

Hedging on the Hill: Does political hedging reduce firm risk?*

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December 2020

Keywords: Political connections; Hedging; Stock return volatility; Earnings volatility; Firm risk

JEL Classification: G32

*We appreciate helpful comments from Anne Beatty (discussant), Amanda Beck, Sam Bonsall, Jennifer Brown, Matt DeAngelis, Lucile Faurel (discussant), Nathan Goldman (discussant), Landon Mauler, Brian Miller, Karl Muller, Kyle Peterson, Spencer Pierce, Grace Pownall, Brady Twedt, Beverly Walther and participants at Emory University, Georgia State University, the University of Utah, the 2019 CAPANA conference, the 2019 AAA Annual Meeting, and the 2019 Western AAA Doctoral Student Faculty Interchange. We thank Arthur Morris for sharing code for identifying government customers and Kyle Petersen for sharing competition data. We also gratefully acknowledge financial support from our respective universities.

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Abstract

We examine whether firms' political hedging activities are effective at mitigating political risk. Focusing on the risk induced by partisan politics, we measure political hedging as the degree to which firms' political connections are balanced across Republican and Democratic candidates. We find that greater political hedging is associated with reduced stock return volatility, particularly during periods of higher policy uncertainty. Similarly, greater political hedging is associated with reduced crash risk, investment volatility, and earnings volatility. Moreover, the reduction in earnings volatility appears to relate to both a firm's taxes and its operating activities, as we find that greater political hedging is associated with reduced cash effective tax rate volatility and pretax income volatility. We further find investors are better able to anticipate future earnings for firms that engage in political hedging, suggesting that political hedging helps improve firms' information environments. Lastly, we perform an event study using President Obama's Clean Power Plan. We find that on the days this policy proposal was debated in Congress, energy and utility firms experience heightened intra-day return volatility (relative to other firms and non-event days). However, this heightened volatility is mitigated for energy and utility firms that are more politically hedged. Overall, we conclude that political hedging is an effective risk management tool that helps mitigate firm risk.

Keywords: Political connections; Hedging; Stock return volatility; Earnings volatility; Firm risk; Risk management

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1. Introduction

Corporate executives consistently describe firm-level risk management as a central focus of their decision-making (Rawls and Smithson 1990, Graham and Harvey 2001). However, relatively little is known about how firms manage risks over which they have limited direct control, such as changes in government policy. Not only are election outcomes difficult to anticipate, but even after election outcomes are known, uncertainty remains over the ability of elected officials to pursue their policy agendas alongside incumbent members of the opposing party (Fowler 2006, Goodell and Vähämaa 2013). For these reasons, uncertainty over whether and how government policies will change imposes significant risk on firms (Baker et al. 2016, Boutchkova et al. 2012, Pástor and Veronesi 2012, 2013). In this paper, we investigate whether firms' political hedging activities are effective at mitigating political risk.

We focus on risk induced by politicians' partisan policy preferences and the extent to which firms can hedge this risk by maintaining connections across party lines. In line with Pástor and Veronesi (2012, 2013), we argue that political risk is a function of both whether government policies will change and the impact that those changes will have on firms, and a dominant factor that contributes to this risk stems from variation in the ideological beliefs held by members of Congress. The two primary political parties in the United States generally hold distinct positions on economic policies, covering a broad range of issues such as competition, taxes, healthcare, environmental and labor laws (Alesina et al. 1997, McCarty et al. 2006, Peskowitz and Sridharan 2018).¹ Because the policymaking process involves negotiation between both political parties, each party has some opportunity to influence political outcomes (e.g., legislation, government spending) and the degree to which these outcomes are favorable or unfavorable to the firm will vary, representing a source of risk. Therefore, as a natural corollary to the hedging literature, we expect a first order strategy in navigating political risk that stems from politicians' cross-party bargaining is to maintain political connections with members of both Congressional parties.² By hedging their exposure in this way,

¹Republicans: <https://www.gop.com/platform/>. Democrats: <https://www.democrats.org/party-platform>.

² Motivated by an interest in partisan-induced political risk, Azzimonti (2018) develops a measure that captures instances when partisanship leads to extreme outcomes, such as filibusters and/or gridlock. In contrast, we adopt a

firms should be in a better position to anticipate and/or influence political outcomes, regardless of which party is in power. This advantaged positioning should allow them to make better investment or operating decisions and potentially reduce the impact of political risk on firm performance.

On the other hand, it is possible that political hedging may not actually help reduce firm risk. For example, some research suggests that legislators are more likely to accept meetings with firms that share ideological alignment and tend to reject firms with ties to members of the opposing political party (Austen-Smith 1995, Levitt 1996). Thus, political hedging could potentially weaken firms' access to politicians and influence over prospective legislation. Consistent with this, Pham (2019) finds that although expected returns tend to increase when there is greater economic policy uncertainty, they increase less when firms are loyal to one political party. Additionally, political hedging might adversely affect firms' relationships with their customers, as prior research finds that consumers penalize retailers when retailers' campaign financing activity or political statements are inconsistent with the consumer's party affiliation (Panagopoulos et al. 2020, Painter 2020). Thus, whether political hedging is an effective risk management tool is an empirical question.

We begin by studying the relation between political hedging and firm-level equity volatility. Prior research identifies equity volatility as a central measure of firm risk (Coles et al. 2006, Guenther et al. 2017), and highlights the positive association between political risk and equity volatility (Boutchkova et al. 2012, Pástor and Veronesi 2013). If firms are effective at mitigating policy risk through political hedging, our primary hypothesis predicts that greater political hedging is associated with lower equity volatility.

To test this prediction, we employ an empirical proxy for political hedging based on the extent to which firms' make balanced political contributions across Republican and Democrat candidates. This measure ranges from zero to one, where a value of one indicates that the firm has balanced its political contributions so that it is connected to the same number of Republicans and Democrats (i.e., fully hedged), and a value of zero indicates that the firm contributes solely to one

broader view of partisan disagreement that allows for cross-party bargaining and negotiations that do not necessarily result in gridlock.

political party (i.e., fully unhedged).³ We observe variation in the degree of politically hedging within and across firms and industries, as well as an overall upward trend in hedging through time. To ensure that this measure is not simply capturing the value of being politically connected in general, we control for the firm's total number of political connections throughout our analyses.

We base our analyses on a sample of 34,782 firm-election cycle observations for 8,325 unique U.S. firms between 1998 and 2016. We use a lead-lag design and include firm fixed effects to estimate the extent to which variation in political hedging within a particular firm affects subsequent equity volatility for that firm. We also include year fixed effects and numerous other controls for trends in volatility or in campaign financing activity over time. Consistent with our prediction, we document a strong negative relation between political hedging activity and equity volatility. Our results indicate that a one standard deviation increase in political hedging activity is associated with a 1.96% reduction in subsequent equity volatility.

Our initial findings support the idea that political hedging helps firms mitigate political risk. If political hedging helps firms reduce their exposure to political risk, the association between political hedging and volatility should be concentrated during periods marked by heightened political risk. To test this prediction, we use several measures of time-varying policy uncertainty including the partisan division in Congress, the tax policy uncertainty (TPU) index, and the economic policy uncertainty (EPU) index developed by Baker et al. (2016). Using these measures, we find that the reduction in equity volatility associated with political hedging is larger when the level of political risk is high relative to other periods. In contrast, during periods of partisan gridlock, which reduces the likelihood of policy development, we expect a weaker association between political hedging and firm risk. Using the partisan conflict index from Azzimonti (2018) to capture gridlock, we find evidence consistent with this prediction.

Additionally, we consider the influence of political hedging on mitigating firms' downside risk. Prior research links periods of increased policy uncertainty to depressed investment and equity

³ This measure is also set to zero if a firm makes no political contributions, as that firm is also unhedged because it does not have direct access to the balanced policy information or the opportunities for influence that politically hedged firms have.

prices (Gulen and Ion 2016, Julio and Yook 2012, Pástor and Veronesi 2013), which stems from managers and investors cautious response to potential bad outcomes (i.e., the cautious response is asymmetric in downside risk). Unlike volatility which measures uncertainty over the entire distribution of returns, crash risk provides an asymmetric measure that focuses on extreme reductions in equity value. The early literature on hedging establishes avoidance of such extreme negative outcomes as a central motivation for corporate hedging activities (Mayers and Smith 1982, Nance et al. 1993). Thus, to the extent that political hedging is useful for mitigating firms' exposure to political risk, we expect that greater political hedging is also associated with lower crash risk. Our results support this inference.

If political hedging is an effective risk management tool, we also expect politically hedged firms to experience less volatility in future firm fundamentals, such as earnings or investment. Regarding investment, prior theory and evidence point to the ability to take advantage of investment opportunities and engage in smoother investment as a benefit of corporate hedging (Froot et al. 1993, Smith and Stulz 1985, Nance et al. 1993). Consistent with this notion, we find that greater political hedging is indeed associated with lower future investment volatility (i.e., smoother investment).

Regarding earnings, Pástor and Veronesi (2003) develop a model of equity prices in which equity volatility increases in the volatility of a firm's profits. With this framework in mind, to the extent that political hedging helps reduce volatility in firm fundamentals, we would also expect greater political hedging to be associated with reduced subsequent earnings volatility. Consistent with this expectation, our evidence suggests that political hedging reduces the volatility of firms' subsequent earnings. This appears to be attributable to both its impact on core operations, and its impact on the firm's taxes, as we find political hedging appears to reduce pretax income volatility and cash ETR volatility.

Our evidence related to equity, investment, and earnings volatilities suggest political hedging helps firms mitigate risk related to firm operations. One motivation for managers to alleviate firm risk is to help reduce investor uncertainty about corporate performance and thereby improve the information environment (Caskey 2009, Verrecchia 1983). Drake et al. (2018) show that uncertainty

about government policies makes it more difficult for market participants to incorporate information about future earnings into current stock prices. If political hedging helps alleviate some of this uncertainty for firms, it should be easier for investors to anticipate and process earnings signals of firms who engage in political hedging. Consistent with this theory, we find a positive association between political hedging and equity price informativeness as measured using future earnings response coefficients. This evidence supports the notion that political hedging also helps reduce investor uncertainty around firm performance.

Because firms can choose to engage in political hedging, we perform several additional robustness tests to address self-selection and endogeneity concerns. To mitigate the possibility that our results could be due to our political hedging measures being correlated with the firm's other risk management strategies, we also control for derivative hedging activity and continue to find similar results. We also find similar results using a subsample of politically connected firms to ensure that our findings are not driven by systematic differences across connected and unconnected firms (e.g., connected firms may be better at managing uncertainty in general). Moreover, we find consistent results when using the unexpected component of hedging as an explanatory variable (i.e., the residual from a predictive model that explains 90% of the variation in hedging).⁴

To further bolster our empirical identification, we perform an event study using the setting of the Clean Power Plan that was introduced and implemented during the Obama administration. Adopting clean power regulation was a very partisan issue with significant implications for energy and utility firms. We find that on the days this policy proposal was debated in Congress, energy and utility firms experienced heightened intra-day return volatility (relative to other firms and relative to non-event days). However, this heightened volatility was mitigated for energy and utility firms that were more politically hedged. This within-firm variation in return volatility during short windows helps address alternative explanations for our findings and provides further confidence in our inferences. Moreover, we perform placebo tests where we randomly assign the event dates and

⁴ Additionally, we find consistent results using industry by year fixed effects to control for unobservable industry trends. We also calculate the impact threshold of a confounding variable (ITCV) and find it is unlikely that our results are driven by a correlated omitted variable.

the treatment firms and find no results, as expected. Collectively, the findings across all our analyses support the conclusion that political hedging is effective at reducing firm risk.

Our study makes several contributions to the extant literature. First, we provide evidence that balanced political connections across both parties serve as an effective hedging strategy that helps firms mitigate policy-related risks. Limited by data availability constraints, early work on corporate hedging focuses primarily on derivative use to mitigate financial risks. In contrast, we link a specific form of risk (i.e., political risk) to a specific risk-management strategy (i.e., bi-partisan political connections). By doing so, we are able to overcome data constraints and provide evidence of political hedging as a method by which firms can mitigate political risk.

Our study of political hedging, or the balance of political connections across political parties, also extends the literature on corporate political activity, which has largely focused on the depth of political connections (Brown et al. 2015, Christensen et al. 2017, Cooper et al. 2010, Correia 2014, Mehta et al. 2020, Wellman 2017). Unlike prior research, we directly control for the level of firms' political connections in our analyses, which allows us to disentangle the impact of political hedging from the depth of political connections on firm risk. As such, our results are important for building a more complete picture of the effects of political activity on corporate outcomes.

Moreover, a recent stream of research investigates the effect of policy uncertainty on firms' business environments, as well as the political strategies that firms use to manage policy uncertainty (Azzimonti 2018, Julio and Yook 2012, Gulen and Ion 2016, Ovtchinnikov et al. 2020, Wellman 2017). However, these studies do not address whether political strategies are effective at reducing firms' overall risk.⁵ We fill this gap by providing direct evidence of the negative link between political hedging and firm risk, particularly during times of high uncertainty. These findings also complement recent evidence by Pham (2019). He finds that firm's *ex ante* expected returns are less sensitive to

⁵ For example, when examining the relationship between corporate political activity and corporate investment/innovation, prior studies find that firms on average respond cautiously to uncertainty by reducing investment, while politically active firms do not experience similar declines in investment. However, it is possible that relatively higher levels of investment during high uncertainty periods arise because managers of politically active firms overinvest in times of high uncertainty. Therefore, politically active firms may ultimately exhibit more overall risk.

increases in economic policy uncertainty when firms are politically connected. In contrast, we provide evidence that political hedging is effective at reducing firms' *ex post* realized risk.

Finally, our study highlights an important potential benefit of political hedging: an improved information environment. Our findings offer a natural complement to recent work investigating the effect of economic policy uncertainty on firms' information environments. For example, prior research shows that policy uncertainty limits investors' ability to anticipate future earnings, and managers tend to increase the provision of voluntary disclosure to help reduce this uncertainty (Nagar et al. 2019, Drake et al. 2018). We find that political hedging, by reducing firm risk, appears to alleviate some of this uncertainty for investors, suggesting an additional channel available to firms beyond increasing voluntary disclosure.

With that said, our study is also subject to certain caveats and limitations. In particular, it is difficult to draw causal inferences when examining voluntary firm behavior, such as political hedging, as variables related to this choice that are also correlated with the outcomes we study could confound our inferences. For example, when firms politically hedge, they may also be more likely to take other risk reducing actions that may impact the outcome variables that we examine. Although we perform numerous analyses to mitigate these concerns, as outlined above, such self-selection issues cannot be entirely eliminated in our setting. Second, our study focuses on risks related to the political landscape of the United States, so our findings may not generalize to countries with different political institutions. Despite these limitations, our study provides novel evidence that enhances our understanding regarding the ability of political hedging to reduce firm risk.

2. Related Literature and Hypothesis Development

This study examines whether political hedging helps mitigate firm exposure to political risk. As this is related to the literatures on corporate hedging and political risk, we outline our hypotheses in the context of these bodies of research.

2.1. *Why do firms hedge?*

A common motivation for corporate hedging is to reduce the volatility of firm value (Nance, Smith, and Smithson 1993). Despite that, a large body of literature posits that there is no need for

publicly traded firms to engage in hedging activities because investors can hedge based on their own portfolio and risk preferences (e.g., Modigliani and Miller 1958). The implicit assumption underlying this theoretical argument is that investors have perfect information about the set of available investments and the different risks that each investment imposes. However, to the extent frictions make it relatively costlier for investors to manage exposure to firm-level risk, firms are motivated to develop hedging programs that reduce the firm's overall risk (DeMarzo and Duffie 1991, Geczy et al. 1997, Guay 1999). For example, DeMarzo and Duffie (1991) illustrate that firm-level hedging is necessary in the presence of information asymmetries around firm risks. In such scenarios, investors lack sufficient information to properly mitigate the firm's risk through diversification, so it becomes valuable for managers to employ hedging activities to reduce volatility in firm value.

In this study, we focus on risk related to the firm's political environment as a setting where such frictions are likely to exist.⁶ Inherently, there are likely to be asymmetries between investors and managers in the ability to access policymakers, allowing managers to better predict and mitigate the impact of political risk. For example, gaining a seat at the table during policy discussions requires orchestrating several costly activities, such as developing long-term relationships with legislators (Snyder 1990) and providing information to legislators on the economic viability of proposed legislation (Hillman and Hitt 1999). Firms often manage such activities through a centralized government relations office in Washington D.C. (Bremmer 2005). In fact, an important input into government policy decisions is research that legislators receive from firms' in-house policy experts (Wright 1996). Consequently, to the extent managers face incentives to mitigate political risk, we expect firms are more likely than investors to have access to information about policy developments and to have an advantage in assessing the impact of various policy alternatives.

2.2. Political hedging and firm risk

Pástor and Veronesi (2012, 2013) offer a framework that is useful for understanding the impact of political risk on firms. The authors model political risk as a function of uncertainty over

⁶ To some extent, investors can protect against political risk by constructing portfolios that capitalize party platforms into equity prices based on expected election outcomes (Belo et al. 2013, Knight 2006, Mattozzi 2008). However, due to the dynamic nature of policy risks, fully mitigating political risk at the investor level is challenging.

(a) *whether* government policies will change and (b) the potential *impact* that new government policies are likely to have on firm profitability. As the authors point out, heterogeneity in politicians' ideological and party preferences is a major contributing factor to policy uncertainty.

The major political parties generally have very diverse views over economic policies and can shape policies through committee representation in Congress. Specifically, the bulk of the policy formation process generally occurs within Congressional committees, where committee members can monitor ongoing governmental operations, identify issues for legislative review, gather and evaluate information, and recommend courses of action to the House and Senate, respectively. Important for our setting, rules surrounding the structure of Congressional committees are designed to ensure some amount of cross-party bargaining.⁷ In general, the ratio of party representation on each Congressional committee mirrors that of party representation in the House and Senate, respectively. Thus, each political party has some opportunity to influence political outcomes.⁸ As a result, even after election outcomes are known, uncertainty remains over the ability of elected officials to pursue their partisan agendas alongside incumbent members of the opposing party (Fowler 2006, Goodell and Vähämaa 2013). The degree to which these outcomes are favorable or unfavorable to the firm will vary, representing potentially good and bad states of the world from the firm's perspective.⁹

We expect that when firms balance political connections between both political parties, this can serve as an effective hedging strategy, allowing firms to mitigate policy-related risks. Firms have an opportunity to manage political risk through their political hedging in at least two ways. First, through active participation with both parties, firms gain more complete information about legislative developments by understanding the perspectives of policymakers from both parties (i.e.,

⁷ For more details on congressional committee assignments, see http://clerk.house.gov/committee_info/commfaq.aspx and <https://www.senate.gov/artandhistory/history/common/briefing/Committees.htm>.

⁸ It is for this reason that the balance of a firm's political connections has the potential to matter beyond the number of the firm's political connections. For example, a firm that is connected to the ranking Republican and ranking Democrat on a Congressional committee is likely in a better position to obtain more complete information about potential policies and influence policy formation than if the firm was connected to the Ranking Republican and another Republican on the committee.

⁹ Of course, the degree to which members of the opposing political parties disagree over adjusting government policies will vary through time depending on the nature of policies under consideration and on the relative balance of power between the two primary parties. We directly test this variation in Section 4.

the information channel). Second, maintaining political connections with both parties can make it easier for firms to directly shape legislative developments, manage regulatory scrutiny, and influence a variety of other political outcomes (i.e., the influence channel). Taken together, we view firms' influence over political outcomes and firms' access to policy information as complementary, interrelated activities and expect both channels to impact the link between political hedging and firm risk.¹⁰

However, it is possible that firms may not benefit from political hedging. For instance, firm-level political hedging may not be effective if legislators reject firms that contribute to candidates from opposing political parties. Theory suggests that ideological alignment can be more important than either the magnitude of contributions received or whether contributors represent direct constituents of the legislator (Austen-Smith 1995). In addition, firms' customers may respond negatively to political hedging. For example, research finds that consumers are sensitive to (the lack of) partisan allegiances in corporate campaign support. In an experiment designed to reveal retailers' partisan inclinations, Panagopoulos et al. (2020) find that consumers are more (less) likely to prefer retailers that align (deviate) from the consumer's self-declared party affiliation. Thus, the extent to which political hedging is an effective risk management tool is ultimately an empirical question.

3. Data and Sample

To test our hypothesis, we begin by obtaining data on political contributions made by firms' political action committees (PACs) from the Federal Election Commission's (FEC) detailed committee, candidate, and contribution files (<http://www.fec.gov>). These contributions are observable and are likely correlated with other forms of campaign support that do not require disclosure, such as the hosting of fundraising events (Cooper et al. 2010). Thus, Cooper et al. (2010) maintain that identifying the number of candidates supported and characteristics of those candidates

¹⁰ Because access to information about policy developments is a natural by-product of firms attempts to influence policymakers, we expect both mechanisms to contribute the negative association between political hedging and firm risk, and thus play a role in all of the outcome variables that we examine.

serves as a reasonable proxy for the firms' overall political activity.¹¹ Because firms can have multiple PACs, we aggregate the FEC data to the firm level. This is done by matching PACs to their corresponding sponsors in Compustat/CRSP. Because the FEC database does not include company identifiers (e.g., CUSIP, CIK), we hand match the FEC data to Compustat/CRSP based on company names and years.¹² We employ this hand matching approach to reduce the likelihood that we miss PACs that are sponsored by firms' subsidiaries with fundamentally different names than the parent firms.¹³ Due to the time consuming nature of this process, we restrict this linking to cover the time period of 1992 through 2016. Using this data, we are able to construct firm-level measures of political hedging.

We measure political hedging as the degree to which firm's political connections are balanced across party lines. Specifically, we define *PoliticalHedge* as follows:

$$PoliticalHedge = 1 - \frac{|REP - DEM|}{REP + DEM} \quad (1)$$

where *REP* (*DEM*) represent the number of Republican (Democrat) candidates receiving political contributions from the firm.¹⁴ By construction, this measure of political hedging can vary from zero to one. It takes a value of zero if a firm contributes only to a single party and thus is completely unhedged and a value of one if a firm contributes equally to both parties and thus is fully hedged. If a firm makes no political contributions during a rolling window, it is essentially unhedged as well because it does not have access to the balanced information and the opportunities for influence that hedged firms have. Thus, in these instances we also set the hedging measure to zero. Following prior literature, we construct this measure of hedging using all contributions to candidates made over

¹¹ While the Federal Election Campaign Act prohibits firms from making contributions directly to federal elections campaigns, firms may legally participate in federal election activities through a corporate sponsored PAC. For example, the PAC can solicit contributions from the firm's executives, employees and stockholders. Corporate executives managing the PAC then strategically allocate these funds to political campaigns.

¹² As the FEC data reports historical company names, we primarily rely on historical names from CRSP in this linking process, as Compustat backfills company names.

¹³ Subsidiaries are verified using data from Lexis Nexis and internet searches.

¹⁴ Our hedging measure focuses on the number of candidates supported through campaign financing activity rather than dollars contributed. This approach follows the intuition of Cooper et al. (2010) who argue that the number of supported candidates serves as a better proxy for firms' overall campaign financing activity, both observable and unobservable. However, our inferences are similar if we instead use a proxy for political hedging based on the dollars contributed to Republican and Democratic candidates.

rolling six-year windows (Cooper et al. 2010, Christensen et al. 2017).¹⁵ This approach reflects Snyder's (1990) observation that long-run political relationships are the most valuable to the firm. These rolling windows end in October of a given election year, as elections occur in early November.

Prior research documents a positive correlation between the total number of political connections formed through campaign support and the degree to which these connections are equally distributed across Republicans and Democrats, respectively (e.g., Tripathi et al. 2002). Therefore, as firms expand their political hedging strategy (i.e., increase the scope of connections to members of both political parties) the total number of candidates a firm contributes to will also naturally increase. To ensure that our results relate to hedging strategies rather than overall political activity, we count the total number of candidates that a firm contributes to, following Cooper et al. (2010):

$$PoliticalConnections = Ln(1 + Cand) \quad (2)$$

where *Cand* is the number of political candidates the firm has contributed money to during the six-year window ending just prior to the election. We include this variable as a control throughout our analyses in order to isolate the degree of political hedging from the degree of political connectedness.

To be included in our sample, we require firms to have adequate data to calculate the outcome variables we study, along with data on basic firm characteristics. We do not require firms to make political contributions; this design choice maximizes our sample size and the generalizability of the study. As our hedging measures require 6 years-worth of data to construct, our final sample covers each election cycle from 1998 through 2016. This yields a sample of 34,782 firm-election cycle observations for 8,325 unique U.S. firms.¹⁶

Table 1 provides descriptive statistics for our measures of political hedging and other key variables in our analyses. The summary statistics in Panel A reveal that the mean (median) *PoliticalHedge* is 0.115 (0.000), indicating that most firms in our sample do not engage in political hedging. Among firms that have political connections, *PoliticalHedge* has a mean (median) of 0.624 (0.682), and ranges from 0.444 at the 25th percentile to 0.857 at the 75th percentile (untabulated),

¹⁵ Senators serve six-year terms, and members of the House of Representatives serve two-year terms.

¹⁶ In additional analyses, we restrict our analyses to firms that have made political contributions at some point during this time period. See the Online Appendix for more details.

indicating that there is substantial variation in political hedging among politically connected firms. It is also worth noting that our measures of political hedging are non-directional, but in additional untabulated analyses we examine the directional split of corporate contributions and confirm Cooper et al. (2010)'s finding that firms contribute more to Republican candidates on average.

We also examine how political hedging varies over time and across industries. Table 1, Panel B presents descriptive statistics for our measure of political hedging for each election cycle in our sample. The mean *PoliticalHedge* ranges from 0.085 in 1998 to 0.140 in 2016. The results in Table 1, Panel B reveal that there is consistent political hedging activity in each year of our sample. This provides reassurance that political hedging is not concentrated in certain time periods and absent from others. There is also evidence of an upward trend in the degree of political hedging over time.¹⁷

Table 1, Panel C presents descriptive statistics for our measures of political hedging separately by industry, using the Fama-French 12 industry definitions. The results reveal meaningful levels of political hedging across all industries. Overall, the results in Table 1 indicate that corporate political hedging is a widespread phenomenon, but also that there is significant variation in the level of hedging across firms and over time.

4. Empirical Analyses and Results

4.1. Political Hedging and Equity Volatility

Our central hypothesis posits an association between corporate political hedging activities and subsequent equity volatility. To test this association, we estimate the following equation:

$$IdioVol_{i,t}^{Ret} = \beta_1 PoliticalHedge_{i,t-1} + \gamma Controls_{i,t-1} + \alpha_i + \alpha_t + \epsilon_{i,t} \quad (3)$$

This equation employs a lead-lag design where our dependent variable represents a post-election outcome (i.e., measured in year t), and our independent variables are measured just prior to the election (i.e., year $t-1$). To measure our dependent variable, idiosyncratic equity volatility

¹⁷ We note that the number of observations decreases over time in our sample. This is likely an artifact of the decreasing number of firms covered by Compustat during our sample period. In untabulated analyses we confirm that the percentage of Compustat firms that are politically connected is increasing during our sample period.

($IdioVol^{Ret}$), we first estimate firm-specific returns (Ret^{FS}) using the following regression of weekly firm-specific returns on weekly market and industry returns:

$$r_{j,t} = \alpha_j + \beta_{1,j}r_{m,t-1} + \beta_{2,j}r_{i,t-1} + \beta_{3,j}r_{m,t} + \beta_{4,j}r_{i,t} + \beta_{5,j}r_{m,t+1} + \beta_{6,j}r_{i,t+1} + \epsilon_{j,t} \quad (4)$$

We estimate Equation (4) separately for each firm-election cycle using weekly returns over the 12-month period following the Election Day of each cycle. For each firm-week, $Ret_{j,t}^{FS}$ is defined as the residual $\epsilon_{j,t}$ from Equation (4). We then define $IdioVol^{Ret}$ as the annualized standard deviation of Ret^{FS} . Thus, $IdioVol^{Ret}$ focuses on the portion of equity volatility due to firm-specific equity price movement.

Our primary coefficient of interest in Equation (3) is β_1 ; if prior political hedging is associated with lower subsequent idiosyncratic equity volatility, β_1 will be negative. As previously mentioned, we include the level of political connections maintained by the firm as a control throughout our analyses. Following previous research on the determinants of firm-level equity volatility, we also include market volatility ($MktVol$), CAPM beta ($Beta$), equity market value (MVE), and book-to-market ratio (BTM) in the *Controls* vector (Sridharan 2015). We measure $MktVol$ as the annualized standard deviation of daily industry portfolio returns over the 12-month period ending the day before Election Day. We use Fama-French 48 industry classifications to identify the relevant industry portfolio for each firm in calculating $MktVol$. We obtain $Beta$ by estimating the standard CAPM model with daily returns over the 12-month period ending the day before Election Day. MVE is calculated using market prices on the most recent fiscal year-end date prior to the election. We calculate BTM as the ratio of equity book value to equity market value, and we obtain equity book values from the most recent fiscal year-end prior to the Election Day.

To address the non-random selection of political hedging activity, the *Controls* vector also includes several variables that are likely associated with a firm's decision to hedge politically. First, since we expect that a firm's ability to hedge is a function of their recent performance, we include controls for the level of firm's profitability (ROA) and whether the firm reported a loss ($Loss$). We calculate ROA as the ratio of net income to beginning total assets for the most recent fiscal year ending prior to the election. $Loss$ is an indicator equaling one if net income for the most recent fiscal year ending prior to the election is negative, and zero otherwise. Second, firms' ability to politically

hedge is likely a function of their financial constraints, so we include the firm's current cash balance (*Cash*), debt to equity ratio (*Leverage*), and probability of financial distress (*ZScore*) as controls to reflect their potential impact. We measure *Cash* as the level of cash held as of most recent fiscal year-end prior to the election, scaled by total assets at the beginning of the period. *Leverage* is the ratio of total debt to beginning total assets for the most recent fiscal year ending prior to the election. Following Shivdasani and Stefanescu (2010) we define *Zscore* as $3.3 \times \text{Pre-Tax Income} + \text{Sales} + 1.4 \times \text{Retained Earnings} + 1.2 \times (\text{Current Assets} - \text{Current Liabilities}) / \text{Total Assets}$. All variables used in this calculation are based on the most recent fiscal year-end prior to the election. Third, there is natural variation in firms' business environments that affects their risk profiles, particularly as it relates to political partisanship. For instance, firms that rely on tangible assets to generate their revenues have different risk profiles than firms that rely more on intangible assets (Bartram et al. 2012). In addition, firms that face heightened industry competition or are more reliant on government contracts may be more sensitive to political risk. To address these important sources of variation in political risk exposure, we include controls for firms' tangible asset balance (*PPE*), exposure to industry competition (*Competition*), and dependence on government contracts (*GovtSales*). We measure *PPE* as the value of net property, plant, and equipment at the most recent fiscal year-end prior to the election, scaled by total assets at the beginning of the period. Following Li et al. (2013), *Competition* measures the number of occurrences of competition-related words per 1,000 total words in the 10-K for the most recent fiscal year ending prior to the election. *GovtSales* measures the proportion of the firm's sales to government customers (as a percentage of total sales) during most recent fiscal year ending prior to the election.¹⁸

In addition to the robust set of variables in the *Controls* vector, we also include firm fixed effects in Equation (3). Therefore, any time-invariant characteristics of a firm that might be associated with the decision to engage in political hedging will not contaminate estimation of β_1 . We also include year fixed effects to control for trends in political contribution activity over time.

¹⁸ Using the Compustat Segments Customer data we identify sales to government customers if the firm reports the federal government as a major customer (i.e., Compustat item CTYPE = "GOVDOM") or reports a company as a major customer (CTYPE = "COMPANY"), but lists a branch of the federal government as the company name (using Compustat item CNMS).

Lastly, we winsorize all continuous variables at the top and bottom one percent levels and cluster the standard errors by firm.¹⁹

Table 2 presents results from the estimation of Equation (3). Related to our hypothesis, in column (1) we observe a significantly negative coefficient on *PoliticalHedge*. This indicates that prior political hedging is associated with reduced idiosyncratic equity volatility. In columns (2) and (3) we replicate this analysis while including controls for the level of political connections and other observable determinants of equity volatility and hedging activity.²⁰ The results in column (3) suggest that a one standard deviation in political hedging activity is associated with a 0.84 percentage point reduction in equity volatility, which represents a 1.96% reduction in equity volatility relative to the mean. Our inferences are consistent both in sign and in effect size using this extensive group of controls. We also find similar results (untabulated) if we measure hedging over just the prior two-years (i.e., a single election cycle). Overall, the results in Table 2 indicate that firms engaging in political hedging experience a reduction in the firm-specific component of equity volatility.

4.2. Cross-sectional Analyses: Periods of High Policy Uncertainty and Gridlock

If political hedging helps firms reduce their exposure to policy risk, the association between political hedging and volatility should be concentrated during high policy uncertainty periods. We examine this implication by estimating a modified version of Equation (3):

$$\begin{aligned} IdioVol_{i,t}^{Ret} = & \beta_1 PoliticalHedge_{i,t-1} + \beta_2 PoliticalHedge_{i,t-1} \times HighUncertainty_t \\ & + \gamma Controls_{i,t-1} + \alpha_i + \alpha_t + \epsilon_{i,t} \end{aligned} \quad (3a)$$

Equation (3a) modifies Equation (3) to include the interaction term of political hedging with periods of high policy uncertainty (*HighUncertainty*). If the relation between political hedging and equity volatility is stronger during times of heightened policy uncertainty, the coefficient on this interaction term will be negative (i.e., $\beta_2 < 0$).

¹⁹ Conley et al. (2018) describe the limitations of using multiway clustering to estimate standard errors in samples with short time series. Our sample comprises 10 distinct election-cycles, suggesting that clustering by year is not advisable for our analyses. Nonetheless, our results are robust to double-clustering standard errors by firm and election cycle.

²⁰ Variance inflation factors (VIFs) for all variables in the models are far below 10, revealing that multicollinearity is unlikely to be a problem for our analyses (Kennedy 2008).

We employ three measures of political uncertainty. For our first measure, we use the degree of division of the U.S. Congress (*PartyDiv*). We expect that as Congress becomes more evenly balanced between Republicans and Democrats, there will be less Congressional consensus about legislative priorities. This, in turn, will lead to more uncertainty about what government policies will ultimately be implemented. As a result, firms should benefit more from having connections with members of both parties as that should provide a more complete set of information and/or opportunities for influence. We obtain data on U.S. party division from Charles Stewart's Congressional Data Page (see http://web.mit.edu/17.251/www/data_page.html).

For our second and third measures, we use the tax policy uncertainty (*TPU*) index (a common partisan issue), and the economic policy uncertainty (*EPU*) index (intended to capture policy uncertainty over multiple issues). A common issue that usually entails significant cross-party bargaining is the development of tax policy. Uncertainty stemming from the tax rulemaking process can include uncertainty about whether new tax laws will be enacted as well as uncertainty about whether temporary tax laws will be renewed or allowed to expire. For example, tax laws are increasingly being passed through the budget reconciliation process, which is hampered by partisan disagreement and leads to a proliferation of temporary tax legislation and heightened tax policy uncertainty (Tax Policy Center 2018, Viswanathan 2007). While tax policy is a key source of difference between the two primary U.S. political parties, there are also meaningful differences on other components of their policy platforms, including but not limited to healthcare policy, entitlement programs, and environmental laws. To capture these differences, we also examine variation in general economic policy uncertainty. We obtain TPU and EPU indices from the Baker et al. (2016) data library (see www.policyuncertainty.com).

For each of these measures, we construct an indicator that equals one when the given metric indicates higher political uncertainty. Specifically, we define *TPUAbove* (*EPUAbove*) as indicators that equal one when the average monthly (daily) level of the TPU (EPU) index are above the sample median, as higher levels of these indices indicate greater uncertainty.²¹ In contrast, we define

²¹ Note that while the EPU index is available on a daily basis, the TPU index is only available on a monthly basis.

PartyDivBelow as an indicator that equals one when the split of seats between Republicans and Democrats in Congress is less than the sample median division, as this indicates a more evenly split Congress and thus more uncertainty about what government policies will ultimately be implemented.²²

We also study the effect of political hedging on equity volatility during periods of gridlock. Gridlock occurs when partisan conflict begins to interfere with negotiations across party lines, thereby reducing the likelihood of new legislation. If periods of gridlock prevent negotiations across party lines, then we expect that firms' efforts to hedge across party lines will not be as beneficial during these periods. Thus, the association between political hedging and volatility should be weaker during periods of gridlock. We examine this by estimating a modified version of Equation (3):

$$\begin{aligned} IdioVol_{i,t}^{Ret} = & \beta_1 PoliticalHedge_{i,t-1} + \beta_2 PoliticalHedge_{i,t-1} \times Gridlock_t + \gamma Controls_{i,t-1} \\ & + \alpha_i + \alpha_t + \epsilon_{i,t} \end{aligned} \quad (3b)$$

Equation (3b) modifies Equation (3) to include the interaction term of political hedging with periods of gridlock (*Gridlock*). If the relation between political hedging and equity volatility is weaker during times of gridlock, the coefficient on this interaction term will be positive (i.e., $\beta_2 > 0$).

To capture gridlock, we utilize the Partisan Conflict Index from Azzimonti (2018), which measures the frequency of newspaper coverage of articles reporting political disagreement about government policy—both within and between national parties—normalized by the total number of news articles in 1990. Unlike EPU or TPU, the Partisan Conflict Index is increasing in the frequency of terms such as “gridlock”, “filibuster”, and “fail to compromise,” which are strong indicators of legislative gridlock. As Azzimonti (2018) documents that partisan conflict is particularly high during a large portion of our sample period, we measure *Gridlock* using an indicator variable equal to one if the partisan conflict index is above the sample median, zero otherwise.

The results of these tests are reported in Table 3. For the three proxies for high policy uncertainty, the results reveal negative and significant coefficients on the interaction terms,

²² The main effects of our cross-sectional variables (e.g., *EPUAbove*) are excluded from the regression model because they are absorbed by the year fixed effects.

indicating that the association between political hedging and equity volatility is stronger in periods of high policy uncertainty. This is consistent with political hedging being more beneficial for reducing return volatility during periods of high policy uncertainty. In contrast, using the proxy for gridlock, the results reveal a positive and significant coefficient on the interaction term, indicating that the association between political hedging and equity volatility is weaker during periods of gridlock. This is consistent with political hedging having a smaller impact on firm risk when gridlock halts legislative progress.

4.3. Political Hedging and Crash Risk

Most corporate hedging activity is specifically motivated by a goal of avoiding extreme negative outcomes (Mayers and Smith 1982, Nance et al. 1993), which suggests that a focus on the entire distribution of potential outcomes may mischaracterize the true goal of hedging activity. Crash risk, a measure of the incidence of extreme negative equity returns, focuses more narrowly on extreme reductions in equity value (Chen et al. 2001). If political hedging is indeed effective at reducing policy uncertainty by reducing the incidence of adverse outcomes, this should manifest in a reduction in equity crash risk. To test this, we examine the association between equity crash risk and political hedging by estimating Equation (5) below:

$$CrashRisk_{i,t}^X = \beta_1 PoliticalHedge_{i,t-1} + \gamma Controls_{i,t-1} + \alpha_i + \alpha_t + \epsilon_{i,t} \quad (5)$$

We define crash risk in two ways: $CrashRisk^{Skew}$ and $CrashRisk^{Duvol}$. $CrashRisk^{Skew}$ measures the negative conditional skewness of weekly equity returns and is defined as the negative of the third moment of firm-specific weekly returns over the year after the election date, divided by the cubed standard deviation of firm-specific weekly returns. This measure will be increasing in the extent to which firms experience more negative weekly returns. $CrashRisk^{Duvol}$ measures the asymmetry of negative and positive weekly return volatilities, or “down-to-up volatility”. We estimate $CrashRisk^{Duvol}$ by taking the natural logarithm of the ratio of the standard deviation of Ret^{FS} during down weeks to the standard deviation of Ret^{FS} during up weeks. We classify a week as being down (up) if Ret^{FS} for that week is below (above) the mean Ret^{FS} over the 12-month post-election period. The *Controls* vector remains as previously defined, and we again employ firm and year fixed effects.

Table 4 presents the results of estimating Equation (5). In columns (1) and (2) we use $CrashRisk^{Skew}$ and $CrashRisk^{Duvol}$, respectively, as the dependent variable. Consistent with our hypothesis, we observe a significantly negative coefficient on $PoliticalHedge$ in both specifications. Our results indicate that a one standard deviation increase in political hedging activity is associated with a 3.84% reduction in the negative conditional skewness of weekly stock returns (4.39% of the standard deviation) and a 1.71% reduction in “down-to-up” volatility (4.52% of the standard deviation). Overall, these results suggest that firms engaging in political hedging experience less extreme negative equity market outcomes.

5. Additional Analyses

Our main results support the inference that corporate political hedging activities reduce firm risk. In this section, we extend our analysis by considering the association between political hedging and volatility in firm fundamentals, such as investment and earnings volatility. We further explore the implications of reduced firm risk for investor processing of earnings information.

5.1. Political Hedging and Investment Volatility

If political hedging is a successful risk management strategy, then we also expect to find that greater political hedging is associated with lower investment volatility. Prior theory and evidence point to the ability to take advantage of investment opportunities as a benefit of corporate hedging (e.g., Smith and Stulz 1985, Nance et al. 1993, Geczy et al. 1997, Campello et al. 2011). Several studies demonstrate that firms on average respond cautiously to uncertainty over government action by delaying investment and hiring decisions (Julio and Yook 2012, Baker et al. 2016, Gulen and Ion 2016), while politically active firms experience less severe investment shocks when the level of market-wide political uncertainty is high (Wellman 2017). However, there is no evidence on whether political hedging is associated with smoother investment more generally, despite awareness of the value of smooth investment patterns (Froot et al. 1993). Hence, we examine the relation between investment volatility and political hedging, and by estimating Equation (6) below:

$$Vol_{i,t}^{InvX} = \beta_1 PoliticalHedge_{i,t-1} + \gamma Controls_{i,t-1} + \alpha_i + \alpha_t + \epsilon_{i,t} \quad (6)$$

where the dependent variable is the volatility of firm-level investment expenditures (Vol^{InvX}). We identify three components of firm-level investment that collectively offer a broader picture of firms' investment activities: capital expenditures ($Capx$), research and development expenditures ($R\&D$), and acquisition expenditures (Acq). For each investment component, we separately calculate the standard deviation of annual expenditures, scaled by average total assets, over the five years subsequent to Election Day.²³ We form decile ranks for each of the resulting volatility measures ($Vol^{InvCapx}$, $Vol^{InvR\&D}$, Vol^{InvAcq}) to mitigate skewness in them. If political hedging helps firms reduce exposure to political risk and leads to more stable investment, we should observe a negative β_1 coefficient when estimating Equation (6). The controls vector remains as previously defined, along with firm and year fixed effects.

Table 5 presents the results from our estimation of Equation (6). We find that the volatilities of investments in capital expenditures and research and development are negatively related to political hedging activity. This suggests that firms that hedge experience less uncertainty around their fundamental business operations. In contrast, we do not observe a significant relation between the volatility of acquisition investments and political hedging activity. This finding suggests that political hedging activities are less effective at alleviating uncertainties arising from one-time acquisitions.²⁴ Overall, the results in Table 5 are consistent with the idea that corporate political hedging allows firms to engage in smoother investment patterns.

5.2. Political Hedging and Earnings Volatility

To the extent that political hedging reduces firm risk, we would expect to see it reflected in lower volatility of firm fundamentals, such as earnings volatility. We test this by estimating Equation (7) below:

$$Vol_{i,t}^{EarnX} = \beta_1 PoliticalHedge_{i,t-1} + \gamma Controls_{i,t-1} + \alpha_i + \alpha_t + \epsilon_{i,t} \quad (7)$$

²³ So that our firm fundamental volatility tests (e.g., investment volatility, earnings volatility, tax rate volatility) are all measured over a consistent window, we define investment volatility over a five-year horizon to be consistent with subsequent analyses of tax rate volatilities (discussed hereafter), which are only available on an annual basis and are typically calculated using a five-year window (Guenther, Matsunaga, and Williams 2017).

²⁴ If we combine CAPX, R&D, and acquisition spending together and then calculate the volatility of these combined expenditures, we continue to observe a significant negative relation between this aggregate investment volatility measure and political hedging (untabulated).

where the dependent variable is the volatility of firm-level earnings before extraordinary items (Vol^{EarnIB}). Additionally, since taxes are a central component of overall earnings, and prior literature has found that politics can influence a firm's effective tax rate (Brown et al. 2015, Mills et al. 2013), we also separately consider the impact of political hedging on the volatility of the firm's cash effective tax rate ($Vol^{EarnCashETR}$), and the volatility of pre-tax income ($Vol^{EarnPTI}$). This allows us to tease out whether hedging mitigates risks related to taxes and/or operations. We scale both earnings and pretax income by sales to control for size effects. We calculate each firm's annual cash effective tax rate (ETR), defined as cash taxes paid scaled by pretax income. We measure the volatility of each of these three earnings measures by taking the standard deviation of annual observations over five-year horizons beginning after Election Day.²⁵ As with investment, we transform the standard deviations of these measures into decile ranks so that the resulting volatility measures (Vol^{EarnIB} , $Vol^{EarnCashETR}$, $Vol^{EarnPTI}$) quantify the relative variation of a firm's earnings and tax payments over time. If political hedging helps firms reduce exposure to political risk and leads to more stable profitability, we should observe a negative β_1 coefficient in Equation (7). The controls vector and fixed effects structure remain as previously defined.

Table 6 presents the results from our estimation of Equation (7). Across our three measures, we find that political hedging activity is negatively related to future earnings volatility. This suggests that firms that hedge experience less volatility around their fundamental business operations. Overall, the results in Table 6 are consistent with the idea that political hedging mitigates risk related to firm profitability.

5.3. Political Hedging and Stock Price Informativeness

Our results related to equity, investment, and earnings volatility suggest political hedging helps firms mitigate risk related to firm operations. A natural implication of this reduced risk is that it should be easier for investors to anticipate and process earnings and thus equity prices should more quickly reflect such information. In particular, if politically hedged firms experience more stable

²⁵ We employ annual observations since effective tax rates are available only on an annual basis. Additionally, for the cash ETR volatility measure, we follow prior literature and exclude observations from the volatility calculation when cash ETR is uninterpretable due to being outside the range of 0 to 1 and/or not having a positive denominator (Christensen, Kenchington, and Laux 2020).

earnings, we expect that future earnings should be easier for investors to anticipate. To examine this, we test Equation (8) below:

$$\begin{aligned}
 RET_{i,t} = & \beta_1 Earn_{i,t-1} + \beta_2 Earn_{i,t} + \beta_3 Earn_{i,t+1} + \beta_4 PoliticalHedge_{i,t-1} + \\
 & \beta_5 Earn_{i,t-1} \times PoliticalHedge_{i,t-1} + \beta_6 Earn_{i,t} \times PoliticalHedge_{i,t-1} + \\
 & \beta_7 Earn_{i,t+1} \times PoliticalHedge_{i,t-1} + \beta_8 PoliticalConnection_{i,t-1} + \\
 & \beta_9 RET_{i,t+1} + \beta_{10} MVE_{i,t-1} + \beta_{11} Loss_{i,t} + \beta_{12} Growth_{i,t} + \alpha_i + \alpha_t + \epsilon_{i,t}
 \end{aligned} \tag{8}$$

In this equation, the dependent variable RET_{it} is a firm's annual stock return following a given election date. $Earn_{i,t-1}$, $Earn_{i,t}$, and $Earn_{i,t+1}$ denote firm-level earnings before extraordinary items during years $t-1$, t , and $t+1$, scaled by total assets. The coefficient β_3 measures the relation between current firm-level stock returns and future firm earnings and thus can be interpreted as a “future earnings response coefficient” (FERC). It is increasing in the extent to which current stock returns reflect/predict future firm earnings (Lundholm and Myers 2002, Choi et al. 2011). To address our research question, we include political hedging as an additional control and interact it with past, current, and future earnings ($PoliticalHedge_{i,t-1} \times Earn_{i,t+j}$). We also include controls for the level of political connections, future returns, firm size, a loss indicator, asset growth, and firm and year fixed effects. If investor uncertainty is decreasing with firms' political hedging activities and thus allows them to more rapidly process earnings information, we will observe a positive coefficient on the interaction of political hedging with future firm earnings (β_7), indicating that FERCs are higher for firms that engage in more political hedging.

Table 7 presents the results of our estimation of Equation (8). Column (1) presents a baseline version of Equation (8). In column (2) we add our measure of political hedging to Equation (8). We observe a positive and significant coefficient on the interaction of political hedging with future earnings, which indicates a stronger association between current stock prices and future earnings as firms engage in more political hedging. This is consistent with the view that political hedging activity reduces firm risk and thus alleviates investor uncertainty around corporate earnings.

6. Robustness Analyses

In this section we perform several additional analyses to assess the robustness of our inferences.

6.1. Other risk management practices

Our main results indicate that political hedging is associated with a reduction in firm risk, as evidenced by lower equity, investment, and earnings volatilities. Recognizing that firms choose to engage in political hedging activities, we control for several observable firm characteristics that may be associated with this choice. Moreover, we include firm fixed effects to capture any time-invariant firm characteristics that might not be directly observable, but are still associated with the decision to engage in political hedging, such as firms' risk management practices, which are largely stable over time (Ittner and Michels 2017).

Nonetheless, it is possible that time variation in firms' political hedging activities are correlated with their other risk management efforts and with realizations of firm risk. For instance, many firms also use derivatives to hedge market risks, and prior literature documents a myriad of benefits associated with maintaining a derivative hedging program (Bartram et al. 2011, Graham and Rogers 2002, Allayannis and Weston 2001). To ensure that such activities are not a correlated omitted variable in our analyses, we conduct additional analyses where we control for derivative hedging programs. Following prior literature, we define the variable *DerivativeC*, which measures the reported amount of unrealized derivative gains or losses in accumulated other comprehensive income scaled by market value of equity (Campbell 2015, Makar et al. 2013).²⁶ Since Rountree et al. (2008) document market benefits associated with the existence, rather than magnitude, of risk management practices, we also define a binary version of this variable, *DerivativeD*, which equals one when firms report a non-zero accumulated unrealized derivative gain or loss in accumulated other comprehensive income, and zero otherwise.²⁷ We include these variables as additional controls in the estimation of Equations (3), (5), (6) and (7) and report the results in Table 8.

²⁶ We measure these derivative variables during the most recent fiscal year ending prior to Election Day. Also note that we find similar results if we instead measure derivative use as the absolute value of unrealized derivative gains or losses in accumulated other comprehensive income scaled by market value of equity (untabulated).

²⁷ Although the reported amount of unrealized derivative gains or losses in accumulated other comprehensive income allows us to identify firms that use cash flow hedges, which are a major portion of overall derivative use (Pierce 2020), it does not capture non-designated or fair value hedges. Thus, we are imperfectly able to control for derivative use. With that said, it is not clear to us how those types of hedges would be correlated with what we document in our tests (and in particular, our cross-sectional tests), which helps mitigate concerns that our results are spurious.

Consistent with prior research, the results in Table 8 reveal a significantly negative coefficient on *DerivativeD* in equation (3). This indicates that the existence of a derivative hedging program is associated with a reduction in equity volatility. More importantly, however, we continue to observe a significantly negative association between political hedging and equity volatility, crash risk, and investment and earnings volatilities. These results persist whether we employ the binary or continuous measures of derivative programs. This provides reassurance that our findings are not driven by other risk management strategies that firms employ. It further reinforces our inference that political hedging helps firms reduce firm risk by managing their exposure to political risk.

6.2. Predictive model for hedging activity

To further address the non-random selection of political hedging activity, we also estimate a predictive model of political hedging as a function of observable firm characteristics. Specifically, we estimate the following equation:

$$\begin{aligned} \text{PoliticalHedge}_{i,t} = & \beta_1 \text{PoliticalConnections}_{i,t} + \beta_2 \text{MktVol}_{i,t} + \beta_3 \text{Beta}_{i,t} + \beta_4 \text{BTM}_{i,t} + \\ & \beta_5 \text{ROA}_{i,t} + \beta_6 \text{Loss}_{i,t} + \beta_7 \text{Cash}_{i,t} + \beta_8 \text{GovCust}_{i,t} + \beta_9 \text{ZScore}_{i,t} + \beta_{10} \text{Leverage}_{i,t} + \\ & \beta_{11} \text{Competition}_{i,t} + \beta_{12} \text{PPE}_{i,t} + \alpha_j + \alpha_t + \text{HedgeResidual}_{i,t} \end{aligned} \quad (9)$$

where the dependent variable is our measure of political hedging, as previously defined. The explanatory variables in this equation comprise the comprehensive set of control variables we employ in our earlier analyses. We expect that these variables are related to political hedging activity, because prior research demonstrates their association either with subsequent equity volatility or with firms' risk exposure. Equation (9) also includes industry and year fixed effects.

The results of estimating Equation (9) appear in column 1 of Table 9. They reveal that there is a strong positive association between political hedging activity and the level of political connections a firm maintains. This is unsurprising given that the act of political hedging often necessitates increased political connectedness. Several other variables also have significant associations as well, including the presence of losses and leverage. Overall, Equation (9) appears to offer a reasonable model for the determinants of political hedging, as we are able to explain 81% of variation in political hedging for our sample using it.

The residual term, $HedgeResidual_{i,t}$, provides an estimate of the portion of political hedging that is unrelated to the observable controls we employ (i.e., the “unexpected” portion of political hedging). We adopt this residual as an alternative to political hedging as an explanatory variable in Equation (3) and present the results of this re-estimation in column (2) of Table 9.²⁸ As suggested by Chen, Hribar, and Melessa (2018), we continue to include all of the explanatory variables from Equation (10) in this re-estimation. Column (2) reveals a strong negative relation between $HedgeResidual$ and $IdioVol$. It indicates that idiosyncratic equity volatility is decreasing in the magnitude of a firm’s political hedging activity that is unrelated to observable firm or market characteristics. This result offers further support of our inference that political hedging activity is an effective tool for reducing firm risk.

As an alternative predictive model, we replace the industry fixed effects with firm fixed effects in column (3) of Table 9. This increases the explanatory power of the predictive model to 90%. Using the residual from this model, in column (4) we again find a strong negative relation between $HedgeResidual$ and $IdioVol$. These findings corroborate our prior inferences and illustrate that self-selection concerns related to political hedging can largely be mitigated by controlling for observable characteristics and using firm fixed effects.

6.3. Event Study around Clean Power Plan

To further bolster our identification of the relation between political hedging and firm risk, we conduct an event study around the passage of the Clean Power Plan (CPP). First proposed in June 2014 under President Obama’s Climate Action Plan, the CPP aimed to reduce carbon dioxide emission by setting limits on carbon pollution from energy and utilities firms. Announcement of the CPP prompted substantial partisan debate in Congress about the scope and nature of the regulatory proposal. In August 2015, President Obama unveiled key details of the final version of the CPP, and the final version of the CPP was officially published in the Federal Register in October 2015.²⁹

²⁸ To be consistent with our prior analyses that measure political hedging as of $t-1$, we use the residual as of $t-1$.

²⁹ According to the Federal Register, “When an agency publishes a final rule, generally the rule is effective no less than thirty days after the date of publication in the Federal Register.” For more information, see Federal Register (2011).

The CPP most directly affects firms in the energy and utilities industries by constraining their carbon emissions. Therefore, we expect that the initial proposal and subsequent debate around the CPP exposed utilities and energy firms to additional policy-related risk, relative to other firms in the market. However, during the period when the CCP was being debated, politically hedged firms likely had an opportunity to influence both the regulation itself and also legislative bills affected by the regulation via their interactions with policymakers in order to reduce their risk exposure. Moreover, as a by-product of attempting to influence the CPP proposal and related legislation, politically hedged firms likely had advance access to important information about the specific parameters that would be included in the final legislation, giving them a comparative advantage in strategically reacting to that information. If the ability to influence policy and/or learn about policy developments helps politically hedged firms reduce exposure to policy-related risks, we should observe a muted risk response for those utilities and energy firms that were more politically hedged prior to the announcement of the CPP. To test this prediction, we study how firm risk evolves over both long and short-window horizons around the development of the CPP.

Our long-horizon tests involve a modification of Equation (3) to explore how the relation between political hedging and idiosyncratic equity volatility varies for firms affected by the development of the CPP. We add two additional explanatory variables to Equation (3): 1) an indicator variable for affected firms, *Treat*, and 2) an indicator variable for the time period when the proposal is likely to affect firm risk, *EventYear*. Using Fama-French 12 industry classifications, *Treat* equals one for firms in the utilities or energy industries and zero otherwise. Since the debate of the CPP occurred primarily between June 2014 and October 2015, we define *EventYear* to equal one during the 2014 election cycle and zero otherwise. Since we measure volatility during the twelve months after a particular election cycle, defining *EventYear* this way allows us to study how volatility from December 2014 to November 2015 differs from the rest of the sample period, which roughly overlaps with the primary window of CPP debate.

While the main effects of both *Treat* and *EventYear* are subsumed by our use of firm and year fixed effects, we are primarily interested in the interactive effects of *Treat* and *EventYear*. If treated firms are more subject to risk related to the CPP, we expect that the interaction term *Treat*

$\times EventYear$ will exhibit a positive coefficient. However, if political hedging effectively mitigates firm risk related to the CPP, the triple interaction term $PoliticalHedge \times Treat \times EventYear$ should exhibit a negative coefficient. The results in Table 10, Panel A confirm these predictions. We find that utilities and energy firms experience additional idiosyncratic volatility during the debate of the CPP, relative to other industries and time periods (i.e., $Treat \times EventYear$ is positive and significant). However, political hedging substantially offsets this effect (i.e., $PoliticalHedge \times Treat \times EventYear$ is negative and significant), suggesting that political hedging helps reduce idiosyncratic volatility for affected firms during the CPP development.

In addition to the long-horizon tests, we also study how return volatility evolves in short windows around key dates in the development of the CPP. Specifically, we use the historical Congressional Record to identify all dates between the initial CPP proposal on June 18, 2014 and October 23, 2015 on which there was active Congressional debate regarding the CPP.³⁰ These event dates are reported in Appendix B. We measure daily intraday equity volatility for all firms in our sample during the time window spanned by these event dates (June 18, 2014 - Oct 23, 2015). Using this firm-day data panel, we estimate the following equation:

$$\begin{aligned}
 IntraVol_{i,t}^{Ret} = & \beta_1 PoliticalHedge_{i,t-1} + \beta_2 PoliticalHedge_{i,t-1} \times Treat_i \\
 & + \beta_3 PoliticalHedge_{i,t-1} \times EventDay_i + \beta_4 Treat_i \times EventDay_i \\
 & + \beta_5 PoliticalHedge_{i,t-1} \times Treat_i \times EventDay_i + \gamma Controls_{i,t-1} + \alpha_i \\
 & + \alpha_t + \epsilon_{i,t}
 \end{aligned} \tag{10}$$

The dependent variable in Equation (10), $IntraVol_{i,t}^{Ret}$, is the intraday equity return volatility experienced by firm i on day t . The key explanatory variables are: a) the firm's level of political hedging, $PoliticalHedge$, b) an indicator variable for whether the firm is in an industry affected by the CPP, $Treat$, and c) an indicator variable for whether there was Congressional debate on that day, $EventDay$. Our controls vector remains as previously defined. We measure political activity ($PoliticalHedge$ and $PoliticalConnections$) prior to the start of the event period (i.e., as of the end of May 2014) to ensure that our measures of political activity do not reflect firm reactions to the

³⁰ We end our identification of event dates as of the date of policy publication in the Federal Register because the final details of the plan are publicly available to all firms and market participants at that point.

CPP. Since the unit of analysis is at the firm-day, we employ date fixed effects in Equation (10). As our hedging variable does not vary within this time window, we employ industry fixed effects instead of firm fixed effects. While the main effects of both *Treat* and *EventDay* are subsumed by our use of industry and date fixed effects, we are primarily interested in the interactive effects of *Treat* and *EventDay*. If treated firms are more subject to risk related to the CPP, we again expect that the interaction term $Treat \times EventDay$ will exhibit a positive coefficient. However, if political hedging effectively mitigates firm risk related to the CPP, the triple interaction term $PoliticalHedge \times Treat \times EventDay$ should exhibit a negative coefficient.

The results of estimating Equation (10) appear in Table 10, Panel B. Consistent with our prior results, we observe a significantly positive coefficient on $Treat \times EventDay$. This supports the view that utilities and energy firms are exposed to additional risk around the development of the CPP (relative to other firms) and thus experience additional intraday return volatility on days with Congressional discussion of the CPP. Most importantly for our hypothesis, we observe a significantly negative coefficient on the triple interaction of $PoliticalHedge \times Treat \times EventDay$, which again suggests that political hedging mitigates political risk.

In untabulated analyses, we also re-estimate this short-window volatility test using firm fixed effects instead of industry fixed effects. In these tests, the firm fixed effects subsume the main effects of *PoliticalHedge* and $PoliticalHedge \times Treat$, as well as the firm level controls, since they are time invariant during the time period when the CPP was being debated. We continue to observe a significantly positive coefficient on $Treat \times EventDay$ and a significantly negative coefficient on $PoliticalHedge \times Treat \times EventDay$. Further, the magnitudes of the coefficients are nearly identical to what is tabulated in Table 10 Panel B. Overall, our results suggest that while policy developments generate material uncertainty for firms, political hedging activity can help firms mitigate these risks.

To confirm that our inferences using the CPP setting are not spurious, we perform a placebo test where we randomly assign the days that the CPP was debated in Congress and which firms are identified as treatment firms. In so doing, we retain the same number of event dates and treatment firms as in the original analysis to ensure comparability with the results in Table 10 Panel B. We perform this placebo test 1,000 times and find that in 98% of the trials we do not observe a

significantly negative coefficient on $PoliticalHedge \times Treat \times PlaceboDay$, as expected.³¹ Furthermore, in 99% of the trials we do not jointly observe a significantly positive coefficient on $Treat \times PlaceboDay$ and a significantly negative coefficient on $PoliticalHedge \times Treat \times PlaceboDay$, as expected (untabulated). These findings provide further confidence in our inferences.

6.4 Additional Robustness Tests

We also perform robustness tests that are outlined in the Online Appendix. These include examining a sub-sample of politically connected firms, utilizing industry \times year fixed effects, and calculating the impact threshold of a confounding variable. The results from these analyses further mitigate concerns regarding potential correlated omitted variables and reinforce our inferences.

7. Conclusion

In this paper we examine whether firms mitigate policy-related risks through political hedging (i.e., the extent to which firms establish political connections across party lines). Using tests that examine within firm variation, we find when firms engage in greater political hedging, they experience reduced return stock volatility, particularly during periods of high policy uncertainty. Furthermore, political hedging appears to reduce a firm's investment and earnings volatility, and thus alleviates investor uncertainty around corporate earnings. We also conduct several additional analyses to corroborate our results. Collectively, these findings suggest that political hedging helps firms mitigate their exposure to political risk. Thus, this paper contributes to the literature by documenting an important channel by which firms manage their risk.

³¹ These statistics are based on a 5% significance level. Our inferences are similar using either the 10% or 1% levels.

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Table 1. Descriptive Statistics

Panel A: Summary Statistics						
	N	Mean	Std	P25	Median	P75
Main Regression Variables						
<i>IdioVol^{Ret}</i>	34,782	0.431	0.279	0.232	0.354	0.550
<i>PoliticalHedge</i>	34,782	0.115	0.272	0.000	0.000	0.000
<i>PoliticalConnections</i>	34,782	0.690	1.562	0.000	0.000	0.000
<i>MktVol</i>	34,782	0.215	0.090	0.157	0.199	0.256
<i>Beta</i>	34,782	0.896	0.748	0.547	0.857	1.177
<i>MVE</i>	34,782	6.022	1.981	4.557	5.922	7.338
<i>BTM</i>	34,782	0.695	0.307	0.453	0.715	0.940
<i>ROA</i>	34,782	-0.007	0.217	-0.004	0.025	0.078
<i>Loss</i>	34,782	0.264	0.441	0.000	0.000	1.000
<i>Cash</i>	34,782	0.192	0.226	0.030	0.092	0.274
<i>GovtSales</i>	34,782	0.021	0.103	0.000	0.000	0.000
<i>ZScore</i>	34,782	0.997	2.293	0.162	1.236	2.302
<i>Leverage</i>	34,782	0.197	0.195	0.021	0.150	0.313
<i>Competition</i>	34,782	0.090	0.048	0.055	0.082	0.117
<i>PPE</i>	34,782	0.243	0.271	0.038	0.142	0.349
Additional Dependent Variables						
<i>CrashRisk^{Skew}</i>	34,782	-0.032	0.874	-0.474	-0.038	0.397
<i>CrashRisk^{DUVol}</i>	34,782	-0.065	0.379	-0.308	-0.070	0.171
<i>Vol^{InvCapx}</i>	31,067	0.018	0.025	0.003	0.009	0.021
<i>Vol^{InvR&D}</i>	32,117	0.011	0.028	0.000	0.000	0.006
<i>Vol^{InvAcq}</i>	30,556	0.000	0.001	0.000	0.000	0.000
<i>Vol^{EarnIB}</i>	31,931	0.461	2.431	0.016	0.038	0.105
<i>Vol^{EarnPTI}</i>	31,931	0.483	2.496	0.022	0.048	0.119
<i>Vol^{EarnCashETR}</i>	18,948	0.110	0.086	0.049	0.087	0.148
<i>RET</i>	31,445	0.079	0.494	-0.224	0.045	0.295
<i>IntraVol^{Ret}</i>	963,170	0.023	0.084	0.000	0.001	0.006

Table 1. Descriptive Statistics (continued)

Panel B: Political Hedging by Election Year		
	N	Mean
1998	4,641	0.085
2000	4,096	0.084
2002	3,743	0.093
2004	3,693	0.102
2006	3,561	0.106
2008	3,205	0.133
2010	3,099	0.146
2012	2,945	0.154
2014	2,932	0.150
2016	<u>2,867</u>	<u>0.140</u>
Total	34,782	0.115

Panel C: Political Hedging by Industry		
	N	Mean
Consumer Non-Durables	1,758	0.105
Consumer Durables	821	0.090
Manufacturing	3,595	0.109
Energy	1,147	0.103
Chemicals	783	0.211
Business Equipment	6,636	0.061
Communications	734	0.235
Utilities	951	0.461
Retail	3,424	0.083
Healthcare	3,781	0.099
Finance	5,872	0.136
Other	<u>5,280</u>	<u>0.115</u>
Total	34,782	0.115

Notes. Panel A reports descriptive statistics. The investment volatility and earnings volatility measures are reported here before decile ranking. Due to skewness in these variables, in the regressions hereafter we use decile-ranked versions of these measures. Panel B reports mean values for *PoliticalHedge*, over the election years in our sample. Panel C reports mean values for *PoliticalHedge* by Fama-French 12 industry. See Appendix A for variable definitions.

Table 2. Political Hedging and Equity Volatility

	Pred.	(1) <i>IdioVol</i> ^{Ret}	(2) <i>IdioVol</i> ^{Ret}	(3) <i>IdioVol</i> ^{Ret}
<i>PoliticalHedge</i>	—	-0.043^{***} (-4.84)	-0.034^{***} (-3.29)	-0.031^{***} (-3.31)
<i>PoliticalConnections</i>			-0.003 (-1.04)	0.004 (1.54)
<i>MktVol</i>				0.242 ^{***} (11.97)
<i>Beta</i>				0.029 ^{***} (11.93)
<i>MVE</i>				-0.043 ^{***} (-15.18)
<i>BTM</i>				-0.046 ^{***} (-5.01)
<i>ROA</i>				-0.151 ^{***} (-10.73)
<i>Loss</i>				0.047 ^{***} (11.22)
<i>Cash</i>				-0.039 ^{***} (-3.04)
<i>GovtSales</i>				-0.047 ^{**} (-1.97)
<i>ZScore</i>				0.008 ^{***} (4.56)
<i>Leverage</i>				0.048 ^{***} (4.19)
<i>Competition</i>				0.080 ^{**} (2.21)
<i>PPE</i>				0.073 ^{***} (5.48)
Year FE		Yes	Yes	Yes
Firm FE		Yes	Yes	Yes
# of Obs.		34,782	34,782	34,782
Adj. R ²		0.63	0.63	0.66

Notes. This table reports coefficient estimates from the OLS regressions of stock return volatility on political hedging. All variables are defined in Appendix A. Firm and election year fixed effects are included in all specifications. Standard errors are clustered by firm and t-statistics are reported in parentheses. ***, **, and * denote two-tailed significance at the 1%, 5%, and 10% levels, respectively.

Table 3. Political Hedging and Equity Volatility: Cross-sectional Analyses

		(1)	(2)	(4)	(5)
	Pred.	$IdioVol^{Ret}$	$IdioVol^{Ret}$	$IdioVol^{Ret}$	$IdioVol^{Ret}$
<i>PoliticalHedge</i>		-0.018*	-0.011	-0.011	-0.053***
		(-1.89)	(-1.17)	(-1.17)	(-4.89)
<i>PoliticalHedge</i> \times <i>PartyDivBelow</i>	—	-0.032***			
		(-5.52)			
<i>PoliticalHedge</i> \times <i>TPUAbove</i>	—		-0.031***		
			(-6.36)		
<i>PoliticalHedge</i> \times <i>EPUAbove</i>	—			-0.031***	
				(-6.36)	
<i>PoliticalHedge</i> \times <i>Gridlock</i>	+				0.031***
					(5.14)
Controls		Yes	Yes	Yes	Yes
Year FE		Yes	Yes	Yes	Yes
Firm FE		Yes	Yes	Yes	Yes
# of Obs.		34,782	34,782	34,782	34,782
Adj. R ²		0.66	0.66	0.66	0.66

Notes. This table reports coefficient estimates from the OLS regressions of cross-sectional tests of the relation between return volatility on political hedging. Specifically, it reports how the relation varies based on the partisan balance in congress (column 1), tax policy uncertainty (column 2), economic policy uncertainty (column 3), and partisan gridlock (column 4). All variables are defined in Appendix A. Firm and election year fixed effects are included in all specifications. Standard errors are clustered by firm and t-statistics are reported in parentheses. ***, **, and * denote two-tailed significance at the 1%, 5%, and 10% levels, respectively.

Table 4. Political Hedging and Crash Risk

	Pred.	(1) <i>CrashRisk</i> ^{<i>Skew</i>}	(2) <i>CrashRisk</i> ^{<i>DUVol</i>}
<i>PoliticalHedge</i>	—	-0.141** (-2.33)	-0.063** (-2.34)
<i>PoliticalConnections</i>		0.004 (0.26)	0.001 (0.20)
<i>MktVol</i>		0.074 (0.92)	0.013 (0.35)
<i>Beta</i>		-0.005 (-0.52)	-0.004 (-1.12)
<i>MVE</i>		0.134*** (12.04)	0.067*** (14.07)
<i>BTM</i>		-0.216*** (-6.00)	-0.093*** (-5.92)
<i>ROA</i>		0.013 (0.25)	0.021 (0.94)
<i>Loss</i>		-0.003 (-0.17)	-0.005 (-0.61)
<i>Cash</i>		-0.016 (-0.30)	-0.013 (-0.53)
<i>GovtSales</i>		-0.102 (-0.92)	-0.044 (-0.91)
<i>ZScore</i>		-0.000 (-0.05)	-0.000 (-0.00)
<i>Leverage</i>		0.100* (1.94)	0.046** (2.05)
<i>Competition</i>		0.080 (0.48)	0.055 (0.75)
<i>PPE</i>		0.036 (0.72)	0.009 (0.41)
Year FE		Yes	Yes
Firm FE		Yes	Yes
# of Obs.		34,782	34,782
Adj. R ²		0.10	0.08

Notes. This table reports coefficient estimates from the OLS regressions of stock price crash risk on political hedging. All variables are defined in Appendix A. Firm and election year fixed effects are included in all specifications. Standard errors are clustered by firm and t-statistics are reported in parentheses. ***, **, and * denote two-tailed significance at the 1%, 5%, and 10% levels, respectively.

Table 5. Political Hedging and Investment Volatility

	Pred.	(1) $Vol^{InvCapx}$	(2) $Vol^{InvR\&D}$	(3) Vol^{InvAcq}
<i>PoliticalHedge</i>	—	-0.408*** (-3.11)	-0.143** (-1.98)	0.068 (0.38)
<i>PoliticalConnections</i>		0.038 (1.13)	0.008 (0.36)	-0.016 (-0.34)
<i>MktVol</i>		0.470*** (2.77)	0.336*** (3.69)	-0.467* (-1.86)
<i>Beta</i>		0.035* (1.83)	0.011 (1.08)	-0.038 (-1.23)
<i>MVE</i>		-0.239*** (-8.38)	-0.052** (-2.34)	-0.325*** (-7.28)
<i>BTM</i>		-1.571*** (-16.90)	-0.184*** (-2.71)	-1.562*** (-10.63)
<i>ROA</i>		-0.310*** (-2.86)	-0.284*** (-3.96)	0.261 (1.51)
<i>Loss</i>		-0.072** (-1.97)	0.034 (1.57)	-0.354*** (-5.94)
<i>Cash</i>		0.112 (0.83)	0.287*** (3.23)	1.957*** (9.16)
<i>GovtSales</i>		-0.089 (-0.35)	0.221 (1.18)	-0.809* (-1.93)
<i>ZScore</i>		0.085*** (5.02)	0.004 (0.33)	0.119*** (4.58)
<i>Leverage</i>		-1.190*** (-10.11)	-0.388*** (-5.15)	-1.375*** (-7.58)
<i>Competition</i>		0.045 (0.12)	0.325 (1.22)	-0.342 (-0.59)
<i>PPE</i>		0.958*** (8.24)	0.108 (1.15)	0.545*** (2.85)
Year FE		Yes	Yes	Yes
Firm FE		Yes	Yes	Yes
# of Obs.		31,067	32,117	30,556
Adj. R ²		0.72	0.95	0.56

Notes. This table reports coefficient estimates from the OLS regressions of investment volatility on political hedging. Column 1 examines capital expenditure volatility, column 2 examines research and development volatility, and column 3 examines acquisition spending volatility. All variables are defined in Appendix A. Firm and election year fixed effects are included in all specifications. Standard errors are clustered by firm and t-statistics are reported in parentheses. ***, **, and * denote two-tailed significance at the 1%, 5%, and 10% levels, respectively.

Table 6. Political Hedging and Earnings Volatility

	Pred.	(1) Vol^{EarnIB}	(2) $Vol^{EarnPTI}$	(3) $Vol^{EarnCashETR}$
<i>PoliticalHedge</i>	—	-0.358** (-2.28)	-0.339** (-2.15)	-0.505* (-1.93)
<i>PoliticalConnections</i>		0.088** (2.15)	0.052 (1.23)	0.100 (1.38)
<i>MktVol</i>		1.410*** (7.34)	1.779*** (9.19)	0.300 (0.82)
<i>Beta</i>		0.128*** (6.57)	0.133*** (6.59)	0.000 (0.01)
<i>MVE</i>		0.264*** (8.11)	0.317*** (9.29)	0.135** (2.19)
<i>BTM</i>		0.949*** (9.45)	0.944*** (9.01)	0.390* (1.91)
<i>ROA</i>		-0.780*** (-7.47)	-0.864*** (-7.70)	0.288 (0.84)
<i>Loss</i>		0.265*** (6.62)	0.189*** (4.71)	-0.110 (-1.34)
<i>Cash</i>		0.758*** (5.60)	0.720*** (5.17)	-0.385 (-1.37)
<i>GovtSales</i>		-0.313 (-1.25)	-0.202 (-0.74)	-0.619 (-1.33)
<i>ZScore</i>		-0.026* (-1.83)	0.003 (0.21)	0.131*** (2.84)
<i>Leverage</i>		-0.022 (-0.17)	-0.002 (-0.01)	0.780*** (3.09)
<i>Competition</i>		1.515*** (3.68)	1.336*** (3.12)	0.883 (1.20)
<i>PPE</i>		0.356*** (2.64)	0.365*** (2.65)	-0.211 (-0.81)
Year FE		Yes	Yes	Yes
Firm FE		Yes	Yes	Yes
# of Obs.		31,931	31,931	18,948
Adj. R ²		0.66	0.64	0.34

Notes. This table reports coefficient estimates from the OLS regressions of earnings volatility on political hedging. Column 1 examines total earnings volatility, column 2 examines pretax income volatility, and column 3 examines cash ETR volatility. All variables are defined in Appendix A. Firm and election year fixed effects are included in all specifications. Standard errors are clustered by firm and t-statistics are reported in parentheses. ***, **, and * denote two-tailed significance at the 1%, 5%, and 10% levels, respectively.

Table 7. Political Hedging and Price Informativeness

	Pred.	(1) RET_{it}	(2) RET_{it}
$Earn_{it-1}$	—	-0.441 ^{***} (-7.98)	-0.404 ^{***} (-7.25)
$Earn_{it}$	+	0.527 ^{***} (8.42)	0.504 ^{***} (8.01)
$Earn_{it+1}$	+	0.870 ^{***} (16.12)	0.820 ^{***} (15.14)
$PoliticalHedge_{it-1}$			-0.157 ^{***} (-4.83)
$Earn_{it-1} \times PoliticalHedge_{it-1}$			-2.399 ^{***} (-7.21)
$Earn_{it} \times PoliticalHedge_{it-1}$			1.592 ^{***} (3.89)
$Earn_{it+1} \times PoliticalHedge_{it-1}$	+		2.338^{***} (7.03)
$PoliticalConnections_{it-1}$		0.007 (1.19)	0.014 ^{**} (2.07)
RET_{it+1}		-0.135 ^{***} (-21.87)	-0.135 ^{***} (-21.99)
MVE_{it-1}		-0.321 ^{***} (-48.65)	-0.321 ^{***} (-48.75)
$Loss_{it}$		-0.195 ^{***} (-21.47)	-0.190 ^{***} (-21.04)
$Growth_{it}$		0.204 ^{***} (16.47)	0.211 ^{***} (16.92)
Year FE		Yes	Yes
Firm FE		Yes	Yes
# of Obs.		31,445	31,445
Adj. R ²		0.39	0.40

Notes. This table reports coefficient estimates from the OLS regressions of future earnings response coefficient on political hedging. All variables are defined in Appendix A. Firm and election year fixed effects are included in all specifications. Standard errors are clustered by firm and t-statistics are reported in parentheses. ***, **, and * denote two-tailed significance at the 1%, 5%, and 10% levels, respectively.

Table 8. Political Hedging and Equity Volatility: Controlling for Derivative Usage

Panel A: Controlling for Derivative Use with an Indicator Variable (<i>DerivativeD</i>)									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	<i>IdioVol</i> ^{Ret}	<i>CrashRisk</i> ^{Skew}	<i>CrashRisk</i> ^{DUVol}	<i>Vol</i> ^{InvCapx}	<i>Vol</i> ^{InvR&D}	<i>Vol</i> ^{InvAcq}	<i>Vol</i> ^{EarnIB}	<i>Vol</i> ^{EarnPTI}	<i>Vol</i> ^{EarnCashETR}
<i>Political</i>	-0.032***	-0.141**	-0.062**	-0.411***	-0.142**	0.070	-0.365**	-0.346**	-0.502*
<i>Hedge</i>	(-3.38)	(-2.33)	(-2.33)	(-3.14)	(-1.97)	(0.39)	(-2.33)	(-2.19)	(-1.92)
<i>DerivativeD</i>	-0.018***	0.006	0.006	-0.052	0.010	0.034	-0.159***	-0.164***	0.117
	(-5.38)	(0.34)	(0.82)	(-1.32)	(0.40)	(0.58)	(-3.31)	(-3.36)	(1.54)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm & Yr. FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
# of Obs.	34,782	34,782	34,782	31,067	32,117	30,556	31,931	31,931	18,948
Adj R ²	0.66	0.10	0.08	0.73	0.95	0.56	0.66	0.64	0.34

Panel B: Controlling for Derivative Use with a Continuous Measure Capturing Unrealized Gains/Losses from Derivatives (<i>DerivativeC</i>)									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	<i>IdioVol</i> ^{Ret}	<i>CrashRisk</i> ^{Skew}	<i>CrashRisk</i> ^{DUVol}	<i>Vol</i> ^{InvCapx}	<i>Vol</i> ^{InvR&D}	<i>Vol</i> ^{InvAcq}	<i>Vol</i> ^{EarnIB}	<i>Vol</i> ^{EarnPTI}	<i>Vol</i> ^{EarnCashETR}
<i>Political</i>	-0.031***	-0.141**	-0.062**	-0.407***	-0.144**	0.073	-0.354**	-0.335**	-0.505*
<i>Hedge</i>	(-3.34)	(-2.33)	(-2.33)	(-3.11)	(-1.99)	(0.41)	(-2.26)	(-2.13)	(-1.94)
<i>DerivativeC</i>	-0.761*	0.529	0.837	3.035	-2.699	10.763	9.240*	9.039	4.169
	(-1.70)	(0.26)	(0.91)	(0.72)	(-1.03)	(1.57)	(1.73)	(1.63)	(0.45)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm & Yr. FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
# of Obs.	34,782	34,782	34,782	31,067	32,117	30,556	31,931	31,931	18,948
Adj R ²	0.66	0.10	0.08	0.72	0.95	0.56	0.66	0.64	0.34

Notes. This table reports coefficient estimates from Equations (3), (4), (5), and (6) with controls for the usage of derivatives. Panel A controls for derivative usage based on an indicator variable and Panel B utilizes a continuous measure based on unrealized gains and losses from derivatives, respectively. All variables are defined in Appendix A. All variables in the *Controls* vector, as well as firm and election year fixed effects, are included in all specifications. Standard errors are clustered by firm and t-statistics are reported in parentheses. ***, **, and * denote two-tailed significance at the 1%, 5%, and 10% levels, respectively.

Table 9. Political Hedging and Equity Volatility: Residual Model

	(1)	(2)	(3)	(4)
	<i>PoliticalHedge</i>	<i>IdioVol^{Ret}</i>	<i>PoliticalHedge</i>	<i>IdioVol^{Ret}</i>
<i>HedgeResidual</i>		-0.029*** (-3.12)		-0.031*** (-3.31)
<i>PoliticalConnections</i>	0.155*** (281.09)	-0.001 (-0.51)	0.169*** (43.76)	-0.001 (-0.72)
<i>MktVol</i>	0.046*** (4.83)	0.241*** (11.89)	0.003 (0.33)	0.242*** (11.96)
<i>Beta</i>	0.002* (1.74)	0.029*** (11.91)	-0.000 (-0.02)	0.029*** (11.93)
<i>MVE</i>	-0.001 (-1.35)	-0.043*** (-15.17)	-0.003* (-1.75)	-0.043*** (-15.15)
<i>BTM</i>	0.003 (1.15)	-0.046*** (-5.01)	-0.010** (-2.27)	-0.046*** (-4.97)
<i>ROA</i>	0.003 (0.74)	-0.151*** (-10.74)	-0.002 (-0.60)	-0.151*** (-10.73)
<i>Loss</i>	-0.006*** (-2.89)	0.047*** (11.27)	-0.005*** (-2.82)	0.047*** (11.26)
<i>Cash</i>	0.005 (1.23)	-0.040*** (-3.05)	-0.003 (-0.61)	-0.039*** (-3.03)
<i>GovtSales</i>	0.052*** (7.68)	-0.049** (-2.03)	0.002 (0.09)	-0.047** (-1.97)
<i>ZScore</i>	0.000 (0.31)	0.008*** (4.56)	0.001* (1.95)	0.008*** (4.54)
<i>Leverage</i>	0.032*** (8.09)	0.047*** (4.10)	0.016*** (2.58)	0.047*** (4.14)
<i>Competition</i>	0.017 (1.12)	0.080** (2.19)	0.040** (2.14)	0.079** (2.17)
<i>PPE</i>	-0.009** (-2.55)	0.073*** (5.51)	-0.003 (-0.46)	0.073*** (5.49)
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	No	No	No
Firm FE	No	Yes	Yes	Yes
# of Obs.	34,782	34,782	34,782	34,782
Adj. R ²	0.81	0.66	0.90	0.66

Notes. Column (1) of this table reports coefficients from the estimation of Equation (9) using industry fixed effects. Column (2) presents the coefficients from the estimation of Equation (3) using the residual from column (1), *HedgeResidual*, as an alternative explanatory variable. Column (3) of this table reports coefficients of Equation (9) using firm fixed effects. Column (4) presents the coefficients from the estimation of Equation (3) using the residual from column (3), *HedgeResidual*, as an alternative explanatory variable. All variables are defined in Appendix A. Firm and election year fixed effects are included in all specifications. Standard errors are clustered by firm and t-statistics are reported in parentheses. ***, **, and * denote two-tailed significance at the 1%, 5%, and 10% levels, respectively.

Table 10. Political Hedging and Equity Volatility: Event Study around Clean Power Plan

Panel A: Long horizon return volatility tests		
	Pred.	$IdioVol^{Ret}$
$PoliticalHedge$		-0.037*** (-3.70)
$PoliticalHedge \times Treat$		0.050*** (2.82)
$PoliticalHedge \times EventYear$		0.040*** (5.59)
$Treat \times EventYear$	+	0.160*** (8.31)
$PoliticalHedge \times Treat \times EventYear$	—	-0.123*** (-4.22)
Controls		Yes
Year FE		Yes
Firm FE		Yes
# of Obs.		34,782
Adj. R ²		0.66
Panel B: Short horizon daily intra-day return volatility tests		
	Pred.	$IntraVol^{Ret}$
$PoliticalHedge$		-0.010*** (-2.60)
$PoliticalHedge \times Treat$		0.005 (0.70)
$PoliticalHedge \times EventDate$		0.004*** (8.62)
$Treat \times EventDate$	+	0.004*** (3.66)
$PoliticalHedge \times Treat \times EventDate$	—	-0.005*** (-2.97)
Controls		Yes
Date FE		Yes
Industry FE		Yes
# of Obs.		963,170
Adj. R ²		0.19

Notes. Panel A presents the coefficients from the estimation of Equation (10), which pertains to a long window test examining idiosyncratic return volatility. Panel B presents the coefficients from the estimation of Equation (10b), which pertains a short window test examining daily intraday return volatility. All variables are defined in Appendix A. Standard errors are clustered by firm and t-statistics are reported in parentheses. ***, **, and * denote two-tailed significance at the 1%, 5%, and 10% levels, respectively.

Appendix A. Variable Definitions

Variable	Definition	Data Source
<i>Beta</i>	The estimated β coefficient from the following model with daily returns over a 12-month period. $(Ret - R_f)_{i,t} = \alpha + \beta(Mkt - R_f)_{i,t} + \varepsilon_{i,t}$	CRSP
<i>BTM</i>	The book value of assets divided by the market value of assets.	Compustat
<i>Cash</i>	Cash divided by beginning total assets.	Compustat
<i>Competition</i>	Number of competition-related words per 1,000 total words in the 10-K based on Li, Lundholm, and Minnis (2013).	SEC EDGAR
<i>CrashRisk^{DUVol}</i>	The log of the ratio of the standard deviation on the down weeks (firm-specific weekly returns below the annual mean) to the standard deviation on the up weeks (firm-specific weekly returns above the annual mean) over a 12-month period.	CRSP
<i>CrashRisk^{Skew}</i>	Negative one times the third moment of firm-specific weekly returns for over a 12-month period divided by the standard deviation of firm-specific weekly returns raised to the third power.	CRSP
<i>DerivativeC</i>	Accumulated unrealized derivative gain or losses (other comprehensive income) scaled by market value.	Compustat
<i>DerivativeD</i>	An indicator variable equal to one if accumulated unrealized derivative gain or losses (other comprehensive income) does not equal to zero; zero otherwise.	Compustat
<i>Earn</i>	Earnings before extraordinary items scaled by total assets.	Compustat
<i>EventDay</i>	An indicator variable equal to one if there was discussion in Congress on that day about the Clean Power Plan, and zero otherwise.	Congressional Record
<i>EventYear</i>	An indicator variable equal to one for the 2014 election cycle; zero otherwise.	Compustat
<i>EPUAbove</i>	An indicator variable equal to one if the average level of the daily Economic Policy Uncertainty index over the 12-month period after each election is larger than the sample median; zero otherwise.	Baker et al. (2016)
<i>GovtSales</i>	Sales to government customers divided by total sales.	Compustat
<i>Gridlock</i>	An indicator variable equal to one if the average level of the monthly Partisan Conflict index over the 12-month period after each election is larger than the sample median; zero otherwise.	Azzimonti (2018)
<i>Growth</i>	The growth rate in total assets from the prior year to year t .	Compustat

Appendix A. Variable Definitions (continued)

Variable	Definition	Data Source
<i>IdioVol^{Ret}</i>	<p>The annualized standard deviation of the residual value from the following model estimated over a 12-month period.</p> $r_{j,t} = \alpha_j + \beta_{1,j}r_{m,t-1} + \beta_{2,j}r_{i,t-1} + \beta_{3,j}r_{m,t} + \beta_{4,j}r_{i,t} + \beta_{5,j}r_{m,t+1} + \beta_{6,j}r_{i,t+1}$ <p>$r_{j,t}$ is the weekly return for firm j in week t; $r_{m,t}$ is the market return for in week t; $r_{i,t}$ is the FF value weighted industry index return for industry i in week t.</p>	CRSP
<i>IntraVol^{Ret}</i>	Daily intraday equity volatility, measured as the second-by-second trade-based intraday stock return volatility for the firm on day t , times 1,000.	TAQ
<i>Leverage</i>	Total debt scaled by lagged total assets.	Compustat
<i>Loss</i>	An indicator variable equal to one if net income is negative, and zero otherwise.	Compustat
<i>MktVol</i>	The annualized standard deviation of daily Fama-French 48 industry portfolio returns over a 12-month period.	CRSP
<i>MVE</i>	The natural log of the market value of equity.	Compustat
<i>PartyDivBelow</i>	An indicator variable equal to one if the absolute difference in the number of seats held by Republicans and Democrats in Congress scaled by the total number of seats in Congress is smaller than the sample median; zero otherwise.	Charles Stewart
<i>Political Connections</i>	Measured as the natural logarithm of 1 plus the number of political candidates (House, Senate, and Presidential) to whom the firm contributed money to over the 6 years (i.e., 72 months) ending in October before each election.	FEC
<i>PoliticalHedge</i>	Measured as $1 - \frac{ REP-DEM }{REP+DEM}$ over the 6 years (i.e., 72 months) ending in October before each election, where REP (DEM) represent the total number of Republican (Democrat) candidates that receive political contributions from the firm.	FEC
<i>PPE</i>	Net property, plant, and equipment scaled by lagged total assets.	Compustat
<i>RET</i>	The cumulative annual stock return.	CRSP
<i>ROA</i>	Net income divided by lagged total assets.	Compustat

Appendix A. Variable Definitions (continued)

Variable	Definition	Data Source
<i>Treat</i>	An indicator variable equal to one if the firm is from energy or utility industry; zero otherwise.	Compustat
<i>TPUAbove</i>	An indicator variable equal to one if the average level of the monthly Tax Policy Uncertainty index over the 12-month period after each election is larger than the sample median; zero otherwise.	Baker et al. (2016)
$Vol^{EarnCashETR}$	The standard deviation of Cash ETR in the five years after Election Day. Cash ETR is calculated as taxes paid scaled by pretax income. Years with Cash ETRs outside the range of 0 to 1 or negative pretax income are excluded from the calculation. This measure is decile ranked in the regression.	Compustat
Vol^{EarnIB}	The standard deviation of annual earnings before extraordinary items scaled by sales in the five years after Election Day. This measure is decile ranked in the regression.	Compustat
$Vol^{EarnPTI}$	The standard deviation of annual pre-tax income over sales in the five years after Election Day. This measure is decile ranked in the regression.	Compustat
Vol^{InvAcq}	The standard deviation of cash outflow of funds used for acquisition over assets in the five years after Election Day. This measure is decile ranked in the regression.	Compustat
$Vol^{InvCapx}$	The standard deviation of annual capital expenditure over assets in the five years after Election Day. This measure is decile ranked in the regression.	Compustat
$Vol^{InvR\&D}$	The standard deviation of annual research and development expenditure over assets in the five years after Election Day. This measure is decile ranked in the regression.	Compustat
<i>ZScore</i>	$3.3 \times \text{Pre-Tax Income} + \text{Sales} + 1.4 \times \text{Retained earnings} + 1.2 \times (\text{Current assets} - \text{Current liabilities}) / \text{Book assets}$ based on Shivdasani and Stefanescu (2010).	Compustat

Appendix B: Clean Power Plan Event Dates

The following list provides all dates when the Congressional Record included discussion of the Clean Power Plan between June 18, 2014 (the date of initial proposal) through October 23, 2015 (the date of final plan publication in the Federal Register). For additional details on each event, see

<https://www.congress.gov/congressional-record/>

<u>Dates</u>	<u>Congressional Record Header</u>
June 18, 2014	Clean Power Plan Proposal from EPA
July 28-29, 2014	House Committee Meetings
September 8-9, 2014	House Committee Meetings
November 12, 2014	US-China Climate Agreement
December 10-12, 2014	Protecting Volunteer Firefighters & Emergency Responders Act of 2014; Insular Areas & Freely Associated States Energy Development
January 26-27, 2015	Keystone XL Pipeline Act
February 9, 2015	Climate Change
March 4, 2015	Senate Committee Meetings
March 9-11, 2015	Senate Committee Meetings
March 18, 2015	Secret Science Reform Act of 2015
March 25-26, 2015	Concurrent Resolution on the Budget, Fiscal Year 2016
April 13-14, 2015	Climate Change; Concurrent Resolution on the Budget, Fiscal Year 2016;
April 16, 2015	The War on Coal
April 20, 2015	Petitions & Memorials
April 28-29, 2015	Clean Power Plan in Minnesota; Energy & Water Development & Related Agencies Appropriations Act, 2016
May 4-6, 2015	Senate Committee Meetings; Ensuring Tax Exempt Organizations the Right to Appeal Act
May 12, 2015	The Middle Class
May 18-19, 2015	Ensuring Tax Exempt Organizations the Right to Appeal Act
June 2-3, 2015	Climate Change; National Defense Authorization Act for Fiscal Year 2016
June 9, 2015	EPA Rule & Big Stone Plant
June 11, 2015	Federal Regulations
June 17-18, 2015	Papal Encyclical on Climate Change; National Defense Authorization Act for Fiscal Year 2016
June 22-25, 2015	Congressional Program Ahead; Committee Meetings; Ratepayer Protection Act of 2015
July 7-8, 2015	Department of the Interior, Environment, & Related Agencies Appropriations Act, 2016
July 16, 2015	EPA Regulations
July 26-29, 2015	Text of Amendments; Hire More Heroes Act of 2015; The Impacts of Coal
August 3-5, 2015	Plan unveiled by President Obama; Clean Power Plan; Cybersecurity Information Sharing Act of 2015
September 10, 2015	Hire More Heroes Act of 2015
September 16-18, 2015	Hire More Heroes Act of 2015; Climate Change & Public Health; Ozone Regulations; Constitution Day
October 7, 2015	Energy & Water Development & Related Agencies Appropriations Act, 2016
October 22, 2015	Growth in Federal Regulations
October 23, 2015	Federal Plan for the Clean Power Plan published in the Federal Register