Risk-*Taking* Incentives and *Risk*-**Talk***ing* Outcomes

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I find a strong positive association between CEOs' option-based compensation and discussions about political risk (*risk*-**talk***ing*) during subsequent corporate earnings conference calls. This effect is more pronounced in the subsample of firms with lower equity price volatility and poor investment risk-taking (lower capital expenditure). Furthermore, seven out of eight components of *risk*-**talk***ing* maintain a positive association with CEOs' option-based compensation. These findings suggest CEOs with more options in pay packages likely find discussing political risk during corporate earnings calls as a viable alternative to boost proxies of risk-taking outcomes (such as equity price volatility), especially when they sense risk-taking expectations untenable.

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1. INTRODUCTION

Risk-averse managers prefer to avoid risky projects irrespective of their NPV. Early studies reckon that convex compensation contracts alleviate managerial risk aversion and align managerial interests to those of shareholders seeking to accept positive NPV projects irrespective of their riskiness (Jensen & Meckling 1976; Myers, 1977; Smith & Stulz, 1985). Options are key to the design of convex compensation packages, as they involve significant upside potential with little downside risk to managers' wealth, effectively motivating them against rejecting risky positive NPV projects. Empirical evidence generally supports this view that option-based compensation incentivizes managers to take on more risk (Guay, 1999; Rogers 2002; Sanders & Hambrick, 2007; Low, 2009; Gormley, Matsa & Milbourn, 2013), with some exceptions with evidence to contrary (e.g., Ross, 2004; Hayes, Lemmon & Qiu, 2012). However, managers receiving compensation packages loaded with incentives to demonstrate risk-taking may resort to opportunistic means to influence the demonstration of risk-taking (e.g., boost equity price volatility) to preserve such incentives in future compensation contracts. Unsurprisingly, the literature blames risk-taking incentives for manipulative, opportunistic managerial behavior such as executive option grants backdating, earnings manipulation, and misreporting (Bergstresser & Philippon, 2006; Burns & Kedia, 2006; Cheng & Farber, 2008; Peng & Röell, 2008; Grant, Markarian & Parbonetti, 2009; Feng, et al., 2011; Armstrong et al., 2013), risk-shifting (Annantharam & Lee, 2014), and selecting projects that increase systematic risk as opposed to idiosyncratic risk (Armstrong & Vashishtha, 2012), all of which are likely motivated to preserve incentives they receive. This study presents

another opportunistic managerial behavior, which involves exploiting flexible disclosure environment of earnings calls to discuss (or not discuss) political risk, which this study calls *risk*-**talk***ing*. In short, do managers with options in compensation packages resort to *risk*-**talk***ing*? Does this happen more when managers sense poor investment risk-taking and weak risk-taking outcomes?

To capture managerial *risk*-**talk***ing*, I utilize the 'textual analysis of corporate earnings call transcript' based measure of firm-level political risk developed by Hassan et al. (2019) (which I call political risk revelations – *PRR*).[1' 2] This measure is aptly suited to capture managerial *risk*-**talk***ing,* as earnings conference calls are voluntary and flexible information events during which corporate executives (e.g., the chair, CEO and CFO, and as appropriate other executives) start by presenting information about firms' financial and other results followed by answering questions from participants such as analysts, investors and other interested parties. For managers who wish to create illusion about risk-taking or influence risk-taking outcomes (e.g., equity price volatility), earnings calls are the most opportune avenues that provide flexibility to use voluntarily words, tone,

[1]This measure of political risk revelation according to Hassan et al. (2019, p.2135) reflects "*the share of their quarterly earnings conference calls that they devote to political risks. ……that it correctly identifies calls containing extensive conversations on risks that are political in nature, that it varies intuitively over time and across sectors, and that it correlates with the firm's actions and stock market volatility in a manner that is highly indicative of political risk.*" Hassan et al. (2019) find this measure's variation is largely firm specific amounting to over 90% of variation, it positively relates with equity price volatility and firms' actions portraying risk-taking (e.g., investments and hiring). Subsequent research finds this measure of firm-level political risk revelation has significant corporate outcomes, such as it is associated with corporate debt terms and yield (Gad et al., 2023; Huang, Shen & Wu, 2023) and the cost of equity capital (Mishra, 2023).

[2]I acknowledge that earnings call transcripts include words uttered by managers as well as outsiders, such as analysts suggesting our *PRR* measure is not entirely based on talks by managers. However, on average earnings call transcripts include over 80% (less than 20%) words uttered by managers (analysts) (see, Yong, Cho & Yang, 2022), suggesting that our measure of *risk*-talk*ing* predominantly (on average over 80%) captures managers' talk about political risk.

sentences and discussions that imply risk, such as political risk. Using their novel measure of political risk revelations as the proxy of *risk*-**talk***ing*, I find a strong positive association between the share of options in CEO pay packages and *risk*-**talk***ing*. Furthermore, option pay-*risk*-**talk***ing* sensitivity is more pronounced in firms with lower total and idiosyncratic volatility and more so in the firms featuring both lower volatility and lower capital spending (investment risk-taking). Furthermore, Hassan et al. provide a breakdown of *PRR* into eight different components, unlike total or nonpolitical risk. As expected, I find seven out of eight components of *PRR* (*risk*-**talk***ing)* are increasing in options pay. This suggests that managers with options in pay packages opportunistically reveal political risk when the attained risk outcomes (e.g., capital investments and equity price volatility) are weaker. Options pay likely encourages managers to disguise the actual level of risk-taking by using "*risk*-**talk***ing*" as an alternative means to influence risk outcomes (such as equity price volatility), more so when '*pay structure implied risk expectations*' are unattainable.

Corporate boards likely consider their own risk tolerance to design and adjust compensation packages for routing managerial efforts toward their risk-taking expectations, and risk-averse boards may offer fewer options in compensation packages and risk-averse CEOs could self-select firms with lower options in compensation packages, pointing to significant endogeneity issues in analyzing risk-taking implications of options pay (e.g., see, Gormley et al., 2013). However, because boards do not design convex compensation packages to encourage managerial *risk*-**talk***ing*, endogeneity issues are far less severe in the empirical analysis on *risk*-**talk***ing* implications of options pay.

Nevertheless, despite strong baseline results, empirical challenges due to firm-CEO (board's expectations-CEO) matching or observable or unobservable firm-specific heterogeneity cannot be ignored. To address these identification challenges, first, I use a panel firm-fixed effects framework as the primary empirical design while simultaneously using a healthy set of observed controls, including controls for lagged *PRR*. Second, *risk*-**talk***ing* could be an innate attribute of managers; therefore, to address potential identification issues due to unobserved CEO heterogeneity, I account for CEO-firm combination fixed effects. Third, I also utilize annual change in *PRR* as the dependent variable, proxies of option-based pay (risk-taking incentives) as the key test variable, and simultaneously account for firm-fixed effects. Fourth, managers likely talk more about political risk because of the increase in such risk due to unobserved industry shocks (e.g., clean energy regulations) or unaccounted for changes in state-level political risks. To address this concern, in regression tests, I separately account for annual industry and state effects, along with firm-fixed effects. Finally, public criticism of opportunistic executive options grant backdating (Yermack, 1997; Heron & Lie, 2007; Daines, McQueen & Schonlau, 2018) led to regulation changes, as reflected in *FAS123R*, which was implemented between 2005/2006. Because the implementation of *FAS123R* resulted in significant changes in rules related to accounting treatment (e.g., expensing) of equity-based pay (e.g., Hayes et al., 2012; Bakke et al., 2016), "*effectively eliminating any accounting advantages associated with stock options*" (Hayes et al., 2016, p. 175), I utilize this exogenous shock as an additional identification strategy. In using a battery of such tests, I continue to find strong evidence that options pay encourages managerial *risk*-**talk***ing*.

This study contributes to the past literature on risk-taking incentives embedded in CEO pay contracts and opportunistic managerial behavior in general and their eventual effect on political risk revelations in particular. More importantly, it sheds further light on manager-shareholder agency conflicts and that convex compensation contracts, such as option-based pay packages, while intended for alleviating managerial opportunism, can have many ways to feed on managerial opportunism (Rajgopal & Shevlin, 2002). Prior literature shows several suboptimal managerial behaviors linked to option-based compensation, such as earnings manipulation, misreporting, and risk shifting (e.g., Burns & Kedia, 2006; Peng & Röell, 2008; Feng, et al., 2011; Armstrong et al., 2013; Annantharam & Lee, 2014; Armstrong & Vashishtha, 2012). This study uncovers another suboptimal, opportunistic, and likely manipulative behavior of managers linked to risk-taking incentives embedded in pay packages. I call this managerial behavior *risk*-**talk***ing*, as such opportunistically revealing (or not revealing) political risk during earnings conference calls. Apart from this, it provides boards and corporate monitors a message that equity price volatility could be a poor criterion for assessing managers' risk-taking performance, as it can equally be affected by managerial talks about unpursued or nonexistent risks.

2. LITERATURE & RESEARCH QUESTIONS

2.1. Risk-taking incentives and risk-taking outcomes:

An optimal executive compensation package is expected to align managerial interests to those of the shareholders, such that managers undertake investment and financing policies that involve positive NPV projects. However, managers may pursue a "quiet

life", where opportunities persist (Bertrand & Mullainathan, 2003), and undiversified managers' pursuit of a "*quiet life*" (Danthine & Donaldson, 2008) may often preclude such alignments. To this effect, the literature suggests that under risk neutrality, shareholders would prefer accepting all positive NPV projects. However, risk-averse managers prefer accepting only those projects that are less risky and rejecting positive NPV projects that are more risky, precluding firm value maximization (e.g., Rajgopal & Shevlin, 2002).

A number of prior studies dating back several decades (e.g., Jensen & Meckling 1976; Myers, 1977; Smith & Stulz, 1985) to early this century (Rajgopal & Shevlin, 2002; Coles, Daniel & Naveen, 2006) contain intuitions that executive option-based compensation (or convex compensation contracts) are expected to alleviate managerial risk avoidance and align managerial interests to those of shareholders who expect all positive NPV projects be accepted without regard to their riskiness. However, there are some dissenting views. For example, Lambert, Larcker & Verrecchia (1991) argue that option-based pay packages likely expose managers' wealth to firm risk, thus discouraging risk-taking, and Ross (2004) argues that options pay does not necessarily reduce managerial risk aversion. The prior empirical literature supports the majority view that convex compensation contracts containing a significant option-based component help motivate managers to take on risky projects. For example, Guay (1999) concludes that convex compensation packages increase stock-return volatility and influence investment and financing decisions; Rogers (2002) shows that options in compensation packages discourage the use of derivatives for hedging; Sanders & Hambrick (2007) find that CEO options encourage higher investment outlays and

generate more volatile performance. Likewise, Low (2009) regards "managerial risk aversion" as an agency problem leading managers to reduce firm risk that adversely affects shareholder wealth. They find that low risk-taking incentives embedded in compensation vega are associated with lower risk-taking. Gormley et al. (2013) find that managers' less convex compensation is associated with lower leverage, lower R&D expenses, more accumulation of cash and instances of more diversifying acquisitions, suggesting lower managerial risk-taking. Therefore, despite significant regulatory changes surrounding options pay taken place during 2005/2006, which significantly reduced the share of option-based compensation in favor of other forms of equity-based compensation in recent years (Edmans, Gabaix & Jenter, 2017; Bettis, Bizjak, Coles & Kalpathy, 2018), options remain a nontrivial component of CEO pay packages for many firms (Murphy, 2013). Some studies provide evidence to the contrary (Aboody & Kasznik, 2000; Hayes et al., 2012), suggesting that option-based compensation does not necessarily align managerial interests to those of shareholders because there is little evidence "*that the decline in option usage following the accounting change results in less risky investment and financial policies*" (Hayes et al., 2012, p.174). Options, instead, encourage managers to manipulate the timing and nature of information disclosure (Aboody & Kasznik, 2000).

2.2. Risk-taking incentives & information manipulation:

Despite managerial efforts to consummate the message embedded in compensation packages, the risk outcomes may not necessarily fit those implied by compensation contracts and expected by managers and shareholders. Managers who have incentives to demonstrate risk-taking to preserve the incentives they receive in their compensation

packages may resort to alternative strategies to influence the demonstration of risk-taking and thus risk outcomes such as equity price volatility. In those situations, managers likely have incentives to adjust other inputs that may eventually render visibly risky outcomes. When investment risk-taking and risk-taking outcomes such as equity price volatility (e.g., Guay 1999; Low, 2009) do not elevate to managerial expectations, managers may resort to "*mitigate such effects through earnings management*" (Grant et al., 2009, p.1029). Laux (2014) argues that because boards often rely on accounting information for decision making and the CEOs' pay structure endogenously introduces a gap in CEOs' vs. boards' preferred decisions, CEOs might use their discretion to choose the degree of accounting information manipulation to shift boards' preferred decisions toward their own. In their analytical model, Laux (2014) predicts that an increase in executive pay plan convexity (e.g., more options in pay packages) is positively related to accounting information manipulation and poor reporting quality. Similarly, Armstrong et al. (2013) argue that provided misreporting positively affects equity price volatility and equity value, making managers less averse to equity risk, and managers with more risk-taking incentives will have incentives to misreport. Moreover, analytically, Peng and Röell (2008) demonstrate that options pay likely motivates managers to inflate their reports and likely exert a (p.289) "*more powerful impact on manipulation than stock awards, given their higher pay-performance elasticity*."

Empirical evidence supports these views; for example, risk-taking incentives positively affect income smoothing (Grant et al., 2009), and option-based pay is positively associated with misreporting; thus, compensation packages that make managers less

averse to risk encourage misreporting (Armstrong et al., 2013). Aboody & Kasznik (2000) find that managers tend to report bad news closer to the option grant dates and delay releasing good news until after receiving the grants. Apart from this, there is significant literature that shows that compensation structures are related to accounting irregularity; for example, CEO compensation delta is positively associated with discretionary accruals (Bergstresser & Philippon, 2006), financial restatements (Burns & Kedia, 2006), instances of fraud and misrepresentations (Feng et al., 2011) and option-based pay encourages restatements (Cheng & Farber, 2008).

2.3. Research questions:

Overall, this literature supports the intuition that option-based compensation packages help managers share the benefits from increased volatility of cash flows and equity prices with little downside risk. Therefore, they not only discourage managers from giving up risky positive NPV investments but also motivate them to indulge in practices (such as accounting information manipulation, misreporting or risk shifting) that likely make equity prices more volatile. Likewise, if *risk*-**talk***ing* increases both the firm's equity value and equity price volatility (risk), managers receiving options in compensation contracts have incentives to highlight and talk more about risk, as they will be less averse to the effect of excessive risk reporting. This is consistent with Peng and Röell (2008)'s and Laux (2014)'s arguments that options pay (as opposed to stock pay) is a stronger cause for corporate manipulations.

Against the backdrop of these arguments and the flexible disclosure environment of earnings conference calls, I argue that risk-taking incentives likely motivate managers

to speak more about political risk during these events. Because earnings calls are not as structured as other corporate disclosures, they provide significant flexibility to discuss and manipulate soft information such as the current state of the firm risk and future risk outlooks. In other words, for managers who wish to influence risk-taking outcomes (equity price volatility), these are the most opportune avenues for voluntarily misreporting and manipulating corporate soft information. Therefore, I argue that *risk-***tak***ing incentives* may result in *risk-***talk***ing,* such as greater, opportunistic and manipulative voluntary revelations of political risk during earnings calls. This tendency can be stronger when managers suspect a lack of investment risk-taking and lower risk outcomes such as equity price volatility. Accordingly, I raise and test:

> *Do CEOs with options in compensation packages reveal more political risk during corporate earnings conference calls?*
>
> *Is such a tendency more prevalent when they sense poor investment risk-taking and weak risk-taking outcomes?*

3. DATA & VARIABLES

I match S&P 1500 firms from the executive compensation database to Hassan et al. (2019) firm-level political risk dataset. Because the Hassan et al. dataset covers the period from 2002 to 2021 and ExecuComp covers 1993 to 2020, the sample in this research covers annual CEOs' compensation structure from 2002 to 2020 and political risk measures from 2002 to 2021. I match this dataset with the Compustat annual database, which returns a

sample of 30,495 firm-years with nonmissing values for the key test (CEO Pay structure) and dependent (political risk revelation) variables.

3.1. Firm-level politick risk & risk-taking outcomes:

Hassan et al. (2019) perform textual analysis of earnings conference call transcripts to collect the number of bigrams (combinations of words) implying various risks, including political risk. They show that the measure of political risk has a positive correlation with return volatility but a negative association with firms' investment, capital spending, and growth in hiring. This measure of political risk revelations (*PRR*) may account for both a) the existence of political risk in the firm and b) opportunistic as well as honest revelation of such risk during earnings calls. Because over 80% of the conversations included in earnings conference calls involve talks by managers (Yong et al., 2022) and because political risk is positively associated with firm-level volatility (a common measure used as an outcome of a firm's risk-taking), I argue that the revelation of political risk to analysts, investors and other parties during earnings conference calls could be an alternative strategy used by managers to create illusion about risk and increase volatility.

I extract Hassan et al. (2019) proxies from https://www.firmlevelrisk.com/. These proxies are based on quarterly conference call transcripts. Because risk-taking is not expected to materialize in the quarter after the receipts of risk-taking incentives, I compute firm-year means of quarterly values to annualize them and scale these annual estimates of risk revelations by annual sample standard deviations to produce standardized estimates for risk proxies. Therefore, the current proxies of *PRR* represent the number of standard deviations, where one standard deviation represents the

standard deviation of the sample firms' *PRR* for each sample-year. I also extract and scale the proxies of total risk, nonpolitical risk, political sentiments and components of *PRR* and extract Florackis et al. (2023) cybersecurity risk scores and Sautner et al. (2023) climate change -exposure, -sentiment and -risk. Furthermore, I create two proxies of outcomes of firm-level risk-taking, which are total volatility (*TVOL*) computed using weekly total returns for 52 weeks and idiosyncratic volatility (*IVOL*) computed using residuals from the market model for the same 52 weekly returns, which is consistent with Roussanov and Savor (2014). Because *TVOL* and *IVOL* represent realized risk-taking outcomes, I extract 6-month call implied volatility (*CVOL*) as the third proxy of risk-taking outcomes that captures investors' *ex ante* expectations of future volatility.[3]

3.2. CEO-compensation structure:

Compensation contracts involve risky as well as fixed nonrisk compensation packages. The goal of the risky portion of the compensation package is to align managerial interests to those of the firm's owners by encouraging the former to undertake positive NPV projects irrespective of their riskiness. I create proxies of total compensation (TDC1) measured as "sum of Salary + Bonus + Other Annual + Restricted Stock Grants + LTIP Payouts + All Other + Value of Option Grants". Then, I decompose this total compensation into several components that are expected to have varying degrees of influence on convexity of compensation packages and CEOs' incentives to take or talk about risk, starting from *CashPay*, which represents cash salary plus bonus as a

[3] I am very much grateful to the anonymous referee for suggesting this third proxy, apart from other valuable suggestions.

percentage of total pay; *RiskyPay*, which includes restricted stock grants, LTIP payouts and fair value of option grants scaled by total pay; *StockPay*, which is the share of restricted stock grants in total pay; and *OptPay*, which is the share of the fair value of annual options grant in annual total pay. Of these, *CashPay* is expected to contribute the least to the convexity of CEO pay packages, while *OptPay* contributes the most. I also estimate *Vega* of the option-based pay following Core & Guay (2002), which measures the effect in the value of CEOs' new wealth for a one percent change in stock return volatility. I use *Vega* of the new wealth (annual options grants) because I focus on the effect of CEOs' annual pay on risk revelations while controlling for CEOs wealth embedded in the firm. Finally, I estimate the delta of CEOs' wealth, which measures the change in the value of CEOs' firm-specific equity and options ownership for every percent change in the stock price.

3.3. Control and other variables:

I create a set of firm- and CEO-specific control variables, including *LogAssets*, Return on Assets (*ROA*), Leverage, Cash-holdings (*Cash_hld*), Institutional Ownership (InstOwn), Tobin's Q (*Q*), Natural log of CEO Age (*LogAge*), Natural log of CEO Tenure (*LogTenure*), CEO Ownership in the firm (*CEOown*), CEO also serving as board chair (*CEO Chair*) indicator, indicator variable for CEOs gender (*Female*), indicator variable for CEO education (*MBAPHD*), indicator variable for CEOs starting their career at the start of the recessions (*RecessionStart*) (Scholar & Zuo, 2017), CEO with work experience in armed forces (*MillitaryCEO*) (Benmelech & Frydman, 2015) and various other variables. All these variables, including those discussed in sections 3.1 and 3.2, are defined in Appendix A.

[Insert Table 1 here]

Table 1 presents the statistical properties of these variables. Some points to note, the mean *OptPay* in this sample is approximately 17%, which is relatively lower than what is reported in prior studies covering periods mostly before the regulations around option-based pay expensing (*FAS123R*) came into force; however, this number is not trivial. However, equity pay (including option-based pay) consistently represents approximately half of the CEO's total pay package. Table 2 presents pairwise correlations between explanatory variables. Overall, the correlations between explanatory variables are not very high; thus, I do not anticipate adverse effects from potential collinearity.

[Insert Table 2 here]

4. ANALYSIS

I first start by observing political risk revelations during earnings conference calls around CEO options grant years. In Table 3, in a subsample of firms that included options in CEO pay packages for one or more years over the sample period, I estimate the mean and standard deviation of the proxy of annual political risk revelations (*PRR*) for the *option grant year*, *one year before the option grant year* and *one year after the option grant year*. Table 3 shows no significant change in *PRR* from one year before the option grant year to the options grant year; however, *PRR* significantly increases in the years subsequent to the option grant year. This result provides preliminary evidence that option grants provide executives with an incentive to talk more about risk during earnings conference calls subsequent to receiving options grants.

[Insert Tables 3 & 4 here]

4.1. Baseline results on option-based pay and risk- talking:

Building on the above univariate premise, in the rest of this section, I examine how compensation structures involving option grants incentivize CEOs to discuss more political risk during earnings conference calls. It is obvious that univariate results suffer from significant bias due to their inability to account for CEO-, firm-, or industry-specific known or unknown heterogeneity that could drive CEOs' incentives to discuss more political risk. Therefore, in the multivariate analysis, I start by accounting for a healthy set of observable firm and CEO attributes and unobservable time and firm effects. The *PRR* is highly firm specific and likely involves significant correlation over time; therefore, in all regressions, I account for the *PRR* lagged by one period.

Furthermore, the literature that examines the effect of convex compensation packages on corporate risk-taking or risk-taking outcome (equity price volatility) recognizes significant endogeneity issues (Rajgopal & Shevlin, 2002; Gormley et al., 2013; Shue & Townsend, 2017) for two main reasons. Boards' risk tolerance and expectations of firm-level risk-taking likely drive their design and adjustment of CEO compensation contracts to influence managers' risk-taking incentives, such as boosting (reducing) the sensitivity of CEOs' wealth to equity price volatility (wealth *Vega*) to encourage (discourage) risk taking. Likewise, the risk-averse (risk-seeking) board may offer fewer (more) options in compensation packages, and a risk-averse (risk-seeking) CEO could self-select a firm that includes lower (higher) options in compensation packages. This makes it rather challenging to mitigate potential reverse causality and identification

issues in empirical tests about the effect of CEO compensation structure on risk-taking. The literature does empirically show that boards adjust risk-taking incentives downward by reducing options in pay packages after observing an increase in "left tail risk" in the preceding period (Gormley et al., 2013). The literature also has many attempts to address the endogeneity of pay packages and risk-taking. For example, prior studies relied on systems of equations (see Rajgopal & Shevlin, 2002; Coles et al., 2006), instrumental variables (Shue & Townsend, 2017), exogenous shocks to such pay packages and risk (Chava & Purnanandam, 2010; Gormley et al., 2013).

In contrast, it is obvious that the board does not necessarily structure option-based pay packages to incentivize managers to reveal nonexistent risk (i.e., *risk*-**talk***ing*); nevertheless, one may anticipate similar identification challenges, albeit in a much smaller way, plague this *risk*-**talk***ing* analysis. To mitigate these challenges, first, in all regressions, I use *PRR* revealed during the fiscal year subsequent to the option grant fiscal year (PRR_{T+1}) as the dependent variable and simultaneously control for the *PRR* values lagged by a year (PRR_T). The latter not only helps account for potential time-series correlation but also helps control for the effect from the adjustment in compensation packages after observing managers' political risk revelations. Second, to address potential firm-specific unobserved or unaccounted for observed tendency of the board to grant option-based pay, I adopt panel firm fixed effects as the key empirical strategy.

Using the empirical framework discussed above that involves a number of firm- and CEO-specific observable controls, including lagged values of the dependent variable and firm-fixed effects with cluster (firm)-robust standard errors, I present the key tests in

Table 4. In Model 1, I start by examining whether total pay has an effect on subsequent *PRR* and find that there is no significant effect of the size of *TotalPay* on *PRR*. Next, in Model 2, as expected, the share of *CashPay* in the compensation package is insignificantly associated with PRR_{T+1}. Similarly, Model 3 shows that the proportion of *RiskyPay* (which includes stock-based, option-based and LTIP pay) in the pay package is not significantly associated with PRR_{T+1}. In Model 4, however, *StockPay*, which represents the share of nonoption-based equity pay, loads with a weak negative coefficient vs. PRR_{T+1}. This finding is important and suggests that despite a significant increase in the share of nonoption-based risky pay in CEO pay packages after the implementation of regulation changes surrounding option-based compensation in 2006 and onwards, surprisingly, such nonoption risky pay packages do not increase political risk revelations. Next, in Model 5, however, as expected, PRR_{T+1} is positively and significantly associated with *OptPay*, which is consistent with analytical predictions that the convexity of CEO compensation incentivizes CEOs to reveal more political risk during earnings conference calls. This evidence is further backed in Model 6, where the natural log of the number of options awarded (*LogOptAwd*) loads with a significant positive coefficient, and in Model 7, the natural log of *Vega* of the options granted in the firm-years (*LogAwdVega*) is positively associated with PRR_{T+1}. Overall, I interpret this evidence as suggesting that the options in pay packages positively affect CEOs' incentives to reveal risk during earnings conference calls. Economically, a one standard deviation (0.234) change in *OptPay* leads to an approximately 0.02 change in the value of PRR_{T+1}, which is an approximately 3.34% increase from its median value.

In Table 4, *StockPay* loads with a negative coefficient with weak significance and *OptPay* loads with a positive, highly significant coefficient. However, which wins the battle remains unknown until we jointly test these two in the same specification; as such, in Table 4A, I present "horse-race" regressions that primarily test the relative effect of two key components of equity-based pay – *StockPay* vs. *OptPay*. In Model 1, while *OptPay* continues to load with a positive and significant coefficient, *StockPay* loads with a negative but statistically insignificant coefficient. Model 2 adds *CashPay* to the race, which loads with a near zero and insignificant coefficient including *StockPay*, while *OptPay* continues to load with a positive and significant coefficient. These results are practically similar when using *LogOptAwd* (in Models 3 & 4) and *LogAwdVega* (Models 5 & 6) as proxies for the options component of pay, providing strong evidence that the share of options in CEO pay packages strongly incentivizes CEOs to repeatedly reveal political risk during earnings conference calls.

4.2. Option-based pay and risk-taking:

Upon showing that options in pay packages encourage *risk*-**talk***ing*, I wonder a) does option-based pay encourage risk-taking and influence equity price volatility, as evident in prior literature? b) is *risk*-**talk***ing* an outcome of simply reporting material facts about current levels of risk? In other words, do current levels of corporate risk-taking and equity price volatility affect subsequent managerial *risk*-**talk***ing*?

4.2.1 Options pay and future equity price volatility

To verify whether the findings from the prior literature – option-based pay enhances managerial risk-taking and thus equity volatility (Shue & Townsend, 2017) – hold in the

current sample, I examine the effect of option-based pay on future total volatility measured as the standard deviations of 52 weekly returns for each fiscal year and future idiosyncratic volatility measured as the standard deviation of residuals from the single factor market model using again 52 weekly returns for each fiscal year. Because the option implied volatility is forward looking, it reflects investors' expectation about immediate future volatility, as such option implied volatility is an *ex ante* measure of expected volatility. Therefore, I also utilize call implied volatility as a proxy of investors' expectation of corporate risk-taking outcomes. I extract the six-month call option implied volatility measured at the end of the annual reporting period from Bloomberg. Because "*most prior studies use equity risk as their proxy for firm risk*" (See, Low, 2009, p.474) instead of cash flow volatility, in Table 5, I use the panel fixed effects specifications where the proxies of total volatility ($TVOL_{T+1}$), idiosyncratic volatility ($IVOL_{T+1}$), and call implied volatility ($CVOL_T$) are dependent variables and proxies of option-based pay are test variables. Allow me to restate, $CVOL_T$ is an *ex-ante* measure capturing expected future volatility. The results support the evidence presented in prior literature that options in CEO pay packages indeed provide incentives to take on higher risk, as evident from these outcomes of firm-level risk-taking.

[Insert Tables 5 & 6 here]

4.2.2 Corporate risk-taking and managerial risk-talking

Obviously, managers of firms with a higher level of political risk are likely to reveal more political risk during corporate earnings conference calls. Given the findings in Table 5, *PRR* may be suspected to reflect the existence of political risk or other risk more closely

than managerial *risk*-**talk***ing*. In other words, *risk*-**talk***ing* could simply be an outcome of the presentation of material facts about current corporate risk-taking rather than opportunistic and manipulative discussions about risk. Therefore, it is prudent empirical strategy to control for the outcomes of risk-taking in the tests that examine the effect of pay structure in *risk*-**talk***ing*. I report the results of the analysis performed to this effect in Table 6. Tests reported in Panel A control for some obvious proxies of firms' investment risk-taking, such as R&D expenses as a percentage of sales, SG&A expenses as a percentage of sales as a portion of SG&A expenses also includes investment in intangibles such as organizational capital, advertising and publicity, which are expected to have long-lasting effects, and capital investments (both via acquisitions and green field investments) as a percentage of PPE. In doing so, I do not find these measures of firm-level risk-taking associated with PRR_{T+1}, while the proxies of option-based pay continue to demonstrate a significant positive effect. In Panel B, I control for three ultimate outcomes of firm-level risk-taking, *TVOL*, which measures firms' total risk (both systematic and unsystematic risk), *IVOL*, which measures idiosyncratic risk reflecting firm-specific risk-taking, and *CVOL*, which is a proxy of the market's ex ante expectation of risk-taking outcomes. In doing so, I find that both *TVOL* (Models 1 to 3) and *IVOL* (Models 4 to 6) load with a positive as expected but statistically insignificant coefficient, and *CVOL* (Models 7 to 9) loads with an insignificant negative coefficient, suggesting that more risk-taking is unassociated with *risk*-**talk***ing*. However, in controlling for *TVOL, IVOL or CVOL*, the proxies for risk-taking incentives (option-based pay) continue to load with strong positive coefficients vs. $PRR_{T+1.}$ Taken together these results suggest that

political risk revelations are significant and important outcomes of options in CEO compensation packages upon controlling for the outcomes of risk-taking. Moreover, these results are consistent with *risk*-**talk***ing* being an opportunistic managerial behavior instead of an honest disclosure of material facts about the existing risk during earnings calls.

To summarize, CEOs with risk-taking incentives, as evident in the annual share of options in their compensation packages, reveal more political risk during corporate earnings calls. The results also suggest that such CEOs likely take more risk evident from the positive association of firm risk outcomes vs. option-based pay. The takeaway is that while these findings suggest some evidence that option-based pay likely provides managers with an incentive to take on more risk, they afford strong evidence that option pay incentivizes managers for frequent political risk revelations (perhaps, opportunistically) by talking more about it during earnings calls.[4]

4.3. Additional identification and sensitivity issues:

4.3.1 Sample selection

[4] Our sample starts in 2002 and in 2002 SEC changed stock option reporting requirements in response to the mandates of Sarbanes-Oxley Act, greatly reducing firms' ability to backdate grants (Heron & Lie, 2007), as such most options are expected to be at the money on the grant date. I examine and find the subsequent [to grant] year moneyness (in, out or at- the money) of executive options have little, if any, asymmetric effects on PRR_{T+1} (see Internet Appendix). Proxies of the share of *OptPay* representing in, out or at the money options load with positive and significant coefficients. The moneyness of options is based on the highest price during the year subsequent to the option grant year. The share of *OptPay* is regarded as in the money, if the highest stock price during the year subsequent to the grant year is higher than 10% of the exercise price, out of money, where the highest stock price during the year subsequent to the grant year is at least -1% lower than the exercise price, at the money otherwise.

Table 7 presents the sensitivity of these results to several other potential empirical issues. First, while the current sample starts in 2002, the year in which the SEC implemented rules requiring firms to report option grants within two business days of the grant date to discourage backdating executive option grants (See, Heron & Lie, 2007), the current sample covers four years prior to the full implementation of various regulations surrounding option-based pay reporting (years 2002 to 2005, while most were implemented by fiscal year beginning after December 2005, e.g., Bakke et al., 2016). In our sample, the share of executive options in the CEO pay package was approximately 40% in 2002 (while nonoption equity-based compensation remained at approximately 8%). The former gradually declined (while the latter gradually increased), standing slightly above 20% (20.77%) in 2006 and 7% (44%) in 2019. To test the effect of *OptPay* on *PRR* after these regulation changes, in Panel A of Table 7, I restrict the sample to the years 2006 to 2020. In doing so, I continue to observe strong and similar results that *risk*-**talk***ing* increases in options pay.

4.3.2 Omitted variable bias – CEO pay-performance sensitivity and personal attributes

While examining the sensitivity of risk-taking to the CEO pay packages, especially that of *Vega*, prior empirical studies control for CEO pay-performance sensitivity as embedded in the *Delta* of CEOs' wealth. In Panel B, therefore, in examining the sensitivity of *PRR* to CEO pay structure, I control for CEOs' wealth delta, measured as the change in CEOs' wealth with a one percent change in the value of the stock price, and find that the results continue to hold.

In the main tests, I account for a healthy set of observable CEO characteristics while also controlling for observable and unobservable firm-specific heterogeneity. However, it is obvious that some observable and unobservable CEO-specific heterogeneity that may drive risk and potentially be correlated with CEOs' *risk*-**talk***ing* incentives could be suspects of being left out. Therefore, in Panel C, I start by accounting for some additional observable CEO attributes, such as the CEO Overconfidence (*Holder67*) indicator measured as per Malmendier and Tate (2005, 2008), CEO position at other firms (*CEO at other*) which could be observed by board *a priori*, and *Military CEO* indicator measured as CEOs' employment in Armed Forces similar to that used in Benmelech & Frydman (2015). Both *CEO at Other* and *Military CEO* are extracted from BoardEx employment files. In accounting for these observable CEO attributes, the results remain practically unchanged, while none of these three attributes are significantly correlated with PRR_{T+1}. Furthermore, in Panel D, the results continue to hold when I use panel tests that account for CEO-Firm joint effects apart from other controls. However, I acknowledge that *StockPay* loads with an insignificant coefficient while maintaining the sign, and the significance of the coefficient of *OptPay* and *LogAwdVega* slightly declines in accounting for CEO-firm joint effects.

[Insert Table 7 here]

4.3.3 Omitted variable bias- industry and state effects

Thus far, I attempt to address potential causality issues by controlling for the lagged value of *PRR* and firm fixed effects. While I understand that time-invariant industry effects are largely accounted for in using time-invariant firm effects, political

risk could vary significantly across industries overtime, and there could be industry-specific differences in the existence and reporting practices of political risk. Therefore, in Models 1 to 3 of Panel E, I use *PRR* adjusted for industry average *PRR* ($adjPRR_{T+1}$) as the dependent variable and control for its lagged value. In doing so, *OptPay*, *LogOptAwd* and *LogAwdVega* all continue to load with a positive and significant coefficient vs. $adjPRR_{T+1}$. In Panel F, I rerun the base case models using joint Industry×Year fixed effects effectively capturing time-varying industry-specific shocks to political risk, along with time-invariant firm effects. In doing so, I continue to find that *OptPay*, *LogOptAwd* and *LogAwdVega* continue to load with positive and significant coefficients, while other components of the CEO compensation package load with insignificant coefficients, including *StockPay*. Furthermore, in Models 4 to 6 of Panel E, while keeping the same panel firm-fixed effects as the main empirical specifications, I use the change in *PRR* from time T to time T+1 as the dependent variable. In doing so, I continue to observe that *OptPay*, *LogOptAwd* and *LogAwdVega* continue to load with a positive and highly significant coefficient, further supporting that these findings are NOT significant outcomes of such identification issues. Furthermore, in robustness tests (see Internet Appendix), the results remain practically similar when using firm & joint Industry×Year effects, correcting standard errors for two-way firm & industry-year clustering.

Likewise, state effects are expected to be significant in actual statewide political risk and political risk talks by management teams of firms with headquarters in those states. In our original analysis, time-invariant state effects are absorbed within the firm-fixed effects. However, similar to industry effects, state effects could be time varying. For

example, the state-level economic, political and business environment may not be fixed overtime. As such, to further mitigate potential time-varying (year-over-year) state effects in political risk revelations, I also control for firm & joint State×Year effects and correct standard errors for two-way firm & state-year clustering. The results (see the Internet Appendix) remain practically robust to these controls and corrections. [5]

4.3.4 FAS123R as shock to option-based pay

In regard to identification issues, thus far, prior subsections have focused on addressing the potential effect of several observable and unobservable CEO, firm, geographic and industry heterogeneity. Section 4.3.1 (Table 7 - Panel A) also includes tests based on the *Post123R* subsample. To further strengthen the power of these findings, this section exploits the implementation of *FAS123R* (2005/2006) (Hayes et al., 2012; Cadman et al., 2013; Bakke et al., 2016) as an exogenous shock to the CEO pay structure (options vs. other form of equity pay) and likely their *risk*-**talk***ing* incentives. The basic idea is that, because of the requirements of *FAS123R* about accounting treatment of equity-based pay (especially options expensing), firms are expected to reduce options in executive pay packages in favor of other forms of equity-based pay (such as restricted stocks). The empirical findings in prior literature overwhelmingly support this (e.g., Hayes et al., 2012; Bakke et al., 2016).

[5] As 2016 federal election in the U.S. was rather dramatic and likely filled with significant political uncertainty that resulted in Donald Trump's ascend to the White House. In robustness tests (see Internet Appendix), I find the change in *PRR* (i.e., *ΔPRR*) with Trump's 2016 presidential election win is negatively related with immediately preceding year change in *StockPay (Δ StockPay)*, but with a weak significance (0.10 level), but immediately preceding year change in *OptPay (Δ OptPay)* continues to load with a positive and significant (better than 0.05 level) coefficient, with and without controlling for the states that Trump won election (*Trump-States*)..

To this end, like Bakke et al., I use a sample of firm-years 2003 to 2006, i.e., two years before and two years after the implementation of *FAS123R*, and code years 2005 and 2006 (*Post123R* shock period) as 1, and zero for *Pre123R* period (i.e., years 2003 and 2004), and present the variation in *OptPay*, *StockPay* and *PRR Pre-* and *Post123R*. For support of the current findings, upon implementation of *FAS123R*, I expect *OptPay* to decrease, *StockPay* to increase, and *PRR* to decrease. To obtain univariate statistics of Panel A of Table 7A, I first take the arithmetic average of each firm's *OptPay*, *StockPay* and *PRR* for two years *Pre123R* and two years *Post123R*, and then estimate within-firm change in these firm level means *Pre-* to *Post123R*. The results show that the option pay to total compensation ratio (*OptPay*) declined by approximately 0.0759 (from its *Pre123R* value of 0.3361) and that the ratio of restricted stocks to total compensation (*StockPay*) increased by approximately the same 0.0731 (from its *Pre123R* value of 0.0996). This finding is as expected and consistent with those of Bakke et al. (2016) and Hayes et al. (2012) that the implementation of *FAS123R* resulted in a sizable reduction in the share of options in compensation packages and a corresponding increase in the share of other equity-based compensation components (especially restricted stocks). More importantly, unlike the prior findings about corporate risk-taking, I note that the *PRR* also declined *Post123R* by approximately 0.14 standard deviations from its *Pre123R* average value of approximately 0.90 standard deviations. This provides initial evidence that in aggregate, firms reduced option pay immediately after the implementation of *FAS123R*, and likewise, the management team reduced the frequency of political risk talks during earnings conference calls.

[Insert Table 7A here]

However, the univariate statistics discussed above suffer from omitted variable bias; as such, they are meaningless without accounting for heterogeneity in firm, CEO attributes and other potential omitted variables. Therefore, in Panel B, I test this initial evidence of an increase in *StockPay*, a decrease in *OptPay* and a decrease in *PRR Post123R* under the multivariate setting. I use annual data for these four years and specifications that include a range of firm/CEO controls, firm-fixed effects, and cluster-robust standard errors. The *Post123R* dummy loads with a positive and significant coefficient vs. *StockPay* (Model 1) and a negative and significant coefficient vs. all proxies of options pay: *OptPay, LogOptAwd* and *LogAwdVega* (Models 2 to 4), supporting that the options component of CEO pay packages was significantly replaced by restricted stock-based equity pay immediately after the implementation of *FAS123R*. While the literature examining the risk-taking implications of options in CEO pay packages did not find evidence of a decrease in risk-taking upon implementation of *FAS123R*, in column 5 of Panel B, I observe a significant negative coefficient of *Post123R* vs. PRR_{T+1}. These results signal that the exogenous shock that potentially resulted in firms' significant cutting of options in pay packages (as observed in Models 2 to 4) as a significant driver of such a *Post123R* decline in *PRR*.

Furthermore, consider two firms, firm A with 60% *Pre123R* options in the CEO pay package and firm B with 10% *Pre123R* options in the CEO pay package. Clearly, firm A has room for a much higher magnitude decrease in *OptPay* compared to firm B. Therefore, it is conceivable that CEO's *OptPay* at firm B would have a lesser possibility of substantial

change after the implementation of *FAS123R* compared to that of firm A. In other words, it is expected that firms with more *Pre123R OptPay* have greater room for a larger scale drop in *OptPay Post123R (*i.e., greater impact from adopting *FAS123R);* therefore, the *Post123R* effect on *PRR* of this exogenous shock is likely more pronounced for such firms. To implement this, in Models 6 and 7, I use the sample of firms demonstrating a positive value for *Pre123R OptPay (*for at least one of the years 2003 or 2004) and code all firm-years in 2003 to 2006 as *High(Low)* based on above (below) median of "*Pre123R within-firm mean of OptPay"* empirical distribution. Then, I repeat a similar test as in Model 5 using these two (*High/Low Pre123R within-firm mean of OptPay*) firm-year subsamples separately. In these tests, I expect the coefficient of *Post123R* (i.e., negative effect) vs. PRR_{T+1} to be more pronounced in the '*High-Pre123R within-firm mean of OptPay*' subsample, while it would be less pronounced in '*Low-Pre123R within-firm mean of OptPay*' subsample. As expected in Model 6, in the subsample with '*High- Pre123R within-firm mean of OptPay*' firms, the coefficient of *Post123R* is negative (-0.1669) and significant at better than 1% level, while in Model 6 (the subsample featuring '*Low- Pre123R within-firm mean of OptPay*' firms), the coefficient of *Post123R* is negative but much smaller in size and highly insignificant. These results imply that this exogenous shock indeed had a significant effect in reducing the use of options in CEO pay packages and, accordingly, in subsequent political risk revelations by managers. This analysis provides support for the casual effect of *OptPay* on *PRR*.

Finally, based on the insights from Hayes et al. (2012), I expect that *Pre123R to Post123R* change in *OptPay* will be positively associated with *Pre123R to Post123R* change

in *PRR*. To implement this, I start by estimating the arithmetic average of each firm's *OptPay*, *StockPay*, *PRR* and control variables for two years *Pre123R* (2003 & 2004) and two years *Post123R* (2005 & 2006), followed by within-firm change in these firm-level averages *Pre123R* to *Post123R*. Then, following this literature, I regress these within-firm changes in the values of *PRR* on within-firm changes in the values of *StockPay*, *OptPay*, and control variables. Because the distance from the first year of *Pre123R* to the last year of *Post123R* is rather long, there is a significant possibility of CEO changes for a nontrivial number of firms. Therefore, to control the possible effects from the changes in CEOs *Pre123R* to *Post123R*, I require that there be no change in the CEO of a firm from *Pre123R (e.g., 2004)* to *Post123R (e.g., 2006);* as such, there is no need to include changes in CEOs' personal attributes in these regressions. Model 1 of Table 7A – Panel C uses specifications consistent with Hayes et al. (2012) that include the changes in the log of sales, leverage, market-to-book value of the firm (*MTB*, the same as *Q*), R&D expenses scaled by sales (*R&D/Sale*), and capital expenditure scaled by net PPE (*CAPEX_PPE*). The specifications also control industry effects (at Fama-French 30 industries) and use corresponding cluster (industry)-robust standard errors. Additionally, all regressions include a dummy taking a value of 1 for the firms with zero options *Pre123R* to control for the possible effect of the firms using no options at all *Pre123R* and within-firm change in *PRR (Δ within-firm mean PRR)* as the dependent variable. In Model 1, as expected, the change in *OptPay* (*Δ within-firm mean OptPay)* loads with a positive and significant (at better than 10% level) coefficient, but the change in *StockPay* ((*Δ within-firm StockPay)* loads with an insignificant coefficient supporting the casual effect of *OptPay* on *PRR*. I acknowledge that the

coefficient of *OptPay* is significant only at the 10% level, as such significance is slightly weaker, yet unlike prior literature focusing on risk-taking, these results provide new evidence that higher *OptPay* encourages managers to pump up political risk during earnings conference calls. Because the change in cash position and governance environment can have important implications for equity vs. nonequity pay, in Model 2, I add within-firm changes in *Cash_hld* and *InstOwn*, and because the change in actual risk could affect *risk*-**talk***ing* by managers, in Model 3, I add the within-firm change in risk-taking outcomes *(Δ within-firm mean IVOL*). In both of these latter models, the within-firm change in *OptPay* loads with a positive and significant (10% level) coefficient providing further support for earlier claims about the casual effect of *OptPay* on *PRR*.

4.4. Alternative proxies of risk revelations, components and sentiments:

4.4.1 Total and nonpolitical risk

Now that it is established that political risk revelations during earnings conference calls are a significant positive function of option-based pay, I test whether total and nonpolitical risk revelations are equally associated with CEO risk-taking incentives. In Table 8, Models 1 to 3, I find that Hassan et al. (2019) proxy of the extent of total risk revelations demonstrates a weaker positive correlation vs. the proxies of option-based pay, while in Models 4 to 6, nonpolitical risk revelations demonstrate a surprisingly negative and rather insignificant association vs. the proxies of option-based pay. Hassan et al. (2019, p.2137) specifically report that "*top-scoring transcripts correctly identify conversations that center on risks associated with politics, including, for example, concerns about*

regulation, ballot initiatives, and government funding." Therefore, the lack of sensitivity of option-based pay and nonpolitical risk may be due to this measure's inability to capture firm risk (other than political risk) substantially or their lack of meaningful relation to future equity price volatility.

[Insert Table 8 here]

4.4.2 Cyber risk and climate change

I also examine the association of *OptPay* on two other types of firm-level risks that are based on textual analysis. First, Florackis et al. (2023) develop cyber risk scores based on the textual analysis of parts of 10-K filings and other sources. Likewise, Sautner et al. (2023) develop proxies of climate change exposure, climate change sentiment and climate change risk based on the textual analysis of earnings conference call transcripts. I observe that *OptPay* does not demonstrate a significant relationship either with Florackis et al. (2023) cyber risk score or with Sautner et al. (2023) proxies of climate change -exposure, -sentiment and -risk (see Internet Appendix).

4.4.3 Components of political risk

Apart from the proxies of overall political risk, Hassan et al. (2019) provide similarly generated political risk scores for eight different components of firm-level political risk, which cover political risk related to Security & Defense, Environment, Health care, Economic Policy & Budget, Technology & Infrastructure, Institutions & Political Process, Trade, and Tax policy. In a separate test (see Internet Appendix), I note that *OptPay* is positively associated with 7 out of 8 components of Hassan et al. (2019) measure of *PRR*, which are political risk related to Environment, Health care, Economic Policy & Budget,

Technology & Infrastructure, Institutions & Political Process, Trade, and Tax policy. However, *OptPay* demonstrates no significant relation with *PRR* related to Security & Defense. This evidence further supports the inferences thus far about the relationship between options pay and firm-level political risk.

4.4.4 Political Sentiments

Hassan et al. (2019) also construct a measure of firm-level political sentiment that captures conference call participants' positive and negative sentiments and is distinct from firm-level political risk measures. This measure is increasing in positive sentiments and positively associated with "*stock returns, investments and hiring*" (Hassan et al., 2019) and positively affects a firm's corporate social responsibility (Hasan & Jiang, 2023); as such, one may expect positive (negative) political sentiments to have positive (negative) firm implications. Therefore, CEOs with significant stock-based pay (unlike option-based pay) likely have incentives to create an environment of positive political sentiments during earnings conference calls. To this end, the results (see Internet Appendix) demonstrate significant evidence (albeit slightly weak) supporting this conjecture that a higher proportion of stock-based compensation in CEO pay packages (*StockPay*) is positively associated with Hassan et al. (2019) index of political sentiments, while proxies of options-based pay are unassociated with this index.

5. RISK OUTCOMES, 'OPTIONS PAY – PRR' SENSITIVITY

I argue that despite managerial efforts (no effort) to consummate the message embedded in compensation packages, the realized risk outcomes (e.g., volatility) may not

necessarily always meet the expectations of managers and shareholders. If managers with convex compensation packages expect a lack of risk-taking ex ante given the current state of such risk outcomes, they have incentives to adjust other inputs that may eventually demonstrate risky outcomes by increasing the volatility of equity prices. When risk (or volatility) outcomes do not elevate to managerial expectations, they may resort to manipulations (Peng & Röell, 2008), earnings management (Grant et al., 2009), or misreporting (Armstrong et al., 2013). Empirical evidence in these studies supports a positive association of risk-taking incentives with earnings management (Grant et al., 2009) and a positive association of option-based pay (especially compensation *Vega*) with misreporting (Armstrong et al., 2013). Against the backdrop of these findings, I argue that it is likely that managers who receive high option-based pay but fail to meet investment risk-taking expectations resort to revealing more political risk during conference calls as an alternative and opportunistic strategy to demonstrate elevated equity price volatility. To examine this proposition more directly, I divide sample firm-years at median of *TVOL* and *IVOL* into two groups - High and Low, and separately test sensitivity of PRR_{T+1} vs. *OptPay* for each of these groups. In Models 1 and 2 of Table 9, I observe that *OptPay-PRR* sensitivity is positive and significant (i.e., more pronounced) in the firms that observe lower *TVOL*. Similarly, in Models 7 and 8, I observe that *OptPay-PRR* sensitivity is positive and significant only in the subsample of firm-years that observe lower *IVOL*. These results support the arguments that CEOs who receive option-based pay likely compensate for expected risk-taking by **talk**ing more about political risk during earnings conference calls, arbitrarily influencing risk outcomes.

[Insert Table 9 here]

Nevertheless, it remains unclear whether such risk talks are heterogeneous across levels of investment risk-taking in the firm. To this end, I further divide high-risk outcome and low-risk outcome subsamples into two additional groups based on investment risk-taking. I measure investment risk-taking as firm-year CAPEX scaled by PPE (*CAPEX_PPE*) and partition high-low *TVOL/IVOL* subgroups at their respective median by *CAPEX_PPE* such that each *TVOL/IVOL* group has a *High_CAPEX_PPE* vs. *Low_CAPEX_PPE* subgroup. Then, I test *OptPay-PRR* sensitivity in these four subgroups, keeping PRR_{T+1} as the dependent variable. In Model 3, I observe a weak positive coefficient of *OptPay,* suggesting positive but weak *OptPay-PRR* sensitivity in the firms that have high risk-taking outcomes measured by equity price volatility (*TVOL*) and high new investments (*High_CAPEX_PPE)*. In Models 4 and 5, the coefficient of *OptPay* is not significant, suggesting no material *OptPay-PRR* sensitivity in the subgroup of firms with *High TVOL* and *Low CAPEX_PPE* or *Low TVOL* and *High CAPEX_PPE*. This suggests that if managers receiving options compensation have at least one way to justify higher risk-taking in the firm, they are less likely to pursue *risk*-**talk***ing* as an alternative way to do so. Furthermore, and more interestingly, in Model 6, the coefficient of *OptPay* is positive and significant at the 5% level. Because Model 6 represents the subsample of firms with *Low TVOL & Low CAPEX_PPE*, these results suggest that *OptPay-PRR* sensitivity is more pronounced in the firm with lower risk-taking outcomes (*Low TVOL*) and lower investment risk-taking (*Low CAPEX_PPE*). This further supports the conjecture that the managers of firms that have expressively lower levels of risk-taking, as evident from the

lack of equity price volatility and lack of capital spending, pursue risk-**talk***ing* as an alternative strategy for potentially influencing future risk outcomes that may help preserve risk-taking incentives in future compensation contracts.

[Insert Table 10 here]

6. CROSS-SECTIONAL ANALYSIS

I examine variations in risk-taking in the cross-sections of various firm-specific attributes in Table 10. As the literature suggests larger firms are monitored by more analysts, public and media, such firms are expected to involve lower information asymmetry (e.g., Fama & French, 1992) and agency problems. More importantly, in larger firms, managerial behavior is likely to be monitored more closely by analysts and media, which likely dampens managers' ability to behave opportunistically. Therefore, in larger firms, CEOs with options in pay packages may have lower opportunities for misreporting or opportunistically revealing risk without taking or observing it. Consistent with this view in Models 1 and 2, I find that *OptPay-PRR* sensitivity is significantly positive in smaller than median firms.

Third, I find that *OptPay-PRR* sensitivity is more pronounced in more profitable (Models 3 & 4), high debt financing (Models 5 & 6), lower cash holdings (Models 7 & 8), and lower Q (Models 9 & 10) firms. This is also the case when CEOs have lower ownership of the firm (Models 11 & 12) and the firms that face lower product-market competition (Models 13 & 14). Both lower CEO ownership and lower product-market competition imply higher agency conflicts. Fourth, however, surprisingly, I find CEO

OptPay-PRR sensitivity more pronounced in firms featuring higher than median institutional ownership (Models 15 & 16) and the presence of more than 1 institutional blockholder with 5% or more ownership (Models 17 & 18). Both firms with higher institutional ownership and multiple institutional blockholders are expected to have stronger external governance given the expected monitoring role of institutional blockholders (e.g., Ruiz-Mallorquí & Santana-Martín, 2011). Moreover, the literature provides analytical and empirical evidence that the presence of multiple large blockholders likely reduces agency conflicts and the expropriation of minority investors (e.g., Bennedsen & Wolfenzon, 2000; Bloch & Hege, 2003; Laeven & Levine, 2008; Attig et al., 2008; Mishra, 2011). However, it is likely that CEOs of firms with significant institutional monitoring are under pressure to demonstrate the materialization of risk-taking incentives imbedded in their compensation packages. Given such pressure, when sensing poor risk-taking outcomes, such managers likely opportunistically reveal more political risk during earnings conference calls.

The upshot of this analysis is that there is significant heterogeneity in the sensitivity of *OptPay-PRR* across firm characteristics. Most importantly, CEOs receiving options in their pay packages feel pressure to demonstrate more risk in firms that apparently have poor existing risk outcomes (lower total and idiosyncratic volatility) in general and poor existing risk outcomes combined with low new capital investments in particular. Managers of such firms likely attempt to compensate for their poor performance in capital investments (risk-taking) and risk-taking outcomes by opportunistically reveling more political risk during earnings conference calls, as such

revelations are associated with higher equity price volatility – a common measure of risk-taking outcomes.

7. CONCLUSION

Using a sample of S&P 1,500 firms and discussions about political risk contained in corporate earnings conference calls, I examine whether risk-taking incentives embedded in convex compensation packages also encourage CEOs to discuss more political risk opportunistically. I find strong evidence to support this argument that option-based pay is significantly positively associated with subsequent discussions about political risk during corporate earnings conference calls (which I call *risk*-**talk***ing*), while such pay is also significantly positively associated with the outcomes of higher risk-taking (equity price volatility). Furthermore, I examine whether such a tendency of managers is an alternative (albeit opportunistic) strategy to influence the outcomes of risk-taking such as equity price volatility. To this end, I find strong support that managers discuss more political risk during earnings conference calls in firms with lower total and idiosyncratic risk, which are often used as measurements for managerial risk-taking outcomes. Moreover, such effects are more pronounced in firms that lack strong risk outcomes (i.e., have lower volatility) and that have undertaken lower new capital investments (i.e., have lower capital expenditure). Importantly, options pay is positively associated with seven out of eight components of *risk*-**talk***ing*. Overall, I find strong empirical support for the link between options pay and managers' discussions about political risk (i.e., *risk*-**talk***ing*) during corporate earnings conference calls.

I find significant cross-sectional variation in the sensitivity of *risk*-**talk***ing* to *OptPay*. Such sensitivity is more pronounced in smaller, more profitable, highly leveraged, cash-strained, and undervalued firms. Furthermore, such sensitivity is more pronounced in firms facing lower product-market competition, lower CEO ownership, higher institutional ownership and more institutional blockholders with 5% or higher ownership.

Overall, this study sheds further light on the agency conflicts between managers and shareholders and the effectiveness of the CEO pay structure in alleviating or exacerbating them. This research contributes to our understanding of the effect of risk-taking incentives by presenting discussions about political risk during earnings conference calls as an alternative strategy to manipulate risk-taking outcomes. It bolsters the arguments in prior literature that managers with risk-taking incentives likely resort to opportunistically inflating and manipulating corporate reports.

Appendix A

Variable Definitions and Data Sources

Variable	Definition	Source
TDC1	Total Compensation (Salary + Bonus + Other Annual + Restricted Stock Grants + LTIP Payouts + All Other + Value of Option Grants)	ExecuComp
TCUR	Total Current Compensation (Salary + Bonus)	The same as above
TotalPay	Natural log of (1+TDC1)	Authors' estimation based on ExecuComp data
OptPay	Fair value of options grant (OPTGRANT), Blacks' value of options grant (OPTION_AWARDS_BLK_VALUE) where missing divided by TDC1	The same as above
LogOptAwd	Natural log of 1+ number of options awarded (OPTION_AWARDS_NUM).	The same as above
CashPay	TCUR divided by TDC1	The same as above

StockPay	Non options risky pay, representing restricted stock grants plus long-term incentive plans (RSTKGRNT 1992 format, STOCK_AWARD_FV afterwards) divided by TDC1	The same as above
RiskyPay	(RSTKGRNT (or STOCK_AWARD_FV) +LTIP+OPTGRANT (or OPTION_AWARDS_BLK_VALUE) divided by TDC1.	The same as above
Vega	Change in CEO's wealth for every one percent change in stock price volatility [$e^{-dT}N'(Z)ST^{(1/2)}$] x (0.01) x (#options granted) estimated as per Core and Guay (2002), where d is log(1+annual dividend), N'(Z) probability density with estimation value of options Z, S spot price at grant date, T is time to maturity. *Vega* is based on firm-year option grants.	Authors' Estimation as per Core and Guay (2002)
Delta	Wealth delta representing the change in CEOs' wealth for 1% change in the firm's stock price.	Author calculation
PRR	*PRR* is 'annualized firm-level political risk revelations as per Hassan et al. (2019), based on the textual analysis of corporate earnings conference calls', standardized by sample firms' annual standard deviation of firm-level political risk scores. The higher occurrences of bigrams (combination of words) signifying political risk in conference calls give higher value to *PRR*.	Hassan et al. (2019)
RISK	RISK is 'annualized firm-level total risk as per Hassan et al. (2019), based on the textual analysis of corporate earnings conference calls', standardized by sample firms' annual standard deviation of RISK.	The same as above
NPRR	*NPRR* is 'annualized firm-level nonpolitical risk as per Hassan et al. (2019), based on the textual analysis of corporate earnings conference calls', standardized by sample firms' annual standard deviation of *NPRR*.	The same as above
AdjPRR	*PRR* in excess of *Industry-year average PRR*	Authors' estimation
ΔPRR_{T+1}	PRR_{T+1} *minus* PRR_T	Authors' estimation
LogAssets	The natural log of total assets (AT - $ million) for the fiscal year ending prior to the cost of equity estimation year.	Authors' estimation based on Compustat data
ROA	Operating income before depreciation (OIBDP)÷Total Assets (AT)	The same as above
LEVERAGE	Book leverage defined as the ratio estimated as [total long-term debt (DLTT) + debt in current liabilities (DLC)] ÷ total assets (AT).	The same as above
Cash_hld	Cash & equivalent (CHE) divided by total assets (AT)	The same as above
R&D/Sale	Research and development expenses (XRD) divided by Total Sales (SALE)	The same as above
Missing_R&D	1 for firm-years where Compustat has a missing value for XRD, zero otherwise	The same as above

SG&A/Sale	Selling, general and administrative expenses (XSGA) divided by total sales (SALE)	The same as above
CAPEX_PPE	Total Capital expenditure (CAPX+AQC) divided by Plant Property and Equipment Net (PPENT)	The same as above
Q	Tobin's Q estimated as [Market Value of Equity (CSHO*PRCC_F) + Total Assets (AT)-Common Equity (CEQ)] ÷Total Assets (AT)	The same as above
Herfindahl	Herfindahl Index of Industry Construction	Compustat
FirmAge	Number of years since a firm is represented in Center for Research in Securities Prices (CRSP) database.	Authors' estimation based on CRSP database
InstOwn	% Shares owned by institutions (INSTOWN_PERC)	Thompson Reuters/WRDs
Female	Female CEO Dummy	Authors' estimation based on ExecuComp data
CEOown	% Shares owned by CEOs (SHROWN_TOT_PCT)	ExecuComp
MBAPHD	CEO with either an MBA or Ph.D. degree	BoardEx/ ExecuComp
CEO Age	Age of the CEO by firm-year	The same as above
CEO Tenure	Years worked as CEO at the firm	The same as above
Holder67	1 for CEO-years after a CEO was found to hold in the money exercisable options, where the market price was 67% higher than the exercise price following the method proposed by Malmendier &Tate (2005, 2008).	Authors' estimation using ExecuComp data
RecessionStart	CEOs who likely started their career at the start of the NBER recession (Recession CEOs), based on their likely age of graduation from four-year college (completing 22 years and running in 23).	Authors' estimation
CEO Chair	CEO who is also the chair of the board	The same as above

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Table 1: Descriptive Stats

Variable	Mean	S.D.	0.25	Mdn	0.75	N
PRR_{T+1}	0.846	1.006	0.291	0.563	1.040	29940
PRR_{T}	0.821	1.003	0.279	0.539	1.003	30495
TotalPay	8.200	0.996	7.535	8.269	8.910	30495
CashPay	0.327	0.255	0.139	0.236	0.439	30495
RiskyPay	0.461	0.276	0.273	0.516	0.672	30495
StockPay	0.290	0.268	0.000	0.273	0.505	30495
OptPay	0.171	0.234	0.000	0.000	0.296	30495
LogOptAwd	2.355	2.546	0.000	0.000	4.836	30495
LogAwdVega	0.928	1.478	0.000	0.000	1.871	30485
LogWealthDelta	0.889	1.474	0.000	0.000	1.770	30485
LogAssets	7.891	1.726	6.641	7.788	9.021	30495
ROA	0.120	0.098	0.071	0.116	0.168	28411
Leverage	0.247	0.207	0.068	0.222	0.371	30495
Cash_hld	0.151	0.166	0.029	0.087	0.213	29474
R&D/Sale	0.040	0.089	0.000	0.000	0.032	30495
Missing_R&D	0.446	0.497	0.000	0.000	1.000	30495
SG&A/Sale	0.215	0.190	0.066	0.178	0.322	30495
CAPEX_PPE	0.527	1.062	0.116	0.229	0.448	30495
Q	1.913	1.207	1.151	1.511	2.190	29296
LogAge	4.017	0.129	3.932	4.025	4.094	30480
LogTenure	1.243	0.797	0.693	1.386	1.792	30495
CEOown	1.919	4.304	0.052	0.436	1.585	30495
InstOwn	0.652	0.344	0.520	0.768	0.898	30495
CEO Chair	0.357	0.479	0.000	0.000	1.000	30495
Female	0.036	0.186	0.000	0.000	0.000	30495
MBAPHD	0.231	0.421	0.000	0.000	0.000	30495
RecessionStart	0.136	0.342	0.000	0.000	0.000	30495

This table presents statistical properties of variables used in the regression tests. The variable definitions are presented in Appendix A

Table 2: Pairwise Correlations

Variables	*TotalPay*	CashPay	*RiskyPay*	*StockPay*	*OptPay*	*LogOptAwd*	*LogAwdVega*	LogAssets	ROA	Leverage	Cash_hld	Q	LogAge	LogTenure	CEOown
CashPay	-0.70														
RiskyPay	0.60	-0.70													
StockPay	0.46	-0.52	0.62												
OptPay	0.18	-0.22	0.47	-0.41											
LogOptAwd	0.29	-0.27	0.41	-0.28	0.80										
LogAwdVega	0.20	-0.22	0.33	-0.23	0.64	0.68									
LogAssets	0.62	-0.33	0.22	0.25	-0.03	0.07	-0.06								
ROA	0.18	-0.11	0.06	0.00	0.06	0.05	0.03	0.00							
Leverage	0.19	-0.10	0.05	0.12	-0.07	0.00	-0.04	0.24	0.01						
Cash_hld	-0.15	0.04	0.00	-0.10	0.11	0.05	0.14	-0.37	-0.06	-0.33					
Q	0.04	-0.07	0.07	-0.04	0.13	0.05	0.11	-0.23	0.41	-0.10	0.40				
CEO Age	0.09	0.01	-0.07	0.01	-0.09	-0.06	-0.10	0.13	0.01	0.04	-0.12	-0.08			
LogTenure	0.16	-0.17	0.02	0.17	-0.17	-0.11	-0.09	0.11	0.03	0.01	-0.04	0.02	0.29		
CEOown	-0.23	0.21	-0.22	-0.17	-0.06	-0.10	-0.04	-0.23	0.02	-0.10	0.13	0.08	0.11	0.11	
InstOwn	0.14	-0.17	0.13	0.14	-0.01	-0.04	0.02	0.02	0.10	-0.05	0.02	0.07	0.05	0.19	-0.06
CEO Chair	0.11	0.03	0.01	-0.08	0.10	0.11	0.01	0.15	0.03	0.01	-0.09	-0.05	0.18	0.08	0.10
Female	0.02	-0.03	0.01	0.04	-0.03	-0.02	0.00	0.00	0.02	0.00	0.00	0.01	-0.05	-0.03	-0.05
MBAPHD	0.03	-0.03	0.03	0.01	0.02	0.04	0.01	0.02	0.00	0.00	-0.01	-0.03	0.00	0.02	-0.05
RecessionStart	0.02	0.00	0.01	-0.02	0.04	0.03	0.02	0.01	0.04	0.03	-0.02	0.01	0.06	0.00	0.01

This table presents pairwise correlations between regression variables. The variable definitions are presented in Appendix A

Table 3: Univariate Analysis

Variable = Annual *PRR*			
Variable	***PRR* for Years Before**	***PRR* for Option Award Years**	***PRR* for Years After**
N	10503	10766	10620
Mean	0.7400	0.758	0.796
S.D.	0.838	0.844	0.926
Analysis: PRR Increase* vs. *Last Year			
	Difference	0.018	0.038***
	T-STAT	1.56	3.14

Presents univariate test of firm-level political risk revelations during, before, and after the option-grant year for the sample of firms represented in ExecuComp database for which Hassan et al. (2019) measure of firm-level political risk is available in the years 2002 to 2021. *PRR* is 'annualized firm-level political risk revelations as per Hassan et al. (2019), based on the textual analysis of corporate earnings conference calls', standardized by sample firms' annual standard deviation of firm-level political risk scores. The higher occurrences of bigrams signifying political risk in conference calls give higher value to *PRR*. Stars indicate significance levels as follows: *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.1$ (two tailed).

Table 4: CEO Pay Structure & Political Risk Revelations

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}
TotalPay	0.0049						
	(0.686)						
CashPay		-0.0074					
		(-0.243)					
RiskyPay			0.0135				
			(0.544)				
StockPay				-0.0473*			
				(-1.756)			
OptPay					0.0833***		
					(2.668)		
LogOptAwd						0.0084***	
						(3.047)	
LogAwdVega							0.0112**
							(2.471)
PRR_T	0.1522***	0.1522***	0.1522***	0.1522***	0.1522***	0.1523***	0.1523***
	(6.135)	(6.138)	(6.134)	(6.135)	(6.131)	(6.137)	(6.134)
LogAssets	-0.0221	-0.0207	-0.0209	-0.0187	-0.0215	-0.0223	-0.0216
	(-1.329)	(-1.264)	(-1.280)	(-1.148)	(-1.318)	(-1.359)	(-1.319)
ROA	0.1060	0.1090	0.1113	0.1094	0.1190	0.1169	0.1128
	(1.142)	(1.176)	(1.197)	(1.180)	(1.282)	(1.261)	(1.214)
Leverage	-0.0094	-0.0105	-0.0102	-0.0130	-0.0080	-0.0108	-0.0067
	(-0.166)	(-0.185)	(-0.179)	(-0.228)	(-0.140)	(-0.191)	(-0.118)
Cash_hld	-0.0442	-0.0450	-0.0438	-0.0475	-0.0446	-0.0448	-0.0448
	(-0.675)	(-0.689)	(-0.668)	(-0.724)	(-0.681)	(-0.684)	(-0.684)
Q	-0.0168*	-0.0165*	-0.0165*	-0.0166*	-0.0177**	-0.0169**	-0.0171**
	(-1.946)	(-1.931)	(-1.927)	(-1.943)	(-2.074)	(-1.973)	(-1.995)
LogAge	-0.0116	-0.0108	-0.0090	-0.0148	-0.0022	-0.0021	-0.0066
	(-0.157)	(-0.145)	(-0.121)	(-0.200)	(-0.029)	(-0.029)	(-0.089)
LogTenure	0.0057	0.0058	0.0059	0.0057	0.0055	0.0053	0.0060
	(0.539)	(0.555)	(0.561)	(0.535)	(0.524)	(0.507)	(0.566)
CEOown	0.0008	0.0007	0.0007	0.0005	0.0009	0.0009	0.0008
	(0.293)	(0.266)	(0.280)	(0.212)	(0.348)	(0.355)	(0.309)
InstOwn	-0.0278	-0.0274	-0.0282	-0.0248	-0.0290	-0.0261	-0.0277
	(-0.871)	(-0.862)	(-0.884)	(-0.777)	(-0.908)	(-0.814)	(-0.864)
CEO Chair	0.0002	0.0004	0.0004	0.0010	0.0006	0.0005	0.0015
	(0.014)	(0.026)	(0.024)	(0.064)	(0.039)	(0.031)	(0.090)
Female	-0.0580	-0.0580	-0.0580	-0.0575	-0.0578	-0.0565	-0.0595
	(-1.471)	(-1.471)	(-1.471)	(-1.461)	(-1.469)	(-1.439)	(-1.508)
MBAPHD	-0.0243	-0.0241	-0.0241	-0.0238	-0.0249	-0.0249	-0.0254
	(-1.172)	(-1.163)	(-1.166)	(-1.154)	(-1.204)	(-1.206)	(-1.227)
RecessionStart	0.0241	0.0241	0.0241	0.0241	0.0231	0.0237	0.0245
	(1.009)	(1.009)	(1.007)	(1.009)	(0.970)	(0.994)	(1.027)
Constant	0.9639***	0.9916***	0.9763***	0.9914***	0.9269***	0.9314***	0.9600***
	(2.969)	(3.059)	(2.989)	(3.051)	(2.848)	(2.865)	(2.955)
Observations	27,717	27,717	27,717	27,717	27,717	27,717	27,707
Adj R2	0.040	0.040	0.040	0.040	0.040	0.040	0.040
R2-Between	0.652	0.652	0.651	0.648	0.641	0.642	0.640
R2-Overall	0.174	0.174	0.174	0.174	0.171	0.170	0.171
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Presents panel tests of the effect of pay structure on firm-level political risk revelations (*PRR*) for the sample of firms represented in ExecuComp database for which Hassen et al. (2019) measure of firm-level political risk is available in the years 2002 to 2021. All variables are estimated as described in Appendix A. *PRR* is 'annualized firm-level political risk revelations as per Hassan et al. (2019), based on the textual analysis of corporate earnings conference calls', standardized by sample firms' annual standard deviation of firm-level political risk scores. The higher occurrences of words signifying political risk in conference calls give higher value to *PRR*. Subscripts representing number of years prior (negative) and after (positive) CEO-Year. T-statistics based on cluster(firm)-robust standard errors are in brackets. Stars indicate significance levels as follows: *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.1$ (two tailed).

Table 4A: Horse Race Option Pay vs. Stock Pay

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}
StockPay	-0.0253	-0.0130	-0.0307	-0.0228	-0.0362	-0.0376
	(-0.883)	(-0.380)	(-1.106)	(-0.712)	(-1.323)	(-1.248)
OptPay	0.0747**	0.0885**				
	(2.247)	(2.294)				
LogOptAwd			0.0078***	0.0086***		
			(2.729)	(2.707)		
LogAwdVega					0.0101**	0.0099**
					(2.199)	(2.129)
CashPay		0.0235		0.0179		-0.0032
		(0.615)		(0.488)		(-0.096)
PRR_T	0.1522***	0.1521***	0.1523***	0.1523***	0.1523***	0.1523***
	(6.131)	(6.134)	(6.137)	(6.138)	(6.134)	(6.136)
Controls/Intercept	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Observations	27,717	27,717	27,717	27,717	27,707	27,707
Adj R2	0.040	0.040	0.040	0.040	0.040	0.040
R2-Between	0.640	0.639	0.640	0.640	0.638	0.638
R2-Overall	0.172	0.172	0.171	0.171	0.172	0.172
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Effects	Yes	Yes	Yes	Yes	Yes	Yes

Presents robustness tests of the effect of options vs. stock pay on firm-level political risk revelations (*PRR*) for the sample of firms represented in ExecuComp database, for which Hassen et al. (2019) measure of firm-level political risk is available from years 2002 to 2021. All variables are estimated as described in Appendix A. *PRR* is 'annualized firm-level political risk as per Hassen et al. (2019), based on the textual analysis of quarterly earnings conference calls', standardized by sample firms' annual standard deviation of firm-level political risk scores. The higher occurrences of words signifying political risk in conference calls give higher value to *PRR*. Subscripts representing number of years prior (negative) and after (positive) CEO-Year. T-statistics based on cluster(firm)-robust standard errors are in brackets. Stars indicate significance levels as follows: *** p < 0.01, ** p < 0.05, and * p < 0.1 (two tailed).

Table 5: CEO Pay Structure, Future Realized & Expected Risk-taking Outcomes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
VARIABLES	$TVOL_{T+1}$	$IVOL_{T+1}$	$CVOL_{T}$	$TVOL_{T+1}$	$IVOL_{T+1}$	$CVOL_{T}$	$TVOL_{T+1}$	$IVOL_{T+1}$	$CVOL_{T}$
OptPay	0.0016*	0.0018**	0.0127**						
	(1.929)	(2.333)	(2.414)						
LogOptAwd				0.0002**	0.0002**	0.0012**			
				(2.027)	(2.035)	(2.438)			
LogAwdVega							0.0003*	0.0002*	0.0013$
							(1.955)	(1.934)	(1.557)
$TVOL_{T}$	0.2602***			0.2600***			0.2600***		
	(10.180)			(10.181)			(10.184)		
$IVOL_{T}$		0.2540***			0.2538***			0.2538***	
		(8.849)			(8.852)			(8.856)	
$CVOL_{T-1}$			0.3055***			0.3052***			0.3053***
			(18.779)			(18.750)			(18.736)
Controls/Intercept	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Observations	27,024	27,024	18,877	27,024	27,024	18,877	27,024	27,024	18,867
Adj R2	0.315	0.211	0.460	0.315	0.211	0.460	0.315	0.211	0.459
R2-Between	0.606	0.588	0.647	0.607	0.588	0.647	0.607	0.589	0.648
R2-Overall	0.398	0.337	0.559	0.398	0.337	0.560	0.399	0.338	0.560
Year/Firm Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Presents panel tests of the effect of pay structure on firm risk for the sample of firms represented in ExecuComp database for which Hassen et al. (2019) measure of firm-level political risk is available in the years 2002 to 2021. All variables are estimated as described in Appendix A, except for these: *TVOL* is total volatility estimated standard deviation of 52 weekly returns, *IVOL* is idiosyncratic volatility estimated as the standard deviation of residuals from market model using 52 weekly observations and *CVOL* is the six-month call option implied volatility measured at the end of annual reporting period (extracted from Bloomberg). Valid observations of the proxy of the call option volatility are available for the years 2004 onward for the majority of firms. Subscripts representing number of years prior (negative) and after (positive) CEO-Year. T-statistics based on cluster(firm)-robust standard errors are in brackets. Stars indicate significance levels as follows: *** p < 0.01, ** p < 0.05, and * p < 0.1 (two tailed), and $p<0.1 (one tailed).

Table 6: CEO Pay Structure & Political Risk Revelations (controlling for risk-taking and equity price volatility)

Panel A: Controlling for risk-taking

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	PRR $_{T+1}$	PRR $_{T+1}$	PRR $_{T+1}$	PRR $_{T+1}$	PRR $_{T+1}$	PRR $_{T+1}$	PRR $_{T+1}$
LogTDC1	0.0050						
	(0.700)						
CashPay		-0.0066					
		(-0.217)					
RiskyPay			0.0128				
			(0.517)				
StockPay				-0.0479*			
				(-1.775)			
OptPay					0.0830***		
					(2.664)		
LogOptAwd						0.0085***	
						(3.061)	
LogAwdVega							0.0112**
							(2.481)
PRR_T	0.1521***	0.1521***	0.1521***	0.1520***	0.1521***	0.1522***	0.1522***
	(6.131)	(6.134)	(6.130)	(6.131)	(6.126)	(6.133)	(6.129)
R&D/Sale	0.0735	0.0760	0.0768	0.0734	0.0737	0.0802	0.0806
	(0.405)	(0.419)	(0.423)	(0.404)	(0.405)	(0.440)	(0.443)
Missing_R&D	-0.0433	-0.0431	-0.0430	-0.0433	-0.0428	-0.0440	-0.0426
	(-0.852)	(-0.848)	(-0.846)	(-0.853)	(-0.845)	(-0.870)	(-0.841)
SG&A/Sale	-0.1726	-0.1722	-0.1718	-0.1740	-0.1714	-0.1732	-0.1730
	(-1.540)	(-1.536)	(-1.533)	(-1.551)	(-1.526)	(-1.544)	(-1.542)
CAPEX_PPE	-0.0005	-0.0004	-0.0005	-0.0003	-0.0006	-0.0005	-0.0008
	(-0.071)	(-0.067)	(-0.069)	(-0.047)	(-0.082)	(-0.073)	(-0.122)
Controls/Intercept	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	27,717	27,717	27,717	27,717	27,717	27,717	27,707
Adj R2	0.040	0.040	0.040	0.040	0.040	0.040	0.040
R2-Between	0.598	0.598	0.598	0.596	0.589	0.586	0.588
R2-Overall	0.169	0.169	0.169	0.170	0.167	0.166	0.167
Year/Firm Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Panel B: Control for the outcomes of risk-taking

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
VARIABLES	PRR $_{T+1}$	PRR $_{T+1}$	PRR $_{T+1}$	PRR $_{T+1}$	PRR $_{T+1}$	PRR $_{T+1}$	PRR $_{T+1}$	PRR $_{T+1}$	PRR $_{T+1}$
OptPay	0.0856***			0.0858***			0.1482***		
	(2.689)			(2.695)			(3.754)		
LogOptAwd		0.0087***			0.0087***			0.0109***	
		(3.083)			(3.094)			(3.324)	
LogAwdVega			0.0118**			0.0119***			0.0162***
			(2.565)			(2.580)			(3.169)
PRR_T	0.1504***	0.1506***	0.1506***	0.1505***	0.1506***	0.1506***	0.1582***	0.1586***	0.1584***
	(6.468)	(6.475)	(6.471)	(6.469)	(6.476)	(6.473)	(5.552)	(5.571)	(5.554)
$TVOL_T$	0.4098	0.4009	0.3995						
	(1.634)	(1.598)	(1.594)						
$IVOL_T$				0.3333	0.3236	0.3240			
				(1.205)	(1.169)	(1.171)			
$CVOL_{T-1}$							-0.0304	-0.0325	-0.0334
							(-0.530)	(-0.566)	(-0.582)
Controls/Intercept	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Observations	27,400	27,400	27,390	27,400	27,400	27,390	18,649	18,649	18,639
Adj R2	0.040	0.040	0.040	0.040	0.040	0.040	0.046	0.045	0.045
R2-Between	0.615	0.615	0.613	0.620	0.620	0.617	0.591	0.601	0.598
R2-Overall	0.167	0.166	0.167	0.168	0.167	0.167	0.187	0.188	0.189
Year/Firm Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Presents tests of the effect of pay structure on firm-level political risk revelations for the sample of firms represented in ExecuComp database for which Hassan et al. (2019) measure of firm-level political risk is available in the years 2002 to 2021. All variables are estimated as described in Appendix A. *PRR* is 'annualized firm-level political risk revelations as per Hassan et al. (2019), based on the textual analysis of corporate earnings conference calls', standardized by sample firms' annual standard deviation of firm-level political risk scores. The higher occurrences of bigrams signifying political risk in conference calls give higher value to *PRR*. Among control variables, *TVOL* is total volatility estimated standard deviation of 52 weekly returns, *IVOL* is idiosyncratic volatility estimated as the standard deviation of residuals from market model using 52 weekly observations and *CVOL* is the six-month call option implied volatility measured at the end of annual reporting period (extracted from Bloomberg). Valid observations of the proxy of the call option volatility are available for the years 2004 onward for the majority of firms. Subscripts representing number of years prior (negative) and after (positive) CEO-Year. T-statistics based on cluster(firm)-robust standard errors are in brackets. Stars indicate significance levels as follows: *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.1$ (two tailed), and \$p<0.1 (one tailed).

Table 7: CEO Pay Structure & Political Risk Revelations

Panel A: 2006 and onwards

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	*PRR T+1*	*PRR T+1*	*PRR T+1*	*PRR T+1*	*PRR T+1*	*PRR T+1*	*PRR T+1*
TotalPay	0.0031						
	(0.351)						
CashPay		0.0108					
		(0.285)					
RiskyPay			0.0040				
			(0.146)				
StockPay				-0.0584**			
				(-1.984)			
OptPay					0.1003***		
					(2.849)		
LogOptAwd						0.0087***	
						(2.899)	
LogAwdVega							0.0105**
							(2.201)
PRR_T	0.1601***	0.1600***	0.1601***	0.1600***	0.1601***	0.1602***	0.1602***
	(5.092)	(5.095)	(5.093)	(5.093)	(5.087)	(5.095)	(5.090)
Observations	22,548	22,548	22,548	22,548	22,548	22,548	22,538
Adj R2	0.045	0.045	0.045	0.045	0.045	0.045	0.045
R2-Between	0.584	0.585	0.584	0.581	0.568	0.571	0.574
R2-Overall	0.189	0.190	0.189	0.190	0.186	0.186	0.187
Year/Firm Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Panel B: Control for CEO wealth-performance sensitivity

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	*PRR T+1*	*PRR T+1*	*PRR T+1*	*PRR T+1*	*PRR T+1*	*PRR T+1*	*PRR T+1*
TotalPay	0.0041						
	(0.577)						
CashPay		-0.0043					
		(-0.142)					
RiskyPay			0.0110				
			(0.444)				
StockPay				-0.0467*			
				(-1.733)			
OptPay					0.0801**		
					(2.562)		
LogOptAwd						0.0081***	
						(2.938)	
LogAwdVega							0.0107**
							(2.358)
LogWealthDelta	0.0081	0.0084	0.0082	0.0083	0.0060	0.0051	0.0065
	(1.110)	(1.137)	(1.115)	(1.120)	(0.814)	(0.684)	(0.874)
PRR_T	0.1522***	0.1522***	0.1522***	0.1522***	0.1522***	0.1524***	0.1524***
	(6.135)	(6.138)	(6.135)	(6.135)	(6.131)	(6.137)	(6.134)
Observations	27,717	27,717	27,717	27,717	27,717	27,717	27,707
Adj R2	0.040	0.040	0.040	0.040	0.040	0.040	0.040
R2-Between	0.641	0.641	0.640	0.637	0.632	0.634	0.630
R2-Overall	0.172	0.172	0.172	0.172	0.170	0.169	0.170
Year/Firm Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Panel C: Observed CEO & unobserved firm effects

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	*PRR T+1*	*PRR T+1*	*PRR T+1*	*PRR T+1*	*PRR T+1*	*PRR T+1*	*PRR T+1*
TotalPay	0.0046						
	(0.646)						
CashPay		-0.0059					
		(-0.194)					
RiskyPay			0.0126				
			(0.508)				
StockPay				-0.0467*			
				(-1.731)			
OptPay					0.0816***		
					(2.626)		
LogOptAwd						0.0081***	
						(2.955)	
LogAwdVega							0.0109**
							(2.406)
PRR_T	0.1520***	0.1520***	0.1520***	0.1520***	0.1520***	0.1522***	0.1522***
	(6.132)	(6.136)	(6.132)	(6.132)	(6.128)	(6.135)	(6.131)
Holder67	0.0296	0.0299	0.0298	0.0296	0.0276	0.0253	0.0278
	(1.389)	(1.402)	(1.395)	(1.379)	(1.297)	(1.186)	(1.298)
CEO at Other	-0.0139	-0.0136	-0.0137	-0.0136	-0.0143	-0.0134	-0.0150
	(-0.432)	(-0.425)	(-0.426)	(-0.423)	(-0.446)	(-0.416)	(-0.468)
MillitaryCEO	-0.0046	-0.0044	-0.0046	-0.0043	-0.0049	-0.0048	-0.0042
	(-0.090)	(-0.086)	(-0.090)	(-0.083)	(-0.095)	(-0.094)	(-0.082)
Observations	27,717	27,717	27,717	27,717	27,717	27,717	27,707
Adj R2	0.040	0.040	0.040	0.040	0.040	0.040	0.040
R2-Between	0.652	0.652	0.651	0.647	0.639	0.639	0.639
R2-Overall	0.174	0.174	0.174	0.174	0.171	0.170	0.171
Year/Firm Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Panel D: Unobserved firm-CEO effects

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	*PRR T+1*	*PRR T+1*	*PRR T+1*	*PRR T+1*	*PRR T+1*	*PRR T+1*	*PRR T+1*
TotalPay	0.0022						
	(0.245)						
CashPay		0.0107					
		(0.336)					
RiskyPay			0.0067				
			(0.262)				
StockPay				-0.0267			
				(-0.891)			
OptPay					0.0516*		
					(1.763)		
LogOptAwd						0.0069**	
						(2.446)	
LogAwdVega							0.0078*
							(1.747)
PRR_T	0.0370	0.0369	0.0370	0.0369	0.0370	0.0372	0.0371
	(1.547)	(1.547)	(1.548)	(1.546)	(1.548)	(1.556)	(1.555)
Observations	27,717	27,717	27,717	27,717	27,717	27,717	27,707
Adj R2	0.018	0.018	0.018	0.018	0.018	0.018	0.018
R2-Between	0.0676	0.0690	0.0676	0.0708	0.0678	0.0648	0.0644
R2-Overall	0.0423	0.0428	0.0422	0.0434	0.0418	0.0402	0.0408

Year Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
CEO-Firm-Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Panel E: First difference tests							
	(1)	(2)	(3)		(4)	(5)	(6)
VARIABLES	$adjPRR_{T+1}$	$adjPRR_{T+1}$	$adjPRR_{T+1}$		ΔPRR_{T+1}	ΔPRR_{T+1}	ΔPRR_{T+1}
OptPay	0.0774**				0.0813**		
	(2.515)				(2.398)		
LogOptAwd		0.0078***				0.0112***	
		(2.870)				(3.563)	
LogAwdVega			0.0111**				0.0121**
			(2.449)				(2.507)
$adjPRR_T$	0.1505***	0.1507***	0.1507***				
	(6.106)	(6.113)	(6.108)				
Observations	27,717	27,717	27,707		27,717	27,717	27,707
Adj R2	0.022	0.022	0.022		0.012	0.012	0.012
R2-Between	0.780	0.781	0.777		0.009	0.010	0.008
R2-Overall	0.175	0.175	0.175		0.0113	0.0114	0.0112
Year/Firm Effects	Yes	Yes	Yes		Yes	Yes	Yes
Panel F: Firm & joint industry-year effects							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}
TotalPay	0.0058						
	(0.787)						
CashPay		-0.0112					
		(-0.363)					
RiskyPay			0.0153				
			(0.615)				
StockPay				-0.0380			
				(-1.401)			
OptPay					0.0783**		
					(2.514)		
LogOptAwd						0.0082***	
						(2.906)	
LogAwdVega							0.0115**
							(2.480)
PRR_T	0.1491***	0.1491***	0.1491***	0.1490***	0.1491***	0.1492***	0.1492***
	(5.990)	(5.993)	(5.989)	(5.990)	(5.986)	(5.992)	(5.991)
Observations	27,717	27,717	27,717	27,717	27,717	27,717	27,707
Adj R2	0.044	0.044	0.044	0.044	0.044	0.044	0.044
R2-Between	0.121	0.117	0.137	0.117	0.114	0.136	0.120
R2-Overall	0.0693	0.0667	0.0732	0.0667	0.0656	0.0728	0.0646
Ind × Year Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Presents robustness tests for unobserved and observed CEO effects, and potential causality on the effect of pay structure on firm-level political risk revelations (*PRR*) for the sample of firms represented in ExecuComp database for which Hassan et al. (2019) measure of firm-level political risk is available in the years 2002 to 2021. All variables are estimated as described in Appendix A. *PRR* is 'annualized firm-level political risk revelations as per Hassan et al. (2019), based on the textual analysis of corporate earnings conference calls', standardized by sample firms' annual standard deviation of firm-level political risk scores. The higher occurrences of bigrams signifying political risk in conference calls give higher value to *PRR*. Subscripts representing number of years prior (negative) and after (positive) CEO-Year. Cluster (firm, unless stated)-robust t-Statistics are in brackets. All regressions include control variables used in main regressions and intercept, which are suppressed for saving space. Stars indicate significance levels as follows: *** p < 0.01, ** p < 0.05, and * p < 0.1 (two tailed), and $p<0.1 (one tailed).

Table 7A: Exogenous Shock

Panel A: Basic stats for *Pre123R* vs. *Post123R*

	(1)	(2)	(3)	(4)	(5)	(6)
Variable	*Mean Pre123R*	*ΔPost123R*	*%ΔPost123R*	*STD of Δ*	*N of Δ*	*TSTAT of Δ*
OptPay	0.33607	-0.0759	-22.58%	0.2228	1178	-11.692
StockPay	0.09962	0.0731	73.38%	0.1635	1178	15.345
PRR	0.90196	-0.1377	-15.27%	0.7937	1178	-5.955

Panel B Exogenous shock - implementation of *FAS123R*

	Full Sample					**Pre123R *within-firm* mean of OptPay**	
						High (>Med)	**Low (<Med)**
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	*StockPay*	*OptPay*	*LogOptAwd*	*LogAwdVega*	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}
POST123R	0.0963***	-0.1086***	-0.5884***	-0.3427***	-0.1295***	-0.1669***	-0.0706
	(10.564)	(-10.183)	(-6.059)	(-6.284)	(-3.375)	(-3.613)	(-1.011)
PRR_T	-0.0018	-0.0036	-0.0161	-0.0186	-0.2162***	-0.2314***	-0.1880***
	(-0.535)	(-0.957)	(-0.503)	(-1.077)	(-6.221)	(-6.557)	(-3.335)
Controls/Intercept	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Observations	5,527	5,527	5,527	5,527	5,444	2,063	1,991
Adj R2	0.103	0.086	0.048	0.035	0.068	0.075	0.052
R2-Between	0.0438	0.0354	0.0999	0.00200	0.330	0.242	0.261
R2-Overall	0.0610	0.0384	0.0718	0.00349	0.0856	0.0237	0.0830
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Panel C: Exogenous Shock - Implementation of *FAS123R* -first difference tests

	(1)	(2)	(3)
VARIABLES	*Δ within-firm mean PRR*	*Δ within-firm mean PRR*	*Δ within-firm mean PRR*
Δ within-firm mean OptPay	0.1257*	0.1373*	0.1332*
	(1.735)	(1.822)	(1.791)
Δ within-firm mean StockPay	0.1034	0.1007	0.0964
	(0.907)	(0.872)	(0.814)
Controls/Intercept	*Yes*	*Yes*	*Yes*
Observations	858	857	846

Adj R2	0.02	0.02	0.02
F-stat P Values	0.03	0.03	0.04
Industry Effects	Yes	Yes	Yes

Presents robustness tests using exogenous shock on the option pay in favor of stock-based equity pay due to changes in accounting rules related to equity based pay with the implementation of *FAS123R* for the sample of firms represented in ExecuComp database, for which Hassen et al. (2019) measure of firm-level political risk is available from years 2003 to 2006. All variables are estimated as described in Appendix A. *PRR* is 'annualized firm-level political risk as per Hassen et al. (2019), based on the textual analysis of quarterly earnings conference calls', standardized by sample firms' annual standard deviation of firm-level political risk scores. The higher occurrences of words signifying political risk in conference calls give higher value to *PRR*. Subscripts representing number of years prior (negative) and after (positive) CEO-Year. Stars indicate significance levels as follows: *** p < 0.01, ** p < 0.05, and * p < 0.1 (two tailed), and $p<0.1 (one tailed).
In Panel A: Sample includes years from 2003 to 2006, *Pre123R* includes the years 2003 and 2004, and *Post123R* includes 2005 and 2006. *OptPay* (*StockPay*) is the share of options (Restricted Stocks) in total compensation. *ΔPost123R* represents *Post123R* mean less *Pre123R* mean of respective variables.

In Panel B: *Post123R* is 1 for the years 2005 & 2006, and zero for the years 2003 & 2004. *Pre123R within-firm mean of OptPay* is the *within-firm* mean of 2003 & 2004 *OptPay*, where firms has positive value for *OptPay* at least in one year. Column 6 includes the below median values of the distribution of "*Pre123R within-firm mean of OptPay*", and column 7 includes above median values of the same distribution. T-statistics based on cluster(firm)-robust standard errors are in brackets.

In Panel C: For each variable *Δ* represents a change estimated as *Post123R within-firm* mean (i.e., *within-firm* mean of year 2005 & 2006 values) less *Pre123R within-firm* mean (i.e., *within-firm* mean of year 2003 & 2004 values). Model 1 controls for variables in *SET1* (i.e., *Δ within-firm mean LogSales, Δ within-firm mean Leverage, Δ within-firm mean MTB, Δ within-firm mean R&D/Sale, Δ within-firm mean CAPEX_PPE*), Model 2 controls for *SET2* (i.e., *SET1 plus Δ within-firm mean Cash_hld, Δ within-firm mean InstOwn*), and Model 3 controls for *SET3* (i.e., *SET2 plus Δ within-firm mean IVOL*). Each model also controls for No-Options *Pre123R* dummy, which is 1 if there are no options *Pre123R*. T-Statistics based on cluster (industry)-robust standard errors are in brackets.

Table 8: CEO Pay Structure, Overall, Nonpolitical, & Other Risk Revelations

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	$RISK_{T+1}$	$RISK_{T+1}$	$RISK_{T+1}$	$NPRR_{T+1}$	$NPRR_{T+1}$	$NPRR_{T+1}$
OptPay	0.0363*			-0.0496*		
	(1.652)			(-1.660)		
LogOptAwd		0.0040**			0.0001	
		(2.040)			(0.019)	
LogAwdVega			0.0015			-0.0069
			(0.460)			(-1.578)
$RISK_T$	0.3152***	0.3153***	0.3153***			
	(23.900)	(23.914)	(23.910)			
$NPRR_T$				0.1694***	0.1695***	0.1693***
				(9.681)	(9.679)	(9.669)
Controls/Intercept	Yes	Yes	Yes	Yes	Yes	Yes
Observations	27,717	27,717	27,707	27,717	27,717	27,707
Adj R2	0.150	0.150	0.150	0.047	0.047	0.047
R2-Between	0.869	0.869	0.869	0.572	0.569	0.574
R2-Overall	0.481	0.481	0.482	0.183	0.182	0.183
Year/Firm Effects	Yes	Yes	Yes	Yes	Yes	Yes

Presents panel tests of the effect of pay structure on delayed overall risk and nonpolitical risk revelations for the sample of firms represented in ExecuComp database for which Hassan et al. (2019) measure of firm-level political risk is available in the years 2002 to 2021. All variables are estimated as described in Appendix A. *PRR* is 'annualized firm-level political risk revelations as per Hassan et al. (2019), based on the textual analysis of corporate earnings conference calls', standardized by sample firms' annual standard deviation of firm-level political risk scores. The higher occurrences of bigrams signifying political risk in conference calls give higher value to *PRR*. Subscripts representing number of years prior (negative) and after (positive) CEO-Year. T-statistics based on cluster(firm)-robust standard errors are in brackets. Stars indicate significance levels as follows: *** p < 0.01, ** p < 0.05, and * p < 0.1 (two tailed), and $p<0.1 (one tailed).

Table 9: Political Risk Revelations - Options Pay Sensitivity & Cross Section of Risk-taking Outcomes

	Total volatility					
	High	**Low**	**High**	**High**	**Low**	**Low**
			CAPEX_PPE			
			High	**Low**	**High**	**Low**
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}
OptPay	0.0600	0.1327**	0.1192*	-0.0259	0.0844	0.1650**
	(1.359)	(2.534)	(1.907)	(-0.411)	(1.196)	(1.972)
Controls/Intercept	Yes	Yes	Yes	Yes	Yes	Yes
Observations	14,194	13,205	8,260	5,934	6,454	6,751
Adj R2	0.043	0.029	0.061	0.041	0.018	0.038
R2-Between	0.420	0.154	0.399	0.0426	0.0629	0.0370
R2-Overall	0.159	0.0939	0.199	0.0440	0.0595	0.0425
Year/Firm Effects	Yes	Yes	Yes	Yes	Yes	Yes
	Idiosyncratic volatility					
	High	**Low**	**High**	**High**	**Low**	**Low**
			CAPEX_PPE			
			High	**Low**	**High**	**Low**
	(7)	(8)	(9)	(10)	(11)	(12)
VARIABLES	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}
OptPay	0.0500	0.1312**	0.0929	-0.0281	0.0880	0.1655**
	(1.168)	(2.467)	(1.552)	(-0.450)	(1.202)	(2.030)
Controls/Intercept	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Observations	14,237	13,162	8,371	5,866	6,343	6,819
Adj R2	0.038	0.032	0.045	0.039	0.024	0.037
R2-Between	0.447	0.153	0.357	0.0504	0.0913	0.0308
R2-Overall	0.155	0.0897	0.167	0.0484	0.0863	0.0392
Year/Firm Effects	Yes	Yes	Yes	Yes	Yes	Yes

This table presents panel tests of the sensitivity of firm-level political risk revelations to the convexity of pay structure in the cross sections of risk outcomes. The sample includes firms represented in ExecuComp database for which Hassan et al. (2019) measure of firm-level political risk is available in the years 2002 to 2021. All variables are estimated as described in Appendix A. *PRR* is 'annualized firm-level political risk revelations as per Hassan et al. (2019), based on the textual analysis of corporate earnings conference calls', standardized by sample firms' annual standard deviation of firm-level political risk scores. The higher occurrences of bigrams signifying political risk in conference calls give higher value to *PRR*. All tests also control for the lagged value of *PRR*. Subscripts representing number of years prior (negative) and after (positive) CEO-Year. T-statistics based on cluster(firm)-robust standard errors are in brackets. Stars indicate significance levels as follows: *** p < 0.01, ** p < 0.05, and * p < 0.1 (two tailed), and $p<0.1 (one tailed).

Table 10: Cross-sectional Analysis

	SIZE		ROA		LEVERAGE	
	Large	**Small**	**High**	**Low**	**High**	**Low**
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}
OptPay	0.0678	0.0967**	0.1041**	0.0717	0.0883*	0.0688
	(1.465)	(2.173)	(2.237)	(1.621)	(1.851)	(1.598)
Controls/Intercept	Yes	Yes	Yes	Yes	Yes	Yes
Observations	13,355	14,362	13,990	13,727	13,448	14,269
Adj R2	0.044	0.028	0.027	0.042	0.032	0.032
R2-Between	0.272	0.449	0.285	0.378	0.103	0.469
R2-Overall	0.163	0.123	0.097	0.168	0.0589	0.201
Year/Firm Effects	Yes	Yes	Yes	Yes	Yes	Yes
	Cash		**Q**		**CEOown**	
	High	**Low**	**High**	**Low**	**High**	**Low**
	(7)	(8)	(9)	(10)	(11)	(12)
VARIABLES	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}
OptPay	0.0613	0.1267**	0.0693*	0.1122**	0.0708	0.0969**
	(1.521)	(2.519)	(1.671)	(2.251)	(1.644)	(2.064)
Controls/Intercept	Yes	Yes	Yes	Yes	Yes	Yes
Observations	14,361	13,356	14,149	13,568	13,956	13,761
Adj R2	0.033	0.038	0.035	0.031	0.033	0.037
R2-Between	0.399	0.232	0.307	0.215	0.493	0.149
R2-Overall	0.171	0.100	0.121	0.100	0.184	0.074
Year/Firm Effects	Yes	Yes	Yes	Yes	Yes	Yes
	Herfindahl		**InstOwn%**		**Blockholders 5%**	
	High	**Low**	**High**	**Low**	**Yes**	**No**
	(13)	(14)	(15)	(16)	(17)	(18)
VARIABLES	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}	PRR_{T+1}
OptPay	0.1207**	0.0421	0.1307***	0.0421	0.1222***	0.0211
	(2.423)	(1.004)	(2.617)	(1.044)	(2.771)	(0.441)
Controls/Intercept	Yes	Yes	Yes	Yes	Yes	Yes
Observations	14,699	13,018	13,920	13,797	18,629	9,088
Adj R2	0.042	0.035	0.040	0.022	0.040	0.021
R2-Between	0.335	0.359	0.492	0.110	0.541	0.011
R2-Overall	0.119	0.161	0.209	0.054	0.198	0.013
Year/Firm Effects	Yes	Yes	Yes	Yes	Yes	Yes

This table presents panel tests of the effect of pay structure on political risk revelations for the cross section various firm specific attributes. The sample includes firms represented in ExecuComp database for which Hassan et al. (2019) measure of firm-level political risk is available in the years 2002 to 2021. All variables are estimated as described in Appendix A. *PRR* is 'annualized firm-level political risk revelations as per Hassan et al. (2019), based on the textual analysis of corporate earnings conference calls', standardized by sample firms' annual standard deviation of firm-level political risk scores. The higher occurrences of bigrams signifying political risk in conference calls give higher value to *PRR*. All tests also control for the lagged value of *PRR*. Subscripts representing number of years prior (negative) and after (positive) CEO-Year. T-statistics based on cluster(firm)-robust standard errors are in brackets. Stars indicate significance levels as follows: *** p < 0.01, ** p < 0.05, and * p < 0.1 (two tailed), and $p<0.1 (one tailed).