#### ORIGINAL PAPER



# Going to Haven? Corporate Social Responsibility and Tax Avoidance

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**Abstract** This study examines the endogenous relation between corporate social responsibility (CSR) and tax avoidance by focusing on a common strategy of corporate tax avoidance, i.e., establishing entities in offshore tax havens. Using hand-collected data on a sample of U.S. firms, we find that firms' CSR ratings increase substantially in the two years after they first open tax haven affiliates. We provide evidence by using the controlled foreign corporations (CFC) look-through rule enacted by Congress in 2006 that facilitates offshore profit shifting. We find that firms that are affected by the CFC legislation increase their CSR practices in response. Overall, our results are consistent with the risk management theory, which argues that firms hedge against the potential negative consequences of aggressive tax avoidance practices through an increase in positive CSR activities.

**Keywords** Corporate social responsibility · Offshore affiliates · Tax avoidance · Tax havens

## Introduction

Corporate social responsibility (CSR) is often associated with promises of ethical and socially responsible conduct by businesses. Most rating agencies measure CSR efforts based on environmental, labor, and human rights issues. Tax avoidance activity is seldom seen as a part of CSR activity, despite the fact that corporate tax avoidance practices can create significant costs for society (Weisbach 2002).<sup>1</sup>

For the last three decades, there has been a rise in the number of multinational firms engaging in tax avoidance. Artificially shifting profits from high-tax to low-tax jurisdictions—known as tax havens or Offshore Finance Centers (OFCs)—is a common tax avoidance practice. According to a recent U.S. Congressional Report, the government loses \$10 billion to \$60 billion per year in estimated tax revenues when corporations shift profits to offshore entities (Gravelle 2015).<sup>2</sup> Leading companies such as Starbucks and Amazon have recently come under scrutiny for such activity and have experienced a consumer backlash due to their aggressive tax avoidance activity. This has led to a major transformation in both companies' CSR agendas, as they launched campaigns that put

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<sup>&</sup>lt;sup>2</sup> These corporate tax avoidance activities have recently come under greater scrutiny. In 2011, Senator Carl Levin introduced the "Stop Tax Haven Abuse Act" while claiming that offshore tax abuses are not only undermining public confidence in the tax system, but also increasing the tax burden on middle-class America (https://www.gpo.gov/fdsys/pkg/BILLS-112s1346is/pdf/BILLS-112s1346is.pdf).



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<sup>&</sup>lt;sup>1</sup> See "Is tax the next big CSR issue"? 19 June, 2014. (available at http://www.governanceanddevelopment.com/2014/06/is-tax-next-big-csr-issue.html).

increased emphasis on the environment and on community-first activities in an effort to rebuild their respective images.<sup>3</sup>

In this paper, we study the relation between CSR and tax avoidance by looking at a major form of tax avoidance: firms opening up offshore entities in tax havens. In particular, we investigate whether firms' CSR ratings increase or decrease after opening up offshore affiliates in tax havens. Several prior studies have examined the link between CSR and tax avoidance and found no conclusive evidence (Carroll and Joulfaian 2005; Huseynov and Klamm 2012; Lanis and Richardson 2012; Hoi et al. 2013; Watson 2015; Davis et al. 2016). The CSR literature suggests two competing theories linking CSR and tax avoidance.

The *corporate culture* theory—which argues that all the decisions of the firm should reflect a shared belief of "right behavior" (Kreps 1996; Hermalin 2001)—posits a negative relation between CSR ratings and aggressive tax avoidance practices. In contrast, the risk management theory—which argues that firms purposely increase their CSR activities to hedge against any reputational risks that might arise from aggressive tax avoidance practices (Godfrey 2005; Minor and Morgan 2011)—predicts a positive relation between CSR ratings and aggressive tax avoidance practices. The biggest challenge in examining the relation between CSR and tax avoidance is endogeneity caused by omitted variables and simultaneity. 4 Many firm characteristics such as values, internal capabilities, or unobservable CEO characteristics affect both how a firm sets its CSR agenda and the tax avoidance practices it adopts. Omitting or relying on poor proxies for these variables in CSR regressions can significantly bias the coefficient estimates and lead to unreliable inferences. Moreover, because many important corporate decisions are made simultaneously, including those related to CSR and tax avoidance, it is difficult to draw any causal interpretations.

We contribute to the literature by applying a novel methodology that attempts to address endogeneity in CSR and tax avoidance relation in two distinct ways. First, we focus on firms that engage in tax avoidance through the use of offshore tax haven affiliates. Opening up a tax haven affiliate provides a firm-specific event that allows for comparing changes in CSR ratings before and after such an event; this helps mitigate the simultaneity problem. Second, we use a common exogenous shock, that is, a change in legislation that facilitates profit shifting to tax havens. We employ propensity score matching and use a difference-in-differences (DID) approach to examine the changes in CSR ratings in response to changes in tax legislation; this helps mitigate the identification problem.

We categorize firms as tax avoiders once they open or acquire an offshore tax haven affiliate. We focus on this definition for two reasons: First, this is one of the most popular ways for multinational firms to lower their effective tax payments. Second, with the exception of Preuss (2010, 2012), most of the empirical studies in the CSR and tax avoidance literature use different measures of tax avoidance such as effective tax rates, tax shelters, and book-tax differences. Very little attention is paid to tax avoidance through tax havens in the CSR context.

We use publicly available firm-level social ratings provided by Kinder, Lydenberg, Domini, & Co. (KLD) to measure CSR activities of firms. In particular, we focus on ratings in the categories of community, corporate governance, diversity, employee relations, environment, human rights, and product quality/safety issues. We compare CSR ratings of firms before and after they engage in tax avoidance activities, in particular after they open offshore affiliates in tax havens. If firms adhere to corporate culture theory, we expect them to *decrease* their CSR activity after opening a tax haven affiliate. By contrast, if firms adhere to risk management theory, we expect them to *increase* their CSR activity after opening a tax haven affiliate.

Using a sample of U.S. firms for the period 1995–2012, we find support for the risk management theory. Firms' CSR ratings increase significantly after opening up offshore affiliates in tax havens, and this is driven by firms boosting their positive CSR activities instead of curbing

<sup>&</sup>lt;sup>3</sup> See BBC News (November 12th, 2012) for executive testimonies of these companies on tax avoidance (available at http://www.bbc.com/news/business-20288077). Also for the CSR transformation agenda of Starbucks and Amazon see the articles in USA Today (July 6th, 2014, available at http://www.usatoday.com/story/money/business/2014/07/06/why-its-hard-to-hate-starbucks/12022699/) and on the public relations website (November 1st, 2013, available at http://www.conecomm.com/amazon-csr), respectively.

<sup>&</sup>lt;sup>4</sup> Endogeneity is also a major problem for the relation between CSR and financial performance. For example, Garcia-Castro et al. (2010) deal with the endogeneity problem while linking social performance to financial performance. See Van Beurden and Gossling (2008) for a review of the relation between corporate social and financial performance.

<sup>&</sup>lt;sup>5</sup> After opening offshore affiliates in tax havens, firms can engage in tax avoidance using a variety of techniques, such as debt reallocation, earnings stripping, and income shifting. Since tax on the income of foreign subsidiaries (except for certain passive income) is deferred until repatriated, this income can avoid U.S. taxes. The taxation of passive income has also been reduced, through the use of "hybrid entities" that are treated differently in different jurisdictions. In addition, earnings from income that is taxed can often be shielded by foreign tax credits on other income. Thus, on average very little tax is paid on the foreign source income of U.S. firms with tax haven operations. Dyreng and Lindsey (2009) document that U.S. firms with operations in one or more tax havens enjoy low taxation and have about 1.5% lower tax burden than other U.S. firms without operations in tax havens. In an international sample, Col and Errunza (2014) show that the acquirers of tax haven firms decrease their ETRs on average by 4%.

down on CSR concerns. Further, we analyze individual components of CSR scores and find that positive activities mostly center on the more visible aspects such as environment, diversity, and human rights. Taken together, these results imply that firms use CSR activities to rebuild their image or to hedge against the negative connotation associated with tax avoidance activities.

We also find evidence that firms that are affected by legislation that facilitates offshore profit shifting increase their CSR practices subsequently. Specifically, we employ a difference-in-differences (DID) approach by using an exogenous legislative event, the passing of the controlled foreign corporations (CFC) look-through rule (henceforth, CFC-LTR) enacted by Congress in 2006. In validation tests, we show that firms' tax haven subsidiary operations increase significantly upon passage of these CFC regulations. We then compare the CSR practices of firms with tax haven offshore affiliates pre- and post CFC-LTR enactment relative to matched control firms that are not affected by this regulation. We find that during the post-legislation period following the enactment of CFC-LTR, treatment firms' CSR ratings increase on average by 1.32 points (58% of the treatment mean) relative to control firms. In cross-sectional tests, we show that firms that operate in industries where reputation is crucial, such as consumer retail and financial services, react more strongly by increasing their CSR activities further.

Our study contributes to the literature in several ways. First, we shed new light on the relation between a firm's CSR activities and tax avoidance by using offshore tax haven affiliates, a growing form of tax avoidance. Second, our study helps mitigate the challenges of endogeneity issues faced by prior research in examining the relation between CSR and tax avoidance. Lastly, our results support the risk management theory of CSR and contribute to a larger debate in the literature on whether tax avoidance is in line with CSR or should be considered as part of CSR.

The paper is organized as follows. "Literature Review and Hypothesis Development" section provides a literature review and develops two competing hypotheses. "Methodology" section describes our methodology. "Data" section presents the data. Results are presented in "Results" section. "Cash Holdings, CSR and Tax Avoidance" section provides robustness checks, while "Conclusions" section concludes.

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# Literature Review and Hypothesis Development

Despite the increasing economic importance of offshore tax havens, academic research linking CSR and taxation is limited. Several studies—Christensen and Murphy (2004), Carroll and Joulfaian (2005), and Hanlon and Heitzman (2010)—highlight the need for academic research that focuses on the linkage between tax avoidance and CSR.<sup>7</sup>

There are two main theories that relate CSR activities to aggressive tax avoidance practices: corporate culture theory and risk management theory. The corporate culture theory posits a negative relation between CSR and tax avoidance. The theory argues that if a firm strongly believes in "right" corporate behavior, then all the decisions of the firm, including decisions on CSR and tax avoidance activities, should reflect that shared belief (Kreps 1996; Hermalin 2001). In other words, according to corporate culture theory a firm should not simultaneously engage in activities that might have opposite effects on society. Firms undertake CSR activities for the benefit of a variety of stakeholders, including the firm's shareholders, employees, customers, vendors, regulators, creditors, and communities in which it operates. If government is also considered as part of these stakeholders, then aggressive tax avoidance should be seen as inconsistent with their CSR activities. Thus, if corporate culture drives company decisions, firms that are opening offshore entities in tax havens should be socially less responsible.

**H1** Firms *decrease* their CSR activities after implementing aggressive tax avoidance practices.

<sup>&</sup>lt;sup>8</sup> The literature has also examined the role of top executives in firms' aggressive tax policies. For example, Dyreng et al. (2010) find that top corporate executives who are responsible for the culture of the firm (or "tone at the top") significantly affect firms' tax avoidance policy. Rego and Wilson (2012) link top executive compensation and aggressive tax avoidance. Olsen and Stekelberg (2016) document the effect of CEO narcissism on the likelihood that the CEO's firm engages in corporate tax avoidance.



<sup>&</sup>lt;sup>6</sup> The number is calculated as 1.316/2.26, where 2.26 is the mean CSR rating for the treatment firms reported in Panel C of Table 5.

<sup>&</sup>lt;sup>7</sup> Until recently, little attention was paid to the relation between CSR and tax avoidance (Dowling 2014). However, there are numerous studies that focus on CSR and tax avoidance separately. For example, Hong and Kostovetsky (2012) study how political values influence socially responsible investing (SRI). Hong et al. (2012) explore the relation between CSR and financial constraints. Albuquerque et al. (2014) relate CSR to firm value and systematic risk. Jamali et al. (2008) study the overlap between CSR and firms' corporate governance. Masulis and Reza (2015) study how agency problems affect corporate philanthropy. Barnea and Rubin (2010) examine the relation between firms' CSR ratings and their ownership and capital structures. Frank et al. (2009) investigate the link between aggressive financial reporting and CSR. See Hanlon and Heitzman (2010) and Margolis et al. (2007) for a comprehensive survey on tax research and CSR, respectively. For a survey of CSR in accounting studies, see Moser and Martin (2012).

The risk management theory argues that firms focus on maximizing shareholder interest, not the interest of all stakeholders. It suggests that firms mitigate the reputational risk associated with negative corporate events and maximize shareholders' interests by increasing their CSR activities, which help them create positive reputation (Godfrey 2005). In the last couple of years, many multinational corporations have received negative media coverage for engaging in tax avoidance using offshore tax haven affiliates. For example, Apple, Google, Starbucks, Amazon, GE, eBay, and Ikea have all recently come under scrutiny and experienced a consumer backlash due to aggressive tax avoidance attempts through their tax haven operations (e.g., see Kocieniewski 2011a, b; McCormack 2011; Duhigg and Kocieniewski 2012; Gongloff 2012; Moulds 2012). In fact, according to YouGov's Brandlndex, which records the strength of companies' brand identity, Starbucks' reputation has been tarnished by tax-related negative media coverage (Ebrahimi 2012). According to risk management theory, firms try to overcome such negative media coverage by strategically increasing their CSR activities in response (Godfrey 2005; Minor and Morgan 2011). This is consistent with the major transformation of Starbucks' CSR agenda by CEO Howard Schultz and his team that is geared toward putting people, community, and environment first. This strategy was adopted shortly after the backlash (Ritter 2014). Consequently, risk management theory suggests that firms will increase their CSR efforts to mitigate the negative reputational effects that are associated with opening affiliates in tax havens.

**H2** Firms *increase* their CSR activities after implementing aggressive tax avoidance practices.

Empirical studies that investigate the relation between CSR and tax avoidance have not been conclusive. For example, Hoi et al. (2013), Huseynov and Klamm (2012), and Lanis and Richardson (2012) find that more socially responsible firms are less likely to be tax avoiders and provide evidence supporting the corporate culture theory. However, Carroll and Joulfaian (2005), Sikka (2010), Watson (2015), and Davis et al. (2016) provide evidence consistent with the risk management theory and argue that firms which claim to be socially responsible also actively engage in tax avoidance.

These studies use different measures of tax avoidance and none of them focus on firms with tax haven operations. For example, Lanis and Richardson (2012) use effective tax rates (ETRs) and examine publicly listed Australian corporations. Similarly, Watson (2015) and Davis et al. (2016) both use effective tax rates. Watson (2015) also uses unrecognized tax benefits to explore the relation between CSR and tax avoidance of the U.S. firms. Hoi et al. (2013) employ tax shelters, book-tax differences, and FIN48 as

measures of tax avoidance. Carroll and Joulfaian (2005) analyze tax return data to determine whether firms make charitable contributions for the purpose of receiving a tax deduction. Sikka (2010) uses anecdotal evidence on the most aggressive form of tax avoidance, that is, tax evasion. In a related study, Huseynov and Klamm (2012) analyze the effects of a firm's negative and positive social actions on tax avoidance by focusing on tax management fees.<sup>9</sup>

Preuss' studies (2010, 2012) are the first to consider tax havens by focusing on firms that are headquartered in tax havens. He finds that firms with headquarters in tax havens tend to make stronger claims of social responsibility than the U.S.-headquartered firms, and thus concludes that there is a conflict between claiming social responsibility and engaging in offshore financial centers to reduce their tax liabilities.

Our study differs from those of Preuss (2010, 2012) in several ways. First, we use a larger sample by focusing on the U.S. firms with tax haven subsidiaries, whereas Preuss focuses on firms that are tax haven domiciled (specifically Bermuda and Cayman Islands). Our large sample size and the event study approach allow us to conduct a thorough empirical analysis by increasing the power of tests while mitigating the econometric issues. Second, our CSR measure is different from the one used by Preuss (2010, 2012). We use KLD CSR ratings as a measure of firm CSR activities. KLD is an external rating agency that evaluates firms' historical as well as future CSR activities over long periods of time. Preuss (2012), by contrast, uses a crosssectional measure based on CSR tools available on corporate websites of 27 companies. 10 Most importantly, prior studies do not address the endogeneity issues surrounding the relationship between CSR and tax avoidance.

<sup>&</sup>lt;sup>9</sup> Huseynov and Klamm (2012) find that the interaction of corporate governance strengths and diversity concerns with tax management fees negatively affects Cash ETRs. See Harjoto and Jo (2011) and Jensen (2002) for the relation between corporate governance and CSR as well as Jo and Harjoto (2011) on how the CSR and firm value relation is affected by corporate governance.

Most external rating agencies are likely to rate firms based on the same set of information that is voluntarily disclosed by firms. KLD provides CSR ratings for more than 3000 of the largest U.S. companies. Numerous researchers have pointed out that KLD provides an objective, uniform, and systematic assessment of the social behavior of firms (see Liston-Heyes and Ceton 2009). In addition, KLD's social ratings are among the oldest and most influential and, by far, the most widely analyzed by academics (Chatterji et al. 2009).

## Methodology

While studying the relation between CSR and tax avoidance, one should account for the fact that firms that choose to engage in tax avoidance activities may not be a random sample of firms. Managerial decisions to engage in tax avoidance may be driven by many factors that are difficult to observe (e.g., state tax policies, internal capabilities of the firm, CEO's personal values, etc.) and hence are potentially omitted by researchers. For example, all else being equal, firms with more CSR activities may already have substantial tax savings from these activities, so they might not engage in aggressive tax avoidance. This may create a potential feedback effect (reverse causality), making it difficult to draw an inference about the relationship.

Our empirical approach attempts to address the identification problem. A firm-specific event, such as opening up a tax haven affiliate, allows us to compare the changes in CSR activities before and after that event. We first focus on the changes in CSR around these corporate events and then use a common exogenous shock such as a change in legislation, namely the CFC look-through rule, which facilitates profit shifting to tax havens. However, we acknowledge that it is impossible to rule out all conceivable channels through which CSR and tax avoidance might be correlated. Thus, endogenous interactions may still exist.

# **Institutional Background on Controlled Foreign Corporations (CFC) Look-Through Rule**

The controlled foreign corporations (CFC) look-through rule enacted by Congress in 2006 significantly reduced the effectiveness of the anti-deferral tax rules and facilitated the increase in offshore profit shifting. The legislation was a follow-up to the initial rules issued by Treasury in late 1996, also known as check-the-box regulations. These regulations enable firms to choose their organizational form for tax purposes—for example, whether to be taxed as a C-corporation or as a pass-through entity such as a partnership or sole proprietorship—by filing a one-page form on which they simply check the appropriate box. Check-the-box was intended to eliminate the complexity of tax rules, but had the unintended consequence of facilitating tax avoidance by large U.S.-based multinational firms through the use of hybrid entities. Because the checkthe-box rule was a product of Treasury regulations and could be revoked or revised at any time, proponents of the rule urged Congress to enact supporting legislation. It provided "look-through" treatment for certain payments between related CFCs and became known as the CFC lookthrough rule (LTR).

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Foreign personal holding company income such as interest, dividends, rents, and royalties can be easily manipulated to disguise their actual origin, and therefore are not eligible for tax deferral. Such passive income is generally referred to as "Subpart F income," named after the section of the tax code designed to prevent tax avoidance abuse. The look-through rule under I.R.C. Section 954(c)(6) grants an exclusion from Subpart F income for dividends, interest, rents, and royalties that one CFC receives or accrues from a related CFC. Specifically, the CFC-LTR provides tax-planning opportunities for intercompany transactions between related CFCs that allow for the exclusion of certain undistributed taxable income to the U.S. shareholders. It also enables the payment of dividends from lower tier CFCs and provides more discretion in the timing of repatriating CFC earnings to the U.S. shareholders (Dougherty 2015). In other words, the legislation allows companies to dodge taxes on Subpart F income by removing their obligation to report the transactions associated with that income. For example, according to a Senate committee, Apple used its Irish subsidiaries to avoid \$44 billion in taxes on offshore profits made between 2009 and 2012, particularly by exploiting loopholes through CFC-LTR and check-the-box regulations.<sup>11</sup>

In the Results section, we show that firms' tax haven operations increase significantly subsequent to the enactment of CFC-LTR regulations. We hypothesize that if the risk management theory holds, firms that are likely to benefit from these regulations and increase tax avoidance in response are also expected to increase CSR efforts in the post-legislation period.

# **Difference-in-Differences Approach**

We explore the changes in CSR scores as a response to changes in legislation using difference-in-differences (DID) regressions and run the following model:

$$\begin{split} CSR_{it} &= \alpha_0 + \alpha_1 Treatment + \alpha_2 Post_{CFC-LTR} \\ &+ \alpha_3 Treatment \times Post_{CFC-LTR} \\ &+ Controls + Industry\_dummies + \epsilon_{it}, \end{split}$$

where CSR is proxied by overall KLD ratings, strengths, and concerns, as well as sub-criteria ratings including community, corporate governance, diversity, employee relations, environment, human rights, and product quality/safety issues. *Post CFC-LTR* is an indicator that equals one if the observation is after the adoption of the CFC lookthrough rule (LTR). *Treatment* is an indicator that equals

<sup>&</sup>lt;sup>11</sup> U.S. Senate Permanent Subcommittee on Investigations (PSI), "EXHIBITS: Hearing on Offshore Profit Shifting and the U.S. Tax Code—Part 2 (Apple Inc.)" (May 21, 2013), pp. 5 & 6. https://info.publicintelligence.net/HSGAC-AppleOffshore.pdf.



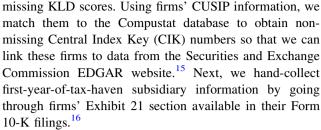
one if the firm is in the treatment group that is affected by the legislation and opens up a tax haven affiliate, and zero otherwise. The control group consists of a matched sample of firms that are least likely to be affected by the legislation. The difference in the effect of the legislation on CSR practices is then measured by the coefficient  $\alpha_3$ . The risk management argument implies a significantly positive coefficient on the difference term, whereas the corporate culture theory implies a significantly negative coefficient. *Controls* include firm-level variables that are used in the literature and shown to affect the CSR of firms.<sup>12</sup>

Ideally, DID compares the changes in CSR scores of two groups of firms: (a) treatment firms that do not operate in tax havens before the enactment of LTR but open affiliates in tax havens after the enactment of LTR, and (b) control firms that do not operate in tax havens before or after the enactment of LTR. It is essential that the two groups have similar firm characteristics and follow a similar CSR trend before the exogenous shock. Thus, after determining our treatment firms, we implement a propensity score matching (PSM) procedure to identify a matched sample of control firms.

PSM procedure helps us guard against the presence of trends that differentially affect treatment and control groups, which in turn can induce bias in  $\alpha_3$  (see Besley and Case 2000). In the Results section, we show that after the matching, the treated and control firms have similar firm characteristics before the event. We also plot average CSR scores for treatment and control firms before and after the exogenous event. This ensures that the treated and control firms are more likely to experience common trends around the event window and the parallel trends assumption is less likely to be violated. <sup>14</sup>

#### Data

In order to identify firms with tax haven affiliates, we collect data from two main sources: Thomson Financial SDC database and Exhibit 21 from Form 10-K filings. Tax haven is defined based on the Dharmapala and Hines' (2009) definition, which combines Hines and Rice (1994) and OECD criteria, and is presented in Appendix 1. We identify 1276 unique firms that engaged in transactions with tax havens from the SDC database. We match these firms to the KLD database and identify 393 firms with non-



To identify firms with no tax haven operations, we restrict our search to firms that (i) have non-missing KLD scores for our entire sample period and (ii) have no foreign income reported on Compustat. Finally, to ensure the accuracy of our control sample, we manually go through EDGAR filings to ensure that they do not report any tax haven subsidiary information on Exhibit 21. Our sample period begins in 1995 when most firms have available electronic filings.

Our final sample covers the period between 1995 and 2012; it contains 3897 firm-year observations for 341 unique firms with tax haven affiliates, and 16,295 firm-year observations for 1630 unique firms with no tax haven operations. Table 1 reports the year and industry distribution of our final sample firms that have tax haven affiliates and compares them to the overall Compustat sample distribution. Tax haven countries in the sample include Antigua, Aruba, Bermuda, Cayman Islands, Hong Kong, Ireland, Jordan, Mauritius, Luxembourg, Singapore, and Switzerland. The highest percentage of firms in the tax haven sample belongs to financial firms (31%) and machinery and electronics firms (20%); the smallest percentage belongs to utilities and transportation (4%). The industry distributions are more or less comparable to the overall population.

Our CSR measure is a publicly available score provided by Kinder, Lydenberg, Domini, & Co. (KLD). The KLD ratings are built on a point-by-point assessment of companies along a number of dimensions, consistently measured by a group of professionals with the same criteria across a large sample of firms. Different information sources are triangulated in order to determine the final score for each firm (Waddock and Graves 1997). Following prior studies, we focus on ratings in the categories of community, corporate governance, diversity, employee

helps us save a tremendous amount of time and effort.



 $<sup>\</sup>overline{}^{12}$  We define these variables in detail in the next section as well as in the tables.

<sup>&</sup>lt;sup>13</sup> We thank our anonymous referees for helping us implement a more rigorous methodology.

<sup>&</sup>lt;sup>14</sup> See for example Bakke et al. (2016) and Bertrand and Mullainathan (2003) for similar implementations of difference-in-differences method.

Note that Huizinga and Voget (2009) also use SDC database to identify affiliates in tax implications of the parent–subsidiary relationship. We find that the coverage of foreign subsidiaries listed in the Exhibit 21 of firms' 10-K filings is, however, more accurate, as 10-K filings are required by the SEC, whereas the SDC database may not include a subsidiary observation if it is not acquired through M&A. We are grateful to our anonymous referee for this suggestion.
We record the first year that a tax haven subsidiary (based on Dharmapala and Hines' (2009) definition) shows up in firms' records instead of recording all tax haven subsidiaries for each firm, which

Table 1 Summary statistics: tax haven transactions

Years	Tax haven sample (%)	Industry	Tax haven sample (%)	Compustat sample (%)
1995–1997	8.96	Agriculture and consumer products	5.91	10.72
1998-2000	11.97	Basic manufacturing	15.14	11.15
2001-2003	18.85	Machinery and electronics	20.10	17.41
2004-2006	19.97	Utilities and transportation	3.90	8.18
2007-2009	19.97	Wholesale and retail trade	11.96	7.27
2010-2012	20.29	Financial services	31.31	28.02
		Tourism and miscellaneous services	11.69	17.27
	100.00		100.00	100.00

The table summarizes the distribution of CSR variables for the U.S. firms from 1995 to 2012 that have tax haven affiliates along with the overall COMPUSTAT sample distribution. The tax haven definition is based on the Dharmapala and Hines' (2009) criteria. Agriculture and consumer products are firms with two-digit SIC codes 00–19; basic manufacturing 20–29; machinery and electronics 30–39; utilities and transportation 40–49; wholesale and retail trade 50–59; financial services 60–69; tourism and miscellaneous services 70–99 s. Tax haven countries in the sample include Antigua, Aruba, Bermuda, Cayman Islands, Hong Kong, Ireland, Jordan, Mauritius, Luxembourg, Singapore, and Switzerland

relations, environment, human rights, and product quality/safety issues.

The overall KLD rating is defined as the sum of the ratings in the various sub-categories. Ratings for a firm in each sub-category are obtained by adding one point for each strength and subtracting one point for each concern, with higher ratings implying greater strengths and/or fewer concerns. We only use scores for sub-categories that are available throughout our sample period. This is to avoid any time biases, in the event of new criteria being introduced or dropped during the sample period that may bias our results. Appendix 2 provides detailed information on KLD scores and lists the issues considered for strengths and concerns that are used to construct the scores in each sub-category.

KLD ratings and their sub-criteria are summarized in Panel A of Table 2. Firms with tax haven operations have higher overall KLD ratings than those with no tax havens (mean of 2.16 versus -0.45, respectively). Notably, for firms with no tax haven operations, the mean concern score is higher than the strength score (1.54 versus 1.09). In all sub-categories, firms with tax havens score higher in terms of the number of strengths, but, with the exception of diversity, the number of concerns is also much higher for tax haven firms.

We include in our models the set of standard control variables that are used in the literature, and which have been shown to affect the CSR of firms (see, for example, Rubin 2008 and Barnea and Rubin 2010). We compute the control variables using Compustat data. Next, we describe these controls and provide a rationale for their inclusion in our analysis.

We measure *firm size* by the natural logarithm of total assets. Larger firms attract more attention and may be under great scrutiny by the public; thus, they tend to be

more socially responsible. Leverage is defined as the ratio of long-term debt to total assets. Firms that are highly levered may be less likely to invest in CSR. Cash is calculated as the ratio of cash and cash equivalents to total assets. Firms that have more financial slack can afford to spend more on CSR activities. Differences in investment opportunities and growth opportunities can create differences in the need to raise capital and hence in CSR practices. To measure growth opportunities, we use market-tobook ratios, defined as market price divided by book value per share. R&D scaled by total assets is used to control for differences in intangibility of corporate resources. Companies with high R&D expenditures also tend to be highgrowth firms and enjoy high valuation. <sup>17</sup> Finally, we also control for firm visibility and advertising efforts, as they are likely to affect company involvement in CSR activities by reflecting the firm's exposure to investors, media, and the influence of other social arbiters. Following Garcia-Castro et al. (2010), we proxy visibility by a dummy variable indicating whether a firm is listed in the Standard & Poor's 500 index, and additionally use advertising expenses scaled by total assets.

Panel B of Table 2 summarizes the characteristics of firms that use tax haven offshore affiliates versus those that do not. Firms that have tax haven operations are larger in size and more R&D intensive, and have higher valuations (high market-to-book) and lower debt ratios. They also have higher sales ratios and more advertising expenses. Since firm characteristics are systematically different between the two samples, it is important that we control for these variables in our tests. Finally, the pairwise



<sup>&</sup>lt;sup>17</sup> If a firm has all major financial variables except R&D, we set this variable equal to zero; that is we assume that when a company does not report these variables, it is because R&D spending is negligible.

Table 2 Summary statistics: tax haven versus no tax haven

			Tax have	en			No tax	haven		
			Mean	SD	Min	Max	Mean	SD	Min	Max
Panel A. CSR v	variables									
KLD scores		Overall	2.16	3.86	-6	15	-0.45	1.89	-10	13
		Strengths	5.28	3.83	0	19	1.09	1.59	0	14
		Concerns	3.12	2.70	0	14	1.54	1.45	0	14
Sub-criteria										
Community		Strengths	0.71	0.92	0	4	0.12	0.39	0	5
		Concerns	0.15	0.14	0	2	0.07	0.05	0	2
Corporate gov	ernance	Strengths	0.29	0.22	0	1	0.17	0.35	0	2
		Concerns	0.78	0.60	0	3	0.32	0.43	0	2
Diversity		Strengths	1.82	1.65	0	7	0.43	0.85	0	7
		Concerns	0.19	0.40	0	2	0.51	0.65	0	3
Employee rela	ations	Strengths	1.12	1.32	0	5	0.20	0.55	0	5
		Concerns	0.64	0.77	0	4	0.31	0.56	0	4
Environment		Strengths	0.96	1.06	0	4	0.10	0.33	0	4
		Concerns	0.62	1.17	0	5	0.14	0.49	0	5
Human rights		Strengths	0.05	0.22	0	2	0.01	0.06	0	1
2		Concerns	0.20	0.43	0	2	0.03	0.15	0	2
Product qualit	y/safety	Strengths	0.34	0.53	0	2	0.05	0.22	0	2
•	, ,	Concerns	0.54	0.78	0	3	0.16	0.48	0	4
Panel B. Firm f	inancials									
SIZE			9.17	1.26	6.14	11.90	7.20	1.81	3.60	11.90
CASH			0.09	0.08	0.01	0.57	0.10	0.14	0.00	0.68
R&D			0.04	0.04	0.00	0.42		0.07	0.00	0.42
M/B			5.15	4.86	0.94	20.01	2.79	3.78	0.87	24.30
LTD			0.15	0.12	0.00	0.58		0.20	0.00	0.86
ADV EXP			0.02	0.03	0.00	0.13		0.01	0.00	0.14
SALES			8.89	1.19	5.27	10.97	6.35	1.85	1.50	10.97
Number of ob	servations		3897				16,295			
	KLD	KLD	KLD	Tax	SIZE	CASH	R&D M	/B LTD	ADV	SALES
	overall	strengths	concerns	haven	SILL	Crion	1102	212	EXP	O' ILL
Panel C. Correl	ations									
KLD overall	1.000									
KLD	0.697	1.000								
strengths	(0.000)	(0.000)								
KLD	-0.477	0.297	1.000							
concerns	(0.000)	(0.000)	(0.000)							
Tax haven	0.382	0.520	0.252	1.000						
	(0.000)	(0.000)	(0.000)							
SIZE	0.174	0.448	0.317	0.525	1.000					
	(0.000)	(0.000)	(0.000)	(0.000)						
CASH	0.047	0.092	-0.050	0.172	-0.466	1.000				
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)				
R&D	-0.017	-0.053	-0.043	0.150	-0.348	0.463	1.000			
RCD										
KKD	(0.026)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)				
M/B	(0.026) $-0.035$	(0.000) -0.004	(0.000) 0.040	(0.000) 0.057	(0.000) -0.135	(0.000) -0.056	-0.053 1.0	000		



Table 2 continued

	KLD overall	KLD strengths	KLD concerns	Tax haven	SIZE	CASH	R&D	M/B	LTD	ADV EXP	SALES
LTD	-0.085	-0.037	0.068	-0.076	0.123	-0.189	-0.060	0.059	1.000		
	(0.000)	(0.000)	(0.000)	(0.002)	(0.000)	(0.000)	(0.000)	(0.000)			
ADV EXP	0.281	0.372	0.235	0.264	0.445	-0.062	-0.0350	0.021	0.024	1.000	
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.004)	(0.014)	(0.152)	(0.099)		
SALES	0.123	0.515	0.455	0.382	0.524	-0.134	-0.085	-0.024	0.026	0.726	1.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.008)	(0.005)	(0.000)	

The table reports the averages, standard deviations, minimums, and maximums of CSR variables, as well as financial variables for firms that have tax haven affiliates and for those that have not engaged in transactions with tax haven firms. Panel A reports descriptive statistics for CSR variables. KLD strengths (concerns) are calculated as the sum of the number of strengths (concerns) in all sub-criteria. Overall KLD scores are calculated as the total number of strengths minus the total number of concerns. Panel B reports descriptive statistics for firm financial data. SIZE, log (total assets); CASH, cash scaled by total assets; R&D, research and development expenses scaled by total assets; M/B, market value over book value per share; LTD, long-term debt scaled by total assets; ADV EXP, advertising expenditures scaled by total sales; and SALES, log (sales) are winsorized at 1%. Panel C reports the pairwise correlations between the firm CSR measures, tax haven operations, and control variables. *P values* are reported in parentheses

correlations between CSR measures, tax haven operations, and firm characteristics are reported in Panel C of Table 2.

#### **Results**

#### **CSR Before and After Tax Havens**

We start by looking at changes in the CSR scores before and after firms open offshore affiliates in tax havens. We determine the year in which firms open a tax haven affiliate by going through their 10-K filings and establishing the first year they report a tax haven subsidiary in the Exhibit 21 section. If the risk management theory holds, firms would increase their CSR efforts after going to tax havens in order to mitigate the risks associated with negative publicity. In Table 3, we report the changes in the CSR scores during a 5-year window (two years before and after the event) as well as two years after these transactions. <sup>18</sup>

Relative to two years before the event, the average increase in CSR scores is substantial at 0.88 points (41% of the mean, significant at 5%). When we decompose the CSR scores into strengths and concerns, we see that both factors increase; however, the increase in positive CSR activities is much larger than the increase in negative CSR activities and hence only the changes in positive CSR activities are statistically significant. CSR scores increase by 0.58 points (27% of the mean, significant at 5%) on average in two

Next, we analyze each CSR component separately to see what is driving the CSR rating changes. The subcriteria that make up the overall KLD ratings include community, corporate governance, diversity, employee relations, environment, human rights, and product quality/safety issues. Table 3 reports the mean changes in overall scores for each sub-criteria, which is calculated as the difference between strengths and concerns. The results suggest that the increase in positive CSR activities is largely driven by the increase in companies' efforts concerning diversity, environment, and human rights issues. On the other hand, CSR concerns increase more than strengths in corporate governance and employee relations aspects; yet, the changes are only significant for corporate governance in the 5-year window surrounding tax haven operations. The increases in corporate governance concerns are consistent with Durnev et al. (2011) finding that firms with offshore tax haven affiliates engage in more earnings management than non-offshore firms. Overall, the results suggest that firms boost positive CSR activities, mainly on more visible aspects after opening up tax haven affiliates. This is consistent with the argument of hedging against the negative consequences of aggressive tax avoidance practices, and in support of the risk management theory of CSR.

#### **Difference-in-Differences**

In this section, we employ a difference-in-differences (DID) approach using an exogenous shock such as the CFC-LTR legislation that affects firms' offshore entity

<sup>&</sup>lt;sup>18</sup> When we look at 3-year windows (one year before and after the event) as well as the change in one year after the transaction, the results are consistent, but the magnitudes of the changes are smaller.



years after opening tax haven affiliates.

Table 3 CSR before and after tax haven

	Difference (after	Difference (after-before) $(-2, +2)$			fference (after) $(0, +2)$		
	Difference	% of Mean	P value	Difference	% of Mean	P value	
CSR ratings (overall KLD score)	0.875**	40.50	(0.034)	0.579**	26.80%	(0.012)	
Positive CSR (KLD strengths)	1.625**		(0.025)	0.894**		(0.019)	
Negative CSR (KLD concerns)	0.75		(0.179)	0.315		(0.255)	
Sub-criteria							
Community	0.062	2.90	(0.166)	0.034	1.60	(0.272)	
Corporate governance	-0.312***	-14.40	(0.009)	-0.083	-3.80	(0.124)	
Diversity	0.375**	17.40	(0.027)	0.167**	7.70	(0.011)	
Employee relations	-0.062	-2.90	(0.387)	-0.111	-5.10	(0.199)	
Environment	0.500***	23.20	(0.007)	0.361***	16.70	(0.002)	
Human rights	0.187*	8.70	(0.094)	0.152**	7.00	(0.013)	
Product quality/safety	0.125	5.80	(0.167)	0.059	2.70	(0.114)	
Number of firms	281			321			

The table shows the average (mean) change in CSR scores of firms after opening affiliates in tax havens. KLD strengths (concerns) are calculated as the sum of the number of strengths (concerns) in all sub-criteria. Overall KLD scores and sub-criteria scores are calculated as the total number of strengths minus the total number of concerns. Significance tests are based on a two-tailed *t* test. Bold is used to highlight the variable of interest. \*, \*\*, and \*\*\* indicate significance at the 10, 5, and 1% level, respectively. *P values* are reported in parentheses

Italics are used to highlight p-values

practices in tax havens. We start by running a validation test to see if firms had indeed increased tax haven operations following the enactment of CFC-LTR legislation. As our data are restricted to the first year of tax haven operations from Exhibit 21 filings, we obtain the data on timeseries observations of all subsidiaries for our sample firms from Scott Dyreng's website. We split the sample years into two: before and after the enactment of CFC-LTR legislation in 2006. We report the average number of tax haven subsidiaries across all firms for all sample years prior to, and after, legislation. From Table 4, it can be observed that the average number of tax haven subsidiaries increased by more than 50% (from 7.2 to 11.5), and differences are significant at 1% following the LTR legislation. <sup>20</sup>

We also calculate the ratio of tax haven subsidiaries to firms' overall numbers of subsidiaries worldwide, and report the time-series averages of those ratios across all firms for both sub-samples. The ratio of tax haven subsidiaries relative to all subsidiaries has also increased dramatically from 21 to 28% in years following the passage of LTR legislation. This is consistent with the argument that CFC-LTR enactment facilitates offshore profit shifting.

Our treatment group involves firms that are affected by the legislation and open up a tax haven affiliate following the passage of LTR. Using propensity score matching (PSM), we create a matched control group of firms that are not affected by the legislation, i.e., they do not operate in tax havens before or after the enactment of LTR. Table 5 reports the results of the PSM procedure. In Panel A, the first-stage probit regressions that estimate the propensity score show that firms that are larger in size, cash-rich, with low leverage, more growth opportunities, and high R&D expenses are more likely to open offshore affiliates in tax havens. <sup>21</sup> This is consistent with prior studies which argue that the majority of the artificial income shifting from high-tax to low-tax countries is due to transfers of intangibles (see, for example, Grubert 1998).

Moreover, consistent with Desai and Dharmapala (2009), firms with lower values of tax shields (which imply a greater incentive to engage in tax avoidance) are more likely to open tax haven affiliates. The control sample is then selected randomly from the subset of firms with no tax haven operations that have the closest propensity score to our treatment firms. Under ideal circumstances, there



<sup>&</sup>lt;sup>19</sup> https://sites.google.com/site/scottdyreng/. Comparing our hand-collected data to those on Scott Dyreng's website, we are able to accurately match the first year of operations for 92% of our sample. For those remaining, the reasons we could identify for the mismatches are due to differences in the start of sample years, definition of tax havens, and firm coverage. As a robustness check, we reran our tests after removing those with non-overlapping first-year numbers and all our results remain virtually unchanged.

<sup>&</sup>lt;sup>20</sup> For consistency, the tax haven definition is based on Dharmapala and Hines (2009). Note that Scott Dyreng's website also defines tax havens with a larger set of countries/jurisdictions.

<sup>&</sup>lt;sup>21</sup> In order to ensure that the treatment and control groups follow a similar CSR trend before the exogenous shock, we also match them in the past CSR dimension by including lagged KLD scores in the probit regressions. This helps improve the average treatment effect and provides a better, more comparable control group. If we exclude past scores from selection regressions, our main results do not change.

**Table 4** Validation test: enactment of CFC-LTR and tax avoidance

Variable	Before CFC-LTR	After CFC-LTR	t-stat	P value
Number of tax haven subsidiaries	7.22	11.46	3.06	(0.002)
Percentage of tax haven subsidiaries (%)	21.20	27.82	4.17	(0.000)
Number of firms	334			

The table reports the mean number of tax haven subsidiaries and the ratio of tax haven subsidiaries as a percentage of all subsidiaries of the U.S. firms before and after the enactment of Controlled Foreign Corporations-"look-through rule" (CFC-LTR). The data are obtained from Scott Dyreng's website for our sample firms and data years cover the period between 1995 and 2010. The corresponding *t*-statistic and *P* value are reported for the difference in means. Bold is used to highlight the variable of interest

should be no differences in the attributes of the treatment and control samples. Panel B reports the covariate balance for treated and control firms after the PSM. The bias is defined as the percentage difference of the mean values of the treatment group and the matched control group, divided by the square root of the mean sample variance in the treatment group and the not matched non-treatment group (Rosenbaum and Rubin 1983). The P values indicate that matching is efficient, i.e., after the PSM, firms in the treatment and control groups do not differ much based on firm characteristics such as size, cash, R&D expense, market-to-book, and leverage ratios as well as prior CSR performance.<sup>22</sup> The discrepancy between the mean KLD scores of the treatment and control groups is much smaller for the average treatment effect (ATT), indicating that matching has resulted in a balancing of the original level of CSR scores before the treatment.

One of the key identifying assumptions in DID models is that the treatment group firms exhibit trends that are similar to the control group firms in the absence of treatment (see Angrist and Pischke 2008). Therefore, in Fig. 1, we plot the KLD scores of treatment and control firms pre and post the exogenous event: CFC-LTR legislation in 2006. KLD\_treatment plots the mean KLD scores for treatment firms, and KLD\_control plots those for control firms. As clearly shown in the figure, the parallel trends assumption is not violated. Overall, the results in Fig. 1 and Table 5 indicate that our PSM procedure is able to generate a control group that is similar enough to the treatment group to be used for the ATT estimation.

Next, we employ our DID tests on the pooled sample of treatment and control firms. The results are reported in Table 6. In Panel A, we report the effect of LTR legislation on overall CSR ratings (KLD scores), as well as positive and negative CSR activities (measured by KLD strengths and weaknesses) separately. The coefficient on the interaction term is significantly positive for overall scores and

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Table 5 Propensity score matching

Panel A. Sample selection regression								
Dependent variable: tax haven	COEF	Pr > ChiSq						
SIZE	0.252***	<.0001						
CASH	0.662**	0.011						
R&D	1.358**	<.0001						
M/B	0.129**	0.028						
LTD	-0.386***	0.009						
KLD(t-1)	0.087***	<.0001						
Time fixed effects	Y							
Industry fixed effects	Y							
LogL	-1306.57							
Pseudo-R2	0.1710							
Number of observations	15,258							

Panel B. Covariate balance

Variable	Mean			T test	Nb of obs	
	Treated	Control	%bias	T	P >  t	
SIZE	9.48	9.54	-3.4	-0.44	(0.663)	554
CASH	0.07	0.07	-4.7	-0.60	(0.546)	541
R&D	0.03	0.03	2.4	0.26	(0.796)	547
M/B	5.59	8.98	-14.6	-0.71	(0.477)	532
LTD	0.16	0.15	7.0	1.22	(0.221)	536
KLD (t-1)	1.54	1.25	9.3	1.14	(0.254)	520

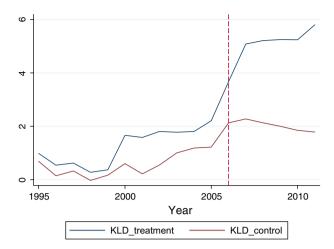
Panel C. Average treatment effect

KLD scores	Treated	Control	Difference	SE	t-stat	Nb of obs
Unmatched	2.26	-0.55	2.81	0.09	29.03	15,528
ATT	2.26	1.26	1.00	0.23	4.33	1036

The table reports the results of the propensity score matching (PSM) procedure. Panel A reports the results of first-stage probit regressions to estimate a propensity score where the dependent variable is having tax haven operations. Panel B reports the means of the covariates after the propensity score matching. Panel C reports the average treatment effect (ATT) on the treated firms. The difference in means t test assumes equal variances. P values are reported. Bold is used to highlight the variable of interest. \*\*, \*\*\* show statistical significant at 10, 5, 1 percent



 $<sup>^{22}</sup>$  The absolute bias is less than 5% except for market-to-book, leverage, and prior CSR scores, for which the biases are still not at large.



**Fig. 1** CSR Scores Before and After CFC-LTR. The figure plots the mean KLD scores for treatment and control firms in years before and after the Controlled Foreign Corporations-"look-through rule" regulation, which was enacted in 2006. The year of enactment is represented with the *dashed line* 

strengths, suggesting that the treatment firms increase positive CSR activities considerably more in response to the legislation change. Specifically, following the CFC-LTR enactment, on average, the KLD ratings of treatment firms increase by 1.32 points while positive CSR ratings increase by 1.55 points relative to control firms. Panel B reports the results for the CSR components underlying the overall scores. The interaction terms measuring the differences are significantly positive for diversity, environment, and human rights aspects; this suggests that treatment firms improve CSR efforts on these dimensions following the CFC-LTR legislation. This is consistent with prior results indicating evidence of increasing CSR activities in response to aggressive tax avoidance attempts.<sup>23</sup>

Next, we explore the cross-sectional variation in the reaction. For example, we hypothesize that if the risk management hypothesis holds, the reaction should be stronger in industries where reputation is important. Macey (2010) notes that reputation matters more in some industries than others and underlines the importance of reputation in the financial services industry. Hanlon and Slemrod (2009) show that stock price reaction following company news about its involvement in tax shelters is more negative

For both retail and financial firms, the coefficients on the triple interaction terms are significant, presenting evidence for stronger reactions of firms from these industries. For financial firms, analogous to full sample results, the increase in CSR scores is mostly driven by raising positive CSR efforts, while for retail firms it is driven by both the increase in positive aspects and the decrease in CSR concerns. Taken together, these results provide support for the risk management hypothesis.

# Cash Holdings, CSR, and Tax Avoidance

In a recent study, Hanlon et al. (2014) provide evidence that firms' cash holdings are related to tax uncertainty and tax avoidance activities. Cash holdings are also one of the main determinants of CSR activities. Therefore, for instance, a plausible scenario may be that the increase in tax haven operations after the passage of CFC-LTR could lead to more cash holdings, which in turn would help finance an increase in CSR activities.<sup>24</sup> While we control for cash in our main analysis, in this section we test and rule out the possibility that cash holdings are the channel through which firms' tax avoidance and CSR activities are related. We measure cash holdings by cash ratio, calculated as cash divided by total assets, and excess cash, the residual from the regression of cash holdings on its determinants as defined in Opler et al. (1999).<sup>25</sup>

We first check whether firm cash holdings have increased after the passage of CFC-LTR. We find that while the average cash ratio increased from 8 to 10%, the excess cash did not change significantly. These findings suggest that firms might experience higher cash (absolute levels) after the passage of CFC-LTR, but most of this cash is utilized by these firms in their operations.

Next, we run the difference-in-differences (DID) regressions for high-cash and high-excess cash firms,

in the retail sector, suggesting a possible consumer/taxpayer backlash. Table 7 shows the results of difference-indifferences regressions with indicators for firms operating in consumer retail and finance industries, which are identified based on the two-digit SIC codes.

We also repeat our main tests using alternative CSR measures. The IVA (Intangible Value Assessment) score and its components such as environment, human capital, strategic governance, and stakeholder capital are obtained from the MSCI Environmental, Social, and Governance (ESG) Database. The sample is much smaller since for only a limited number of firms, the first year of tax haven subsidiary falls within the available IVA sample time period (2004-2010). Our main results continue to hold. For brevity, the results are not reported and are available upon request.

 $<sup>^{\</sup>rm 24}$  We thank the anonymous referee for bringing it to our attention.

<sup>&</sup>lt;sup>25</sup> Opler et al. (1999) argue that firms use their cash holdings for operational and liquidity needs as they grow. Therefore, it is important to focus on cash holdings that are in excess of operational and liquidity needs. Excess cash is defined as the residual from cross-sectional regressions of cash-to-assets ratios on market-to-book ratio, firm size, capital expenditure-to-assets ratio, net working capital-to-assets ratio, long-term debt, R&D expenses-to-sales, cashflow-to-total assets, and volatility of past industry cashflows.

Table 6 Difference-in-differences regressions: CSR and tax avoidance

Panel A. KLD scores									
Dependent variable	KLD Overall (1)	KLD Strengths (2)	KLD Concerns (3)	KLD Overall (4)	KLD Strengths (5)	KLD Concerns (6)			
Post CFC-LTR	0.757	0.455	-0.301	1.108	-0.369	-2.476			
	(1.309)	(0.723)	(0.719)	(1.500)	(0.499)	(1.871)			
Treatment	0.119	0.152	0.033	0.170	0.191	0.021			
	(0.628)	(0.491)	(0.370)	(0.609)	(0.487)	(0.361)			
Treatment $\times$ <i>Post CFC</i> -	1.316**	1.547***	0.231	1.357**	1.360***	0.037			
LTR	(0.564)	(0.500)	(0.306)	(0.543)	(0.482)	(0.295)			
Firm controls	Y	Y	Y	Y	Y	Y			
Interaction w/controls	Y	Y	Y	Y	Y	Y			
Fixed effects	N	N	N	Y	Y	Y			
$R^2$ adjusted	0.280	0.531	0.457	0.330	0.553	0.528			
Number of observations	1036	1036	1036	1036	1036	1036			

Panel B. Components of KLD scores

Dependent variable	COM (1)	GOV (2)	DIV (3)	EMP (4)	ENV (5)	HUM (6)	PRO (7)
Post CFC-LTR	-0.034	0.191	-0.216	0.331	0.336	0.002	0.148*
	(0.087)	(0.176)	(0.133)	(0.606)	(0.861)	(0.025)	(0.081)
Treatment	0.155	0.001	-0.010	0.055	-0.225	-0.099	0.243
	(0.153)	(0.134)	(0.235)	(0.193)	(0.195)	(0.065)	(0.161)
Treatment $\times$ <i>Post CFC-LTR</i>	0.021	0.186	0.219***	0.062	0.769***	0.203**	0.997
	(0.146)	(0.141)	(0.069)	(0.209)	(0.154)	(0.068)	(0.760)
Firm controls	Y	Y	Y	Y	Y	Y	Y
Interaction w/controls	Y	Y	Y	Y	Y	Y	Y
Fixed effects	Y	Y	Y	Y	Y	Y	Y
R <sup>2</sup> Adjusted	0.329	0.329	0.268	0.539	0.405	0.508	0.426
Number of observations	1036	1036	1036	1036	1036	1036	1036

The table reports the results of the difference-in-differences (DID) regressions on the relation between CSR scores and tax haven operations. The dependent variables are the KLD scores and their components: Community, Corporate Governance, Diversity, Employee Relations, Environment, Human Rights, and Product Quality/Safety. *Post-CFC-LTR* is an indicator variable equal to one if the observation is after the adoption of the CFC look-through rule. *Treatment* is a dummy that equals one if the firm is in the treatment group and zero otherwise. Firm controls include SIZE, log (total assets); CASH, cash scaled by total assets; R&D, research and development expenses scaled by total assets; M/B, market value over book value per share; F\_INCOME, foreign income scaled by total sales; S&P500, dummy equals 1 if firm is part of the index; ADV EXP, advertising expenditures scaled by total sales; LTD, long-term debt scaled by total assets. Regressions include industry and year fixed effects. Standard errors are reported in parentheses. Bold is used to highlight the variable of interest. Italics are used to highlight p-values. \*, \*\*, and \*\*\* indicate significance at the 10, 5, and 1% level, respectively. Standard errors are clustered at the firm level to adjust them for heteroscedasticity and time-series correlation

where high (excess)-cash firms are defined as those with cash holdings that are higher than the sample median. The results are reported in Table 8. Since cash holdings are likely to boost mostly the positive CSR activities, we report our results on KLD strengths. Columns (1)–(2) report the results with cash ratio and high-cash firms, and columns

<sup>&</sup>lt;sup>26</sup> The results are very similar when we conduct the tests on the overall KLD scores.





<sup>(3)–(4)</sup> report those with excess cash levels and excess cash firms. The coefficients on the cash (excess cash) measures are significant in 3 out of 4 specifications, confirming that cash holdings are related to positive CSR activities. More importantly, the coefficients on *Treatment\*Post CFC-LTR* remain significantly positive; yet, the coefficients on triple interaction terms with cash holdings are insignificant in all specifications. The results indicate that the increase in CSR efforts is not necessarily related to treatment firms with high cash (or excess cash) holdings.

Table 7 Difference-in-differences regressions: industry analysis

Dependent variable	Retail industry	,		Finance indust	ry	
	KLD overall (1)	KLD strengths (2)	KLD concerns (3)	KLD overall (4)	KLD strengths (5)	KLD concerns (6)
Post CFC-LTR	0.368	-0.156	-0.524***	0.646	-1.243**	-1.890***
	(0.313)	(0.274)	(0.200)	(0.694)	(0.565)	(0.367)
Treatment	0.157	1.245**	1.088**	1.383*	1.815***	0.432
	(0.709)	(0.599)	(0.434)	(0.759)	(0.677)	(0.385)
Treatment $\times$ <i>Post CFC-LTR</i>	1.460***	2.023***	0.563*	1.970***	1.907***	-0.063
	(0.532)	(0.485)	(0.319)	(0.695)	(0.622)	(0.345)
Industry	-0.029	0.087	0.116	1.550***	1.590***	0.040
	(0.560)	(0.519)	(0.278)	(0.367)	(0.351)	(0.184)
$Treatment \times post CFC$ -	4.295***	2.891**	-1.404***	1.743*	1.949***	0.206
$LTR \times Industry$	(1.473)	(1.391)	(0.509)	(0.985)	(0.745)	(0.613)
Post CFC-LTR × industry	-0.285	1.052	1.337***	-1.155**	-1.561***	-0.406
	(1.288)	(1.193)	(0.439)	(0.561)	(0.509)	(0.302)
Treatment × industry	1.278	0.451	-0.828	-2.549	-2.573	-0.024
	(1.882)	(2.392)	(0.838)	(2.025)	(1.814)	(0.597)
Firm controls	Y	Y	Y	Y	Y	Y
Interaction w/controls	Y	Y	Y	Y	Y	Y
R <sup>2</sup> adjusted	0.158	0.417	0.325	0.133	0.430	0.377
Number of observations	1036	1036	1036	1036	1036	1036

The table reports the results of the difference-in-differences (DID) regressions on the relation between CSR scores and tax haven operations in the retail and finance industries. The dependent variables are the KLD scores, strengths, and concerns. *Post-CFC-LTR* is an indicator variable equal to one if the observation is after the adoption of the CFC look-through rule. *Treatment* is a dummy that equals one if the firm is in the treatment group and zero otherwise. *Retail* is an indicator for firms in the retail industry (with two-digit SIC codes 50–59). *Finance* is an indicator for firms in the financial services industry (with two-digit SIC codes 60–69). Firm controls include SIZE, log (total assets); CASH, cash scaled by total assets; R&D, research and development expenses scaled by total assets; M/B, market value over book value per share; F\_INCOME, foreign income scaled by total sales; S&P500, dummy equals 1 if firm is part of the index; ADV EXP, advertising expenditures scaled by total sales; LTD, long-term debt scaled by total assets. Standard errors are reported in parentheses. Bold is used to highlight the variable of interest. \*, \*\*, and \*\*\* indicate significance at the 10, 5, and 1% level, respectively. Standard errors are clustered at the firm level to adjust them for heteroscedasticity and time-series correlation

# **Conclusions**

In this paper, we investigate the relation between CSR and tax avoidance by looking at a major form of tax avoidance—the use of offshore entities in tax havens. Theories that relate CSR and tax avoidance do not agree on the relation. Studies that have empirically investigated the relation between firms' tax avoidance behavior and CSR activities have so far been inconclusive, partly because they use different measures of tax avoidance. Our approach allows us to alleviate the econometric issues, particularly the endogeneity concerns while studying the relation.

Using a sample of U.S. firms, we show that firms that pursue aggressive tax avoidance strategies by establishing offshore entities increase their CSR ratings substantially. We employ a difference-in-differences (DID) approach by using an exogenous event that facilitated the increase in offshore profit shifting, that of the controlled foreign corporations (CFC) look-through rule enacted by Congress in

2006. We find evidence that firms that are affected by the legislation increase positive CSR practices in response. Overall, our results support the risk management theory and provide evidence for the inconsistency between firms' CSR and tax avoidance activities.

Our results contribute to the debate on whether tax avoidance is in line with CSR or should be considered as part of CSR. Currently, CSR is broadly defined as the continuing commitment by businesses to behave ethically while improving the quality of life of the workforce, local community, and society at large. While its scope is increasingly being broadened, tax issues are seldom classified in the context of CSR. Some firms do not see any contradiction between actively engaging in CSR while at the same time seeking to minimize their tax liabilities through aggressive tax avoidance practices, even though these practices are often regarded as "unethical" and "unpatriotic." Thus, analyzing how consistent the behavior



Table 8 Cash holdings, CSR, and tax avoidance

Panel A. Univariate	e results				
Variable	Before CFC-LTR	After CFC-LTR	<i>t</i> -stat	P value	Nb of Obs
Cash ratio	0.08	0.10	2.82	(0.002)	1036
Excess cash	0.19	0.25	-0.64	(0.259)	734
Panel B. Difference	e-in-differences regressions				
Dependent variable		KLD strengths (1)	KLD strengths (2)	KLD strengths (3)	KLD strengths (4)
Post CFC-LTR		0.014	-0.110	0.422	0.190 (0.484)
		(0.298)	(0.305)	(0.399)	
Treatment		1.678*	1.267**	0.679	0.779
		(0.723)	(0.624)	(0.646)	(0.680)
Treatment $\times post$	CFC-LTR	2.196**	1.919***	1.546**	2.383***
		(0.662)	(0.707)	(0.696)	(0.831)
Cash		5.581**			
		(2.101)			
High-cash			1.240***		
			(0.421)		
Excess cash				0.339*	
				(0.181)	
High-excess cash					-0.173
					(0.413)
Treatment × post (	$CFC$ - $LTR \times cash$	1.088			
		(3.985)			
Treatment $\times$ post (	CFC-LTR × high-cash		-0.252		
•	Ü		(0.873)		
Treatment × post (	CFC-LTR × excess cash			0.369	
•				(0.495)	
Treatment × post (	CFC-LTR × high-excess cash				-0.294
•	Ü				(0.865)
Other interactions		Y	Y	Y	Y
Control variables		Y	Y	Y	Y
Interaction w/contro	ols	Y	Y	Y	Y
$R^2$ adjusted		0.406	0.417	0.402	0.399
Number of observa	tions	1036	1036	734	734

The table reports the univariate and multivariate results of the relation between firm tax haven operations and cash holdings. Panel A reports univariate differences in means of cash and excess cash holdings before and after the adoption of CFC look-through rule. The corresponding *t*-statistic and *P* value are reported for the difference in means. Panel B reports difference-in-differences (DID) regressions on the relation between CSR scores, tax haven operations, and firms' cash holdings. The dependent variables are the KLD strengths. *Post-CFC-LTR* is an indicator variable equal to one if the observation is after the adoption of the CFC look-through rule. *Treatment* is a dummy that equals one if the firm is in the treatment group and zero otherwise. Cash holdings are measured by CASH, cash scaled by total assets, and EXCESS CASH, the residual from the regression of cash holdings on its determinants as defined in Opler et al. (1999). HIGH-CASH (HIGH-EXCESS CASH) is a dummy which equals 1 if firms' cash (excess cash) holdings are higher than the sample median. Control variables are SIZE, log (total assets); R&D, research and development expenses scaled by total assets; M/B, market value over book value per share; F\_INCOME, foreign income scaled by total sales; S&P500, dummy equals 1 if firm is part of the index; ADV EXP, advertising expenditures scaled by total sales; LTD, long-term debt scaled by total assets. Bold is used to highlight the variable of interest. Italics are used to highlight p-values. \*, \*\*, and \*\*\* indicate significance at the 10, 5, and 1% level, respectively. Standard errors are reported in parentheses and are clustered at the firm level to adjust them for heteroscedasticity and time-series correlation



is in both aspects through a systematic approach is the first step toward understanding the relation.

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## **Appendix 1: List of Tax-Haven Countries**

Anguilla, Antigua and Barbuda, Aruba<sup>a</sup>, Bahamas, Bahrain, Barbados, Belize, Bermuda, British Virgin Islands, Cayman Islands, Channel Islands, Cook Islands, Cyprus, Dominica, Gibraltar, Grenada, Hong Kong<sup>b</sup>, Ireland<sup>b</sup>, Isle of Man, Jordan<sup>a</sup>, Lebanon<sup>a</sup>, Liberia, Liechtenstein, Luxembourg<sup>b</sup>, Macao<sup>b</sup>, Maldives, Malta, Marshall Islands, Mauritius<sup>a</sup>, Monaco, Montserrat, Nauru<sup>a</sup>, Netherlands Antilles, Niue<sup>a</sup>, Panama, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Samoa<sup>a</sup>, San Marino<sup>a</sup>, Seychelles<sup>a</sup>, Singapore<sup>b</sup>, Switzerland<sup>b</sup>, Tonga<sup>a</sup>, Turks and Caicos Islands, Vanuatu, Virgin Islands (U.S.)<sup>a</sup>

# **Appendix 2: Components of CSR Criteria (KLD Scores)**

Sub-criteria	Strengths	Concerns
Community	Charitable giving Innovative giving Support for housing Support for education Non-U.S. charitable giving Other strengths	Investment controversies Negative economic impact Other concerns
Corporate governance	Limit compensation Ownership strength Other strengths	High compensation Ownership concern Other concerns
Diversity	CEO Promotion Board of directors Work/life benefits Women and minority Contracting Employment of the disabled Gay and lesbian policies Other strengths	Controversies Non-representation Board diversity concerns Other concerns

Sub-criteria	Strengths	Concerns
Employee relations	Strength in union relations	Concern in union relations
	Cash profit sharing Employee involvement Retirement benefits strength Health and safety strength	Health and safety controversies Workforce reductions Retirement benefits concern Other concerns
Environment	Other strengths Beneficial products and	Hazardous waste
Human rights	services  Pollution prevention  Recycling  Clean energy  Other strengths  Indigenous people relations strength	Regulatory problems Ozone-depleting chemicals substantial Emissions Agricultural chemicals Climate change Other concerns Burma/Mexico concern
	Labor rights Other strengths	Human rights violation International labor Indigenous people relations concern Other concerns
Product quality/ safety	Quality R&D/innovation Benefit to economically Disadvantaged Other strengths	Product safety  Marketing/contracting Controversies  Antitrust Other concerns

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a Appears only in OECD list

<sup>&</sup>lt;sup>b</sup> Appears only in Hines and Rice (1994) list

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