Economic Resources and Corporate Social Responsibility

Abstract

Our research suggests that firms condition their CSR policies on the availability of economic resources. Using the value of a firm's real estate as a measure of exogenous shocks on the firm's economic resources, we show that increases in resources reduce CSR concerns, while decreases in resources increase CSR concerns. The relative impact of resource availability on CSR concerns, however, depends on several organizational variables that influence a firm's preferences for CSR investments. Furthermore, we show that firm reactions to increases and decreases in resources are not symmetric: resource gains reduce CSR concerns, but resource losses increase CSR concerns even more markedly. Overall, these results suggest that firms may treat CSR decisions in much the same way as other investment decisions.

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1. Introduction

Why do firms engage in socially disapproved behaviors? What factors discourage such behaviors in favor of social responsibility? In 2007, about 84% of U.S. public firms engaged in at least one "socially disapproved" behavior (as defined and determined by KLD Research and Analytics, Inc.; hereafter "KLD"). The average number of such behaviors was 2, with a range of 0-18, including categories like community, environment, diversity, employee, product safety, and humanity. Given ample evidence of links between socially disapproved corporate behaviors and negative consequences like lawsuits, market share deterioration, network partner losses, and public disapproval (e.g., Strachan, et al., 1983; Davidson, et al., 1994; Baucus and Baucus, 1997; Haunschild, et al., 2006; Karpoff, et al., 2008; and Nossiter, 2010), the continued prevalence of socially disapproved behaviors remains puzzling, and the contributing factors remain important to investigate.

Beyond the obvious practical import of socially disapproved behaviors (hereafter "CSR concerns" in accordance with KLD terminology), the continued prevalence of such behaviors cuts to the heart of important theoretical puzzles in the corporate social responsibility (CSR) literature. For example, Martin and Moser (2016) show that investors respond favorably when managers make and disclose the societal benefits of investments, and numerous papers show that avoiding CSR concerns has significant consequences for firm performance and resources (e.g., Benlemlih & Bitar, 2016; Cheng, Ioannou, & Serafeim, 2014; Jo, et al., 2009; Simpson and Koshers, 2002; Trudel and Cotte, 2009; Wu and Shen, 2013, and Kruger, 2015). If that is the case, why does further reducing CSR concerns (and enhancing CSR strengths) in core business functions remain the most significant leadership challenge facing companies today (State of Sustainable Business Survey by BSR, 2014)[1]? Is it possible that mitigating CSR concerns requires resources that firms simply do not have?

That is the topic of the current research. We suggest that resource availability may be central to decisions about whether to avoid socially disapproved behaviors. To date, research has amassed more evidence for the opposite causal path—that decreased CSR concerns improve firm performance and thus increase resource availability (e.g., Benlemlih & Bitar, 2016; Cheng, Ioannou, & Serafeim, 2014; Jo, et al., 2009; Simpson and Koshers, 2002). Yet, theory suggests that resource availability could also drive CSR decisions (Lys, Naughton, & Wang, 2015; Preston and O'Bannon, 1997; Waddock and Graves, 1997), and scholars have explicitly called for empirical research into that possibility (e.g., Benlemlih & Bitar, 2016). We respond to the call by exploring whether, when, and how a causal link from resource availability to socially disapproved behaviors might emerge. In terms of whether such a link might emerge, if firms regard

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[1] Business of a Better World (BSR) is a nonprofit organization with a network of more than 250 companies. See website: www.bsr.org.

CSR as one of several investment options[2], then changes in firm economic resources could influence CSR investments much as these changes influence other investment decisions. Just as shocks to U.S. corporations' real estate value during the housing boom period influenced their aggregate investment (Chaney et al., 2010), for example, such shocks might influence firms' CSR activities. On the other hand, if firms see CSR investments as a "cost of doing business," matching their CSR concerns to their peer organizations (Matten & Moon, 2008), then there should be no causal relationship between firm resources and CSR. This perspective also accords with economic theory suggesting that companies should maximize shareholders' value rather than internalizing the negative externalities they impose on other stakeholders (e.g., Pigou, 1920; Friedman, 1970). Testing these dueling perspectives on the influence of firm resources on CSR concerns (i.e., exploring *whether* such a causal path exists) is our first objective.

Even if firms do consider CSR an investment decision, they might not place CSR activities at the top of their investment priorities. One possible factor that could shape a firm's investment preference is financial constraint. Prior research suggests that firms place their core business investment needs at the top of the investment hierarchy and CSR somewhere lower (e.g., Preston and O'Bannon, 1997; Waddock and Graves, 1997). One critical implication is that firms' CSR-related reactions to resource changes may depend on whether their core business investment needs have already been met—that is, whether they are financially constrained. Financially constrained firms still have unmet business needs. Thus, positive resource shocks should create little financial slack, and these firms are more likely to use their gains to meet essential business needs such as capital expenditure and/or M&As. Financial constraint is only one of several variables that may influence where CSR concerns rank in a firm's investment priorities. To offer insight into some other important influences, we examine three critical variables highlighted by the literature: political influences (Di Giuli and Kostovetsky, 2014), corporate governance (Harjoto and Jo, 2011), and analyst coverage (Knyazeva, 2007, Yu, 2008, and Harjoto and Jo, 2011). Testing the impact of financial constraint and other relevant organizational variables that might influence the relationship between firm resources and CSR concerns (i.e., exploring *when* the causal path unfolds) represents our second objective.

If resource availability does influence firms' CSR concerns, it is important to know how firms react to resource gains and resource losses, and particularly if they react symmetrically. One important reason is that asymmetric reactions would lead to markedly different patterns of CSR concerns in good and bad economic conditions. To illuminate firms' CSR responses to resource gains and losses, we draw from prospect theory (Kahneman and Tversky, 1979) and its application to top-management teams (e.g., Barberis

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[2] Godfrey (2005), for example, presents a theory suggesting that corporations increase philanthropy to generate moral capital, which provides "insurance-like" protection for shareholder wealth. Minor and Morgan (2011) show that enhanced CSR reputation protects firms from negative corporate events like product recalls.

et al., 2001; Grinblatt and Han, 2005). Though originally conceived as a theory of individual decision-making (Kahneman and Tversky, 1979; Coval and Shumway, 2005), prospect theory has been invoked by many subsequent scholars to explain firm-level behavior (e.g., Fiegenbaum and Thomas, 1988; Fiegenbaum, et al., 1996; Hayward and Hambrick, 1997; Wiseman and Gomez-Mejia, 1998; Sanders, 2001)—the logic being that top management team members make decisions in accordance with prospect theory, and these decisions become firm-level policy that also reflects prospect theory.

At the most fundamental level, prospect theory and its extensions suggest a negative relationship between economic resources and CSR concerns: To recoup losses, a decrease in resources should increase a firm's appetite for risky behaviors like CSR concerns (e.g., investing less in employee welfare, cutting back on community contributions, spending less on product safety). To protect gains, a resource increase should decrease a firm's appetite for risky CSR concern behaviors. Additionally, prospect theory indicates that "losses loom larger than gains," meaning that decision-makers are more sensitive to losses. By that logic, firms with losses should increase their CSR concerns (engage in socially disapproved behavior) more readily than firms with gains should decrease their concerns (reduce socially disapproved behavior). Finally, prospect theory's "certainty effect" suggests that *sure* losses or gains have stronger behavioral effects than *tenuous* losses or gains. Thus, we predict that the effect of resource availability on CSR concerns will be strongest when losses or gains are relatively more permanent. In sum, prospect theory and its subsequent applications suggest that firm resources may drive CSR behavior in systematic (and potentially troubling) ways. Testing whether firms react symmetrically to resource gains and losses (i.e., exploring *how* the causal path unfolds) is thus our third objective.

In sum, this study seeks to shed light on the relationship between firm resources and CSR concerns by determining whether exogenous changes in firm resources, particularly via real estate assets, could influence a firm's engagement in CSR concern behaviors. To isolate the effects of resource availability on CSR, we identify the change in the value of firm real estate assets as an exogenous shock on firm resources (Chaney et al., 2012). Specifically, we treat variations in local real estate prices as exogenous shocks to examine whether firms engage in more or fewer CSR concerns as their asset value changes unexpectedly. Using exogenous real estate shocks helps to mitigate the concern that some firm resource changes are driven by past CSR policies. Thus, our research can speak rather directly to the nature of the causal path from resource availability to CSR, which is unique in the CSR literature. Following Chaney et al. (2012), our estimated resource variable is *RE Value*. The average *RE Value* is 0.496 (median is 0.352)[3], suggesting that real estate represents almost half of the tangible assets held by firms in our sample.

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[3] The median *RE Value* is comparable to the value of 0.28 reported by Chaney et al. (2012). They use the same data period as ours but include all firms that report real estate ownership in 1993. Because of CSR data availability, we use a smaller sample that includes relatively larger firms.

Controlling for year and firm fixed effects, an OLS regression analysis clustering observations at the state-year level supports a negative relationship between real estate shocks and the number of CSR concerns, suggesting that firms do in fact view CSR as an investment decision, which is influenced by the availability of economic resources. Specifically, a 2.84-percentage increase (decrease) in real estate value leads to one reduction (addition) to the number of CSR concerns, *ceteris paribus*.

To investigate whether firm financial constraints influence this relationship, we first split our data by the level of financial constraint faced by our firms. In support of our conjecture, the reported negative effect of real estate shocks is particularly evident in the group of firms *without* financial constraints (those that have already met their core business needs). For these firms, just a one percentage increase in *RE Value* (compared to the 2.84-percentage increase among all firms and a non-significant impact among *constrained* firms) leads to one reduction in CSR concerns. As further evidence, we examine the other types of investments financially constrained firms make with gains from real estate shocks. In contrast to the non-significant effects of resource gains on CSR concerns, financially constrained firms use these resources to make capital expenditures and invest in intangible assets (such as patents or goodwill increased through mergers and acquisitions).

As noted, we also examine whether and how political concerns, corporate governance, and analyst scrutiny influence the relationship between resources and CSR concerns. First, consistent with our predictions and past research indicating that Democratic CEOs and Democratic-leaning firm locations are associated with fewer CSR concerns, we find that the negative effects of *RE Value* are especially evident for firms led by Democratic CEOs. For instance, among firms with a Democratic (versus Republican) CEO, a one percentage increase (decrease) in *RE Value* appears to lead to twelve times as many reductions (additions) in CSR concerns when the HPI (House Price Index[4]) prices are more stable. Yet, this also significantly challenges prior theory by suggesting that "Democratic" firms are not only more willing to reduce CSR concerns in "good" times; they may be more likely to increase CSR concerns in "bad" times. Second, we find that the negative relationship between *RE Value* and CSR concerns is particularly evident in firms that closely align the interests of the CEO and shareholders, as measured by the extent to which CEOs' personal wealth is exposed to firm stock price changes. Lastly, we find that the effect of real estate shocks on CSR concerns is particularly strong in firms subject to more financial analyst scrutiny, and the effect grows even stronger when the number of analysts increases. Specifically, the negative effect of *RE Value* on CSR concerns is about eight times higher in the group of firms with six or more financial analysts than in the group of firms with fewer analysts. These findings are all consistent with theory, as explained below.

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[4] https://www.fhfa.gov/DataTools/Downloads/pages/house-price-index.aspx

To compare firms' CSR responses to resource gains and losses, we split the sample into firm-years with resource gains and firm-years with resource losses. Consistent with the predictions of prospect theory, we find that the negative impact of real estate value on CSR concerns is four times stronger when firms experience real estate losses than gains. That is, they are willing to incur four times more CSR concerns after a real estate loss than the CSR concerns they alleviate after a real estate gain. Furthermore, consistent with prospect theory's suggestion that reactions are stronger when gains and losses are relatively certain, the variation in firms' reaction to real estate shocks is particularly strong in states with less volatile (more stable) real estate prices.

Lastly, we check the fundamental assumption, underlying our theory, that changes in real estate value impact the availability of economic resources. Chaney et al. (2012) specifically suggest that real estate value impacts a firm's investments by affecting its pledgeable assets and therefore its debt capacity. To test our assumptions, we empirically examine this potential mechanism for the effect of real estate shocks on CSR concerns. We first examine how shocks in real estate value impact debt financing, which is measured by the issuance of bonds and the amount of proceeds raised from new bond issuance. We find that firms are more likely to issue bonds and raise more proceeds from bond issuance when they experience positive real estate shocks, supporting the impact of real estate shocks on the value of pledgeable assets. We then show that the coefficient of real estate shocks on CSR concerns is -1.135 in the subsample of firms that issue bond securities, substantially and significantly higher than the -0.193 in the subsample of firms without bond issuance. The results therefore support our conjecture that real estate shocks impact firms' economic resources, especially through debt financing, which leads to changes in firms' CSR behaviors.

Overall, our research suggests that CSR concerns depend on the availability of firm resources. The relative attractiveness of adjustments to CSR concerns, however, depends on several organizational variables that influence firms' investment preferences (financial constraint, political climate, corporate governance, and analyst coverage). Finally, firm reactions to resource gains and losses are not symmetric: resource gains reduce CSR concerns, but resource losses increase CSR concerns even more markedly, leading firms to cut proverbial corners.

Our study contributes to the literature on the link between firm resources and CSR (see Kitzmueller and Shimshack, 2012 for a review on the economics of CSR). This literature has revealed negative, positive, and neutral links (McWilliams and Siegel, 2000; 2001), partially because of the difficulties in establishing causality. Recent studies provide ample evidence on the ways that CSR impacts firm performance. For example, Cheng et al. (2014) show that CSR performance impacts firms' access to finance. Benlemlih and Bitar (2016) show that firms with higher CSR scores are have lower investment inefficiency. And Servaes and Tamayo (2013) and Kruger (2015) show that CSR impacts firm value. Our paper differs by focusing on the opposite causal relationship—that is, the path from firm resource availability to CSR policies. To

our knowledge, ours is the first attempt to provide genuine causal and empirical evidence about the influence of firm resources on CSR, and our data clearly document such a relationship. Our findings contribute to the corporate finance literature by documenting an important and previously unexamined driver of CSR.

The remainder of the paper is organized as follows. Section 2 reviews the relevant literature. Section 3 describes the data and methods underlying the results presented in section 4, and the paper concludes in section 5.

2. Literature Review and Hypothesis Development

2.1 Firm Economic Resources and CSR

According to KLD, examples of specific socially disapproved behaviors include community concerns (e.g., tax, environmental, and water rights disputes), corporate governance concerns (e.g., accounting and transparency issues),[5] diversity concerns (e.g., controversies resulting in fines or civil penalties and non-representation of women on boards), employee concerns (e.g., health and safety and retirement benefits), environmental concerns (e.g., hazardous waste and ozone depleting chemicals), human rights concerns (e.g., controversial operations in foreign countries and labor rights issues), and product safety concerns (e.g., product safety issues, consumer fraud, and antitrust). Recognizing that individuals have different opinions as to what constitutes a CSR "concern," we nevertheless use KLD's categories given their wide adoption in the field of CSR (e.g., Chatterji et al, 2009; Goss and Roberts, 2011; Lange and Washburn, 2012; Moser and Martin, 2012, Hoi et al., 2013).

Both the practitioner and academic discourse on CSR reveal ambivalence about the links between CSR and firm economic resources. On the one hand, both shareholders and consumers appear to take firms' social performance into consideration when making decisions. For example, more than a quarter of participants in a U.S.-based survey have bought or sold shares based on a company's social performance, and about 42% of North American consumers have punished socially irresponsible companies by not buying their products (International Institute for Sustainable Development)[6]. Accordingly, firms appear to be responding to social demands for responsible behavior: More companies than ever are investing in environmental, social, and governance issues (Di Giuli and Kostovetsy, 2014)[7], and the majority of

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[5] Recent studies (Kruger, 2015; Servaes and Tamayo, 2013) exclude corporate governance from the CSR measure. We run robustness tests by excluding corporate governance from our CSR concerns, and the results remain qualitatively the same.

[6] See survey reported by International Institute for Sustainable Development: https://www.iisd.org/business/issues/sr_csrm.aspx.

[7] US companies allocated $28 billion to sustainability and $15 billion to corporate philanthropy in 2010 (according to Surveys: http://www.verdantix.com/index.cfm/papers/Press.Details/press_id/42/verdantix-forecasts-us-_sustainable-

executive expect to allocate additional resources to every dimension of corporate citizenship in the near future [State of Corporate Citizenship (SCC), 2014]. On the other hand, survey data suggest that managers see the implementation of further CSR activities as their most significant leadership challenge (State of Sustainable Business Survey, 2014, by BSR), suggesting that further CSR implementation may depend on resources that firms do not currently have—or even that future CSR activities may depend on their future performance (Lys et al., 2015). In sum, the practitioner literature provides some reason to believe that firm resource availability may influence CSR.

The academic literature has also long been divided on the relationship between CSR and firm economic resources (see a comprehensive review by Griffin and Mahon, 1997). As noted, the bulk of the empirical research has focused on the causal link from CSR behavior to firm performance, generally documenting that fewer CSR concerns (and more CSR strengths) lead to improved performance (e.g., Benlemlih & Bitar, 2016; Cheng et al., 2014; Deng et al., 2013; Jo, et al., 2009; Simpson and Koshers, 2002; Trudel and Cotte, 2009; Wu and Shen, 2013, and Kruger, 2015). For example, Cheng and colleagues (2014) showed that stronger CSR performance predicted greater access to finance by improving stakeholder engagement and increasing transparency, while Benlemlih & Bitar (2016) showed that CSR performance positively predicts investment efficiency. Despite these compelling findings, the literature has also suggested the possibility of a negative relationship (Wright and Ferris, 1997), and a series of highly-cited papers have integrated these findings by providing theoretical and statistical reasons to believe that the link may, on average, be neutral (McWilliams and Siegel, 2000; 2001).

Additionally, several influential theoretical papers (Preston and O'Bannon, 1997; Waddock and Graves, 1997) as well as a novel empirical paper (Lys et al., 2015) have suggested that the causality might run in the other direction. That is, they have suggested that firm financial performance might predict CSR behavior. Lys and colleagues (2015), for example, showed that firm managers invest in increased CSR when they privately learn that the firm will perform well in the future. According to this argument, the actual improved performance may occur in the future, but the *awareness* of improved performance precedes and causally precipitates the CSR decision. In other words, (anticipated) performance represents a causal predictor of CSR decisions (Lys et al., 2015). Note that this perspective is not necessarily in conflict with the perspective that CSR decisions predict firm performance, as the causality could run in both directions as part of a feedback loop. For example, the anticipation of improved performance could drive increased CSR, which could later contribute to performance over and above the performance improvement anticipated initially.

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business-spending-will-double-to-60bn-by-2014 and http://www.philanthropyjournal.org/news/top-stories/corporate-giving-grows-median-flat).

In sum, the literature provides some strong theoretical (Preston and O'Bannon, 1997; Waddock and Graves, 1997) and empirical (Lys et al., 2015) reasons to suspect that firm financial performance and associated financial resources may drive CSR in addition to the reverse. Indeed, some of the scholars who have argued that CSR predicts firm performance (Benlemlih & Bitar, 2016) have also acknowledged that firms' "actual CSR decisions depend mainly on the resources available" (p. 4), that their own empirical approach "cannot confirm a causal relationship" (p. 21), and that future research may wish to "extend the framework…by examining the direction of causation between these two variables" (p. 21). We build from the existing theory and evidence as well as Benlemlih & Bitar (2016)'s call for research to examine the possibility that an exogenous indicator of firm financial performance—the performance of real estate assets—may predict CSR concerns.

2.2 Hypothesis Development

2.2.1 Investment Opportunities and CSR Concerns

CSR need not be a charitable donation nor a marketing scheme. The CSR literature has presented some links between firms' CSR policies and their actual risk management and performance, suggesting that firms might see CSR as an investment. Godfrey (2005), for example, presents a theory suggesting that corporations increase philanthropy to generate moral capital, which provides "insurance-like" protection for shareholder wealth. Minor and Morgan (2011) show that enhanced CSR reputation protects firms from negative corporate events like product recalls. Several leading companies including GE, Nestle, and Johnson & Johnson have started incorporating CSR into their daily business operations under the "shared value" model (Porter and Kramer, 2011), which emphasizes that firms can generate economic value in a way that also produces value for society. These developments, both theoretical and organizational, suggest that at least some firms may see at least some forms of CSR as an investment.

We focus specifically on CSR concerns, investigating whether firms see concern reduction as a possible investment (and an increase in concerns as a shift toward other investments). CSR concerns not only summarize overall CSR performance well but also predict negative future events more accurately than positive CSR activities (e.g., Chatterji et al, 2009; Goss and Roberts, 2011; Lange and Washburn, 2012; Moser and Martin, 2012, Hoi et al., 2013). Furthermore, CSR concerns may be a more important determinant of firm value than responsible behavior (Clark, 2008; Frooman, 1997; McGuire et al., 2003; Kruger, 2015). Thus, concerns represent an important consideration in their own right.

How might real estate shocks influence firms' investments in CSR concerns? In a perfect market, where all firms have equal access to capital markets, this and all of a firm's investment decisions would be independent of its financing conditions (Modigliani and Miller, 1958). Markets, nevertheless, are imperfect, and access to external finance does matter for investment decisions. Studies show that if a firm has difficulty

9

obtaining outside finance, its investments display excess sensitivity to the availability of internal funds.[8]

So the availability of external capital matters for decisions about whether to invest, and the literature also suggests that, in the presence of financing frictions, it may also influence the types of investment choices firms make. For example, Fazzari et al. (1988) argue that factors such as investment tax credits or depreciation allowances may be more important than the cost of capital for investment decisions. These findings suggest that, in the presence of financing frictions, real estate shocks may influence firms' investment choices. Consistent with this possibility, Chaney et al. (2012) show that increases in real estate value increase firms' collateral value and therefore their debt capacity, which in turn increase their aggregate investment: Over the period 1993-2007, U.S. corporations invested $0.06 out of each $1 of collateral. This positive impact of collateral value on aggregate investment is particularly evident for financially constrained firms. Specifically, treating the change in a firm's real estate assets as an external shock on its collateral value, studies link real estate value changes to firms' investments (Chaney et al., 2012), capital structure (Cvijanovic, 2014), and cost of capital (e.g. Berger et al., 2011; Lin et al., 2011). If firms see CSR concern reduction as an investment decision, and if resource changes like increases in real estate value influence a firm's investment choices, then resource changes should predict CSR concerns:

Hypothesis 1A: Firms consider CSR concern reduction an investment decision, resulting in a negative relationship between firm economic resource changes and CSR concerns.

On the other hand, firms may seek to reduce CSR concerns because they anticipate negative consequences if they fail to do so, not because they view the reduction of CSR concerns as an investment decision. In other words, firms may consider CSR a "cost of doing business," a potentially well-founded view in light of the risks associated with falling below benchmarks on the CSR concerns. For example, firms that perform poorly on the environmental or human rights dimensions open themselves up to a host of issues from unflattering media attention, to lawsuits, to boycotts (e.g., Strachan, et al., 1983; Davidson, et al., 1994; Baucus and Baucus, 1997; Haunschild, et al., 2006; Karpoff, et al., 2008; and Nossiter, 2010). Thus, firms may engage in the maximal amount of CSR concerns allowable to avoid attracting attention, which could readily result in an isomorphic pattern whereby peer organizations attempt to match their CSR activities (Matten & Moon, 2008).

This view of CSR, like the view that it represents an investment decision, would result in many millions of dollars in CSR spending. Yet, firms following the business cost view would try to minimize their CSR spending and match it to peer organizations. Their CSR spending would not be sensitive to

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[8] See e.g., Fazzari and Athey (1987), Fazzari, et al., (1988a, 1988b), and Hoshi et al., (1990, 1991), Whited (1992).

exogenous changes in resources. In other words, the business cost view would suggest little or no relationship between resource changes and CSR concern reduction. Thus, we advance a competing Hypothesis 1B about the existence of a relationship between resources and CSR concerns:

Hypothesis 1B: Firms consider CSR concern reduction a cost of doing business, resulting in little or no relationship between firm economic resources changes and CSR concerns.

An initial, descriptive analysis of our data suggested that firm CSR activities do vary in accordance with resource availability, providing preliminary support for Hypothesis 1A. Thus, although we test the competing hypotheses more formally and exhaustively below, we also proceed to propose and test a series of predictions about the nature of the relationship between resource changes and CSR concerns.

2.2.2 Investment Preferences and the Effect of Resource Availability on CSR Concerns

If firms treat CSR the same as other investment opportunities, the negative impact of resource availability on CSR concerns should be similar in all firms. As noted above, however, the literature suggests that in the presence of financing frictions, access to external capital may influence not only aggregate investment but the types of investment choices firms make. If firms consider CSR as part of their investment portfolio, how do they prioritize CSR relative to their other investment opportunities (or do they)? One possibility is that firms, as a result of financing constraints, prioritize their investments via an investment hierarchy. Specifically, the financial slack theory of CSR (e.g., Preston and O'Bannon, 1997; Waddock and Graves, 1997) suggests that firms have an investment hierarchy, with their core business investment needs placed at the top and their CSR activities lower on the list. Thus, firms invest in their business needs first and then invest in CSR and other more "discretionary" activities if and when any resources remain. Consistent with this argument, Benlemlih & Bitar (2016, p. 4) suggest that, "The level of resources that will be devoted to CSR activities in the short term depends mainly on the accessibility of resources not required for other purposes." The critical implication is that financially unconstrained firms, which have more financial slack than financially constrained firms (by definition), may be more likely to invest in matters of social performance, like CSR concerns (Preston & O'Bannon, 1997; Waddock and Graves, 1997). Thus, financial constraint may moderate the relationship between firm resources and CSR concerns.

Financial constraint is but one of several relevant organizational variables that may influence the structure of a firm's investment hierarchy, as well as where CSR falls in that structure, and thus moderate the focal relationship. In particular, the CSR literature suggests three important variables that may give firms a "taste" for adjusting their CSR activities in response to resource changes: 1) political environment, 2) corporate governance, and 3) analyst scrutiny. First, at least in public statements, the Democratic Party

11

appears to place more emphasis on CSR-related issues like environmental protection, antidiscrimination laws, etc. Consistent with this idea, a 2007 National Consumers League survey shows that 96% of Democrats believe Congress should ensure that companies address social issues, compared to 65% of Republicans[9]. Additionally, firms score higher on CSR when they are led by Democratic CEOs or are located in Democratic-leaning states (Di Giuli and Kostovetsky, 2014), and Democratic investment managers hold more socially responsible companies in their portfolios than do Republican managers (Hong and Kostovetsky, 2012). This evidence suggests that the CSR decisions of Democratic firms may be more sensitive to resource changes, which should amplify their reduction in CSR concerns after a resource gain but could also, intriguingly, amplify their increase in CSR concerns after a resource loss.

The second potential moderator is corporate governance. The conventional economic perspective holds that firms should not internalize their negative externalities (Pigou, 1920) and that the "social responsibility of business is to increase its profits" (Friedman, 1970). A recent study by Liang and Renneboog (2017) shows that common law countries, believed to have the best shareholder protections, foster the least CSR. In that case, we would expect little or no effect of resource availability on CSR concerns in well-governed firms, where managerial interests are more aligned with those of shareholders.

The evidence presented above, however, suggests that customers and shareholders' in the U.S. have recently become increasingly aware of firms' CSR policies. Additionally, Servaes et al. (2013) show that CSR impacts firm value the most in firms with higher customer awareness. As investors and consumers place more value on CSR, firms may respond to this preference by directing more of the available resources to CSR. In this case, firms' responsiveness to the availability of the economic resources should be greatest among firms with the best corporate governance. This conjecture is plausible in light of a recent study (e.g., Harjoto and Jo, 2011) showing that positive CSR behaviors are positively associated with governance characteristics.

We use two proxies for the quality of corporate governance. First is an entrenchment index (*E Index*) developed by Bebchuk, Cohen, and Ferrell (2009), with higher numbers indicating higher managerial entrenchment and thus weaker corporate governance. The second proxy is a CEO's equity-based compensation. Specifically we use *CEO Delta*, which is the dollar amount of a CEO's wealth that is exposed to the firm's stock prices. The use of equity-based compensation, especially by increasing the sensitivity of CEO wealth to stock price (Jensen and Murphy, 1990; Hall and Liebman, 1998), has grown rapidly in recent years (Murphy, 1999; Perry and Zenner, 2000). A higher delta means that CEOs share gains and losses with shareholders. Additionally, a higher delta increases managers' exposure to risk (Amihud and Lev, 1981; Smith and Stulz, 1985; Schrand and Unal, 1998; and Guay 1999) because it means they are

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[9] Fleishman-Hillard Inc. and the National Consumers League survey: http://www.marketingcharts.com/?attachment_id=400.

undiversified with respect to firm-specific wealth. Studies show that CEOs with higher deltas are thus more risk-adverse (Amihud and Lev, 1981; Smith and Stulz, 1985). For all of these reasons, a higher CEO delta is seen as aligning managers' and shareholders' incentives (Coles et al., 2006). Although the direction of the impact of corporate governance on where CSR ranks in investment hierarchy is not definitive, the literature reviewed above suggests that strong corporate governance would increase a firm's willingness to adjust CSR concerns in response to resource changes.

As a final potential moderator, we consider infomediaries like analysts, who play an active role in influencing a firm's public exposure and could thus increase the risks of engaging in excessive CSR concerns. Firms with more infomediaries are scrutinized more closely by the public (Fombrun and Shanley, 1990; Rao, 1994; Fombrun, 1996; Pollock and Rindova, 2003). Security analysts, in particular, play an important role as corporate monitors and help reduce agency costs by making a firm's actions public (Chung & Jo, 1996). Similarlyy, Knyazeva (2007) and Yu (2008) view analysts as additional monitoring mechanisms and argue that analyst coverage imposes discipline on misbehaving managers, helping to align managers with shareholders. Finally, Harjoto and Jo (2011) show that firms with more analysts tend to have higher CSR ratings. Thus, it is natural to expect that firms with more analysts will be more concerned about the risks associated with CSR concerns and, much like firms with strong governance, will be more reactive to resource changes when setting CSR policies.

Overall, the above logic all supports the same basic idea: that firms have a hierarchy of investment priorities, and CSR's rank in that hierarchy varies depending on a predictable set of moderators (financial constraint, political environment, governance, and analyst scrutiny). Thus:

Hypothesis 2: Firms have investment preferences, such that the effect of economic resources on CSR is stronger in financially unconstrained firms, Democratically-led firms, better governed firms, and firms with more analyst scrutiny.

Across all of these moderators, it is important to note that the relationship may go both directions. In other words, the moderators are likely to exacerbate the tendency of positive real estate shocks to reduce CSR concerns, but also the tendency of negative real estate shocks to increase CSR concerns. This makes sense if firms view CSR as an investment project that is subject to the availability of resources, but it also generates some interesting and potentially counterintuitive possibilities, e.g., that Democratically-led firms may increase concerns more readily than Republican-led firms in lean economic environments.

2.2.3 Prospect Theory and the Pattern of the Effect of Resource Availability on CSR

Do resource gains and losses have symmetric effects on firms' CSR decisions? The answer is important for many reasons, including the potentially varying implications of recessionary and expansionary economic conditions for CSR concerns.

To address this issue, we draw from prospect theory (Kahneman and Tversky, 1979): a basic theory of human choice suggesting that people react differently to perceived gains and losses. Although gains are preferred to losses, "losses loom larger than gains," meaning that the "pain" associated with a $1 loss is greater than the "pleasure" associated with a $1 gain. This leads to an S-shaped utility curve with a steeper curve in the loss domain.

In addition to explaining a wide variety of individual behaviors, prospect theory has been effectively applied to firm behavior (Allison, 1971; Bowman, 1982; Fiegenbaum and Thomas, 1988). Fiegenbaum and Thomas (1988), for example, showed that firms whose performance fell below an aspiration point (a perceived loss) became risk-seeking, whereas firms whose performance rose above an aspiration point (a perceived gain) became risk-averse. Additionally, university endowments actively reduced their payouts following negative financial market shocks, but did not increase their payouts following positive shocks (Brown et al., 2014). These are just two of many studies suggesting that firms, like the individuals who lead them, demonstrate behavior reflective of prospect theory. The probable reason is just that: firms are led by CEOs and top management teams, whose own decisions are influenced by prospect theory (e.g., Fiegenbaum and Thomas, 1988; Fiegenbaum, et al., 1996; Hayward and Hambrick, 1997; Wiseman and Gomez-Mejia, 1998; and Sanders, 2001). Since those decisions become firm policy (e.g., Hambrick and Mason, 1984; Bertrand and Schoar, 2003; Altman and Hotchkiss, 2005), firm behavior mirrors the dictates of individual-level prospect theory. Research has provided a wealth of support for the idea that top managers' decisions mediate the effects of individual-level prospect theory on firm-level behavior. For example, in the university study mentioned above, asymmetric payouts were particularly evident in endowments whose value was close to the benchmark value at the start of the university president's tenure, suggesting that the university president was experiencing market losses rather personally and acutely.

For the current paper, the critical implications of prospect theory and its asymmetric S-shaped curve are that people and organizations that perceive an outcome as a loss tend to become relatively more risk-seeking to reverse the loss, whereas those who perceive a gain become more risk-averse to preserve the gain. This suggests that firms will increase their CSR concerns more aggressively after a negative real estate shock than they will reduce their concerns after a positive shock. Additionally, prospect theory's "certainty effect" suggests that *sure* losses or gains have stronger behavioral effects than *tenuous* losses or gains (Kahneman and Tversky, 1979). Thus, we predict that the effect of resource availability on CSR concerns will be stronger in the domain of losses, and strongest when losses or gains are relatively more permanent:

14

Hypothesis 3: Firms increase CSR concerns more readily after a loss than they reduce CSR concerns after a gain (especially when gains or losses are more permanent).

3. Data Description and Summary Statistics

3.1 Real Estate Shocks and CSR

We start from the sample of active U.S. COMPUSTAT firms in 1993 with non-missing total assets, excluding firms in finance industries (SIC code between 6000 and 6999). We then collect data on the value of real estate assets for each firm. Specifically, following Chaney et al. (2012), we calculate the ratio of the accumulated depreciation of buildings (dpacb in Compustat) to the historic cost of buildings (fatb in Compustat) and multiply by the assumed mean depreciable life of 40 years (Chaney et al., 2012; Nelson et al., 2000). To calculate the average age of the real estate assets, we obtain the year of purchase for the real estate assets. Finally, for each firm's real estate assets (fatp+fatb+fatc in Compustat), we use a real estate price index to estimate the market value of these real estate assets for 1993, and then calculate the market value for each year in the sample period (1993-2007). The accumulated depreciation on buildings is not available in COMPUSTAT after 1993. Therefore, we restrict our sample to firms active in 1993.

To measure the market value of real estate, we use state-level real estate asset price indices from the Office of Federal Housing Enterprise Oversight (OFHEO). The OFHEO provides a Home Price Index (HPI), which is a broad measure of the movement of single-family home prices in the United States[10]. HPI data are available at the state level since 1975[11]. Figure 1 presents the trend of state-level HPI during the sample period. The trend appears to be monotonically increasing until the late 2000s, when it slows.

[Insert Figure 1 Here]

We then match the state-level real estate price index with our accounting data using the state identifier from Compustat. *RE Value$_t$* is thus the market value of the real estate appearing on the 1993 balance sheet in year t, scaled by lagged property, plant, and equipment. The impact of real estate price changes on firm resource may be different from the state-level housing price changes. By definition, the resource impact on firms is simultaneously determined by the original holding of real estate since the inception time of 1993, the state-level house prices, and how much firms expand after 1993. To illustrate, a firm that held substantial real estate assets in 1993 and did not purchase property after 1993 would clearly

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[10] Using residential real estate prices as a proxy for commercial real estate prices could be a source of noise. These two indices, however, are reasonably highly-correlated (0.57 at state-level). Furthermore, Chaney et al. (2012) use both proxies and show that their results do not depend on the price index used.

[11] Using state-level HPI yields more observations than MSA. We however reexamine our hypothesis by MSA HPI, and our main results hold.

benefit from subsequent housing price increases. In contrast, for a firm that held few real estate assets in 1993 and/or kept purchasing real estate at market price, the impact of house price changes on firm resources would be determined by both the numerator (how much the value of the real estate assets held in 1993 changes afterwards) and the denominator (how much real estate firms purchase at higher market prices afterwards).

Figure 2 presents the trend of the percentage of firms experiencing positive changes, suggesting resource gains, in *RE Value$_t$* during the sample period. It shows that the number of firms experiencing positive real estate shocks (and likely benefitting from it because of the gains from the difference between the higher market price and the lower historical purchasing price) increases steadily during the 1990s and the early 2000s before it starts to decline after 2003. Note that we are interested in the impacts of real estate shocks on individual firms, depending on their holding of real estate assets in 1993. Even though our data end before the collapse of the housing market starting in 2008, Figure 2 shows that the sample includes numerous firm-year observations with both positive and negative real estate shocks. In the regression analysis presented in the following section, we include both firm-level real estate shocks and the state-level housing price indices (HPI).

[Insert Figure 2 Here]

We define CSR concerns as corporate activities that KLD has recognized as having a socially disapproved impact on stakeholders like the community, employees, shareholders, customers and environment, etc. The KLD database contains firm-year data, including thirty-four binary scores in seven categories: corporate governance, employee relations, environment, community, diversity, human rights, and product quality and safety. The variable *Concerns_all$_t$* is the total number of such concerns for a firm in year t. For instance, KLD indicates that Wal-Mart Stores, Inc. had eleven concerns in 2005 in the following areas: community (other), corporate governance (high compensation), diversity (controversies and other), employee relations (union relations and other), environment (regulatory problems), human rights (labor rights concern), and three product concerns (safety, marketing and antitrust). Therefore the *Concerns_all$_t$* score for Wal-Mart Stores, Inc. in 2005 is eleven. It increases to fifteen in 2006, and the increase is due to employee relations (health and safety concern), two more corporate governance concerns (political accountability concern and other), and community (negative economic impact). Figure 3 presents the number of average CSR concerns across all firms during the sample period. The number of concerns remains relatively stable around 2 and starts to increase significantly around 2004.

[Insert Figure 3 Here]

16

3.2 Summary Statistics

Because the KLD dataset starts to provide CSR scores for the S&P 500 in the 1990s, we end with a sample of 2,936 firm-year observations that have both CSR and real estate value information available. Table 1 presents the summary statistics.

Table 1 shows that the average number of CSR concerns is 2.227, ranging from zero to as many as 18. The average *RE Value* is 0.496, suggesting that the market value of real estate accounts for almost half of our sample firms' fixed assets. The untabulated median *RE Value* is 0.356, and it is comparable to the value of 0.280 reported by Chaney et al. (2012). They use the same data period as ours but include all firms that report real estate ownership in 1993. Due to data availability, we use a smaller sample that includes the larger firms, for which CSR data is available.

We also report the state-level *HPI volatility*, which is the standard deviation of the state-level HPI during the sample period. The average value is 80.704. The untabulated statistics show that the five most volatile states/territories during the sample period are Massachusetts, New York, Washington D.C., California, and Rhode Island, and the least volatile are Nevada, Louisiana, West Virginia, Texas, and Oklahoma.

As noted, our sample includes the largest public U.S. firms because of data availability. The summary shows that the average value of total assets is $7.321 billion, and the average value of market value of equity is $13.412 billion. To provide more insight into the sample, we rank our sample firms with the population of U.S. public firms by market value in each year, by quartiles. The summary statistics show that the average size quartile of our sample firms is 3.948, suggesting that they rank above the top 75th percentile level in each year during the sample period. The average market-to-book ratio of equity (*MtB*) of our sample is 3.751.

[Insert Table 1 Here]

To examine firms' investment priorities, first via the financial constraint hypothesis, we measure firms' financial constraints by their credit constraints. Following prior studies such as Denis et al. (2010), our measure of financial constraint is whether a firm has a bond rating (*Rated*). Table 1 shows that the average value of *Rated* is 0.706, suggesting that 70.6% of the sample observations have access to the credit market, whereas 29.4% are constrained in the sense of not having access. This high rate of access is not surprising given the relatively large size of the firms in our sample.

Drawing from the literature, we construct several variables to explain why firms may have different "tastes" for adjusting their CSR concerns in response to resource changes. The first factor we explore is

political influence. We use two proxies for the influence of political preference. One is the local political preference of the firm's surrounding area. Firms' local political environment, such as whether it is located in a "Red" or "Blue" state, is known to influence their corporate social responsibility (Rubin, 2008). We measure local political preference by collecting data on all of the donations individuals across the U.S. make during each election cycle, and then sort them by five-digit zip codes. We code the local political environment as *Local Dem* if the donations made to Democratic parties during an election cycle are higher than the donations made to Republican parties (relatively few were made to other parties). Our results show that the average value of *Local Dem* is 0.302, suggesting that 30.2% of the firms are located in Democratic-leaning areas.

Our other political preference measure is the CEO's political preference. Following Hong and Kostovetsky (2012) and others, we use CEOs' political donations during election cycles as a proxy for their party affiliations. Individual donation data are obtained from the FEC website (www.fec.gov), which makes all federal contributions by individuals since 1979 publicly available, along with information like the donor's address and employer, the donation amount, and the recipient of the donation. Donors can make direct donations to candidates or party committees (whose party affiliation can be identified though the FEC website). Because of the enormous size of the records for each election cycle, we first reduce the size of the file by matching the FEC data with the Execucomp database through donors' occupations. We then use names to identify CEOs who make donations. CEO political preference is determined by the total amount of donations to each party during the whole sample period; they need not donate every election cycle to be included. A CEO is coded as a *Rep CEO* if he/she makes more donations to Republican candidates and parties during the whole sample period (about 28% of the sample) and *Dem CEO* in the converse case (about 10% of the sample). The remaining CEOs made no identifiable donations.

Second, Table 1 presents the average quality of corporate governance, first using an entrenchment index (*E Index*) developed by Bebchuk, Cohen, and Ferrell (2009). The index ranges from 0-6, with higher numbers indicating higher managerial entrenchment and thus weaker corporate governance. The average value of *E Index* is 2.857. Our other proxy for corporate governance is *CEO Delta*, which is the dollar amount of a CEO's wealth that is exposed to the firm's stock prices. The delta calculation follows the procedure of Guay (1999) and Core and Guay (2002), using the Black-Scholes (1973) option valuation model, as modified by Merton (1973) to account for dividends. Detailed information on the options granted to CEOs until 2006, including exercise price, maturity, and number of options issued, are obtained from ExecuComp. Stock volatility is estimated using daily stock information from the Center for Research in Security Prices (CRSP). Table 1 shows that the average dollar amount of *CEO Delta* is $1.090 million, suggesting that, on average, the value of a CEO's stock holdings changes by $1.090 million when firm's

stock price changes by 1%. This value is higher than the mean value of $0.6 million reported by Coles et al. (2006) because of a different sample period and set of firms[12].

The third moderator that may influence firms' taste of CSR is infomediaries like analysts. We use the number of analysts following our sample firms as a proxy. The range is 0-30, and the average in our sample is 7.372.

4. Main Results

4.1 Economic Resources and CSR Concerns

In this section, we test our first set of hypotheses on resource availability and CSR by examining the effect of real estate shocks on CSR concerns. Our goal is to provide initial evidence indicating whether firms treat CSR concerns as an investment decision, as suggested by a pattern of CSR investment that varies with resource changes. The baseline model that we use to run the main analysis is given by:

$$Concerns\_all_{it}^{l}=\alpha_i +\delta_t +\beta \cdot RE\ Value_{it} +\gamma P_t^l + controls_{it} + \epsilon_{it} \tag{1}$$

Where *Concerns_all* is the number of the CSR concerns in year t for firm i located in state l, *RE Value_{it}* is the market value of real estate asset in year t to lagged PPE, and P_t^l is the state-level HPI price in state l in year t.

The coefficient $\widehat{\beta}$ is the average effect of real estate shocks on CSR concerns. As argued earlier, this reduced form equation suggests that the coefficient $\widehat{\beta}$ will be negative. Therefore in a reduced form, the coefficient $\widehat{\beta}$ measures, for the average firm in the sample, the effects of real estate shocks on CSR activities, specifically the number of CSR concerns.

Our control variables are firm size measured by market value (*LnMkt_t*), market-to-book ratio (*MtB_t*), and profitability (*PITA_t*). These variables capture the effects of the changes in a firm's specific risk, growth opportunity, and profits on its CSR concerns. We also include a firm fixed effect α_i, as well as year fixed effects δ_t, to capture aggregate specific CSR shocks. Finally, the variable P_{lt} controls for the overall impact of the real estate cycle on CSR concerns. Shocks ϵ_{it} are clustered at the state-year level. This correlation structure is conservative given that the explanatory variable of interest, *RE Value_{it}*, is defined at the firm level (see Bertrand, et al., 2004; Chaney, et al., 2012).

To summarize, *RE Value_{it}* measures the subsequent variations in the market values of the specific assets shown on firms' 1993 balance sheet. β therefore measures how firms' CSR concerns respond to each

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[12] Coles et al. (2006) study U.S. public firms during the sample period between 1992 and 2002, including a sample of 9,551 firm-year observations.

additional $1 of real estate the firm actually owns. This specification helps us to isolate our results from the state-level shocks that impact all firms with or without real estate assets.

Table 2 presents estimates of the equation. The dependent variable is the number of CSR concerns. All models control for year-specific and firm-specific effects, and errors are clustered at state-year level. Model 1 starts with the simplest estimation, including just $RE\ Value_{it}$ without additional controls. It shows that a one percentage increase in the market value of real estate assets reduces the number of CSR concerns by 0.430. Or, put another way, a 2.325 percentage increase in the market value of real estate assets leads to one reduction in the number of CSR concerns. The adjusted R^2 is 0.737, suggesting that $RE\ Value_{it}$ and the controls explain a significant portion of the change in CSR concerns in a given year, for a given firm.

Model 2 includes the additional control variables. The coefficient on $RE\ Value_{it}$ remains significant at the 1% level, though the magnitude decreases slightly. The control variables yield interesting insights too. Firm size increases CSR concerns. The coefficient of $LnMkt$ is 0.164 and significant at the 1% level. Both growth opportunities and profitability reduce CSR concerns, which are consistent with the literature that reports a positive link between firm performance and CSR ratings. Our results therefore support Hypothesis 1A, that firms consider CSR concern reduction an investment decision, resulting in a negative relationship between firm resources and CSR concerns.

4.2 When Do Firms Invest in CSR Concern Reduction? The Investment Preference Analysis

To test our hypotheses regarding the existence of an investment hierarchy and location of CSR concerns in the hierarchy, we examine how resource availability impacts CSR concerns in various subsamples divided by financial constraints, political influence, corporate governance, and analyst scrutiny. We first split firms by their financial constraints. As a reminder, the financial slack argument suggests that the effects of a real estate shock should be especially pronounced for firms without financial constraints, as they have already met their financing needs, and any real estate gains represent genuine financial slack. Firms with financial constraints, conversely, suffer underinvestment, so real estate gains may be prioritized to remedy underinvestment (Chaney et al., 2012).

Our measure of financial constraints is credit constraints, operationalized as bond ratings assigned by S&P (Almeida, Campello, and Weisbach, 2004). We do not use firm size as a proxy, as in Almeida et al. (2004), because the firms in our sample are all large compared to the population of public firms. There are a variety of ways of identifying financial constraints, and there is no general agreement on which measure is best proxy. Since previous studies (e.g., Chaney et al., 2012) suggest that real estate shocks impact investment through the value of collateral and thus debt capacity, credit constraints best suit our research question. And two main motivations for using bond rating as a popular proxy for financial

constraints are all related with debt financing (Faulkender and Petersen 2006), which fit our research design the best.

We split the sample into the financially *constrained* firms and *unconstrained* firms and first tested whether the relationship between real estate shocks and CSR concerns differed between these two groups of firms. Additionally, we created an interaction variable consisting of real estate shocks and financial constraints; the results are presented in Model 1 of Table 3. The results show that unconstrained firms show a significantly larger reduction in CSR concerns than constrained firms after a positive real estate shock. We then rerun our baseline equation for each subsample. The results are reported in Models 2 and 3 of Table 3.

[Insert Table 3 Here]

The results of Model 2 and 3 show that the coefficient on *RE Value$_{it}$* is significant and negative only for the group of unconstrained firms (which constitute the majority of our sample). Specifically, the coefficient is -0.885 (significant at the 1% level), suggesting that a one percentage increase (decrease) in *RE Value* leads to almost one reduction (addition) to the number of CSR concerns.[13]

Our results thus provide initial support for Hypothesis 2, that firms have an investment hierarchy and that CSR falls lower than core business investments in the hierarchy, as evidenced by the weaker relationship between resource changes and CSR concerns in financially constrained firms. In particular, a sudden real estate gain (loss) does not appear to impact CSR concerns for constrained firms; the coefficient is 0.004 for these firms. Therefore, in light of studies showing that real estate shocks increase firms' debt capacity and investment, especially for financially constrained firms (Chaney et al., 2012), our results suggest that constrained firms may not have enough slack left over to reduce their CSR concerns. In other words, financial constraints represent an important moderator of the relationship between resources and CSR concerns, suggesting that CSR concerns do not rank among the highest priorities for financially constrained firms.

Indeed, to test our assumption that financially constrained firms would invest any unexpected windfalls in the good projects that their financial constraints previously forced them to pass up, we replace the dependent variable with investment in capital expenditure and intangible assets. The results are shown in Panel B of Table 3. The results show that real estate shocks increase financially constrained firms'

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[13] This negative effect of resource availability on CSR concerns in unconstrained firms becomes even larger in states with relatively stable HPI prices (where gains and losses are more "certain," in the parlance of prospect theory). The coefficient is -1.558 (significant at 1%), suggesting that a one percentage increase (decrease) in real estate value leads to 1.558 reductions (additions) to the number of CSR concerns.

investment in capital expenditure and intangible assets significantly, though there is only a directional rather than a significant difference between the constrained and unconstrained firms. These results support our assumptions about investment priorities. For financially unconstrained firms, real estate shocks increase their acquisition of tangible assets and intangible assets (e.g., through M&A or patents).

Next, we test Hypothesis 2 by examining the other three factors that may impact firms' taste for CSR. The first measure is local political preference, and the results are presented in Table 4. *Red states* refers to those states with more residents donating to the Republican party, and *Blue states* refers to those with more residents donating to the Democratic party. To provide more insight into the impact of political preference, we add two new political variables, *Reppresident$_t$* and *Repmajority$_t$*, to the baseline model. *RepMajority$_t$* is one if the majority of the Senate Majority Leader is Republican. These two new variables are included to capture the political environment for CSR. We first test whether firms use resources differently as a function of their local political preference. The interaction variable between real estate shocks and *Blue* state (capturing the difference between these and the Red states) is negative and significant at the 5% level, suggesting that firms located in states with different political climates make different types of adjustments to CSR concerns following real estate shocks.

[Insert Table 4 Here]

We then report the results in subsamples. Model 3 of Table 4 shows that the previously reported negative relationship of real estate shocks is particularly driven by firms located in Democratic-leaning areas. The coefficient is -0.439 (significant at 1%). The coefficient is negative but not significant for firms located in Republican-leaning areas. These results suggest that resource availability is a particularly important driver of CSR concern adjustments for firms with Democratic preferences; they decrease CSR concerns more readily after gains but may also increase CSR concerns more readily after losses. For firms with Republican-leaning preferences, CSR concerns are not very responsive to resource shocks, suggesting that factors other than economic resources may have more influence on the CSR behavior of firms with Republican preferences. Although our results are consistent with Rubin (2008), who finds that companies with a high (low) CSR ratings tend to be located in Democratic (Republican) states and counties, we additionally find that local political preference exacerbates the resource effect of real estate shocks on CSR concerns (in both directions).

To provide further evidence on the interactive effects of political influence, we next examine the influence of the CEO's political affiliation on the resource / CSR concern relationship. We rerun the baseline equation, adding variables for the CEO's political affiliation. We also keep the two variables that measure the general political environment for CSR activities. The main results are very similar without

these additional control variables. The results are reported in Table 5. We include *Dem CEO* and *Rep CEO* separately because our models are run at firm-level. Thus, the coefficient on *Dem CEO* indicates the effects on CSR concerns when the firm switches to a Democratic-leaning CEO, and the coefficient on *Rep CEO* indicates the effects on CSR concerns when the firm switches to a Republican-leaning CEO.

[Insert Table 5 Here]

Model 1 of Table 5 shows that when a firm switches to a Democratic-leaning CEO, the firm's number of CSR concerns decreases by 0.353 (significant at the 1% level), and Model 5 shows that when a firm switches to a Republican-leaning CEO, the firm's number of CSR concerns increases by 0.205 (significant at the 5% level). These results support the findings of Di Giuli and Kostovetsky (2014), who show that firms score higher on CSR when they are led by Democratic CEOs or are headquartered in Democratic-leaning states.

More relevant for our predictions, though, we next examine whether CEOs differentially apply resources to CSR as a function of political preferences. We create interaction variables consisting of real estate shocks and the CEO's personal political preference. The results for Democratic CEOs and Republican CEOs are reported in Models 2 and 6 of Table 5, respectively. We do not find support for the idea that, when firms switch to Democratic-leaning CEOs or Republican-leaning CEOS, these switches affect the way in which the CEO applies economic resources to CSR concerns.

This lack of differences was puzzling, so we sought to unpack it by examining the role of a theoretically-relevant variable described above: real estate price volatilities. We split the sample into states with relatively stable or unstable state-level HPI prices, classifying the states in relation to the mean state-level HPI volatility of 80.704. The results are reported in Models 3, 4, 7, and 8 of Table 5, respectively. We find that the coefficient on the interaction between *Dem CEO* and *RE Value$_{it}$* is -1.829 (significant at 5%), suggesting that the negative effect of *RE Value* on CSR concerns is stronger in firms that switch to Democratic-leaning CEOs than for all other firms. We do not find a significant relationship for Republican-leaning CEOs when splitting by the stability of state-level HPI prices.

In other words, our data suggest that, at least when price volatility is considered, the negative effects of *RE Value* on CSR concerns are especially evident when firms switch to Democratic CEOs. For example, in states with stable HPI indices, a one percentage increase (decrease) in *RE Value* leads to 1.8 reductions in (additions to) CSR concerns for firms that switched to Democratic CEOs in the same year of the real estate shock; this impact is about twelve times higher than the effect for firms that switched to Republican CEOs at the time of shock, suggesting that Democratic-leaning CEOs are more responsive to resource changes when making CSR decisions (again, in both directions).

23

Next, we examine investment priorities as a function of corporate governance. As noted, we use two proxies for interest alignment: CEO stock-based compensation and managerial entrenchment. The results are reported in Table 6. We split the sample by *CEO delta* and by the median value of *E index*, respectively.

[Insert Table 6]

We first use an interaction variable to examine whether there is significant difference between the coefficients of the subsamples. Results of Model 1 (Table 6) show that the real estate shocks impact CSR concerns significantly more negatively in firms with CEOs who have greater wealth tied to firm stock performance. Results in Models 2 and 3 indicate that the negative effect of real estate shocks on CSR is significant and driven by firms with CEOs who have a higher delta. Models 4 to 6 show that, although the coefficient is slightly more negative for the group of firms with less entrenched CEOs, there is no significant difference in the coefficients of real estate shocks between the subsamples split by *E index*.

In sum, our results suggest that a CEO's stock-based compensation, which is designed to align the CEO's interests with shareholders', affords a "taste" for CSR concern reduction.

Lastly, to capture the effect of analyst scrutiny on CSR policies, we measure the number of analysts following the firm. To test our conjecture, we split the sample into firms with and without financial analysts, and those with more and fewer financial analysts. The results are presented in Table 7. In Models 5 and 6, the sample is split by the median number of analysts, which is six for our sample.

[Insert Table 7]

We first examine the difference in the coefficients between the subsamples; the results in Models 1 and 4 of Table 7 show that analyst coverage significantly influences how firms utilize resources created by real estate shocks. The interactions between real estate shocks and each analyst variable are both negative and significant at the 1% level.

We then present results in split samples. Model 3 of Table 7 shows that, for firms with any analyst following, the coefficient is -0.374 (significant at the 1% level). This negative impact increases to -0.906 when the number of analysts following is six or more (significant at the 1% level). Our results are consistent with the literature on the role of analysts in increasing monitoring and aligning interests, and they suggest that infomediaries like analysts represent a third variable that could give firms a "taste" for CSR concern adjustment.

In sum, we find that CSR represents a more attractive investment opportunity for some firms than others. The effect of resource shocks on CSR concerns vary by financial constraints, political environment, CEO incentives, and analyst scrutiny. Thus, firms not only see CSR concern reduction as an investment decision; they see it as a more or less attractive investment option as a function of these factors.

4.3 Responses to Resource Gains and Losses.

As explained earlier, prospect theory suggests that the negative relationship between resource availability and CSR concerns should be stronger when firms experience negative (versus positive) resource shocks. In this section, we formally test this prediction by splitting the baseline equation into those firm-year observations associated with positive real estate shocks and those with negative shocks. The results are reported in Panel A of Table 8. Furthermore, based on prospect theory's implication that sure gains and losses are more motivating than tenuous gains and losses, we split the sample into subsamples according to the state-level HPI volatility. We predicted that the observed trends would be more evident in states with relatively stable HPI prices, suggesting sure gains or sure losses.

[Insert Table 8 Here]

We first examine the difference in the coefficients between the resource gain and loss subsamples. Model 1 of Table 8 shows that firms adjust CSR concerns asymmetrically in response to gains and losses. Specifically, firms are more willing to increase CSR concerns after losses than to reduce them after gains. Models 2 and 3 of Table 8 report the results for the groups of firms with real estate gains or losses, and the results show that the coefficient on *RE Value$_{it}$* is 0.678 (significant at the 1% level) for the group of firm-years experiencing negative real estate shocks, which is about four times larger than the coefficient for the group of firm-years with positive shocks. This result supports the prediction of prospect theory that losses will loom larger than gains—that firms more aggressively revise their CSR policies after negative than positive real estate shocks. Put differently, they increase their CSR concerns following losses more readily than they reduce their CSR concerns following gains (a potentially troubling result). Models 4 to 6 of Table 8 show that the observed steeper slope in the resource-loss firm-years is particularly apparent in states with low HPI volatilities, which is consistent with prospect theory's "certainty effect," indicating that sure losses and sure gains factor more heavily than uncertain losses and gains.

Given the increasing public attention to socially disapproved behaviors, an interesting (exploratory) question is *how* firms change their CSR policies, especially when they allow their CSR concerns to increase. Is there an order in which they assume additional concerns? To provide insight, we reexamine the baseline model by replacing the *Concerns_all* variable with the seven specific categories. In the interest of space,

25

we only report the categories on which *RE Value* has a significant impact. The results, reported in Panel B of Table 9, show that when firms experience positive real estate shocks, they first reduce employee concerns (union relations, health and safety issues, workforce reductions, retirement benefits, etc.)[14]. When firms experience negative real estate shocks, however, they also *increase* concerns related to employees, as well as corporate governance and their products. Corporate governance concerns include issues like high compensation, ownership, accounting, transparency, and political accountability; product concerns include product safety, marketing issues, and antitrust. In addition to providing interesting insights into the kinds of concerns firms are willing to assume, these results shed additional light on Hypothesis 3, that firms assume additional concerns (after resource losses) more readily than they reduce concerns after resource gains.

4.4 Robustness test: The channel through which real estate creates economic resources

Our empirical design relies on the assumption that the change in real estate value impacts the availability of economic resources. Chaney et al. (2012) specifically suggest that real estate value impacts a firm's investments by affecting its pledgeable assets and therefore its debt capacity. To test our assumptions, we empirically examine this potential mechanism for the effect of real estate shocks on CSR concerns.

We first examine how shocks in real estate value impact debt financing, which is measured by the issuance of bonds and the proceeds raised from new bond issuance. The bond issuance information is collected from Thomson One. The results are reported in Panel A of Table 9.

[Insert Table 9 Here]

The dependent variable in the logit regression analysis is a dummy variable coded one when firms issue new bond securities and zero if not. The results of the logit regression are reported in Model 1 of Table 9. The dependent variable for the Tobit analysis is the natural logarithm of the proceeds from bond issuance plus one dollar. The value therefore is zero for firms that do not issue new bonds in a given year. The results of the Tobit model are reported in Model 2 of Table 9. Both models control year and industry effects.

The results suggest that firms are more likely to issue bonds when they experience positive real estate shocks, supporting the impact of real estate shocks on the value of pledgeable assets. Model 2 of Table 9 also suggests that, conditional on a firm issuing new bond securities, greater real estate shocks lead to greater proceeds raised.

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[14] For a detailed definition, please see Appendix A.

In Panel B of Table 9, we run the base model of real estate shocks on CSR concerns, testing whether the coefficient on real estate shocks differs between the subsamples of firm-years that issue bonds or do not. The coefficient on real estate shocks is -1.135 in the subsample of firms that issue bond securities, much higher than the -0.193 in the subsample of firms without bond issuance. The interaction between real estate shocks and bond issuance is significant and negative as shown in Model 3 of Table 9, suggesting that the difference in the coefficients observed in Models 1 and 2 is statistically significantly. The results of Panel B support our assumption that real estate shocks impact firms' economic resources through debt financing, which leads to changes in firms' CSR behaviors.

5   Conclusions

Overall, our research suggests that firms regard adjustments to CSR concerns as investment decisions, influenced by the availability of economic resources. We show that resource gains reduce CSR concerns, while resource losses increase them. This finding contributes to the CSR literature by providing the first known empirical and causal evidence of a link from resource availability to CSR concerns. This evidence complements recent findings documenting a link from CSR to firm performance (e.g., Benlemlih & Bitar, 2016; Cheng et al., 2014), suggesting the possibility of a bidirectional process and possibly a feedback loop. Future research could fruitfully investigate the intriguing possibility of reciprocal causation.

Additionally, our results show that the relative impact of economic resources on CSR concerns depends on several organizational variables that influence the structure of a firm's investment priorities (financial constraint, political climate, CEO compensation, and analyst scrutiny). These results extend past findings documenting a link between such factors and CSR itself (e.g., Preston and O'Bannon, 1997; Waddock and Graves, 1997; Harjoto and Jo, 2011; Hong and Kostovetsky, 2012; Di Giuli and Kostovetsky, 2014; Benlemlih & Bitar, 2016), suggesting that these factors influence not only a firm's absolute level of CSR, but also its willingness to *change* CSR policy in response to exogenous forces.

Finally, based on prospect theory, we show that firm reactions to resource gains and losses are asymmetric. Our theoretical explanation is prospect theory (Kahneman and Tversky, 1979): a well-known theory suggesting that "losses loom larger than gains," and that people prefer relatively "safe" courses of action after gains (particularly sure gains), even while they take substantial restorative risks following losses (particularly sure losses). Our empirical results not only support the negative relation between resource availability and CSR concerns; they also show that the negative effect looms larger when firms experience resource losses than gains. In other words, firms appear more willing to increase their socially disapproved behaviors after a loss than decrease them after a gain (particularly in low-volatility states, where the gains

and losses are more "sure"). These troubling findings suggest that challenging economic conditions could produce a proliferation of regression on social responsibilities.

In conclusion, our study attempts to resolve theoretical puzzles in the CSR literature and shed practical light on the ways to discourage socially disapproved behavior. The fact that at least some firms, under some conditions, use resource gains to reduce CSR concerns is notable. Yet, so is the fact that firms readily regress on their social responsibility when they experience resource losses. Our study offers a new explanation for both sides of the proverbial coin, suggesting that, when it comes to consequential choices about CSR, economics and social considerations go hand-in-hand.

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Table 1

Summary Statistics

This table presents the summary statistics of the sample firms. *Size Quartile* is the quartile ranking of the firm among all public U.S. firms in the given fiscal year by its market value of equity. This value ranges from 1 to 4, where higher values indicate larger size. *MtB* is the market-to-book ratio of equity. *Rated* is a dummy variable, and it is one if the firm has an S&P credit rating. *Total CSR Concerns* is the total number of CSR concerns reported by KLD. *RE Value* is the market value of real estate assets to lagged property, plant, and equity. *HPI Volatility* is the standard deviation of the state-level HPI during the sample period. *Eindex* is the entrenchment index developed by Bebchuk, Cohen, and Ferrell (2009). The index ranges from zero to six, with higher numbers indicating higher managerial entrenchment and therefore worse corporate governance. *CEO Delta* is the sensitivity of CEO wealth (including options and common stock holdings) to a 1% change in the value of the firm's stock price. *Local Dem* is a dummy variable, and it is one if the donations made to Democratic party during an election cycle are higher than the donations made to other parties. Specifically, we collect all the donations residents make during each election cycle and sort them by five-digit zip codes. *Dem CEO* is one if the CEO donates to the Democratic party during the sample period and *Rep CEO* otherwise. *Rep President* is one for the years when the President is Republican. *Number of Analysts* is retrieved from I/B/E/S and it is the number of analysts that provide recommendations for the firm.

	Average (n=2,936)	Stdv.	Min.	Max.
Total Assets ($mil.)	7,321.060	13,402.390	66.420	163,514
Market Value ($mil.)	13,412.200	33,788.730	17.749	460, 767.900
Size Quartile	3.948	0.222	3	4
MtB	3.751	3.409	0.439	21.107
Rated	0.706	0.456	0	1
Total CSR Concerns	2.227	2.241	0	18
REValue	0.496	0.613	0.001	10.915
HPI Volatility	80.704	42.089	25.947	179.125
Eindex	2.857	1.228	0	6
CEO Delta ($mil.)	1.090	2.325	0	14.760
Local Dem	0.302	0.459	0	1
Dem CEO	0.100	0.300	0	1
Rep CEO	0.282	0.450	0	1
Rep President	0.645	0.479	0	1
Number of Analysts	7.372	5.418	0	30

Table 2

Economic Resources and CSR Concerns

This table presents the empirical link between the value of real estate and CSR concerns. The dependent variable is the number of CSR concerns. P_{tl} is the state-level HPI index. $LnMkt_t$ is the natural logarithm of the firm's market value of equity. MTB_t is the market-to-book ratio of equity. $PITA_t$ is the pretax income scaled by total assets. All regressions control for year and firm fixed effects and cluster observations at state-year level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

	1	2
REValue$_{it}$	-0.430***	-0.345***
	(0.000)	(0.000)
P$_{tl}$		-0.001
		(0.969)
LnMkt$_t$		0.164***
		(0.007)
MTB$_t$		-0.033***
		(0.004)
PITA$_t$		-0.827**
		(0.027)
CHETA$_t$		0.051
		(0.906)
Year and Firm Fixed Effects	Yes	Yes
State-year Cluster	472	472
Firms	367	367
Obs.	2,936	2,936
Within group R^2	0.737	0.738

Table 3

Resource Effect on CSR Concerns and Investment Priority: by Financial Constraints

This table presents the results by financial constraints. The control variables are the same as those used in table 2. *Constrained* refers to those firms that are not rated by S&P, and *Unconstrained* refers to those with credit ratings from S&P. Panel A presents the effect of real estate shocks on CSR concerns by financial constraints and by real estate price volatility. Panel B presents the effect of real estate shocks on firms' other investments such as capital expenditure (CAPEX) and intangible assets by financial constraints. All regressions control for year and firm fixed effects and cluster observations at state-year level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

Panel A: Impacts on CSR Concerns

	All		
	Total	Constrained	Unconstrained
	1	2	3
$REValue_{it}$	-0.087	0.004	-0.885***
	(0.319)	(0.958)	(0.000)
$REValue_{it}$*Unconstrained	-1.007***		
	(0.000)		
Unconstrained	0.045		
	(0.776)		
P_{tl}	0.001	-0.001	0.001
	(0.242)	(0.867)	(0.937)
$LnMkt_t$	0.097	0.014	0.068
	(0.111)	(0.878)	(0.376)
MTB_t	-0.020*	0.029	-0.031**
	(0.065)	(0.198)	(0.012)
$PITA_t$	-0.706*	-0.883**	-1.073**
	(0.060)	(0.025)	(0.032)
$CHETA_t$	0.054	-0.040	-0.724
	(0.900)	(0.918)	(0.300)
Year and Firm Fixed Effects	Yes	Yes	Yes
State-year Cluster	472	334	417
Firms	364	164	241
Obs.	2,914	858	2,056
Adj. R^2	0.742	0.625	0.749

Panel B: Impacts on Alternative Investments

	CAPEX			Intangible Assets		
	Total	Constrained	Unconstrained	Total	Constrained	Unconstrained
	1	2	3	4	5	6
$REValue_{it}$	0.002*	0.003*	0.001	0.020***	0.017**	0.050***
	(0.086)	(0.065)	(0.419)	(0.000)	(0.014)	(0.009)
$REValue_{it}$*Unconstrained	-0.003			0.014		
	(0.118)			(0.297)		
Unconstrained	-0.002			0.039***		
	(0.370)			(0.000)		
P_{tl}	0.001	0.001	0.001	-0.001	0.001	-0.001
	(0.281)	(0.138)	(0.815)	(0.898)	(0.790)	(0.395)
$LnMkt_t$	0.006***	0.003	0.009***	0.050***	0.044***	0.050***
	(0.000)	(0.286)	(0.000)	(0.000)	(0.000)	(0.000)
MTB_t	0.001	0.001	0.001	-0.011***	-0.008***	-0.012***
	(0.163)	(0.234)	(0.155)	(0.000)	(0.000)	(0.000)
$PITA_t$	0.060***	0.083***	0.023**	-0.019	-0.033	-0.018
	(0.000)	(0.000)	(0.014)	(0.547)	(0.352)	(0.723)
$CHETA_t$	-0.057***	-0.078***	-0.037***	-0.440***	-0.357***	-0.540***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Year and Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
State-year Cluster	618	533	518	618	533	518
Firms	643	380	421	643	380	421
Obs.	6,323	2,648	3,675	6,323	2648	3,675
Adj. R^2	0.605	0.595	0.647	0.596	0.633	0.633

Table 4

Resource Effect on CSR Concerns and Investment Priority: by Local Political Preferences

This table presents the results by local political preferences. The control variables in columns 1 and 2 are the same as those used in Table 2. Columns 3 to 5 add more political variables to the baseline model. *Red states* refers to those states with more residents donating to the Republican party, and *Blue states* refers to those with more residents donating to theDemocratic party. *Reppresident$_t$* is one if the incumbent President is Republican and zero otherwise. *RepMajority$_t$* is one if the majority of the Senate Majority Leader is Republican. All regressions control for year and firm fixed effects and cluster observations at state-year level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

	Baseline Model + political variables		
	All	Red states	Blue states
	1	2	3
REValue$_{it}$	-0.176*	-0.175	-0.439***
	(0.061)	(0.361)	(0.000)
REValue$_{it}$*Blue	-0.251**		
	(0.045)		
Blue states	-0.009		
	(0.923)		
Reppresident$_t$	1.679***	1.725***	2.918***
	(0.000)	(0.000)	(0.000)
RepMajority$_t$	1.528***	1.553***	-0.048
	(0.000)	(0.000)	(0.876)
Control Variables	Yes	Yes	Yes
Year and Firm Fixed Effects	Yes	Yes	Yes
State-year Cluster	472	406	290
Firms	367	313	208
Obs.	2,936	1,987	861
Adj. R^2	0.738	0.695	0.798

Table 5

Resource Effect on CSR Concerns and Investment Priority: by CEO Political Preferences

This table presents the results by CEO political preferences. The control variables are the same as those used in table 2 plus the political variables used in Table 5. *Dem CEO* refers to those CEOs who donate to the Democratic party during the sample period and *Rep CEO* refers to those who donate to the Republican party during the sample period. *Low Vol* refers to those firms located in states with less volatile HPI prices, and *High Vol* otherwise. The sample is divided by the mean value of the volatility of the state-level HPI prices. All regressions control for year and firm fixed effects and cluster observations at state-year level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

	Dem CEOs				Rep CEOs			
	All	All	Low Vol	High Vol	All	All	Low Vol	High Vol
	1	2	3	4	5	6	7	8
Dem CEO* REValue$_{it}$		-0.341	-1.829**	0.128				
		(0.161)	(0.015)	(0.671)				
Dem CEO	-0.353***	-0.156	0.336	-0.709**				
	(0.003)	(0.370)	(0.156)	(0.025)				
Rep CEO* REValue$_{it}$						-0.044	-0.157	0.232
						(0.731)	(0.252)	(0.392)
Rep CEO					0.205**	0.231**	-0.020	0.519***
					(0.037)	(0.042)	(0.878)	(0.010)
REValue$_{it}$	-0.351***	-0.321***	-0.367***	-0.344**	-0.372***	-0.342***	-0.268***	-0.377**
	(0.000)	(0.000)	(0.000)	(0.039)	(0.000)	(0.000)	(0.001)	(0.034)
Control Variables+ Reppresident$_t$+ RepMajority$_t$	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State-year Cluster	472	472	282	190	472	472	290	190
Firms	367	364	231	136	367	367	208	136
Obs.	2,936	2,936	1,813	1,121	2,936	2,936	861	1,121
Adj. R^2	0.739	0.739	0.732	0.749	0.738	0.738	0.798	0.753

Table 6

Resource Effect on CSR Concerns and Investment Priority: by Corporate Governance

This table presents the results by corporate governance. We split the sample by the median value of *E Index* and CEO *Delta,* respectively. The control variables are the same as those used in Table 2. *Weak Governance/Good Governance* refers to those firms with *E Index* higher/lower than the median value, suggesting more/less entrenched management. All regressions control for year and firm fixed effects and cluster observations at state-year level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

	CEO Incentives			E Index		
	Total	Lower Delta	Higher Delta	Total	Weak Governance	Strong Governance
	1	2	3	4	5	6
$REValue_{it}$	-0.221**	-0.122	-0.538**	-0.310**	-0.353*	-0.428***
	(0.011)	(0.162)	(0.012)	(0.023)	(0.088)	(0.000)
$REValue_{it}$*Higher Delta	-0.430***					
	(0.000)					
Higher Delta	0.164*					
	(0.099)					
$REValue_{it}$*Strong Governance				-0.068		
				(0.663)		
Strong Governance				0.081		
				(0.568)		
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Year and Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
State-year Cluster	470	364	416	467	409	372
Firms	367	249	284	346	276	179
Obs.	2,866	1,018	1,848	2,820	1,657	1,163
Adj. R^2	0.741	0.716	0.750	0.739	0.716	0.777

Table 7

Table 7

Resource Effect on CSR Concerns and Investment Priority: by Analyst Coverage

This table presents the results by the number of analysts following the firm. We split the sample by whether the firm has analyst coverage or not and by the median number of analysts following. The control variables are the same as those used in Table 2. All regressions control for year and firm fixed effects and cluster observations at state-year level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

	Total	Without Analyst Coverage	With Analyst Coverage	Total	Fewer Analysts (n<=6)	More Analysts (n>6)
	1	2	3	4	5	6
$REValue_{it}$	0.165	0.350	-0.374***	-0.260***	-0.111	-0.906***
	(0.331)	(0.646)	(0.000)	(0.003)	(0.204)	(0.000)
$REValue_{it}$*With Analyst Coverage	-0.528***					
	(0.001)					
Analyst Coverage	0.265**					
	(0.036)					
$REValue_{it}$*More analysts				-0.352***		
				(0.005)		
More analysts				0.363***		
				(0.000)		
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Year and Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
State-year Cluster	472	138	464	472	403	379
Firms	364	72	352	367	307	232
Obs.	2,914	164	2,750	2,936	1,475	1,461
Adj. R^2	0.738	0.712	0.739	0.740	0.700	0.761

Table 8
Resource Effect on CSR Concerns: by Prospect Theory

This table presents the results by whether real estate shocks create gains or losses and by the volatility of the state-level HPI index. The control variables are the same as those used in Table 2. Firms experience a *Gain* in resources when there are the positive real estate shocks and a *Loss* when there are negative real estate shocks. *Low Vol* refers to those firms located in states with less volatile HPI prices, and *High Vol* otherwise. The sample is divided by the mean value of the volatility of the state-level HPI prices. Panel A presents the results for the total number of CSR concerns. Panel B presents the results for the number of CSR concerns in the categories that have significant results for the main variable. See details of CSR categories in the Appendix. All regressions control for year and firm fixed effects and cluster observations at state-year level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

Panel A: Total CSR Concerns

| | All | | | Low Vol | | | High Vol | | |
| | Total | Gain | Loss | Total | Gain | Loss | Total | Gain | Loss |
	1	2	3	4	5	6	7	8	9
$REValue_{it}$	-0.330***	-0.185**	-0.678***	0.348***	-0.218*	-0.733***	-0.319*	0.166	-0.561
	(0.000)	(0.033)	(0.000)	(0.000)	(0.089)	(0.000)	(0.078)	(0.600)	(0.127)
$REValue_{it}$*Loss	-0.269***			-0.343***			-0.119		
	(0.001)			(0.000)			(0.401)		
Loss	0.101			0.141*			0.008		
	(0.112)			(0.083)			(0.945)		
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State-year Cluster	444	277	409	266	146	252	178	131	157
Firms	360	251	350	225	132	221	135	119	129
Obs.	2,735	773	1,962	1,690	342	1,348	1,045	431	614
Adj. R^2	0.750	0.748	0.751	0.744	0.683	0.764	0.756	0.793	0.735

Panel B: CSR Categories

| | Gain | Loss | | |
| | Concerns_Employee | Concerns_Employee | Concerns_Corproate Governance | Concerns_Product |
	1	2	3	4
$REValue_{it}$	-0.130*	-0.186***	-0.118*	-0.209***
	(0.070)	(0.005)	(0.069)	(0.003)
Control Variables	Yes	Yes	Yes	Yes
Year and Firm Fixed Effects	Yes	Yes	Yes	Yes
State-year Cluster	277	409	409	409
Firms	251	350	350	350
Obs.	773	1,962	1,962	1,962
Adj. R^2	0.422	0.517	0.499	0.709

Table 9

Economic Resources and CSR Concerns: The Channel through Bond Issuance

Panel A: Real estate shocks and bond issuance

	DV: New Issuance	DV: Proceeds of New Issuance
	Logit	Tobit
	(1)	(2)
$REValue_{it}$	0.133**	0.829**
	(0.046)	(0.038)
P_{tl}	-0.001	-0.002
	(0.879)	(0.534)
$LnMkt_t$	0.679***	3.532***
	(0.000)	(0.000)
$Cheta_t$	-4.495***	-22.626***
	(0.000)	(0.000)
$Hitech_t$	-0.298	-0.980
	(0.204)	(0.435)
$Leverage_t$	3.908***	21.610***
	(0.000)	(0.000)
$Firmrisk_t$	-0.323***	-1.836***
	(0.000)	(0.000)
$PITA_t$	-1.930***	-10.115***
	(0.000)	(0.001)
$Ibdummy_t$	2.343***	11.248***
	(0.000)	(0.001)
Year and Industry Fixed Effects	Yes	Yes
Obs.	6,063	6,321
Adj. R^2	0.295	0.152

Panel B: Real estate shocks and CSR: by bond issuance

	DV: CSR concerns		
	With New Issuance of Bond	Without New Issuance of Bond	All
	(1)	(2)	(3)
$REValue_{it}$	-1.135***	-0.193**	-0.305***
	(0.005)	(0.029)	(0.000)
$Bond\ Issuance_t$			0.223**
			(0.014)
$REValue_{it}* Bond\ Issuance_t$			-0.417***
			(0.008)
Control Variables	Yes	Yes	Yes
Year and Firm Fixed Effects	Yes	Yes	Yes
State-year Cluster	472	472	472
Firms	367	367	367
Obs.	2,936	2,936	2,936
Adj. R^2	0.737	0.738	0.738

Figure 1

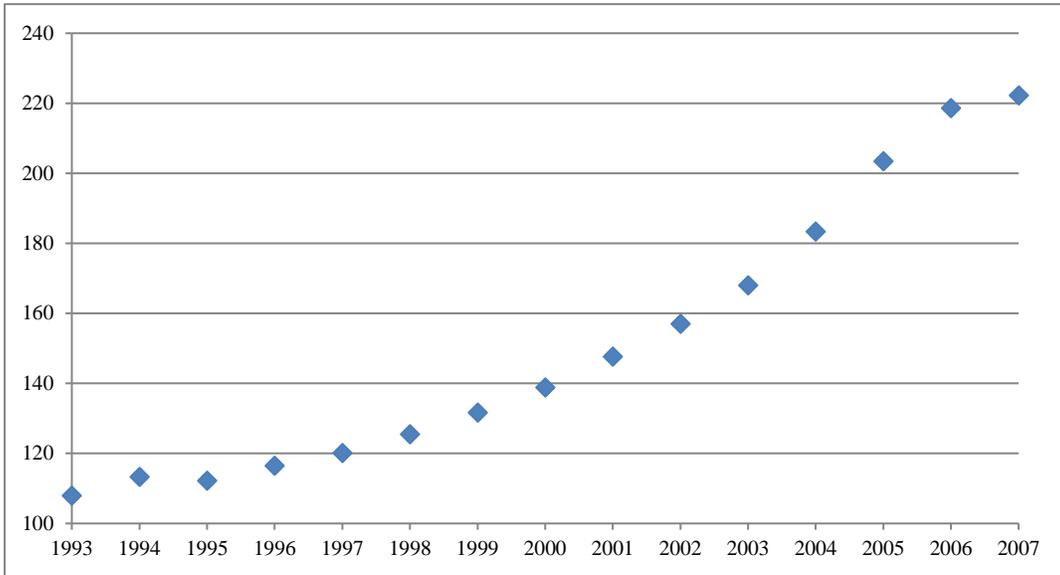The Trend in State-level HPI

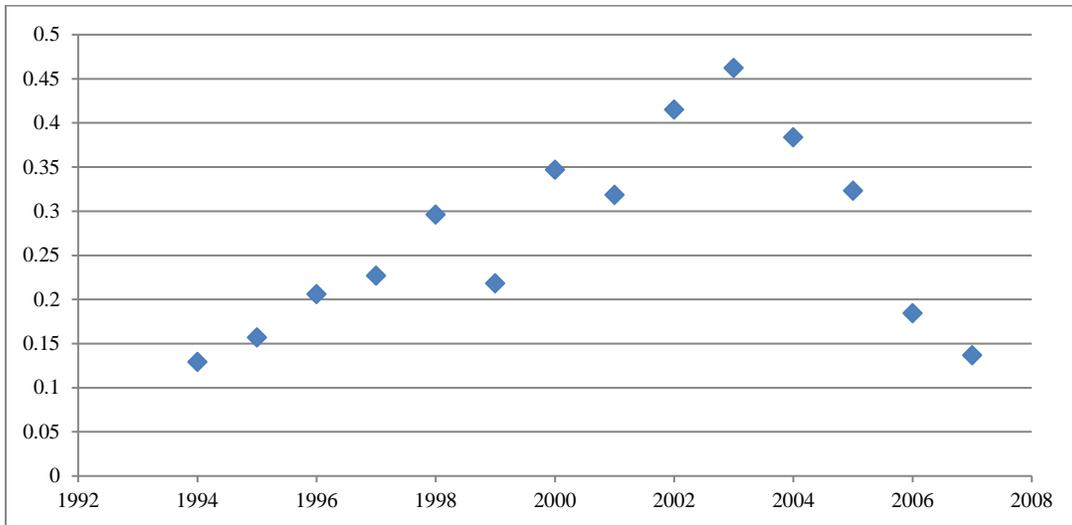
Figure 2

Fraction of Firms Experiencing an Increase in Real Estate Value

Figure 3

The Trend in CSR Concerns