



**WU International Taxation Research Paper Series**

No. 2015 - 16

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Avoidance and Corporate Tax Reporting**

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# **News Media Coverage of Corporate Tax Avoidance and Corporate Tax Reporting**

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Financial support by the Austrian Science Fund (FWF): W 1235-G16 is gratefully acknowledged.

## **News Media Coverage of Corporate Tax Avoidance and Corporate Tax Reporting**

### **Abstract**

Drawing upon media agenda-setting theory and previous studies in organizational impression management, this paper empirically investigates the influence of tax avoidance news on corporate tax reporting. This study is based on the pronounced discontinuity in the amount of news articles related to tax avoidance in the United Kingdom over two periods (2010-2011 and 2012-2013). A difference-in-differences design is employed in order to enable a comparison of the media effects on those firms that have been reported in tax avoidance news versus those without media attention. Using a sample of annual reports of UK FTSE 100 companies across the period 2010 to 2013, I test the impact of tax avoidance news on quality and quantity of tax disclosure. The results suggest that the recent increase in media attention on tax avoidance does not stimulate firms to improve the quality and the quantity of tax disclosure in their corporate reporting. Rather, firms can be discouraged from discussing the most relevant tax items in their reporting, as shown in the case of financial firms which were the subject of the largest amount of tax avoidance news.

**Keywords:** tax avoidance, income tax disclosure, impression management

## 1. Introduction

The impact of the news media on setting a public agenda and shaping public opinions is a well-established proposition which has been supported by a broad range of socio-political research (Park, 1940; McCombs and Shaw, 1972; Gamson et al., 1989; 1992; Soroka, 2003; McCombs, 2014). Such a strong influence of news media is observed for issues in which individuals have no direct experience; therefore news media becomes the only main source of obtaining information (Ader, 1995; Power, 2004). Where the issue of corporate tax avoidance is concerned, news media exerts an effect by translating complex and obscure tax issues into simple and provocative messages which then easily penetrate into the public's mind through repetitive broadcasting. As a survey by the Oxford Centre for Business Taxation indicates, corporate tax issues remain out of the public eye until the media discovers them, and they then become part of social concern only if the media and the public begin to focus their attention on those matters (Freedman et al., 2007).

On 12 November 2012, the UK Public Accounts Committee held a public hearing to address some of the world's most-recognized firms on the issue of tax avoidance. The live broadcast of the hearing and intense media attention have led to an unprecedented volume of news addressing tax avoidance and ignited public intolerance towards tax unfairness issues (Christian Aid, 2013; Garside, 2014). The number of British news articles reporting corporate tax abuse almost doubled in 2012 and 2013 compared to that in 2010 and 2011.<sup>1</sup>

When a company is labelled as a “tax avoider” by media (BBC, 2012a), it encounters reputational risk and legitimacy threats (Lanis and Richardson, 2012). Interviews with tax executives by Mulligan and Oats (2009) suggest that tax managers raise concerns about the role of the media in the context of reputational risk, noting “we try not to do things that’ll get us written up on the front page of the Wall Street Journal.” (p. 688). Foreseeable adverse consequences entail a good reason for companies to take an impression management approach as a defensive or preventive measure if their tax practice is viewed as abusive during the peak of media attention. To maintain legitimacy and regain reputation, companies could use rhetorical devices (Thomas, 1997; Yuthas et al., 2002) or increase disclosure of relevant information in the corporate annual reports (Gray et al., 1995). However, companies may not alter their tax reporting behaviours, as the nature of tax information is different from

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<sup>1</sup> Number of articles from a search of Factiva (business database including all news sources). See Figure 1.

that of corporate social reporting (for example, environmental disclosure) in terms of legal complexity. In this regard, testimony by one of the witnesses at the hearing illustrates the practical challenges in tax reporting, stating "[...] the global tax structure is very complex. It is very difficult to explain it, and that is without having anything to do with avoidance. It is just a difficult challenge." (House of Commons, 2012).

Although there are increasing legal compliance obligations and public demands for detailed tax disclosure by multinational corporations (MNCs) (HM Revenue and Customs, 2013; PwC, 2013; OECD, 2014; The Guardian, 2014), the question as to how firms present their tax practices as a response to media pressure has not been tested empirically. Therefore, this study investigates whether media pressure relates to a change in the volume of tax disclosure in audited financial statements (i.e. quantity), and the contents of tax information in the corporate annual reports – which relates to tax items, particularly tax avoidance (i.e. quality). The reason for relying on corporate annual reports rather than referring to other types of corporate communication venues, such as press releases or corporate websites, is a high level of credibility of corporate annual reports supported by audited financial statements. As the reports are intended to fulfil the regulatory disclosure requirements (including International Financial Reporting Standards, IFRS), tax information in the reports is believed to be relevant and reliable information that users are looking for. Moreover, extensive literature on corporate disclosure heavily utilizes the corporate annual report due to its effective merits of communicating to external users (Stanton and Stanton, 2002). Through its narrative sections, it is also regarded as an effective vehicle for impression management by sending a message as to what is important for the companies, and thus reflecting a company's stance on the current issue (Neu et al., 1998; Guthrie et al., 2004). By identifying the relationships between media attention and corporate tax reporting, one can infer whether intense media coverage of tax can lead to desirable outcomes, namely increasing both the quality and quantity of tax disclosure.

Consequently, this study contributes to existing literature which has examined the effects of public pressure on corporate governance, but which focused less on corporate tax communication in relation to tax avoidance issues. By using a unique set of hand-collected dataset, this study attempts to shed light on firms' behaviours with regard to the effects of public pressure on tax transparency and ongoing public debates on corporate tax avoidance. The research questions investigated in this study are as follows:

1. Are companies more likely to address key tax items that particularly address tax avoidance concerns when their tax practices are challenged by news media during the high media attention period?
2. Are companies more likely to increase the volume of tax disclosure in their financial statements when their tax practices are challenged by news media during the high media attention period?

To identify media attention, I collect news with topics related to tax avoidance from major UK news media outlets during the period from 2010 to 2013. Based on the pronounced discontinuity between the period of 2010-2011 and 2012-13, I separate the testing period into a low and high media attention period. These two different sets of data allow a comparison of annual reports before and after the peak of media attention with a compounding effect of the media intensity in terms of the volume of tax avoidance news articles in relation to each company. The firm sample is taken from FTSE 100 multinational corporations listed in the UK London Stock Exchanges during 2012, with the data being corporate annual reports from 2010 to 2013. Data on quantity and quality of tax disclosure is hand collected from the respective firms' corporate annual reports. The total number of words in the tax disclosure in the notes section of the audited financial statements is counted as a quantity measure. To test the quality of tax disclosure, the entire sections of the annual reports are read and evaluated according to the disclosure index.

In short, the study finds no significant results supporting the media influence on the quantity of tax disclosure. The quality of tax disclosure, in terms of firms' addressing the most relevant key tax items, is not positively related to the intensity of media pressure during the high media attention period. Instead, a negative relationship between the quality and media intensity is observed from the case of financial firms which received the highest number of news articles addressing tax avoidance issues. Taken together, the results suggest that the recent increase in media attention on tax avoidance does not stimulate firms to improve tax disclosure in their corporate reports; rather, it can discourage the firms from discussing the most relevant tax items when they are at the centre of media attention.

This paper proceeds as follows: Section 2 discusses the research background and prior literature which enable hypotheses development. Section 3 illustrates the research design. Results and findings are analysed in Section 4, and Section 5 offers conclusions.

## 2. Background and Hypotheses Development

### 2.1. Tax shaming and corporate self-defence

The oral evidence of Amazon, Google and Starbucks taken before the UK Public Accounts Committee public hearing on the issue of tax avoidance symbolizes how companies would represent themselves when the public puts them to tax shame.<sup>2</sup> What is noticed in their testimony is that they defend their tax position by using words concerned with ethics, moral values and the social order, such as "ethics".<sup>3</sup> A symbolic catchword in the recent economic-political debate, "transparency",<sup>4</sup> was also frequently mentioned during the hearing. The testimony below by the representatives of Amazon, Google and Starbucks illustrates how such words were used:

"We sincerely believe that we are doing everything to an ethical standard – not just the legal standard, but exactly what we should be doing."

"We are trying to be very transparent. I assure you that our intent is to operate at the highest ethical standards." (House of Commons, 2012).

The frequent use of such affirmative words appears to reflect the awareness of corporate reputational damage. With regard to the concept of reputation at risk, Power (2004) explains the idea of an "expectation gap" where there is a gulf between public expectation of performance and public perception of that performance. By representing itself in a more socially affirmative way, a corporation seeks to regain public acceptance (Gray et al., 1995). Extending this line of thinking to the situation where the media and public are accusing companies avoiding taxes of being immoral,<sup>5</sup> how to communicate tax matters and manage corporate image in relation to tax becomes one of the primary agenda items for firms (Ernst and Young, 2012; 2014). For example, with regard to its tax avoidance schemes which were extensively reported during the period of 2012-2013, Barclays acknowledges risk by stating:

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<sup>2</sup> Similar cases of public hearings are also found in the United States. In September 2012, the cases of offshore tax avoidance schemes by Microsoft and Hewlett-Packard were investigated. In May 2013, the Subcommittee examined offshore profit shifting and tax avoidance by Apple Inc. *See* <http://www.hsgac.senate.gov/subcommittees/investigations/media>.

<sup>3</sup> Harvard General Inquirer word lists; *see* <http://www.wjh.harvard.edu/~inquirer/homecat.htm>.

<sup>4</sup> Forssbaeck, J. and Oxelheim, L. (2014). *The Oxford Handbook of Economic and Institutional Transparency*. Oxford: Oxford University Press.

<sup>5</sup> "We're not accusing you of being illegal; we're accusing you of being immoral", stated by Margaret Hodge, a Chair of the Public Accounts Committee, during the public hearing on Amazon, Google and Starbucks.

There is risk that the Group could suffer losses due to additional tax charges, other financial costs or reputational damage due to: failure to comply with, or correctly assess the application of, relevant tax law; failure to deal with tax authorities in a timely, transparent and effective manner (including in relation to historical transactions which might have been perceived as aggressive in tax terms) [...] (Barclays, 2013 Annual Report, p. 140)

In recent years there seems to be a growing trend that more firms are explaining their tax management in the corporate responsibility section, regardless of the level of media attention to their tax affairs. Schroders, a financial institution listed in the FTSE 100, is a good example for this case. Although there is no tax avoidance news in relation to Schroders during the period of 2010 to 2013, it claims its tax stance by stating that “Schroders is committed to conducting its tax affairs in an open and transparent way.” within the corporate responsibility section of its 2012 and 2013 annual reports. Considering that a series of tax scandals by banks has caused the public to perceive the financial industry to be the root cause of aggressive tax schemes, the case of Schroders would represent what is referred to as the collective response of industries to legitimacy threats (Herremans et al., 2009). As Barnett (2006) and King and Lenox (2000) suggest, members of an industry are subject to the difficulty of mobilizing collective action, and are judged by a collective notion regardless of their individual corporate performance.

Another noteworthy reaction by firms is their not taking any action towards adverse tax publicity. Benoit (1997) explains that a firm does not necessarily respond to the public threats because responding itself implies the firm's acceptance of those accusations. This strategy is also found in one of telecommunications companies. In spite of accumulating tax avoidance news about the firm during 2010-2013, its annual reports during that period do not provide any specific explanation with regard to alleged tax avoidance matters or any disclaimer suggesting that their tax affairs are, in fact, managed in line with ethics or transparency as part of corporate responsibility. Another strategy can be to reduce specific disclosure. For example one financial institution actually reduced its tax information in terms of the number of words in the 2013 annual report after it received negative publicity regarding its tax affairs during 2012. This case supports the view suggested by Elsbach et al. (1998) and De Villiers and van Staden (2006), explaining that a firm's remedial strategy right after image-threatening events can backfire if its actions are perceived to be devious; therefore providing specific information is believed to be more harmful than helpful in regaining public trust.



The cases above indicate that firms adopt various disclosure strategies, but there is very limited empirical investigation. These cover the extent to which corporations actually change their tax practices in relation to public pressure (Dyrenge et al., 2014; Gallemore et al., 2014), and the explicit disclosure on tax (Ylönen and Laine, 2015). Therefore, to develop the research hypotheses of this study, the next section discusses media agenda-setting theory as a theoretical background, as well as prior literature investigating the link between media pressure and corporate reporting in a broad context.

## **2.2. Media exposure and corporate reporting**

The fundamental idea of media agenda-setting theory is that "those issues emphasized in the news come to be regarded by the public over time as being important." (McCombs, 2014, p. 4). As Figure 1 demonstrates, mass communication generates a strong influence by transferring salience from the media agenda to the public agenda (McComb and Shaw, 1972).

Experimental investigations show evidence of a causal relationship between the form and the way of presenting news and the viewers' interpretation of the issues being reported (Iyengar and Kinder 1987; Iyengar, 1994; de Vreese, 2004). This consequence appears to support the propositions of media agenda-setting theory:

P<sub>1</sub>: The amount of news coverage that a firm receives in the news media is positively related to the public's awareness of the firm (Carroll and McCombs, 2003, p. 39).

P<sub>2</sub>: The amount of news coverage devoted to particular attributes of a firm is positively related to the proportion of the public who define the firm by those attributes (p. 40).

Considering the recent major media attention on issues of corporate governance, Carroll and McCombs (2003) extend this core concept by translating it into a business setting. They argue that media brings evaluation criteria that apply to all companies – not only for the companies covered in the news. That is, media has the wide spectrum of evaluation criteria, and how media portrays the focal firm generates a broader spillover effect which spreads to the whole industry (Desai, 2011; Zavyalova et al., 2012).

Among others cases, a number of environmental reporting studies substantiate the above argument, providing sound insight into the reaction of firms (or industry as a whole) to

controversial corporate misconduct that has attracted media attention. A commonly identified trend is a significantly higher level of incident-related disclosure in terms of the number of words and positive tones in the contexts after media exposure (Deegan and Rankin, 1996; Darrell and Schwartz, 1997; Brown and Deegan, 1998; Neu et al., 1998; Bewley and Li, 2000; Deegan et al., 2000; 2002; Islam and Deegan, 2010). It supports the assertion that “if there is increased community concern about environmental issues, driven by increased media attention, then the increased concern should be matched by increased disclosures.” (Brown and Deegan, 1998, p. 26). Arguably, such increasing information can be interpreted as a defensive effort by the firm in question to satisfy public concern and to express its legitimacy (Gray et al., 1995; Desai, 2011). This view is also linked to an impression management perspective by referring to as a “verbal remedial tactic” or “tactical verbal impression management” which converts image-threatening events into image-protecting verbal claims (Aerts and Cormier, 2009, p. 23).

As tax information is particularly confidential, one might not be able to expect that corporate tax reporting would follow the same trend that is generally found from the cases of corporate environmental disclosure. This is because providing extensive tax information can generate opposing consequences: it promotes a firm's tax transparency and assures the tax authorities and public, at the same time, it reveals a firm's sensitive tax position – which could possibly lead to a financial loss to the firm from additional scrutiny by the tax administration. Therefore, the matter of providing more detailed tax information can be subject to a firm's strategic considerations. However, when firms fear financial losses from reputational harm and shaming public sanctions, more than financial losses caused by revealing sensitive tax information, they might consider over-disclosure of tax information a sensible strategy (Blank, 2008; 2009). Likewise, by inferring from the past cases of major social incidents related to the firm, it is reasonable to expect an increase in the rhetoric of words and repetitive use of assuring verbal cues in financial reporting (Davison, 2008).

Given the assumption that the issue of corporate tax avoidance is considered to be a corporate social incident attracting media attention which eventually deteriorates corporate image, I posit the following hypotheses:

Hypothesis 1 (H1): A firm will disclose more relevant tax information which particularly addresses the key items related to tax avoidance concern (i.e. quality) when the firm appears in tax avoidance news during the high media attention period.

Hypothesis 2 (H2): The association between the amount of tax avoidance news coverage about a firm and the volume of tax disclosure in its annual report (i.e. quantity) will be higher when the firm appear in tax avoidance news during the high media attention period.

### 3. Research Design

#### 3.1. Sample and data

For empirical testing, this study uses FTSE 100 firms listed as of 2012 for their high representativeness and public visibility. Moreover, a series of investigations by the UK Public Accounts Committee on tax avoidance schemes, followed by a stark increase in UK media attention, provides a reasonable assumption that UK public firms would be influenced after the public hearings on tax avoidance.<sup>6</sup> The exclusion of firms with a tax exempt status as real estate investment trusts (REITs) and mergers reduced the sample size to 93. The final sample consists of 372 firm-year observations from 2010 to 2013. Firm-specific financial data is collected from the Thomson Reuters Datastream database. Other main data (in particular, quantity and quality of tax disclosure) have been hand collected from corporate annual reports for years ended from 2010 to 2013, as obtained from corporate websites.

I use the following search terms which are commonly occurring key words from all major news and business publications in the UK from the Factiva database:<sup>7</sup> "tax avoidance", "tax evasion", "tax loophole(s)", "tax haven(s)", "tax transparency" and "aggressive tax planning". These key words are searched for each firm-specific observation, and the observation period ranges from 1 January 2010 to 31 December 2013. This is to capture the initial trend of the amount of news coverage of tax aggressiveness which is broadly defined as downward management of taxable income through tax planning activities (Frank et al., 2009) that do not necessarily break the law.<sup>8</sup> Consistent with prior literature (Chen et al.,

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<sup>6</sup> The notable event is the tax avoidance cases of Google, Amazon and Starbucks investigated by the UK Public Accounts Committee (PAC) on 12 November 2012. Following this, the PAC held a series of public hearings on tax avoidance schemes (e.g. on 6 December 2012 and on 31 January 2013). The PAC examined the tax avoidance schemes promoted by tax advisors and large accountancy firms. On 7 March 2013, the PAC questioned the tax authorities (HMRC) regarding their role in preventing tax avoidance. See <http://www.parliament.uk/business/committees/committees-a-z/commons-select/public-accounts-committee/publications/?type=&session=2&sort=false&inquiry=all>.

<sup>7</sup> Factiva is a global news and information on business and economics provided by Dow Jones & Company.

<sup>8</sup> It appears that news media refer to "tax avoidance" when they report firms' being aggressive in tax management in general. For example The Guardian (the UK new paper) has a section titled "Tax Avoidance".

2010), I use the terms “tax aggressiveness” and “tax avoidance” interchangeably throughout this paper.

Figure 1 shows the search results as a general trend (i.e. firms are unspecified), and obvious discontinuity is found between the period of 2010-2011 and 2012-2013.<sup>9</sup> The same trend is also found for the sample firms as shown in Figure 2. The result identifies that 53 of the sample companies have been reported in the news at least once relating to tax aggressiveness during the period of 2010-2013, while 40 companies have not been reported in the news at any time during the observation period. These two different sets of data allow for comparison analysis before and after the peak of media attention, with a compounding effect of the amount of tax news on each firm. Table 1 summarizes the sample construction.

<Insert Figure 1 here>

<Insert Figure 2 here>

<Insert Table 1 here>

### **3.2. The empirical models and measurement of variables**

To test the first hypothesis, I adapt content analysis which is widely used in assessing of environmental corporate reporting (Merkl-Davies and Brennan, 2007). As there is no established disclosure index evaluating quality of tax disclosure particularly associated with tax avoidance concern, I refer to commonly identified news headlines and keywords in the articles. This is based on the assumption that if media attention raises public concern on a particular issue, the increased concern should be matched with increased disclosure (Brown and Deegan, 1998). For example after the news headlines such as “Starbucks paid just £8.6m UK tax in 14 years” (BBC, 2012b) and “Vodafone: No UK tax to pay on £84bn sale” (BBC, 2013), the disclosure regarding corporate tax payments would be expected to increase. The most frequent keyword (non-monetary term) in tax avoidance news is “transparency”,

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Although there can be a difference in definitions distinguishing tax avoidance from tax aggressiveness, news articles use the term “tax avoidance” in a broader context which includes tax dodging and aggressive tax practices.

<sup>9</sup> Although the public tax scrutiny by the UK Public Accounts Committee on 22 November 2012 is perceived to be one of the most pronounced events of 2012, it did not instantly trigger the highest media attention on tax avoidance during 2012. In fact, FACTIVE search results on a monthly basis show that the highest month in terms of the volume of news articles related to tax avoidance was June, followed by December, March and February 2012.

followed by “tax haven(s)”, “corporate social responsibility” and “ethics”. In numerical terms, “effective tax rates” and “tax payments” are very frequently mentioned in the news articles. In fact, these words were also commonly mentioned during the UK Public Accounts Committee hearing of the Amazon, Google and Starbucks cases, as shown in Table 2.

<Insert Table 2 here>

Considering those observations and referring to a tax transparency framework suggested by PwC (2013), I develop a disclosure index (Table 3) which has a direct link to the keywords that have been intensely debated in the news and during the UK hearing. This attempts to evaluate the quality of tax disclosure that addresses tax avoidance concerns specifically and to show to what extent a firm uses discretionary disclosure claiming its disassociation from tax avoidance in its tax reporting. In order to minimize subjectivity, a flexible range of the disclosure quality scale implemented by van Staden and Hooks (2007) is applied (Appendix B). That is, some are scored on a 4-point (0-3), a 3-point (0-2) or a 2-point scale (0-1) which results in a total possible score of 20. An entire annual report is read and evaluated according to the disclosure index, and then a score is assigned for each key tax item found throughout the report.<sup>10</sup> The total score of each firm observation is coded as Qty\_tax, which is a proxy for the quality of tax disclosure within the context of tax avoidance and a firm's self-representation as being disassociated from tax avoidance.

<Insert Table 3 here>

To test the second hypothesis, the extent of a firm’s information provision about its tax position is measured by the number of words in tax disclosure in its financial statements as part of the annual reports, and is coded as TaxDisc. Tax disclosure refers to descriptive information which explains how tax-related financial figures (e.g. income tax expense, tax paid, deferred tax assets) are determined, and such information is found in the notes section of the audited financial statements. The contents of tax disclosure is hand-collected from the financial statements, and then words are counted using TextSTAT (textual analysis software). To test both hypotheses above, I use a difference-in-differences design to control for general trends and develop the following model:

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<sup>10</sup> For example, a firm’s tax risk discussion is commonly found in the governance section of the annual report. Depending on the level of detail, a score of 1 or 2 will be assigned.

$$\text{Disclosure}_{it} = \alpha_0 + \beta_1 \text{Treat} + \beta_2 \text{Post} + \beta_3 \text{Intensity}_{it} + \beta_4 \text{Treat} \times \text{Post} \\ + \beta_5 \text{Treat} \times \text{Post} \times \text{Intensity}_{it} + \beta_6 \text{Control Variables}_{it} + \varepsilon_{it}$$

where  $i$  denotes the sample companies and  $t$  indicates years.

### Independent variables

*Treat* equals one if the firm has been reported in the tax news more than once during the testing period, and equals zero otherwise.  $\beta_1$  indicates the average pre-period difference (i.e. low media attention period) in disclosure between firms that are the subject of tax news (i.e. treatment group) and those not the subject of tax news (i.e. control group). *Post* equals one for firm-year observations ending in 2012-2013 and equals zero in 2010-2011.<sup>11</sup>  $\beta_2$  reflects the control group's average difference in disclosure between the pre- and post-periods (i.e. low vs. high media attention period), thus detecting the change due to general trends.

*Intensity* is the amount of news articles in relation to tax avoidance issues associated with the firm. As only the firms in the treatment group have a value of *Intensity*,  $\beta_3$  captures the effects of the amount of tax news on the disclosure within the treatment group. The interacted form *Treat x Post* aims to see the difference between the groups during the post-period, represented by  $\beta_4$ . The primary interest in this study is  $\beta_5$ , which measures the effects of the amount of tax news on the disclosure of the treatment group after the peak of media attention that is incremental to any general trends observed in the control group.

### Control variables

Building on the assumption that it is a firm's tax aggressiveness that leads to a higher chance of receiving media attention and would therefore affect the extent of its tax disclosure (Blank, 2008; 2009), I control for a firm's tax-related characteristics that affect the firm's aggressive tax practices (Blouin, 2014). These are effective tax rate (ETR), tax havens and foreign sales. ETR has been persistently used as a proxy for tax aggressiveness (Rego, 2003; Hanlon and Heitzman, 2010). It is computed as total tax expense divided by pre-tax income. Consistent

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<sup>11</sup> A different month of fiscal year-end (e.g. non-December year-end) is not specified for this study because FACTIVA search results on a monthly basis show that a heavy volume of tax news is observed throughout 2012 and 2013. Likewise, a relatively lower volume of tax news is observed on a monthly basis throughout years 2010 and 2011.

with prior literature (Dyreng et al., 2008), the value of ETR is Winsorized at 0 and 1. Following the arguments and evidence that tax havens are significantly and positively associated with the level of tax avoidance (Desai et al., 2006; Hanlon et al., 2011), a firm's use of tax havens is considered. The data are provided by ActionAid (2013), which published the full list of tax haven operations of FTSE 100 companies. A significant portion of foreign operations can provide a firm with aggressive tax planning opportunities, such as income shifting, due to different tax rates in the different jurisdictions in which it has a presence (Klassen and Laplante, 2012). Hence, I include the portion of a firm's foreign sales in respect to of total sales as another control variable. For the missing data in the Thomson Reuters Datastream database, I hand-collect from the segment reporting section in the financial statements.

Previous studies identify several determinants that influence the level and quality of corporate disclosure. The effects of the following factors are generally discussed and, accordingly, they are included as control variables: Firm size (*Size*) (Firth, 1979; Lang and Lundholm, 1993), ownership concentration (*Ownership*) (LaPorta et al., 1998; Birt et al., 2006), and age (*Age*) (Roberts, 1992). Firm size is measured as the logarithm of total sales. Ownership concentration is considered as the portion of total outstanding shares held by the top 10 investors in a company. Each sample firm's age is determined from the established year found on the corporate website.<sup>12</sup> Sample firms are classified based on the Industry Classification Benchmark (ICB) code, and industry fixed effects are taken into account.

## **4. Results**

### **4.1. Disclosure quality**

Figure 3 illustrates the comparison of average disclosure scores of each firm observation by group and period, along with the maximum score in each case. At a glance, the average disclosure scores of all items are substantially below the given maximum score of each case, except for the case of effective tax rate (ETR) disclosure.

<Insert Figure 3 here>

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<sup>12</sup> As the origin of a firm is considered to be from the inception of the firm, a firm's age is not disturbed by restructuring or change of legal form.

This suggests that most firms have not actively spoken about their stance on tax avoidance issues and provided the key tax information. The reason that ETR has a relatively higher disclosure score trend is due to the fact that its contents are directly linked to disclosure requirements under accounting standards (International Accounting Standard 12 – Income Taxes). As such, one could argue that the higher disclosure score for the ETR disclosure case is driven by regulatory force, rather than negative news media reports. Nevertheless, the quality of ETR disclosure appears to be slightly higher for the treatment group in the post-period.

Overall differences between the pre- and post-periods and the two groups are not substantial, but in general the disclosure scores of the treatment group and the post-period are higher than those of the pre-period and the control group, except for the case of tax risk management disclosure. It is interesting to see that the firms without media pressure on their tax practices (i.e. control group) disclose their tax risk management more than those firms with media pressure (i.e. treatment group). It appears that establishing tax risk management and publicly discussing it in the annual report reflect corporate “greenwashing”, which is found in the social and environmental accounting literature. Laufer (2003) explains the term “greenwash” as referring to corporations deliberately managing their public presentation so as to “hide deviance, deflect attributions of fault, obscure the nature of the problem or allegation, reattribute blame, ensure an entity’s reputation and, finally, seek to appear in a leadership position” (p. 255).

The score of the tax haven item is not shown in Figure 3 because only one firm (SSE plc) in the dataset mentioned its tax stance towards tax havens. For its uniqueness, it is worth noting its statement, as follows:

SSE does not take an aggressive stance in its interpretation of tax legislation, or use so-called ‘tax havens’ as a means of reducing its tax liability. SSE’s tax policy is to operate within both the letter and spirit of the law at all times (SSE Annual Report 2012 and 2013).

During the post-period, more firms claim their disassociation from aggressive tax practices within the context of ethics or transparency (12% in pre-period, 27% in post-period).

Likewise, firms use words that are directly referring to tax avoidance, such as "aggressive tax practice", "tax avoidance" and "sophisticated tax planning". The selected firms’ disclosure below are good examples in this regard:



The Group's tax planning is consistent with this responsible approach, and it will not enter into arrangements which have tax avoidance as their sole objective. (Burberry, Annual Report 2012/13).

The Group, which is predominantly UK-based, operates a simple business model and does not engage in sophisticated tax planning structures.

(Wm Morrison Supermarkets PLC, Annual Report and Financial Statements 2012/13)

## **4.2. Disclosure trends**

Figures 4 and 5 illustrate the trend of the quality and quantity of tax disclosure during the period of 2010-2013 for the full sample. At a glance, there is no dramatic jump between the pre- (2010-2011) and the post-period (2012-2013) for both disclosure measures. However, the treatment group has a higher average disclosure score and volume of tax disclosure than the control group. With respect to the quality measure, the average disclosure score ranges between 4 and 7 out of the maximum total score of 20. While the average disclosure score appears to remain constant during the period of 2010-2012, a slight shift is observed in 2013. Compared to 2012, the average score of the treatment group in 2013 increased by 1.24 points (5.34 to 6.58), whereas that of the control group increased by 0.6 points. The average total number of words in the tax disclosure in the financial statements ranges between 1,400 and 1,800. The trend regarding quantity of tax disclosure shows a steady growth for both the control and treatment groups. Given that accounting standards continue to increase disclosure requirements with regard to income tax, it is not possible to rule out a general trend to explain the increase in the volume of tax disclosure. To substantiate the differences triggered by media pressure, further analysis is conducted with regression tests, and those results are discussed in section 4.4.

<Insert Figure 4 here>

<Insert Figure 5 here>

## **4.3. Descriptive statistics**

Table 4 presents the descriptive statistics for the variables. The mean value of tax news hits is 2.96, with a high standard deviation of 16.81 due to the major UK banks that have the largest volume of news articles. As shown in Figure 6, the financial sector has the highest number of tax news articles, and this difference is taken into account with industry fixed effects, and by running a separate regression test for the financial industry only. With regard to the

difference between the treatment and the control group, Table 5 presents a univariate comparison for all variables. On average, the treatment group tends to disclose more than the control group, as evidenced by higher mean values. The differences between the control and treatment group including the pre- and post-period comparisons are significant for the total number of words in tax disclosure and the quality of tax disclosure.

Table 6 presents the Pearson correlations for the variables. The correlation analysis illustrates that the amount of tax news and the matter of firms being the subject of tax news are significant and positively correlated to the number of words in tax disclosure and the quality of tax disclosure. The high-attention period is significant and positively correlated to the quality of tax disclosure, and it is not significant for the quantity of tax disclosure in terms of number of words. Taken together, these findings suggest that when a firm is the subject of negative tax news, the chance of the firm's providing more tax disclosure and addressing relevant items of tax avoidance issues would be higher; however, the prediction of the same trend may be uncertain when the compound effects of pre-post effect and the intensity of media pressure are taken into account.

<Insert Table 4 here>

<Insert Table 5 here>

<Insert Table 6 here>

#### **4.4. Multivariate results analysis**

Tables 7 and 7.1 provide the results of the difference-in-differences regression for the entire sample and subsamples of financial and non-financial firms. The reason for separating the financial industry from others is to articulate the collective response of the financial industry to the negative publicity (Herremans et al., 2009), given that the maximum level of media pressure has focused on the financial industry (Figure 6).

<Insert Table 7 here>

<Insert Table 7.1 here>

<Insert Figure 6 here>

## H1: Quality of tax disclosures

Table 7 shows the result that there is an increasing trend of disclosure scores evidenced by the positive and significant coefficient on *Post* ( $p$ -value  $<0.05$ ), but this is insignificant for firms in the financial industry. This indicates that control firms are more likely to improve quality of tax disclosure during the post-period, relative to the pre-period, but this general trend is not applied to the subsample of financial firms. However, when the difference of two groups is combined with the post effect (*Treat x Post*), a positive and significant impact is observed in the financial firms ( $p$ -value  $<0.05$ ), but not for non-financial firms. The strong impact of media intensity on the disclosure score is found for all cases, as evidenced by a significant coefficient of *Treat x Intensity*; however, the direction of the impact is found to be opposite when the entire sample is divided into financial and non-financial groups. That is, the financial firms that have been to the subject of tax avoidance news are more likely to react positively by disclosing more tax items, whereas non-financial firms rather decrease their discussion of key tax items as media attention increases. When the post-period effect is added (*Treat x Intensity x Post*) as a main interest of this test, significance is identified only for the financial industry, but its direction is negative. This finding illustrates an interesting behaviour of the financial firms when their tax practices attract negative publicity. While the financial firms react positively to the media pressure by addressing more key tax items and thus increasing the quality of tax disclosures, they are rather discouraged to do so in relation to media intensity during the high media attention period.

The test results for all three cases do not provide supportive evidence for the first hypothesis (H1). However, there are two noteworthy reverse patterns identified in this test. The first is that the higher the level of media intensity that the non-financial firms face, the less key tax items the non-financial firms discuss in their reports. The second pattern is that the positive reaction of the financial firms to the level of media intensity turns to a negative reaction with its compound effect of the post-period.

## H2: Quantity of tax disclosures

Table 7.1 presents the results of the full sample. It suggests that generally the firms are more likely to increase the volume of tax disclosure during the post-period relative to the pre-period, as the coefficient of *Post* is significant and positive (84.802;  $p$ -value  $<0.05$ ).

However, when subsamples are compared, this significant effect of *Post* appears to be driven by non-financial firms that have a stronger effect. Other independent variables are insignificant for all cases. It appears that the matter of being the subject of news or its interaction with the volume of news articles does not influence the quantity of tax disclosure; therefore there is no evidence to support the second hypothesis (H2).

#### 4.5. Year-by-year and placebo analysis

To test whether there is a significant difference in the quality and volume of tax disclosure in any year between the groups, the variable of *post* is disaggregated into year fixed effects for the years 2011-2013<sup>13</sup> and then interacted with *Treat* and *Intensity*. As such, the following model is developed:

$$\begin{aligned} \text{Disclosure} = & \alpha_0 + \beta_1 \text{Treat} + \beta_2 \text{Intensity}_{it} + \beta_3 \text{Yr2011} + \beta_4 \text{Yr2012} \\ & + \beta_5 \text{Yr2013} + \beta_6 \text{Yr2011} \times \text{Treat} + \beta_7 \text{Yr2012} \times \text{Treat} \\ & + \beta_8 \text{Yr2013} \times \text{Treat} + \beta_9 \text{Yr2011} \times \text{Treat} \times \text{Intensity}_{it} \\ & + \beta_{10} \text{Yr2012} \times \text{Treat} \times \text{Intensity}_{it} + \beta_{11} \text{Yr2013} \times \text{Treat} \times \text{Intensity}_{it} \\ & + \beta_{12} \text{Control Variables}_{it} + \varepsilon_{it} \end{aligned}$$

where *i* denotes the sample companies and *t* indicates years.

Following the hypotheses of this study, the variables of main interest are year interactions with *Treat* and *Intensity*, where  $\beta_{10}$  and  $\beta_{11}$  are expected to be positive and significant in order to support the hypotheses of this study. The regression results are presented in Tables 8 and 8.1.

<Insert Table 8 here>

<Insert Table 8.1 here>

#### H1: Quality of tax disclosures

Overall, it appears that 2013 is the main year that lifts the sensitivity of firms towards media exposure related to tax avoidance. For the entire firms and the subsample, the coefficient of *Yr2013* x *Treat* is significant and positive. This suggests that the firms that are the subject of tax avoidance news are more likely to react positively by increasing their discussion of the

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<sup>13</sup> Year 2010 is the left-out year.

key tax items in their reports, and thus enhancing the quality of tax disclosure. This one-year time lag seems reasonable, given that generally corporate annual reports contain retrospective contents. Therefore, it might be difficult to expect an instant change in tax disclosure in 2012 annual reports as a response to media scrutiny of tax matters during 2012. However, in the following year, firms may be able to change the contents of tax disclosure by addressing more relevant key tax items.

However, when the effect of *Intensity* is interacted, the main focus of this test, different reactions are observed in each case. For the entire sample firms, significance is observed only in 2011, and it is uncertain as to which unidentified factors drive the firms to react positively to the media pressure in 2011 (0.078;  $p$ -value < 0.10), but not in 2012 or 2013. When testing the financial firms separately, significant but negative effects are found in the post-year interaction with *Treat* and *Intensity* (i.e.  $Yr2012*Treat*Intensity$  and  $Yr2013*Treat*Intensity$ ), and the effects are stronger in 2013 (-0.235;  $p$ -value < 0.01) compared to 2012 (-0.201;  $p$ -value < 0.05). On the other hand, insignificant effects of such variables are identified for non-financial firms. In short, the result of this year-by-year analysis is consistent with the main test, above, and further confirms that the hypothesis of a positive relationship between the disclosure score and the level of media intensity during the post-period (H1) is not supported. Rather, an inverse relationship is identified with regard to the firms in the financial industry.

## H2: Quantity of tax disclosures

Testing results of the entire sample show a significant and positive effect found in 2012 and 2013 ( $p$ -value < 0.05; < 0.01 respectively), but insignificant effect for all of the year-interacted variables. From the subsample testing, a similar trend is also observed for non-financial firms. Such a general increase trend in the volume of tax disclosure in the post-period appears to reflect the ongoing amendments of International Accounting Standard 12 – Income Taxes which continually add disclosure requirements throughout the period. However, the same pattern does not apply to the case of the financial industry. It appears that the pre-post effect does not play a key role in influencing the extent of tax disclosure of the financial firms, as the positive and significant effect is already identified in 2011 ( $p$ -value < 0.05). Moreover, the coefficients of year-interacted form ( $Year*Treat*Intensity$ ) are also significant for all years ( $p$ -value < 0.10) which barely differentiate more pronounced effects during the post-period. Arguably, strengthening banking regulations in the UK could be attributed to the growth of

tax disclosure by the financial firms throughout the years. Among others, the UK government introduced the Code of Practice on Taxation for Banks in 2009 and the tax authorities (HMRC) published their governance Protocol on a Bank's Compliance with the Code in March 2012.<sup>14</sup> Similarly, there has been an increasing tax regulation of capital instruments by the UK tax authorities (HMRC) following the reform by the Basel Committee on Banking Supervision in June 2011.<sup>15</sup> The direct correlation of such regulatory impacts, however, has not been confirmed in this test.

Nevertheless, the test results cannot confirm that the volume of tax disclosure is higher when the firms were the subject of tax avoidance news during the high media attention period, based on the following results: first, the main interest of coefficients of  $Yr2012 * Treat * Intensity$  and  $Yr2013 * Treat * Intensity$  ( $\beta_{10}$  and  $\beta_{11}$ ) are insignificant for the full-sample and subsample for the non-financial test. Despite being significant for financial firms, the effects are not distinguished from the prior year (i.e. 2011); therefore the second hypothesis (H2) is not supported.

#### **4.6. Spillover effects analysis**

Given that the above test results document the positive and significant coefficients for the variables *Post* and *Y2013*, a question still remains as to why the control group also increases the quality and quantity of tax disclosure without a direct relationship with tax avoidance news. Presumably, an equally significant influence could come from peer pressure and industry spillover effects that have been identified in other types of corporate wrongdoings (Zavyalova et al., 2012). In other words, overall intensity of media pressure on tax avoidance would influence the firms not the subject of media attention (i.e. control group). By considering two factors, spillover from the same industry and outside industry,<sup>16</sup> these further tests attempt to explore determinants of the case of the control group. As such, the following two models are tested:

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<sup>14</sup> HMRC (2013). Strengthening the Code of Practice on Taxation for Banks, available at [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/204321/130530\\_Code\\_consultation\\_Docprint\\_version.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/204321/130530_Code_consultation_Docprint_version.pdf).

<sup>15</sup> HMRC (2011). Guidance on Basel III: Tax Treatment of Regulatory Capital Instruments, available at <https://www.gov.uk/government/publications/basel-iii-tax-treatment-of-regulatory-capital-instruments>.

<sup>16</sup> Spillover within industry refers to a total number of tax avoidance news articles associated with the same industry of the firm, and outside the industry refers to a total tax avoidance articles, except for the industry of the firm.

$$\text{Disclosure} = \alpha_0 + \beta_1 \text{Post} + \beta_2 \text{Spillover\_within}_{it} + \beta_3 \text{Spillover\_within}_{it} \times \text{Post} \\ + \beta_4 \text{Control Variables}_{it} + \varepsilon_{it}$$

$$\text{Disclosure} = \alpha_0 + \beta_1 \text{Post} + \beta_2 \text{Spillover\_outside}_{it} + \beta_3 \text{Spillover\_outside}_{it} \times \text{Post} \\ + \beta_4 \text{Control Variables}_{it} + \varepsilon_{it}$$

where  $i$  denotes the sample companies and  $t$  indicates years.

$\text{Spillover\_within}_{it}$  refers to the total number of tax avoidance news articles of the treatment group within the same industry.  $\text{Spillover\_outside}_{it}$  refers to the total number of articles excluding the same industry as the firm. Therefore, those two variables will have a constant number by industry and year. Tables 9 and 9.1 show the regression results.

<Insert Table 9 here>

<Insert Table 9.1 here>

Similar to the main findings, the spillover effects within and across the sector do not have any impact on the volume of tax disclosure. For the case of the spillover effects within industry, the post effect does not diminish, as the coefficients of disclosure score and tax disclosure are significant and positive at the 10% and 5% levels, respectively. Thus, it is difficult to assert a direct relationship between the increased disclosure score and tax disclosure during the post-period and the degree of media attention within and across the industry. A plausible explanation for the growth in the disclosure score would be that the control group also reacts to increasing public awareness of tax avoidance mixed with social disaffirmation and intense media attention on corporate tax issues in general. Likewise, it appears that the firms tend to comply with the regulatory requirement of increased tax-related disclosure, regardless of whether they are criticized by the media. Nevertheless, there may be other unobserved factors which have not been discovered in this study.

## **5. Discussion and conclusion**

The media agenda-setting theory (McCombs and Shaw, 1972; McCombs, 2014) and previous studies of organizational impression management (Merkl-Davies and Brennan, 2007) suggest that public perception shaped by news media plays a significant role in threatening overall corporate reputation and image. Following this view, firms are expected to reflect escalating

media pressure on corporate tax avoidance issues when they communicate their tax affairs in their annual reports. This study empirically examines whether there is a relationship between increased media attention and corporate tax reporting behaviours. The test is based on the obvious discontinuity observed during the period from 2010 to 2013 in terms of the amount of news coverage of corporate tax avoidance. Such a natural external experimental setting allows for a separation of the test periods into low (Pre) and high (Post) media attention periods, while grouping the sample firms according to whether or not their tax practices were reported by media (i.e. treatment vs. control group).

To assess the relationship with media intensity by period, both qualitative and quantitative disclosure measures are used. The tax disclosure score is used to evaluate the extent to which the firms explicitly address the most relevant tax items that can mitigate tax avoidance concerns. The quantitative measure of tax disclosure by counting the total number of words is intended to capture the changes in the volume of tax disclosure.

In contrast to the prediction set out in the hypotheses, the test does not find evidence to support the hypotheses with regard to both disclosure measures. The observed general increase in the quality and quantity of tax disclosure are not associated with the recent increasing news media attention on corporate tax avoidance. As regards the quality of tax disclosure, the firms that have been the subject of negative tax news are more likely to respond to separate effects of media intensity and post-period effect by improving their tax disclosure. However, the combined effects of media intensity and post-period effect diminishes such positive reactions. For the financial firms that received the highest level of media attention, a negative relationship between disclosure quality and intensity is identified. That is, they rather decrease the discussion of key tax items in their reports as intensity increases. This can be attributed to a marginally decreasing effect of intensity as observed. Firms with high intensity react less to an increase in media attention than those with low intensity. As regards the volume of tax disclosure, it appears that the increasing trend of volume of tax disclosure is driven by the general increase in regulatory and accounting standards disclosure requirements, rather than by media pressure. In short, the results suggest that the increased media scrutiny of corporate tax avoidance itself does not necessary induce the improvement in corporate tax disclosure in terms of both quality and quantity; rather it can discourage firms to openly discuss sensitive tax issues.

The findings of this study provide a novel insight into corporate reporting behaviour with



regard to tax avoidance concerns. More significantly, they highlight that corporate tax reporting is, by its nature, different from other types of corporate social and environmental disclosure. The commonly identified positive relationship between the level of media exposure and the extent of disclosure (Deegan and Rankin, 1996; Darrell and Schwartz, 1997; Brown and Deegan, 1998; Neu et al., 1998; Bewley and Li, 2000; Deegan et al., 2000; 2002; Islam and Deegan, 2010) is not found in the case of corporate tax avoidance. It appears that a “do-not-respond” strategy (Benoit, 1997; Elsbach et al., 1998; van Staden, 2006) is more predominant than “over-disclosure” strategies (Blank 2008; 2009), especially when the media scrutiny of corporate tax reaches the maximum level.

This study is subject to some limitations. First, due to the small number of firm-year observations, it is possible that the sample data may not be able to fully capture the actual pattern of a change in the corporate annual reports in the longer term. Second, the qualitative attributes in corporate tax reporting are assessed within narrow criteria as such overall credibility as to how genuine or faithful the tax information firms provide is not determined.

The implications of this study are as follows. The notion of the agenda-setting role of news media (McCombs and Reynolds, 2002) is not well translated into a corporate tax reporting setting. Although a high level of media attention on tax avoidance is able to influence public perception of the wrongdoing firms, it does not play an essential role in increasing and improving tax disclosure. Rather, overly focused media pressure can bring about unintended outcomes, including firms’ decreased provision of the most publicly demanded tax information. This calls into question the real efficacy of the whole tax transparency agenda that has been heavily promoted by news media. Considering that firms establish the optimal level of disclosure policies based on a firm-specific cost-benefit analysis (e.g. Gigler and Hemmer, 2001), one single factor of external influence of the overheated media coverage of a firm’s tax affairs may not be able to shift the level of tax disclosure in an upward direction.

One could also cast doubt on the credibility of news contents, as the news deliberately targets certain companies for popular appeal. By endorsing the actions of the protest groups against those targeted firms, news media may seek public attention on its news platform while maximizing public outrage towards multinational companies. This disputable effect of news media on corporate tax reporting leads to further questions as to what other factors might ultimately stimulate firms to voluntarily disclose more informative and faithful tax

information to public, other than regulatory enforcement such as accounting standards (e.g. International Financial Reporting Standards (IFRS)). Given that the extent to which a firm is willing to provide the detailed and key tax information is largely determined by corporate managers, possible determinants could be found by linking to the individual characteristics of tax managers who take a more conservative approach towards tax management (Mulligan and Oats, 2009).

Future research can be expanded to include other types of corporate communications such as press releases, corporate websites and corporate social responsibility reports. Cross-country analysis can also be considered, given the fact that each country's different factors influence corporate reporting, such as the level of media pressure; stakeholders; and social, political, cultural and economic contexts (Adams, 2002). By examining a larger number of years and sample firms, one can observe how long such negative media effects might last by monitoring any form of change in corporate reporting behaviours.

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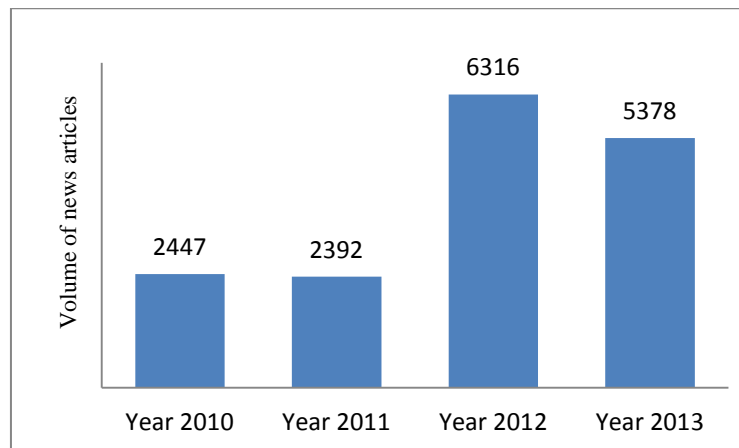
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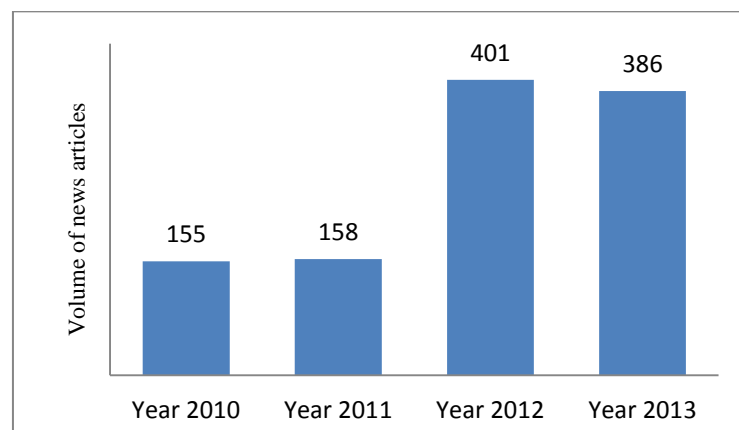


Figure 1: Amount of news on tax avoidance in the UK major news media (Unspecified firms)



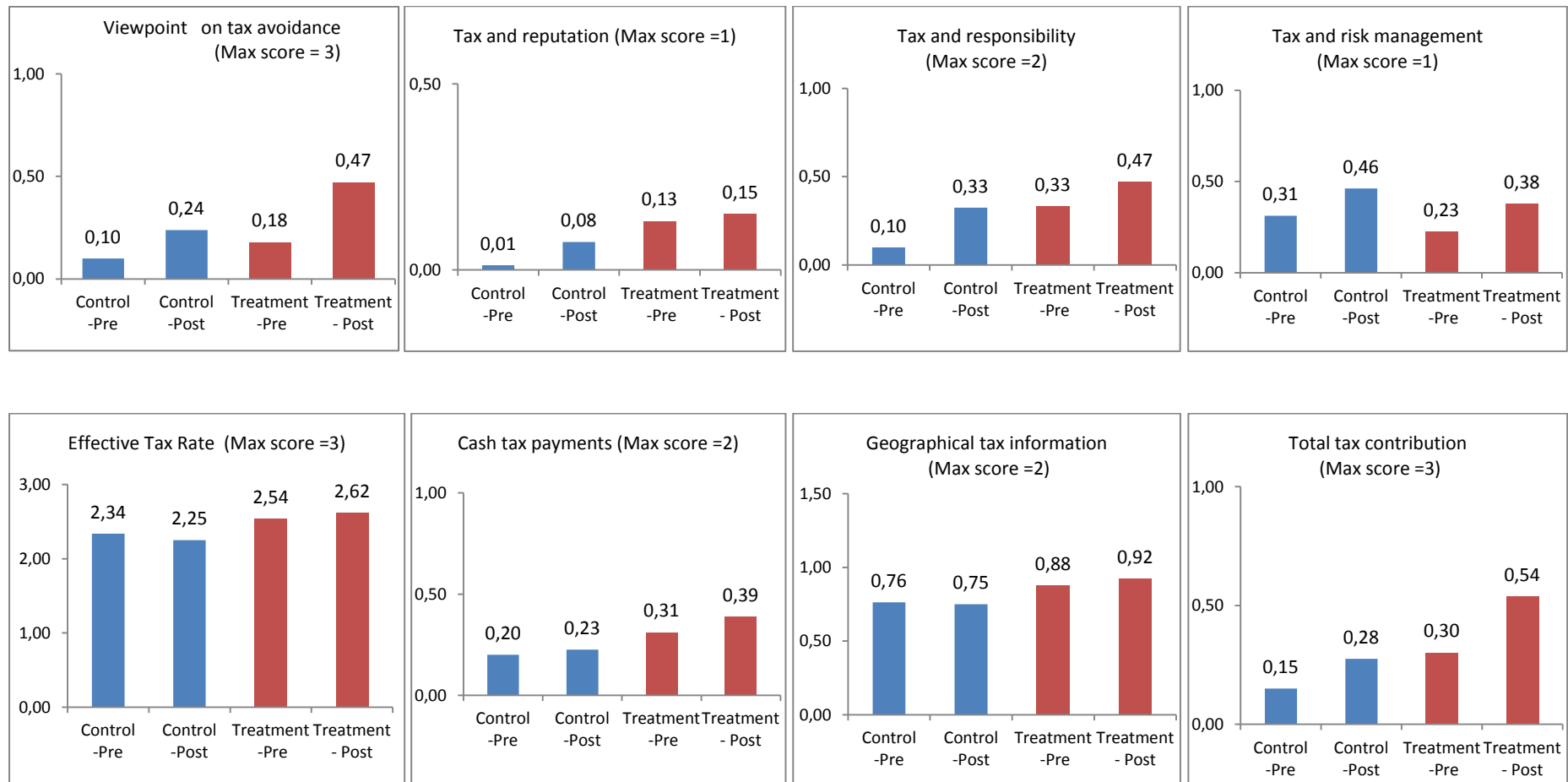
Per FACTIVA news article search with the following key words: "tax avoidance", "tax evasion", "tax loophole(s)", "tax haven(s)", "tax transparency" and "aggressive tax planning".

Figure 2: Amount of news on tax avoidance in the UK major news media (Sample firms)



Per FACTIVA news article search with the following key words: "tax avoidance", "tax evasion", "tax loophole(s)", "tax haven(s)", "tax transparency" and "aggressive tax planning".

Figure 3: Average disclosure score by group and period



n=80: Control-pre, Control-post;

n=106: Treatment-pre, Treatment-post

Tax Havens: Only one company in post-period has mentioned its tax position regarding having subsidiaries in tax haven.

Figure 4: Quality of tax disclosure: average disclosure score (Maximum score = 20)

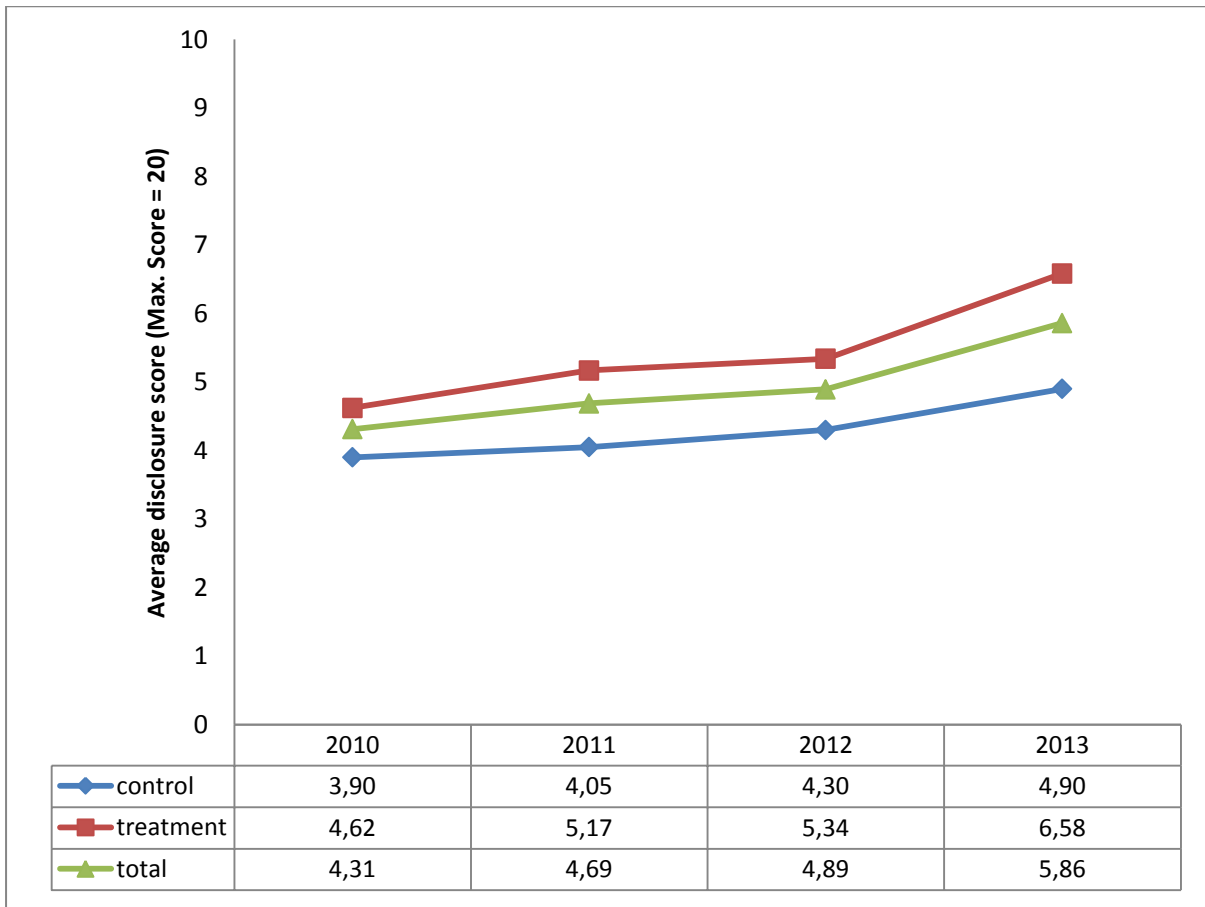


Figure 5: Quantity of tax disclosure: Total number of words in tax disclosure

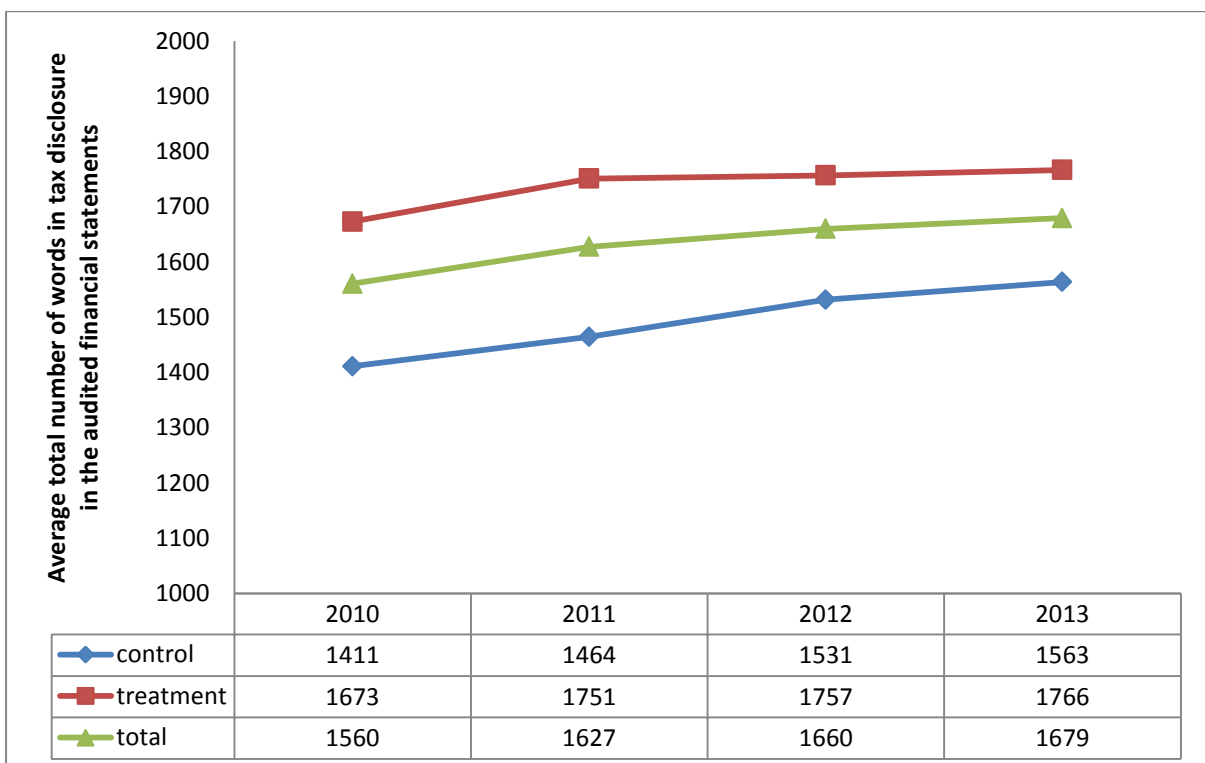
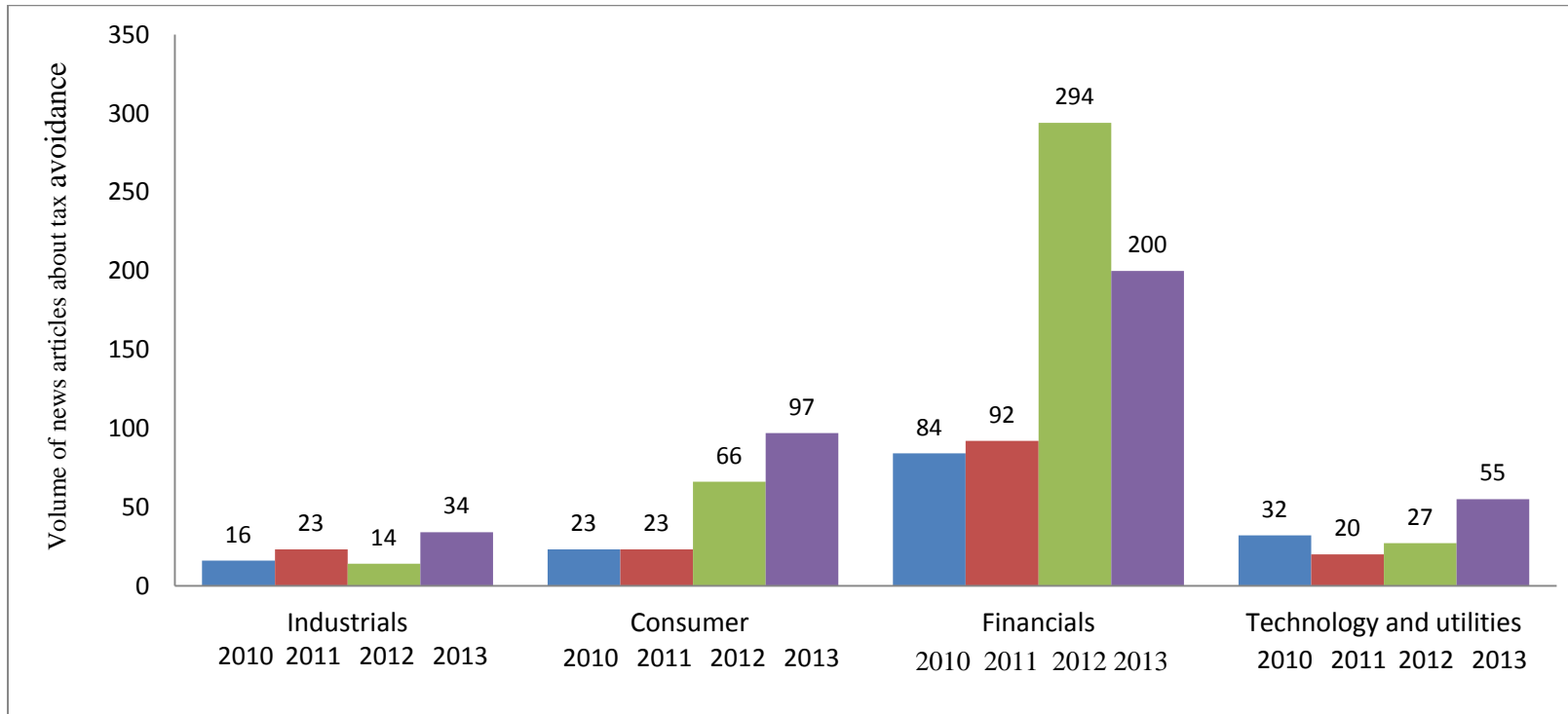


Figure 6: Volume of news articles about tax avoidance by industry during the period 2010-2013



Industries are clustered as: Industrials = Basic Materials, Industrial, Oil and Gas; Consumer = Consumer Goods, Consumer Services, Healthcare; Financials = Banks and Financial services; Technology and Utilities = Technology, Telecommunication, Utilities.

Table 1: Sample construction

Pre	Post	Treatment group	Control group
Years 2010-2011	Years 2012-2013	Number of firms = 53	Number of firms = 40
Low media attention	High media attention	$\sum_{t=1}^4 \text{Tax news hits} > 0$	$\sum_{t=1}^4 \text{Tax news hits} = 0$

t = 1: year 2010, t = 2: year 2011, t = 3 year 2012, t = 4 year 2013

Table 2: Keywords in tax avoidance news articles and during the UK hearing

News Subjects	Keywords	Amount of News Articles				# mentioned during the UK Hearing
		Yr. 2010	Yr. 2011	Yr. 2012	Yr. 2013	
Tax avoidance + (or),	Transparency	40	72	190	448	15
	Ethics	4	13	72	52	8
Aggressive tax planning + (or),	Tax haven	89	50	244	231	15
	Effective Tax Rate	195	209	676	306	25
Tax evasion +	Tax payments	73	43	238	151	52

Table 3: Tax disclosure index (adapted from PwC Tax Transparency Framework, (PwC, 2013))

Key tax items	Checklist Description (0 = no mention)	Max Score
Viewpoint on tax avoidance	Discussion of tax policies and strategies within the context of: <ul style="list-style-type: none"> <li>• Transparency</li> <li>• Corporate Ethics</li> <li>• Disclaimer about potential tax avoidance</li> </ul> (1= mention)	1 1 1
Reputational risk	Acknowledgement of corporate reputational risk associated with tax (1= mention)	1
Tax haven	Information of subsidiaries located in tax havens (1= mention)	1
Responsibilities	Clear indication of who is responsible for tax affairs. (1= mention, 2= elaborate)	2
Tax risk	Explanation of tax risk management and how it is handled (1= mention, 2= elaborate)	2
Effective tax rate (ETR)	<ul style="list-style-type: none"> <li>• Discussion of tax charge in relation to corporate profits</li> <li>• Clear reconciliation of the tax charge to the statutory rate</li> <li>• Explicitly determined ETR as percentage %.</li> </ul> (1= indicated)	1 1 1
Cash tax payments	<ul style="list-style-type: none"> <li>• Discussion of cash tax payments in relation to corporate profits</li> <li>• Clear reconciliation of cash tax payments to the tax charge</li> <li>• Explicitly determined cash tax rate as percentage %.</li> </ul> (1= indicated)	1 1 1
Geographical tax information	Geographically broken-down tax information (1= minimum coverage, 2= disaggregated tax charges or payments by region or jurisdiction)	2
Total tax contribution	Showing economic contribution of a company by paying varies types. (1= mention; 2= elaborate; 3= comprehensive)	3
<b>Total Score</b>		<b>20</b>

Quality Scale – Disclosure concerning tax avoidance (adapted from van Staden and Hooks, 2007, p. 202)  
0 = None: no discussion of the issue; 1 = Mention; minimum coverage, little detail; 2 = Elaborate: the impact tax management of the company or its policies was clearly evident with detailed descriptions.  
3= Comprehensive: detailed descriptions supported by defined in monetary terms or actual physical quantities.

Table 4: Descriptive statistics: Full sample (n=372)

<b>Variables</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min</b>	<b>p25</b>	<b>Median</b>	<b>p75</b>	<b>Max</b>
TaxDisc	1631	627	554	1208	1493	1990	5491
Qty_tax	4.938	2.780	0.000	3.000	4.000	6.000	16.000
Treatment	0.570	0.496	0.000	0.000	1.000	1.000	1.000
Post	0.500	0.501	0.000	0.000	0.500	1.000	1.000
Intensity	5.189	16.806	0.000	0.000	1.000	3.000	195.000
ETR	0.258	0.152	0.000	0.186	0.250	0.306	1.000
Foreign_Sales	0.559	0.363	0.000	0.159	0.619	0.899	1.000
Havens	85.108	117.957	0.000	19.000	47.000	95.000	618.000
Size	8.745	1.415	4.911	7.608	8.848	9.714	12.590
Ownership	0.393	0.171	0.111	0.276	0.346	0.464	0.930
Age	112.511	83.937	2.000	30.000	110.000	287.000	323.000

TaxDisc = total number of words in tax disclosure in the audited financial statements, Qty\_tax = total score of tax disclosure according to the checklist (Appendix A); Treat= "1" if the firm has been reported in the tax news more than once during the testing period and equals "0" otherwise; Post = "1" for firm-year observations ending in 2012-2013 and "0" for otherwise. Intensity = the amount of news articles in relation to tax avoidance issues associated with the firm; ETR = effective tax rate (tax expense divided by pre-tax income), bounded between [0,1]; Foreign\_Sales = foreign sales divided by total sales; Havens = total number of a firm's offshore subsidiaries in tax havens; Size = company size, measured as logarithm of total sales; Ownership = the portion of total outstanding shares held by top 10 investors; Age = company age.

Table 5: Descriptive statistics for the sample of firms with tax news (treatment) and firms without tax news (control)

Variables	Mean			Median		
	Treatment (n = 212)	Control (n =160)	Diff (p-value)	Treatment (n = 212)	Control (n =160)	Diff (p-value)
TaxDisc	1,736.0	1,492.0	244.0***	1,624.0	1,428.0	196.0***
Pre	1,712.0	1,438.0	274.0***	1,503.0	1,325.0	178.0
Post	1,761.0	1,547.0	214.0**	1,659.0	1,440.0	219.0*
Qty_tax	5.429	4.287	1.142***	5.000	5.000	0.000
Pre	4.896	3.975	0.921**	4.000	5.000	1.000
Post	5.962	4.600	1.362***	5.000	5.000	0.000**
Intensity	5.189	0.000	5.189***	1.000	0.000	1.000***
ETR	0.277	0.234	0.043**	0.259	0.234	0.025
Foreign_Sales	0.500	0.636	-0.136***	0.570	0.801	-0.231***
Havens	117.226	42.550	74.676***	65.000	27.000	38.000***
Size	9.179	8.169	1.010***	9.413	8.010	1.403***
Ownership	0.384	0.404	-0.020*	0.336	0.349	-0.013
Age	115.613	108.400	7.213	109.000	119.000	-10.000

TaxDisc = total number of words in tax disclosure in the audited financial statements, Qty\_tax = total score of tax disclosure according to the checklist (Appendix A); Treatment = if the firm has been reported in the tax news more than once during the testing period, and Control = otherwise; Post = firm-year observations ending in 2012-2013; Pre = firm year observation ending in 2010-2011. Intensity = the amount of news articles in relation to tax avoidance issues associated with the firm; ETR = effective tax rate (tax expense divided by pre-tax income), bounded between [0,1]; Foreign\_Sales = foreign sales divided by total sales; Havens = total number of a firm's offshore subsidiaries in tax havens; Size = company size, measured as logarithm of total sales; Ownership = the portion of total outstanding shares held by top 10 investors; Age = company age. \*, \*\* and \*\*\* denote significance at 10%, 5% and 1%, respectively.



Table 6: Pearson correlations (n=372)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
TaxDisc	(1)	1.000										
Qty_tax	(2)	0.3301***	1.000									
Post	(3)	0.060	0.157***	1.000								
Treat	(4)	0.193***	0.204***	0.000	1.000							
Intensity	(5)	0.144***	0.221***	0.099*	0.199***	1.000						
ETR	(6)	0.059	0.062	0.040	0.138***	0.308***	1.000					
Foreign_Sales	(7)	0.094*	0.001	-0.115**	-0.187***	-0.065	0.039	1.000				
Havens	(8)	0.286***	0.161***	0.000	0.314***	0.429***	0.114**	0.118**	1.000			
Size	(9)	0.347***	0.178***	0.038	0.354***	0.251***	0.196***	0.144***	0.597***	1.000		
Ownership	(10)	-0.020	0.028	0.000	-0.057	-0.078	-0.140***	-0.192***	-0.248***	-0.351***	1.000	
Age	(11)	0.088*	0.089*	0.012	0.043	0.250***	0.051	0.150***	0.265***	0.329***	-0.255***	1.000

TaxDisc = total number of words in tax disclosure in the audited financial statements, Qty\_tax = total score of tax disclosure according to the checklist (Appendix A); Treat = "1" if the firm has been reported in the tax news more than once during the testing period and equals "0" otherwise; Post = "1" for firm-year observations ending in 2012-2013 and "0" for otherwise. Intensity = the amount of news articles in relation to tax avoidance issues associated with the firm; ETR = effective tax rate (tax expense divided by pre-tax income), bounded between [0,1]; Foreign\_Sales = foreign sales divided by total sales; Havens = total number of a firm's offshore subsidiaries in tax havens; Size = company size, measured as logarithm of total sales; Ownership = the portion of total outstanding shares held by top 10 investors; Age = company age. \*, \*\* and \*\*\* denote significance at 10%, 5% and 1%, respectively.

Table 7: The impact of tax news on disclosure: Disclosure score (H1)

Code	Disclosure score (H1)		
	Full-Sample	Non-Financial Firms	Financial Firms
	Coefficient (Std.Err)	Coefficient (Std.Err)	Coefficient (Std.Err)
Treat	0.519 (0.552)	0.375 (0.553)	1.545 (1.611)
Post	0.668** (0.301)	0.740** (0.358)	0.535 (0.347)
Intensity	0.129* (0.077)	-0.173** (0.065)	0.204*** (0.044)
Treat * Post	0.678* (0.373)	0.597 (0.442)	2.174** (0.773)
Treat * Post * Intensity	-0.109 (0.067)	0.033 (0.057)	-0.188*** (0.035)
ETR	0.011 (1.262)	1.008 (1.747)	-1.385 (1.481)
Foreign sales	0.637 (0.648)	0.744 (0.595)	2.901 (2.110)
Havens	0.000 (0.003)	0.000 (0.003)	-0.000 (0.009)
Size	0.073 (0.230)	0.054 (0.216)	-0.297 (0.805)
Ownership	1.211 (1.923)	2.573 (2.211)	-3.597 (4.715)
Age	0.001 (0.004)	-0.002 (0.004)	0.003 (0.007)
Constant	2.755 (2.359)	2.178 (2.474)	6.111 (7.267)
Industry fixed effects	Yes	Yes	No
Cluster by firm	Yes	Yes	Yes
Observations	372	300	72
Adj. R <sup>2</sup>	0.121	0.122	0.293

Treat = "1" if the firm has been reported in the tax news more than once during the testing period and equals "0" otherwise; Post = "1" for firm-year observations ending in 2012-2013 and "0" for otherwise. Intensity = the amount of news articles in relation to tax avoidance issues associated with the firm; ETR = effective tax rate (tax expense divided by pre-tax income), bounded between [0,1]; Foreign\_Sales = foreign sales divided by total sales; Havens = total number of a firm's offshore subsidiaries in tax havens; Size = company size, measured as logarithm of total sales; Ownership = the portion of total outstanding shares held by top 10 investors; Age = company age. I report robust standard errors clustered by entity in parentheses. \*, \*\* and \*\*\* denote significance at 10%, 5% and 1%, respectively.

Table 7.1: The impact of tax news on disclosure: # Words in tax disclosure (H2)

	# Words in tax disclosure (H2)		
	Full-Sample	Non-Financial Firms	Financial Firms
Code	Coefficient (Std.Err)	Coefficient (Std.Err)	Coefficient (Std.Err)
Treat	162.944 (146.546)	70.954 (136.646)	432.942 (418.166)
Post	106.203** (44.293)	152.863*** (50.522)	-68.887 (80.967)
Intensity	-1.875 (7.684)	11.720 (8.683)	-16.436 (14.191)
Treat * Post	-65.485 (69.260)	-75.305 (67.316)	-91.992 (291.259)
Treat* Post * Intensity	1.996 (5.960)	-4.652 (11.227)	14.083 (12.600)
ETR	-125.393 (257.967)	-144.894 (345.343)	191.310 (184.662)
Foreign sales	104.775 (176.204)	120.773 (160.557)	286.467 (518.594)
Havens	0.691 (0.499)	1.564*** (0.450)	-0.248 (1.344)
Size	129.160** (51.624)	11.999 (44.093)	294.302 (222.900)
Ownership	236.102 (446.740)	837.603 (526.817)	-369.047 (1161.764)
Age	-0.313 (0.636)	-0.930 (0.748)	0.083 (1.620)
Constant	503.980 (614.673)	1171.208 (601.260)	-949.271 (2217.668)
Industry fixed effects	Yes	Yes	No
Cluster by firm	Yes	Yes	Yes
Observations	372	300	72
Adj. R <sup>2</sup>	0.218	0.265	0.419

Treat = "1" if the firm has been reported in the tax news more than once during the testing period and equals "0" otherwise; Post = "1" for firm-year observations ending in 2012-2013 and "0" for otherwise. Intensity = the amount of news articles in relation to tax avoidance issues associated with the firm; ETR = effective tax rate (tax expense divided by pre-tax income), bounded between [0,1]; Foreign\_Sales = foreign sales divided by total sales; Havens = total number of a firm's offshore subsidiaries in tax havens; Size = company size, measured as logarithm of total sales; Ownership = the portion of total outstanding shares held by top 10 investors; Age = company age. I report robust standard errors clustered by entity in parentheses. \*, \*\* and \*\*\* denote significance at 10%, 5% and 1%, respectively.

Table 8: Year-by-year and placebo analysis: Disclosure score (H1)

	Disclosure score (H1)		
	Full-Sample	Non-Financial Firms	Financial Firms
Code	Coefficient (Std.Err)	Coefficient (Std.Err)	Coefficient (Std.Err)
Treat	0.475 (0.547)	0.244 (0.588)	1.377 (1.525)
Intensity	0.083 (0.086)	-0.161*** (0.054)	0.225** (0.092)
Yr2011	0.149 (0.141)	0.165 (0.166)	0.043 (0.320)
Yr2012	0.407 (0.310)	0.457 (0.369)	0.342 (0.440)
Yr2013	1.114*** (0.399)	1.230** (0.484)	0.729 (0.508)
Yr2011 * Treat	0.143 (0.261)	0.361 (0.292)	0.768 (0.795)
Yr2012 * Treat	0.372 (0.393)	0.539 (0.461)	1.620 (0.931)
Yr2013 * Treat	1.175** (0.561)	1.177* (0.683)	3.991*** (1.282)
Yr2011 * Treat * Intensity	0.078* (0.040)	-0.102 (0.098)	-0.031 (0.073)
Yr2012 * Treat * Intensity	-0.059 (0.080)	-0.073 (0.057)	-0.201** (0.084)
Yr2013 * Treat * Intensity	-0.082 (0.064)	0.011 (0.068)	-0.235*** (0.075)
ETR	0.227 (1.268)	0.842 (1.768)	-1.123 (1.871)
Foreign sales	0.842 (0.661)	0.975 (0.606)	3.663 (2.229)
Havens	0.000 (0.003)	0.000 (0.003)	0.000 (0.010)
Size	0.064 (0.229)	0.061 (0.217)	-0.423 (0.848)
Ownership	1.364 (1.933)	2.621 (2.256)	-3.591 (4.938)
Age	0.001 (0.004)	-0.003 (0.004)	0.004 (0.007)
Constant	2.433 (2.357)	1.885 (2.519)	6.491 (7.579)
Industry fixed effects	Yes	Yes	No
Cluster by firm	Yes	Yes	Yes
Observations	372	300	72
Adj. R <sup>2</sup>	0.135	0.147	0.258

Treat = "1" if the firm has been reported in the tax news more than once during the testing period and equals "0" otherwise; Intensity = the amount of news articles in relation to tax avoidance issues associated with the firm; ETR = effective tax rate (tax expense divided by pre-tax income), bounded between [0,1]; Foreign\_Sales = foreign sales divided by total sales; Havens = total number of a firm's offshore subsidiaries in tax havens; Size = company size, measured as logarithm of total sales; Ownership = the portion of total outstanding shares held by top 10 investors; Age = company age. I report robust standard errors clustered by entity in parentheses. \*, \*\* and \*\*\* denote significance at 10%, 5% and 1%, respectively.

Table 8.1: Year-by-year and placebo analysis: # Words in tax disclosure (H2)

	# Words in tax disclosure (H2)		
	Full-Sample	Non-Financial Firms	Financial Firms
Code	Coefficient (Std.Err)	Coefficient (Std.Err)	Coefficient (Std.Err)
Treat	167.296 (150.841)	64.140 (147.951)	556.830 (464.223)
Intensity	-7.161 (9.495)	9.769 (7.909)	-42.388** (19.750)
Yr2011	43.487 (40.571)	26.718 (46.373)	228.320** (95.434)
Yr2012	106.230* (54.509)	139.997** (64.672)	5.419 (62.962)
Yr2013	150.741** (62.064)	194.202*** (73.468)	56.158 (130.045)
Yr2011 * Treat	-6.366 (51.955)	11.430 (59.635)	-196.102 (134.049)
Yr2012 * Treat	-57.367 (73.572)	-64.120 (75.468)	-161.069 (361.645)
Yr2013 * Treat	-81.640 (82.681)	-67.083 (103.583)	-326.171 (320.441)
Yr2011 * Treat * Intensity	9.067 (8.376)	7.282 (13.402)	30.487* (17.126)
Yr2012 * Treat * Intensity	7.331 (8.339)	-0.445 (8.168)	38.095* (19.308)
Yr2013 * Treat * Intensity	6.711 (7.157)	-4.690 (18.666)	37.507* (18.944)
ETR	-101.036 (266.125)	-146.461 (352.704)	506.028** (200.558)
Foreign sales	110.043 (181.196)	129.178 (165.513)	191.818 (552.435)
Havens	0.698 (0.504)	1.556*** (0.453)	0.098 (1.311)
Size	128.862** (52.019)	11.448 (44.704)	295.181 (231.849)
Ownership	244.006 (450.324)	841.051 (532.694)	-248.798 (1257.312)
Age	-0.314 (0.643)	-0.927 (0.758)	0.240 (1.704)
Constant	469.437 (619.988)	1153.949* (608.003)	-1211.958 (2401.066)
Industry fixed effects	Yes	Yes	No
Cluster by firm	Yes	Yes	Yes
Observations	372	300	72
Adj. R <sup>2</sup>	0.206	0.251	0.383

Treat = "1" if the firm has been reported in the tax news more than once during the testing period and equals "0" otherwise; Intensity = the amount of news articles in relation to tax avoidance issues associated with the firm; ETR = effective tax rate (tax expense divided by pre-tax income), bounded between [0,1]; Foreign\_Sales = foreign sales divided by total sales; Havens = total number of a firm's offshore subsidiaries in tax havens; Size = company size, measured as logarithm of total sales; Ownership = the portion of total outstanding shares held by top 10 investors; Age = company age. I report robust standard errors clustered by entity in parentheses. \*, \*\* and \*\*\* denote significance at 10%, 5% and 1%, respectively.

Table 9: Spillover effects: Within industry

	Control group	
	Disclosure score (H1)	# Words in tax disclosure (H2)
Code	Coefficient (Std.Err)	Coefficient (Std.Err)
Post	0.671* (0.374)	133.719** (55.681)
Spillover_within	-0.012 (0.013)	3.517 (2.579)
Spillover_within * Post	0.007 (0.010)	-2.947 (1.929)
ETR	2.852* (1.644)	-148.261 (336.050)
Foreign sales	-0.230 (0.625)	-35.857 (211.301)
Havens	0.021* (0.010)	3.337 (2.385)
Size	0.064 (0.317)	105.656 (76.143)
Ownership	1.454 (2.518)	151.78** (62.270)
Age	-0.004 (0.006)	1.592 (1.207)
Constant	1.559 (2.282)	-76.599 (586.134)
Industry fixed effects	Yes	Yes
Cluster by firm	Yes	Yes
Observations	160	160
Adj. R <sup>2</sup>	0.266	0.183

Post = "1" for firm-year observations ending in 2012-2013 and "0" for otherwise. Intensity = the amount of news articles in relation to tax avoidance issues associated with the firm; Spillover = total number of tax avoidance news articles of the treatment group within the same industry; Spillover\_outside = total number of the articles except for the same industry of the firm. ETR = effective tax rate (tax expense divided by pre-tax income), bounded between [0,1]; Foreign\_Sales = foreign sales divided by total sales; Havens = total number of a firm's offshore subsidiaries in tax havens; Size = company size, measured as logarithm of total sales; Ownership = the portion of total outstanding shares held by top 10 investors; Age = company age. I report robust standard errors clustered by entity in parentheses. \*, \*\* and \*\*\* denote significance at 10%, 5% and 1%, respectively.



Table 9.1: Spillover effects: Outside industry

	Control group	
	Disclosure score (H1)	# Words in tax disclosure (H2)
Code	Coefficient (Std.Err)	Coefficient (Std.Err)
Post	0.278 (0.840)	-183.934 (147.831)
Spillover_outside	0.003 (0.016)	-3.535 (2.892)
Spillover_outside * Post	-0.001 (0.011)	2.933 (2.079)
ETR	2.792 (1.658)	-149.839 (337.335)
Foreign sales	-0.245 (0.625)	-34.134 (211.884)
Havens	0.021* (0.010)	3.330 (2.381)
Size	0.068 (0.317)	105.819 (76.139)
Ownership	1.445 (2.521)	151.86** (62.308)
Age	-0.004 (0.006)	1.592 (1.207)
Constant	1.105 (2.672)	474.929 (809.695)
Industry fixed effects	Yes	Yes
Cluster by firm	Yes	Yes
Observations	160	160
Adj. R <sup>2</sup>	0.265	0.181

Post = "1" for firm-year observations ending in 2012-2013 and "0" for otherwise. Intensity = the amount of news articles in relation to tax avoidance issues associated with the firm; Spillover = total number of tax avoidance news articles of the treatment group within the same industry; Spillover\_outside = total number of the articles except for the same industry of the firm. ETR = effective tax rate (tax expense divided by pre-tax income), bounded between [0,1]; Foreign\_Sales = foreign sales divided by total sales; Havens = total number of a firm's offshore subsidiaries in tax havens; Size = company size, measured as logarithm of total sales; Ownership = the portion of total outstanding shares held by top 10 investors; Age = company age. I report robust standard errors clustered by entity in parentheses. \*, \*\* and \*\*\* denote significance at 10%, 5% and 1%, respectively.