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**Market Valuation Consequences of Avoiding  
Taxes While Also Being Socially Responsible**

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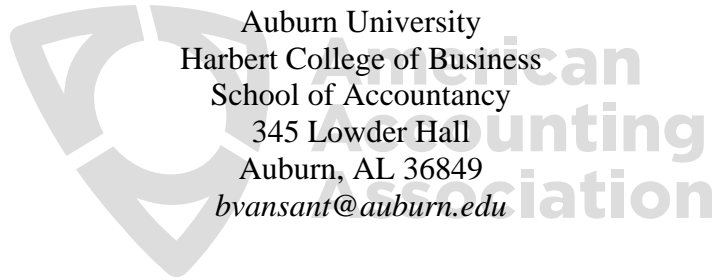
# Market Valuation Consequences of Avoiding Taxes while also being Socially Responsible

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# Market Valuation Consequences of Avoiding Taxes while also being Socially Responsible

## ABSTRACT

In this study, we examine the effects of tax avoidance and Corporate Social Responsibility (CSR) activities on equity market valuation. Economic theory suggests that managers should avoid taxes through any legal means (Friedman 1970), and that CSR activities are of value to the extent that shareholder wealth is maximized (Hales, Matsumura, Moser, and Payne 2016). We hypothesize that while equity market participants may positively value both CSR and tax avoidance, these two actions are viewed as inconsistent with one another when engaged upon contemporaneously, where increased activity of one diminishes the value of the other. Results, using a sample of U.S. public firms during years 2000-2013, support our expectation and show a negative interaction between CSR and tax avoidance. A series of robustness checks provide additional evidence consistent with investors viewing CSR and tax avoidance as contradictory.

**Keywords:** Corporate Social Responsibility; equity valuation; shareholder theory; tax avoidance

**JEL Classifications:** G32, M41, M49, M410

**Data Availability:** Data are available from the public sources cited in the text.

## INTRODUCTION

In this study, we examine the joint effects of tax avoidance and Corporate Social Responsibility (CSR) activities on equity market valuation. The issue of whether (and to what extent) managers should take action to aggressively minimize their firms' tax burdens and, at the same time, expend firm resources toward being socially responsible is particularly ambiguous and presents managers with balancing shareholder interests with that of other stakeholders (The Economist 2017). Indeed, normative arguments regarding whether publicly-traded corporations should, or should not, aggressively engage in transactions for the purpose of avoiding taxes has been, and continues to be hotly debated. At the same time, and with similar sentiments, the extent to which these same firms should invest resources toward the "social good" is also a point of disagreement.

Standard neoclassical economic theory prescribes that managers, as agents of the shareholders, should minimize corporate tax burdens through any legal means (Friedman 1970; Avi-Yonah 2014). Consistent with this view, prior research documents a positive relationship between market values and tax avoidance (Wilson 2009; Inger 2014; and Drake, Lusch, and Stekelberg 2017). The standard economic view of the firm also does not distinguish CSR from other activities, suggesting that all managerial choices should be made toward maximizing shareholder wealth. In this case any benefits to society that result are positive externalities (Hales, Matsumura, Moser, and Payne 2016). Nevertheless, existing studies do find evidence consistent with a positive relation between firm value and CSR performance (Margolis, Elfenbein, and Walsh 2009; Malik 2014; Huang and Watson 2015; Jain, Jain, and Rezaee 2016), which suggests investors acknowledge that spending firm resources on CSR activities can potentially lead to better future firm financial performance. It is speculated that this is because investors view CSR activities as building reputational capital with key stakeholders (other than equity shareholders) which can strengthen brand loyalty and thus protect firms from negative business shocks (Godfrey 2005; Minor 2015). Further, a positive effect of CSR activities on firm market valuation is consistent with what Jensen (2002) refers to as an “enlightened shareholder” perspective.

Consistent with prior studies, we expect and find that tax avoidance and CSR performance each have a positive first-order effect on the equity markets’ assessment of firm value. However, we contend that, from the shareholders’ perspective, these activities are potentially counterproductive when concurrently engaged upon.<sup>1</sup> In other words, we argue that

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<sup>1</sup> We assume that investors do not assess firm activities in isolation, such that an activity that is generally perceived as value enhancing can be discounted when another activity diminishes the perceived value. For example, while paying dividends and taking on debt may not be viewed negatively by investors in isolation, engaging in these two

investors perceive CSR and tax avoidance to be inconsistent with one another in terms of maximizing long-term value, and therefore the positive returns to each are throttled by the other.

Tax avoidance carries the risk of future negative tax outcomes in the form of tax liabilities, interest, and penalties when tax positions are challenged by the I.R.S. Prior research shows that investors are sensitive to these potential future costs; specifically, the level (Cook et al. 2015) and riskiness (Drake et al. 2017) of tax avoidance impacts the value investors place on tax avoidance. Therefore, investors likely factor into their valuation whether a firm's use of tax savings will generate a sufficient yield to offset these potential costs. We conjecture that investors perceive investments in CSR activities as relatively lower yielding uses of firm resources as compared to other investment opportunities. In this case, we expect tax avoidance will be valued less by equity shareholders when the extent to which firms appear to have invested in CSR is greater.

Regarding the influence of tax avoidance on investors' valuations of CSR activities, our intuition is that investors may be skeptical of the potential reputational value of a firm's CSR activities when a firm is also engaging in "socially undesirable" tax avoidance behaviors. Austin and Wilson (2016) find that firms with valuable brands engage in less tax avoidance, suggesting brand building and tax avoidance are inconsistent strategies. Similarly, in a survey of corporate tax executives, Graham, Hanlon, Shevlin and Shroff (2013) report that respondents believe tax avoidance can result in damage to their firm's reputation. The results of these studies suggest managers may also perceive that shareholders view aggressive tax avoidance as damaging the reputational value of CSR.

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activities concurrently could be viewed by some investors as inconsistent, thus dampening the total value of the two activities jointly.

Using ordinary least squares regression, we test the relation between firm value, tax avoidance, and CSR. We estimate our models using CSR data from the MSCI annual dataset of environmental, social and governance (ESG) ratings (formerly KLD Research Analytics, Inc.), financial accounting data from Standard & Poor's Compustat database, and additional stock information from CRSP. We proxy for tax avoidance using two widely accepted measures from prior literature. Consistent with prior research, we generally find that, *ceteris paribus*, tax avoidance and CSR are both positively associated with firm value. However, consistent with our theory and hypothesis, we find that the interaction of tax avoidance and CSR is negatively associated with firm value. We interpret this result as evidence that, from the equity market perspective, while tax avoidance and CSR are each value-increasing choices made by managers, these two types of actions are inconsistent with one another.

We perform several robustness tests to provide further evidence corroborating our theory and to rule out alternative explanations. First, we include other types of firm expenditures/investments, specifically Capital Expenditures and Research and Development Expenditures, in our model and compare the interaction of these with tax avoidance to that of CSR. In contrast to our results showing a negative interaction of tax avoidance with CSR, we find that Capital Expenditures and Research and Development Expenditures do not negatively interact with tax avoidance, suggesting investors view CSR as a less desirable use of tax savings as compared to these other common investments firms can make with excess resources.

Our second robustness check examines whether investors distinguish between different types of CSR when making their joint assessment of tax avoidance and CSR activities. We modify our main tests by disaggregating CSR activities that we argue are of a more philanthropic nature (such as charitable giving and funding for human rights initiatives) from those that are not

(such as investments that are ‘pro-employee’ and product quality investments). Results show a negative interaction between *philanthropic* CSR and tax avoidance, but do not show significant interaction between *non-philanthropic* CSR and tax avoidance. We interpret this result as further evidence consistent with tax avoidance being viewed by investors as damaging a firm’s reputational value gained via CSR. A third robustness test, utilizing a cross-sectional tax shelter analysis, is performed to rule out the alternative explanation that our main result (a negative interaction of CSR and tax avoidance on market valuation) is driven by firms with negative tax events subsequently engaging in increased levels of positive CSR activities.

Our study makes several important contributions. Prior studies examine the association between the propensity of firm managers to engage in both tax avoidance and CSR activities, and report mixed and nuanced results (e.g., Hoi, Wu and Zhang 2013; Watson 2015; Garcia 2015; Davis et al. 2016). The focus of these prior studies is on whether (and the extent) CSR activities and tax avoidance are used as complements or substitutes by firm managers. However, ultimately, it is important for managers to understand the equity valuation consequences of their choices to jointly engage in tax avoidance and CSR, as these choices could have direct bearing on a firm’s access to capital. Therefore, we take the literature in a new direction and inform managerial practice by considering the *equity valuation consequences* of managerial choices to engage concurrently in tax avoidance and CSR. Huang, Sun and Yu (2017) find that while investor reactions to corporate inversions are positive, the reaction is less positive for firms with high CSR ratings. We extend this line of inquiry by formally examining the joint effects of tax avoidance and CSR activities on firm value.<sup>2</sup>

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<sup>2</sup> We note that a concurrent study by Davis, Moore and Rupert (2017) examines the interaction of tax avoidance and CSR performance on investor decisions in an experimental setting.



Our study also contributes to the burgeoning tax avoidance research literature by providing additional evidence suggesting that market valuation of firms' tax avoidance behavior is context specific, and may depend on what other firm attributes or behaviors signal to investors about the potential use of tax savings, such as managerial diversion of tax savings in poorly governed firms (Desai and Dharmapala 2009). Our study extends this line of inquiry by providing evidence that tax avoidance may also be discounted by investors when tax savings are perceived as used for activities that directly benefit non-owner stakeholders.

Finally, our study contributes to the CSR literature by showing that investor valuation of CSR is impacted by other firm behaviors, in this case a firm's tax behavior. Drawing upon the basic tenets of shareholder theory, we distinguish between CSR activities that have a greater potential to increase firm profits from those of a more philanthropic nature. To our knowledge, our study is the first to make this distinction. Our analysis shows that our main result—that tax avoidance and CSR negatively interact to affect firm market values—is driven by CSR activities we classify as philanthropic. Therefore, our study highlights that it is important to consider the different nature of the various types of CSR activities when testing how CSR affects, or is affected by, other firm behaviors and user perceptions.

The remainder of this paper is organized as follows. The second section provides background and theory to develop our hypothesis regarding the interaction of CSR activities and tax avoidance on firm value. The third section describes the research design and sample data. The fourth section presents and discusses our results. The fifth section concludes and discusses the implications of the results.

## **BACKGROUND AND THEORY DEVELOPMENT**

### **Background and Prior Literature**

#### ***Tax Avoidance and Firm Value***

Drake et al. (2017) and Inger (2014) provide empirical evidence that, on average, tax avoidance is positively associated with firm value. Tax avoidance is believed to be of value to shareholders because it can be viewed as a source of financing to fund firm operations and projects (Edwards et al. 2016). Prior studies also examine the impact of tax avoidance on the cost of capital. Goh, Lee, Lim and Shevlin (2013) find that less aggressive forms of tax avoidance reduce a firm's cost of equity. Cook, Moser and Omer (2015) show that the impact of tax avoidance on the cost of capital varies with a firm's relative level of tax avoidance. In a cost of debt setting, Kim, Li and Li (2010) provide evidence that banks charge lower loan spreads and impose fewer debt covenant restrictions to firms with greater tax avoidance.

Overall, the results of these studies provide evidence consistent with a traditional shareholder theory viewpoint; that tax avoidance will increase firm value (and lower the cost of obtaining funds) to the extent the benefits exceed any associated costs (Scholes, Wolfson, Erickson, Maydew, and Shevlin 2008). We argue that this implies valuation of tax avoidance behavior is a function of two things: 1) whether, and the extent to which, investors believe tax savings will be used to generate positive returns in the future, and 2) what investors perceive to be the costs associated with generating funds via tax planning strategies and the related risk of future negative tax outcomes.

#### ***Corporate Social Responsibility and Firm Value***

Whether or not firms should engage in CSR activities that have no immediate direct effect on maximizing shareholder wealth has been, and continues to be, debated (Friedman 1970;

Moser and Martin 2012). At one end of this debate, shareholder theorists contend that any CSR activities that do not explicitly increase firm profits are, in essence, a non-normative transfer of wealth from the rightful beneficiaries (i.e., the shareholders) to those with no property rights in the firm (Friedman 1970; Sundram and Inkpen 2004). In contrast, stakeholder theorists argue that firms should not just act in the best interest of equity shareholders by maximizing profit, but also to the benefit of various other stakeholders (Freeman, Wicks, and Parmar 2004). Jensen (2002) coins the phrase “enlightened shareholder” in his argument that CSR activities *should be* valued by shareholders, suggesting there is a reputational value from CSR that can ultimately benefit the equity shareholder.

Review articles in both the accounting and management literatures (Margolis et al. 2009; Malik 2014; Huang and Watson 2015) conclude there is empirical evidence of (at least) a small positive association between firm investments in CSR and firm value. For example, studies find evidence that firms with higher (i.e., more positive) CSR performance have: a lower cost of equity capital (Dhaliwal, Li, Tsang, and Yang 2011; Richardson and Welker 2001), and higher market capitalization rate and higher market-to-book values (Anderson and Frankle 1980; Freedman and Stagliano 1991, Klassen and McLaughlin 1996; and Flammer 2013).

### **Theory and Hypothesis**

While prior literature (and the present study) document positive market valuation of the first order effects of both tax avoidance and CSR, we postulate that investors’ valuations of each of these activities is influenced by the extent of the other. Specifically, we argue that firm resources expended on CSR decrease market valuation of tax avoidance; and, likewise, that tax avoidance decreases market valuation of positive CSR activities. In other words, we contend that tax avoidance and CSR interact negatively on market valuation, and that the interaction is not as

simple as CSR moderating tax avoidance or vice versa. Instead we theorize that, from an equity investor's perspective, avoiding taxes and engaging in socially responsible activities diminishes the value of each activity. This is because: 1) CSR may be viewed by investors as inconsistent with a corporate strategy of avoiding taxes to the ultimate benefit of shareholders, and 2) tax avoidance may be viewed by investors as detracting from the potential reputational value of otherwise good corporate citizenship. The following discussion elaborates on our intuition and theory along these lines.

According to shareholder theory, if investors believe firms are not using tax savings for net positive present value activities, then investors will not place a positive value on tax avoidance. Prior research suggests investors consider the risk generated by tax planning activities in their valuation of tax avoidance and that investor appetite for risky tax behavior is limited (Hanlon and Slemrod 2009; Drake et al. 2017; Cook et al. 2015). To the extent firms engage in tax aggressiveness to reduce tax payments, specifically taking tax positions that are likely to be challenged by the I.R.S, the risk of future negative tax outcomes in the form of tax liabilities, interest and penalties increases. Drake et al. (2017) show that tax risk mediates the value of tax avoidance. Cook et al. (2015) find tax avoidance has a differential association with the cost of capital dependent on the level of tax avoidance. These studies provide evidence that investors are sensitive to potential future costs associated with riskier tax strategies. Therefore, it is reasonable to expect that investors are attuned to whether a firm is using its tax savings to invest in activities and technologies that will produce future profits capable of offsetting the potential cost of negative tax outcomes.

While it is not possible for investors to trace the actual use of tax savings, we suspect that it increases the total funds investors perceive as available for managerial discretion.<sup>3</sup> Many CSR activities firms invest in are potentially less profitable uses of funds as compared to investments in firms' normal business operations. Standard economic theory presumes that managers should not invest in CSR activities at the expense of the shareholders (Moser and Martin 2012). Therefore, if investors perceive investments in CSR activities as low risk, low yielding uses of firm resources (in this case cash tax savings) as compared to other potential uses of firm resources (e.g., research and development investments, capacity expansion, etc.) then we expect that tax avoidance is valued less by investors when a firm is expending greater amounts of its resources on CSR.

At the same time, we argue that higher levels of tax avoidance may result in lower valuation of CSR because tax avoidance may erode the reputational benefits of CSR. Prior research suggests that CSR is valued positively by equity market participants because these types of firm behaviors bolster a firm's reputation with non-shareholder, stakeholders (Godfrey 2005; Minor 2015). Results in Austin and Wilson (2016) suggest brand building activities and tax avoidance are inconsistent strategies and find that firms with the most valuable brands engage in less tax avoidance. Graham et al. (2013) survey corporate tax executives and find evidence suggesting executives limit engagement in tax planning because of concerns about their firm's reputation. In an examination of the response to an activist group's efforts to compel disclosure of tax havens by U. K. firms, Dyreng, Hoopes and Wilde (2016) find that firms reduce tax

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<sup>3</sup> While the amount firms spend on CSR is not readily available, anecdotal evidence suggests the amount is large and material for some firms. For example, in a report from the Reputation Institute (Miltenburg 2013), Microsoft and Disney are reported to have spent approximately \$900 million and \$250 million, respectively, on CSR activity in 2012 alone. These amounts represent 10% and 45% respectively, of the total cash taxes avoided by Microsoft and Disney (calculated as CSR spending divided by difference between pre-tax income less special items multiplied by 35% and cash taxes paid).

avoidance in the face of public scrutiny. These studies suggest reputational concerns are an important factor when considering engagement in tax planning activities.

Indeed, firms that avoid taxes are often criticized as not being socially responsible (Sikka 2010; Avi-Yonah 2014). A recent study by Huang et al. (2017) finds that firms with high CSR are less likely to engage in a corporate inversion, suggesting avoiding tax by expatriating offshore is inconsistent with investments to bolster CSR capital. Additionally, the authors show that while investor reactions to corporate inversions are positive, the reaction is significantly less positive for firms with high CSR ratings. This implies investors perceive tax avoidance and CSR as inconsistent firm activities.

Based on the preceding discussion, we formally state the following hypothesis in the alternative form:

**H:** There is a negative interaction between tax avoidance and CSR activities on equity market valuation.

## RESEARCH DESIGN

### Model Specification

We estimate the following model using ordinary least squares regression to test the joint impact of CSR activities and tax avoidance on firm value:

$$Firm\ Value_{it} = \beta_0 + \beta_1 Tax\ Avoid_{it} + \beta_2 CSR_{it} + \beta_3 Tax\ Avoid_{it} * CSR_{it} + \sum Controls_{it} + \varepsilon_{it} \quad (1)$$

### *Firm Value*

Following prior studies that examine the relation between firm value and tax avoidance (Drake et al. 2017, Inger 2014, Bryant-Kutcher, Guenther and Jackson 2012, Desai and Dharmapala 2009), firm value is measured by *Tobin's Q*, the ratio of the market value of the firm 2 days after the release of the 10-K to the book value of assets at year end.<sup>4</sup>

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<sup>4</sup> Results are consistent using equity market value at year end.

## *Tax Avoidance*

We use the cash effective tax rate (CETR) as our primary measure of tax avoidance because it captures temporary and permanent cash tax savings. Additionally, cash tax savings can be used by managers to fund new projects and/or CSR activities. The CETR is measured as cash taxes paid divided by pre-tax income adjusted to remove the effects of special items (Dyreng et al. 2008).

We use a long-run approach and measure the CETR over a three-year period following Inger (2014) and Austin and Wilson (2016).<sup>5</sup> A long-run measure mitigates distortions in tax avoidance as proxied by a one-year CETR that are caused by variation in the timing of tax payments and refunds (Dyreng et al. 2008). Consistent with prior studies, the CETR is censored at 0 and 100% because a negative cash effective tax rate indicates a firm that has not paid tax or has negative pre-tax income while a cash effective tax rate greater than 100% indicates a firm is paying more than a dollar of tax per dollar of income.<sup>6</sup> Since a higher cash effective tax rate suggests lower tax avoidance, we define tax avoidance (*Tax Avoid*) as the inverse of CETR. Consistent with prior research, we expect a positive coefficient on *Tax Avoid*, suggesting tax avoidance is positively associated with firm value.

To ensure our measure of tax avoidance is capturing aggressive tax avoidance, we refine our measure as firm year observations in the bottom quartile of CETR by industry and year (*High Tax Avoid*). We also estimate our models using an alternative measure of tax avoidance that is designed to capture aggressive tax avoidance, specifically discretionary permanent book

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<sup>5</sup> While our sample period begins in 2000, the long-run CETR uses data prior to 2000. For example, the three-year CETR for 2000 observations is measured over 1998-2000. Our primary result of interest is consistent using a one, five and ten-year measurement window for the CETR. *High Tax Avoid* measured using the one-year CETR is insignificant, all other results are the same.

<sup>6</sup> We remove loss firms and firms with negative tax paid from our analysis. Inferences remain unchanged if we instead exclude observations with a CETR greater than one or less than zero.

tax differences (DTAX) following Frank et al. (2009). DTAX is the residual for each firm year from a regression of permanent book tax differences on control variables that impact permanent book tax differences but do not correspond with aggressive tax planning, such as the book tax difference arising from intangible assets.<sup>7</sup>

## **CSR**

To proxy for firms' CSR activities, we use data on the MSCI annual data set of environmental, social and governance (ESG) ratings of publicly traded companies (formerly KLD Research & Analytics, Inc), which is commonly used to measure CSR in the accounting, finance and management research literatures. MSCI assigns social responsibility scores across the following primary categories: *Corporate Governance, Community, Diversity, Employee, Environment, Human Rights, and Product Quality and Safety*.<sup>8</sup> Within each category MSCI assigns points for Responsible CSR Activities (“strengths”) and Irresponsible CSR Activities (“concerns”). In our tests we measure CSR in two ways. First, *CSR* is measured as the sum of strengths less concerns for *Corporate Governance, Community, Diversity, Employee, Environment, Human Rights, and Product* activities. Second, *CSR Strengths* is measured as the sum of only CSR strengths. We examine CSR strengths in isolation because it is reasonable to believe that cash tax savings could be used to fund positive CSR activities, such as the use of cash tax savings to make a donation to charity. However, we also examine the sum of strengths

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<sup>7</sup> *DTAX* is a continuous measure such that observations with higher positive residuals from the regression are considered the most tax aggressive and observations with the lowest negative residuals are considered the least tax aggressive. See the appendix for a further description of this model and how the variable is estimated.

<sup>8</sup> We include *Corporate Governance* and *Human Rights* in our measure of CSR to be consistent with an exploratory analysis described after our main results. While Hoi et al. (2013) include *Corporate Governance* and *Human Rights* in their measure of CSR, Davis et al. (2016) and Kim et al. (2012) do not. Results are consistent if *Corporate Governance* and/or *Human Rights* are excluded from the measure of CSR. Results are also consistent if we exclude *Tax Disputes* from the *Community* category or exclude observations with a tax dispute (approximately 1.5% of sample) from the analysis.



less concerns because it is possible that cash tax savings could be used to prevent CSR concerns, such as increasing a budget for product safety.

### ***Controls***

We include control variables that, based on prior research, could have an impact on the association between tax avoidance, CSR, and firm value. *PPE*, measured as gross property, plant and equipment controls for the impact of fixed assets on firm value. We include *Foreign Income* because Collins, Hand and Shackelford (2000) report a positive association between firm value and foreign income and multinational firms have tax planning opportunities generated from international operations. Morck, Shleifer and Vishny (1988) demonstrate a negative association between firm value and size. Additionally, larger firms have more opportunities to engage in tax planning (Manzon and Plesko 2001, Rego 2003). Total sales is selected as a control variable for *Size*<sup>9</sup> because of the mechanical relation between assets and *Tobin's Q*. Shin and Stulz (2000) show that *Tobin's Q* is associated with firm risk. Stock price volatility controls for *Risk*, measured as the standard deviation of monthly returns over the prior 36-month period. *Growth*, measured as the average sales growth over the prior three-years, is included because firm value is positively associated with growth opportunities.

Tax shields could act as substitutes for tax avoidance and therefore change the value of tax avoidance. We include three controls for tax shields; debt (*Leverage*), net operating losses (*NOL*) and book value of intangible assets (*Intangibles*). *Firm Age*, measured as the natural log of the number of years a firm is listed in CRSP, controls for growth restraints that may be experienced by older firms. We include *ROA* as a control variable based on Watson's (2015) findings which show that earnings performance moderates the relation between tax avoidance and CSR.

*Liquidity*, measured as cash and short term investments scaled by lagged assets following Hoi et

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<sup>9</sup> Results are consistent when *Size* is measured as the log of sales.

al. (2013) and Kruger (2015), is included because prior research finds liquidity affects investor reactions to CSR news (Kruger 2015).

We include year and industry dummies based on the Fama and French (1997) 48 industry classifications, to control for the variability of tax avoidance and CSR across time and industries. Following (Petersen 2009), standard errors are adjusted for heteroskedasticity using robust standard errors clustered at the firm level. Continuous variables are winsorized at the 1 percent and 99 percent tails. All variable definitions are also summarized in the appendix.

### **Sample Selection**

We estimate our regression models using CSR data from MSCI's social ratings database (formerly KLD), financial accounting data from Standard & Poor's Compustat database and additional stock information from CRSP. We start with all observations from MSCI's social ratings database from 2000-2013 totaling 34,652.<sup>10</sup> Our sample is reduced by 2,172 observations that cannot be matched to Compustat using the CUSIP or ticker. We lose an additional 976 observations that are missing necessary data from Compustat or CRSP to calculate dependent or independent variables. Profitable and loss firms are valued differently by investors and have different tax avoidance incentives and opportunities. Exclusion of firms with cumulative negative pre-tax income and/or negative cash tax paid during the three year CETR measurement period results in a sample size of 25,427 firm year observations in our analyses using the CETR to measure tax avoidance. Data requirements to calculate DTAX and exclusion of negative pre-tax income and/or negative cash tax paid during the one-year DTAX measurement period results

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<sup>10</sup> KLD, acquired by MSCI in 2010, covered approximately 650 companies in the S&P 500 and Domini 400 Social indices until 2003 when coverage was expanded to the largest 3,000 companies by market capitalization. Untabulated results are robust to exclusion of pre-2003 observations. We also use data from 1998 and 1999 to calculate the three year CETR.

in a further loss of observations, resulting in a sample size of 20,808 for all analysis using DTAX as a proxy for tax avoidance.

## RESULTS

### Univariate Results

Descriptive statistics for observations included in the regression analyses are presented in Table 1. The mean value of *CSR* is negative, suggesting on average firms have more *CSR* concerns than strengths, consistent with prior research (Hoi et al. 2013). The mean value of *CSR Strengths* is approximately 1.5. Tax avoidance proxied by the three-year CETR is 22 percent. Tax avoidance proxied by DTAX is close to 0 due to the residual nature of the measure. The mean value of Tobin's *Q* is 1.9.

(Insert Table 1)

Table 2 presents Pearson and Spearman correlation coefficients. *Tobin's Q* is positively correlated with *CSR* and *CSR Strengths* ( $p < 0.01$ , one-tailed), providing evidence consistent with prior research that *CSR* is positively associated with firm value. Consistent with prior research, *Tobin's Q* is generally positively associated with our measures of tax avoidance ( $p < 0.05$ , one-tailed). *Tax Avoid* measured by CETR is negatively associated with the *CSR* measures, while DTAX is positively associated with the *CSR* measures, consistent with the mixed results concerning the association between tax avoidance and *CSR* in prior studies (Hoi et al. 2013; Davis et al. 2016).

(Insert Table 2)

### Multivariate Results

Regression results for Equation 1, which tests the impact on firm value of jointly engaging in *CSR* and tax avoidance, are presented in Table 3. Panel A includes the inverse of the

three-year CETR as the measure of tax avoidance. The coefficient on *Tax Avoid* is positive and significant across all model specifications, consistent with our expectation and prior research. Model A includes a continuous measure of *CSR* as the sum of CSR strengths less concerns. The coefficient of 0.01 on *CSR* is positive and significant ( $p < 0.1$ , one-tailed), consistent with prior research documenting a positive association between CSR and firm value.<sup>11</sup> Providing support for our hypothesis, the coefficient of -0.044 for the interaction of *CSR* and *Tax Avoid* is negative and significant ( $p < 0.05$ , one-tailed). While the positive main effect of *CSR* shows that investors value CSR activities, the negative interaction with tax avoidance suggests that investors do not believe managers should take on the risk of negative tax outcomes in order to have funds available to invest in CSR. The result is also consistent with investors viewing tax avoidance as inconsistent with a high positive CSR strategy and/or investors not believing that a record of good corporate citizenship will counteract negative tax outcomes in the future.

The coefficient on *PPE* is negative and significant, suggesting larger levels of fixed assets are indicative of a mature firm with fewer growth opportunities. The growth opportunities captured by foreign activity is reflected in a positive coefficient on *Foreign Income*. The positive coefficient on *Risk* reflects investors' belief that risk signals growth opportunities. *Size* is negatively associated with firm value, reflecting the reduced growth opportunities afforded to larger firms. Consistent with net operating losses being indicative of poor performance, the coefficient on *NOL* is negative. We attribute the negative coefficient on *Intangible* to the growth potential associated with intangible assets being captured by *Growth* and other control variables.

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<sup>11</sup> In a baseline model excluding CSR the coefficient of .246 on Tax Avoid (measured as the inverse of the three-year CETR) is positive and significant (p-value = .0002). In a baseline model excluding Tax Avoid the coefficient of .02 on CSR is positive and significant (p-value = .0001) and the coefficient of .027 on CSR Strengths is positive and significant (p-value <.0001). When the interaction of *Tax Avoid* and *CSR* is excluded from the model, the coefficient of .225 on *Tax Avoid* is positive and significant (p-value = .0009) and the coefficients of .023 and .031 on *CSR Index* and *CSR Strengths*, respectively, are positive and significant (p-value <.0001). While DTAX is not significant when included in a baseline model excluding CSR or when the interaction of *Tax Avoid* and *CSR* is excluded, the main effect of *CSR* and *CSR Strengths* remain positive and significant (p-value < .0001).

The negative coefficient on *Firm Age* is consistent with older firms lacking attractive business opportunities. *ROA* is positive and significant, consistent with a positive association between firm performance and firm value. *Liquidity* is positive and significant, consistent with companies with more cash being better positioned to invest in projects with positive net present values. The sign and significance of control variables are consistent across model specifications and we limit further discussion.

We include a continuous measure of *CSR Strengths* as the sum of CSR strengths in Model B. The coefficient of 0.015 on *CSR Strengths* is positive and significant ( $p < 0.05$ , one-tailed), consistent with investors valuing firm efforts to engage in positive CSR activities. The negative and significant coefficient of -0.05 ( $p < 0.05$ , one-tailed) on the interaction of *CSR* and *Tax Avoid* is consistent with the result in Models A and provides additional support for our hypothesis.

We include an indicator variable, *High Tax Avoid*, set to one when a firm year observation's CETR is in the bottom quartile by industry and year in Model C. This design intends to capture firms avoiding the most tax that would be subject to the risk of future negative tax outcomes and damage to CSR capital from unwanted scrutiny. The coefficient of .074 on *High Tax Avoid* is positive and significant ( $p < 0.1$ , one-tailed), suggesting investors value efforts to avoid more tax than their peers. The coefficient of 0.032 on *CSR Strengths* is positive and significant ( $p < 0.01$ , one-tailed), consistent with Model B. The negative and significant coefficient of -0.027 ( $p < 0.01$ , one-tailed) on the interaction of *CSR Strengths* and *High Tax Avoid* suggests investors discount firms that engage in high levels of tax avoidance while at the same time engaging in positive CSR activity, consistent with our hypothesis.

We include *CSR Weaknesses* in addition to *CSR Strengths* in Model D. *CSR Weaknesses* is measured as the sum of concerns for *Corporate Governance, Community, Diversity, Employee,*

*Environment, Human Rights, and Product* activities. Hoi et al. (2013) find that firms with excessive irresponsible CSR activities are more tax aggressive. We interact *CSR Weaknesses* with *Tax Avoid* to determine whether the observed relation between firm value, tax avoidance and positive CSR activities is impacted by a firms irresponsible CSR activities. The results for our variables of interest are consistent. Specifically, the coefficient of .014 on *CSR Strengths* is positive and significant ( $p < .05$ , one-tailed) and the coefficient of -.057 on the interaction of *CSR Strengths* and *Tax Avoid* is negative and significant ( $p < .01$ , one-tailed). The coefficient on *CSR Weaknesses* and the coefficient on the interaction of *CSR Weaknesses* and *Tax Avoid* are insignificant, suggesting engaging in tax avoidance while involved in irresponsible CSR activities does not impact the effect of tax avoidance on firm value.

We include *CSR Weaknesses* and *High Tax Avoid* in Model E and find consistent results. Specifically, the coefficient of .032 on *CSR Strengths* is positive and significant ( $p < .01$ , one-tailed) and the coefficient of -.028 on the interaction of *CSR Strengths* and *High Tax Avoid* is negative and significant ( $p < .01$ , one-tailed). The coefficient on *CSR Weaknesses* and the coefficient on the interaction of *CSR Weaknesses* and *High Tax Avoid* are insignificant.

Panel B includes DTAX as an alternative measure of tax avoidance with the same model specifications as Panel A. We use DTAX, a measure of tax avoidance that concentrates on aggressive tax planning, to confirm that the discount observed in Panel A is related to investors' perceptions of tax risk and CSR capital risk. The main effect of Tax Avoid is insignificant in Models A, B and D. However, the main effect of *High Tax Avoid* is positive and significant ( $p < 0.01$ , one-tailed) in Models C and E.<sup>12</sup> The main effect of *CSR* and *CSR Strengths* are positive and significant ( $p < 0.01$ , one-tailed) across all model specifications. The negative and significant

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<sup>12</sup> To our knowledge, no studies have used DTAX in an examination of the association between firm value and tax avoidance.

coefficients ( $p < 0.05$ , one-tailed) on the interaction of *Tax Avoid* and our measures of *CSR* across models are consistent with results in Panel A, and provide further support for our hypothesis.<sup>13</sup> The coefficient on *CSR Weaknesses* and the interaction of *CSR Weaknesses* and *Tax Avoid* are insignificant, consistent with Models D and E in Panel A.

(Insert Table 3)

## Robustness Checks

We performed the following robustness checks to corroborate our main results and rule out alternative explanations.

### *Effect of Other Uses of Tax Savings on Market Valuation of Tax Avoidance*

As we have argued previously, the negative interaction between *CSR* and tax avoidance on firm market valuation could be because investors view *CSR* as a poor use of excess funds gained via tax avoidance, given that financial returns to *CSR* investments are nebulous. Therefore, an analysis of the effects of other uses of firm resources on the market valuation of tax avoidance can be used as a comparison. We augment our empirical model (Equation 1) to include proxies for uses of firm resources investors likely view as having direct bearing on future financial performance—Capital Expenditures (*CAPEX*) and Research and Development Expenses (*R&D*)—that, in contrast to *CSR* activities, we do not expect to negatively interact with tax avoidance in terms of market valuation.<sup>14</sup>

Table 4 presents results using tax avoidance as proxied by the inverse of the three-year *CETR*. The main effect of *Tax Avoid* is not significant across model specifications. While the

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<sup>13</sup> The KLD data corresponds to calendar year ends whereas Compustat follows fiscal year end. Our results are consistent if we only include firms with calendar year ends. We run regressions by year and find a negative and significant or insignificant coefficient on the interaction *Tax Avoid*\**CSR* in all model specifications with the exception of 2003 in which the coefficient on *Tax Avoid* (*DTAX*)\**CSR Index* is positive and significant.

<sup>14</sup> We cannot think of any reasonable arguments (and are not aware of any prior research) that would lead to an expectation that market valuations of *CAPEX* and/or *R&D* would be negatively affected by tax avoidance.

coefficient on *CSR Index* is not significant in Model A, the coefficient on *CSR Strengths* in Models B and C is positive and significant ( $p < .05$ , one-tailed). Consistent with our main analysis reported above, the coefficient on the interaction of the various measures of tax avoidance and CSR remain negative and significant ( $p < .05$ , one-tailed) across model specifications. The coefficients on *CAPEX* and *R&D* are positive and significant ( $p < .01$ , two-tailed) across model specifications, consistent with these activities having a positive first-order effect on firm value. Importantly, the coefficient on the interaction of *Tax Avoid* and *CAPEX* is insignificant across model specifications, suggesting the use of firm resources (that may include funds generated via tax avoidance) for the purchase of capital assets is not discounted by investors when done so concurrently with tax avoidance. Likewise, the coefficient on the interaction of *Tax Avoid* and *R&D* is positive and significant ( $p < .01$ , two-tailed) across model specifications. Overall, these results provide further support that investors discount the joint engagement in CSR and tax avoidance because CSR signals to investors that cash generated from tax avoidance has not been used toward an investment that will generate a positive return large enough to offset the costs of aggressive tax planning. As in our main analysis, we also estimated our models using DTAX as a measure of tax avoidance (results not tabulated). Results for our primary variables of interest are consistent with the results reported above.

*(Insert Table 4)*

#### ***Philanthropic vs. Non Philanthropic CSR***

We next perform a robustness check to corroborate that one explanation for a negative interaction between CSR and tax avoidance is that tax avoidance damages the reputational value of CSR. Prior research suggests certain types of CSR may negatively interact with tax avoidance, while other types of CSR may not (e.g., Jo and Harjoto 2011; Cheng, Green, and Ko 2014;



Borghesi, Houston, and Naranjo 2014). For example, Cheng et al. (2014) provide experimental evidence that investors only value CSR when it is consistent with a firm's core strategy.

Borghesi et al. (2014) show cross-sectional differences in the association between firm characteristics and different categories of CSR. Therefore, we distinguish between CSR categories in the MSCI database that are arguably more directly related to profitability (such as investments that are 'pro-employee' and product quality investments) from CSR activities that are philanthropic in nature (such as charitable giving and funding for human rights initiatives).

We modify Equation 1 by including indicator variables, *Philanthropic CSR* and *Non-philanthropic CSR* activities.<sup>15</sup>

Philanthropic CSR could be viewed by the market as firm efforts primarily useful in building reputational capital and therefore incongruent with an aggressive tax strategy.<sup>16</sup> While investors may appreciate that philanthropic behavior will have a positive impact on firm reputation, whether or how these activities will incrementally add to future profitability is more uncertain. Furthermore, tax avoidance may dampen any positive valuation effects of philanthropic activities if investors view tax avoidance as a type of negative CSR. We define *Philanthropic CSR* as an indicator variable equal to one if a firm has at least one CSR strength which MSCI categorizes as *Community* and *Human Rights*. MSCI lists responsible *Community* CSR activities as: Generous Giving, Innovative Giving, Support for Housing, Support for Education, Non-U.S. Charitable Giving, Volunteer Programs and Other Strength. MSCI lists responsible *Human Rights* CSR activities as: Indigenous People Relations, Labor Rights and

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<sup>15</sup> We chose to measure two disaggregated CSR proxies (i.e., *Philanthropic* and *Non-Philanthropic*) as indicator variables due to the lack of variation in the data that comprises the measure of *Philanthropic CSR*. As can be observed from the descriptive statistics we report in Table 1, few firms have combined *Philanthropic CSR* strength scores of at least one, and very few have a score of greater than one. Therefore, we consider the most relevant measure for our exploratory analysis as being whether or not a firm has a positive score for these activities.

<sup>16</sup> We define philanthropic, consistent with the Merriam-Webster dictionary, as firm behaviors which represent "active effort to promote human welfare".

Other Strength. We expect that investors will discount the joint engagement in tax avoidance and philanthropic CSR demonstrated by a negative and significant coefficient on the interaction *Tax Avoid\*Philanthropic CSR*.

Non-philanthropic type CSR activities could have a more direct effect on future profitability include investments in improving employee workplace conditions and product quality. For instance, activities included in MSCI's CSR category *Employee* include: strong retirement benefits, cash profit sharing, and employee health and safety measures, all which may help firms to attract and retain better employees, enhancing firm value. Activities MSCI categorizes as *Product* include product quality and R&D/Innovation, both of which are likely intricately tied to the extent a firm's products are demanded by its customers, thus increasing sales and potential profitability. In contrast, CSR activities that likely have a much less direct effect on improved profitability could include philanthropic giving to charity and investments in a firm's community and/or for human rights causes.

We define *Non-philanthropic CSR* as an indicator variable equal to one if a firm has at least one CSR strength which MSCI categorizes as *Corporate Governance, Diversity, Employee Relations, Environment* or *Product Quality and Safety*. We include *Corporate Governance* as *Non-philanthropic CSR* because strong corporate governance protects shareholder interests and should alleviate investor concern that managers are investing in CSR activities unwisely.<sup>17</sup> *Diversity* and *Employee Relations* are included in *Non-philanthropic CSR* because these types of employee centered activities should help firms attract and retain talented employees, enhancing firm value. We include *Environment* in *Non-philanthropic CSR* because prior research shows environmental social responsibility positively impacts firm value. Hart (1995) posits that

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<sup>17</sup> Results are robust to the exclusion of *Corporate Governance* from the *Non-philanthropic CSR* measure and *Human Rights* from the *Philanthropic CSR* measure.

environmental corporate social responsibility can become a resource that gives a firm a competitive advantage.<sup>18</sup> We include *Product Quality and Safety* in *Non-philanthropic CSR* because having high quality and innovative products should attract customers and increase profits, translating into firm value. We expect an insignificant coefficient on the interaction *Tax Avoid \* Non-philanthropic CSR*. We include the same control variables and model specification as Equation 1 above.

Table 5 presents results using tax avoidance as proxied by the CETR. The main effect of *Tax Avoid* is positive and significant ( $p < 0.01$ , two-tailed), consistent with our main results reported in Table 3 for Equation 1. The main effect of *Philanthropic CSR* is insignificant in Model A, but is positive and significant in Model B ( $p < 0.05$ , two-tailed), providing some evidence that investors value philanthropic activities. The main effect of *Non-philanthropic CSR* is positive and significant across model specifications ( $p < 0.05$ , one-tailed).

Model A includes a continuous measure of tax avoidance. The coefficient of -0.339 on the interaction *Tax Avoid \* Philanthropic CSR* is negative and significant ( $p < 0.05$ , two-tailed), consistent with our expectation that investors place a discount on firms that jointly engage in tax avoidance and positive philanthropic CSR activities. This result suggests investors may believe managers should not take on tax risk in order to use tax savings to promote social welfare and should instead let the government play this role. This result is also consistent with the interpretation that investors view engaging in tax avoidance as weakening the reputational capital gained by firms' philanthropic behavior.

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<sup>18</sup> Russo and Fouts (1997) test this empirically and find that firms with higher levels of environmental performance have stronger economic performance. Jo and Hajoto (2011) find no association between the environmental corporate social responsibility and firm value. Untabulated results are robust to inclusion of environment as *Philanthropic CSR* or exclusion from the analysis.

The coefficient of -0.028 on the interaction *Tax Avoid\* Non-philanthropic CSR* is insignificant. This result suggests that the discount on firms engaging jointly in tax avoidance and positive CSR activities is limited to philanthropic CSR activities. We interpret this result as investors believing that non-philanthropic CSR activities are positive net present value activities that are worth taking on the tax risk to engage in. Additionally, the results are also consistent with investors believing that engagement in tax avoidance will not destroy the value created from non-philanthropic activities.<sup>19</sup>

Model B includes an indicator variable, *High Tax Avoid*, set to one when *CETR* is in the bottom quartile by industry and year. The results are consistent with Model A. Specifically, the coefficient of -0.191 is negative and significant ( $p < 0.01$ , two-tailed) on the interaction of *Tax Avoid* and *Philanthropic CSR*, while the coefficient is insignificant on the interaction of *Tax Avoid* and *Non-philanthropic CSR*. As in our main analysis, we also estimated our models using *DTAX* as a measure of tax avoidance (results not tabulated). Results for our primary variables of interest are consistent with the results reported above.

(Insert Table 5)

### ***CSR and Tax Shelter Analysis***

Hanlon and Slemrod (2009) document a decline in firm value when there is news of engagement in a tax shelter. Wilson (2009) documents negative abnormal returns before, during and after engagement in a tax shelter by poorly governed firms. Firms may believe that increasing their positive CSR activities will moderate the negative impact of aggressive tax

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<sup>19</sup> In an experimental setting, Davis et al. (2017) find that nonprofessional investors place a price premium on firms that are perceived as socially responsible and able to successfully avoid taxes. While this result seems at odds with our result of a discount on tax avoidance when CSR is high, we believe the lack of a discount on tax avoidance when *Non-philanthropic CSR* is high reconciles results with a concurrent study. Specifically, Davis et al.(2017) use supply chain and green policies ratings to manipulate CSR in their experiment. These policy ratings coincide with our *Employee* and *Environment* categories, both of which are classified as *Non-philanthropic CSR*.

avoidance. If firms increase their positive CSR activity concurrently with engagement in aggressive tax behavior, our results could be attributed to the discount related to the negative tax event and not the joint engagement in tax avoidance and CSR. While we believe it more likely that firms would increase CSR after the revelation of aggressive tax behavior, we examine firms' CSR behavior surrounding tax shelter engagement using the tax shelter sample examined in Wilson (2009). We find that 12.7 (19.0) percent of tax shelter firms exhibit an increase (decrease) in *CSR Strengths* in the year of tax shelter engagement, suggesting that few firms engaging in aggressive tax behavior concurrently increase their positive CSR activity.

We find that 21.3 (28.4) percent of tax shelter firms exhibit an increase and 17.3 (17.6) percent exhibit a decrease in the CSR index in the year (second year) after tax shelter engagement. This provides preliminary evidence that firms do not necessarily increase CSR activities after engagement in a tax shelter. We further examine CSR activity after aggressive tax behavior using the tax disputes variable from the MSCI database. We find that 16.5 percent of tax dispute observations increase positive CSR activity and 25.3 percent decrease positive CSR activity. This is consistent with our tax shelter analysis which showed few firms concurrently increase positive CSR activity while engaging in aggressive tax behavior. We find that 23.0 (37.5) percent of tax dispute observations exhibit an increase in the year (second year) after the dispute and 7.5 (14.8) percent exhibit a decrease. These trends indicate that some firms increase CSR after a tax dispute; however, the absence of the tax dispute in the years following the tax dispute partially explains this trend (i.e. the absence of the tax dispute mechanically makes the CSR index higher the year following the tax dispute). We remove tax disputes from the CSR index and find consistent results (not tabulated). We also remove observations with a tax dispute from the analysis and find consistent results (not tabulated).

## CONCLUSION

We predict and find that the market valuation of firms' tax avoidance and corporate social responsibility activities, while both positively valued, negatively interact when both activities are engaged upon by managers. We theorize, and find evidence suggesting, that: 1) CSR activities may signal to investors that cash generated via tax avoidance has not been used toward investments that will generate a return sufficient to offset the risk associated with tax planning strategies, and 2) investors may view tax avoidance as inconsistent with a firm's reputation building strategy, which, in turn, could mitigate the potential positive effect on future profits stemming from improved reputations with other stakeholders of the firm.

Our study makes several contributions, all of which have important implications to the long-standing debate between the shareholder and stakeholder theoretical views with regards to CSR. Prior studies examine the association between the occurrences of tax avoidance and CSR activities (e.g., Hoi et al. 2013; Watson 2015; Garcia 2015; Davis et al. 2016). However, our study is the first to directly investigate the interplay between tax avoidance and CSR from the perspective of the equity market. To this end, the results of our study provide evidence that investors do not assess these two types of firm activities in isolation, but rather consider the potential effects on firm value of these activities jointly.

We also contribute to the tax avoidance research literature more generally. We provide evidence, consistent with prior research, suggesting that the market valuation of firms' tax avoidance behavior is context specific, and may depend on what other firm attributes or behaviors signal to investors about the potential use of tax savings (Desai and Dharmapala 2009). In particular, our results suggest the extent firms invest in activities that directly benefit other stakeholders of the firm influences how investors value tax avoidance. We find that

investors discount the value of tax avoidance when the engagement in CSR activities is high. Therefore, our results suggest that from the investors' perspective, funds gained via potentially risky tax strategies should be invested in projects with higher net present value potential as opposed to reputation building CSR activities that have weaker links to firm profit maximization.

Lastly, our study demonstrates that it is important to consider the different nature of the various types of CSR activities when investigating how CSR affects, or is affected by, other firm behaviors and user perceptions. We document that the influence of CSR on the relation between tax avoidance and firm value is sensitive to the type of CSR. Specifically, this analysis suggests that our main result—that higher levels of CSR and tax avoidance negatively interact to affect firm value—is driven by CSR activities we classify as philanthropic. Thus suggesting investors place less value on firms that appear to be playing 'Robin Hood' by taking from the government in the form of avoided taxes in order to distribute funds to society via corporate philanthropic giving. Future research could consider how philanthropic versus non-philanthropic types of CSR activities are related to, or influence, other firm behaviors, performance, and user perceptions

While we conduct several robustness tests to corroborate the main results are consistent with our theory, we cannot completely rule out other possible explanations. Data limitations make it difficult to identify the exact underlying mechanisms that result in a negative interaction of tax avoidance and CSR on firm value. Specifically, while we argue that using tax savings to invest in CSR diminishes the value of tax avoidance, the amount that firms spend on CSR is not publicly available, therefore we use the CSR index as a proxy. While we believe it is likely that the CSR Index, particularly CSR Strengths, is positively associated with CSR spending, we cannot validate this association. Additionally, data from a firm's tax return would provide the best measure of tax avoidance and the riskiness of a firm's tax position; however, this data is not

publicly available and we must rely on a traditional measure of tax avoidance using data from the financial statements. We believe firms with lower cash effective tax rates would inherently have more risky tax avoidance activities; however, we cannot validate this association with publicly available data. We, however, contend that the information limitations acknowledged above are similar to the limitations faced by investors.



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**APPENDIX**  
**Variable Definitions**

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***Dependent Variable***

Tobin's Q                      Ratio of market value of firm to book value of firm =  

$$\frac{((AT) + ((\text{Price 2 days after 10-K filing}) * (\text{Common Shares Outstanding 2 days after 10-K filing})) - (CEQ))}{(AT)}$$

***Tax Avoidance Measures***

*Tax Avoid (3 year)*                      CETR\*-1

*High Tax Avoid*                      Indicator variable equal to one if *Tax Avoid* is in the fourth quartile

*CETR*                      
$$\sum_{t-2,t} (\text{Cash Income Tax Paid (TXPD)} / (\text{Pre-tax Income (PI)} - \text{Special Items (SPI)})$$

*DTAX*                      Discretionary permanent book tax differences adopted from Frank, Lynch, and Rego (2009) methodology, equal to the residual for firm *i* in year *t* from regressions (by industry and year) of permanent tax differences on goodwill/intangibles, income or loss reported under equity method of accounting, minority interest income or loss, current state tax expense, the change in net operating loss carryforwards, and lagged permanent book tax differences.

***CSR Measures***

*CSR Index*                      Sum of strengths less concerns for Corporate Governance, Employee Relations, Environment, Diversity, Product Quality and Safety, Community and Human Rights Activities from MSCI database

*CSR Strengths*                      Sum of strengths for Corporate Governance, Employee Relations, Environment, Diversity, Product Quality and Safety, Community and Human Rights Activities from MSCI database

*CSR Weaknesses*                      Sum of concerns for Corporate Governance, Employee Relations, Environment, Diversity, Product Quality and Safety, Community and Human Rights Activities from MSCI database

*Non-Philanthropic CSR*                      Indicator variable equal to one if Non-Philanthropic CSR Strengths are greater than zero

*Non-Philanthropic Strengths*                      Sum of strengths for Corporate Governance, Employee Relations, Environment, Diversity and Product Quality and Safety Activities from MSCI database

(appendix continued on the following page)

<i>Philanthropic CSR</i>	Indicator variable equal to one if Philanthropic CSR Strengths are greater than zero
<i>Philanthropic Strengths</i>	Sum of strengths for Community and Human Rights activities from MSCI database
<b>Control Variables</b>	
<i>PPE</i>	$(PPEGT/ AT_{t-1})$
<i>Foreign Income</i>	$(PIFO/AT_{t-1})$
<i>Size</i>	Sales (SALE)
<i>Risk</i>	Standard deviation of monthly stock returns over previous 36 months (CRSP)
<i>Growth</i>	3 year average sales growth from t-2 to t $\sum_{t-2,t} (SALE_t - SALE_{t-1})/SALE_{t-1}$
<i>Leverage</i>	$(\text{Long-term Debt} + \text{Debt in Current Liabilities})/\text{Total Assets}$ $(DLTT+DLC)/(AT)$
<i>NOL</i>	NOL Carryforward/Total Assets (TLCF/AT)
<i>Intangibles</i>	$(INTAN/AT_{t-1})$ , if INTAN = “.”, then INTANG = 0
<i>Firm Age</i>	$\text{Ln}(1 + \text{number of years listed in Compustat})$
<i>ROA</i>	$(PI_{-} - XI)/\text{Lag } AT$
<i>Liquidity</i>	Cash and Short-Term Investments/Lagged Total Assets $(CHE/AT_{t-1})$
<i>CAPEX</i>	Capital Expenditures/Lagged Total Assets $(CAPEX/LAGAT)$
<i>R&amp;D</i>	R&D Expense/Lagged Total Assets $(XRD/LAGAT)$

**TABLE 1**  
**Descriptive Statistics**

<b>Variable</b>	<b>N</b>	<b>Mean</b>	<b>Std. Dev</b>	<b>1st quartile</b>	<b>Median</b>	<b>3rd quartile</b>
CSR (Strengths minus Weaknesses)	25,427	-0.345	2.478	-2.000	-1.000	1.000
CSR Strengths	25,427	1.486	2.419	0.000	1.000	2.000
Philanthropic CSR Strengths	25,427	0.154	0.513	0.000	0.000	0.000
Non-philanthropic CSR Strengths	25,427	1.332	2.097	0.000	1.000	2.000
CSR Weaknesses	25,427	1.598	1.831	0.000	1.000	2.000
Philanthropic CSR Weaknesses	25,427	0.104	0.375	0.000	0.000	0.000
Non-philanthropic CSR Weaknesses	25,427	1.493	1.636	0.000	1.000	2.000
3-Year Cash Effective Tax Rate	25,427	0.220	0.190	0.063	0.215	0.317
Tax Avoid (CETR)	25,427	-0.220	0.190	-0.317	-0.215	-0.317
Tax Avoid (DTAX)	20,808	0.020	0.109	-0.009	0.006	0.035
Tobin's Q	25,427	1.897	1.464	1.106	1.460	2.128
PPE	25,427	0.256	0.278	0.048	0.158	0.372
Foreign Income	25,427	0.015	0.032	0.000	0.000	0.012
Size (\$ in millions)	25,427	3,757	7,669	323	928	2,995
Risk	25,427	0.122	0.071	0.077	0.107	0.148
Growth	25,427	0.149	0.371	0.018	0.087	0.019
Leverage	25,427	0.225	0.222	0.040	0.187	0.340
NOL	25,427	0.398	0.489	0.000	0.000	1.000
Intangible	25,427	0.190	0.242	0.010	0.092	0.292
Firm Age	25,427	2.753	0.878	2.200	2.830	3.430
Liquidity	25,427	0.190	0.310	0.031	0.094	0.250
Capital Expenditures (CAPEX)	25,427	0.052	0.077	0.011	0.031	0.063
Research and Development (R&D)	25,427	0.032	0.088	0.000	0.000	0.029
ROA	25,427	0.072	0.169	0.015	0.065	0.132

This table presents descriptive statistics for all variables included in subsequent regression analyses. See appendix for variable definitions.

**TABLE 2**  
**Correlation matrix**

Variable	Non-phil.			Non-Phil.			CETR	DTAX	Tobin's Q	PPE	
	CSR Index	CSR Strengths	Phil. CSR Strengths	CSR Strengths	CSR Weak	Phil. CSR Weak					CSR Weak
CSR		0.712	0.462	0.712	-0.351	-0.134	-0.362	-0.010	0.014	0.057	-0.072
CSR Strengths	0.627		0.692	0.984	0.308	0.279	0.280	-0.021	0.020	0.010	0.010
Philanthropic CSR Strengths	0.339	0.492		0.554	0.299	0.254	0.276	-0.025	0.020	0.010	0.039
Non-philanthropic CSR Strengths	0.621	0.986	0.395		0.294	0.261	0.268	-0.025	0.005	-0.010	0.022
CSR Weaknesses	-0.486	0.098	0.178	0.094		0.590	0.982	-0.023	0.002	-0.044	0.143
Philanthropic CSR Weaknesses	-0.134	0.279	0.254	0.261	0.381		0.429	-0.031	-0.107	-0.042	0.125
Non-philanthropic CSR Weaknesses	0.036	-0.040	0.057	0.083	0.987	0.267		0.076	0.016	0.094	0.707
CETR	-0.034	-0.068	-0.047	-0.062	-0.023	0.001	-0.017		0.067	0.060	0.069
DTAX	0.026	0.048	0.030	0.049	0.022	-0.107	0.023	0.044		0.099	0.072
Tobin's Q	0.065	0.037	0.001	0.043	0.002	-0.029	0.006	0.008	0.099		-0.039
PPE	-0.061	0.083	0.032	0.084	0.145	0.128	0.140	-0.020	0.072	0.139	
Foreign Income	0.069	0.161	0.123	0.161	0.085	0.081	0.081	-0.081	0.201	0.224	0.066
Size	0.100	0.424	0.359	0.410	0.260	0.275	0.244	-0.144	0.026	-0.050	0.245
Risk	-0.140	-0.195	-0.175	-0.185	-0.015	-0.107	-0.005	0.147	0.105	0.022	0.028
Growth	-0.012	-0.078	-0.086	-0.074	-0.064	-0.037	-0.063	0.040	0.029	0.220	0.021
Leverage	-0.043	0.041	0.072	0.031	0.073	0.088	0.069	0.142	-0.049	-0.213	0.185
NOL	-0.036	-0.019	-0.016	-0.015	0.025	-0.044	0.033	0.115	0.122	0.061	0.032
Intangible	0.005	0.026	0.027	0.027	0.042	-0.030	0.048	-0.011	0.116	0.146	-0.032
Firm Age	0.081	0.238	0.212	0.228	0.120	0.172	0.109	-0.123	0.000	-0.069	0.164
Liquidity	0.024	-0.025	-0.059	-0.014	-0.030	-0.077	-0.024	0.011	0.142	0.377	-0.171
Capital Expenditures (CAPEX)	-0.040	0.057	0.083	0.060	0.101	0.084	0.098	0.055	0.098	0.125	0.363
Research and Development (R&D)	0.056	0.047	0.060	0.055	-0.001	-0.059	0.009	0.125	0.247	0.363	-0.068
ROA	0.046	0.067	0.043	0.069	0.039	0.036	0.035	-0.246	0.055	-0.246	0.055

This table presents Pearson (upper panel) and Spearman (lower panel) correlation coefficients for regression variables. Correlation coefficients  $> |0.013|$  are significant at the 5 percent level. Continuous variables winsorized at the 1st and 99th percentiles. See appendix for variable definitions.



**TABLE 2 (continued)**  
**Correlation matrix**

<b>Variable</b>	<b>Foreign Income</b>	<b>Size</b>	<b>Risk</b>	<b>Growth</b>	<b>Leverage</b>	<b>NOL</b>	<b>Intangible</b>	<b>Firm Age</b>	<b>Liquidity</b>	<b>CAPEX</b>	<b>R&amp;D</b>	<b>ROA</b>
CSR	0.115	0.190	-0.120	-0.028	-0.040	-0.012	0.012	0.114	0.010	-0.046	0.032	0.046
CSR Strengths	0.207	0.606	-0.160	-0.073	0.018	-0.004	0.003	0.291	-0.052	-0.023	-0.005	0.055
Philanthropic CSR Strengths	0.142	0.481	-0.124	-0.054	0.029	-0.017	-0.008	0.201	-0.060	0.000	-0.020	0.035
Non-philanthropic CSR Strengths	0.205	0.582	-0.154	-0.071	0.014	-0.001	0.005	0.286	-0.045	-0.024	0.001	0.055
CSR Weaknesses	0.111	0.473	-0.053	-0.055	0.065	0.006	-0.002	0.200	-0.073	0.038	-0.049	0.025
Philanthropic CSR Weaknesses	0.114	0.374	-0.094	-0.028	0.041	-0.038	-0.050	0.185	-0.070	0.030	-0.062	0.038
Non-philanthropic CSR Weaknesses	0.098	0.443	-0.038	-0.055	0.063	0.016	0.010	0.181	-0.066	0.035	-0.040	0.019
CETR	-0.021	-0.045	0.092	0.090	0.137	0.083	-0.029	-0.082	0.080	0.076	0.139	-0.132
DTAX	0.201	0.026	0.105	0.029	-0.049	0.122	0.116	0.000	0.157	0.016	0.244	0.072
Tobin's Q	0.150	-0.056	0.101	0.157	-0.119	0.012	0.002	-0.134	0.349	0.094	0.338	0.173
PPE	-0.022	0.059	-0.022	0.051	0.179	-0.026	-0.168	0.099	-0.160	0.707	-0.144	0.070
Foreign Income		0.152	-0.065	-0.028	-0.094	0.117	0.098	0.132	0.061	0.007	0.064	0.250
Size	0.253		-0.170	-0.047	0.050	-0.008	0.007	0.298	-0.108	-0.016	-0.084	0.054
Risk	-0.055	-0.289		0.103	-0.006	0.144	-0.023	-0.217	0.209	0.044	0.196	-0.171
Growth	0.021	-0.084	0.031		0.001	0.014	0.047	-0.205	0.154	0.170	0.119	-0.008
Leverage	-0.065	0.258	-0.124	-0.066		0.016	0.086	0.010	-0.244	0.035	-0.155	-0.128
NOL	0.158	0.040	0.170	0.022	0.008		0.182	-0.071	0.070	0.010	0.126	-0.072
Intangible	0.242	0.178	-0.010	0.105	0.087	0.227		-0.072	-0.057	-0.121	0.041	0.054
Firm Age	0.150	0.373	-0.283	-0.255	0.087	-0.075	-0.026		-0.222	-0.066	-0.134	0.056
Liquidity	0.167	-0.221	0.289	0.131	-0.494	0.129	0.034	-0.182		-0.003	0.537	-0.064
Capital Expenditures (CAPEX)	0.107	0.178	0.075	0.167	0.033	0.055	0.008	0.049	-0.007		-0.043	0.116
Research and Development (R&D)	0.298	-0.157	0.221	0.088	-0.268	0.218	0.232	-0.033	0.465	0.036		0.041
ROA	0.313	0.174	-0.168	0.256	-0.208	-0.045	0.149	0.065	0.183	0.317	-0.396	

This table presents Pearson (upper panel) and Spearman (lower panel) correlation coefficients for regression variables. Correlation coefficients  $> |0.013|$  are significant at the 5 percent level. Continuous variables winsorized at the 1st and 99th percentiles. See appendix for variable definitions.

**TABLE 3**  
**OLS Regressions of Firm Value on Tax Avoidance and CSR**

**Panel A:** Tax Avoid = 3-Year Cash Effective Tax Rate \* -1 (CETR)

Variable	Predicted Sign	Model A		Model B		Model C		Model D		Model E	
		Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat
Intercept		2.895	10.02 ***	2.874	9.99 ***	2.766	9.42 ***	2.857	9.90 ***	2.762	9.40 ***
Tax Avoid	+	0.217	3.29 ***	0.299	3.92 ***			0.254	2.90 ***		
High Tax Avoid (Top Quartile)	+					0.074	1.35 *			0.066	1.16
CSR Index	+	0.010	1.40 *								
CSR Strengths	+			0.015	1.87 **	0.032	4.69 ***	0.014	1.65 **	0.032	4.69 ***
Tax Avoid*CSR	⊖	-0.044	-2.19 **								
Tax Avoid*CSR Strengths	⊖			-0.050	-2.12 **			-0.057	-2.35 ***		
High Tax Avoid*CSR Strengths	⊖					-0.027	-2.68 ***			-0.028	-2.68 ***
CSR Weaknesses								0.012	1.42	0.002	0.33
Tax Avoid*CSR Weaknesses								0.035	1.53		
High Tax Avoid*CSR Weaknesses										0.006	0.54
PPE		-0.287	-2.81 ***	-0.286	-2.80 ***	-0.276	-2.70 ***	-0.287	-2.80 ***	-0.276	-2.70 ***
Foreign Income		3.565	3.85 ***	3.486	3.75 ***	3.492	3.88 ***	3.492	3.76 ***	3.488	3.88 ***
Size		0.000	-2.58 ***	0.000	-3.95 ***	0.000	-4.03 ***	0.000	-3.81 ***	0.000	-3.89 ***
Risk		0.875	1.85 *	0.875	1.85 *	0.875	1.80 *	0.872	1.85 *	0.875	1.80 *
Growth		0.341	3.25 ***	0.345	3.28 ***	0.349	3.32 ***	0.346	3.29 ***	0.349	3.32 ***
Leverage		-0.024	-0.14	-0.029	-0.17	-0.016	-0.09	-0.030	-0.17	-0.016	-0.10
NOL		-0.160	-3.86 ***	-0.161	-3.86 ***	-0.158	-3.90 ***	-0.161	-3.87 ***	-0.158	-3.90 ***
Intangibles		-0.457	-5.85 ***	-0.455	-5.84 ***	-0.456	-5.89 ***	-0.455	-5.84 ***	-0.456	-5.89 ***
Firm Age		-0.112	-4.51 ***	-0.116	-4.65 ***	-0.116	-4.61 ***	-0.116	-4.67 ***	-0.116	-4.63 ***
ROA		1.476	2.27 **	1.482	2.28 **	1.479	2.22 **	1.480	2.28 **	1.479	2.21 **
Liquidity		1.115	8.42 ***	1.114	8.41 ***	1.117	8.43 ***	1.114	8.42 ***	1.117	8.43 ***
Industry fixed effects (Fama French 48)		Yes		Yes		Yes		Yes		Yes	
Year fixed effects		Yes		Yes		Yes		Yes		Yes	
N		25,427		25,427		25,427		25,427		25,427	
R-sq		26.82%		26.84%		26.78%		26.85%		26.78%	
Adj. R-sq		26.61%		26.63%		26.57%		26.63%		26.57%	

This table presents regression results regarding the association between tax avoidance and CSR with firm value (i.e., Equation 1). \*, \*\*, and \*\*\* denote statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively, one-tailed in cases of a predicted sign, two-tailed otherwise. Tobin's Q is used as a measure of firm value. All continuous variables winsorized at 1st and 99th percentiles. Models include industry and year fixed effects. Industry defined following Fama French 48 industry classifications. p-values reflect clustering of standard errors at the firm level. See appendix for variable definitions.

**TABLE 3 (continued)**  
**OLS Regressions of Firm Value on Tax Avoidance and CSR**

**Panel B: Tax Avoid = Discretionary Tax (DTAX)**

Variable	Predicted	Model A		Model B		Model C		Model D			Model E	
	Sign	Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat	
Intercept		2.509	8.42 ***	2.469	8.45 ***	2.458	8.41 ***	2.464	8.42 ***	2.452	8.38 ***	
Tax Avoid	+	-0.143	-0.82	0.062	0.31			-0.015	-0.06			
High Tax Avoid (Top Quartile)	+					0.100	3.610 ***			0.095	3.05 ***	
CSR Index	+	0.021	4.68 ***									
CSR Strengths	+			0.033	5.140 ***	0.034	5.260 ***	0.033	5.15 ***	0.034	5.300 ***	
Tax Avoid*CSR	⊖	-0.108	-1.80 **									
Tax Avoid*CSR Strengths	⊖			-0.124	-2.060 **			-0.131	-2.10 **			
High Tax Avoid*CSR Strengths	⊖					-0.016	-2.970 ***			-0.017	-2.860 **	
CSR Weaknesses								0.004	0.60	0.004	0.57	
Tax Avoid*CSR Weaknesses								0.051	0.55			
High Tax Avoid*CSR Weaknesses										0.004	0.41	
PPE		-0.290	-3.31 ***	-0.293	-3.34 ***	-0.297	-3.40 ***	-0.293	-3.34 ***	-0.297	-3.40 ***	
Foreign Income		3.049	3.74 ***	2.940	3.58 ***	2.747	3.42 ***	2.939	3.58 ***	2.743	3.42 ***	
Size		0.000	-1.91 *	0.000	-3.91 ***	0.000	-3.82 ***	0.000	-3.81 ***	0.000	-3.72 ***	
Risk		0.366	0.75	0.371	0.76	0.323	0.66	0.366	0.75	0.321	0.65	
Growth		0.236	2.50 **	0.241	2.55 **	0.239	2.53 **	0.242	2.56 **	0.240	2.54 **	
Leverage		-0.777	-3.08 ***	-0.783	-3.11 ***	-0.786	-3.13 ***	-0.783	-3.11 ***	-0.787	-3.13 ***	
NOL		-0.055	-1.86 *	-0.056	-1.90 *	-0.057	-1.94 *	-0.056	-1.88 *	-0.057	-1.94 *	
Intangibles		-0.477	-6.21 ***	-0.475	-6.20 ***	-0.483	-6.29 ***	-0.476	-6.21 ***	-0.484	-6.29 ***	
Firm Age		-0.107	-4.40 ***	-0.112	-4.55 ***	-0.111	-4.55 ***	-0.112	-4.57 ***	-0.111	-4.57 ***	
ROA		4.664	6.32 ***	4.669	6.33 ***	4.684	6.36 ***	4.667	6.33 ***	4.684	6.36 ***	
Liquidity		-0.170	-0.48	-0.178	-0.50	-0.188	-0.53	-0.175	-0.49	-0.188	-0.53	
Industry fixed effects (Fama French 48)		Yes		Yes		Yes		Yes		Yes		
Year fixed effects		Yes		Yes		Yes		Yes		Yes		
N		20,808		20,808		20,808		20,808		20,808		
R-sq		42.21%		42.28%		42.32%		42.29%		42.32%		
Adj. R-sq		45.00%		42.08%		42.11%		42.08%		42.11%		

This table presents regression results regarding the association between tax avoidance and CSR with firm value (i.e., Equation 1). \*, \*\*, and \*\*\* denote statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively, one-tailed in cases of a predicted sign, two-tailed otherwise. Tobin's Q is used as a measure of firm value. All continuous variables winsorized at 1st and 99th percentiles. Models include industry and year fixed effects. Industry defined following Fama French 48 industry classifications. p-values reflect clustering of standard errors at the firm level. See appendix for variable definitions.

**TABLE 4**  
**Regressions with CAPEX and R&D**

Tax Avoid = 3-Year Cash Effective Tax Rate \* -1 (CETR)

Variable	Predicted Sign	Model A		Model B		Model C	
		Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat
Intercept		2.530	10.46 ***	2.516	10.39 ***	2.527	10.46 ***
Tax Avoid	+	-0.110	-0.84	-0.039	-0.27		
High Tax Avoid (Top Quartile)	+					-0.031	-0.39
CSR Index	+	0.004	0.73				
CSR Strengths	+			0.013	1.68 **	0.028	4.49 ***
Tax Avoid*CSR Index	⊖	-0.048	-2.52 ***				
Tax Avoid*CSR Strengths	⊖			-0.042	-1.84 **		
High Tax Avoid*CSR Strengths	⊖					-0.024	-2.54 ***
CAPEX		2.343	5.46 ***	2.369	5.52 ***	2.055	4.33 ***
R&D		5.809	4.54 ***	5.802	4.53 ***	3.809	5.47 ***
Tax Avoid*CAPEX		1.127	0.83	1.201	0.88		
Tax Avoid*R&D		5.788	2.77 ***	5.801	2.78 ***		
High Tax Avoid*CAPEX						0.306	0.63
High Tax Avoid*R&D						2.293	2.22 ***
PPE		-0.774	-6.28 ***	-0.777	-6.30 ***	-0.772	-6.16 ***
Foreign Income		2.669	3.53 ***	2.597	3.43 ***	2.651	3.57 ***
Size		0.000	-2.03 **	0.000	-3.38 ***	0.000	-3.63 ***
Risk		0.876	1.79 *	0.879	1.79 *	0.929	1.87 *
Growth		0.279	2.57 ***	0.281	2.59 ***	0.283	2.60 ***
Leverage		0.142	0.94	0.138	0.91	0.139	0.93
NOL		-0.155	-4.25 ***	-0.155	-4.26 ***	-0.151	-4.29 ***
Intangibles		-0.529	-7.17 ***	-0.527	-7.15 ***	-0.524	-7.17 ***
Firm Age		-0.088	-3.99 ***	-0.091	-4.14 ***	-0.092	-4.16 ***
ROA		2.555	5.68 ***	2.558	5.69 ***	2.624	5.81 ***
Liquidity		0.476	3.21 ***	0.475	3.20 ***	0.465	3.14 ***
Industry fixed effects (Fama French 48)		Yes		Yes		Yes	
Year fixed effects		Yes		Yes		Yes	
N		25,347		25,347		25,347	
R-sq		32.42%		32.43%		32.51%	
Adj. R-sq		32.22%		32.23%		32.30%	

\*, \*\*, and \*\*\* denote statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively, one-tailed in cases of a predicted sign, two-tailed otherwise. Tobin's Q is used as a measure of firm value. All continuous variables winsorized at 1st and 99th percentiles. Models include industry and year fixed effects. Industry defined following Fama French 48 industry classifications. p-values reflect clustering of standard errors at the firm level. See appendix for variable definitions.

**TABLE 5**  
**Regressions with Philanthropic versus Non-Philanthropic CSR**

Tax Avoid = 3-Year Cash Effective Tax Rate \* -1 (CETR)

Variable	Model A		Model B	
	Coeff.	t-stat	Coeff.	t-stat
Intercept	2.806	9.84 ***	2.696	9.13 ***
Tax Avoid	0.285	2.75 ***		
High Tax Avoid (Top Quartile)			0.088	1.23
Philanthropic CSR Strengths	0.035	0.64	0.152	3.30 ***
Non-Philanthropic CSR Strengths	0.100	2.05 **	0.120	4.48 ***
Tax Avoid*Philanthropic CSR Strengths	-0.339	-2.10 **		
Tax Avoid*Non-Philanthropic CSR Strengths	-0.028	-0.21		
High Tax Avoid*Philanthropic CSR Strengths			-0.191	-3.29 ***
High Tax Avoid*Non-Philanthropic CSR Strengths			-0.057	-0.80
PPE	-0.287	-2.82 ***	-0.275	-2.71 ***
Foreign Income	3.502	3.80 ***	3.524	3.94 ***
Size	0.000	-3.83 ***	0.000	-3.92 ***
Risk	0.879	1.86 *	0.876	1.80 *
Growth	0.344	3.28 ***	0.349	3.31 ***
Leverage	-0.027	-0.16	-0.014	-0.08
NOL	-0.162	-3.87 ***	-0.159	-3.94 **
Intangibles	-0.457	-5.87 ***	-0.458	-5.93 ***
Firm Age	-0.115	-4.60 ***	-0.115	-4.54 ***
ROA	1.479	2.28 **	1.480	2.22 **
Liquidity	1.115	8.41 ***	1.118	8.43 ***
Industry fixed effects (Fama French 48)	Yes		Yes	
Year fixed effects	Yes		Yes	
N	25,427		25,427	
R-sq	26.90%		26.85%	
Adj. R-sq	26.69%		26.64%	

\*, \*\*, and \*\*\* denote statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively, two-tailed. Tobin's Q is used as a measure of firm value. All continuous variables winsorized at 1st and 99th percentiles. Models include industry and year fixed effects. Industry defined following Fama French 48 industry classifications. p-values reflect clustering of standard errors at the firm level. See appendix for variable definitions.