

Corporate Social Responsibility and Hedging Policies

Busra Agcayazi
New York University
Stern School of Business
New York, NY 10012
ba2473@stern.nyu.edu
Corresponding Author

Gunratan Lonare
Illinois State University
College of Business
Normal, IL 61790
gglonar@ilstu.edu

Ahmet M. Tuncuz
University of Michigan-Dearborn
College of Business
Dearborn, MI 48126
atuncuz@umich.edu

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Abstract

This paper delves into the primary association between corporate social responsibility (CSR) and hedging strategies. By employing textual analysis of 10-K filings to measure corporate hedging, we demonstrate that firms with higher levels of CSR are more inclined to engage in hedging practices and with greater intensity. We also show that a reduction in cash flow volatility and a decrease in the cost of debt are potential channels through which CSR firms increase hedging. Furthermore, the influence is more pronounced when robust corporate governance mechanisms are in place. Our estimates pass a number of endogeneity tests, including the entropy balancing method and instrumental variables approach that takes into account political and geographic considerations. Results remain robust to alternative measures and dimensions of CSR and hedging.

JEL classifications: G32, G34, M14

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1. Introduction

Over the last decades, the perceptions of corporate social responsibility (CSR) among academics and practitioners have significantly evolved. Previously, investments made towards environmental and social policies, such as reducing emissions, adopting renewable energy sources, and upholding labor standards, were deemed as a cost to the firm, and a company had no obligation to society beyond its shareholders (Friedman, 1970). However, the advent of stakeholder theory (Freeman, 1984), which broadens a company's societal obligations beyond merely focusing on shareholder profits, has spurred a wider application of CSR. This approach serves as a method to showcase a firm's altruistic behavior and its consideration of the societal consequences of its operations, thus generating a type of moral capital (Godfrey, Merrill, and Hansen, 2009). Consequently, a substantial body of academic research agrees on CSR's positive influence on firm outcomes, including a higher valuation (i.e., Lys, Naughton, and Wang, 2015; Fatemi, Fooladi, and Tehranian, 2015), investment efficiency and innovation (Cook, Romi, Sánchez, and Sánchez, 2019), lower cost of financial distress (i.e., Boubaker, Cellier, Manita, and Saeed, 2020), and better mergers and acquisitions performance (i.e., Deng, Kang, and Low, 2013). Despite the intensified interest in CSR¹, it is important to acknowledge that the costs associated with CSR remain a concern, as they can divert resources from other critical business activities, increase risk, and reduce profitability. Therefore, the use of risk management strategies, specifically corporate hedging, may be necessary to address the challenges associated with CSR. This study explores how hedging decisions are established in response to CSR investments.

¹ Governance and Accountability Institute, examining annual corporate sustainability trends, indicates that 92% of S&P 500 and 70% of Russell 1000 companies released sustainability reports in 2020, up from less than 20% in 2011. <https://www.ga-institute.com/nc/storage/press-releases/article/92-of-sp-500r-companies-and-70-of-russell-1000r-companies-published-sustainability-reports-in-202.html>

Given the myriad of stakeholders, such as employees, consumers, and suppliers involved, risk diversification becomes an intricate task demanding the crucial role of hedging strategies to maintain a firm's financial stability. Through hedging, a company can not only meet its obligations to a diverse stakeholder base but also fortify its social license to operate, thereby enhancing its overall performance and sustainability. Supporting this shift in focus, Graham's (2022) presidential address offers evidence that challenges the traditional goal of maximizing shareholder value. His survey findings highlight the emerging trend where companies strive for a balanced approach between shareholders and other stakeholders. Complementing this, Edmans (2020) suggests that companies that adopt a "pie-growing mindset" view their employees as collaborators, genuinely implement sustainability measures, and invest meaningfully in their primary stakeholders, and such firms experience increased profitability in the long term. Additionally, firms that transition their leadership into long-term owners create enhanced value for both shareholders and stakeholders. As such, we aim to augment this line of literature by examining the impact of CSR on hedging behavior from a balanced shareholder-stakeholder perspective.

Firms with deep commitments to employee relations, environmental policies, diversity, and human rights may see these values permeate their corporate governance practices beyond CSR. Their inherent obligations towards the community, employees, and environment could echo in their decisions to safeguard shareholder interests by hedging financial risks. This aligns with agency theory (Jensen and Meckling, 1976), which contends that managers should make decisions protecting and enhancing shareholder interests. In this context, hedging safeguards the company's profitability and, thereby, shareholder value. Managers often perceive CSR initiatives as long-term strategic investments that augment shareholder value by boosting the company's reputation, fostering customer loyalty, attracting skilled employees, and mitigating regulatory risks. We

suggest that firms demonstrating strong corporate governance, where managers have interests that align with shareholders and exhibit reduced agency costs, they are more likely to employ hedging strategies to mitigate any possible negative impacts associated with CSR. Thus, hedging in these firms plays a dual role: it underpins financial stability while simultaneously protecting stakeholder and shareholder interests.

Using data from S&P 1500 firms from 1995 to 2018, we examine the influence of adopting socially responsible practices on corporate hedging decisions. Our methodology for measuring hedging involves a text-based approach that carefully identifies keywords in the firms' 10-K filings that indicate hedging behavior. We first categorize these keywords based on the type of hedging instrument, such as foreign exchange, interest rate, or commodity. Next, we construct two comprehensive proxies for hedging: (i) a binary variable that indicates whether the company engaged in hedging during a particular year and (ii) a continuous variable that measures the intensity of hedging by the number of related keywords identified. Our findings demonstrate a notably positive association between CSR and the likelihood of utilizing hedging strategies. We then scrutinize the influence of CSR implementation on the intensity of hedging. The results indicate that as a firm intensifies its level of socially responsible practices (i.e., a higher CSR score), the employment of hedging instruments increases in tandem. Our estimates are statistically and economically significant, with a one-standard-deviation increase in CSR score resulting in a 10% (16%) increase in corporate hedging activity from the mean (median).

Although this study employs an extensive array of control variables and a range of tests to provide evidence for the influence of CSR on hedging strategies, we acknowledge that there may still be issues related to endogeneity. For instance, governance may be an unobserved variable that drives both CSR and risk management behavior. Firms with more robust management may opt to

hedge and also invest in socially responsible activities. To address the issue of omitted variable bias, we follow a series of established methods in the literature and employ an instrumental variable approach, using state-based political views and geography-based CSR policies.² Furthermore, firms with high CSR scores may possess certain characteristics that firms with low CSR scores lack, which could affect our results. We also use the entropy balancing method to address other potential concerns related to such endogeneity.

Next, to delve deeper into this effect, we explore various channels through which CSR influences hedging. Our findings suggest that firms that prioritize their socially responsible activities and simultaneously engage in corporate hedging experience a decrease in cash flow volatility. Additionally, corporations that are involved in both CSR and hedging activities enjoy a lower cost of bank debt. Moreover, our estimates suggest that the positive impact of CSR on hedging is more pronounced³ in firms with more effective corporate governance. Our findings withstand rigorous robustness and subsample checks, including alternative measurements and dimensions of both CSR and hedging.

Our research brings several significant contributions to the CSR and risk management literature by integrating a balanced shareholder-stakeholder perspective. First, we implement a comprehensive, text-based approach to meticulously extract hedging behavior indicators from firms' 10-K filings. Second, while the existing literature explores the influence of social responsibility on risk-taking³, our study is unique in establishing a direct, empirically substantiated

² To address potential endogeneity issues, we use an instrumental variable approach based on the blue state variable (Deng, Kang, and Low, 2013; Di Giuli and Kostovetsky, 2014) and average CSR score of geographically proximate firms (Jiraporn, Jiraporn, Boeprasert, and Chang, 2014), which satisfy the relevance and exclusion requirements of this method, as explained in subsections 3.4 and 4.2.1, respectively.

³ For example, Harjoto and Laksmana (2018) finds that CSR increases firm value through guiding managerial decisions by reducing deviations from the optimal level of risk-taking. Our study differs from Harjoto and Laksmana (2018) by investigating the influence of CSR on corporate hedging, and therefore, provides a more direct approach between the CSR investments and risk management.

causal influence of CSR on hedging strategies. Our findings illuminate agency theory's postulation of effective governance and managers using hedging to offset potential negatives of CSR initiatives. Lastly, we demonstrate how a firm's commitment to employee relations, environmental policies, diversity, and human rights permeates into other corporate governance practices beyond CSR, highlighting the interconnectedness of various aspects of a firm's operations.

The rest of the paper is organized as follows: Section 2 discusses the literature and hypotheses, Section 3 describes the data and variables, Section 4 provides empirical findings for the relationship between CSR and hedging policies, Section 5 presents a battery of robustness checks and additional analysis, and Section 6 concludes.

2. Literature Review and Hypotheses

In this section, we show how this research is relevant by providing an overview of existing studies that examine determinants of hedging as well as their implications on corporate operations and performance. Additionally, we explicitly present a gap in the literature for corporate social responsibility's influence on hedging as a potential factor influencing various firm decisions. Then, we delve into empirical and theoretical research to evaluate how a firm's CSR practices might influence its risk management strategies, and how investing in CSR may increase a firm's need to hedge.

As pioneered by Modigliani and Miller (1958), in perfectly efficient capital markets without taxes and financing costs, a company's capital structure would not contribute to its value. However, managers engage in corporate hedging when market imperfections are incorporated. In fact, Bodnar, Giambona, Graham, and Harvey (2019) report that around two-thirds of North American public companies utilize risk management techniques. The determinants of hedging are

generally explained by two lines of theories. According to the shareholder maximization theory, firms hedge to maximize shareholders' wealth by lowering costs related to the agency (Dadalt, Gay, and Nam, 2002), underinvestment (Froot, Scharfstein, and Stein, 1993), and tax (Smith and Stulz, 1985). On the other hand, managerial utility theory suggests that managers hedge to signal managerial abilities or to lower their personal risk exposure (i.e., Breeden and Viswanathan, 2015; Wang and Fan, 2011). Besides these motivations, some of the primary implications of hedging include reducing costs of capital and financial distress (Kumar and Rabinovitch, 2013; Bartram, Brown, and Conrad, 2011; Campello, Lin, Ma, and Zou, 2011), boosting firm value (Hang, Geyer-Klingeborg, and Rathgeber, 2019; Levine, 2005), and enhancing financial flexibility (Bonaime, Hankins, and Harford, 2014). Although the determinants of hedging are widely examined in the literature, how CSR affects firm hedging has not been studied. To fill this gap, we propose two counteracting hypotheses on how CSR might influence a company's risk management strategies: through (i) insurance-like features and (ii) enhanced obligation and corporate governance.

According to the corporate reputation theory initially proposed by Fombrun (1996), investment in CSR practices results in a positive reputation, creating goodwill and moral capital. These attributes function as protective insurance, shielding firms against adverse outcomes (Starks, 2009; Pelozo, 2006; Godfrey, 2005). Empirical studies examine the insurance-like protection of CSR.⁴ For example, Lins, Servaes, and Tamayo (2017) find that firms with high social capital, computed by CSR intensity, realize higher stock returns and experience higher profitability than firms with low CSR scores during the financial crisis. They argue that corporate investments in social capital generate trust between firms and investors, producing rewards, especially when times are tough. Similarly, following an adverse event such as a product recall, the stock price of firms

⁴ See, for example, Gillan, Koch, and Starks (2021) who provide a survey of CSR research in finance literature.

with CSR investments declines less than firms without CSR engagement (Minor and Morgan, 2011). Moreover, Bhattacharya, Good, Sardashti, and Peloza (2021) argue that CSR not only improves a firm's reputation but can also lessen sales risks, especially when the CSR activities are clearly stakeholder oriented. According to Godfrey, Merrill, and Hansen (2009), CSR signals the altruism of a firm, and managers can use this moral capital to create value for shareholders by creating insurance-like protection.

The signaling value of CSR expenditures is another feature discussed in previous studies (i.e., Lys, Naughton, and Wang, 2015). By examining the penalties issued by the U.S. Department of Justice and SEC, Hong and Liskovich (2015) suggest that socially responsible firms are associated with 2 million USD less in fines due to the halo effects generated by a firm's image through CSR investments. In addition to creating a halo effect, CSR expenditures convey information about firms' value. Kim, Li, and Liu (2018) find that firms with higher CSR attract more investors. Lys, Naughton, and Wang (2015) document a positive relation between firm value and CSR; however, they argue that this association is due to the signaling value of CSR expenditures instead of the positive returns led by those expenditures. The authors' findings suggest that corporations undertake CSR expenditures when they want to signal information about firms' prospects.

When firms engage in CSR practices, they do corporate virtue-signaling, where they show their altruism to stakeholders and investors, thereby creating moral capital. Through this mechanism, CSR mitigates the impact of adverse outcomes and acts as an insurance for the negative outcomes of future potential unfavorable events. This suggests that since CSR can be used as a hedging tool, firms may not need to utilize standard corporate hedging instruments. For this reason, we state our first hypothesis below:

Hypothesis 1: CSR has a negative impact on corporate hedging activities.

While CSR investments' signaling and insurance-like features could lead to more flexibility in risk-taking, in our second hypothesis, we predict that the company's dedication to ethical business practices and robust corporate values may permeate and impact other governance mechanisms. This, in turn, could instill a greater sense of accountability for safeguarding shareholder value and ultimately result in a heightened inclination for risk mitigation. Furthermore, in firms with more effective governance mechanisms, the managers may be more incentivized to protect the shareholders' interests beside those of stakeholders. Next, we explore the connections between these assertions and their reflections in the existing literature.

Previous research has established the positive impact of CSR on a firm's financial performance (i.e., Cornett, Erhemjamts, and Tehranian, 2016; Edmans, 2012; Mackey, Mackey, and Barney, 2007), but this link has been assumed to be linear. Sun and Ding (2020) suggest a U-shaped relationship between CSR and cash flow volatility, indicating that CSR can reduce cash flow volatility at low to moderate levels but may increase volatility at high levels of CSR. When analyzing the short-run returns associated with CSR, the findings of Masulis and Reza (2015) indicate that the announcement of corporate philanthropic contributions elicits a negative reaction from the stock market. In a similar vein, according to Di Giuli and Kostovetsky (2014), there is a significant negative correlation between changes in firms' CSR scores and changes in their stock returns or ROA over a span of three years. Owing to the considerable costs, CSR initiatives are more frequently undertaken by firms with lesser financial constraints (Hong, Kubik, and Scheinkman, 2012) and those that forecast solid future financial outcomes (Lys, Naughton, and Wang, 2015). However, the studies also suggest potential drawbacks to CSR initiatives. These could manifest in the form of increased audit fees when CSR investments are disproportionately

high (LópezPuertas-Lamy, Desender, and Epure, 2017), and potential inefficiencies in capital allocation that might impact overall firm performance (Bhandari and Javakhadze, 2017).

Aside from the costs associated with CSR, a strand of research proposes that a company's capacity for risk-taking also amplifies in tandem with its CSR engagements. This concept is supported by Dunbar, Li, and Shi (2020), who show that when a company's CSR engagement intensifies, its risk-taking capability correspondingly escalates. As a reaction, companies adjust CEO compensation contracts to foster increased risk incentives. This line of thought is strengthened by findings from Bechetti, Ciciretti, and Hasan (2015), who demonstrate that CSR can unfavorably impact a company's flexibility in responding to adverse productivity shocks, consequently resulting in a dip in stakeholders' wealth. However, the potential adverse effects of increased risk-taking could be offset by effective corporate governance. Such governance enables companies to proficiently manage CSR investments and deploy corporate hedging. For instance, Fauver and Naranjo (2010) find that the quality of a firm's corporate governance positively correlates with its inclination to engage in hedging practices. Therefore, robust corporate governance empowers firms to balance the pursuit of social and environmental objectives with the need to sustain financial performance and preserve shareholder wealth.

When confronted with potential side effects of CSR, firms may utilize hedging instruments because the inherent sense of morals necessitates the safeguarding of shareholders' interests as well as those of stakeholders. Companies can maximize shareholders' wealth by hedging through reducing the costs associated with taxation, underinvestment, and financial distress, as well as lowering the cost of capital (see, e.g., Kumar and Rabinovitch, 2013, Campello, Lin, Ma, and Zou, 2011; Froot, Scharfstein, and Stein, 1993; Smith and Stulz, 1985). Adopting this approach ensures that risk management practices align with the firm's commitment to corporate social responsibility.

In summary, increased commitment to CSR does not occur in isolation but in conjunction with amplifying a firm's risk-taking capacity and the potential for increased volatility. This drives firms to strike a balance between their moral obligations to shareholders and stakeholders, and their financial performance. According to Edmans (2020) and Graham (2022), when companies embrace a balanced approach that considers both shareholders and stakeholders, they tend to achieve superior financial returns over the long term. We posit that this balance can be achieved through the use of hedging strategies to counterbalance the potential side effects of CSR. Therefore, we propose our second hypothesis as follows:

Hypothesis 2: CSR has a positive impact on corporate hedging activities.

3. Data

3.1 Hedging

We use SEC EDGAR filings to develop our text-based hedging measures by identifying the words that imply the firm's intended hedging activities. Our panel data sample consists of all S&P 1500 firms between January 1995 and December 2018. The choice of beginning date is because EDGAR's full coverage starts around 1995, and we end in 2018 due to the KLD database being available until that year. We obtain Fama-French 49 industry classification from the Fama-French data library. Following prior studies, we exclude the financial (SIC code 6000–6999) and utility (SIC code 4900–4999) firms from the dataset due to the different investment nature of firms in these industries (i.e., Deng, Kang, and Low, 2013).

The enactment of Financial Accounting Standard (FAS) 133 mandated companies to disclose the fair market value of derivatives without requiring notional values. However, the absence of information on the notional values of derivatives could compromise any estimation of

the level of corporate hedging (Graham and Roger, 2002). Therefore, we have developed a broad proxy for corporate hedging that can be applied across all industries while acknowledging the constraints of this metric. Following the recent literature on corporate hedging (i.e., Lonare, Nart, and Tuncez, 2022; Qiu, 2019; Manconi, Massa, and Zhang, 2018; Almeida, Hankins, and Williams, 2017; Hoberg and Moon, 2017), we construct our hedging measures based on a textual analysis of 10-K statements. By using our automated algorithm, we begin by identifying hedging-related terms and creating corresponding lists for (i) foreign exchange, (ii) interest rate, and (iii) commodity derivatives. Then, we develop distinct hedging metrics for each of the three instruments and combine them to form two inclusive hedging variables.

To analyze the penetration of hedging strategies in U.S. firms, following Lonare, Nart, and Tuncez (2022), we first define three dummy variables *FX_HEDG_D*, *IR_HEDG_D*, and *CMD_HEDG_D* based on whether the use of foreign exchange, interest rate, or commodity derivatives in 10-K for a given year is mentioned, respectively. Next, we create corresponding continuous variables *FX_HEDG_CS*, *IR_HEDG_CS*, and *CMD_HEDG_CS* based on the number of times the firm uses words regarding foreign exchange, interest rate, or commodity hedging, respectively. Lastly, we build two main hedging measures; *HEDG_CS*, the sum of *FX_HEDG_CS*, *IR_HEDG_CS*, and *CMD_HEDG_CS*, and *HEDGE_D*, a binary variable based on whether the use of any hedging measures in its 10-K for the given year is mentioned. We provide a more detailed explanation of our hedging variables and hedging-related words in Appendix B.

Table 1 presents summary statistics on corporate hedging variables. Our sample consists of 20,095 firm-year observations and 2,087 unique firms. Similar to previous studies, we find that 71% of the firms in our sample engage in hedging activities. Although non-mutually exclusive, among these firms, 52.4% are involved in activities related to foreign exchange derivatives, 47.5%

engage in activities related to interest rate derivatives, and 15.7% conduct strategies related to commodity hedging. Table 2 provides Pearson correlations for our key variables.

3.2 Corporate Social Responsibility (CSR)

We determine a corporation's environmental, social, and governance performance using a score representing its engagement in CSR activities. We develop this measure based on the MSCI KLD database, which uses an extensive range of sources, including government data, company filings, and media reports to evaluate companies' performance along with seven major categories: corporate governance, community activities, diversity, employee relations, human rights, environmental policies, and product quality and safety. Each category includes negative (concerns) and positive (strength) values.

In order to construct our CSR measure, following Den, Kang, and Low (2013), for each KLD category, we first sum the strength and concern values and divide them by the respective number of available strength and concern values for that year to construct strength and concern scores for every specific category. Then, for each firm in a given year, we take the difference between the total strength scores (*CSR_STRENGTH*) and the total concern scores (*CSR_CONCERN*) to construct our CSR measure, *CSR*. Following this methodology, *CSR* gives equal weights to the seven categories. We provide lists of strengths and concerns for each CSR category in Appendix C.

As reported in Table 1, the mean value for our primary CSR measure is -0.051, and the median of *CSR* is 0. The average value of firms conducting a good deed (*CSR_STRENGTH*) is 0.341, and the average value of firms that do not (*CSR_CONCERN*) is 0.392. As reported in Table 2, the correlation coefficient between *HEDGE_CS* and *CSR* is 0.11, which is significant at 1%.

3.3 Control Variables

Based on the extant corporate hedging literature, we include a number of firm-level controls that are shown to influence firm risk management decisions. These include *ASSETS*, for firm size, defined as the CPI-adjusted book value of total assets; *R&D*, calculated as the R&D expenditures divided by total assets; Leverage (*LEV*), defined as the ratio of long-term debt plus debt in current liabilities to total assets; Tobin's Q (*Q*) calculated as the sum of the market value of equity and book value of assets, minus book value of equity and balance sheet deferred taxes, divided by book value of assets; *CAPX*, defined as capital expenditures divided by total assets; profitability, *ROA*, is operating income before interest divided by total assets; *CASH*, defined as cash divided by total assets; asset tangibility, *PPE*, calculated as an investment in property, plant, and equipment divided by total assets; and *CASHVOL*, for cash flow volatility, computed as the standard deviation of annual operating cash flows over the previous five fiscal years, scaled by the total assets.

We also control for the Kaplan and Zingales (1997) index and use its decile rank, *KZINDEX*, to measure the reliance on external financing. *FIRMAGE* is calculated as the difference between the year under examination and the first year it appears on CRSP, plus one. Following Purnanandam (2008), we control for the nondebt tax shield, *ND_TAXSHIELD*, defined as depreciation and amortization scaled by total assets. We take inventory into account by following Almeida, Hankins, and Williams (2017) and construct the *INVENTORY* variable, calculated as inventory scaled by the costs of goods sold. *TRADE_CREDIT* is defined as the account payables scaled by total assets. Lastly, we control for asset maturity following Barclay and Smith (1995) and Billett, King, and Mauer (2007). *ASSET_MATURE* is the book value-weighted average of the

maturities of long-term assets and current assets. Appendix A provides a more detailed description of control variables.

Summary statistics for all firm-level control variables are presented in Table 1 and are similar to those reported in previous studies. For example, the average size of firms (*ASSETS*) in our sample is 6.86 billion USD, and the mean age of a typical firm is around 31 years. The mean values of ROA, Tobin's Q, and leverage are 0.14, 2.12, and 0.22, respectively.

3.4 Instrumental Variables

Even though utilizing a wide range of (fourteen) control variables reviewed in the previous subsection assist in alleviating omitted variables bias, our findings could still suffer from endogeneity issues due to unobserved factors. To mitigate the potential endogeneity concerns, we use state-level political views and geography-based inclination for CSR as our instrumental variables. Di Giuli and Kostovetsky (2014) suggest that companies headquartered in democratic-leaning states invest more in CSR compared to firms in republican-leaning states. Hence, we gather information on state-level presidential election results from MIT Election Data and Science Lab.⁵ Following Deng, Kang, and Low (2013), we define *BLUESTATE* as a dummy variable taking the value of one if a firm is headquartered in a democratic state and zero otherwise.⁶ We expect *BLUESTATE* to be positively associated with our CSR measure, satisfying the relevance condition. However, since the construction of this variable is state based, it is unlikely that *BLUESTATE* significantly impacts any specific firm's hedging activities, fulfilling the exclusion requirement of the instrumental variable. As seen in Table 1, around two-thirds of the firms in our sample are

⁵ MIT Election Data and Science Lab is publicly available and could be found at <https://electionlab.mit.edu>.

⁶ As Compustat backfills firm headquarter information based on the most recent business address, we scrape historical addresses from 10-K headers.

likely to be democratic. The reason is that many of the firms are clustered in blue states such as New York.

Corporate policies may be swayed by the policies of nearby enterprises, as demonstrated in studies by Jannati (2020) and Jaffe, Trajtenberg, and Henderson (1993). The presence of local competition and shared environmental factors can impact a firm's socially responsible practices. Jiraporn, Jiraporn, Boeprasert, and Chang (2014) demonstrate that a firm's proclivity for CSR engagement is positively correlated with the average CSR score of neighboring firms due to investors' location preferences, competition, and managerial social interactions. However, the collective CSR score of all geographically close firms is unlikely to directly impact the decision and intensity of utilizing firm-specific hedging instruments. Since geography fulfills both the relevance and exclusion requirements of instrumental variables, we utilize it in the next analysis. To capture the CSR activities of nearby firms, we utilize two different instruments: *GEOMEANCSR*, which represents the average CSR of all firms headquartered within a 250-kilometer radius of the focal firm, and *ZIP3MEANCSR*, which reflects the average CSR of all firms located in the same three-digit zip code as the focal firm.

3.5 Cash Risk, Governance, Bank Debt, and Macroeconomic Variables

To gain insight into the mechanisms at play, we investigate the characteristics of firms that engage in both CSR activities and hedging practices. We first assess the impact of social responsibility and hedging on cash risk and the cost of debt. Following Minton and Schrand (1999), we calculate *CASH_RISK* as the standard deviation of a firm's quarterly operating cash flow over the eight quarters succeeding a given fiscal year-end, scaled by the absolute value of the mean over the same period. In addition, studies acknowledge that the cost of equity capital and interest rates on bank loans are lower for firms with strong environmental profiles (Chava, 2014; Goss and

Roberts, 2011). Hence, following Graham, Li, and Qiu (2008) and Bharath and Shumway (2008), we create *LOAN_SPREAD*, the bank debt variable from DealScan. Additional control variables we used to explain *LOAN_SPREAD* are defined in Appendix A. We then examine the role of corporate governance in this effect. We measure governance using two variables: board co-option from Coles, Daniel, and Naveen (2014), *CO_OPTION*, and the entrenchment index of Bebchuk, Cohen, and Ferrell (2009).

4. Results

This section studies the link between CSR and corporate hedging decisions. We report the findings for the propensity and the intensity of hedging, discuss potential channels and address possible endogeneity concerns in multiple ways.

4.1 CSR and Corporate Hedging

Table 3 provides the univariate analysis and reports the mean (Panel A) and median (Panel B) for our main interest variables, *CSR*, *HEDG_D*, and *HEDG_CS*, for each CSR score quintile. CSR score quintiles are formed every fiscal year based on *CSR* variable constructed from the strength and concern values of seven major dimensions provided by the KLD database. Quintile 1 (5) contains firms with the lowest (highest) CSR scores. Among the firms in the lowest CSR quintile, around 69.7% engage in hedging, while 76.3% of the firms in the highest CSR quintile involve in hedging. As shown in the last column of Panel A, for both the *HEDG_D_{t+1}* and *HEDG_CS_{t+1}*, the differences between the first and the fifth quintiles are statistically and economically different. The median difference for *HEDG_CS_{t+1}* in Panel B also confirms this

result.⁷ Overall, the estimates in Table 3 indicate that compared with low CSR score firms, those with high CSR scores are associated with more hedging-related activities, supporting our second hypothesis.

We further investigate the positive association and report our main multivariate analysis of the effect of CSR on corporate hedging in Table 4. Besides including firm-level control variables, we also control for year fixed effects, as well as industry or firm fixed effects. We clustered standard errors at the firm level, and industry fixed effects are based on the Fama-French 49 industry classifications. We first examine the propensity of hedging regarding CSR investments. Hence, we estimate a Probit regression using *CSR* as the main independent variable and *HEDG_D* as the binary dependent variable taking the value of one when a firm mentions the use of any hedging instruments in its 10-K, and zero otherwise. Columns (1) and (2) present the marginal effects of Probit models at the mean. Findings show that, in Column (1), one point increase in the CSR score increases the likelihood of hedging by 3.9%, which is significant at the 1% level. Hence, socially responsible investing increases the propensity of hedging. In Column (2), the estimation with year and firm fixed effects shows similar results, with an increase in the likelihood of hedging by 1.4%.

While an increased tendency towards hedging with CSR is important to report, examining the extent of corporate hedging is noteworthy. Next, we estimate an OLS regression using the same independent variable, *CSR*, but switch the dependent variable to the scaled count of hedging-related keywords in 10-K, *HEDG_CS*. The coefficient estimates in Columns (3) and (4) are positive and significant at the 1% level. These results are also economically significant. For

⁷ The median value of *HEDG_D_{t+j}* for each CSR score quintile is 1 because the number of hedging firms are greater than the number of non-hedging firms for each quintile (the mean value of *HEDG_D_{t+j}* is greater than 0.5 for each quintile, as seen in Panel A of Table 3).

instance, in Column (3), a one-standard-deviation increase in *CSR* increases *HEDG_CS* by 0.046, which is a 10% (16%) increase from its mean (median). These findings align with those reported in the univariate setting and further support a positive association between CSR investments and hedging activities.

4.2 Endogeneity Checks

Findings in the univariate and multivariate analyses are significant and support CSR's positive impact on firm hedging behavior. We use extensive and widely accepted control variables and obtain statistically significant results; thus, this lessens concerns regarding omitted variable bias. However, our results could still suffer from endogeneity. For instance, companies with experienced management may be the ones that choose to hedge and, at the same time, invest more in social and environmental activities. In this section, we perform an instrumental variable (IV) approach and entropy balancing technique to address potential endogeneity issues, including those related to unobserved factors and different characteristics inherent to high CSR firms.

4.2.1 Instrumental Variable Approach

In order to mitigate any concerns regarding potential unobservable omitted factors, we employ a 2SLS regression analysis in Table 5, utilizing several instrumental variables. Panel A presents the results using *BLUESTATE*, a measure indicating the proclivity towards democratic inclinations at the state level, as an IV. Meanwhile, Panel B presents findings employing two geography-based IVs, where *GEOMEANCSR* and *ZIP3MEANCSR* serve as measures of the average CSR of all other firms headquartered within a 250-km radius and the same three-digit zip code as the firm, respectively. Consistent with the extant literature, the instrumental variable coefficients in the first stage of 2SLS (Column (1) in Panel A, and Columns (1) and (4) in Panel B) display a significantly positive relation between our IVs and firms' CSR policies. In the second

stage, we employ the predicted CSR, along with the two hedging variables and control variables, including fixed effects. Our results indicate that the coefficient estimates on the predicted CSR variable are positive and significant at the 1% level for both hedging measures.

In support of our instrumental variable selection, we perform the Cragg-Donald test (Cragg and Donald, 1993) to confirm the high correlation between our instrumental variables and *CSR*. Our instruments pass this test and suggest that our system is not weakly identified. Also, Hausman exogeneity test rejects the null hypothesis that *CSR* is exogenous, thereby supporting the necessary condition for implementing IV estimation. Overall, the regression results in Table 5 further validate those in univariate (Table 3) and multivariate analyses (Table 4), and they support the positive association between CSR and corporate hedging.

4.2.2 Entropy Balancing Approach

Our baseline results may be subject to issues related to firms with high CSR scores having different characteristics than those with low CSR scores. To address this concern, we conduct entropy balancing, a data preprocessing method, for matching treatment and control samples to force, by design, certain balance metrics to hold. This multivariate reweighting technique creates treatment and pseudo-control groups balanced on all covariates except the variable of interest (Hainmueller, 2012). Following the same logic, we aim to achieve covariate balance with entropy balancing.

We begin by ranking *CSR* into quintiles for each year in our sample period. We define the treatment group as the firms in the top quintile and the control group as those in the bottom quartile. With this procedure, we identify 3,918 firm-year observations in the treatment group and 5,603 observations in the control group. We set a dummy *HIGH_CSR* equal to one for firm-year observations in the treatment group and set it equal to zero for the observations in the control

group. We then apply the entropy balancing technique that involves reweighting observations of the control group to achieve covariates balance, except for the hedging variables, between the treatment and the control group in the first three moments (i.e., mean, variance, and skewness).⁸

Table 6 reports the results of the entropy balancing method. Panel A describes the summary statistics of covariates for the treatment and the control groups after employing the entropy balancing technique. The covariates for the treatment group and the reweighted covariates of the control group are virtually identical in terms of mean, variance, and skewness. Also, the standardized differences and variance ratios are under the vertical bands, as per Rubin (2001) and Austin (2011).

Panel B of Table 6 reports multivariate analyses similar to Table 4, replacing *CSR* variable with *HIGH_CSR*. The sample for this analysis consists of the treated and the control group and the reweighted covariates from the entropy balancing from Panel A. This analysis provides estimates on the *HIGH_CSR* variable that captures the average treatment effects by comparing observations in the high CSR group (treatment) against the observations in the low CSR group (control), holding other factors constant. As presented in this table, the coefficients on *HIGH_CSR* remain positive and significant for both *HEDGE_D* and *HEDG_CS* variables. Overall, the estimations in Table 6 support our findings and mitigate potential concerns related to results driven by other factors inherent in the high CSR firms.

4.3 Channels

To comprehend the mechanisms underlying the positive association between CSR and hedging, we explore the impact of investing in both CSR and hedging practices on various firm outcomes. More precisely, we scrutinize the influence of socially responsible and hedging-oriented

⁸ Following Hainmueller and Xu (2013), we use *ebalance* package on Stata.

firms on cash risk and the cost of debt. Table 7 presents the coefficient estimates of the OLS regression for a subsample of firms that hedge (Column 1) and another subsample of firms that do not (Column 2). Findings indicate a significantly negative coefficient (at the 5% level) on *CSR* in Column (1). Our results reveal that the negative effect of *CSR* on cash flow risk is statistically significant only for firms that engage in hedging. Furthermore, incorporating interaction terms, we explore this effect in the full sample. The variable *HEDGE_QNTL* designates the quintile group based on our main hedging variable (*HEDGE_CS*). A significantly negative coefficient on the interaction variable *CSR*×*HEDGE_QNTL* indicates that *CSR* firms are more likely to hedge to mitigate cash risk. Thus, reducing cash risk may represent a potential avenue for *CSR* firms to hedge. Although a firm's commitment to environmental and social policies and the adoption of initiatives such as to improve diversity and product quality can elevate its exposure to risks, the firm's sense of responsibility to its shareholders' wealth is evident in its increased hedging activity. Our findings support the idea that high *CSR* firms hedge more due to their dedication to a comprehensive approach to value creation.

Next, we investigate the effect of social responsibility on the cost of bank debt differing in the hedging behavior. Table 8 reports the results of the OLS model, where the dependent variable is the logarithm of the bank loan spreads. Columns (1) and (2) represent estimates for a subsample of firms that hedge, without loan controls and with full controls, respectively. Similarly, Columns (3) and (4) represent estimates for a subsample of firms that do not hedge. The coefficients in the first two columns are significant and negative, meaning that among hedger firms, those with higher *CSR* levels enjoy lower loan spreads when obtaining bank debt. When we run a similar analysis for firms that do not hedge in Columns (3) and (4), the *CSR* coefficients are still negative but insignificant. This finding suggests that *CSR* firms are likely to hedge to lower the cost of bank

debt. We also detect a significantly negative coefficient (at the 5% level) on the interaction term $CSR \times HEDGE_QNTL$ in the full sample in Column (5). Our finding is in line with prior literature suggesting that firms with greater environmental and social scores pay a lower interest rate, which decreases the cost of debt (i.e., El Ghouli, Guedhami, Kwok, and Mishra, 2011; Goss and Roberts, 2011). Overall, results in Tables 7 and 8 suggest that reducing cash risk and lowering the cost of bank debt are potential channels that motivate CSR firms to hedge.

4.4. The Effectiveness of Corporate Governance

Strong corporate governance may play a role in the relationship between CSR and hedging, primarily by enhancing risk management, ensuring strategic alignment, promoting stakeholder engagement, and fostering transparency and accountability. More specifically, companies with robust governance mechanisms are better equipped to balance CSR activities' potential rewards and risks and hedging strategies, creating a synergistic effect between these two facets. Furthermore, effective governance helps align CSR initiatives and hedging strategies with the organization's overall objectives, facilitating long-term beneficial impacts and positive contributions to shareholder value. This strategic alignment is strengthened by active stakeholder engagement, a hallmark of good corporate governance, which allows for more informed decisions about CSR activities and hedging practices, thus optimizing benefits for diverse stakeholders while managing potential risks. Additionally, the transparency and accountability fostered by strong governance offer stakeholders a clear view of how these activities are managed and their impact on the company while holding decision-makers responsible for their outcomes. Therefore, good

corporate governance can enhance the synergy between CSR and hedging, contributing to an organization's overall success.⁹

For this reason, we explore the effect of CSR on hedging for different levels of corporate governance quality. We use two proxies to estimate the regression models for low- and high-governance quality groups and report the results in Table 9. Our first measure is *CO_OPTION*, the tenure-weighted measure of co-opted directors as a fraction of the entire board.¹⁰ Board co-option is the fraction of the board comprised of directors appointed after the CEO assumed office, which has been associated with potential management entrenchment issues in prior studies (i.e., Coles, Daniel, and Naveen, 2014). We categorize firms into two groups using the year-median value of *CO_OPTION* for this analysis. Additionally, as a means of robustness analysis, we employ a secondary governance metric - the CEO entrenchment. In Columns 3 and 4, firms are placed into high and low CEO entrenchment groups based on *E_INDEX* values (with high values above three and low values below). Results show that the influence of CSR on hedging is positive and significant only for low co-option and entrenchment groups, in other words, when there are more effective corporate governance mechanisms in place.

5. Robustness Tests and Additional Analysis

Our main results and the endogeneity tests provide evidence for a significant positive association between CSR and firm hedging behavior. Our findings augment the comprehension of how firms make decisions regarding hedging in response to their CSR standing, which influences the overall expenses and risk associated with cash flow. This section reports alternative

⁹ Fauver and Naranjo (2010) show that company's corporate governance influences its propensity to utilize hedging practices. Lel (2011) shows that firms with good governance are more likely to employ derivatives to hedge their currency risk and avoid costly external financing.

¹⁰ We thank Lalitha Naveen for making this data available. The data spans from 1996 to 2014.

specifications that assess our predictions through several robustness checks and provides additional analysis.

5.1 Different Types of Hedging

We examine the specific hedging activities to see whether and how the hedging components are affected by engagement in socially responsible projects. We re-estimate the main regression model in Table 4, with the components of the main hedging variables (*HEDGE_D* and *HEDGE_CS*) that are based on the foreign exchange, interest rate, and commodity hedging instruments. The new dependent variables, *FX_HEDG_D*, *IR_HEDG_D*, and *CMD_HEDG_D* are dummy variables taking the value of one when the firm mentions the use of foreign exchange, interest rate, and commodity hedging in its 10-K filings, respectively. Similarly, *FX_HEDG_CS*, *IR_HEDG_CS*, and *CMD_HEDG_CS* are scaled counts of foreign exchange, interest rate, and commodity hedging-related keywords in 10-K filings, respectively. Table 10 reports the impact of corporate social responsibility on each of these specific hedging instruments.

Table 10 Panel A reports the impact of CSR on foreign exchange hedging, where firms eliminate risk stemming from transactions in foreign currencies. Firms are more likely to hedge foreign exchange risk with high CSR levels. The intensity of foreign exchange hedging also increases significantly with greater CSR activities. In Panel B, we provide coefficient estimates for interest rate hedging and find that firms with more engagement in socially responsible activities have a higher propensity to hedge against interest rate risks. Similar to foreign exchange hedging, the intensity of interest rate hedging also increases with CSR. Lastly, Panel C reports findings on the impact of CSR on a firm's commodity hedging. Although the coefficient of *CMD_HEDG_D* is insignificant, the coefficient of *CMD_HEDG_CS* is significantly positive. Overall, our results show that CSR firms engage in all types of hedging instruments.

5.2 Industry-Specific Impact

Table 11 reports the effect of CSR on corporate hedging for different Fama-French 49 (FF49) industries. Panel A presents summary statistics of our main variables across various industries, and Panel B reports multivariate OLS estimation of CSR on corporate hedging for different industries. CSR positively impacts hedging in various industries, including agriculture and food products, apparel and textiles, healthcare, construction, coal and petroleum, machinery, and retail. However, it has a significant negative relationship with hedging in the consumer goods industry. Kumar and Rabinovitch (2013) extensively study the oil and gas industry for the factors of corporate hedging. Our results for *Coal, Petroleum, and Natural Gas* industry show that there is also a positive and statistically significant impact of CSR on hedging activity.

5.3 Alternative Hedging Measures

In order to check the robustness of our main finding, the positive association between CSR and hedging activities, we re-estimate the main regressions with several alternative hedging measures. The main continuous hedging measure, *HEDGE_CS*, is scaled by the total number of words in a 10-K. For robustness, we also employ the non-scaled version of this variable (*HEDGE_C*, constructed as the number of hedging-related keywords in 10-Ks) and include the natural logarithm of *HEDGE_C* in our estimations.

Since our main hedging variables are based on counting of words, we cannot rule out the possibility that our measures might capture forward-looking hedging disclosures as well. For example, the sentence “The company may enter an interest rate swap instrument to limit its exposure to changes in variable interest rates.” conveys an intention of using hedging instruments in the future but not in the given fiscal year. This sentence captures forward-looking hedging disclosure. In contrast, the sentence “The company uses interest rate swaps to manage its exposure

to interest rate movements.” conveys the current use of hedging instruments in the fiscal year, capturing the backward-looking hedging disclosure. Our current measures of hedging count may reflect both types of hedging disclosures. In order to eliminate forward-looking hedging disclosure, we first categorize a 10-K sentence as a backward-looking hedging sentence if (a) it includes any of the hedging-related keywords from Appendix B and (b) it does not mention any of the forward-looking words from Muslu, Radhakrishnan, Subramanyam, and Lim (2015). Based on this process, we define *BW_HEDGE* as the number of backward-looking hedging sentences used divided by the total number of sentences in the 10-K report, times 1000.

Effective in 2001, firms are required to report unrealized holding gains and losses from changes in the fair value of the cash flow hedge in the “Accumulated Other Comprehensive Income” item based on FAS 133 (Bonaimé, Hankins, and Harford, 2014; Campbell, Downes, and Schwartz, 2015). We gather this item from Compustat variables AOCIDERGL (“Accumulated Other Comprehensive Income - Derivative Unrealized Gain/Loss”) and CIDERGL (“Comprehensive Income - Derivative Gains/Losses”), starting from 2001. We set a dummy variable *COMP_HEDGE* equals to one if either AOCIDERGL or CIDERGL is non-missing, otherwise set it to zero.

We then re-estimate our OLS and Probit specifications from Table 4 with the above dependent variables *HEDGE_C*, *BW_HEDGE*, and *COMP_HEDGE*, respectively. Table 12 reports the findings of CSR’s influence on these three alternative hedging measures. As seen, the coefficients on *CSR* remain significantly positive for all the measures; hence, our main findings are robust to alternative measures of corporate hedging practices.

5.4 Alternative CSR Measures

We test the robustness of our findings using alternative measures of our key independent variable, *CSR*. It is important to examine whether the subgroups under our overall measure, *CSR*, influence hedging in line with those reported in our previous tables. *CSR_STRENGTH* is the scaled total strength score of CSR rating based on its seven dimensions (i.e., environmental policies, corporate governance, diversity, community activities, employee relations, human rights, and product quality). For instance, when firms implement socially and environmentally responsible projects, their *CSR_STRENGTH* score increases. We also use the *CSR_CONCERN* variable, which is the scaled total concern score of CSR rating based on its seven dimensions. Table 13 Columns (1) and (2) present the coefficient estimates for both variables. In line with our expectations and main findings, the results show a positive coefficient for the *CSR_STRENGTH* and a negative coefficient for the *CSR_CONCERN* variable. Hence, investing in projects, i.e., to improve employee relations and product quality, is associated with increased hedging intensity. Not being involved in such CSR projects adversely affects the firm's hedging.

Next, we address potential concerns related to CSR elements related to firm governance quality. It is possible that firms with good governance may lean towards hedging more than their competitors without such quality. For this reason, we remove any dimensions that may affect hedging directly. Based on five dimensions of CSR (i.e., community activities, diversity, employee relations, environmental policies, and product quality), we create a new measure, *CSR5*, and re-estimate the OLS model. As reported in Table 13 column (3), the coefficients remain unchanged and further confirm the positive association between CSR and firm hedging decisions, regardless of the governance quality.

5.5 CSR Dimensions and Alternative Sample

In order to analyze and interpret the results further, we estimate the main model in Table 4 using the breakdown of CSR as our variables of interest and hedging as the dependent variable. We present the estimates for the seven dimensions of CSR (corporate governance, community activities, diversity, employee relations, environmental policies, human rights, and product quality and safety) in Table 14. Our results indicate that having good corporate governance, increased diversity, better employee relations, supporting environmental policies and human rights, and investing in product quality and safety positively and significantly correlate with the firm's hedging intensity. The coefficient for the corporations' engagement in community activities is positive but not significant. Overall, Table 14 shows firms' responsible manners in supporting society's good disseminate through their considerations in risk management strategies.

Lastly, we investigate our primary predictions with a subset of the CSR sample. Starting from 2001 (2003), KLD extended its research coverage and incorporated the largest, by market capitalization, 1000 (3000) American firms in its database. After 2003, the number of firms in our sample nearly doubles, i.e., 557 firms in 2002 and 1,192 firms in 2003. In order to confirm our main findings, we focus on the post-2003 period and re-estimate the models in Table 4 using the same controls, dependent, and independent variables. Table 15 reports the impact of CSR on corporate hedging for the post-2003 period, and the sample spans from 2003 to 2018. Our findings are similar to those reported in Table 4. Firms with higher CSR scores are 4.6% more likely to engage in hedging projects, and the level of hedging also increases with the increased levels of CSR.

6. Conclusion

This study investigates the influence of CSR on corporate hedging. Using a detailed and comprehensive textual analysis of 10-K filings of S&P 1500 firms, we construct a binary variable identifying whether the firm uses a word implying hedging and a continuous variable representing the number of words that signal the firm's hedging intensity. Our findings demonstrate that a firm with a higher CSR score is significantly more likely to utilize foreign exchange, interest rate, and commodity hedging. Moreover, the hedging intensity increases with the level of CSR score. By implementing corporate hedging policies, high CSR companies reduce cash volatility and the cost of debt. The careful examination of potential channels reveals that this positive association is related to robust corporate governance mechanisms as well as firms' internal commitment to strong corporate values penetrating through other risk management strategies.

We address potential endogeneity issues related to unobserved factors and different characteristics inherent to high CSR firms. The instrumental variable tests and entropy balancing findings validate our main results and mitigate the concerns related to endogeneity. Finally, the estimations are robust to alternative ways of measuring corporate hedging and CSR. Our results shed light on the firm decision-making related to the interconnections between social responsibility and hedging.

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Appendix A: Data Sources and Definitions

Variable	Definition
I. Hedging (Source: 10-K statements from SEC)	
<i>HEDGE_D</i>	Dummy variable equals to one if a firm mentions the use of any hedging instruments (foreign exchange, interest rate, or commodity derivatives) in its 10-K for a given year and set to zero otherwise, details in Appendix B.
<i>HEDGE_CS</i>	The number of keywords related to hedging instruments (foreign exchange, interest rate, or commodity derivatives) scaled by the total number of words in the 10-K times 1000, details in Appendix B.
<i>HEDGE_C</i>	The number of hedging-related keywords in 10-K from Appendix B.
<i>BW_HEDGE</i>	A 10-K sentence is categorized as a backward-looking hedging sentence if (a) it contains any of the hedging-related keywords from Appendix B and (b) it does not mention any of the forward-looking words from Muslu, Radhakrishnan, Subramanyam, and Lim (2015). <i>BW_HEDGE</i> is the number of backward-looking hedging sentences used in 10-K scaled by the total number of sentences in the 10-K, times 1000.
<i>COMP_HEDGE</i>	Dummy variables set equals to one if either of the Compustat items <i>AOCIDERGL</i> (“Accumulated Other Comprehensive Income - Derivative Unrealized Gain/Loss”) and <i>CIDERGL</i> (“Comprehensive Income - Derivative Gains/Losses”) is non-missing, otherwise set to zero.
II. CSR (Source: KLD/MSCI)	
<i>CSR</i>	The sum of total scaled strengths minus total scaled concerns of CSR ratings is based on seven dimensions of CSR: corporate governance, community activities, diversity, employee relations, environmental policies, human rights, and product quality. The scaled strengths (concerns) in a given dimension of CSR is computed by scaling the raw strengths (concerns) by the number of items of the strengths (concerns) in that dimension for a given year. Details on each CSR dimension are in Appendix C.
<i>CSR_STRENGTH</i>	The sum of total scaled strengths of CSR ratings is based on seven dimensions of CSR, provided in Appendix C. The scaled strengths in a given dimension of CSR are computed by scaling the raw strengths by the number of items of the strengths in that dimension for a given year.
<i>CSR_CONCERN</i>	The sum of total scaled concerns of CSR ratings is based on seven dimensions of CSR, provided in Appendix C. The scaled concerns in a given dimension of CSR are computed by scaling the raw concerns by the number of items of the concerns in that dimension for a given year.
<i>CSR5</i>	The sum of total scaled strengths minus total scaled concerns of CSR ratings is based on five dimensions of CSR: community activities, diversity, employee relations, environmental policies, and product quality. The scaled strengths (concerns) in a given dimension of CSR are computed similarly to those of the main <i>CSR</i> measure.
III. Controls (Source: Compustat and CRSP)	
<i>ASSETS</i>	Book value of total assets (CPI-adjusted).
<i>R&D</i>	R&D expenditures divided by total assets, set to 0 if missing.
<i>LEV</i>	The ratio of long-term debt plus debt in current liabilities to total assets.

Appendix A contd.

<i>Q</i>	The market value of equity plus book value of assets minus book value of equity minus balance sheet deferred taxes, divided by book value of assets.
<i>CAPX</i>	Capital expenditures divided by total assets.
<i>ROA</i>	Operating income before interest divided by total assets.
<i>CASH</i>	Cash divided by total assets.
<i>PPE</i>	Investment in property, plant, and equipment divided by total assets.
<i>CASHVOL</i>	The standard deviation of annual operating cash flows over the past five fiscal years, divided by the total assets.
<i>KZINDEX</i>	Kaplan and Zingales (1997) index defined as $-1.002 * (IB+DP)_t / PPENT_{t-1} + 0.283 * (AT + PRCC * CSHO - CEQ - TXDB) / AT_t + 3.139 * (DLTT+DL)_t / (DLTT + DLC + SEQ)_t - 39.368 * (DVC + DVP)_t / PPENT_{t-1} - 1.315 * CHE_t / PPENT_{t-1}$. We use decile rank computed each year.
<i>FIRIMAGE</i>	One plus the difference between the year under investigation and the first year the firm appears on the CRSP tapes.
<i>ND_TAXSHIELD</i>	Depreciation and amortization scaled by total assets.
<i>INVENTORY</i>	Inventory divided by the costs of goods sold.
<i>TRADE_CREDIT</i>	Account payables divided by total assets.
<i>SGROWTH</i>	Growth in annual sales over the prior year.
<i>RET</i>	Stock returns over the fiscal year.
<i>TAXLOSS</i>	Dummy variable set equal to one if a firm has a positive net operating loss carryforward and zero otherwise.
<i>ASSET_MATURE</i>	The book value-weighted average of the maturities of long-term assets and current assets, where the maturity of long-term assets is computed as gross property, plant, and equipment divided by depreciation expense, and the maturity of current assets is computed as current assets divided by the cost of goods sold (see Barclay and Smith, 1995; Billett, King, and Mauer, 2007).
<i>RATED</i>	Dummy variable set equal to one if the firm has a Standard & Poor's long-term debt rating.

IV. Instrumental

<i>BLUESTATE</i>	Dummy variable set equals to one if a firm is headquartered in a democratic state and zero otherwise. (Source: MIT Election Lab)
<i>GEOMEANCSR</i>	Average <i>CSR</i> of all other firms headquartered within a 250-km radius of the firm. (Source: KLD/MSCI)
<i>ZIP3MEANCSR</i>	Average <i>CSR</i> of all other firms headquartered in the same three-digit zip code of the firm. (Source: KLD/MSCI)

V. Risk-Taking (Source: Compustat)

<i>CASH_RISK</i>	The standard deviation of a firm's quarterly operating cash flow over the eight quarters succeeding a given fiscal year end, scaled by the absolute value of the mean over the same period. Quarterly operating cash flow is computed as sales minus cost of goods sold minus selling, general and administrative expenses minus the change in working capital for the period.
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Appendix A contd.

VI. Governance

<i>CO_OPTION</i>	Tenure-weighted measure of co-opted directors as a fraction of the total board. (Source: Coles, Daniel, and Naveen, 2014)
<i>E_INDEX</i>	Following Bebchuk, Cohen, and Ferrell (2009), the entrenchment index is computed as the sum of indicator variables for six anti-takeover provisions: staggered boards, limits to shareholder bylaw amendments, poison pills, golden parachutes, supermajority requirements for mergers, and charter amendments. (Source: ISS)

VII. Bank Debt (Source: DealScan)

<i>LOAN_SPREAD</i>	The interest spread over LIBOR (or LIBOR equivalent) measured as the all-in-spread-drawn. The all-in-drawn-spread is the total (fees and interest) annual spread in basis points that the borrower pays over LIBOR (or LIBOR equivalent) for each dollar borrowed.
<i>MATURITY</i>	Loan maturity reported in months.
<i>SECURED</i>	Dummy variable equal to one if the loan facility is secured, and zero otherwise.
<i>COVENANTS</i>	The number of covenants in the loan facility.
<i>LOAN_CONC</i>	Loan amount divided by the summation of loan amount, long-term debt, and current liabilities.
<i>SYNDICATED</i>	Dummy variable equal to one if the loan is syndicated, and zero otherwise.
<i>TERM_LOAN</i>	Dummy variable equal to one if the type of borrowing is a term loan and, zero otherwise.
<i>REVOLVER_LOAN</i>	Dummy variable equal to one if the type of borrowing is a revolving credit line or 364-day facility, and zero otherwise.
<i>BRIDGE_LOAN</i>	Dummy variable equal to one if the type of borrowing is a bridge loan, and zero otherwise.
<i>GEN_LOAN</i>	Dummy variable equal to one if the loan purpose is for general corporate purposes, project finance, or other purpose, and zero otherwise.
<i>TAKEOVER_LOAN</i>	Dummy variable equal to one if the loan purpose is for a takeover or recapitalization, and zero otherwise.
<i>WORKCAP_LOAN</i>	Dummy variable equal to one if the loan purpose is to finance working capital and, zero otherwise.

VIII. Macroeconomic (Source: Federal Reserve Board of Governors)

<i>DEFAULT_SPREAD</i>	Yield spread between average BBB corporate bonds and average AAA corporate bonds.
<i>TERM_SPREAD</i>	Yield spread between the 10-year U.S. Treasury bond and the 3-month U.S. Treasury bills.

Appendix B: Construction of Hedging Variables

We develop corporate hedging variables using textual analysis of 10-K statements. Our automated algorithm searches for different keyword lists related to hedging activities in a firm's 10-K. We utilize three different keyword lists for each type of hedging instrument: foreign exchange (FX), interest rate (IR), and commodity (CMD) hedging. First, we create separate measures for these three types, and then we combine them to form an overall hedging variable. The details of these variables are as follows:

FX hedging:

We closely follow Lonare, Nart, and Tuncez (2022), Chen and King (2014), and Huang, Peyer, and Segal (2013) to generate FX hedging variable. A firm is concluded to follow FX hedging in a year if it mentions any of the following combinations of the words in its 10-K statement: (currency/ currency rate/ exchange/ exchange rate/ cross-currency) and (cap/ collar/ contract/ derivative/ floor/ forward/ future/ option/ swap). For example, the combination of two words from each list includes currency cap, currency collar, and currency contract.

We also exclude false-positive hits by searching the following different words surrounded by the above FX combination that would make a firm not to use in FX hedging activities such as “in the future”, “forward-looking”, “not material”, “do not engage in foreign exchange”, “does not have any currency forward.” We develop the following two FX hedging variables:

FX_HEDGE_D is a dummy variable set equal to one if a firm mentions the use of foreign exchange derivatives in its 10-K for a given year based on the combination of the words specified above and set to zero otherwise.

FX_HEDGE_CS is the number of times a firm mentions FX hedging in its 10-K for a given year based on the combination of the words specified above scaled by the total number of words in the 10-K times 1000.

IR hedging:

For IR hedging, we use the following list of words documented in Lonare, Nart, and Tuncez (2022) and Huang, Peyer, and Segal (2013): “interest rate swap”, “interest rate cap”, “interest rate collar”, “interest rate floor”, “interest rate forward”, “interest rate option”, “interest rate future.” We develop the following two IR hedging variables:

IR_HEDGE_D is a dummy variable set equal to one if a firm mentions the use of interest rate derivatives in its 10-K for a given year based on keywords specified above and set to zero otherwise.

IR_HEDGE_CS is the number of times a firm mentions interest rate hedging in its 10-K for a given year based on keywords specified above scaled by the total number of words in the 10-K times 1000.

CMD hedging:

For commodity hedging, we use the following word list documented in Almeida, Hankins, and Williams (2017):

hedge fuel	uses derivative financial instruments to manage the price risk
fuel hedge	uses financial instruments to manage the price risk
fuel call option	uses derivative financial instruments to manage price risk
commodity derivative	uses derivatives to manage the price risk
commodity contract	uses derivatives to manage price risk
commodity forward	forward contracts for certain commodities
commodity future	forward contracts for commodities derivatives to mitigate commodity price risk
commodity hedge	futures to mitigate commodity price risk
commodity hedging	options to mitigate commodity price risk
commodity option	swaps to mitigate commodity price risk
commodity swap	corn future
hedges of commodity price	cattle future commodity price swap

We develop the following two commodity hedging variables:

CMD_HEDGE_D is set equal to one if a firm mentions any of the words from the above commodity hedging-related word list in the 10-K for a given year and zero otherwise.

CMD_HEDGE_CS is the total number of commodity hedging words from the above word list documented in the 10-K statement scaled by the total number of words in the 10-K times 1000.

Overall hedging:

Finally, our two main overall hedging variables are formed as follows:

HEDGE_D takes a value of one if a firm mentions the use of any hedging instruments (foreign exchange, interest rate, or commodity derivatives) in its 10-K for a given year and is set to zero otherwise.

HEDGE_CS is the sum of *FX_HEDGE_CS*, *IR_HEDGE_CS*, and *CMD_HEDGE_CS*.

Appendix C: Dimensions of Corporate Social Responsibility (CSR)

The variables in parentheses are from the MSCI/KLD database.

Strengths	Concerns
<i>I. Corporate Governance</i>	
Limited Compensation (<i>CGOV_str_A</i>)	High Compensation (<i>CGOV_con_B</i>)
Ownership Strength (<i>CGOV_str_C</i>)	Ownership Concern (<i>CGOV_con_F</i>)
Reporting Quality (<i>CGOV_str_D</i>)	Accounting Concern (<i>CGOV_con_G</i>)
Political Accountability Strength (<i>CGOV_str_E</i>)	Reporting Quality (<i>CGOV_con_H</i>)
Public Policy Strength (<i>CGOV_str_F</i>)	Political Accountability Concern (<i>CGOV_con_I</i>)
Corruption & Political Instability (<i>CGOV_str_G</i>)	Public Policy Concern (<i>CGOV_con_J</i>)
Financial System Instability (<i>CGOV_str_H</i>)	Governance Structures (<i>CGOV_con_K</i>)
Other Strengths (<i>CGOV_str_X</i>)	Controversial Investments (<i>CGOV_con_L</i>)
	Business Ethics (<i>CGOV_con_M</i>)
	Other Concerns (<i>CGOV_con_X</i>)
<i>II. Community Activities</i>	
Charitable Giving (<i>COM_str_A</i>)	Investment Controversies (<i>COM_con_A</i>)
Innovative Giving (<i>COM_str_B</i>)	Community Impact (<i>COM_con_B</i>)
Support for Housing (<i>COM_str_C</i>)	Tax Disputes (<i>COM_con_D</i>)
Support for Education (<i>COM_str_D</i>)	Other Concerns (<i>COM_con_X</i>)
Non-US Charitable Giving (<i>COM_str_F</i>)	
Volunteer Programs (<i>COM_str_G</i>)	
Community Engagement (<i>COM_str_H</i>)	
Other Strengths (<i>COM_str_X</i>)	
<i>III. Diversity</i>	
CEO-gender or minority (<i>DIV_str_A</i>)	Workforce Diversity (<i>DIV_con_A</i>)
Promotion (<i>DIV_str_B</i>)	Non-Representation (<i>DIV_con_B</i>)
Board of Directors - Gender (<i>DIV_str_C</i>)	Board of Directors - Gender (<i>DIV_con_C</i>)
Work-Life Benefits (<i>DIV_str_D</i>)	Board of Directors - Minorities (<i>DIV_con_D</i>)
Women and Minority Contracting (<i>DIV_str_E</i>)	Other Concerns (<i>DIV_con_X</i>)
Employment of the Disabled (<i>DIV_str_F</i>)	
Gay and Lesbian Policies (<i>DIV_str_G</i>)	
Employment of Underrepresented Groups (<i>DIV_str_H</i>)	
Other Strengths (<i>DIV_str_X</i>)	
<i>IV. Employee Relations</i>	
Union Relations (<i>EMP_str_A</i>)	Union Relations (<i>EMP_con_A</i>)
No-Layoff Policy (<i>EMP_str_B</i>)	Employee Health & Safety (<i>EMP_con_B</i>)
Cash Profit Sharing (<i>EMP_str_C</i>)	Workforce Reductions (<i>EMP_con_C</i>)
Employee Involvement (<i>EMP_str_D</i>)	Retirement Benefits Concern (<i>EMP_con_D</i>)
Retirement Benefits Strength (<i>EMP_str_F</i>)	Supply Chain (<i>EMP_con_F</i>)
Employee Health and Safety (<i>EMP_str_G</i>)	Child Labor (<i>EMP_con_G</i>)
Supply Chain Labor Standards (<i>EMP_str_H</i>)	Labor-Management Relations (<i>EMP_con_H</i>)
Labor Management (<i>EMP_str_M</i>)	Labor-Management Relations (<i>EMP_con_X</i>)
Controversial Sourcing (<i>EMP_str_N</i>)	
Compensation & Benefits (<i>EMP_str_I</i>)	
Employee Relations (<i>EMP_str_J</i>)	
Professional Development (<i>EMP_str_K</i>)	
Human Capital Management (<i>EMP_str_L</i>)	
Other Strength (<i>EMP_str_X</i>)	

Appendix C contd.

Strengths	Concerns
<i>V. Environmental Policies</i>	
Environmental Opportunities (<i>ENV_str_A</i>)	Hazardous Waste (<i>ENV_con_A</i>)
Waste Management (<i>ENV_str_B</i>)	Regulatory Compliance (<i>ENV_con_B</i>)
Packaging Materials & Waste (<i>ENV_str_C</i>)	Ozone Depleting Chemicals (<i>ENV_con_C</i>)
Climate Change (<i>ENV_str_D</i>)	Toxic Spills & Releases (<i>ENV_con_D</i>)
Property, Plant, Equipment (<i>ENV_str_F</i>)	Agriculture Chemicals (<i>ENV_con_E</i>)
Environmental Management Systems (<i>ENV_str_G</i>)	Climate Change (<i>ENV_con_F</i>)
Water Stress (<i>ENV_str_H</i>)	Impact of Products & Services (<i>ENV_con_G</i>)
Biodiversity & Land Use (<i>ENV_str_I</i>)	Biodiversity & Land Use (<i>ENV_con_H</i>)
Raw Material Sourcing (<i>ENV_str_J</i>)	Operational Waste (<i>ENV_con_I</i>)
Natural Resource Use (<i>ENV_str_K</i>)	Supply Chain Management (<i>ENV_con_J</i>)
Env. Opportunities in Green Buildings (<i>ENV_str_L</i>)	Water Management (<i>ENV_con_K</i>)
Env. Opportunities in Renewable Energy (<i>ENV_str_M</i>)	Other Concerns (<i>ENV_con_X</i>)
Electronic Waste (<i>ENV_str_N</i>)	
Energy Efficiency (<i>ENV_str_O</i>)	
Product Carbon Footprint (<i>ENV_str_P</i>)	
Insuring Climate Change Risk (<i>ENV_str_Q</i>)	
Other Strengths (<i>ENV_str_X</i>)	
<i>VI. Human Rights</i>	
Positive Record in South Africa (<i>HUM_str_A</i>)	South Africa (<i>HUM_con_A</i>)
Indigenous Peoples Relations Strength (<i>HUM_str_D</i>)	Northern Ireland (<i>HUM_con_B</i>)
Labor Rights Strength (<i>HUM_str_G</i>)	Support for Controversial Regimes (<i>HUM_con_C</i>)
Human Rights Policies & Initiatives (<i>HUM_str_X</i>)	Mexico (<i>HUM_con_D</i>)
	Labor Rights Concern (<i>HUM_con_F</i>)
	Indigenous Peoples Relations Concern (<i>HUM_con_G</i>)
	Operations in Sudan (<i>HUM_con_H</i>)
	Freedom of Expression & Censorship (<i>HUM_con_J</i>)
	Human Rights Violations (<i>HUM_con_K</i>)
	Other Concerns (<i>HUM_con_X</i>)
<i>VII. Product Quality and Safety</i>	
Quality (<i>PRO_str_A</i>)	Product Quality & Safety (<i>PRO_con_A</i>)
R&D Innovation (<i>PRO_str_B</i>)	Marketing & Advertising (<i>PRO_con_D</i>)
Social Opportunities (<i>PRO_str_C</i>)	Anticompetitive Practices (<i>PRO_con_E</i>)
Access to Finance (<i>PRO_str_D</i>)	Customer Relations (<i>PRO_con_F</i>)
Access to Communications (<i>PRO_str_E</i>)	Privacy & Data Security (<i>PRO_con_G</i>)
Opportunities in Nutrition and Health (<i>PRO_str_F</i>)	Other Concerns (<i>PRO_con_X</i>)
Chemical Safety (<i>PRO_str_G</i>)	
Financial Product Safety (<i>PRO_str_H</i>)	
Privacy and Data Security (<i>PRO_str_I</i>)	
Responsible Investment (<i>PRO_str_J</i>)	
Insuring Health and Demographic Risk (<i>PRO_str_K</i>)	
Other Strengths (<i>PRO_str_X</i>)	

Table 1: Descriptive Statistics

This table presents the descriptive statistics of all the variables for our sample. The sample period is from 1995 to 2018. All the variables are defined in Appendix A. All continuous variables are winsorized at the 1% and 99% levels of the distribution.

Variables	N	Mean	Std Dev	25th Pctl	Median	75th Pctl
I. Hedging						
<i>HEDGE_D</i>	20,095	0.710	0.454	0.000	1.000	1.000
<i>HEDGE_CS</i>	20,095	0.478	0.543	0.000	0.291	0.781
<i>FX_HEDGE_D</i>	20,095	0.524	0.499	0.000	1.000	1.000
<i>FX_HEDGE_CS</i>	20,095	0.228	0.325	0.000	0.038	0.384
<i>IR_HEDGE_D</i>	20,095	0.475	0.499	0.000	0.000	1.000
<i>IR_HEDGE_CS</i>	20,095	0.199	0.308	0.000	0.000	0.330
<i>CMD_HEDGE_D</i>	20,095	0.157	0.364	0.000	0.000	0.000
<i>CMD_HEDGE_CS</i>	20,095	0.035	0.105	0.000	0.000	0.000
<i>HEDGE_C</i>	20,095	13.550	16.190	0.000	7.000	22.000
<i>BW_HEDGE</i>	20,095	4.957	5.734	0.000	2.882	8.301
<i>COMP_HEDGE</i>	18,545	0.470	0.499	0.000	0.000	1.000
II. CSR						
<i>CSR</i>	20,095	-0.051	0.559	-0.394	0.000	0.200
<i>CSR_STRENGTH</i>	20,095	0.341	0.482	0.000	0.167	0.500
<i>CSR_CONCERN</i>	20,095	0.392	0.420	0.000	0.333	0.583
<i>CSR5</i>	20,095	-0.008	0.486	-0.333	0.000	0.202
III. Control						
<i>ASSETS</i> (\$bn)	20,095	6.858	16.678	0.622	1.679	4.998
<i>R&D</i>	20,095	0.033	0.055	0.000	0.005	0.043
<i>LEV</i>	20,095	0.223	0.186	0.055	0.207	0.335
<i>Q</i>	20,095	2.121	1.339	1.266	1.696	2.475
<i>CAPX</i>	20,095	0.051	0.048	0.019	0.035	0.063
<i>ROA</i>	20,095	0.141	0.092	0.093	0.136	0.188
<i>CASH</i>	20,095	0.162	0.169	0.035	0.101	0.233
<i>PPE</i>	20,095	0.258	0.216	0.092	0.191	0.365
<i>CASHVOL</i>	20,095	0.043	0.035	0.021	0.033	0.053
<i>KZINDEX</i>	20,095	5.265	2.255	4.000	5.000	7.000
<i>FIRMAGE</i> (years)	20,095	30.711	20.959	14.000	24.000	43.000
<i>ND_TAXSHIELD</i>	20,095	0.042	0.025	0.025	0.037	0.053
<i>INVENTORY</i>	20,095	0.199	0.207	0.040	0.161	0.275
<i>TRADE_CREDIT</i>	20,095	0.076	0.068	0.030	0.057	0.096
<i>SGROWTH</i>	20,095	0.082	0.176	0.000	0.072	0.161
<i>RET</i>	20,095	0.155	0.422	-0.118	0.112	0.359
<i>TAXLOSS</i>	20,095	0.546	0.498	0.000	1.000	1.000
<i>ASSET_MATURE</i>	10,634	8.234	5.750	3.841	6.808	11.228
<i>RATED</i>	10,634	0.648	0.478	0.000	1.000	1.000
IV. Instrumental						
<i>BLUESTATE</i>	19,930	0.668	0.471	0.000	1.000	1.000
<i>GEOMEANCSR</i>	19,825	-0.055	0.264	-0.226	-0.114	0.144
<i>ZIP3MEANCSR</i>	15,559	-0.070	0.328	-0.294	-0.106	0.142
V. Risk-Taking						
<i>CASH_RISK</i>	16,407	1.382	1.804	0.433	0.743	1.399

Table 1 Contd.

VI. Governance						
<i>CO_OPTION</i>	14,197	0.305	0.320	0.045	0.176	0.488
<i>E_INDEX</i>	19,091	2.981	1.251	2	3	4
VII. Bank Debt						
<i>LOAN_SPREAD</i> (bps)	10,638	173.321	109.660	100.000	150.000	225.000
<i>MATURITY</i> (months)	10,638	51.340	19.553	39.000	60.000	60.000
<i>SECURED</i>	10,638	0.436	0.496	0.000	0.000	1.000
<i>COVENANTS</i>	10,638	1.238	1.251	0.000	1.000	2.000
<i>LOAN_CONC</i>	10,638	0.390	0.286	0.157	0.331	0.564
<i>SYNDICATED</i>	10,638	0.943	0.232	1.000	1.000	1.000
<i>TERM_LOAN</i>	10,638	0.293	0.455	0.000	0.000	1.000
<i>REVOLVER_LOAN</i>	10,638	0.681	0.466	0.000	1.000	1.000
<i>BRIDGE_LOAN</i>	10,638	0.020	0.139	0.000	0.000	0.000
<i>GEN_LOAN</i>	10,638	0.538	0.499	0.000	1.000	1.000
<i>TAKEOVER_LOAN</i>	10,638	0.111	0.314	0.000	0.000	0.000
<i>WORKCAP_LOAN</i>	10,638	0.138	0.345	0.000	0.000	0.000
VIII. Macroeconomic						
<i>DEFAULT_SPREAD</i> (%)	10,638	1.054	0.476	0.770	0.950	1.160
<i>TERM_SPREAD</i> (%)	10,638	1.994	1.289	0.720	2.210	2.650

Table 2: Pearson Correlations

This table presents the Pearson correlations for our sample. All the variables are defined in Appendix A. The signs ***, **, * indicate the significance of the correlation coefficients at the 1%, 5%, and 10% levels, respectively.

	<i>HEDGE_D_{t+1}</i>	<i>HEDGE_CS_{t+1}</i>	<i>CSR_t</i>	<i>ASSETS_t</i>	<i>R&D_t</i>	<i>LEV_t</i>	<i>Q_t</i>	<i>CAPX_t</i>
<i>HEDGE_D_{t+1}</i>								
<i>HEDGE_CS_{t+1}</i>	0.56***							
<i>CSR_t</i>	0.06***	0.11***						
<i>ASSETS_t</i>	0.05***	0.08***	0.13***					
<i>R&D_t</i>	-0.06***	-0.10***	0.05***	-0.07***				
<i>LEV_t</i>	0.18***	0.21***	0.05***	0.13***	-0.21***			
<i>Q_t</i>	-0.16***	-0.12***	0.10***	-0.07***	0.35***	-0.18***		
<i>CAPX_t</i>	-0.04***	-0.02**	-0.02*	0.01*	-0.16***	0.02*	0.02**	
<i>ROA_t</i>	-0.05***	0.02*	0.06***	0.01*	-0.25***	-0.07***	0.38***	0.24***
<i>CASH_t</i>	-0.14***	-0.18***	0.01	-0.12***	0.56***	-0.35***	0.39***	-0.20***
<i>PPE_t</i>	0.02*	0.03***	-0.04***	0.08***	-0.32***	0.20***	-0.18***	0.71***
<i>CASHVOL_t</i>	-0.13***	-0.16***	-0.10***	-0.16***	0.30***	-0.15***	0.22***	0.04***
<i>KZINDEX_t</i>	0.14***	0.10***	-0.11***	-0.01	-0.25***	0.40***	-0.31***	0.38***
<i>FIRMAGE_t</i>	0.09***	0.18***	0.11***	0.34***	-0.17***	0.13***	-0.15***	-0.05***
<i>ND_TAXSHIELD_t</i>	-0.00	-0.04***	0.01	-0.01	-0.05***	0.06***	-0.09***	0.58***
<i>INVENTORY_t</i>	-0.01	0.02**	0.02**	-0.04***	0.14***	-0.03***	0.07***	-0.18***
<i>TRADE_CREDIT_t</i>	-0.00	0.07***	-0.03***	0.01*	-0.19***	-0.07***	-0.09***	-0.01*

	<i>ROA_t</i>	<i>CASH_t</i>	<i>PPE_t</i>	<i>CASHVOL_t</i>	<i>KZINDEX_t</i>	<i>FIRMAGE_t</i>	<i>ND_TAXSHIELD_t</i>	<i>INVENTORY_t</i>
<i>HEDGE_D_{t+1}</i>								
<i>HEDGE_CS_{t+1}</i>								
<i>CSR_t</i>								
<i>ASSETS_t</i>								
<i>R&D_t</i>								
<i>LEV_t</i>								
<i>Q_t</i>								
<i>CAPX_t</i>								
<i>ROA_t</i>								
<i>CASH_t</i>	-0.13***							
<i>PPE_t</i>	0.14***	-0.38***						
<i>CASHVOL_t</i>	-0.09***	0.38***	-0.07***					
<i>KZINDEX_t</i>	-0.13***	-0.48***	0.59***	-0.07***				
<i>FIRMAGE_t</i>	0.04***	-0.27***	0.09***	-0.19***	-0.00			
<i>ND_TAXSHIELD_t</i>	0.17***	-0.18***	0.57***	0.09***	0.39***	-0.04***		
<i>INVENTORY_t</i>	-0.03***	0.05***	-0.21***	0.03***	-0.15***	0.02***	-0.23***	
<i>TRADE_CREDIT_t</i>	0.03***	-0.19***	-0.05***	0.00	0.06***	0.11***	-0.06***	-0.05***

Table 3: Univariate Analysis

This table reports the means (medians) of *CSR*, *HEDGE_D*, and *HEDGE_CS* variables for each CSR score quintile. CSR score quintiles are formed each fiscal year based on *CSR* variable. Quintile 1 (5) contains firms with the lowest (highest) CSR score. The final column reports differences in means (medians) between the top and bottom quintiles, and signs ***, **, * indicate the significance of these differences based on *t*-tests (Wilcoxon rank-sum test) for means (medians) at the 1%, 5%, and 10% levels, respectively. All variables are defined in Appendix A.

Panel A: Means of Quintile Groups

Variable	Lowest CSR Score				Highest CSR Score	Differences in Means
	Q1	Q2	Q3	Q4	Q5	Q5 - Q1
<i>CSR_t</i>	-0.559	-0.272	-0.084	0.165	0.686	1.245***
<i>HEDGE_D_{t+1}</i>	0.697	0.681	0.697	0.712	0.763	0.067***
<i>HEDGE_CS_{t+1}</i>	0.435	0.443	0.447	0.489	0.587	0.152***

Panel B: Medians of Quintile Groups

Variable	Lowest CSR Score				Highest CSR Score	Differences in Medians
	Q1	Q2	Q3	Q4	Q5	Q5 - Q1
<i>CSR_t</i>	-0.583	-0.333	-0.083	0.125	0.595	1.179***
<i>HEDGE_D_{t+1}</i>	1.000	1.000	1.000	1.000	1.000	
<i>HEDGE_CS_{t+1}</i>	0.226	0.230	0.244	0.306	0.464	0.238***

Table 4: Multivariate Analysis of the Influence of CSR on Hedging

This table presents the effect of corporate social responsibility (CSR) on corporate hedging. In Columns 1 and 2, the dependent variable *HEDGE_D* is a dummy variable equal to one if a firm mentions the use of any hedging instruments in its 10-K and is set to zero otherwise. In Columns 3 and 4, the dependent variable *HEDGE_CS* is the scaled count of hedging-related keywords in 10-K. *CSR* is the scaled net score of CSR rating (total strengths subtracting total concerns), based on seven dimensions of CSR (i.e., corporate governance, community activities, diversity, employee relations, environmental policies, human rights, and product quality). The details of these variables and the other controls are in Appendixes A. Industry fixed effects are based on Fama-French 49 industry classifications. Models (1) and (2) present the marginal effects of Probit models at the mean. *T* and *Z*-statistics are reported in parentheses. For models (1) and (3), *T* (*Z*)-statistics are computed using robust standard errors corrected for clustering at the firm level. Signs ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Dep var =	Probit		OLS	
	<i>HEDGE_D_{t+i}</i>		<i>HEDGE_CS_{t+i}</i>	
	(1)	(2)	(3)	(4)
<i>CSR_t</i>	0.039*** (2.760)	0.014** (2.184)	0.082*** (5.084)	0.029*** (4.650)
<i>Ln(ASSETS_t)</i>	0.059*** (7.314)	0.041*** (5.490)	0.067*** (8.096)	0.072*** (9.624)
<i>R&D_t</i>	0.039 (0.194)	-0.107 (-0.727)	0.087 (0.445)	0.270** (1.984)
<i>LEV_t</i>	0.252*** (5.070)	0.090*** (3.660)	0.435*** (8.199)	0.259*** (9.967)
<i>Q_t</i>	-0.023*** (-3.670)	-0.005 (-1.301)	-0.011 (-1.565)	-0.000 (-0.013)
<i>CAPX_t</i>	-0.054 (-0.289)	-0.103 (-1.055)	0.347 (1.629)	0.029 (0.275)
<i>ROA_t</i>	0.169* (1.889)	0.119** (2.507)	0.219*** (2.622)	0.172*** (3.759)
<i>CASH_t</i>	-0.067 (-1.085)	-0.095** (-2.733)	-0.106* (-1.726)	-0.113*** (-3.294)
<i>PPE_t</i>	-0.211*** (-2.700)	-0.09** (-1.897)	-0.133 (-1.538)	-0.278*** (-5.440)
<i>CASHVOL_t</i>	-0.324* (-1.679)	-0.295*** (-2.888)	-0.630*** (-3.149)	-0.181* (-1.742)
<i>KZINDEX_t</i>	0.024*** (4.726)	-0.003 (-1.141)	0.008 (1.417)	0.000 (0.067)
<i>Ln(FIRMAGE_t)</i>	-0.022 (-1.438)	-0.032* (-1.393)	0.013 (0.769)	-0.164*** (-7.236)
<i>ND_TAXSHIELD_t</i>	-0.031 (-0.080)	0.275 (1.212)	-0.597 (-1.443)	-0.352 (-1.546)
<i>INVENTORY_t</i>	-0.018 (-0.352)	-0.051* (-1.446)	0.052 (0.868)	0.095*** (2.829)
<i>TRADE_CREDIT_t</i>	0.001 (0.008)	-0.02 (-0.206)	0.479** (2.330)	-0.003 (-0.034)
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	No	Yes	No
Firm FE	No	Yes	No	Yes
Observations	20,095	8,721	20,095	19,951
Pseudo/Adjusted R ²	0.171	0.377	0.206	0.655

Table 5: The Influence of CSR on Hedging - Instrumental Variable (IV) Approach

This table presents the results of instrumental variables (IV) estimation of CSR on corporate hedging. Panel A uses state-level democratic inclination as an IV, where *BLUESTATE* is a dummy variable set equal to one if a firm is headquartered in a democratic state and zero otherwise. Panel B uses two geography-based IVs, where *GEOMEANCSR* (*ZIP3MEANCSR*) is the average CSR of all other firms headquartered within a 250-km radius (in the same three-digit zip code) of the firm. *HEDGE_D* is a dummy variable equal to one if a firm mentions the use of any hedging instruments in its 10-K and is set to zero otherwise. *HEDGE_CS* is the scaled count of hedging-related keywords in 10-K. *CSR* is the scaled net score of CSR rating (total strengths subtracting total concerns), based on seven dimensions of CSR. In the first stage of 2SLS, we regress *CSR* variable on contemporaneous control variables and the instruments. The details of all the variables are in Appendixes A. Specifications that use *HEDGE_D* as the dependent variable present marginal effects of IV Probit models at the mean. *T* and *Z*-statistics are reported in parentheses. Signs ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Panel A: State-level Democratic Inclination as an Instrumental Variable

Dep var =	First Stage	Second Stage	
	<i>CSR_t</i>	<i>HEDGE_D_{t+1}</i>	<i>HEDGE_CS_{t+1}</i>
	(1)	(2)	(3)
Predicted <i>CSR_t</i>		1.086*** (3.06)	1.057*** (4.54)
<i>BLUESTATE_t</i>	0.048*** (6.01)		
<i>Ln(ASSETS_t)</i>	0.070*** (24.02)	0.095** (2.16)	-0.002 (-0.09)
<i>R&D_t</i>	0.501*** (5.14)	-0.408 (-1.21)	-0.421** (-2.28)
<i>LEV_t</i>	0.003 (0.15)	0.669*** (6.92)	0.425*** (13.26)
<i>Q_t</i>	0.007** (1.97)	-0.071*** (-6.68)	-0.018*** (-3.34)
<i>CAPX_t</i>	0.488*** (4.18)	-0.616* (-1.67)	-0.133 (-0.67)
<i>ROA_t</i>	0.179*** (3.63)	0.288 (1.64)	0.054 (0.69)
<i>CASH_t</i>	0.060* (1.87)	-0.280*** (-3.18)	-0.183*** (-3.81)
<i>PPE_t</i>	0.004 (0.12)	-0.568*** (-4.99)	-0.119** (-2.52)
<i>CASHVOL_t</i>	-0.388*** (-3.34)	-0.435 (-1.09)	-0.197 (-1.04)
<i>KZINDEX_t</i>	-0.023*** (-9.67)	0.089*** (12.59)	0.031*** (4.83)
<i>Ln(FIRMAGE_t)</i>	0.004 (0.68)	-0.065*** (-3.51)	0.009 (0.99)
<i>ND_TAXSHIELD_t</i>	1.436*** (7.19)	-1.487* (-1.95)	-1.987*** (-4.55)
<i>INVENTORY_t</i>	-0.006 (-0.27)	-0.031 (-0.51)	0.060** (1.97)
<i>TRADE_CREDIT_t</i>	-0.132** (-2.16)	0.133 (0.74)	0.615*** (6.79)
Year FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Observations	19,930	19,930	19,930
Adjusted/Pseudo R ²	0.267		0.138
<i>Endogeneity and relevance tests</i>			
Wald test <i>p</i> -value		0.024**	
Cragg-Donald Wald <i>F</i> -stat			36.152***
Hausman <i>p</i> -value			0.000***

Panel B: Average CSR of Geographically Closed Firms as an Instrumental Variable

Dep var =	<i>GEOMEANCSR_t</i>			<i>ZIP3MEANCSR_t</i>		
	First Stage	Second Stage		First Stage	Second Stage	
	<i>CSR_t</i>	<i>HEDGE_D_{t+1}</i>	<i>HEDGE_CS_{t+1}</i>	<i>CSR_t</i>	<i>HEDGE_D_{t+1}</i>	<i>HEDGE_CS_{t+1}</i>
	(1)	(2)	(3)	(4)	(5)	(6)
Predicted <i>CSR_t</i>		0.540*** (2.720)	0.224*** (2.981)		0.700** (2.316)	0.254** (2.214)
<i>GEOMEANCSR_t</i>	0.509*** (12.164)					
<i>ZIP3MEANCSR_t</i>				0.174*** (7.799)		
<i>Ln(ASSETS_t)</i>	0.077*** (23.686)	0.149*** (6.746)	0.056*** (8.674)	0.088*** (23.846)	0.124*** (3.200)	0.055*** (5.189)
<i>R&D_t</i>	0.491*** (4.504)	-0.145 (-0.486)	0.003 (0.031)	0.325*** (2.704)	-0.154 (-0.487)	0.030 (0.260)
<i>LEV_t</i>	0.023 (0.884)	0.733*** (10.181)	0.423*** (18.086)	0.015 (0.537)	0.638*** (7.488)	0.339*** (13.094)
<i>Q_t</i>	0.006 (1.545)	-0.072*** (-6.990)	-0.011*** (-2.906)	0.011** (2.292)	-0.076*** (-6.617)	-0.014*** (-3.175)
<i>CAPX_t</i>	0.527*** (4.009)	-0.367 (-1.000)	0.295** (2.317)	0.648*** (4.236)	-0.561 (-1.242)	0.326** (2.077)
<i>ROA_t</i>	0.182*** (3.275)	0.468*** (3.059)	0.191*** (3.627)	0.111* (1.767)	0.512*** (2.980)	0.152*** (2.670)
<i>CASH_t</i>	0.046 (1.271)	-0.240*** (-2.593)	-0.103*** (-3.120)	0.078* (1.941)	-0.378*** (-3.721)	-0.113*** (-3.028)
<i>PPE_t</i>	-0.012 (-0.321)	-0.625*** (-6.121)	-0.132*** (-3.819)	-0.057 (-1.291)	-0.339*** (-2.725)	-0.007 (-0.180)
<i>CASHVOL_t</i>	-0.350*** (-2.695)	-0.732** (-2.101)	-0.603*** (-4.931)	-0.267* (-1.822)	-0.389 (-1.018)	-0.395*** (-2.922)
<i>KZINDEX_t</i>	-0.027*** (-9.980)	0.086*** (10.741)	0.013*** (4.187)	-0.027*** (-8.840)	0.078*** (8.260)	0.008* (1.909)
<i>Ln(FIRMAGE_t)</i>	0.003 (0.440)	-0.073*** (-3.856)	0.013** (2.085)	0.012 (1.521)	-0.087*** (-4.126)	0.017** (2.338)
<i>ND_TAXSHIELD_t</i>	1.734*** (7.718)	-0.891 (-1.305)	-0.867*** (-3.567)	1.681*** (6.605)	-2.307*** (-2.919)	-1.124*** (-3.731)
<i>INVENTORY_t</i>	0.001 (0.030)	-0.046 (-0.744)	0.053** (2.388)	0.015 (0.566)	-0.102 (-1.548)	0.058** (2.434)
<i>TRADE_CREDIT_t</i>	-0.160** (-2.339)	0.090 (0.489)	0.515*** (8.097)	-0.124 (-1.592)	0.070 (0.338)	0.477*** (6.682)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	19,825	19,762	19,825	15,559	15,460	15,559
Adjusted R ²	0.253		0.187	0.271		0.177
<i>Endogeneity and relevance tests</i>						
Wald test <i>p</i> -value		0.036**			0.079*	
Cragg-Donald Wald <i>F</i> -stat			147.955***			60.819***
Hausman <i>p</i> -value			0.045**			0.096*

Table 6: The Influence of CSR on Hedging - Entropy Balancing Approach

This table presents the results of the Entropy balancing technique. Each year *CSR* is ranked into quintiles, and the firms in the top quintile are placed in the treatment group, and those in the bottom quartile are placed in the control group. A dummy variable *HIGH_CSR* is set equal to one for firm-year observations in the treatment group and set equal to zero for the observations in the control group. The entropy balancing technique is then employed that reweights observations of the control group to achieve covariates (except our dependent hedging variables) balances between the treatment and the control group in the first three moments (i.e., mean, variance, and skewness). Panel A reports summary statistics of observations in both groups. The standardized difference (Std. Diff.) for each covariate is the difference in means between treatment and control groups divided by the standard deviation of the treatment group. The variance ratio (Var. Ratio) for each covariate is the ratio of the variance in the treatment group scaled by variance for the control group. Panel B reports multivariate regression that includes the treatment and the control group samples. The main independent variable of interest is *HIGH_CSR*; all the other control variables are from post-entropy balancing implementation. *HEDGE_D* is a dummy variable equal to one if a firm mentions the use of any hedging instruments in its 10-K and is set to zero otherwise. *HEDGE_CS* is the scaled count of hedging-related keywords in 10-K. The details of these variables and the other controls are in Appendixes A. Models (1) presents the marginal effect of the Probit model at the mean. *T* and *Z*-statistics are reported in parentheses and are computed using robust standard errors corrected for clustering at the firm level. Signs ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Summary Statistics after Entropy Balancing

Covariate	Treatment (<i>HIGH_CSR</i> = 1) (N = 3,918)			Control (<i>HIGH_CSR</i> = 0) (N = 5,603)			Std. Diff.	Var. Ratio
	Mean	Variance	Skewness	Mean	Variance	Skewness		
<i>Ln(ASSETS)</i>	8.170	2.825	0.077	8.170	2.825	0.077	0.000	1.000
<i>R&D</i>	0.037	0.003	2.014	0.037	0.003	2.014	0.000	1.000
<i>LEV</i>	0.225	0.030	0.671	0.225	0.030	0.671	0.000	1.000
<i>Q</i>	2.243	1.809	1.959	2.243	1.809	1.959	0.000	1.000
<i>CAPX</i>	0.051	0.002	2.181	0.051	0.002	2.181	0.000	1.000
<i>ROA</i>	0.153	0.008	0.089	0.153	0.008	0.089	0.000	1.000
<i>CASH</i>	0.166	0.025	1.326	0.166	0.025	1.326	0.000	1.000
<i>PPE</i>	0.258	0.045	1.217	0.258	0.045	1.217	0.000	1.000
<i>CASHVOL</i>	0.039	0.001	2.263	0.039	0.001	2.263	0.000	1.000
<i>KZINDEX</i>	4.912	4.417	0.313	4.912	4.417	0.313	0.000	1.000
<i>Ln(FIRMAGE)</i>	3.380	0.488	-0.268	3.380	0.488	-0.268	0.000	1.000
<i>ND_TAXSHIELD</i>	0.043	0.001	1.293	0.043	0.001	1.293	0.000	1.000
<i>INVENTORY</i>	0.201	0.043	2.248	0.201	0.043	2.248	0.000	1.000
<i>TRADE_CREDIT</i>	0.071	0.004	2.211	0.071	0.004	2.211	0.000	1.000

Table 6 Panel B: Regressions after Entropy Balancing

Dep var =	<i>HEDGE_D</i> _{<i>t+1</i>}	<i>HEDGE_CS</i> _{<i>t+1</i>}
	(1)	(2)
<i>HIGH_CSR</i> _{<i>t</i>}	0.058*** (3.217)	0.120*** (5.106)
<i>Ln(ASSETS)</i> _{<i>t</i>}	0.048*** (5.304)	0.062*** (5.908)
<i>R&D</i> _{<i>t</i>}	-0.072 (-0.265)	0.193 (0.643)
<i>LEV</i> _{<i>t</i>}	0.269*** (4.069)	0.552*** (6.545)
<i>Q</i> _{<i>t</i>}	-0.022*** (-2.746)	-0.002 (-0.244)
<i>CAPX</i> _{<i>t</i>}	-0.293 (-1.140)	0.202 (0.621)
<i>ROA</i> _{<i>t</i>}	0.113 (0.917)	0.162 (1.235)
<i>CASH</i> _{<i>t</i>}	0.001 (0.018)	-0.120 (-1.319)
<i>PPE</i> _{<i>t</i>}	-0.200** (-2.043)	-0.132 (-0.987)
<i>CASHVOL</i> _{<i>t</i>}	-0.160 (-0.604)	-0.678* (-1.929)
<i>KZINDEX</i> _{<i>t</i>}	0.018*** (2.844)	-0.006 (-0.737)
<i>Ln(FIRMAGE)</i> _{<i>t</i>}	-0.037* (-1.788)	-0.017 (-0.698)
<i>ND_TAXSHIELD</i> _{<i>t</i>}	0.263 (0.527)	0.140 (0.233)
<i>INVENTORY</i> _{<i>t</i>}	0.059 (0.902)	0.187* (1.872)
<i>TRADE_CREDIT</i> _{<i>t</i>}	-0.063 (-0.337)	0.589** (2.100)
Year FE	Yes	Yes
Industry FE	Yes	Yes
Observations	9,464	9,521
Pseudo/Adjusted R ²	0.180	0.221

Table 7: The Influence of CSR and Hedging on Cash Risk

This table presents the effect of corporate social responsibility (CSR) on firms' cash risk. For Columns 1 and 2, a firm is defined as a hedger if it uses any hedging instrument for a given year; otherwise, the firm is identified as a non-hedger. In column 3, *HEDGE_QNTL* represents the quintile group for each firm-year observation formed each fiscal year based on *HEDGE_CS* variable. The dependent variable is *CASH_RISK*, which is the standard deviation of quarterly operating cash flow over the eight quarters succeeding a given fiscal year-end t , scaled by the absolute value of the mean over the same period. *CSR* is the scaled net score of CSR rating (total strengths subtracting total concerns), based on seven dimensions of CSR (i.e., corporate governance, community activities, diversity, employee relations, environmental policies, human rights, and product quality). The details of these variables and the other controls are in Appendixes A. T -statistics (in parentheses) are computed using robust standard errors corrected for clustering at the firm level. Signs ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Dep var = <i>CASH_RISK</i>	Hedgers	Non-Hedgers	Full sample
	(1)	(2)	(3)
$CSR_{t-1} \times HEDGE_QNTL_{t-1}$			-0.026** (-1.978)
$HEDGE_QNTL_{t-1}$			-0.005 (-0.477)
CSR_t	-0.060** (-2.074)	-0.015 (-0.203)	0.052 (0.904)
$Ln(ASSETS_t)$	-0.122*** (-8.663)	-0.185*** (-8.150)	-0.141*** (-11.126)
$R\&D_t$	2.724*** (4.850)	2.294** (2.527)	2.722*** (5.435)
LEV_t	-0.147 (-1.352)	0.192 (0.956)	-0.076 (-0.792)
Q_t	-0.207*** (-11.300)	-0.171*** (-6.530)	-0.182*** (-11.902)
$CAPX_t$	0.515 (0.937)	-0.171 (-0.189)	0.231 (0.483)
PPE_t	-0.443** (-2.562)	-0.885*** (-3.598)	-0.547*** (-3.836)
$SGROWTH_t$	-0.202** (-2.498)	-0.218 (-1.300)	-0.177** (-2.355)
RET_t	0.022 (0.685)	0.008 (0.144)	0.011 (0.411)
$TAXLOSS_t$	0.060* (1.687)	0.123** (1.977)	0.069** (2.168)
Year FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Observations	11,311	5,096	16,405
Adjusted R ²	0.113	0.114	0.111

Table 8: The Influence of CSR and Hedging on Cost of Debt

This table reports the effect of corporate social responsibility (CSR) on the cost of bank debt for the firms differing in corporate hedging activity. For Columns 1–4, a firm is defined as hedger if it uses any hedging instrument for a given year, otherwise, the firm is identified as a non-hedger. In column 5, *HEDGE_QNTL* represents the quintile group for each firm-year observation formed each fiscal year based on *HEDGE_CS* variable. The dependent variable is the natural logarithm of loan spreads (all-in-spread-drawn). *CSR* is the scaled net score of CSR rating (total strengths subtracting total concerns), based on seven dimensions of CSR (i.e., corporate governance, community activities, diversity, employee relations, environmental policies, human rights, and product quality). The regressors are lagged *CSR* and firm variables, loan type, loan purpose, and macroeconomic controls. The details of these variables are in Appendixes A. *T*-statistics (in parentheses) are computed using robust standard errors corrected for clustering at the firm level. Signs ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table 8

Dep var =	Ln (<i>LOAN_SPREAD_t</i>)				
	Hedgers		Non-Hedgers		Full sample
	(1)	(2)	(3)	(4)	(5)
<i>CSR_{t-1}</i> × <i>HEDGE_QNTL_{t-1}</i>					-0.014** (-2.001)
<i>HEDGE_QNTL_{t-1}</i>					-0.008** (-2.506)
<i>CSR_{t-1}</i>	-0.091*** (-3.429)	-0.048** (-2.242)	-0.006 (-0.108)	0.011 (0.294)	0.034 (1.638)
<i>Ln(ASSETS_{t-1})</i>	-0.135*** (-13.156)	-0.152*** (-16.983)	-0.260*** (-12.851)	-0.279*** (-14.495)	-0.181*** (-36.995)
<i>LEV_{t-1}</i>	0.684*** (9.075)	0.062 (0.945)	0.490*** (2.935)	-0.498*** (-3.633)	-0.069** (-2.070)
<i>Q_{t-1}</i>	-0.099*** (-5.450)	-0.064*** (-4.368)	-0.110*** (-3.546)	-0.082*** (-3.658)	-0.057*** (-7.997)
<i>ROA_{t-1}</i>	-1.334*** (-5.693)	-1.085*** (-5.971)	-1.004** (-2.505)	-0.613** (-2.197)	-1.027*** (-11.119)
<i>PPE_{t-1}</i>	-0.085 (-0.712)	0.032 (0.331)	-0.500** (-2.532)	-0.347** (-2.228)	-0.043 (-0.973)
<i>ASSET_MATURE_{t-1}</i>	-0.007** (-2.113)	-0.003 (-1.044)	0.005 (0.913)	0.003 (0.573)	-0.002 (-1.540)
<i>KZINDEX_{t-1}</i>	0.029*** (4.499)	0.013*** (2.817)	0.038*** (2.816)	0.022** (2.086)	0.016*** (5.720)
<i>RATED_{t-1}</i>	0.040 (1.542)	0.016 (0.747)	0.081 (1.038)	0.058 (1.092)	0.018 (1.596)
<i>MATURITY_t</i>		0.004*** (7.145)		0.006*** (8.354)	0.004*** (12.654)
<i>SECURED_t</i>		0.369*** (20.969)		0.495*** (11.973)	0.426*** (40.436)
<i>COVENANTS_t</i>		-0.004 (-0.541)		0.030** (2.057)	-0.006 (-1.560)
<i>Ln(LOAN_CONC_t)</i>		-0.159*** (-12.292)		-0.309*** (-12.006)	-0.200*** (-31.033)
<i>SYNDICATED_t</i>		-0.021 (-0.712)		-0.065 (-1.235)	-0.054** (-2.457)
<i>TERM_LOAN_t</i>		0.047 (0.680)		0.251* (1.920)	0.081 (1.327)
<i>REVOLVER_LOAN_t</i>		-0.162** (-2.358)		-0.102 (-0.778)	-0.194*** (-3.171)
<i>BRIDGE_LOAN_t</i>		0.194** (2.191)		0.623*** (3.890)	0.420*** (5.467)
<i>GEN_LOAN_t</i>		-0.102*** (-4.637)		-0.099*** (-2.642)	-0.115*** (-8.668)

Table 8 contd.

	Hedgers		Non-Hedgers		Full sample
	(1)	(2)	(3)	(4)	(5)
<i>TAKEOVER_LOAN_i</i>		0.089*** (3.250)		0.121** (2.357)	0.073*** (4.277)
<i>WORKCAP_LOAN_i</i>		-0.127*** (-4.599)		-0.071 (-1.565)	-0.124*** (-7.204)
<i>DEFAULT_SPREAD_i</i>	-0.059** (-2.018)	-0.056** (-2.233)	-0.001 (-0.013)	-0.023 (-0.416)	-0.064*** (-3.402)
<i>TERM_SPREAD_i</i>	0.031* (1.867)	0.049*** (3.873)	-0.005 (-0.177)	0.039* (1.825)	0.043*** (4.653)
Year FE	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes
Observations	7,674	7,674	2,960	2,960	10,634
Adjusted R ²	0.410	0.593	0.491	0.695	0.615

Table 9: The Influence of Corporate Governance Quality

This table illustrates the influence of CSR on corporate hedging practices across different tiers of corporate governance quality. The dependent variable $HEDGE_CS$ is the scaled count of hedging-related keywords in 10-K. In Columns 1 and 2, two subsamples are formed based on board co-option variable, CO_OPTION , which is the tenure-weighted measure of co-opted directors as a fraction of the total board. A firm is assigned to the high board co-option if CO_OPTION has an above the sample year-median value; otherwise, it is assigned to the low board co-option group. In Columns 3 and 4, a firm is placed in the high CEO entrenchment group if E_INDEX is above 3; otherwise, it is assigned to the low CEO entrenchment group. CSR is the scaled net score of CSR rating (total strengths subtracting total concerns), based on seven dimensions of CSR. The details of these variables and the other controls are in Appendixes A. T -statistics (in parentheses) are computed using robust standard errors corrected for clustering at the firm level. Signs ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Dep var =	High Co-option	Low Co-option	High Entrenchment	Low Entrenchment
	$HEDGE_CS_{t+1}$		$HEDGE_CS_{t+1}$	
	(1)	(2)	(3)	(4)
CSR_t	0.003 (0.231)	0.038** (2.291)	0.021 (1.467)	0.029** (2.459)
$Ln(ASSETS_t)$	0.094*** (3.617)	0.105*** (3.089)	0.093*** (2.669)	0.060*** (2.855)
$R\&D_t$	-0.152 (-0.415)	0.702 (1.522)	0.220 (0.783)	-0.065 (-0.224)
LEV_t	0.296*** (3.826)	0.260** (2.530)	0.250*** (2.904)	0.260*** (4.162)
Q_t	0.010 (1.275)	-0.009 (-0.820)	-0.005 (-0.596)	0.008 (1.178)
$CAPX_t$	0.308 (1.357)	-0.077 (-0.261)	-0.332 (-1.392)	0.180 (0.951)
ROA_t	0.040 (0.345)	0.290** (2.060)	0.297*** (3.257)	0.104 (1.042)
$CASH_t$	-0.057 (-0.631)	-0.026 (-0.251)	-0.111 (-1.424)	-0.100 (-1.476)
PPE_t	-0.400** (-2.464)	-0.388** (-1.966)	-0.004 (-0.022)	-0.225* (-1.837)
$CASHVOL_t$	-0.075 (-0.235)	0.113 (0.293)	0.122 (0.438)	-0.362 (-1.355)
$KZINDEX_t$	-0.009 (-1.198)	0.011 (1.361)	-0.002 (-0.216)	-0.001 (-0.226)
$Ln(FIRMAGE_t)$	0.003 (0.169)	-0.028 (-1.035)	-0.011 (-0.230)	-0.024 (-1.065)
$ND_TAXSHIELD_t$	1.119* (1.759)	-0.184 (-0.277)	-0.223 (-0.332)	-0.360 (-0.887)
$INVENTORY_t$	0.111 (1.155)	0.072 (0.631)	0.035 (0.494)	0.126 (1.198)
$TRADE_CREDIT_t$	0.544* (1.648)	-0.310 (-0.834)	0.372 (1.102)	-0.087 (-0.329)
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Observations	6,814	6,916	6,534	12,279
Adjusted R ²	0.723	0.675	0.735	0.661

Table 10: CSR and Specific Hedging Instruments

This table presents the effect of corporate social responsibility (CSR) on different types of hedging instruments. *FX_HEDGE_D*, *IR_HEDGE_D*, and *CMD_HEDGE_D* are dummy variables set equal to one if a firm mentions the use of foreign exchange, interest rate, and commodity hedging in its 10-K, respectively. *FX_HEDGE_CS*, *IR_HEDGE_CS*, and *CMD_HEDGE_CS* are scaled counts of foreign exchange, interest rate, and commodity hedging-related keywords in 10-K, respectively. *CSR* is the scaled net score of CSR rating (total strengths subtracting total concerns), based on seven dimensions of CSR (i.e., corporate governance, community activities, diversity, employee relations, environmental policies, human rights, and product quality). The controls are the same as in Table 4. The details of all the variables are in Appendix A and B. Models (1), (3), and (5) present the marginal effects of Probit models at the mean. *T* and *Z*-statistics are reported in parentheses and are computed using robust standard errors corrected for clustering at the firm level. Signs ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Foreign Exchange Hedging		
	<i>FX_HEDGE_D</i> _{<i>t</i>+1}	<i>FX_HEDGE_CS</i> _{<i>t</i>+1}
<i>CSR</i> _{<i>t</i>}	0.046*** (2.594)	0.040*** (4.262)
<i>Controls</i> _{<i>t</i>}	Yes	Yes
Year FE	Yes	Yes
Industry FE	Yes	Yes
Observations	20,095	20,095
Pseudo/Adjusted R ²	0.225	0.217
Panel B: Interest Rate Hedging		
	<i>IR_HEDGE_D</i> _{<i>t</i>+1}	<i>IR_HEDGE_CS</i> _{<i>t</i>+1}
<i>CSR</i> _{<i>t</i>}	0.037** (2.355)	0.029*** (3.36)
<i>Controls</i> _{<i>t</i>}	Yes	Yes
Year FE	Yes	Yes
Industry FE	Yes	Yes
Observations	20,095	20,095
Pseudo/Adjusted R ²	0.182	0.177
Panel C: Commodity Hedging		
	<i>CMD_HEDGE_D</i> _{<i>t</i>+1}	<i>CMD_HEDGE_CS</i> _{<i>t</i>+1}
<i>CSR</i> _{<i>t</i>}	0.008 (1.074)	0.010*** (2.939)
<i>Controls</i> _{<i>t</i>}	Yes	Yes
Year FE	Yes	Yes
Industry FE	Yes	Yes
Observations	19,720	20,095
Pseudo/Adjusted R ²	0.35	0.305

Table 11: The Industry-wise Effect of CSR on Hedging

This table presents the influence of CSR on corporate hedging for different Fama-French 49 (FF49) industries. Panel A presents summary statistics of our main variables across different FF49 industries. *HEDGE_CS* is the scaled count of hedging-related keywords in 10-K. *CSR* is the scaled net score of CSR rating (total strengths subtracting total concerns), based on seven dimensions of CSR. The details of these variables are in Appendixes B and C. Panel B reports multivariate OLS estimation of CSR on corporate hedging for different FF49 industries. Due to a small number of firms, we combine firms in Agriculture, Food Products, and Candy & Soda, firms in Apparel and Textiles, firms in Defense, Precious Metals, Non-Metallic, and Industrial Metal Mining, firms in Coal, Petroleum and Natural Gas. We separately run our main model in Table 3 (Model 1) for each FF49 industry, where the dependent variable is *HEDGE_CS*, and the main regressor is *CSR*. All the control variables are defined in Appendix A. All regressions use year fixed effects. Signs ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table 11 Panel A: Industry-wise Summary Statistics

Industry	Observations	CSR		HEDGE_CS	
		Mean	Median	Mean	Median
Agriculture	62	-0.471	-0.533	0.561	0.207
Food Products	515	0.143	0.083	0.666	0.351
Candy & Soda	61	-0.142	-0.167	0.667	0.737
Beer & Liquor	123	0.133	0.000	0.845	0.787
Tobacco Products	66	-0.322	-0.405	0.232	0.024
Recreation	136	0.078	0.000	0.699	0.704
Entertainment	265	-0.181	-0.167	0.433	0.310
Printing and Publishing	221	0.184	0.125	0.367	0.173
Consumer Goods	468	0.271	0.167	0.661	0.542
Apparel	411	-0.018	0.000	0.663	0.500
Healthcare	393	-0.209	-0.250	0.368	0.160
Medical Equipment	658	-0.008	0.000	0.522	0.387
Pharmaceutical P	1,007	0.033	0.000	0.257	0.000
Chemicals	699	-0.212	-0.167	0.783	0.687
Rubber and Products	132	-0.053	0.000	0.680	0.440
Textiles	86	0.061	0.000	0.493	0.289
Construction Mat	500	-0.092	0.000	0.352	0.188
Construction	408	-0.187	-0.167	0.144	0.000
Steel Works etc.	413	-0.178	-0.167	0.567	0.440
Fabricated Products	44	-0.140	-0.183	0.515	0.558
Machinery	1,001	-0.050	0.000	0.669	0.621
Electrical Equipment	342	-0.142	-0.133	0.708	0.507
Automobiles and Trucks	461	-0.156	-0.143	0.583	0.540
Aircraft	154	-0.164	-0.333	0.809	0.709
Shipbuilding, Railroad Equipment	86	-0.414	-0.451	0.839	0.819
Defense	72	-0.216	-0.225	0.207	0.088
Precious Metals	67	-0.152	-0.342	0.336	0.285
Non-Metallic and Industrial Metal Mining	101	-0.055	-0.075	0.318	0.205
Coal	28	-0.612	-0.938	0.279	0.206
Petroleum and Natural Gas	927	-0.105	-0.222	0.667	0.567
Communication	484	-0.056	0.000	0.355	0.180
Personal Services	267	-0.153	-0.158	0.382	0.070
Business Services	1,060	-0.036	0.000	0.384	0.118
Computer Hardware	520	0.079	0.000	0.486	0.378
Computer Software	1,517	0.011	0.000	0.343	0.158
Electronic Equipment	1,473	-0.023	-0.042	0.385	0.235
Measuring and Control Equipment	577	0.024	0.000	0.577	0.448
Business Supplies	396	0.086	0.000	0.561	0.438
Shipping Containers	119	-0.090	0.000	0.781	0.853
Transportation	680	-0.148	-0.117	0.410	0.123
Wholesale	822	-0.109	0.000	0.547	0.361
Retail	1,637	-0.088	-0.042	0.327	0.034
Restaurants, Hotels, Motels	488	-0.008	0.000	0.423	0.201
Others	148	-0.088	0.000	0.411	0.327

Table 11 Panel B: Industry-wise Multivariate Regressions

Industry	N	Coefficient on <i>CSR</i>	<i>T</i> -statistics
Agriculture, Food Products, Candy & Soda	515	0.106**	(2.473)
Beer & Liquor	123	0.117	(1.330)
Tobacco Products	58	0.140*	(1.898)
Recreation	136	-0.033	(-0.330)
Entertainment	263	0.121	(1.534)
Printing and Publishing	221	0.036	(0.384)
Consumer Goods	468	-0.290***	(-4.938)
Apparel and Textiles	497	0.107**	(2.011)
Healthcare	389	0.146***	(3.000)
Medical Equipment	658	0.045	(0.881)
Pharmaceutical Products	1,007	0.129***	(5.178)
Chemicals	699	0.009	(0.183)
Rubber and Plastic Products	132	-0.079	(-0.921)
Construction	500	0.152***	(3.801)
Steel Works etc.	413	-0.080	(-1.425)
Fabricated Products	36	0.286	(0.800)
Machinery	1,001	0.158***	(4.241)
Electrical Equipment	342	-0.083	(-0.853)
Automobiles and Trucks	461	0.032	(0.603)
Aircraft	154	0.157	(1.391)
Shipbuilding, Railroad Equipment	83	0.355*	(1.958)
Defense, Precious Metals, Non-Metallic and Industrial Metal Mining	240	0.008	(0.257)
Coal, Petroleum and Natural Gas	955	0.092***	(3.130)
Communication	484	0.090**	(2.352)
Personal Services	267	0.068	(0.799)
Business Services	1,060	0.012	(0.348)
Computer Hardware	520	0.046	(1.138)
Computer Software	1,517	0.050**	(2.094)
Electronic Equipment	1,473	0.012	(0.475)
Measuring and Control Equipment	577	0.130***	(2.751)
Business Supplies	396	0.059	(1.030)
Shipping Containers	118	0.164	(1.585)
Transportation	680	0.337***	(7.982)
Wholesale	822	-0.009	(-0.184)
Retail	1,637	0.118***	(4.917)
Restaurants, Hotels, Motels	488	-0.079	(-1.638)
Others	145	0.012	(0.172)

Table 12: CSR and Alternative Hedging Measures

This table presents the robustness of our results using alternative measures of corporate hedging. In Model (1), the dependent variable $\ln(1+HEDGE_C)$ is the natural logarithm of one plus the number of hedging-related keywords in 10-K from Appendix B. In Model (2), the dependent variable BW_HEDGE is the number of backward-looking hedging sentences used in 10-K scaled by the total number of sentences times 1000. In Model (3), the dependent variable $COMP_HEDGE$ is a dummy variable set equal to one if either of the Compustat items $AOCIDERGL$ and $CIDERGL$ are non-missing, otherwise set to zero. The sample period for Model (3) analysis is 2001–2018. CSR is the scaled net score of CSR rating (total strengths subtracting total concerns), based on seven dimensions of CSR (i.e., corporate governance, community activities, diversity, employee relations, environmental policies, human rights, and product quality). The details of these variables and the other controls are in Appendixes A. Model (3) presents the marginal effects of the Probit model at the mean. $T(Z)$ -statistics (in parentheses) are computed using robust standard errors corrected for clustering at the firm level. Signs ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Dep var =	OLS		Probit
	$\ln(1+HEDGE_C_{t+1})$	BW_HEDGE_{t+1}	$COMP_HEDGE_{t+1}$
	(1)	(2)	(3)
CSR_t	0.170*** (4.342)	0.805*** (4.783)	0.081*** (4.983)
$\ln(ASSETS_t)$	0.257*** (11.499)	0.660*** (7.683)	0.115*** (12.585)
$R\&D_t$	0.298 (0.507)	0.518 (0.254)	0.003 (0.010)
LEV_t	1.154*** (8.180)	5.096*** (8.929)	0.397*** (6.789)
Q_t	-0.072*** (-4.083)	-0.120* (-1.666)	-0.025*** (-2.755)
$CAPX_t$	0.371 (0.708)	3.533 (1.592)	0.312 (1.185)
ROA_t	0.569** (2.458)	2.724*** (3.044)	0.560*** (5.025)
$CASH_t$	-0.288* (-1.682)	-1.610** (-2.472)	-0.299*** (-3.690)
PPE_t	-0.621*** (-2.712)	-1.924** (-2.157)	-0.060 (-0.656)
$CASHVOL_t$	-1.316** (-2.490)	-7.362*** (-3.635)	-0.786*** (-2.808)
$KZINDEX_t$	0.062*** (4.270)	0.107* (1.755)	0.008 (1.229)
$\ln(FIRMAGE_t)$	-0.039 (-0.921)	0.088 (0.484)	0.027 (1.545)
$ND_TAXSHIELD_t$	-0.983 (-0.881)	-5.847 (-1.343)	-1.186** (-2.392)
$INVENTORY_t$	0.014 (0.090)	0.020 (0.034)	0.054 (0.760)
$TRADE_CREDIT_t$	0.874** (1.978)	4.251** (2.205)	-0.171 (-0.921)
Year FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Observations	20,095	20,095	18,545
Pseudo/Adjusted R ²	0.292	0.187	0.207

Table 13: Alternative CSR Measures and Hedging

This table presents the robustness of our baseline results using different measures of CSR. *CSR_STRENGTH* is the scaled total strengths score of CSR rating based on seven dimensions of CSR (i.e., corporate governance, community activities, diversity, employee relations, environmental policies, human rights, and product quality). *CSR_CONCERN* is the scaled total concerns score of CSR rating based on the seven dimensions of CSR. *CSR5* is the scaled net score of CSR rating (total strengths subtracting total concerns), based on five dimensions of CSR (i.e., community activities, diversity, employee relations, environmental policies, and product quality). The dependent variable *HEDGE_CS* is the scaled count of hedging-related keywords in 10-K. The details of these variables and the other controls are in Appendixes A. *T*-statistics (in parentheses) are computed using robust standard errors corrected for clustering at the firm level. Signs ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Dep var =	<i>HEDGE_CS_{t+1}</i>		
	(1)	(2)	(3)
<i>CSR_STRENGTH_t</i>	0.060*** (2.627)		
<i>CSR_CONCERN_t</i>		-0.103*** (-4.492)	
<i>CSR5_t</i>			0.094*** (4.995)
<i>Ln(ASSETS_t)</i>	0.062*** (7.212)	0.085*** (9.822)	0.064*** (7.754)
<i>R&D_t</i>	0.093 (0.469)	0.142 (0.721)	0.070 (0.358)
<i>LEV_t</i>	0.442*** (8.258)	0.422*** (7.898)	0.435*** (8.197)
<i>Q_t</i>	-0.011* (-1.675)	-0.009 (-1.260)	-0.011 (-1.628)
<i>CAPX_t</i>	0.394* (1.820)	0.328 (1.546)	0.343 (1.613)
<i>ROA_t</i>	0.232*** (2.738)	0.218*** (2.598)	0.212** (2.541)
<i>CASH_t</i>	-0.108* (-1.741)	-0.093 (-1.515)	-0.107* (-1.734)
<i>PPE_t</i>	-0.138 (-1.581)	-0.125 (-1.443)	-0.123 (-1.422)
<i>CASHVOL_t</i>	-0.689*** (-3.450)	-0.582*** (-2.903)	-0.634*** (-3.166)
<i>KZINDEX_t</i>	0.007 (1.271)	0.007 (1.201)	0.008 (1.387)
<i>Ln(FIRMAGE_t)</i>	0.011 (0.620)	0.018 (1.051)	0.013 (0.775)
<i>ND_TAXSHIELD_t</i>	-0.581 (-1.394)	-0.442 (-1.074)	-0.617 (-1.492)
<i>INVENTORY_t</i>	0.054 (0.889)	0.049 (0.801)	0.055 (0.914)
<i>TRADE_CREDIT_t</i>	0.478** (2.314)	0.466** (2.280)	0.478** (2.319)
Year FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Observations	20,095	20,095	20,095
Adjusted R ²	0.203	0.205	0.206

Table 14: Dimensions of CSR Measure and Hedging

This table presents the impact of individual dimensions of corporate social responsibility (CSR) on corporate hedging. The dependent variable *HEDGE_CS* is the scaled count of hedging-related keywords in 10-K. The independent variables are seven dimensions of CSR at time *t* which are defined as the sum of total scaled strengths minus total scaled concerns of each of the seven dimensions of CSR: corporate governance, community activities, diversity, employee relations, environmental policies, human rights, and product quality. The scaled strengths (concerns) in a given dimension of CSR are computed by scaling the raw strengths (concerns) by the number of items of the strengths (concerns) in that dimension for a given year. Details on each CSR dimension are in Appendix C. *T*-statistics (in parentheses) are computed using robust standard errors corrected for clustering at the firm level. Signs ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Dep var =	<i>HEDGE_CS_{t+i}</i>						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>Corporate Governance</i>	0.110*** (2.900)						
<i>Community Activities</i>		0.098 (1.516)					
<i>Diversity</i>			0.077*** (2.794)				
<i>Employee Relations</i>				0.135** (2.574)			
<i>Environmental Policies</i>					0.267*** (3.839)		
<i>Human Rights</i>						0.237* (1.828)	
<i>Product Quality and Safety</i>							0.222*** (3.683)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	20,095	20,095	19,096	20,095	20,095	20,095	20,095
Adjusted R ²	0.202	0.202	0.202	0.203	0.204	0.202	0.204

Table 15: The Influence of CSR on Hedging Post-2003

This table presents the influence of corporate social responsibility (CSR) on hedging for the post-2003 sample. The sample period for this analysis is 2003–2018. In Columns 1 and 2, the dependent variable *HEDGE_D* is a dummy variable equal to one if a firm mentions the use of any hedging instruments in its 10-K and is set to zero otherwise. In Columns 3 and 4, the dependent variable *HEDGE_CS* is the scaled count of hedging-related keywords in 10-K. *CSR* is the scaled net score of CSR rating (total strengths subtracting total concerns), based on seven dimensions of CSR (i.e., corporate governance, community activities, diversity, employee relations, environmental policies, human rights, and product quality). The details of these variables and the other controls are in Appendixes A. Models (1) and (2) present marginal effects of Probit models at the mean. *T* and *Z*-statistics are reported in parentheses. For models (1) and (3), *T* (*Z*)-statistics are computed using robust standard errors corrected for clustering at the firm level. Signs ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Dep var =	Probit		OLS	
	<i>HEDGE_D_{t+1}</i>		<i>HEDGE_CS_{t+1}</i>	
	(1)	(2)	(3)	(4)
<i>CSR_t</i>	0.046*** (3.297)	0.019* (1.868)	0.093*** (5.559)	0.026*** (4.200)
<i>Ln(ASSETS_t)</i>	0.055*** (6.711)	0.047** (2.012)	0.066*** (7.503)	0.081*** (10.046)
<i>R&D_t</i>	-0.014 (-0.073)	-0.243 (-1.596)	0.063 (0.303)	0.376*** (2.731)
<i>LEV_t</i>	0.274*** (5.430)	0.103* (4.006)	0.468*** (8.233)	0.286*** (10.990)
<i>Q_t</i>	-0.026*** (-3.922)	-0.006 (-1.630)	-0.012* (-1.650)	-0.003 (-0.898)
<i>CAPX_t</i>	-0.012 (-0.062)	-0.068 (-0.666)	0.399* (1.672)	0.031 (0.295)
<i>ROA_t</i>	0.170* (1.880)	0.134* (2.772)	0.231*** (2.605)	0.275*** (6.034)
<i>CASH_t</i>	-0.075 (-1.225)	-0.101* (-2.816)	-0.115* (-1.792)	-0.051 (-1.492)
<i>PPE_t</i>	-0.187** (-2.270)	-0.049 (-0.950)	-0.098 (-1.050)	-0.115** (-2.112)
<i>CASHVOL_t</i>	-0.366* (-1.872)	-0.265* (-2.499)	-0.769*** (-3.674)	-0.328*** (-3.140)
<i>KZINDEX_t</i>	0.021*** (4.140)	0.000 (-0.185)	0.006 (0.962)	0.002 (0.624)
<i>Ln(FIRMAGE_t)</i>	-0.016 (-1.077)	-0.093* (-3.579)	0.020 (1.093)	-0.135*** (-5.546)
<i>ND_TAXSHIELD_t</i>	-0.198 (-0.480)	0.321 (1.316)	-0.800* (-1.735)	-0.263 (-1.103)
<i>INVENTORY_t</i>	-0.019 (-0.360)	-0.050 (-1.399)	0.057 (0.909)	0.108*** (3.223)
<i>TRADE_CREDIT_t</i>	-0.003 (-0.020)	0.132 (1.217)	0.496** (2.522)	-0.010 (-0.095)
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	No	Yes	No
Firm FE	No	Yes	No	Yes
Observations	17,061	5,524	17,181	17,037
Pseudo/Adjusted R ²	0.169	0.313	0.233	0.717