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Do Socially Responsible Firms Pay More Taxes?

ABSTRACT: We investigate the relation between corporate tax payments and corporate social responsibility. Because existing theory and empirical studies find inconsistent evidence on the relation between these constructs, we investigate whether the two activities act as complements or substitutes. We estimate the relation between measures of corporate social responsibility and (1) the amount of corporate taxes paid, and (2) the amount invested in tax lobbying activities using both ordinary least squares and a system of simultaneous equations. We find consistent evidence that corporate social responsibility is negatively related to five-year cash effective tax rates and positively related to tax lobbying expenditures. Our evidence suggests that, on average, corporate social responsibility and tax payments act as substitutes.

Keywords: corporate social responsibility; tax avoidance; Global Reporting Initiative

Do Socially Responsible Firms Pay More Taxes?

I. INTRODUCTION

Recent anecdotal evidence suggests that some stakeholders of public companies regard corporate tax payments as socially responsible while others consider them irrelevant in a corporate social responsibility (CSR) context. For example, Margaret Hodge, the chair of the United Kingdom's Parliament Committee on Public Accounts, recently accused Starbucks, Google, and Amazon of immoral behavior due to "using the letter of tax laws both nationally and internationally to immorally minimize their tax obligations" (Lawless 2012). Similarly, *The Guardian* (UK) newspaper reported on February 14, 2009 "nearly 60 percent of financial directors in the UK do now regard tax as an ethical issue." On the other hand, the same newspaper article states that respondents to a survey of tax directors "were unanimous in saying that the payment of corporation tax is not at present a social issue relevant to CSR."

Discussions of taxes in corporate sustainability reports also provide mixed evidence on the importance of tax payments in a CSR context. International organizations like the Global Reporting Initiative (GRI) seek to influence CSR activities by issuing guidelines for sustainability reporting. The GRI guidelines recommend that firms provide detailed information on tax payments because what is "frequently desired by users of sustainability reports is the organization's contribution to the sustainability of a larger economic system" (GRI 2011, 25), suggesting that the GRI considers corporate tax payments as a positive contribution to social welfare. However, some corporations argue in their sustainability reports that taxes hurt innovation, production, job creation, and economic development, which suggests that tax payments detract from social welfare. Similarly, some corporations state that they actively lobby

to lower corporate taxes because lower corporate taxes will lead to increased economic development.

This diversity of perspectives motivates our research question: Are CSR activities and corporate tax payments complements or substitutes? To investigate this question, we examine the relation between measures of corporate social responsibility and both corporate tax payments and tax lobbying activity. Our evidence provides insight into whether managers or other influential stakeholders of socially responsible firms regard the payment of corporate taxes as complementing the firm's CSR activities. Understanding the relation between taxes and corporate social responsibility is important because existing research (Lanis and Richardson 2012; Huseynov and Klamm 2012; Landry, Deslandes, and Fortin 2013; Hoi, Wu, and Zhang 2013; Watson 2015), reporting guidelines (GRI 2011), and theory on CSR (Friedman 1970; Carroll 1979; Garriga and Mele 2004; Mackey, Mackey, and Barney 2007; McGee 2010) suggest competing predictions about the relation between CSR and taxes.

How firms jointly choose the extent to which they engage in CSR and tax avoidance likely reflects how engaging in one activity affects the costs and benefits of the other. If firms view paying taxes in the same way they view CSR activities, then the two activities act as complements. In this case, we expect a positive relation between corporate tax payments and measures of CSR. This prediction is consistent with CSR theories developed in the business and society literature suggesting that firms have social obligations that extend beyond maximizing shareholder wealth (Carroll 1979; Garriga and Mele 2004; Mackey et al. 2007). Under this

theory, firms that value CSR will dedicate resources to socially responsible activities that do not necessarily maximize economic performance.[1]

Conversely, firms may view paying taxes as detracting from social welfare because tax payments reduce innovation, job growth, and economic development. For example, Djankov, Ganser, McLiesh, Ramalho, and Shleifer (2008, 4) find "a consistent and large adverse effect of corporate taxes on both investment and entrepreneurship." If this is the case, we expect corporate tax payments and CSR to act as substitutes, with a negative relation between the two measures.

Researchers also argue that for-profit corporations are more efficient than governments in allocating resources. For example, McGee (2010, 41) states that “keeping resources in the private sector results in benefits to society because the private sector utilizes resources more efficiently than the public sector.” Porter and Kramer (2006, 92) argue that "when a well-run business applies its vast resources, expertise, and management talent to problems that it understands and in which it has a stake, it can have a greater impact on social good than any other institution or philanthropic organization." This perspective suggests that socially responsible firms may dedicate resources to CSR activities, but neither managers nor other influential stakeholders necessarily consider the payment of corporate taxes to be the best means by which to accomplish their social responsibility goals. Moreover, under this view paying less taxes can result in greater social benefits.

Tax payments and CSR also act as substitutes if firms that engage in aggressive tax avoidance increase their CSR activities to offset any negative perceptions. Existing research argues that CSR activities can be used to temper the effects of negative events, such as fraud

[1] At the extreme firms may even pay more corporate taxes than legally required. See the Associated Press news story "Starbucks Promises to Pay More UK Tax" (December 6, 2012) in which Starbucks responded to criticism that its low UK taxes were "immoral" by agreeing to pay "somewhere in the range of 10 million pounds in each of the next two years" regardless of whether the company is profitable.

accusations or environmental disasters, or to offset negative public perceptions about the firm (Fombrun, Gardberg and Barnett 2000; Godfrey, Merrill and Hansen 2009).

Other theories on CSR suggest that decisions about CSR and tax avoidance are unrelated. For example, Friedman (1970) argues that firms should engage in socially responsible activities only when such activities maximize shareholder wealth. Under this view, firms will dedicate resources to CSR activities only to the extent that they align with the overarching goal of maximizing shareholder wealth. Consistent with this theory, Dhaliwal, Li, Tsang, and Yang (2011) and Lev, Petrovits, and Radhakrishnan (2010) find that firms with higher measures of CSR have lower cost of capital and higher revenue growth, respectively. If tax avoidance and CSR both maximize firm value independently of one another, we expect managers to engage in each activity independently of the other, and therefore there will be no relation between CSR and corporate tax payments.

We examine the five-year cash effective tax rates (ETRs) for a sample of U.S. public corporations that also have data on the MSCI annual data set of environmental, social, and governance (ESG) ratings of publicly traded companies. We focus only on U.S. corporations since the way managers and other stakeholders regard taxes in the context of corporate social responsibility may differ across countries.[2] To identify socially responsible firms, we construct a CSR index for the period 2002 through 2011 following the approach in Kim, Park, and Wier (2012).

We find that the CSR index is negatively related to five-year cash ETRs, and these results are driven by firms with high CSR indices. We find similar results using only the subset of

[2] For example, Lanis and Richardson (2012) find that higher levels of CSR disclosure are associated with lower corporate tax avoidance for a sample of 408 Australian firms, suggesting that Australian firms deemed to be more socially responsible pay more taxes.

categories in the CSR index that relate to "community," which includes such activities as charitable giving, innovative giving, community engagement, and community impact. This evidence is consistent with corporate tax payments and CSR acting as substitutes because firms view taxes as detracting from social welfare and/or because they engage in CSR, in part, to offset negative perceptions associated with low tax payments.

We also examine the relation between tax lobbying behavior and CSR and find that the CSR index is positively related to tax lobbying. This result is consistent with our finding of a negative relation between cash ETRs and CSR and corroborates our evidence that socially responsible firms do not necessarily regard the payment of corporate taxes as complementing CSR activities.

We do not attempt to establish causality in the relation between CSR and tax payments; our goal is to determine how firms choose the extent to which they jointly engage in CSR and tax avoidance given that the costs and benefits of engaging in one activity potentially affect the costs and benefits of the other. This lack of a defined causal relationship and the possibility that investment in one activity influences the payoff from the other suggests that the extent of engagement in each activity may be determined simultaneously. We therefore estimate CSR and tax avoidance using a system of simultaneous equations. Results using simultaneous equations are consistent with ordinary least squares.

We distinguish our research question and results from a recent study by Hoi et al. (2013), which also examines the relation between tax avoidance and CSR activities. Hoi et al. provide evidence that firms with "excessive irresponsible CSR activities" have a higher likelihood of engaging in "extremely aggressive tax avoidance policies." Our research question and setting differ from this study in two important ways. First, Hoi et al. focus on a subset of firms with poor

CSR, so their CSR measures include only activities that negatively affect a firm's stakeholders. In contrast, we take a more comprehensive approach and study the full spectrum of CSR activity using an aggregate measure of CSR activity, as well as measures that capture firms in the high and low quintiles of CSR activity, and measures that capture CSR strengths and concerns separately. Second, Hoi et al. focus on "extremely aggressive tax avoidance policies" such as tax sheltering, which may constitute illegal tax fraud, and Fin 48 reserves, which represent tax savings on uncertain tax positions. We study a broader spectrum of legal tax avoidance by using cash ETRs.[3] Although Hoi et al. show that their results are robust to using cash ETRs, their results differ from ours and focus on socially irresponsible firms. In contrast to their result that low CSR firms avoid more taxes, we provide new evidence that high CSR firms avoid more taxes, which suggests that CSR and taxes act as substitutes rather than complements, or that CSR and taxes are substitutes for a different set of firms than Hoi et al. consider.

Our results make two important contributions to research on taxes and CSR. First, our results help in understanding the types of activities that managers or other influential stakeholders consider to be socially responsible. We find a negative relation between tax payments and two measures of CSR. Assuming that managers allocate resources to activities that they or other influential stakeholders consider important in a CSR context, this result suggests that influential stakeholders of socially responsible firms do not, on average, consider corporate tax payments to complement CSR activities. Our results suggest that tax payments and CSR act as substitutes, at least for some firms. This result also highlights the potential tradeoff between

[3] The importance of the idea that tax avoidance should be "legal" is evidenced by an example from General Electric's 2010 Citizenship Report, which states: "GE has taken criticism recently regarding its U.S. tax obligations. Like any business or individual, we do like to keep our tax rate low. But we fully comply with the law and there are no exceptions. GE acts with integrity in relation to our tax obligations wherever we operate. At the same time, we have a responsibility to our shareowners to reduce our tax costs as the law allows. Under any system, GE will comply and pay what we owe."

corporate tax payments and other economic activities that promote social welfare. While higher corporate tax payments provide governments with more revenue to spend on social welfare, firms that focus on after-tax profitability may be able to increase social welfare in other ways, such as investment in infrastructure, R&D, and job creation. Although we do not specifically address the relation between corporate tax payments and social welfare, our results suggest that the relation is more complex than that reflected in some prior research.

Our results also provide evidence about the type of information that may be valued in sustainability reports, an important public policy question. This evidence should be useful to organizations such as the GRI and UN Global Compact that produce sustainability reporting guidelines, as well as to the corporations that produce CSR reports. Current guidelines appear to view corporate tax payments as contributing to the social welfare of the communities in which the corporation operates, suggesting that paying more taxes is better from a social welfare standpoint. Our results suggest that in the U.S. the payment of more tax is not, on average, considered an important complement to CSR.

II. CORPORATE SOCIAL RESPONSIBILITY AND TAXES

Corporate social responsibility can be broadly defined as voluntary firm actions designed to improve social or environmental conditions (Mackey et al. 2007). Our research question provides insight into whether managers or other influential stakeholders of socially responsible firms consider the payment of corporate taxes an important complement to CSR activities, suggesting they view CSR and taxes as complements, or whether stakeholders consider tax payments as detracting resources from CSR, suggesting they view CSR and taxes as substitutes. While corporate tax payments are not entirely voluntary, managers do make choices regarding

the extent to which their firms engage in tax planning that reduces the amount of taxes paid. Managers also decide whether to engage in lobbying to lower corporate taxes. One potential way to understand the relation between CSR and taxes would be to examine how managers discuss taxes in the firm's sustainability report. As discussed in the next section, we examine a sample of sustainability reports and observe that the treatment of taxes is inconsistent across reports.

Corporate Taxes and Sustainability Reporting

Two observations suggest inconsistencies in how corporate tax payments are treated in sustainability reports issued by corporations. First, there appears to be a lack of uniform treatment of tax information in sustainability reports, despite GRI reporting guidelines that clearly emphasize the importance of tax disclosures. Second, some firms for which CSR appears to be important report no tax information at all or report that they promote or lobby for legislation that lowers corporate taxes.

As currently written, the GRI guidelines for sustainability reporting suggest that more socially responsible firms will pay more taxes. For example, the first core economic indicator suggested by GRI is “direct economic value generated and distributed, including [...] payments to capital providers and governments” (GRI 2011, 26). Similarly, the UN Global Compact (UN 2009, 40) encourages participants to engage in a “core business partnership” in which partners collaborate to, among other things, “generate tax revenues.”

Despite this positive relation between corporate tax payments and public welfare suggested by sustainability reporting guidelines, differences exist in how firms view and report taxes in their sustainability reports. Some firms such as Analog Devices report taxes in a manner consistent with the current guidelines and state that they contribute to the community “through

the ongoing operation of our business and taxes." Other firms discuss taxes in their sustainability reports as being harmful to innovation and economic development. For example, Intel states in its 2011 Corporate Responsibility Report that it "believes in promoting tax policies that encourage innovation and competition around the world. [...] the location of our facilities can be substantially affected by the tax and economic development policies of potential host countries."

Some sustainability reports also discuss the fact that large public corporations affect tax policy through their lobbying activities, which, in turn, affect social welfare.[4] Many of these firms argue that they are engaging in good corporate citizenship by actively lobbying to lower the tax payments of businesses, a stance in direct contrast to how the issue of corporate tax payments is framed by the current GRI reporting guidelines. For example, in their 2011 sustainability report, 3M Corporation states that their top objective in terms of public policy issues is "to make the case for tax reform and lower corporate tax rates for a level global playing field." In their 2011 sustainability report 3M rates tax policy as more important than either health or environmental concerns, underscoring the importance they attribute to lowering corporate tax payments.

To understand how taxes and tax information are disclosed in sustainability reports, we examine forty sustainability reports selected randomly from sample firms in the MSCI ESG annual data set from 2009 to 2011 that have high quality sustainability reports.[5] We find that in nineteen (47.5 percent) of these reports the firm either does not make any tax disclosures at all, or refers the reader to the firm's Form 10-K for tax information. We also observe wide variation in the amount and quality of tax information that firms report, and find both positive and

[4] GRI Sustainability Reporting Guidelines version 3.1 includes lobbying activities as a core society performance indicator.
[5] We identify firms with high quality sustainability reports as those with Reporting Quality (CGOV_str_D) equal to one. We discuss these data in more detail in Section III.

negative statements about taxes in the forty reports that we examined. Positive statements about taxes focus on the importance of the firm's tax payments to the social welfare of the community. For example, ConocoPhillips states "Our global operations contribute substantially to social and economic development […] For example, our direct economic contributions during 2011 included: Taxes – Our operations generated $14.9 billion in total tax revenue to governments." Negative statements about corporate taxes generally argue that high tax rates discourage innovation and investment and harm job creation, and therefore hurt the ability of the firm to contribute to social welfare. For example, 3M states "Tax reform is essential to ensuring the long-term competitiveness of American businesses and workers. 3M believes business tax reform should focus on a significant reduction of the corporate income tax rate."

The fact that many companies do not provide tax information in their sustainability reports does not necessarily mean the companies are not in compliance with CSR reporting guidelines. GRI, for example, only requires companies to report on items that are material. In discussing materiality in the context of sustainability reporting, GRI states (2011, 8): "Relevant topics and indicators are those that may reasonably be considered important for reflecting the organization's economic, environmental, and social impacts, or influencing the decisions of stakeholders, and, therefore, potentially merit inclusion in the report. Materiality is the threshold at which topics or indicators become sufficiently important that they should be reported." GRI gives an example of a two-dimensional matrix on which to assess materiality, with the vertical axis reflecting "Influence on Stakeholder Assessments and Decisions" and the horizontal axis reflecting "Significance of Economic, Environmental, and Social Impacts."

Firms vary widely in how they present taxes on the matrix. In Intel's matrix "Taxes" is the lowest rated item on the vertical axis labeled "Importance to Multiple Stakeholders" and is

also rated to the left of (i.e., below) the "medium" line on the horizontal axis labeled "Impact on Intel's Business." From this matrix one could conclude that corporate taxes are not very important to either Intel or its stakeholders. UPS rates "Taxes Paid" high on the vertical axis of its matrix, indicating relatively high importance to stakeholders, but to the far left (i.e., very low) on the horizontal axis, indicating low influence on UPS's business success. In contrast, Symantec does not show taxes on its materiality matrix. In spite of the differences in how taxes are portrayed in their CSR reports, all three of the aforementioned firms are in the top 10 percent of all firms in terms of CSR scores.

The above discussion illustrates that for firms for which CSR is important, the firm may or may not treat corporate tax payments as an important (or material) item compared with other CSR items in their reports. This anecdotal evidence suggests that there is no clear relation between the importance of CSR to a firm and its corporate tax payments, despite the clear link between tax receipts and the ability of governments to fund social services and the GRI guidelines stating that companies should disclose their tax payments. This lack of consistency suggests that the relation between firms' CSR activities and tax payments is an empirical question.

The Relation between CSR and Tax Payments

Existing theories and empirical evidence from the CSR literature also suggest that there are differing views about the relation between tax payments and a firm's other CSR activities. We discuss these different views below.

Arguments Suggesting a Positive Relation between CSR and Tax Payments

Theories developed in the business and society literature (Margolis and Walsh 2003) suggest that firms must consider the interests of all stakeholders, which can sometimes cause the

firm to engage in socially responsible activities that are not profit-maximizing (Mackey et al. 2007). For example, in his model of corporate social performance, Carroll (1979) identifies economic, ethical, legal, and discretionary responsibilities as four basic expectations of CSR. Consistent with Carroll's model, Kim, Park, and Weir (2012) find evidence that managers engage in CSR activities to meet ethical expectations rather than in response to opportunistic incentives. Also consistent with this model, Avi-Yonah (2008) argues that from a CSR perspective, firms should not engage in tax avoidance by using transactions that lack a business purpose, even if the tax avoidance strategy is legal. Christensen and Murphy (2004, 37) state "paying taxes is perhaps the most fundamental way in which private and corporate citizens engage with broader society." Taken together, these theories suggest a positive relation between CSR and corporate tax payments.

Anecdotal evidence suggests that public corporations are sensitive to how their tax payments are perceived by stakeholders. For example, public corporations sometimes take actions to make their tax payments appear larger than they really are. A July 23, 2012 *New York Times* article reports "Apple Inc., already the world's most valuable company, understates its profits compared with other multinationals. It's building up an overlooked asset in the form of billions of dollars, tucked away for tax bills it may never pay."[6] Apple responded to criticism that it's taxes were too low by making the following statement in an April 28, 2012 article in the *New York Times*: "In the first half of fiscal year 2012 our U.S. operations have generated almost $5 billion in federal and state income taxes, including income taxes withheld on employee stock gains, making us among the top payers of U.S. income tax." It is interesting to note that Apple

[6] Many U.S. multinational corporations designate unremitted foreign earnings as permanently reinvested earnings, a designation that allows them to avoid recognizing the potential U.S. tax liability on these earnings. Apple, however, recognizes the potential U.S. tax expense in earnings, a practice that is considered conservative from an accounting perspective but may also make it appear that Apple pays more taxes than it does.

includes the amount of taxes paid by its employees on stock option compensation income in the tax payments it discloses in its sustainability report.

Arguments Suggesting No Relation or a Negative Relation between CSR and Tax Payments

Traditional economic theories suggest that firms will dedicate resources to CSR activities only to the extent that they align with the overarching goal of maximizing shareholder wealth. Consistent with this theory, Dhaliwal et al. (2011) find a negative relation between CSR and cost of capital, and Lev et al. (2010) find evidence of a positive association between CSR activity and revenue growth. Thus, under traditional economic theory, we would expect managers to engage in tax avoidance to the extent it maximizes shareholder wealth. If both tax avoidance and CSR are mechanisms to maximize firm value, we expect no direct relation between CSR and corporate tax payments.

However, if firms view paying taxes as detracting from social welfare because tax payments reduce innovation, job growth, and economic development, then the two activities act as substitutes. In this case we expect a negative relation between corporate tax payments and measures of CSR. Theoretical and empirical studies in economics have demonstrated that corporate taxes tend to decrease investment. For example, Hines (2006, 2) states that "a large body of evidence suggests [...] that international investment, and international tax avoidance, are strongly influenced by tax policies," and "there is every reason to expect countries to benefit from tax reductions as capital becomes more internationally mobile." Djankov et al. (2008, 4) find "a consistent and large adverse effect of corporate taxes on both investment and entrepreneurship."

Some researchers also argue that for-profit corporations are more efficient than governments in allocating resources. For example, McGee (2010) states that “keeping resources in the private sector results in benefits to society because the private sector utilizes resources more efficiently than the public sector.” Lantos (2001) argues that "humanitarian CSR is favored over government welfare in that the aid is voluntarily, more personally, and perhaps more efficiently bestowed, whereas state contributions come via the inefficiency and plodding pace of government bureaucracy and legislators through faceless bureaucrats." Porter and Kramer (2006, 92) argue that "when a well-run business applies its vast resources, expertise, and management talent to problems that it understands and in which it has a stake, it can have a greater impact on social good than any other institution or philanthropic organization." Hines, Horwitz, and Nichols (2010) and Henderson and Malani (2009) make similar arguments. Malani and Posner (2007, p 2019) give the following example: "Google has recently announced, with great fanfare, that it will operate the world's first (to our knowledge) 'for-profit charity.' Google's plan appears to be to finance a for-profit business that will, among other things, develop new technology to improve water supplies in Kenya." This perspective suggests that managers and stakeholders of socially responsible firms may not consider the payment of corporate taxes to be the best means by which to accomplish their social responsibility goals. In fact, this argument suggests that paying taxes detracts from social welfare.

Consistent with this argument, we find that negative statements about corporate taxes in firms’ sustainability reports generally argue that high tax rates discourage innovation and investment and harm job creation, which limit firms’ ability to contribute to social welfare. Qualitative evidence presented in Preuss (2010) and Sikka (2010) is also consistent with this argument. Preuss finds that firms based in tax havens claim to engage in socially responsible

business practices and Sikka finds that firms identifying themselves as socially responsible engage in tax avoidance. More generally, as a firm's after-tax profits increase, its impact on social welfare through infrastructure investment and job creation may increase, which both improves the income level of the community (through employee salaries and payments to suppliers and contractors) and increases other sources of tax revenue, including payroll taxes and employee taxes on salaries. Similarly, firms that avoid taxes have a greater capacity to invest in socially responsible activities. These arguments suggest a negative relation between CSR and corporate tax payments.

Other existing research argues that an additional basis for finding a negative relation between CSR and taxes arises when firms engage in CSR to create "moral capital" to reduce the consequences of their involvement in negative events or publicity (Fombrun et al. 2000; Godfrey et al. 2009). Fombrun et al. (2000, 93) suggest that since regulators are members of the community and legislators are elected by members of the community, they "are more likely to grant the benefit of the doubt to strong corporate citizens." Consistent with a tempering effect of CSR, Godfrey et al. (2009) find that the decline in shareholder value after a negative event is smaller for firms that engage in CSR than for firms that do not. This research suggests that some firms strategically engage in CSR to create a more favorable reputation among various stakeholders and reduce the possibility of negative attention or regulatory action directed at aggressive tax practices and the consequences of such attention or action.[7]

[7] Some activities that improve social welfare also decrease tax payments through tax credits. For example, expenditures on energy saving technology improve the environment while at the same time generating tax credits. As an example, a May 6, 2013 press release by General Electric states "Today GE's renewable energy business announced 1 gigawatt of new U.S. wind turbine orders following the ruling of the production tax credit on January 1, 2013."

Empirical Evidence on the Relation between CSR and Tax Payments

Based on the above discussion, the payment of corporate taxes may be viewed differently from other expenses that a firm incurs to promote social welfare, suggesting that the link between a firm's CSR activities and the amount of corporate taxes paid is an empirical question. Existing studies that investigate the relation between CSR and tax payments find mixed results.

The results of several studies suggest either a positive or negative relation between CSR and tax payments, although these studies differ from ours in either the sample firms or the measures used. Studies suggesting a positive relation find that firms with low CSR ratings (or high measures of CSR "concerns") have lower ETRs (Garcia 2014; Hoi et al. 2013; Huseynov and Klamm 2012), Australian firms with high levels of CSR disclosure have higher ETRs (Lanis and Richardson 2012), and self-reported "tax disputes" with the taxing authorities are higher for firms with low CSR ratings (Lanis and Richardson 2015). On the other hand, studies have found that U.S. firms exhibit no relation between CSR strengths and tax rates (Hoi et al. 2013; Huseynov and Klamm 2012), Canadian firms in the highest CSR rating terciles are more tax aggressive than firms in the middle tercile (Landrey et al. 2013), and the relation between CSR and taxes for U.S. firms is mixed and depends on firm profitability (Watson 2015) or lobbying activities (Garcia 2014).

We provide additional empirical evidence on the relation between CSR and tax payments using a large sample of U.S. firms. We consider firms' strengths and concerns together because this measure provides an assessment of the overall extent to which a firm values CSR. For example, consider two firms, where Firm A has four concerns and no strengths, and Firm B has four concerns and nine strengths. Considering both strengths and concerns, it appears that Firm A does not value CSR (strengths minus concerns equals negative four), whereas Firm B does

value CSR (strengths minus concerns equals positive five). Looking at strengths and concerns separately, both firms appear to place the same value on CSR (total concerns of four). Thus, netting strengths and concerns captures a broader picture of the importance a firm places on CSR than focusing on strengths and weaknesses separately.[8] We also focus on cash ETRs because these measures capture a broader range of tax avoidance activities than measures intended to capture aggressive tax reporting behavior.

We supplement our tests of the relation between CSR and taxes by studying the relation between CSR and tax lobbying expenditures. Existing research finds that firms that spend more on tax lobbying have lower effective tax rates (Brown, Drake, and Wellman 2014; Hill et al. 2012). Because tax lobbying is a means to reduce tax payments, the relation between CSR and tax lobbying provides evidence about whether socially responsible firms view tax payments as contributing to or detracting from social welfare. Therefore, these tests help corroborate our evidence on the relation between CSR and tax payments.

III. EMPIRICAL TESTS

Sample

Our sample initially consists of all firms for which data are available on Compustat for the years 2002 through 2011. Our initial sample begins in 2002 because coverage in the CSR database was greatly expanded for 2002 and later years. Because our empirical tests require five years of data to calculate both cash ETR and the CSR Index, our final sample includes the years 2006 through 2011. Data on the CSR index and sustainability reporting, which we use to construct our CSR measures, come from the MSCI annual data set of environmental, social, and

[8] For comparison purposes, we also report results that examine strengths and concerns separately to be consistent with Hoi et al. (2013).

governance ratings of publicly traded companies. This database was previously referred to as the KLD database.

According to Kim et al. (2012), "KLD uses a combination of surveys, financial statements, and articles in the popular press and academic journals, as well as government reports, to assess social performance along dimensions such as corporate governance, community, diversity, employee relations, environment, product, and exclusionary screen categories including alcohol, gambling, military contracting, nuclear power, and tobacco." To assess a company's level of social responsibility, KLD examines both positive indicators (strengths) and negative indicators (concerns). Numerous scholarly studies use the KLD data to operationalize the CSR construct (e.g., Turban and Greening 1997; Waddock and Graves 1997; Szwajkowski and Figlewicz 1999) and note that the KLD data are a widely used, influential, and highly regarded measure of CSR (Waddock 2003; Chatterji, Levine and Toffel 2009; Mattingly and Berman 2006).

Following Kim et al. (2012) we construct CSR index scores based on the following five KLD categories: community, diversity, employee relations, environment, and product. We also follow Kim et al. (2012) in that we exclude the category for corporate governance, since the link between corporate governance and corporate tax avoidance has been studied previously (Desai and Dharmapala 2006; Armstrong, Blouin, Jagolinzer, and Larker 2014; Lisowsky, Robinson, and Schmidt 2012), and is different from the link between CSR and taxes that is the focus of our study.[9] We construct a CSR index score by adding one for each identified strength, subtracting

[9] The KLD data include seven total categories: community, diversity, employee relations, environment, product, governance, and human rights. We follow Kim et al. (2012) and exclude human rights as well as governance. Results are not sensitive to including human rights and governance in the CSR index. We discuss these tests in more detail in the Sensitivity Tests section.

one for each identified concern, and summing across all strengths and concerns for each firm-year.[10]

To obtain a measure of a firm's tax payments, we use the five-year cash ETR proposed by Dyreng, Hanlon, and Maydew (2008), equal to the sum of taxes paid for a five year period divided by the sum of the pretax income less the sum of special items for the same five year period. We obtain firms' tax lobbying expenditures from the publicly available database maintained by the Center for Responsive Politics, which provides data on firm lobbying expenditures related to thirty issues, and we only use data on a firm's tax lobbying.[11] Our use of this lobbying data is consistent with prior research (e.g., Hill, Kubick, Lockhart, and Wan 2012).

Our final sample combines observations with data on both the Compustat and MSCI ESG databases for a given year. We assume that lobbying activity is zero for firms without data on the lobbying database. We eliminate observations for firms incorporated outside of the U.S., observations with five-year cash ETRs greater than 1 or less than 0, and observations with missing data for any of our regression variables.[12] This process results in a final sample of 5,588 observations.

Research Design

We test the relation between CSR and taxes using the following regression model:

$$DEPVAR_{i,t} = \beta_0 + \beta_1 CSR_{i,t} + \Sigma\beta_k CONTROLS_k + \varepsilon_{N}. \quad (1)$$

[10] The KLD dataset is updated each year and exhibits some variation across time. For example, the mean within firm standard deviation of the CSR index score is 1.01.
[11] The Center for Responsive Politics website (https://www.opensecrets.org/lobby/) provides data that classifies lobbying expenditures by firm into several different categories. We find data for 407 of the 5,588 firm years in our final sample. We merge this data with our sample based on firm name.
[12] To evaluate the effect of eliminating firm-years with cash ETRs less than zero and greater than one, we re-estimate all equations by including these observations and winsorizing all ETRs at zero and one. Inferences are unchanged.

DEPVAR is one of three different variables:

Cash_ETR = five-year sum from year t-4 to year t of cash taxes paid (Compustat data item TXPD) divided by the five-year sum of pre-tax income (PI) less special items (SPI). To allow for meaningful interpretation, firms are required to have a Cash ETR between 0 and 1.

Lobby(0/1) = an indicator variable equal to 1 if the firm reported lobbying expenditures for tax purposes in the current year and 0 otherwise.

Lobby_Exp = the firm's total reported lobbying expenditures for tax purposes divided by lagged total assets (AT).

We employ two measures of CSR:

CSR_Index = total strengths minus total concerns in the MSCI ESG five social rating categories: community, diversity, employee relations, environment, and product.

Community = total strengths minus total concerns in the MSCI ESG "Community" category.

The coefficient on CSR captures the relation between CSR and tax payments. A positive coefficient would suggest that CSR and taxes are complements, whereas a negative coefficient would suggest that they are substitutes. *CONTROLS* consist of two sets of control variables that differ depending on whether the dependent variable is the Cash ETR or one of the lobbying measures. We define these measures in the Appendix.

When *Cash_ETR* is the dependent variable, we include control variables that existing literature finds to be important determinants of tax avoidance including *Size*, *Leverage*, intangible assets (*Intang*), tax benefit of stock options (*Tax_Bnft_Opt*), pre-tax profitability (*PTROA*), growth (*MTB*), foreign income (*For_Inc*), selling, general, and administrative expense (*SG&A*), research and development (*R&D*), net operating loss carryforward (*NOLCF Amount*, *NOLCF Indicator*), property, plant and equipment (*PP&E*), corporate governance (*Governance*), *Cash*, *Excess Cash*, and *Financial Constraints*. In tests of the relation between corporate social

responsibility measures and lobbying activities we include control variables from Hill, Kelly, Lockhart, and Van Ness (2013) including *Size*, pre-tax profitability (*PTROA*), growth (*MTB*), access to lawmakers (*Capital*), and number of lawmakers (*Electoral College*). In addition, all regressions have year and industry fixed effects, where industry is based on the SIC two digit industry classifications. All t-statistics are calculated using standard errors clustered by firm and year. Regressions using the five-year Cash ETR as the dependent variable use mean values of all regression variables measured over the same five-year period as the ETR. Regressions using lobbying as the dependent variable use annual values for all variables. All continuous independent variables are winsorized at the first and ninety-ninth percentiles.

Results

Table 1 presents descriptive statistics for the variables used in our tests. The mean of *CSR_Index* is negative, indicating that the average firm has more "concerns" than "strengths" using the KLD ratings. Mean and median *Cash_ETR* is approximately 26 percent, which is lower than the 35 percent statutory U.S. corporate income tax rate but similar to prior research. The mean ratio of foreign income to total income (*For_Inc*) is 41 percent, while the median is 16 percent, suggesting that most firms have a relatively small amount of foreign income. The Pearson correlation between *Cash_ETR* and *CSR_Index* is -0.046, consistent with CSR activities and tax payments being substitutes rather than complements. We next present multivariate regression tests that include variables to control for other factors that affect Cash ETRs.

Cash_ETR Results

Table 2 presents results of estimating Equation (1) when the dependent variable is the five-year Cash ETR. Since *Cash_ETR* is measured over five years, all other regression variables

are the mean values over the same five-year period. Column (1) presents results with only industry and year fixed effects, while Column (2) contains all of the control variables. The coefficient on *CSR_Index* is significantly negative in both columns indicating that firms with higher CSR indices pay lower taxes than other firms.[13] In Column (2) the coefficient on *CSR_Index* is -0.003. This result suggests that a one unit increase in *CSR_Index* is associated with a 0.3 percentage point decrease in *Cash_ETR* or alternatively that moving from the 25th percentile to the 75th percentile of *CSR_Index* results in a 0.66 percentage point decrease in *Cash_ETR*.[14] While this result is economically modest, it does suggest that cash taxes paid by the firm is *decreasing* in the corporate social responsibility score, consistent with CSR and tax payments acting as substitutes rather than complements.

To more directly address our research question, we conduct separate analyses for firms with high and low CSR indices. We create dummy variables to indicate those firms in the highest or lowest quintiles of *CSR_Index* and include these as independent variables in Equation (1) (replacing *CSR_Index*). Results of estimating this regression are presented in Table 3. The results in Columns (1) and (2) suggest that those observations in the highest quintile of *CSR_Index* have significantly lower values of *Cash_ETR* than other firms, but firms in the lowest quintile of *CSR_Index* do not have significantly different values of *Cash_ETR* than other firms. This result suggests that the firms that are rated highly for social responsibility drive the negative relation between taxes and CSR indices reported in Table 2. In Column (2), the coefficient on *CSR Highest Quintile* is -0.017. This result suggests that after controlling for various other

[13] We also estimate Equation (1) separately by year and find the coefficients on *CSR_Index* are negative for each year in the sample period and are statistically significant in 2007 and 2011. The coefficient on *CSR Highest Quintile* (Table 4) is also negative in every year and significant in three of the six years. These results are consistent with our expectations given the loss of statistical power with smaller sample sizes.

[14] The 25th to 75th percentile of CSR Index ranges from -1.4 to 0.8 [(0.8 - -1.4) x 0.003 = 0.0066].

determinants of tax avoidance, firms in the highest quintile of CSR scores pay 1.7 percent less (as a percentage of pretax income) in taxes than other firms.[15]

Simultaneous Equations Estimation

Although we seek only to provide evidence on association, not causation, we recognize that it is possible that CSR activities and corporate tax avoidance are endogenous. For example, one argument is that firms might engage in CSR to offset the negative perceptions of tax avoidance. In this case the benefits of CSR depend in part on the level of tax avoidance and the costs of tax avoidance depend on the level of CSR. We attempt to control for some of this endogeneity by estimating a three-stage least squares model.[16] Specifically, we estimate the following system of equations:

$$Cash\_ETR_{i,t} = \beta_0 + \beta_1 CSR\_Index_{i,t} + \beta_2 Size_{i,t} + \beta_3 Leverage_{i,t} + \beta_4 Intang_{i,t} + \beta_5 Tax\_Bnft\_Opt_{i,t}$$
$$+ \beta_6 PTROA_{i,t} + \beta_7 MTB_{i,t} + \beta_8 For\_Inc_{i,t} + \beta_9 SG\&A_{i,t} + \beta_{10} R\&D_{i,t} + \beta_{11} NOLCF\_Amount_{i,t}$$
$$+ \beta_{12} NOLCF\_Indicator_{i,t} + \beta_{13} PP\&E_{i,t} + \beta_{14} Governance_{i,t} + \beta_{15} Cash_{i,t} + \beta_{16} Excess\_Cash_{i,t}$$
$$+ \beta_{17} Financial\ Constraints_{i,t} + \Sigma\beta_j \text{Industry}_j + \Sigma\beta_t \text{Year}_t + \varepsilon_{i,t} \quad (2)$$

[15] The economic significance of this effect seems reasonable and in line with existing studies related to cash effective tax rates. For example, Hoi et al. (2013) find that firms with high negative CSR pay 3.4 percent less in taxes (as a percent of taxable income) than other firms and Chen et al. (2010) find that family firms pay 1.2 percent less in taxes (as a percent of taxable income) than non-family firms.

[16] We use three-stage least squares because its use of covariances allows for a more efficient and precise estimate of the coefficients than a two-stage least squares model (Kennedy 1996, 161). Our results are nearly identical using two-stage least squares.

$$CSR\_Index_{i,t} = \alpha_0 + \alpha_1 Cash\_ETR_{i,t} + \alpha_2 Size_{i,t} + \alpha_3 Leverage_{i,t} + \alpha_4 Intang_{i,t} + \alpha_5 PTROA_{i,t}$$
$$+ \alpha_6 MTB_{i,t} + \alpha_7 SG\&A_{i,t} + \alpha_8 R\&D_{i,t} + \alpha_9 NOLCF\_Amount_{i,t} + \alpha_{10} NOLCF\_Indicator_{i,t}$$
$$+ \alpha_{11} PP\&E_{i,t} + \alpha_{12} Governance_{i,t} + \alpha_{13} Cash_{i,t} + \alpha_{14} Excess\_Cash_{i,t} + \alpha_{15} Financial\ Constraints_{i,t}$$
$$+ \alpha_{16} CSR\_Transparency_{i,t} + \Sigma\alpha_j \text{Industry}_j + \Sigma\alpha_t \text{Year}_t + \varepsilon_{i,t} \quad (3)$$

where *CSR_Transparency* equals the five-year average of an indicator variable equal to one if a firm is defined as having a strength in the governance category "Reporting Quality CGOV_str_D" from MSCI ESG database. This variable provides a measure of the quality of a firm's social responsibility reporting, specifically whether the firm is particularly effective in reporting on a wide range of social and environmental performance measures, or is exceptional in reporting one particular measure. We expect that *CSR_Index* will be positively associated with CSR reporting quality. All other variables are as defined as in Equation (1).[17] We exclude *CSR_Transparency* from Equation (2) as we do not expect the quality of a firm's CSR reporting to be a determinant of the cash taxes paid by a firm, and we exclude *Tax_Bnft_Opt* and *For_Inc* from Equation (3) as we do not expect that the tax benefit from stock options or the percent of foreign income to be determinants of corporate social responsibility scores. Table 4 presents the results of this estimation. In Column (1), similar to our previous results we find a negative and significant coefficient on *CSR_Index*. Furthermore, the magnitude of the coefficient is about twice as large in this specification relative to the OLS regression presented in Table 2 Column (2). Taken together, we view this as evidence that firms that engage in greater amounts of socially responsible activities also avoid more taxes.

[17] To develop the empirical equation for CSR, we attempt to be conservative by including many of the variables in the Cash ETR model that are potentially related to the CSR Index. This conservative approach ensures that we control for the extent to which these variables determine both CSR and Cash ETR and results in an equation similar to Jo and Na (2012) and Callan and Thomas (2011).

Tax Lobbying Results

A detailed examination of sustainability reports indicates that some firms argue that they are engaging in good corporate citizenship by lobbying for reduced business taxes. To provide empirical evidence on this question, we test whether firms that are more socially responsible engage in more tax lobbying activities. Table 5 reports results of estimating Equation (1) when the dependent variable is *Lobby(0/1),* an indicator variable equal to one in the year a firm incurs expenditures on tax lobbying and zero otherwise. We estimate Equation (1) using a logistic regression model. Columns (1) and (2) contain only year and industry fixed effects, and Columns (3) and (4) report results with all control variables included. Columns (1) and (3) use *CSR_Index* as an independent variable, and Columns (2) and (4) use indicator variables equal to one if the firm is in the highest or lowest quintile of *CSR_Index*. Results are similar in all of the regression specifications. We find a significant positive relation between tax lobbying and both measures of CSR. This result suggests that those firms that are more socially responsible are also more likely to engage in tax lobbying. These results are economically significant, because an increase from the 25th to 75th percentile of the *CSR_Index* is associated with a 16.5 percent increase in the probability of tax lobbying, and firms in the highest quintile of *CSR_Index* have approximately a 158 percent higher probability of lobbying for taxes than other firms.[18]

Table 6 reports results of estimating Equation (1) when the dependent variable is *Lobby_Exp*, the amount spent by the firm on tax lobbying activities scaled by lagged assets during the year. Columns (1) and (2) contain only year and industry fixed effects, and Columns (3) and (4) report results with all control variables included. Columns (1) and (3) use *CSR_Index* as an independent variable, and Columns (2) and (4) use indicator variables equal to one if the

[18] CSR Index odds are calculated as (e^ 0.073) per a one unit increase.

firm is in the highest or lowest quintile of *CSR_Index*. Results are similar in all of the regression specifications, and are similar to those of Table 5. We find a significant positive relation between the amount spent on tax lobbying and both measures of CSR. This result suggests that those firms that are more socially responsible also spend more on tax lobbying. These results are economically modest, as an increase from the 25th to 75th percentile of the *CSR_Index* is associated with a 0.44 percent increase in the amount spent on tax lobbying, and firms in the highest quintile of *CSR_Index* spend approximately 1.3 percent more (as a percent of lagged assets) on lobbying for taxes than other firms. Overall, the results in Tables 2 through 6 suggest that firms that are more socially responsible pay less in corporate taxes and engage in more tax lobbying activities, consistent with CSR and taxes acting as substitutes rather than complements.

Sensitivity Tests

Alternative CSR Measures

In calculating our main measure of corporate social responsibility, we follow Kim et al. (2012) and sum the strengths and weaknesses in five of the seven CSR categories to create an average CSR score, which we term *CSR_Index.* As an alternative measure, we include all seven KLD categories in the *CSR_Index* and find consistent results.

In addition, it is possible that weaknesses and strengths are not equivalent, or that the association between positive CSR activities and taxes is different than the association between negative CSR activities and taxes. To test this possibility, we follow Hoi et al. (2013) and construct three measures of CSR activity. The first, *Sum of Negative CSR*, is the sum of CSR concerns from MSCGI ESG's five social rating categories: community, diversity, employee relations, environment, and product. The second, *High Negative CSR*, is an indicator variable

equal to one if a firm has more than three CSR concerns. Finally, we also construct the variable *Sum of Positive CSR*, which is the sum of CSR strengths from MSCGI ESG's five social rating categories: community, diversity, employee relations, environment, and product.

Table 7 presents the results of re-estimating Equation (1) with these alternative measures of CSR. In Columns (1) and (2) we use the variable definitions above. In Columns (3) and (4) we add MSCGI ESG's governance strengths to the *Sum of Positive CSR* and governance concerns to the *Sum of Negative CSR* because Hoi et al. (2013) include governance in their measures. In line with this addition of governance, we code *High Negative CSR* equal to one if a firm has more than *four* CSR concerns and zero otherwise.[19] In each estimation, we find a negative and significant coefficient on *Sum of Positive CSR* and insignificant coefficients on *Sum of Negative CSR* and *High Negative CSR*. Taken together, these results are consistent with our main results and suggest that firms that engage in more socially responsible activities avoid more taxes.[20] Notably, these results are contrary to the results in Hoi et al. (2013) who find that firms with high negative CSR have lower cash ETRs and find no association between CSR strengths and Cash ETRs. Thus, the results of our study provide new evidence that CSR and taxes act as substitutes rather than complements.

To further investigate whether our results are sensitive to how we construct our CSR index we conduct an additional test using an alternative CSR index measure. Because the effects of tax payments on the social welfare of a corporation's community are most similar to the MSCI ESG category of "Community," we construct an alternative index using just the ratings from the

[19] Results are similar if we continue to code *High Negative CSR* equal to one if a firm has more than 3 CSR concerns.

[20] All results are similar when we also include human rights in the construction of these three variables.

community category.[21] We re-estimate Tables 2-6 substituting *Community* for *CSR_Index*. With one exception, in each specification we find similar results using this alternate measure. The exception is in Table 5 Column 3. In the original specification *CSR_Index* is positive and significant indicating that firms with higher social responsibility indices have a higher likelihood of lobbying for taxes. In our alternative specification when we substitute *Community* for *CSR_Index* we find a positive but insignificant coefficient on *Community* (t statistic = 1.28).

Executive Characteristics

Prior research such as Dyreng, Hanlon and Maydew (2010) finds that executives play an important role in corporate tax avoidance. In untabulated sensitivity tests, we control for managerial characteristics by including controls for the age and gender of the CEO in our main regressions. We find similar results after including these variables as controls.[22]

IV. CONCLUSION

We investigate the relation between the CSR ratings of U.S. public corporations and both the amount of taxes paid by the firm and the amount of tax lobbying in which the firm engages. We find that a CSR index is negatively related to five-year cash ETRs, and positively related to tax lobbying activities. Our results are robust to a simultaneous equations model, and we also find similar results using alternative measures of CSR. Overall we find that, on average, socially responsible firms do not pay more corporate taxes than other firms. This evidence suggests that

[21] The community category consists of four strengths and one concern. Strengths are as follows: (1) Charitable Giving, (2) Innovative Giving, (3) Community Engagement, and (4) Other Strengths. The one concern included in the community category is Community Impact, which measures the severity of controversies related to a firm's interactions with communities in which it does business.

[22] Information on age and gender is unavailable for some firms in our sample. Therefore, this robustness test is estimated using a smaller sample of observations that have non-missing information in EXECUCOMP for CEO age and gender.

managers or other influential stakeholders of socially responsible firms do not view the payment of corporate taxes as complementing CSR activities.

While the results of this study are consistent with anecdotal evidence that suggests that using legal means to reduce taxes is not considered to be a socially undesirable activity, they are inconsistent with existing research that finds that low CSR firms avoid more taxes. In contrast to these studies, we provide new evidence that high CSR firms avoid more taxes, which suggests that CSR and taxes act as substitutes rather than complements. In comparing other studies to ours, important differences in both our sample composition and the measurement of our variables contribute to differences in results. First, our measure of CSR excludes the corporate governance category. The link between corporate governance and tax avoidance has been studied previously and is different than the link between CSR and taxes, which is the focus of our study. Second, existing studies eliminate observations with negative pre-tax income. Since we use a five-year cash effective tax rate, we only eliminate observations with average negative earnings over five years. Thus, our results are less likely to suffer from the bias documented in Henry and Sansing (2014). Moreover, Watson (2015) finds that firms with low profitability have a different relation between positive CSR activities and tax avoidance than high profitability firms, which provides an example of how sample composition can contribute to differences in results. We also use a long run measure of tax avoidance that averages out variation in effective tax rates due to profitability, accounting differences, and one-time events.

Thus, our results provide evidence that the relation between corporate tax payments and social welfare is perhaps more complex than is currently understood and reflected in the current sustainability reporting guidelines. As such, our results provide important evidence that increases our understanding of the relation between corporate tax avoidance and social responsibility.

Our results also have implications for corporate stakeholders who view CSR as an important part of a public company's activities and tax policy makers considering tax reform legislation. Although Brooks, Hillenbrand and Money (2015, 78) argue that "firms must acknowledge the plurality of their stakeholders and may need to reconcile the potentially mixed signals arising from the various groups," the results of our study suggest that, at least for U.S. public corporations, the payment of taxes is not viewed as an important socially responsible activity by an influential subset of firms' stakeholders. As pointed out by Brooks et al. (2015, 2), "governments themselves are involved in a game where they trade off corporation tax revenue in anticipation of higher employment and other taxes from additional economic activity if foreign direct investment is encouraged by a favourable regime." If policy makers are trying to improve social welfare, understanding this trade-off is important in the design of tax laws. Finally, our results present evidence for only one short period of time, and it may be the case that stakeholders' views on corporate taxes as a socially responsible activity will change or are changing. For example, recent evidence from the U.K. suggests that public pressure may have forced some firms to disclose tax shelter activities (Dyreng, Hoopes and Wilde 2014). If this represents a growing trend, then public pressure may mitigate the impact of tax rules on corporate investment decisions, at least for a subset of firms.

Appendix
Variable Definitions

Cash_ETR	= the 5 year sum (from year t-4 to year t) of cash taxes paid (TXPD) divided by the 5-year sum of pre-tax income (PI) less special items (SPI). In order to allow for meaningful interpretation firms are required to have a Cash ETR between 0 and 1.
Size	= log of total assets (AT)
MTB	= price per share (PRCC_F) times total common shares outstanding (CSHO) over book value of equity (CEQ)
Leverage	= long-term debt (DLTT) plus short-term debt (DLC) scaled by lagged total assets (AT)
Intang	= intangible assets (INTAN) divided by lagged total assets (AT)
Tax_Bnft_Opt	= tax benefit of stock options (TXBCOF) divided by lagged total assets (AT)
PTROA	= pretax income (PI) divided by lagged total assets (AT)
For_Inc	= absolute value of pretax foreign income (PIFO) divided by the absolute value of total pretax income (PI)
SG&A	= *SG&A* equals selling, general and administrative expense (XSGA) divided by lagged total assets (AT).
R&D	= Research and development expenditures (XRD) divided by lagged total assets (AT). If XRD is missing we set R&D equal to zero.
PPE	= property, plant and equipment (PPENT) divided by lagged total assets (AT)
NOLCF Amount	= net operating loss carry forward (TLCF) divided by lagged total assets (AT).
NOLCF Indicator	= 1 if a firm has a net operating loss carryforward (TLCF) and zero otherwise.
Cash	= cash holdings (CHE) divided by lagged total assets (AT).
Governance	= the number of corporate governance strengths (CGOV_STR_NUM) less the number of corporate governance concerns (CGOV_CON_NUM) in MSCI ESG database.
Excess Cash	= is measured following Fresard and Salva (2010) and is the error term from the regression of:

	Ln (Cash / Total Assets) = B0 + B1Ln (Total Assets) + B2(Net Working Capital / Total Assets) + B3(R&D / Total Assets) + B4(Market Value / Total Assets) + B5(Capital Expenditures / Total Assets) + B5(Total Dividends Paid / Total Assets) + B6(Total Debt / Total Assets) + Industry Effects + Year Effects + e
Financial Constraints	= the size-age index developed by Hadlock and Pierce (2010).
CSR_Index	= total strengths minus total concerns in MSCI ESG five social rating categories: community, diversity, employee relations, environment, and product.
Community	= total strengths minus total concerns in MSCI ESG "community" category
Lobby(0/1)	= an indicator variable equal to one if the firm reported lobbying expenditures for tax purposes in the current year and zero else.
Lobby_Exp	= The firm's total reported lobbying expenditures for tax purposes scaled by lagged total assets.
Capital	= an indicator variable equal to one if a firm is headquartered in the capital city of its state of incorporation, and zero else.
Electoral College	= the number of electoral votes in the state in which the firm is located.

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Table 1
Descriptive Statistics

Variable[a]	N	Mean	Std Dev	25th Pctl	50th Pctl	75th Pctl
Cash ETR	5,588	0.260	0.131	0.179	0.259	0.331
CSR_Index	5,588	-0.106	2.077	-1.400	-0.400	0.800
Size	5,588	7.461	1.449	6.433	7.300	8.347
Leverage	5,588	0.220	0.180	0.066	0.200	0.324
Intang	5,588	0.248	0.224	0.063	0.190	0.377
Tax_Bnft_Opt	5,588	0.001	0.003	0.000	0.000	0.001
PTROA	5,588	0.107	0.087	0.051	0.095	0.152
MTB	5,588	3.427	2.622	1.748	2.506	3.721
For_Inc	5,588	0.413	0.714	0.000	0.158	0.558
SG&A	5,588	0.256	0.195	0.112	0.221	0.349
R&D	5,588	0.031	0.051	0.000	0.002	0.042
NOLCF Amount	5,588	0.054	0.118	0.000	0.005	0.051
NOLCF Indicator	5,588	0.468	0.448	0.000	0.400	1.000
PPE	5,588	0.281	0.240	0.104	0.204	0.375
Governance	5,588	-0.396	0.614	-0.800	-0.400	0.000
Cash	5,588	0.184	0.182	0.050	0.114	0.267
Excess Cash	5,588	0.014	0.977	-0.548	0.163	0.737
Financial Constraints	5,588	-3.903	0.525	-4.477	-3.795	-3.476
Lobby 0/1	5,588	0.071	0.256	0.000	0.000	0.000
Lobby_Exp	5,588	0.009	0.044	0.000	0.000	0.000
Capital	5,588	0.003	0.175	0.000	0.000	0.000
Electoral College	5,588	8.295	10.234	3.000	3.000	10.000

[a]*Cash_ETR* is defined as the 5 year sum (from year t-4 to year t) of cash taxes paid (TXPD) divided by the 5-year sum of pre-tax income less special items (SPI). In order to allow for meaningful interpretation firms are required to have a Cash ETR between 0 and 1. *CSR_Index* is defined as total strengths minus total concerns in MSCI ESG five social rating categories: community, diversity, employee relations, environment, and product. *Size* is defined as the log of total assets (AT). *Leverage* is defined as long term debt (DLTT) plus short term debt (DLC) scaled by lagged total assets (AT). *Intang* is defined as intangible assets (INTAN) divided by lagged total assets (AT). *Tax_Bnft_Opt* is defined as the tax benefit of stock options (TXBCOF) divided by lagged total assets (AT). *PTROA* is defined as pretax income (PI) divided by lagged total assets (AT). *MTB* is defined as price per share (PRCC_F) times total common shares outstanding (CSHO) over book value of equity (CEQ). *For_Inc* is defined as the absolute value of pretax foreign income (PIFO) divided by the absolute value of pretax total

income (PI). *SG&A* is defined as selling, general and administrative expense (XSGA) divided by lagged total assets (AT). *R&D* is defined as research and development expense (XRD) divided by lagged total assets (AT). *NOLCF Amount* is defined as the amount of tax loss carryforward (TLCF) divided by lagged total assets (AT). *NOLCF Indicator* is an indicator variable equal to one if a firm has a non-zero tax loss carryforward (TLCF) and zero else. *PPE* is net property, plant and equipment (PPENT) divided by lagged total assets (AT). *Governance* is defined as the number of corporate governance strengths (CGOV_STR_NUM) less the number of corporate governance concerns (CGOV_CON_NUM) in MSCI ESG database. *Cash* is defined as cash and cash equivalents (CHE) divided by lagged total assets (AT). *Excess Cash* is measured following Fresard and Salva (2010). *Financial Constraints* is measured using the index developed by Hadlock and Pierce (2010). *Lobby(0/1)* is an indicator variable equal to one if the firm reported lobbying expenditures for tax purposes in the current year and zero else. *Lobby_Exp* is defined as the firm's total reported lobbying expenditures for tax purposes scaled by lagged total assets. *Capital* is an indicator variable equal to one if a firm is headquartered in the capital city of its state of incorporation and zero else. *Electoral College* is equal to the number of electoral college votes in the state in which the firm is located. All continuous independent variables are winsorized at the 1st and 99th percentiles.

Table 2
Relation between Taxes and CSR

VARIABLE[a]	Predicted Sign	(1)	(2)
CSR_Index	?	-0.004***	-0.003**
		(-2.71)	(-2.00)
Size	-		-0.012***
			(-4.76)
Leverage	-		-0.055***
			(-2.90)
Intang	-		-0.015
			(-0.73)
Tax_Bnft_Opt	-		-1.168**
			(-1.99)
PTROA	?		0.027
			(0.65)
MTB	+		-0.003
			(-0.25)
For_Inc	-		0.020***
			(4.02)
SG&A	-		0.038**
			(2.13)
R&D	-		-0.174**
			(-2.20)
NOLCF Amount	-		-0.234***
			(-8.36)
NOLCF Indicator	-		0.003
			(0.47)
PP&E	-		-0.035
			(-1.61)
Governance	?		0.001
			(0.18)
Cash	?		-0.137***
			(-5.13)
Excess Cash	?		0.016***
			(3.69)
Financial Constraints	-		-0.017**
			(-2.56)
Constant	?	0.312***	0.415***
		(4.24)	(6.05)
Year Effects		Yes	Yes
Industry Effects		Yes	Yes
Observations		5,588	5,588
R-squared		0.109	0.197

*,**, and *** indicate statistical significance at the 0.10, 0.05 and 0.01 levels, respectively (two-tailed tests). t-Statistics are in parentheses and are calculated based on heteroskedasticity-robust standard errors clustered by firm and year.

[a]The dependent variable is *Cash_ETR*, defined as the 5 year sum (from year t-4 to year t) of cash taxes paid (TXPD) divided by the 5-year sum of pre-tax income less special items (SPI). In order to allow for meaningful

interpretation firms are required to have a Cash ETR between 0 and 1. *CSR_Index* is defined as total strengths minus total concerns in MSCI ESG five social rating categories: community, diversity, employee relations, environment, and product. *Size* is defined as the log of total assets (AT). *Leverage* is defined as long term debt (DLTT) plus short term debt (DLC) scaled by lagged total assets (AT). *Intang* is defined as intangible assets (INTAN) divided by lagged total assets (AT). *Tax_Bnft_Opt* is defined as the tax benefit of stock options (TXBCOF) divided by lagged total assets (AT). *PTROA* is defined as pretax income (PI) divided by lagged total assets (AT). *MTB* is defined as price per share (PRCC_F) times total common shares outstanding (CSHO) over book value of equity (CEQ). *For_Inc* is defined as the absolute value of pretax foreign income (PIFO) divided by the absolute value of pretax total income (PI). *SG&A* is defined as selling, general and administrative expense (XSGA) divided by lagged total assets (AT). *R&D* is defined as research and development expense (XRD) divided by lagged total assets (AT). *NOLCF Amount* is defined as the amount of tax loss carryforward (TLCF) divided by lagged total assets (AT). *NOLCF Indicator* is an indicator variable equal to one if a firm has a non-zero tax loss carryforward (TLCF) and zero else. *PPE* is net property, plant and equipment (PPENT) divided by lagged total assets (AT). *Governance* is defined as the number of corporate governance strengths (CGOV_STR_NUM) less the number of corporate governance concerns (CGOV_CON_NUM) in MSCI ESG database. *Cash* is defined as cash and cash equivalents (CHE) divided by lagged total assets (AT). *Excess Cash* is measured following Fresard and Salva (2010). *Financial Constraints* is measured using the index developed by Hadlock and Pierce (2010).

Table 3
Relation between Taxes and High/Low CSR

VARIABLE[a]	Predicted Sign	(1)	(2)
CSR Highest Quintile	?	-0.020***	-0.017***
		(-3.28)	(-2.83)
CSR Lowest Quintile	?	0.002	0.001
		(0.26)	(0.20)
Size	-		-0.012***
			(-4.83)
Leverage	-		-0.055***
			(-2.90)
Intang	-		-0.015
			(-0.75)
Tax_Bnft_Opt	-		-1.191**
			(-2.06)
PTROA	?		0.030
			(0.71)
MTB	+		-0.001
			(-0.25)
For_Inc	-		0.020***
			(4.03)
SG&A	-		0.037**
			(2.11)
R&D	-		-0.173**
			(-2.16)
NOLCF Amount	-		-0.235***
			(-8.52)
NOLCF Indicator	-		0.004
			(0.54)
PP&E	-		-0.035
			(-1.63)
Governance	?		0.001
			(0.10)
Cash	?		-0.137***
			(-5.17)
Excess Cash	?		0.016***
			(3.75)
Financial Constraints	-		-0.017**
			(-2.56)
Constant	?	0.314***	0.414***
		(4.39)	(6.02)
Year Effects		Yes	Yes
Industry Effects		Yes	Yes
Observations		5,588	5,588
R-squared		0.110	0.197

*,**, and *** indicate statistical significance at the 0.10, 0.05 and 0.01 levels, respectively (two-tailed tests). t-Statistics are in parentheses and are calculated based on heteroskedasticity-robust standard errors clustered by firm and year.

aThe dependent variable is *Cash_ETR*, defined as the 5 year sum (from year t-4 to year t) of cash taxes paid (TXPD) divided by the 5-year sum of pre-tax income less special items (SPI). In order to allow for meaningful interpretation firms are required to have a Cash ETR between 0 and 1. *CSR Highest Quintile* is an indicator variable equal to one if a firm is in the highest quintile of *CSR_Index* and zero else. *CSR Lowest Quintile* is an indicator variable equal to one if a firm is in the lowest quintile of *CSR_Index* and zero else. *CSR_Index* is defined as total strengths minus total concerns in MSCI ESG five social rating categories: community, diversity, employee relations, environment, and product. *Size* is defined as the log of total assets (AT). *Leverage* is defined as long term debt (DLTT) plus short term debt (DLC) scaled by lagged total assets (AT). *Intang* is defined as intangible assets (INTAN) divided by lagged total assets (AT). *Tax_Bnft_Opt* is defined as the tax benefit of stock options (TXBCOF) divided by lagged total assets (AT). *PTROA* is defined as pretax income (PI) divided by lagged total assets (AT). *MTB* is defined as price per share (PRCC_F) times total common shares outstanding (CSHO) over book value of equity (CEQ). *For_Inc* is defined as the absolute value of pretax foreign income (PIFO) divided by the absolute value of pretax total income (PI). *SG&A* is defined as selling, general and administrative expense (XSGA) divided by lagged total assets (AT). *R&D* is defined as research and development expense (XRD) divided by lagged total assets (AT). *NOLCF Amount* is defined as the amount of tax loss carryforward (TLCF) divided by lagged total assets (AT). *NOLCF Indicator* is an indicator variable equal to one if a firm has a non-zero tax loss carryforward (TLCF) and zero else. *PPE* is net property, plant and equipment (PPENT) divided by lagged total assets (AT). *Governance* is defined as the number of corporate governance strengths (CGOV_STR_NUM) less the number of corporate governance concerns (CGOV_CON_NUM) in MSCI ESG database. *Cash* is defined as cash and cash equivalents (CHE) divided by lagged total assets (AT). *Excess Cash* is measured following Fresard and Salva (2010). *Financial Constraints* is measured using the index developed by Hadlock and Pierce (2010).

Table 4
Simultaneous Equations Model: Three-Stage Least Squares

VARIABLE[a]	DV = *Cash_ETR* (1)	DV = *CSR_Index* (2)
CSR_Index	-0.006**	
	(-2.11)	
Cash ETR		-3.203*
		(-1.90)
Size	-0.011***	0.260***
	(-4.46)	(8.10)
Leverage	-0.057***	-0.884***
	(-4.45)	(-4.49)
Intang	-0.014	0.348**
	(-1.25)	(2.09)
Tax_Bnft_Opt	-1.261**	
	(-1.98)	
PTROA	0.031	0.994***
	(1.25)	(2.88)
MTB	-0.001	0.062***
	(-0.24)	(5.55)
For_Inc	0.020***	
	(8.07)	
SG&A	0.043***	1.510***
	(3.31)	(8.17)
R&D	-0.156***	4.507***
	(-3.06)	(5.97)
NOLCF Amount	-0.237***	-1.649***
	(-14.20)	(-3.73)
NOLCF Indicator	0.004	0.141**
	(0.86)	(2.36)
PP&E	-0.035**	0.111
	(-2.48)	(0.52)
Governance	0.002	0.024
	(0.68)	(0.53)
Cash	-0.136***	-0.010
	(-7.50)	(-0.27)
Excess Cash	0.017***	0.106**
	(6.31)	(2.21)
Financial Constraints	-0.017***	-0.149**
	(-4.03)	(-2.31)
CSR Transparency		3.879***
		(24.79)
Constant	0.397***	-4.446***
	(8.75)	(-4.67)
Year Effects	Yes	Yes
Industry Effects	Yes	Yes
Observations	5,588	5,588
R-squared	0.195	0.346

*,**, and *** indicate statistical significance at the 0.10, 0.05 and 0.01 levels, respectively (two-tailed tests). t-Statistics are in parentheses.

[a]*Cash_ETR* is defined as the 5 year sum (from year t-4 to year t) of cash taxes paid (TXPD) divided by the 5-year sum of pre-tax income less special items (SPI). In order to allow for meaningful interpretation firms are required to have a Cash ETR between 0 and 1. *CSR_Index* is defined as total strengths minus total concerns in MSCI ESG five social rating categories: community, diversity, employee relations, environment, and product. *Size* is defined as the log of total assets (AT). *Leverage* is defined as long term debt (DLTT) plus short term debt (DLC) scaled by lagged total assets (AT). *Intang* is defined as intangible assets (INTAN) divided by lagged total assets (AT). *Tax_Bnft_Opt* is defined as the tax benefit of stock options (TXBCOF) divided by lagged total assets (AT). *PTROA* is defined as pretax income (PI) divided by lagged total assets (AT). *MTB* is defined as price per share (PRCC_F) times total common shares outstanding (CSHO) over book value of equity (CEQ). *For_Inc* is defined as the absolute value of pretax foreign income (PIFO) divided by the absolute value of pretax total income (PI). *SG&A* is defined as selling, general and administrative expense (XSGA) divided by lagged total assets (AT). *R&D* is defined as research and development expense (XRD) divided by lagged total assets (AT). *NOLCF Amount* is defined as the amount of tax loss carryforward (TLCF) divided by lagged total assets (AT). *NOLCF Indicator* is an indicator variable equal to one if a firm has a non-zero tax loss carryforward (TLCF) and zero else. *PPE* is net property, plant and equipment (PPENT) divided by lagged total assets (AT). *Governance* is defined as the number of corporate governance strengths (CGOV_STR_NUM) less the number of corporate governance concerns (CGOV_CON_NUM) in MSCI ESG database. *Cash* is defined as cash and cash equivalents (CHE) divided by lagged total assets (AT). *Excess Cash* is measured following Fresard and Salva (2010). *Financial Constraints* is measured using the index developed by Hadlock and Pierce (2010). *CSR Transparency* is an indicator variable equal to one if a firm is defined as having a strength in the governance category "CGOV_str_D" from MSCI ESG database.

Table 5

Relation between Tax Lobbying Activity and CSR – Logit Model

VARIABLE[a]	Predicted Sign	(1)	(2)	(3)	(4)
CSR_Index	?	0.255***		0.073*	
		(8.29)		(1.88)	
CSR Highest Quintile	?		1.879***		0.950***
			(8.59)		(3.82)
CSR Lowest Quintile	?		0.120		0.299
			(0.36)		(1.21)
Size	+			1.042***	1.023***
				(9.46)	(9.16)
PTROA	+			0.506	0.222
				(0.47)	(0.20)
MTB	+			0.034	0.030
				(1.05)	(0.93)
Capital	-			0.019	0.002
				(0.02)	(0.00)
Electoral College	*?*			-0.021	-0.021
				(-1.28)	(-1.27)
Constant		0.182	-0.215	-9.087***	-9.126***
		(0.15)	(-0.19)	(-7.10)	(-7.30)
Year Effects		Yes	Yes	Yes	Yes
Industry Effects		Yes	Yes	Yes	Yes
Observations		5,588	5,588	5,588	5,588
R-squared		0.168	0.177	0.336	0.346

*,**, and *** indicate statistical significance at the 0.10, 0.05 and 0.01 levels, respectively (two-tailed tests). t-Statistics are in parentheses and are calculated based on heteroskedasticity-robust standard errors clustered by firm and year

[a]The dependent variable is *Lobby(0/1)*, an indicator variable equal to one if the firm reported lobbying expenditures for tax purposes in the current year and zero otherwise. *CSR_Index* is defined as total strengths minus total concerns in MSCI ESG five social rating categories: community, diversity, employee relations, environment, and product. *CSR Highest Quintile* is an indicator variable equal to one if the firm is in the highest quintile of *CSR_Index* and zero else. *CSR Lowest Quintile* is an indicator variable equal to one if a firm is in the lowest quintile of *CSR_Index* and zero else. *Size* is defined as the log of total assets (AT). *MTB* is defined as price per share (PRCC_F) times total common shares outstanding (CSHO) over book value of equity (CEQ). *PTROA* is defined as pretax income (PI) divided by lagged total assets (AT). *Capital* is an indicator variable equal to one if a firm is headquartered in the capital city of its state of incorporation and zero else. *Electoral College* is equal to the electoral college votes in the state in which the firm is located.

Table 6

Relation between the Amount Spent on Tax Lobbying and CSR – OLS Model

VARIABLE[a]	Predicted Sign	(1)	(2)	(3)	(4)
CSR _Index	?	0.003***		0.002***	
		(5.18)		(3.22)	
CSR Highest Quintile	?		0.022***		0.013***
			(4.58)		(3.32)
CSR Lowest Quintile	?		-0.001		0.001
			(-0.54)		(0.07)
Size	+			0.008***	0.008***
				(6.26)	(6.57)
PTROA	+			0.017**	0.017**
				(2.53)	(2.50)
MTB	+			0.001	0.001
				(0.44)	(0.42)
Capital	-			0.005	0.005
				(0.76)	(0.82)
Electoral College	?			-0.001	-0.001
				(-1.33)	(-1.21)
Constant		0.083	0.079	0.010	0.008
		(1.19)	(1.16)	(0.16)	(0.13)
Year Effects		Yes	Yes	Yes	Yes
Industry Effects		Yes	Yes	Yes	Yes
Observations		5,588	5,588	5,588	5,588
R-squared		0.097	0.098	0.150	0.151

*,**, and *** indicate statistical significance at the 0.10, 0.05 and 0.01 levels, respectively (two-tailed tests). t-Statistics are in parentheses and are calculated based on heteroskedasticity-robust standard errors clustered by firm and year

[a]The dependent variable is Lobby*_Exp*, defined as the firm's total reported lobbying expenditures for tax purposes divided by lagged total assets. *CSR_Index* is defined as total strengths minus total concerns in MSCI ESG five social rating categories: community, diversity, employee relations, environment, and product. *CSR Highest Quintile* is an indicator variable equal to one if the firm is in the highest quintile of *CSR_Index* and zero else. *CSR Lowest Quintile* is an indicator variable equal to one if a firm is in the lowest quintile of *CSR_Index* and zero else. *Size* is defined as the log of total assets (AT). *MTB* is defined as price per share (PRCC_F) times total common shares outstanding (CSHO) over book value of equity (CEQ). *PTROA* is defined as pretax income (PI) divided by lagged total assets (AT). *Capital* is an indicator variable equal to one if a firm is headquartered in the capital city of its state of incorporation and zero else. *Electoral College* is equal to the electoral college votes in the state in which the firm is located.

Table 7
Splitting Corporate Social Responsibility Scores

VARIABLE[a]	Variable Split (1)	Variable Split (2)	Governance Added to Index (3)	Governance Added to Index (4)
Sum of Negative CSR		0.002		0.002
		(0.95)		(1.02)
High Negative CSR	0.001		0.006	
	(0.08)		(0.67)	
Sum of Positive CSR	-0.003**	-0.003**	-0.003**	-0.003**
	(-2.20)	(-2.29)	(-2.29)	(-2.37)
Size	-0.011***	-0.012***	-0.011***	-0.012***
	(-3.27)	(-3.51)	(-3.46)	(-3.51)
Leverage	-0.056***	-0.055***	-0.056***	-0.056***
	(-2.98)	(-2.93)	(-2.98)	(-2.94)
Intang	-0.017	-0.015	-0.017	-0.016
	(-0.86)	(-0.77)	(-0.83)	(-0.77)
Tax_Bnft_Opt	-1.189**	-1.165**	-1.178**	-1.167**
	(-2.04)	(-1.97)	(-2.01)	(-1.97)
PTROA	0.027	0.027	0.028	0.028
	(0.64)	(0.66)	(0.66)	(0.66)
MTB	-0.001	-0.001	-0.001	-0.001
	(-0.25)	(-0.23)	(-0.24)	(-0.23)
For_Inc	0.020***	0.020***	0.020***	0.020***
	(4.00)	(4.02)	(4.01)	(4.02)
SG&A	0.038**	0.039**	0.038**	0.039**
	(2.19)	(2.21)	(2.19)	(2.20)
R&D	-0.178**	-0.173**	-0.176**	-0.173**
	(-2.25)	(-2.19)	(-2.21)	(-2.18)
NOLCF Amount	-0.232***	-0.234***	-0.233***	-0.234***
	(-8.19)	(-8.30)	(-8.24)	(-8.29)
NOLCF Indicator	0.003	0.003	0.003	0.0031
	(0.39)	(0.47)	(0.42)	(0.47)
PP&E	-0.036*	-0.035	-0.036*	-0.035
	(-1.65)	(-1.63)	(-1.65)	(-1.63)
Governance	0.001	0.001	0.003	0.004
	(0.28)	(0.26)	(0.53)	(0.74)
Cash	-0.138***	-0.137***	-0.137***	-0.137***
	(-5.14)	(-5.13)	(-5.14)	(-5.12)
Excess Cash	0.016***	0.017***	0.016***	0.016***
	(3.72)	(3.71)	(3.71)	(3.71)
Financial Constraints	-0.016**	-0.017**	-0.016**	-0.016**

	(-2.51)	(-2.55)	(-2.51)	(-2.54)
Constant	0.413***	0.412***	0.416***	0.413***
	(6.06)	(5.94)	(6.06)	(6.01)
Year Effects?	Yes	Yes	Yes	Yes
Industry Effects?	Yes	Yes	Yes	Yes
Observations	5,588	5,588	5,588	5,588
R-squared	0.196	0.197	0.197	0.197

*,**, and *** indicate statistical significance at the 0.10, 0.05 and 0.01 levels, respectively (two-tailed tests).). t-Statistics are in parentheses and are calculated based on heteroskedasticity-robust standard errors clustered by firm and year.

[a]The dependent variable is *Cash_ETR*, defined as the 5 year sum (from year t-4 to year t) of cash taxes paid (TXPD) divided by the 5-year sum of pre-tax income less special items (SPI). In order to allow for meaningful interpretation firms are required to have a Cash ETR between 0 and 1. *Size* is defined as the log of total assets (AT). *Sum of Negative CSR* is the sum of CSR concerns from MSCGI ESG STAT's five social rating categories: community, diversity, employee relations, environment, and product. *High Negative CSR* is an indicator variable equal to one if a firm has more than 3 CSR concerns. *Sum of Positive CSR* is the sum of CSR strengths from MSCGI ESG STAT's five social rating categories: community, diversity, employee relations, environment, and product. *Size* is defined as the log of total assets (AT). *Leverage* is defined as long term debt (DLTT) plus short term debt (DLC) scaled by lagged total assets (AT). *Intang* is defined as intangible assets (INTAN) divided by lagged total assets (AT). *Tax_Bnft_Opt* is defined as the tax benefit of stock options (TXBCOF) divided by lagged total assets (AT). *PTROA* is defined as pretax income (PI) divided by lagged total assets (AT). *MTB* is defined as price per share (PRCC_F) times total common shares outstanding (CSHO) over book value of equity (CEQ). *For_Inc* is defined as the absolute value of pretax foreign income (PIFO) divided by the absolute value of pretax total income (PI). *SG&A* is defined as selling, general and administrative expense (XSGA) divided by lagged total assets (AT). *R&D* is defined as research and development expense (XRD) divided by lagged total assets (AT). *NOLCF Amount* is defined as the amount of tax loss carryforward (TLCF) divided by lagged total assets (AT). *NOLCF Indicator* is an indicator variable equal to one if a firm has a non-zero tax loss carryforward (TLCF) and zero else. *PPE* is net property, plant and equipment (PPENT) divided by lagged total assets (AT). *Governance* is defined as the number of corporate governance strengths (CGOV_STR_NUM) less the number of corporate governance concerns (CGOV_CON_NUM) in MSCI ESG database. *Cash* is defined as cash and cash equivalents (CHE) divided by lagged total assets (AT). *Excess Cash* is measured following Fresard and Salva (2010). *Financial Constraints* is measured using the index developed by Hadlock and Pierce (2010).