-entity-tax-information/>

persuaded by the media might expect greater backlash. If the media has less of an influence on institutional investors, then we anticipate a less negative response by firms with a higher proportion of institutional investors. In Column 3, we document a less negative market response, which is consistent with institutional investors anticipating a relatively lower potential for backlash that could harm the firm.

Finally, we consider firms that are arguably relatively more concerned about brand image. We assume YouGov polls consumers about brands owned by firms that are more concerned about brand image and set *Consumer Oriented* equal to one for firms whose brands are covered by YouGov, and zero otherwise. We expect a more negative response for these firms if investors anticipate backlash to be greater. In Column 4, we instead find a less negative reaction for firms covered by YouGov. It is possible investors anticipate that consumer facing firms will expend more effort bolstering their brands with consumers, addressing any negative impacts from the disclosure through corporate communication, and therefore that these brands are less easily tarnished by the disclosure regime. Indeed, this expectation is consistent with our inability to find any change in consumer sentiment surrounding the actual disclosure for firms covered by YouGov.

4.2 Market Reaction Tests around the Disclosure Date of December 17, 2015

Once the information is disclosed on December 17, 2015, investor reactions could arise from receiving new information about firms' tax planning, or about how the media, consumers and the public respond, which has implications for policy and long-term consumer backlash. Returns surrounding the disclosure event impound a potential revision of beliefs from April 3, 2013. For example, if the market anticipated significantly more negative media attention than was realized, that positive surprise will be impounded in the stock price on December 17, 2015.

The information disclosed on December 17, 2015, also potentially contains a variety of not mutually exclusive signals to the market about firms' tax planning. To the extent that accounting information does not provide an adequate window into Australian companies' tax affairs, the information disclosed in December could contain new information. Taxable income has long been alleged to contain information usable to financial markets, and the revelation of taxable income may result in financial markets changing opinions about firms' values (e.g., Hanlon 2005; Hanlon et al. 2005; Hanlon and Shevlin 2005; Lev and Nissim 2004). Firms with a zero-tax liability in Australia could be perceived as having successfully tax-planned and avoided cash tax payments. Investors interested in after-tax value might appreciate these planning efforts, and consider this information tradable.³² On the other hand, tax planning may be viewed negatively, and if the planning is seen as overly aggressive, investors may perceive that firms willing to be less than forthright with the ATO may also not be forthright with investors (Desai and Dharmapala 2009; Desai and Dharmapala 2006; Hanlon et al. 2014; Kerr 2012).

We estimate the following regression, restricting the sample period to November 1, 2015 – January 31, 2016:

$$\begin{aligned} \text{Three Day Buy and Hold Return} = & \beta_0 + \beta_1 \text{Paid No Tax} + \beta_2 \text{December 17, 2015} \\ & + \beta_3 \text{Paid No Tax X December 17, 2015} \end{aligned} \quad (4b),$$

where *Three Day Buy and Hold Return* is the three-day buy-and-hold return. *December 17, 2015* is equal to one for December 17, and zero otherwise.³³ Here we measure *Paid No Tax* differently

³² Note, though, that all the information revealed on December 17, 2015 was at that point more than one year old (it was a report concerning the tax year July 1, 2013 through June 30, 2014). Thus, it is likely that to the extent investors priced this information, they priced it as a signal of firms' general tax planning, and not as a direct signal regarding firms' current-year tax affairs. In fact, the disclosure data will always be released with a similar lag.

³³ In robustness analysis, we expand the date window, and set the date indicator equal to one for December 16, 17 and 18, and our main result, the negative coefficient in Column 1 of Table 6, Panel C becomes indistinguishable from zero. This could be because increasing the window to include days where investors were not actively pricing the disclosure simply adds noise to the regression result, or could be because of a return reversal as investors decide they overreacted. To test for over reaction, we set the date indicator equal to one for December 21 and 22 (December 19

than in our previous test. In our previous test, we assumed the market already impounded accounting information, and, if a firm had zero or negative tax expense, it would be assumed to disclose a no-tax liability. In the December 17, 2015 tests, we maintain that assumption. Because firms' actual tax liability from the tax return became public on December 17, 2015, we code *Paid No Tax* equal to one if the firm is disclosed as a no-tax firm in the ATO data but had positive tax expense in 2014, so it is a measure of the new information contained in a no-tax disclosure. As in the previous section, we also conduct a variety of cross-sectional tests. We tabulate these results in Table 6, Panel C.

Column 1 documents a small, but statistically significant, negative response to *Paid No Tax*. In contrast to the date of the legislative event, the actual disclosure event appears to have either conveyed a marginal amount of information about firms' tax liabilities or led investors to believe that any consumer or policy backlash would be slightly greater than initially anticipated.³⁴ In Column 2, we fail to find evidence that the *Number of Entities in Group* explains the cross-sectional pattern of returns for firms that were disclosed as not paying tax. This suggests that the average investor may not understand or find it too costly to determine, how the legal entities in the ATO report map into economic groups, and thus ignores this information. In Column 3, we document a negative response to having paid no tax among firms held by a relatively higher proportion of institutions. Because it is unlikely that an institutional investor views a no-tax disclosure as overly aggressive tax avoidance (which might generate a negative reaction), this

and 20 are Saturday and Sunday), and find that the coefficient on December 21 and 22 X Paid No Tax is insignificantly different from zero, failing to support the possibility of a return reversal.

³⁴ As we note in subsequent analysis, the decision to be disclosed is to some extent a firm choice. Further, the decision to pay any tax is also a firm choice, and some firms may have reported very small tax payments to not land on a "paid no tax" list. For example, Unicharm Australasia Holding PTY LTD, a maker of diapers, paid \$3.00 AUD in tax. To avoid estimation problems that firms near the threshold of disclosure cause, we estimate the regressions in Table 6 eliminating the 10 firms closest to the disclosure threshold. Our results are qualitatively unchanged.

result is more consistent with institutional investors revising upward their expectation about potential backlash these no-tax firms might experience. It may also be the case that sophisticated institutional investors were able to take the taxable income data and learn something new about firm profitability, and, for firms that paid no tax, what they learned was negative. In Column 4, the coefficient on the interaction term is negative and significant, suggesting that after the disclosure event, investors expected greater consumer backlash in firms followed by YouGov than originally anticipated. Perhaps there was more negative media attention, less corporate communication surrounding the event, or both, than anticipated.³⁵

5. Analysis of Behavioral Response by Firms

5.1 Escaping Disclosure by Reducing Reported Income

One potential behavioral response by firms potentially subject to disclosure is to reduce reported total income on the tax return so to fall below the threshold, as happened in Japan with smaller businesses (Hasegawa et al, 2013). To examine the distribution of reported total income around the disclosure threshold, we obtain assistance from the ATO, as this analysis requires proprietary tax data that is not accessible to non-ATO researchers. Having assistance from the ATO in creating aggregated data that we can analyze ensures that the threshold for disclosure, line 6S from the Australian Company Tax Return, is the same number used to conduct these analyses. We look for evidence of excess mass in the distribution just below the threshold, consistent with some firms adjusting their reported total income to fall below the threshold and

³⁵ One concern by Australian firms was that firms that validly paid no tax because they had real economically motivated losses would be perceived as avoiding tax. It is difficult to tell from the ATO data which firms paid no tax for valid reasons, and which did not. However, in a sample of only firms that had no taxable income that remitted no tax, we continue to find a small, negative reaction on the date of the disclosure for firms that paid no tax, suggesting that the market punished even those that potentially had valid reasons for paying no tax. We do not conduct this test for our survey-based tests, as we do not believe it is plausible that Australian consumers would differentiate between a firm paying no tax because it has no income, and paying no tax for other reasons.

thereby avoid disclosure. For instance, the income threshold is applied to individual entities, not to economic groups, so income thresholds can be manipulated through complex corporate structures, which the ATO points out are often observed in private companies.³⁶

We examine public firms and private firms separately; with relatively less information already in the public domain (interested parties must pay 40 AUD to get private firms' financials), private companies have stronger incentives to avoid disclosure. Moreover, because their affairs are generally private and they do not face the same capital market pressures, private firms have greater potential to engage in hidden activities to avoid disclosure, such as restructuring mentioned above. The 100 million AUD threshold applies to all companies for these tests.³⁷

Looking at public companies first, as reported in Figure 3 Panel A, the number of firms reporting between AUD 95 million and 100 million of total income jumps from 34 to 54 between 2013 (the year prior to the disclosure) and 2014 (the year of the disclosure), while the number between 100 million and 105 million holds steady, going from 47 to 48. Panel B replicates this graph, using data from private firms. Excess mass just under the disclosure threshold for private firms is even more pronounced than for public firms. Among private firms, the number of firms between 95 and 100 million in total income increases from 42 to 69 between 2013 and 2014, a large increase. In comparison, in the income group 100 to 105 million AUD, the number of firms

³⁶ See, for example, <https://www.ato.gov.au/Business/Large-business/In-detail/Tax-transparency/Corporate-tax-transparency-report-for-the-2013-14-income-year/>.

³⁷ When the legislation was passed on June 29, 2013 for the tax year from July 1, 2013 to June 30, 2014, all companies filing a tax return in Australia with total income of 100 million AUD (about 75 million USD) or more anticipated being subject to disclosure. The legislation originally applied to all companies whether public or private and whether Australian-owned or foreign-owned. Discussion of an exception for Australian-owned private companies began on June 4, 2015. So until that point, all companies believed they were subject to disclosure if over the 100 million AUD threshold. By the time the amendment to subject Australian-owned private companies to a 200 million AUD threshold was passed, they would have already filed the tax return pertaining to the March 22, 2016 disclosure.

declines from 2013 to 2014, from 55 to 48.³⁸ Thus, we observe an increase in the number of firms just below the disclosure threshold, but the increase seems to be larger among private firms. This may be because the methods used to decrease total income are more available to private firms (i.e., the cost of changing income is lower or changing how the group is consolidated), or because the perceived benefit of avoiding disclosure is larger for private firms.

Finally, we also partition firms by those that paid no tax, and those that paid tax, across public and private firms. For each of these categories, and for firms in each Total Income bin, we subtract the number of firms in 2014 from the number of firms in the bin in 2013. The previous two panels document the increase in both public and private firms in the 95 million to 100 million bin. What is notable in Panel C is that the big jump in the 95 million to 100 million bin is almost entirely made up of firms disclosed as having paid tax, across both public and private firms. That taxable firms are trying to avoid disclosure in general implies they are concerned about disclosure of income in Australia rather than just tax payments.

5.2 Changing Taxes Paid

Another possible behavioral response by companies is to alter what will become publicly disclosed (this is, presumably, the *intended* response by the politicians who created the disclosure legislature—to reduce abusive tax avoidance in Australia and thereby collect more tax revenue). For example, some firms may opt to remit some positive amount of tax to avoid the likely headline category of having paid nothing at all. Alternatively, for those firms already remitting a positive

³⁸ While we tabulate only 2013 and 2014 and only certain income groups to make the graph more manageable, the ATO provided us with data from 2011-2014 for 30 different income categories. The average year-to-year change in this time period for these 30 categories is a 7.7% increase for public firms, and the standard deviation of the 90 changes is 0.323. The 58.8% increase in the 95-100 bin, therefore, represents a year-to-year change that is 1.58 standard deviation units from the average change, a sizable increase. For private firms, the mean increase in the 95-100 bin across the four years is 14.2%, and the standard deviation is 0.408, meaning that the increase from 42 to 69 represents a 50.1% change, 1.22 standard deviation units over the mean.

tax liability, they may increase taxes paid because of the more transparent environment. Again, with assistance from the ATO, we examine this potential response of firms near the 100 million AUD disclosure threshold and, as in our previous tests, look for evidence of a differential change in behavior of firms just below versus above the threshold.

In Figure 4, Panel A, we examine the percentage of firms that remit zero taxes. We graph this percentage for private and public firms, for firms just below and above the total income threshold and consider the time period 2011 to 2014. If firms did remit a positive amount of tax as a result of anticipating disclosure, we would expect to see the percentage of firms just above the disclosure threshold (100-105 million) that paid no tax decrease from 2013 to 2014. We see no such pattern for either public or private firms. Instead, we see the percentage of public firms just *below* the disclosure threshold (95-100 million) that paid no tax decrease from 2013 to 2014. It is possible that public firms successfully avoiding disclosure by lowering their income also, at least in the short-term, increased their tax payments in the unlikely event that they would not be able to achieve the lower reported income needed to avoid disclosure.

Panel B plots the percentage of total income paid as taxes, as reported to the ATO, for firms just above and just below the disclosure threshold. As in Panel A, we graph public and private firms separately. We find no discernible increase in the average tax rate of public firms subject to disclosure's tax rate compared to that of public firms not subject to disclosure. However, among private firms, the average tax rate increased for firms subject to disclosure in 2013 to 2014 from 1.1 to 1.5%, compared to firms not subject to disclosure, which experienced a decrease from 2.1 to 1.5%. Without disaggregated data, it is difficult to judge the significance of this change. Across public and private firms across the two income bins we examine from 2011 to 2014, the standard deviation of the tax rate is 0.52%, suggesting that this change in taxes paid may not be statistically

significant. Based on these figures, it is unlikely that there is any significant effect of disclosure on the amount of tax paid, conditional on firms having a positive tax liability, suggesting that the legislation may not have resulted in any short-run increase in aggregate tax payments to the Australian Treasury.

5.3 Changes in Disclosure

While firms may change their real behavior in response to the disclosure regime, another reasonable response would be to clarify the disclosure, assuaging any potential concerns of investors and consumers regarding the information. In the Australian setting, it is somewhat more difficult in a large sample to document systematic changes in corporate disclosure than it is in the US context (which allows, for example, FTP downloadable 10-Ks). Nevertheless, we do find some examples of firm changes in disclosure in response to the ATO disclosure.

We start by rigorously examining the corporate communications from the ten largest firms that were covered in the media as not having paid any tax, as these firms would be most driven to respond to the public disclosure.³⁹ We examine corporate press releases, annual reports, etc. Of those ten firms, we find two examples of changes in disclosure. Lendlease now hosts a website, <http://www.lendlease.com/investor-centre/taxation/tax-disclosure/>, that discusses the ATO disclosure, and provides some explanation for why Lendlease was disclosed as having paid no tax. While Lendlease does provide this disclosure, the reasons offered are still very basic. For example, Lendlease explained why it paid no tax by noting that “For FY15 Lendlease’s allowable tax deductions exceeded taxable income for the year. This means Lendlease is in a ‘tax loss’ position in Australia.” It then went on to provide some reasons why it had so many deductions. We also

³⁹ We obtained the list here: <http://www.smh.com.au/business/the-economy/top-ten-australian-companies-paying-no-tax-20151217-glpr80.html>.

found evidence that Qantas, the largest non-tax payer that was highlighted in many media articles, also included more tax information in its tax footnote in its annual report than it had in the previous year.⁴⁰

Next, we manually downloaded the most recent annual reports for the ASX 100, and, examined what disclosures they made regarding the ATO. We found four examples out of the 100 annual reports that specifically mentioned the disclosure regime, often mentioning how much in tax the firm paid. For example, CIMIC noted “The Group is committed to managing all taxes in a sustainable manner regarding the commercial and social imperatives of our business and stakeholders. The Group does not undertake purely tax driven transactions,” and went on to note that, according to the ATO disclosure, its tax payment was the 13th largest of any firm in Australia. In another example, Tatts discloses that its most significant contribution to sustainability is “our financial contribution to the broader community via our tax contribution...” It then notes the total taxes paid, broken down by Australian province. Finally, in general searching, we have found other examples of disclosure clarifying the tax payments. Mirvac, for example, now maintains a document called “2016 Tax Corporate Governance Statement: Our Approach to Tax,” where they note “Mirvac Limited did not pay any income tax in relation to the 2015 and 2016 financial years, as its income was able to be offset by these historical tax losses.” On December 18, 2015, TechnologyOne issued a press released that clarified “its effective tax rate in response to the ATO’s corporate tax transparency report,” and notes that receipt of the R&D tax credit is partially responsible for their “effective tax rate being less than 30 per cent.” In summary, we find some

⁴⁰ For example, Qantas, in part, notes “The Qantas Group is committed to embedding risk management practices to support the achievement of compliance objectives and fulfill corporate governance obligations... The Qantas Group has paid all taxes that it owes and all tax compliance obligations are up to date. The Australian Taxation Office (ATO) has advised that the Qantas Group is a key taxpayer continuing to have a ‘low’ likelihood of non-compliance.” It made no such disclosure in prior years.

evidence that firms act to try to explain to the public, and especially investors, their interpretation of the ATO disclosures, but, from our searching, such examples are very rare.

Lastly, the Australian Board of Taxation, at the request of the Treasury, introduced a Voluntary Tax Transparency Code to increase public disclosure of tax information by companies, particularly large multinationals, in May of 2016.⁴¹ Here, we consider the extent to which the ATO disclosure might have prompted firms to voluntarily adopt the Code as another way to consider behavioral responses to the mandatory disclosure regime that we examine. The Code is intended to help companies “educate the public about their compliance with Australia’s tax laws”, to “provide a framework for large businesses to take the lead and become more transparent” and to “encourage all businesses not to engage in aggressive tax avoidance.”⁴² As of March 3, 2017, 74 firms declared the intention to adopt the Code, with 34 published reports.

In untabulated analyses, we find that 9 companies adopted the voluntary code without even being subject to the mandatory disclosure regime. Of those that were subject to the mandatory disclosure regime, 15 of them were foreign-owned companies while the clear majority, 50, were Australian public companies, and the likelihood of adopting is not significantly related to a no-tax disclosure on December 17, 2015. Finally, we find that firms with a greater number of subsidiaries and firms with a greater proportion of institutional shareholders were more likely to adopt the voluntary code. Indeed, comments received from the ASX 100 in developing the framework suggest that differences in consolidation for accounting and tax make it difficult for investors to reconcile tax expense and tax payable. Our observation from looking at the published reports is that they are far too complicated for the public to understand; thus, they are most likely helping

⁴¹ http://taxboard.gov.au/files/2015/10/Letter_from_tsr_anti-hybrid.pdf

⁴² <http://taxboard.gov.au/consultation/voluntary-tax-transparency-code/>

institutional investors understand the impact of consolidation and tax losses when interpreting differences across accounting and tax information.

6. Conclusions

The tax affairs of companies have recently come under intense scrutiny by various stakeholders, resulting in increased disclosure requirements both to the public and to taxing authorities. Supporters of more disclosure argue that increased transparency will improve tax compliance, while opponents argue that it will divulge sensitive information that is, in many cases, misunderstood or potentially presented out of context, necessitating firms having to explain their tax data to the public. The public release of corporate tax information in Australia was preceded by a vigorous debate that of necessity was informed by little or no reliable empirical information about its likely consequences. The analyses described in this paper, which to our knowledge constitute the most comprehensive empirical analysis of corporate public tax disclosure to date, shed light on the short-term ramifications of that policy, and may illuminate future policy debates about similar policies (or the elimination of existing policies).

Collectively, our evidence points to several interesting effects of company tax return disclosure on companies as well as their stakeholders. First, consumers appear to respond, at least in the short term, by holding a slightly more negative view towards private companies that are subject to disclosure. In some cases, these negative views appear to be a consequence of media coverage, but interestingly, are not conditional on the firm's actual tax payments disclosed. Investor response appears to be negative leading up to and surrounding the disclosure event, suggesting that investors perceive that being subject to disclosure will be costly for firms. None of the costs we document appear to be large. Finally, we find evidence that some firms preempt disclosure by changing reported total income on the tax return around the disclosure threshold.

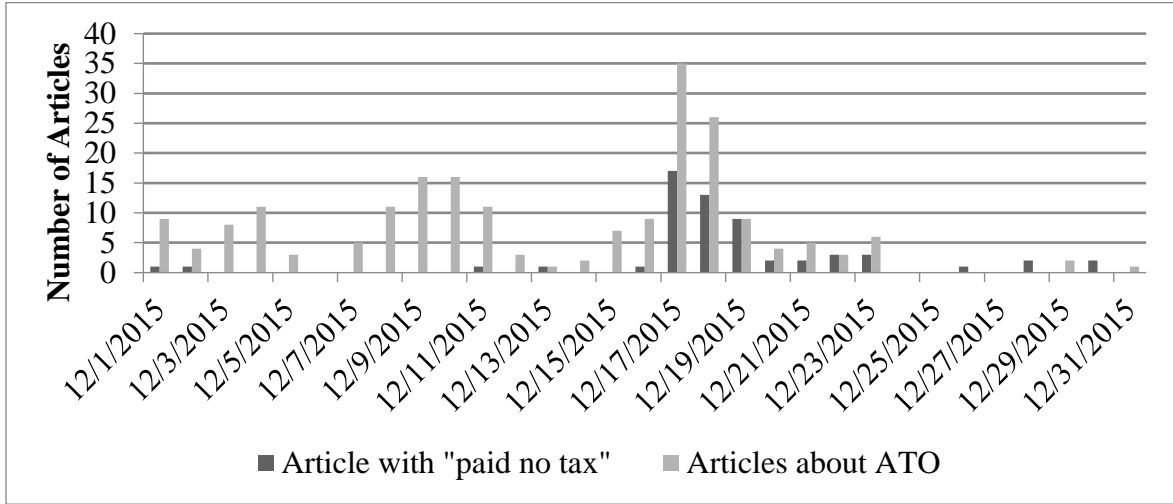
This change in behavior is stronger among private firms. This implies that firms anticipate that, all in all, disclosure will be costly. The longer-term effects of the disclosure regime in Australia, including the impact on tax compliance and tax policy, will require more time, and perhaps more data, to analyze.

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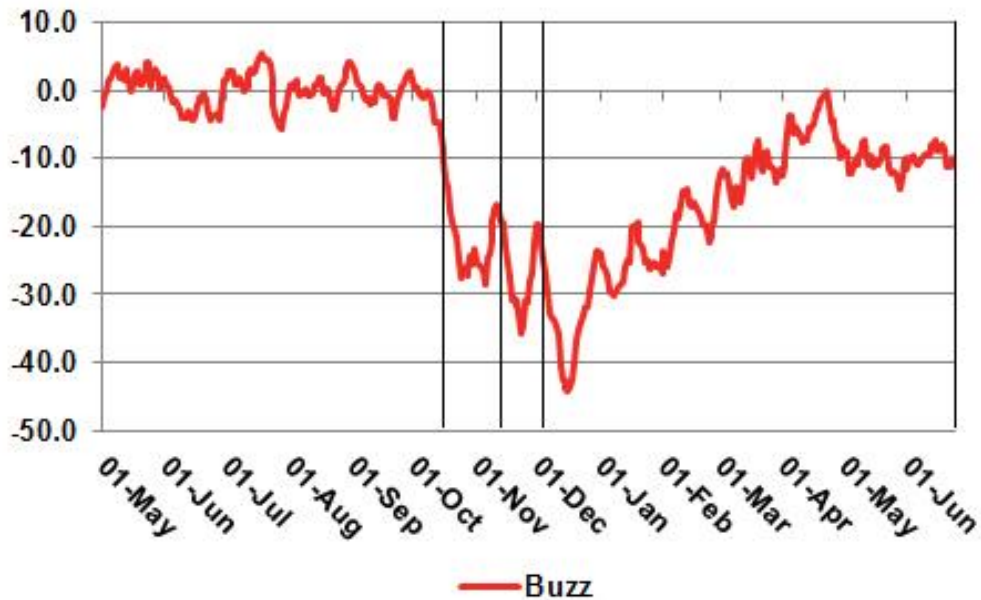
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Figure 1. Articles in Media



Notes. Figure 1 graphs the number of times articles with the phrase “paid no tax” (dark lines) or about the ATO (as determined by Lexis Nexus) occur in the Australian Media, during December 2015.

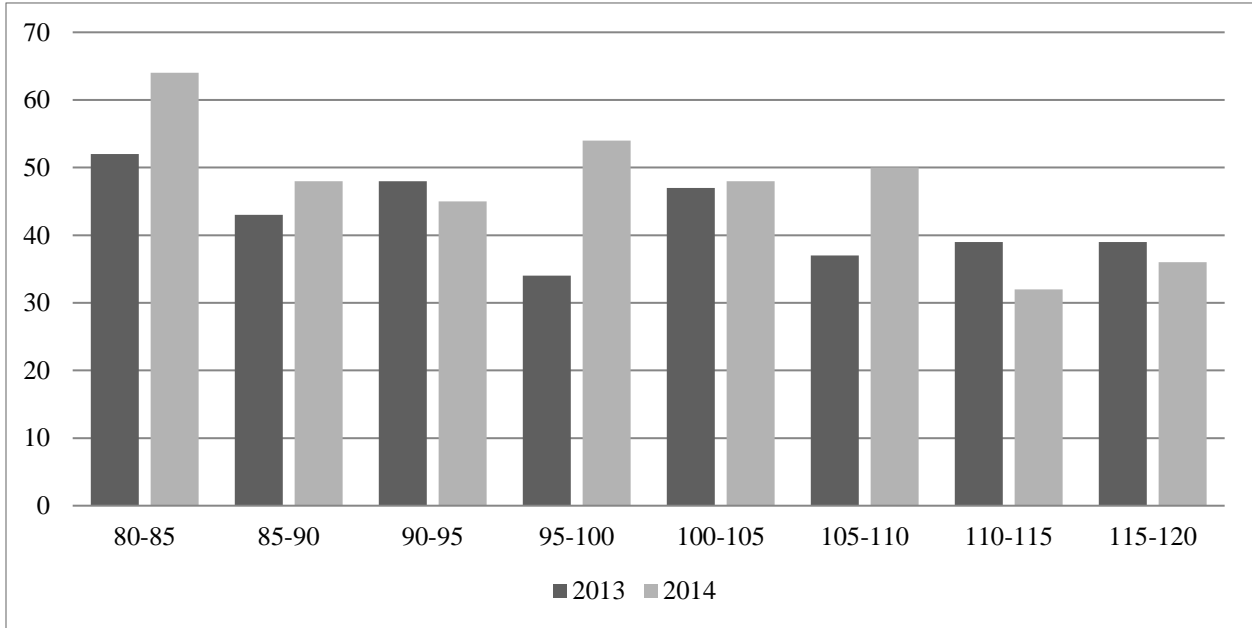
Figure 2. Starbuck’s Buzz Score in the UK from May 2012 through June 2013



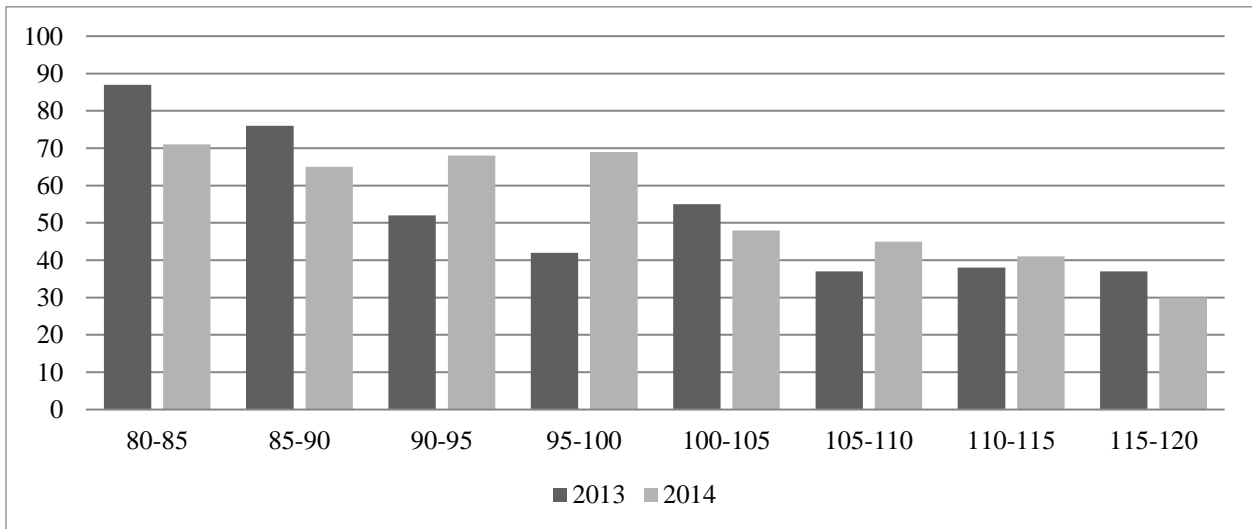
Notes. Figure 2 reports Starbuck’s Buzz Score. YouGov’s Buzz score for a brand measures whether people have heard anything positive or negative about the brand in the media or via word of mouth. Specifically, *Buzz Score* is positive (negative) if the consumer indicated “Over the PAST TWO WEEKS, which of the following brands have you heard something POSITIVE (NEGATIVE) about (whether in the news, through advertising, or talking to friends and family)”. Three key dates (indicated by the vertical lines) related to allegations of tax avoidance by Starbucks in the UK are: (1) October 15, 2012: Reuter’s published a news article exposing some of Starbuck’s international tax arrangements, (2) November 12, 2012: Starbucks executives appeared before the Public Accounts Committee; (3) December 6, 2012: Starbucks announced that it intends to remit £20 million U.K. tax, but admits no wrongdoing.

Figure 3. Analysis of Changes in Reported Total Income

Panel A. Public Firms



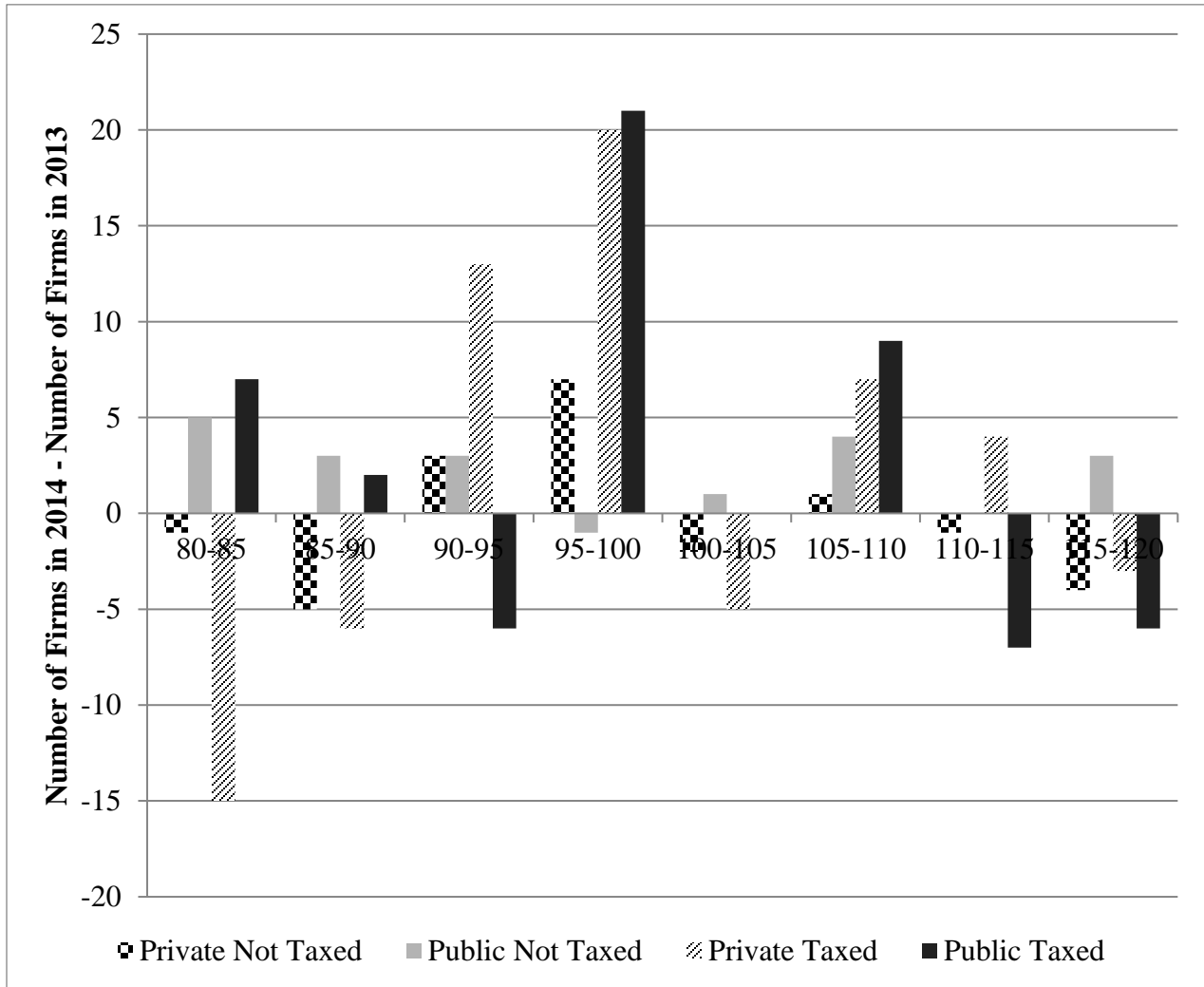
Panel B. Private Firms



Notes. Panel A (Panel B) graphs the distribution of the number of public (private) firms filing a company tax return in Australia in 2013, and 2014. Source: ATO.

Figure 3. Analysis of Changes in Reported Total Income (cont.)

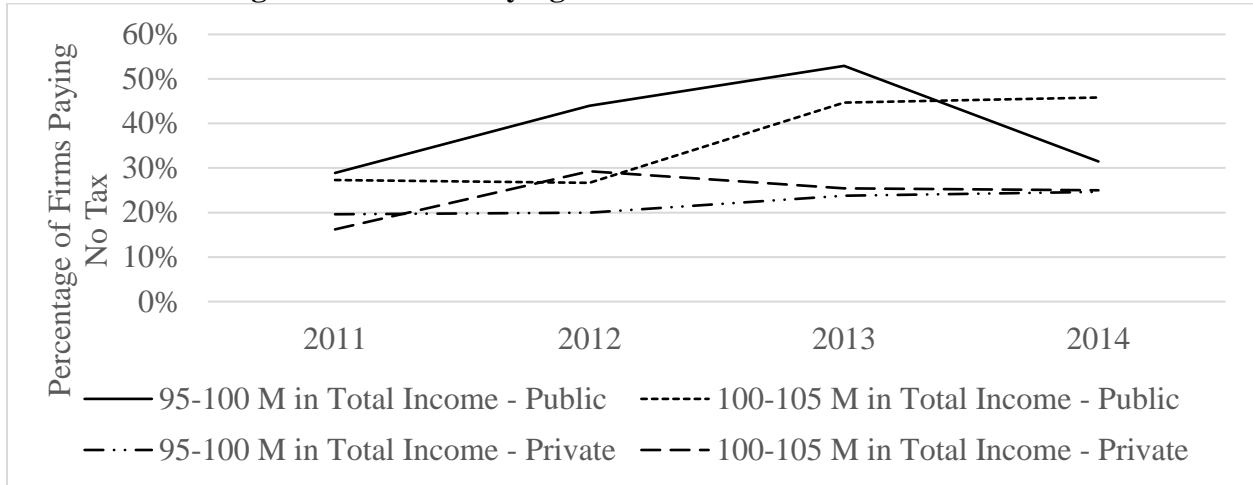
Panel C. Distribution Separated by Tax Status and Public and Private



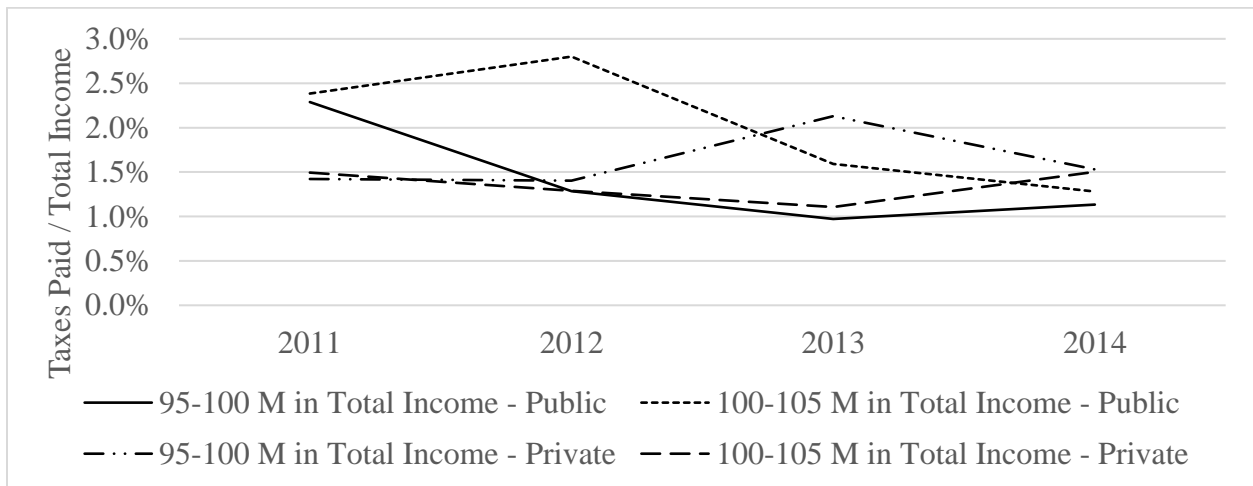
Notes. Panel C graphs the difference in the number of firms in each group – Paid No Tax, and Paid Tax – that reported total income in each bin on their Australian company tax return in 2014 versus 2013, for public and private firms. Source: ATO.

Figure 4. Analysis of Changes in Taxes Paid

Panel A. Percentage of Firms Not Paying Taxes



Panel B. Taxes Payable / Total Income



Notes. Panel A graphs the percentage of firms that had zero taxes payable in 2011-2014, in bins of total income from 95 million to under 100 million, and from 100 million to under 105 million. Panel B graphs the ratio of taxes paid to total income in 2011-2014, in bins of total income from 95 million to under 100 million, and from 100 million to under 105 million. These graphs are created using aggregated data provided by the ATO.

Table 1. Timeline of Events

Date	Event	Description
February 4, 2013	Intention to improve corporate tax transparency announced	The Australian government announced the intention to pass some form of public tax disclosure with no details provided regarding what that disclosure might be
April 3, 2013	Proposed law introduction announced	The Australian government announced that, following public consultation, they intended to legislate a regime of public disclosure of selected company tax return information for firms above AUD100 million
May 29, 2013	Law introduced	Formal legislation introduced for public comment
June 29, 2013	Law enacted	Tax disclosure for all firms above AUD100 million in total income becomes law
June 4, 2015	Private company carve-out	Australian private company exemption draft amendment released for comment
November 12, 2015	Private carve-out enacted	Australian resident private companies removed
December 3, 2015	Amendment passed	Australian private company exemption amended to increase disclosure threshold to AUD200 million rather than offer complete exemption
December 11, 2015	Amendment enacted	Australian resident private companies with AUD200 million or more total income back in the measure
December 17, 2015	Public and foreign-owned firm data disclosed	Data for 1538 Australian public and foreign-owned companies released
March 22, 2016	Private firm data disclosed	Data for 312 Australian private companies released

Table 2. Examples of Twitter© Posts About the Disclosure

- @abcnews I'd love to see a "boycott list" of sorts. Eg. @FordAustralia & GM (@holden_au) paid 0 tax while @Volkswagen paid...
- @ato_gov_au So Major Corps make billions and pay no Tax. So stop stealing my \$
- @exxonmobil how much did you pay the US in income tax this year? #representationwithouttaxation
- @Qantas #auspol zero tax? Are you fair dinkum? criminal you should pay something would you support everyone pays some
- @Qantas \$1.6 billion turn-around from 2014, \$975 million profit, strongest since GFC according to your annual report, and still no tax?
- @Qantas @LendLeaseGroup @exxonmobil All 3 of these companies paid less in tax in Australia than you and I .. As in zero #corporate welfare
- @Qantas @LendLeaseGroup @newscorp among companies that didn't pay #tax in 2013-14 #ato <http://bit.ly/1Mi3W3r>
- @Qantas how much income tax did you pay? Oh #politicaldonations
- @Qantas If you're the "Spirit of Australia" Pay some*%\$#\$*& tax eh? #auspol
- @Qantas meanwhile Qantas makes 14BILLION in revenue and pays no tax. Shameful.
- @Qantas the "Australia" airline - \$14.9 billion in revenue in 2014-15 and paid NO TAX in Australia. #auspol
- @Qantas - why should Aussies support a company paying zero tax - leaner? Not impressed. #auspol #leaners #MYEFO
- @VirginAustralia final happy sale? any tax being paid on that? scamming tax evasion criminals. The old pommie with a beard should be ashamed
- Australia: 0% tax, continued: @Honda @FordAustralia Interestingly, some companies pay SOME tax on SOME earning, e.g. Apple...
- Australia's biggest companies pay no tax 1: @Qantas, GHP, @exxonmobil, @LendLeaseGroup, Citic Resources #auspol
- Australia's biggest companies pay NO tax 3. @VirginAustralia, General Motors Australia #auspol
- Great! How about researching turning record profits into US tax revenue next? @exxonmobil
- Hey, PM @TurnbullMalcolm - can you explain why @exxonmobil Australia earned \$9.6 billion dollars and paid zero tax??
- It seems I paid more tax than @Qantas @VirginAustralia @VodafoneAU @exxonmobil @LendLeaseGroup and @channelten - we all did #commongood
- Shame on the big corporations who didn't pay tax (or 1%) in 2014! @qantas @exxonmobil @ato_gov_au #taxavoidance
- So @exxonmobil pay no tax on their AU\$9.6b income and the "Christian" @ScottMorrisonMP says it's welfare cheats that are the problem #auspol
- Virgin Australia, earned \$4.3 billion and payed no Australian tax @ScottMorrisonMP @VirginAustralia #taxnot
- Vodafone pays no tax but gets government tender #taxrort #auspol
- Wow. @Stockland, @holden_au, @VodafoneGroup, @exxonmobil, @LendLeaseGroup et al paid NO tax in 13/14: @MayneReport
- You and I pay more tax than 500+ multi-million dollar companies. What the ...? <http://getup.to/L8ndQsokVtrWxIWw9> ... @GetUp @ato_gov_au @TurnbullMalcolm

Notes. Contains examples of tweets about the ATO disclosure, mostly emphasizing firms having paid no tax.

Table 3. Disclosed Data

Sample Composition	N	TI > 0	TP > 0
All Firms	1854	1307	1179
Australian Public	281	211	179
Foreign-Owned	1252	857	777
Australian Private	321	239	223

Only Taxpaying Firms (TP > 0)

All Firms	N	Mean	Mdn	Std	Min	Max
Total income	1179	1,118	297	4,234	101	67,456
Taxable income	1179	147	22	871	0	13,760
Tax payable	1179	36	6	216	0	3,951
Effective tax rate	1179	26.40%	29.90%	6.40%	0.00%	30.00%
Australian Public						
Total income	179	3,867	565	9,865	103	67,456
Taxable income	179	589	60	2,005	1	13,760
Tax payable	179	150	13	533	0	3,951
Effective tax rate	179	24.10%	27.00%	7.10%	0.20%	30.00%
Foreign-Owned						
Total income	777	679	266	1,665	101	28,217
Taxable income	777	78	20	416	0	10,716
Tax payable	777	17	5	45	0	515
Effective tax rate	777	26.60%	30.00%	6.40%	0.00%	30.00%
Australian Private						
Total income	223	441	297	429	200	3,391
Taxable income	223	34	14	115	0	1,570
Tax payable	223	9	4	33	0	466
Effective tax rate	223	27.30%	30.00%	5.50%	3.20%	30.00%

Notes. This table shows the sample composition of firms included in the ATO disclosure of tax return data in December (Australian public and foreign-owned) and in March (Australian private). We rely on BvD Orbis data to identify Australian public firms (of the 1,859 firms in the ATO data we are not able to match 5 to Orbis). *TI* is *Taxable Income*. *TP* is *Tax Payable*. The *Effective Tax Rate* is the ratio of *Tax Payable/Taxable Income*. *Total Income* is the tax return data item on which the disclosure thresholds were based. Dollar amounts are in millions.

Table 4. Consumer Response: YouGov Sentiment Survey

Panel A. Descriptive Data

Variable	n	Mean	S.D.	0.25	Mdn	0.75
Reputation	218,087	0.188	0.542	0.000	0.000	1
Impression	218,087	0.252	0.582	0.000	0.000	1
Buzz	218,087	0.106	0.431	0.000	0	0
December 17, 2015	218,087	0.031	0.173	0.000	0	0
Subject to Disclosure	218,087	0.730	0.444	0.000	1	1
Paid No Tax	126,148	0.069	0.254	0.000	0	0
Covered by Media	218,087	0.1884	0.391	0	0	0

Panel B. Regression Results

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Reputation	Impression	Buzz	Reputation	Impression	Buzz	Reputation	Impression	Buzz
December 17, 2015	-0.002106 (-0.10)	-0.003882 (-0.18)	0.028829* (1.69)	-0.005165 (-0.31)	0.026337 (1.48)	0.019288 (1.29)	-0.021604 (-1.14)	0.016987 (0.86)	0.016654 (1.05)
Subject to Disclosure X December 17, 2015	-0.008449 (-0.44)	0.030445 (1.46)	-0.009470 (-0.59)						
Paid No Tax X December 17, 2015				-0.021303 (-1.30)	0.000960 (0.05)	0.000260 (0.02)			
Covered by Media X December 17, 2015							0.040960* (1.65)	0.035576 (1.36)	0.010012 (0.45)
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Respondent Clustering	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	218,087	218,087	218,087	159,256	159,256	159,256	159,256	159,256	159,256
R-squared	0.0578	0.0770	0.0433	0.0581	0.0877	0.0490	0.0581	0.0877	0.0490

Notes. *Reputation* is -1 if the consumer indicated the brand had a negative reputation, 0 if they did not believe it had a negative or positive reputation (but were still aware of the brand), and +1 if the consumer believed the reputation was positive. *Impression* is -1 if the consumer answers that the brand has a negative impression, 0 if they did not have a positive or negative impression, or (but were still aware of the brand), and +1 if the consumer had a positive impression of the brand. *Buzz* is -1 if over the last two weeks the consumer has heard anything negative about the brand, 0 if had heard nothing about the brand, and +1 if had heard something positive about the brand. *December 17, 2015* is equal to one for December 17, 18 or 19th, 2015, and zero otherwise. *Subject to Disclosure* is equal to one if the firm was subject to disclosure, and zero otherwise. *Paid No Tax* is equal to one if the firm that owns the brand was disclosed as having paid no tax. *Covered by Media* is equal one if the media covered the firm. In Panel B, standard errors are clustered by respondent, with t-stats displayed in parentheses below the coefficient estimates. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively (two-tailed).

Table 5. Consumer Response: Author Sentiment Survey**Panel A. Descriptive Data**

Variable Name	N	S.D.	Mean	Mdn
General Perception	32,407	1.629	5.013	5
Willing to do Business	31,867	1.731	4.86	5
Ethical Perception	29,192	1.635	4.813	5
Pays Sufficient Tax	23,231	1.866	4.504	5
Heard of Scandal	35,466	0.362	0.155	0
22 March, 2016	40,249	0.478	0.647	1
Subject to Disclosure	40,249	0.451	0.284	0
Covered by Media	3,454	0.242	0.472	0
Paid No Tax	3,454	0.493	0.415	0

Notes. *General Perception*, *Willing to do Business*, *Ethical Perception*, and *Pays Sufficient Tax* are measured along a seven point Likert scale according to how respondents answered questions (1) through (4), respectively. A response of one indicates “Not Favorable”, “Not Likely”, “Not Ethical”, or “No” while a response of seven indicates “Very Favorable”, “Very Likely”, “Very Ethical” or “Yes” depending on the question being asked. Question (1): In your personal opinion, how favorable is your perception of X? Question (2): Assuming you were in a position to need to do business with a company like X, how likely is it that you would do business with X, instead of one of its competitors? Question (3): How ethical do you think X is? Question (4): Do you feel that X pays as much in taxes as it should? We measure *Heard of Scandal* as an indicator variable equal to one if the respondent indicates that they have heard of a recent scandal involving the company, and zero otherwise. *March 22, 2016* is equal to one for survey responses collected after the March 22, 2016 disclosure, and zero otherwise. *Subject to Disclosure* is equal to one if the firm’s tax return data was included in the March 22, 2016 disclosure, and zero otherwise. *Covered by Media* is equal to one if the firm was highlighted in an Australian news source based on a search of all Factiva articles on March 22, 2016 for either “ATO” or “tax transparency”, and zero otherwise. *Paid No Tax* is equal to one if the ATO disclosure reveals a zero-tax payable for the firm, and zero otherwise.

Table 5. Consumer Response: Author Sentiment Survey (cont.)

Panel B. Regression Results

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
VARIABLES	General Perception	Willing to do Business	Ethical Perception	Pay Sufficient Tax	Heard of Scandal	General Perception	Willing to do Business	Ethical Perception	Pay Sufficient Tax	Heard of Scandal
March 22, 2016	0.009 (0.35)	0.004 (0.14)	-0.002 (-0.07)	-0.019 (-0.43)	0.013** (2.42)					
Subject to Disclosure	-0.199 (-0.94)	-0.089 (-0.42)	-0.203 (-0.94)	-0.269 (-1.00)	0.007 (0.10)					
March 22, 2016 X Subject to Disclosure	-0.081** (-2.37)	-0.092*** (-2.61)	-0.061* (-1.89)	-0.146*** (-3.27)	-0.010 (-1.20)					
Covered by Media						-0.103 (-0.73)	-0.109 (-1.01)	-0.238** (-2.30)	-0.017 (-0.28)	0.093 (1.33)
Paid No Tax						-0.186 (-1.47)	-0.156 (-1.03)	-0.176 (-1.34)	-0.133 (-0.90)	0.122 (1.27)
Covered by Media X Paid No Tax						0.113 (0.67)	0.027 (0.15)	0.150 (0.84)	-0.170 (-0.64)	-0.048 (-0.47)
Observations	29,884	29,373	26,831	21,122	32,588	2,523	2,494	2,361	2,109	2,878
R-squared	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.02

Notes. The sample in columns (1) through (5) includes responses pertaining to 14 firms for whom we have sentiment survey data before and after the disclosure. The sample in columns (6) through (10) includes responses pertaining to 12 firms that were subject to disclosure and for whom we only have sentiment survey data after the disclosure. All variables are defined in Panel A. Standard errors are clustered by firm and survey respondent, with t-stats displayed in parentheses below the coefficient estimates. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively (two-tailed).

Table 6. Market Reaction to Tax Disclosure**Panel A. Descriptive Data**

		n	Mean	S.D.	0.25	Mdn	0.75
April 3, 2013 Test	Three Day Buy and Hold Return	14036	-0.01	0.05	-0.03	0.00	0.02
	April 3, 2013	14036	0.02	0.13	0.00	0.00	0.00
	Paid No Tax	14036	0.18	0.39	0.00	0.00	0.00
	Number of Entities in Group	13915	101	267	19	36	90
	Share of Institutional Shareholders	14036	0.86	0.25	0.87	0.96	1.00
	Consumer Oriented	14036	0.07	0.26	0.00	0.00	0.00
December 17, 2015 Test	Three Day Buy and Hold Return	12758	0.00	0.05	-0.03	0.00	0.02
	December 17, 2015	12761	0.02	0.13	0.00	0.00	0.00
	Paid No Tax	12761	0.24	0.43	0.00	0.00	0.00
	Number of Entities in Group	12700	98	272	18	36	83
	Share of Institutional Shareholders	12761	0.88	0.21	0.88	0.96	1.00
	Consumer Oriented	12761	0.10	0.30	0.00	0.00	0.00

Table 6. Market Reaction to Tax Disclosure (cont.)

Panel B. Regression Results for April 3, 2013

VARIABLES	(1)	(2)	(3)	(4)
	Three Day Buy and Hold Return			
Paid No Tax	0.000269 (0.17)	-0.000496 (-0.30)	-0.001323 (-0.25)	0.000621 (0.39)
April 3, 2013	-0.019485*** (-9.87)	-0.019338*** (-10.06)	0.009067*** (2.92)	-0.020257*** (-9.99)
Paid No Tax X April 3, 2013	-0.011831*** (-7.44)	-0.014023*** (-8.49)	-0.024025*** (-4.60)	-0.011975*** (-7.52)
Interaction		-0.000003** (-2.08)	0.004672* (1.82)	0.009483*** (4.26)
Paid No Tax X Interaction		0.000007*** (3.14)	0.002049 (0.36)	-0.001561 (-0.48)
April 3, 2013 X Interaction		0.000004*** (2.81)	-0.033242*** (-12.95)	0.009715*** (4.36)
Paid No Tax X April 3, 2013 X Interaction		0.000004 (1.62)	0.013733** (2.39)	0.008843*** (2.74)
Interaction Variable		Number of Entities in Group	Share of Institutional Shareholders	Consumer Oriented
Cluster by Date	Yes	Yes	Yes	Yes
Observations	14,036	13,915	14,036	14,036
R-squared	0.0029	0.0032	0.0038	0.0051

Notes. *Three Day Buy and Hold Return* is the three-day buy-and-hold return. *April 3, 2013* is equal to one for April 3, 2013, and zero otherwise. *Paid No Tax* is equal to one if the firm had zero tax expense in 2012 (our best estimate for a zero-tax firm), and zero otherwise. *Number of Entities in Group* is a count variable equal to the number of legal entities in the economic group to which the entity in the ATO data belongs. *Share of Institutional Shareholders* is the share of the firm owned by institutional shareholders. *Consumer Oriented* is an indicator variable coded to equal one for firms with brands that are covered by YouGov. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively (two-tailed).

Table 6. Market Reaction to Tax Disclosure (cont.)**Panel C. Regression Results for December 17, 2015**

VARIABLES	(1)	(2)	(3)	(4)
	Three Day Buy and Hold Return			
Paid No Tax	-0.000640 (-0.52)	-0.000736 (-0.58)	-0.007947 (-1.24)	-0.000294 (-0.23)
December 17, 2015	0.023792*** (12.62)	0.024832*** (13.09)	-0.011661*** (-4.81)	0.022473*** (12.01)
Paid No Tax X December 17, 2015	-0.004813*** (-3.90)	-0.004296*** (-3.37)	0.088648*** (13.88)	-0.002083 (-1.66)
Interaction		0.000006** (2.21)	-0.000165 (-0.06)	0.007096*** (5.58)
Paid No Tax X Interaction		-0.000001 (-0.15)	0.008306 (1.11)	0.004689 (1.24)
December 17, 2015 X Interaction		-0.000011*** (-3.90)	0.040339*** (13.69)	0.010855*** (8.54)
Paid No Tax X December 17, 2015 X Interaction		0.000002 (0.33)	-0.105278*** (-14.03)	-0.045792*** (-12.11)
Interaction Variable		Number of Entities in Group	Share of Institutional Shareholders	Consumer Oriented
Cluster by Date	Yes	Yes	Yes	Yes
Observations	12,758	12,697	12,758	12,758
R-squared	0.0029	0.0037	0.0036	0.0048

Notes. *Three Day Buy and Hold Return* is the three-day buy-and-hold return. *December 17, 2015* is equal to one for December 17, and zero otherwise. *Paid No Tax* is equal one if a firm had positive tax expense in 2014, but, was disclosed in the ATO data as having paid no tax. *Number of Entities in Group* is a count variable equal to the number of legal entities in the economic group to which the entity in the ATO data belongs. *Share of Institutional Shareholders* is the share of the firm owned by institutional shareholders. *Consumer Oriented* is an indicator variable coded to equal one for firms with brands that are covered by YouGov. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively (two-tailed).