FIRM-LEVEL POLITICAL UNCERTAINTY AND RISK-TAKING

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Firm-level Political Uncertainty and Risk-taking

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Abstract

Research shows that political uncertainty affects general economic and firm-related outcomes, but much less is known about how it affects firms' risk taking. Taking advantage of a new construct, we focus on a firm-level political uncertainty index measure because it enables us to examine both time-series and cross-sectional variations in political uncertainty. Using a large sample of non-financial U.S. firms covering the 2003 to 2017 period, we find strong evidence that firm-level political uncertainty, measured as the portion of earnings call conversations with financial analysts that focus on political uncertainty, is positively associated with corporate risk taking. Further analysis shows that the effect of firm-level political uncertainty on risk taking is more pronounced for firms' that have more growth opportunities, dependent on external financing and corporate lobbying incentives. Our results are economically significant and robust to alternative risk-taking measures.

Keywords: Firm-level Policy Uncertainty, Corporate lobbying, Risk-Taking

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1. Introduction

Recent political tension between China and the U.S. has renewed interest in the effect of political situations on investment, corporate finance, employment, and other firm characteristics. The nature of politics and policy decision-making typically involves a great deal of uncertainty. Political parties conduct extensive negotiation and discussion when forming and implementing policies, which takes a considerable amount of time and can yield unpredictable outcomes. Studies shows that policy uncertainty increases default risk (Pástor and Veronesi, 2012, 2013; Kelly et al., 2016). Furthermore, recent studies find that political uncertainty has adverse economic effects. At the macroeconomic level, Baker et al. (2016) show that high political uncertainty leads to declines in employment, investment, and output. At the firm level, studies find that political uncertainty reduces corporate investment, innovation and political uncertainty is also priced into a cross-section of stock returns (e.g., Gorbatikov et al., 2019; Gad et al., 2019; Hassan et al., 2019; Pan, 2019).

Hassan et al. (2019) develop a novel firm-level measure of political uncertainty by conducting textual analyses of the quarterly earnings conference call transcripts of publicly listed firms and constructing an index of firm-level political uncertainty. Unlike other indexes of aggregate political uncertainty, such as the economic policy uncertainty index constructed by Baker et al. (2016), this firm-level political uncertainty measure enables researchers to examine not only time-series changes but also cross-sectional variations in political uncertainty. This study provide evidence that variations in aggregate political uncertainty over time account for only 1% of overall political uncertainty, but firm-level political uncertainty accounts for around 70% of the total variation. As data were unavailable, previous studies do not consider the effect of firm-level

political uncertainty. Therefore, taking advantage of the novel measure, this study examines the effect of firm-level political uncertainty on managerial risk choices in corporate investment decisions.

This paper fills a gap in the literature by investigating how firm-level political uncertainty affects the risk-taking behavior of firms. We emphasize firm risk taking for three reasons. First, firm risk taking refers to the degree of a firm's willingness to undertake risk by investing resources to obtain market opportunities and enhance net present value (Faccio, Marchica, and Mura, 2016) in a rapidly changing, highly competitive, and demanding marketplace (Kraatz, 1998). Firms' risk taking is thus essential for seizing new growth opportunities; ensuring long-term survival, prosperity, and sustainability; and supporting regional and national economic development (John et al., 2008; Su, Li, and Wan, 2017). Second, firm risk taking plays an important role in economic growth. In this regard, small entrepreneurial firms are commonly considered the primary source of risky innovation; large public firms undertake approximately half to two-thirds of total private sector investment, and the riskiness of such investment is positively associated with per capita growth. Thus, risk taking by large, established firms can have significant macroeconomic effects.[1] Third, the literature has long held that managers' undertaking of risky investments in pursuit of profits is a major driver of long-term economic growth, which enhances economic development. (Faccio et al., 2011). In general, we feel that firms' risk taking is an appropriate setting, and this

[1] Reports of large U.S. firms show that 74.3% of all fixed assets were held by corporations in 2003 (Asker et al., 2015). In addition, John et al. (2008) show that a one standard deviation increase in firm risk taking is associated with a 33.2% increase in real GDP per capita growth.

paper henceforth examines the link between firm-level political uncertainty and the risk-taking behavior of firms.

Firm risk-taking activities has important implications for firm growth, performance, and survival. The research works suggest that companies risk taking is determined by many environmental issues. Recently, the effect of political uncertainty has received increasing attention from academics, but there is still no research on the relationship between firm-level political uncertainty and corporate risk taking. Thus, motivated by the growing number of studies on the environmental determinants of firm risk taking and the role of political uncertainty in firm-level decisions, we investigate whether firm-level political uncertainty affects managerial risk choices in U.S. firms.

The finance literature provides evidence that political uncertainty is an essential factor affecting firm risk taking and financial performance (for example, Jones and Banning, 2009; Goodell and Bodey, 2012). A study by Goodell and Vahamaa (2013) examines the effects of U.S. presidential elections on the stock market and finds a relationship between election uncertainty and stock market volatility. In addition, Pantzalis et al. (2009) use a broad sample of countries and document the influence of election cycles. Tran (2019) studied using international data from 18 countries from 2005 to 2016 and documented that economic policy uncertainty is negatively associated to companies risk taking behavior. These findings imply that corporate managers react to greater economic policy uncertainty by engaging in less corporate risk taking. In general, political uncertainty may lead to greater cash flow volatility for firms' and more severe information asymmetry between firms and creditors (Brogaard and Detzel, 2015; Gilchrist et al., 2014). Therefore, the cost of external financing increases and firm managers are less likely to take risks

(Boubakri et al., 2013). As reported by Qi et al. (2010), firms have high cost of debt financing in countries with relatively weak political rights and this will lead firms to borrow less and engage in less firm risk taking. In addition, firm managers are more conservative when they face high firm-level political uncertainty (Bernanke, 1983; Bloom, 2009; Panousi and Papanikolaou, 2012). This will lead career concerned managers to overweight the uncertainty in the political environment by selecting sub-optimal investments. Thus, this eventually leads corporate managers to engage in less risk-taking activities.

An alternative perspective suggests that firms subject to firm-level political uncertainty engage in lobbying and have more access to policy makers. During periods of high political uncertainty, such firms have political access (Brown and Huang, 2017) and as a result, they can get private information. In other words, high firm-level political uncertainty increases lobbying incentives. Hassan et al. (2019) support this argument and argue that during periods of high political uncertainty, firms tend to donate more to political campaigns, create links to politicians, and invest in lobbying activities. Some studies (for example, Bertrand et al. 2014; Akin et al., 2019; Wellman, 2017) also suggest that the scope of political interference naturally creates the possibility that some firms and economic agents connected to politicians and lobbyists have an informational advantage regarding future political events and how they might affect the company. This is in line with the observation that analysts often use conference calls as an opportunity to ask questions related to political topics. This suggests that the future is less uncertain to those firm managers and that as a result, they take more risks. In summary, there is no clear evidence on the effect of firm-level political uncertainty on risk-taking and hence, examining how firm-level political uncertainty affects corporate risk-taking activities is an empirical research question.

Using a sample of 28,849 observations of U.S. firms from 2003 through 2017, we find strong and robust evidence that firm-level political uncertainty is positively associated with firm risk taking, indicating that firms with greater firm-level political uncertainty engage in more risk-taking behavior. We find also that the firm-level policy uncertainty effect is more amplified for firms with more growth opportunities. Furthermore, the relation between firm-level political uncertainty and risk taking is also more pronounced for firms that are highly dependent on external financing, as measured by the standard deviation of cash flows for the last five years and the Hadlock and Pierce (2010) index. Finally, we run cross-sectional analysis for corporate lobbying incentives and we find that the association between firms' exposure to policy uncertainty and risk-taking is stronger for firms that engage in corporate lobbying.

We also perform several additional tests. First, we investigate how firm level policy exposure affects risk taking with respect to firm size. We split our sample into two groups and classify firms above the median size as large firms and the remaining as small firms. We find that smaller firms are more sensitive than larger firms to policy uncertainty and which confirm that firm level political uncertainty promotes risk taking especially for small firms. Second, we perform robustness check on whether the financial crisis has effect on the relation between firms' exposure to policy uncertainty and risk taking. We divide the sample period into two sub-periods and we find consistent results with our prediction that the 2008 financial crisis drew managers' attention to policy uncertainty. Lastly, we use the baseline equation and replace $FPU_{i.t}$ with topic specific policy uncertainty and we find that firms consider firm-level policy exposure regarding certain topics when evaluating risk taking decisions. Specifically, firms' risk taking is positively related with the political uncertainties with economic policy and budget, institutions and political process,

health care, security and defense, tax policy, and technology and infrastructure. Therefore, our result suggests that topic specific policy uncertainty also draws managerial risk taking activities.

To alleviate this potential endogeneity issue, we use the propensity score matching (*PSM)* approach. We regress the indicator of the highest $FPU_{i,t}$ index scores on the firm-level control variables and we use the estimated coefficients from this first-stage regression to compute the propensity score for each observation. Then we match the highest $FPU_{i,t}$ firms with the lowest $FPU_{i,t}$ firms based on the closest propensity scores. Finally, we repeat the baseline analysis using the *PSM* sample, and we find a significantly positive relation between firm-level political uncertainty and risk taking. This evidence supports our premise that firm-level political uncertainty has a causal effect on risk taking.

Our paper extends to the literature in different ways. The first contribution is related to the literature on firm risk taking by finding a new determinant and provides managers and policy makers with additional understanding of how firms react to political uncertainty. This understanding can help managers conduct firm risk management policies more effectively; in particular, it can help managers of multi-national corporations and others choose foreign partners and investment destinations. In addition, policy makers can improve economic efficiency through a better understanding of the effect of political uncertainty on firms' risk taking.

The second contribution is related to the growing importance of political uncertainty in the business context, which presents a strong case for research into whether firm-level political uncertainty affects firm outcomes. The literature focuses mainly on aggregate-level political uncertainty to identify firm-level financing effects (Francis et al., 2014; Çolak et al., 2017; Gao et

al., 2019). However, Hassan et al. (2019) provide evidence that the vast majority of the variation in political risk exposure is at the firm-level rather than at the aggregate level—aggregate political uncertainty cannot capture the variation in political uncertainty within a firm over time, nor can it capture heterogeneity in political uncertainty among firms. Therefore, our paper provides the first document of the impact of firms' exposure to policy uncertainty on corporate risk taking.

The remaining part of this paper is structured as follows. The second part deals the review of related literature and development of hypotheses. The third part describes the data and descriptive results. The fourth section deals the main empirical results. Section five reports the additional tests and robustness checks, and the final section concludes the paper.

2. Literature Review and Development of Hypotheses

Studies document the role of political uncertainty in finance. For instance, Pástor and Veronesi (2012) develop an asset-pricing model that predicts that stock returns are negative and more volatile after policy change announcements. Other research works focuses on how political uncertainty affects firms' operations and decision-making. Baker et al. (2016) also find that firms reduce their investment activities and slow employment growth when policy uncertainty rises. Moreover, political uncertainty also affects firms' financing and investment decisions. Recent research by Waisman et al. (2015) suggested the effect of political uncertainty on corporate debt. They documented that the uncertainty associated with the outcome of U.S. presidential elections leads to a 34 bps increase in corporate bond spreads. Chan et al. (2017) study how economic policy uncertainty affects the cost of raising equity capital. They find that political uncertainty affects the cost, volume, and timing of seasoned equity offerings activity. Their findings implied that

underwriters and issuers tend to delay offerings to mitigate the negative effect of policy uncertainty on investors' interest.

Research studies emphases mainly on how aggregate policy uncertainty affects firms' operations and hence assumes that different firms are homogenous in their response to political uncertainty. This assumption does not seem reasonable. To study the cross-sectional heterogeneity of firms, Hassan et al. (2019) developed a novel measure to study firm-level political uncertainty, which is the first empirical proxy specifically for firm-level political uncertainty. Gad et al. (2020) examine the effect of firm-level political risk on debt markets using the measure developed by Hassan et al. (2019) to show that borrower-level political risk is reflected in the cost and liquidity of public debt, the cost of private debt, and in debt issuance decisions. They document that borrower-level political risk is factored into pricing and liquidity in public debt markets and in the cost of private debt and credit default spreads. Gorbatikov et al. (2019) use a machine-learning-based firm-specific measure of political risk and find that political risk is priced into a cross-section of stock returns. During periods of significant political change, firms are exposed to a volatile policy environment. For example, Saffar et al. (2019) investigate the effect of firm-level political uncertainty on bank loan contracting and find that firms with greater political uncertainty have higher bank loan costs. This effect is greater among firms with a higher degree of information asymmetry and firms that are more financially constrained.

With the firm-level political uncertainty measure developed by Hassan et al. (2019), we can distinguish the effects of aggregate political uncertainty and firm-level political uncertainty and therefore conduct a cross-sectional investigation on how firms are treated or behave differently when confronting the same aggregate political uncertainty. Political uncertainty arises from the

unpredictable process of political decision-making and implementation, and this uncertainty may affect firms' risk-taking behavior. Thus, we examine whether firm-level political uncertainty exerts an important effect on firms' financing decisions, mainly focusing on corporate risk taking.

Firms linked with higher firms' exposure to policy uncertainty tend to engage less risks. The first is that policy risks influences firms' information environment, and firms with higher firm-level political uncertainty are expected to have greater information risk (Kim et al., 2011; Bradley et al., 2016). High firm-level political uncertainty will lead to increased costs for external financing due to increased information asymmetry between lenders and borrowers and more volatile future cash flows for firms (Brogaard and Detzel, 2015; Zhang et al., 2015). If firms face higher external financing costs, management is less willing to raise external funds or take risks (Boubakri et al., 2013). Second, high firm-level political uncertainty leads to greater managerial conservatism. Management prefers investment opportunities with less volatile cash flows to minimize threats to their personal interests or the threat of losing their job (Amihud and Lev, 1981; Gormley and Matsa, 2016). Many studies (Bernanke, 1983; Bloom, 2009; Panousi and Papanikolaou, 2012) document that corporate managers tend to underinvest when facing a highly uncertain environment. Thus, greater policy uncertainty leads companies to engage in less risk taking activities.

However, there is a countervailing argument that firms with firm-level political uncertainty engage in lobbying and have more access to politicians. During periods of high political uncertainty, these firms have access to government policies, and political access is a scarce and valuable resource (Brown and Huang, 2017); as a result, information asymmetry and risk are reduced. In other words, high firm-level political uncertainty increases lobbying incentives. Hassan et al. (2019) support this argument and argue that during periods of high political

uncertainty, firms tend to donate more to political campaigns, create links to politicians, and invest in lobbying activities. Some studies (for example, Bertrand et al., 2014; Akin et al., 2019; Wellman 2017) also suggest that the scope of political interference naturally creates the possibility that some firms and economic agents connected to politicians, and lobbyists will have an informational advantage regarding future political events and how they might affect the company. This is in line with the observation that analysts often use conference calls an opportunity to ask questions related to political topics. Thus, this suggests that the future is less uncertain to firm managers and as a result they take more risks. In summary, there is no clear evidence on the effect of firm-level political uncertainty on risk-taking and hence, examining how firm-level exposure to policy uncertainty affects corporate risk-taking decisions and activities is an empirical research question.

To empirically test the relation between firm-level policy uncertainty and risk taking, we propose the first hypothesis as follows:

H1: Firms associated with greater firm-level political uncertainty engage in more risk-taking behavior.

To examine cross-sectional tests in the effect of firm-level political uncertainty among companies, we run three cross-sectional tests. We first investigate whether the effect different firms' exposure to policy uncertainty is stronger in firms that are more dependent on external financing. Next, we investigate whether the effect of firm-level political uncertainty on risk taking is stronger for firms with more growth opportunities. Finally, we examine whether the impact of firm-level political uncertainty on risk taking is pronounced for firms with more lobbying activities.

Research works document that external financial dependence affect a firm's ability to undertake major investment choices (Stein, 2003), a firm's capital structure choices (e.g., Hennessy and Whited, 2007). When financially constrained firms have high firm-level political uncertainty, they are more likely to skip profitable projects, causing profitability to decrease. Firm managers are more likely to take risks in such situation. Therefore, we predict the effect of firm-level political uncertainty is stronger for firms dependent on external financing and propose the next hypothesis as follows:

H2. The positive association between firm exposure to policy uncertainty and risk taking is more pronounced for firms that are need for external capital.

Firms with more growth opportunities may take more risks as they pursue more investment opportunities. Cohen and Klepper (1996) show that large firms have advantages in investing, as their larger output enables them to reinvest. This indicates that when firms face more investment opportunities, their managers are more willing to take risks to exploit these opportunities, and thus firms engage in more risk taking. The effect of policy uncertainty is intensified when the magnitude of information asymmetry is large. Therefore, we expect that the association between firms' exposure to policy uncertainty and risk taking is stronger in firms with more growth opportunities. Thus, we state the following hypothesis:

H3. The relation between firm-level political uncertainty and risk taking is stronger for firms with more growth opportunities.

Research studies suggest that firms' exposure to policy uncertainty appears to play a significant role in driving corporate lobbying activities. Studies show that high firms' exposure to

policy uncertainty negatively affects business outcomes and this negative effect is particularly valuable to corporate lobbying to access policy makers and learn confidential policy information during high periods of political uncertainty. Hassan et al., (2019) also argue that firms engage in lobbying to actively manage political uncertainty and they document that firms with high policy uncertainty spend more in lobbying. The results provide evidence that companies would lobby more to manage the increased policy uncertainty for higher firms' exposure to policy uncertainty. Thus, we posit that the association between different firms' exposure to policy uncertainty and risk taking is more amplified for firm with more corporate lobbying incentives and propose the final hypothesis as follows.

H4. The association between firms' exposure to policy uncertainty and risk taking is stronger for firms with greater engagement in lobbying activities.

3. Data and Sample

3.1. *Sample*

This section explains how the data are obtained and how the variables are constructed. The data are obtained from a variety of sources. We collect the data for firm-level political uncertainty from the personal website of Dr. Hassan.[2] Firm–level financial data are obtained from Compustat Global database. Furthermore, we collect the data for macroeconomic variables from World Bank-World Development Indicators (WDI) database. Following the literature, we exclude financial firms (i.e., SIC codes 6000−6999) from our sample. We also drop those with missing values for firm-level political uncertainty, risk taking, and financial information. To account outliers, all variables are winsorized at the 1% level at both ends of the sample distribution. Therefore, the final sample contains 28,849 observations from the 2003 through 2017 period.

3.2. *Measuring Risk-Taking*

We employee different measures of corporate risk-taking and investigate their association to firms' exposure to policy uncertainty among U.S. firms. Our primary measure (*RISK1*) is the standard deviation over three years of a firm's return on assets (*ROA*) from the industry-year average return on assets (*ROA)*. Return on assets (*ROA)* is defined as the ratio of earnings before interest and taxes (*EBIT*) over assets (see Langenmayr and Lester, 2018; Acharya et al., 2011). Following Boubakri et al. (2013) and Faccio et al. (2011), our second measure (*RISK2*) is the difference between the highest and lowest levels of annual earnings before interest, taxes, depreciation, and amortization (*EBITDA*) to total assets over four-year periods (*RISK2*). The third

[2] We thank Dr. Hassan for making the data available on his website.

measure (*RISK3*) uses the volatility of firms' *EBITDA* to total assets over a four-year period (see Basu et al., 2018 and Boubakri et al., 2013). The fourth measure (*RISK4*) uses the standard deviation of *ROA* in overlapping four-year periods [t, t+3]. Finally, we also use the standard deviation of *ROA* over four years [t, t+3] (*RISK5*). We measured return on assets (*ROA*) as the ratio earnings before interest (*EBIT*) and tax and sales (see appendix).

3.3. *Measuring Firm-level Political Uncertainty*

Following Hassan et al. (2019) we measure our independent variable based on quarterly earnings conference calls, in which financial analysts and other market participants discuss the current state of affairs with top management. A machine learning algorithm is used on the transcripts of these calls to determine how much of the conversation centers on political topics. To determine which political topics are being discussed, the algorithm extracts all two-word combinations ("bigrams") from training libraries that contain comprehensive sets of political, $\mathbb{P}$, and non-political topics, $\mathbb{N}$. These sets are identified using an undergraduate textbook on American politics, supplemented by newspaper articles from the domestic politics sections of major U.S. newspapers, an undergraduate financial accounting textbook, and newspaper articles on corporate events. The political risk measure is constructed by counting the number of exclusively political bigrams in conjunction with a synonym for risk or uncertainty and then dividing it by the total number of bigrams in the transcript (to adjust for the length of the transcript) as follows:

$$PRisk_{i,t} = \frac{\sum_{b}^{B_{it}} (1\,[b \epsilon P \backslash N] \times 1[\,|b-r|<10] \times \frac{f_{b,P}}{B_P}}{B_{it}},$$

Where r is the position of the nearest synonym of risk or uncertainty, $b = 0, 1, \ldots$, and B_{it} indexes bigrams in the call of firm i at time t. Each bigram is weighted with a score that reflects how strongly it is associated with politics, where $f_{b,p}$ is the frequency of bigram b in the overall political training library, and $B_{\mathbb{P}}$ is the total number of bigrams in the training library. Hassan et al. (2019) subject this measure to a battery of stringent validity checks. The first is a human verification of whether the algorithm correctly identifies conversations about risk associated with political topics in the transcript, and the second is an inspection of how the measure aligns with political events over time and with sectors that have high versus low exposure to political risk. The third validity check is a set of tests of the correlation between political risk and firm-level outcomes that are a priori likely to be affected by political risk (such as planned investments and hiring). The fourth is a set of tests to ensure that the measure does not reflect news about sentiment regarding political events, and finally a set of tests to establish that $FPU_{i,t}$ is different from non-political risk.

3.4. *Control Variables*

Following the literature, we include firm- and country-level characteristics in the model. Control variables for firm-year economic factors are included to isolate macroeconomic effects (such as the business cycle) on firm-level political uncertainty. Following Belo et al. (2013), Pan et al. (2019), and Tran (2019), we include a set of macroeconomic control variables: Gross Domestic Product per Capita (*LnGDPPC)*, Inflation *(INFLATION)*, and Unemployment *(UNEMPLOY).* Gross Domestic Product per Capita *(LnGDPPC)* is measured as the natural logarithm of gross domestic product (GDP) per capita in 2010 constant U.S. dollars, which captures the effect of the country's overall economic growth on managerial investment decisions.

We expect this measure to be positively related to firm risk taking. Inflation (*INFLATION*) is defined as the rate of price change in the economy as a whole, GDP deflator. Following prior literature, we define an unemployment (*UNEMPLOY)* is the ratio of the number of peoples unemployed to the civilian labor force.

In addition, we include the following control variables for possible firm-level effects: firm size (*SIZE*), tangibility (*TANGI*), financial leverage (*LEV*), Tobin's q (*TOBIN'S Q*), cash to assets ratio (*SLACK*), z-score (*ZSCORE*), and firm age (*AGE*). Firm size (*SIZE)* is a proxy for economies of scale and defined as the natural logarithm of total assets in millions of U.S. dollars. Based on previous studies (Boubakri, 2013; Li et al., 2013; Hope, 2003), small firms are generally more risk-seeking than large firms, and thus we expect a negative relation between firm size and our measure of risk taking. We also control for the tangibility of a company's assets (*TANGI*). Tangibility (*TANGI)* is defined as the ratio of net total property, plant, and equipment to total assets. We expect a negative relation between tangibility and risk taking. Leverage (*LEV)* is defined as the sum of long- and short-term debt over total assets, which captures a firm's degree of leverage. Tran (2019) shows that firms with higher financial leverage are more likely to expropriate their creditors, and thus such firms tend to take more risks. *TOBIN'S Q* is measured as the sum of the market value of equity and book value of debt divided by total assets. *TOBIN'S Q* captures investment opportunity and firm growth, and thus we expect a positive relation to our risk-taking measure. *ZSCORE* is calculated following Altman (1968). We include *ZSCORE* to capture firms' financial health and probability of default. *SLACK* is defined as the ratio of cash to total assets. Loss (*LOSS)* is a dummy variable that takes the value of one if net income before extraordinary items is negative and zero otherwise. We include *LOSS* in our estimation to capture a firm's ability

to pay its debt. We control for the effects of firm age (*AGE*), as this factor reflects a firms' operational experience. We expect that younger firms will engage in more risk-taking behavior. Following Petersen (2009), we include both industry fixed effects and standard errors clustered by firm-level in our regression.

3.5. *Descriptive Statistics*

Table 1 presents the descriptive statistics for the firm-level political uncertainty measures and for the risk taking and other control variables during the 2003 to 2017 sample period. As depicted in Panel A of Table 1, the average firm-level risk-taking measure has a spread of over 0.038 to 0.123. The average firm has assets of US$6.56 billion, with financial leverage of 0.223, tangibility of 0.248, and a ratio of cash to total assets of 21.4%. The descriptive statistics are consistent with those found in the prior literature.

[Insert Table 1 here]

Panel B describes the correlations matrix for our variables. The results show that the overall firm-level political uncertainty ($FPU_{i.t}$) and corporate risk-taking (*RISK1*) are positively associated and consistent with our main hypothesis. We also find that firm-level political uncertainty is negatively correlated with large firms (*SIZE*), leverage (*LEV*), and tangibility (*TANGI*), and *ZSCORE*. However, firm-level political uncertainty is positively related with investment opportunities (*TOBINQ*), the ratio of cash to total assets (*SLACK)*, the dummy variable *LOSS*, and firm age (*AGE*).

4. Main Empirical Results

This part describes the main empirical analysis. We first present the effect of firm-level political uncertainty on the risk-taking behavior of companies. Then, we replace our dependent variable with alternative risk-taking measures as robustness checks. Finally, we conduct further cross-sectional analyses of firm-level political uncertainty's effect on firms' risk taking under varying conditions, i.e., dependence on external financing and volume of growth opportunities.

4.1. *Firm-level Political Uncertainty and Risk Taking*

Management determines corporate decisions regarding risk, which have significant implications for corporate performance, growth, and survival (Shapira, 1995). Risk is especially relevant in long-term decisions; therefore, studying managers' risk-taking propensities provides a better understanding of firm strategies (Baird and Thomas, 1985; Boubakri et al., 2013). We use the following regression model to conduct the analysis.

$$RISK1_{i,t} = \alpha + \beta 1 * FPU_{i,t} + \beta_X * X_{i,t} + \varepsilon_{i,t}, \quad (1)$$

Where i denotes the firm, t is the time, and $X_{i,t}$ contains the set of control variables. We estimate the above regression model using ordinary least squares (*OLS*). The *t*-statistics are computed using standard errors that are robust to heteroscedasticity and clustered at the firm level. *RISK1* is defined as the standard deviation over three years of a firm's *ROA* deviation from the industry-year average *ROA* (Langenmayr and Lester, 2018; Acharya et al., 2011). *ROA* is measured as *EBIT* over assets. $FPU_{i,t}$ is firm i's year average political uncertainty, which is derived from the firm's quarterly

earnings call transcripts and standardized by the whole period's standard deviation.[3] Following Tran, 2019, we include firm-level control variables that capture a firm's fundamental characteristics, including firm size, financial leverage, tangibility, age, Tobin's q, slack, loss, and z-score. We include a set of macroeconomic control variables, including inflation rate (*INFLATION*), unemployment rate (*UNEMPLOY*), and gross domestic product (*LnGDPPC*). Following Petersen (2009), we include industry fixed effects and standard errors clustered by firm.

Table 2 presents the baseline regression results for the effect of firm-level political uncertainty on corporate risk taking with and without controlling macroeconomic factors. In Table 2, column (1), we control firm characteristics, industry fixed effects and standard errors clustered by firm, and we find that firm-level political uncertainty is positively related to corporate risk taking at the 1% significance level (coefficient = .004; *t*-statistic = 3.60). In particular, a one standard deviation increase in firm-level political uncertainty leads to a 2.53% increase in managers' risk taking. This finding suggests that corporate managers react to higher firm-level political uncertainty by taking more risks. When we include macro-level variables for the inflation rate, GDP, and the unemployment rate, as shown in column (2), the effect of firm-level political uncertainty remains significantly positive, which indicates that the results are not driven by business conditions (coefficient = .004; *t*-statistic = 3.39).

In addition to the key explanatory variables, the coefficients of the control variables in the regression are also significant and consistent with findings in the literature (Boubakri et al., 2013; Tran, 2019; Huang et al., 2018). For example, corporate risk taking is negatively correlated with

[3] Following Hassan et al. (2019), the standardization process does not subtract the mean.

firm size (coefficient = -.008; *t*-statistic = -15.77) and *ZSCORE* (coefficient = -.005; *t*-statistic = -16.98). Risk taking is positively associated with *TOBIN'S Q* (coefficient = .015; *t*-statistic = 14.26); *SLACK* (coefficient = .061; *t*-statistic = 10.04); *LOSS* (coefficient = .006; *t*-statistic = 3.96); and *AGE* (coefficient = .003; *t*-statistic = 2.5). Generally, the results in Table 2 show that during periods of high firm-level political uncertainty, firms engage in more risk-taking behavior.

[Insert Table 2 here]

4.2. *Alternative Measures of Risk-Taking*

Following Boubakri et al. (2013) and Faccio et al. (2011), we replace the risk-taking measure (*RISK1*) with four alternative measures of firm risk taking: *RISK2*, *RISK3*, *RISK4*, and *RISK5*. Table 3 reports the results of the robustness tests with various measures of corporate risk taking. We find that firm-level political uncertainty is positively related to all four alternative measures of risk taking: *RISK2* (coefficient = .013; *t*-statistic = 2.63), *RISK3* (coefficient = .006; *t*-statistic = 2.71), *RISK4* (coefficient = .006; *t*-statistic = 2.45), and *RISK5* (coefficient = .172; *t*-statistic = 2.34). Our results are robust to alternative measures of risk taking, and this supports our premise that firm-level political uncertainty has a significant effect on the risk-taking behavior of firms.

[Insert Table 3 here]

4.3. *Dependence on External Financing and Its Effect on Firm-level Political Uncertainty*

Firm financial constraints are the market frictions that hinder a firm from obtaining financing for all of its desired investment projects that have positive net present value. When firms

with financial constraints face high political uncertainty, the likelihood that they will delay or forgo profitable projects increases dramatically. Thus, firm managers are more likely to take risks. Therefore, for firms that are dependent on external financing we expect to observe a heightened relation between firm-level political uncertainty and risk taking.

Our first cross-sectional test is for the role of dependence on external financing; we test its effect on the relation between firm-level political uncertainty and risk taking. We consider two measures of dependence on external financing: cash flow volatility (*SDCFO5P*), defined as the standard deviation of total cash flows from the previous five years scaled by total debt, and *HP_index*, which refers to the Hadlock and Pierce index (2010). Regarding dependence on external financing, we classify firms as constrained or unconstrained based on their standard deviation of cash flows for the last five years and *HP_index* score.

Table 4 presents the results. First, the coefficient on the interaction term $FPUi,t \times SDCFO5P$ is positive and significant (coefficient = .012; *t*-statistic = 2.21), which indicates that the effect of firm-level political risk on risk taking is more pronounced for firms that are highly dependent on external financing. Second, the interaction term $FPUi,t \times HP\_Index$ is also positive and significant at the 5% level (coefficient = .0001; *t*-statistic = 2.13), which indicates that the influence of firm-level political uncertainty on a firm's risk-taking behavior is exacerbated for firms with greater uncertainty about their future performance. These results generally support our assumption that the effect of firm-level political uncertainty on risk taking is more pronounced (mitigated) in firms with greater (lesser) dependence on external financing.

[Insert Table 4 here]

4.4. *The Effect of Growth Opportunities on Firm-level Political Uncertainty*

We conduct our second cross-sectional test following John et al. (2008) to determine whether the effect of firm-level political uncertainty is more pronounced for firms with more growth opportunities. Firms with more growth opportunities may take more risks because they pursue more investment opportunities. Thus, we expect that the relation between firm-level political uncertainty and risk taking is stronger for firms with more growth opportunities.

Following the literature (John et al., 2008; Guedhami et al., 2014) we consider two measures of a firm's growth opportunities. Sales growth (*SGRW*) and Tobin's q (*TOBIN'S Q*) are commonly used proxies for firm growth opportunities. *SGRW* is defined as sales growth over the sample period, 2003 through 2017. *TOBIN'S Q* is the sum of the market value of equity and the book value of debt scaled by total assets. To examine the effect of growth opportunities on firms' risk taking, we modify our baseline regression by including the interaction term between firm-level political uncertainty and each of the two growth opportunity measures.

The results are described in the table below. In column (1), the coefficient on the interaction term $FPUi,t \times SGRW$ is positive and significant (coefficient = .0001; *t*-statistic = 2.07), which suggests that the effect of firm-level political uncertainty on risk taking is accentuated for firms with growing sales. In column (2), the coefficient on the interaction term $FPUi,t \times TOBIN'S\ Q$ is also positive and significant (coefficient = .0020; *t*-statistic = 2.15), suggesting that the firm-level political uncertainty−risk taking relation is stronger for firms with a higher level of investment opportunities. These results support the notion that the effect of firm-level political uncertainty is amplified (mitigated) for firms with more (less) growth opportunities.

[Insert Table 5 here]

4.5. *Corporate lobbying incentives and its effect on Firm-level Political Uncertainty*

Studies document that firm level policy uncertainty appears to play a significant role in driving corporate lobbying intensity. Corporate lobbying activities enable firms to obtain different economic benefits. In particular, it helps firms to shape some legislations (Yu and Yu, 2011), gain preferential access to credit (Khwaja and Mian, 2005), receive preferential treatment to obtain government contracts (Agrawal and Knoeber, 2001; Goldman et al., 2013), obtain assistance during corporate bailouts (Faccio et al., 2006). Firms with high policy uncertainty would have a strong incentives to lobby for different reasons. Hassan et al. (2019) argue that firms engage in lobbying to actively manage political uncertainty and they document that firms with high policy uncertainty spend more on lobbying activities. Their findings suggest that firms would lobby more to manage the increased political risk with high different firms' exposure to policy uncertainty. Thus, we expect that the relation between firm's exposure to policy uncertainty and risk-taking to be stronger for firm with corporate lobbying incentives.

We collect corporate lobbying data from the Center for Responsive Politics *(CRP)* website and corporate lobbying (*LOBBY*) is defined as the percentage of firm's total annual lobbying expenditure over its total market value of equity (*MV*) at the beginning of the fiscal year. Public firms are required to file semi-annual reports detailing the issues they lobby for and the total amount of lobbying fees if such expenditure is above US $10,000 during a given year. Table 6 presents the regression results. The coefficient on the interaction term $FPUi,t \times LOBBY$ is positive and significant (coefficient = .0006; *t*-statistic = 1.83), which indicates that the effect of

firm-level political uncertainty on risk taking is more pronounced for firms that are have more corporate lobbying intensity.

[Insert Table 6 here]

5. Additional Tests

In this section, we perform several checks. First, we investigate the effect of firm-level political uncertainty based on firm size. Second, we test whether concerns regarding firm-level political uncertainty intensified after the financial crisis. Third, we investigate the effect of topic-specific political uncertainty on our risk-taking measures. Finally, we perform a robustness check for endogeneity.

5.1. *Large versus Small Firms*

In this subsection, we investigate how firm-level political uncertainty affects risk taking with respect to firm characteristics, i.e., firm size. The literature (see, for example, Pan et al., 2018; Acs and Audretsch, 1988) emphasizes a variety of determinants that affect investment decisions for large and small firms. Cohen and Klepper (1996) provide evidence that larger firms have an advantage in investing, as their larger output enables them to reinvest. Other studies (Brown et al., 2012; Brown and Petersen, 2011) demonstrate that firm size matters for investment, as small firms often rely on external equity financing but have less capacity to access capital markets and are more financially constrained (Beck et al., 2005; Fama and French, 1992). Thus, we predict that small firms are more sensitive to political uncertainty, as they usually face significant financial

insecurity and have fewer financial resources to mitigate political risk. We thus predict that small firms are more likely to take risks.

We split our sample into two groups and classify firms above the median size (total assets) as large firms and the rest as small firms. As shown in column (1) of Table 7, the effect of firm-level political uncertainty has a greater positive effect on small firms' risk taking, with a higher statistical significance and magnitude (coefficient = .0039; *t*-statistic = 2.30) and we find that the p-value 0.0027 of the difference in the $FPU_{i,t}$ coefficient between small and large firm. This result supports the view that small firms are more sensitive than large firms to political uncertainty and confirms that firm-level political uncertainty promotes risk taking especially for small firms.

[Insert Table 7 here]

5.2. *Subsample Analysis: Before and After the Financial Crisis*

Based on the Federal Open Market Committee (2009) and the International Monetary Fund (IMF, 2013), uncertainty about U.S. fiscal, regulatory, and monetary policies contributed to a sharp economic decline from 2008 to 2009 and a gradual recovery afterward. In addition, recent studies (for example, Baker et al., 2016; Julio and Yook, 2012) provide evidence that policy uncertainty was more pronounced in the wake of the financial crisis. Therefore, this study, we divide the sample period into two sub-periods. We predict that before 2008, the relation between firm-level political uncertainty and the risk-taking behavior of firms was relatively weak because most firms did not pay enough attention to political uncertainty. Due to the dramatic depressive effect of the financial crisis, awareness of political uncertainty increased. Therefore, we expect that the relation

between firm-level political uncertainty and risk taking by firms was stronger during the sample period after 2008. The results are presented in Table 8.

[Insert Table 8 here]

Table 8 shows that before 2008, the coefficient on firm-level political uncertainty is significant, and its magnitude of .0035 is smaller than after 2008 (coefficient = .0044; *t*-statistic = 2.52). In general, the results in Table 8 are consistent with our prediction that the 2008 financial crisis drew managers' attention to political uncertainty.

5.3. *Topic-specific Political Uncertainty*

Thus far, we have comprehensively examined how firm-specific political uncertainty affects corporate risk taking. Hassan et al. (2019) find that firms lobby on the political topics they are most concerned about. A firm might be concerned about how creditors evaluate the risks associated with these specific topics rather than the topics in general. To examine this, we test the effects of eight political topics: economic policy and budget, environment, trade, institutions and political process, health care, security and defense, tax policy, and technology and infrastructure. We use Equation (1) and replace $FPUi,t$ with topic-specific political risk. We use a prefix to indicate each specific topic. For example, $EnvRiskM$ is standardized firm-level political risk corresponding to environmental topics. The detailed definitions of the other topic-specific political risks are provided in the Appendix. To ease our interpretation, we follow Hassan et al. (2019) and use standardized topic-specific political risk.

We present the results in Table 9. We find that firms consider firm-level political uncertainty regarding certain topics when evaluating investment decisions. Specifically, firms' risk taking is positively associated with the political risks associated with economic policy and budget, institutions and political process, health care, security and defense, tax policy, and technology and infrastructure. Thus, our results suggest that topic-specific political risk also draws managerial risk-taking behavior.

[Insert Table 9 here]

5.4. *Endogeneity Concerns*

In this subsection, we discuss an alternative to the standard multivariate regression approach. Specifically, we use propensity score matching (PSM), which allows us to compare high versus low levels of firm-level political risk among firms that otherwise share similar characteristics. To do so, we first construct the indicator $DPRisk$, which equals one if a firm's $PRisk$ is in the top 30% that year (treatment group) and zero if it's $PRisk$ is in the bottom 50% (control group). Next, to identify matching firms for the treatment group, we run a logit regression of $DPRisk$ on all variables. As there are no sound predictors of firm-level political risk, we include all firm-related characteristics in the first-step logit regression. The fitted value of $DPRisk$ captures the probability (i.e., propensity score) of being in the treatment group. We select a matching sample for each treatment sample based on the closest estimated probability (without replacement). We also require the matching sample to come from the same 2-digit SIC industry code and year. This results in a matched sample of 2,820 firm-year, comprising 1,410 observations each in the treatment and control groups.

[Insert Table 10 here]

Table 10 reports the results for the PSM sample. The coefficient on $PRisk$ is .009 (t-statistic = 2.10), which indicates that risk taking in the treatment group is about 0.9% higher than that of the matched sample. Overall, the positive relation between firm-level political uncertainty and risk taking is not likely to be driven by omitted variables or unobservable confounding effects.

6. Conclusion

The effect of political uncertainty on firm outputs has attracted a great deal of attention from academics and policy makers in recent years, particularly since the 2008 financial crisis. However, different firms face different levels of political risk. Yet, except for Hassan, Hollander, ven Lent, and Tahoun (2019), most studies only consider the effect of aggregate-level political uncertainty. We empirically examine the relation between firm-level political uncertainty and risk-taking behavior. Based on the literature, we predict that firms with greater firm-level political uncertainty engage in more risk-taking behavior.

Using a large sample of U.S. firms over the 2003 to 2017 period, we find that firms with greater firm-level political uncertainty exhibit more risk-taking behavior. The positive relation of these factors is significant at the 1% level after controlling for firm characteristics and other macroeconomic factors. We find that the firm-level political uncertainty effect is more amplified for firms with more growth opportunities. Furthermore, the relation between firm-level political uncertainty and risk taking is also more pronounced for firms that are highly dependent on external financing, as measured by the standard deviation of cash flows for the last five years and the Hadlock and Pierce (2010) index. Finally, we find that the documented relationship is stronger for

firms with more corporate lobbying incentives. Overall, to the best of our knowledge, this paper is the first to examine the effect of firm-level political uncertainty on risk taking. This paper contributes to the growing stream of literature that examines the effect of political uncertainty on corporate investment policies (e.g., Bloom et al., 2007; Julio and Yook, 2012, 2016; Pástor and Veronesi, 2013; Gulen and Ion, 2015).

Appendix

Variable Definitions and Sources

Variable	Definition	Source
Risk-taking		
RISK1	Defined as the standard deviation over three years of a firms' ROA from the industry-year average ROA (This measure is used by Langenmayr and Lester, 2018 and Acharya et al., 2011). ROA is defined as the ratio of EBIT over assets.	Compustat Global
RISK2	Measured as the difference between the highest and lowest levels of annual EBITDA to total assets over four-year periods.	Compustat Global
RISK3	Measured as the volatility of firms' EBITDA to total assets over a four-year period (as in Basu et al., 2018).	Compustat Global
RISK4	Measured as the standard deviation of ROA over four-year overlapping periods [t, t+3]. ROA is defined as the ratio of EBIT over assets.	Compustat Global
RISK5	Measured as the standard deviation of ROA over four years [t, t+3]. ROA is defined as the ratio of EBIT over sales.	Compustat Global
Political uncertainty		
$FPU_{i.t}$	A firm's overall political uncertainty, measured using Hassan et al.'s (2019) searching technique for quarterly earnings conference call transcripts for each publicly listed company to construct a firm-level measure.	Hassan et al. (2019)
PRISK	Firm 'i' political risk measure at time 't', standardized by its standard deviations.	Hassan et al. (2019)
EcoRiskM	Similar to the construction of overall *PRisk*, this measure focuses on economic policy–related uncertainty.	Hassan et al. (2019)
EnvRiskM	Similar to the construction of overall FPU, this measure focuses on environment-related uncertainty.	Hassan et al. (2019)
HealthRiskM	Similar to the construction of overall *FPU*, this measure focuses on healthcare-related political uncertainty.	Hassan et al. (2019)
InstRiskM	Similar to the construction of overall FPU, this measure focuses on uncertainty related to institutions and political process, such as government reform.	Hassan et al. (2019)
SecureRiskM	Similar to the construction of overall *FPU*, this measure focuses on the uncertainty related to security and defense.	Hassan et al. (2019)

TaxRiskM	Similar to the construction of overall *FPU*, this measure focuses on tax policy–related uncertainty.	Hassan et al. (2019)
TechRiskM	Similar to the construction of overall FPU, this measure focuses on uncertainty related to technology and infrastructure.	Hassan et al. (2019)
TradeRiskM	Similar to the construction of overall FPU, this measure focuses on trade-related uncertainty.	Hassan et al. (2019)
Firm-level variables		
SIZE	Firm size, measured as the natural logarithm of total assets.	Compustat Global
LEV	Firm leverage, measured as the sum of long- and short-term debt in current liabilities divided by total assets.	Compustat Global
TANGI	Firm tangibility, measured as total property, plant, and equipment divided by total assets.	Compustat Global
TOBIN'S Q	Tobin's q, measured as the sum of the market value of equity and book value of debt divided by total assets.	Compustat Global
SLACK	Firm slack, measured as the ratio of cash to total assets.	Compustat Global
LOSS	An indicator variable that takes the value of one if net income before extraordinary items is negative and zero otherwise.	Compustat Global
ZSCORE	From Altman (1968), calculated as (1.2*working capital + 1.4*retained earnings + 3.3*EBIT + 0.999*sales)/total assets + 0.6*(market value of equity/book value of debt).	Compustat Global
AGE	Firm age, measured as the natural logarithm of a firm's age.	Compustat Global
SDCFO5P	standard deviation of yearly cash flows from the previous five years scaled by total debt	Compustat Global
HP_Index	Refers to the Hadlock and Pierce index (2010) calculated as (-0.737* Assets + 0.043*$Assets^2$ – 0.040*Age)	Compustat Global
SGRW	Sales growth is defined as sales growth over the sample period	Compustat Global
LOBBY	Measured as a firm's annual lobbying expenditure scaled by the total market value of equity at the beginning of the fiscal year.	Center for Responsive Politics
Macro-level variables		
UNEMPLOY	Unemployment, measured as the number of persons unemployed divided by the civilian labor force (U3).	World Bank: Development Indicator

INFLATION	Inflation, measured as the rate of rice change in the economy as a whole, GDP deflator	World Bank: Development Indicator
LnGDPPC	Gross domestic product, measured as the natural logarithm of GDP per capita in 2010 constant U.S. dollars.	World Bank: Development Indicator

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Table 1: Summary Statistics and Correlation Matrix

This table presents the descriptive statistics and correlations for the variables used in the regressions. Correlations shown in bold are significant at the 1%, 5% and 10% level. See the Appendix for variable definitions.

Panel A: Summary statistics

Variable (N = 28,849)	Mean	Std Dev	25%	Median	75%
FPU	-0.111	0.652	-0.508	-0.313	0.028
RISK1	0.103	0.110	0.038	0.070	0.123
SIZE	6.557	1.949	5.200	6.524	7.883
LEV	0.223	0.225	0.012	0.183	0.342
TANGI	0.248	0.233	0.068	0.160	0.361
TOBIN'S Q	2.112	1.497	1.200	1.611	2.423
SLACK	0.214	0.226	0.041	0.128	0.317
LOSS	0.326	0.469	0.000	0.000	1.000
ZSCORE	3.580	6.184	1.350	3.000	5.181
AGE	2.847	0.749	2.303	2.833	3.401
LnGDPPC	10.800	0.106	10.740	10.790	10.880
UNEMPLOY	6.521	1.730	5.083	5.784	8.069
INFLATION	1.933	0.716	1.165	1.918	2.686

Panel B: Correlation matrix

	Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1	FPU	1.00												
2	RISK1	0.07	1.00											
3	SIZE	-0.03	-0.24	1.00										
4	LEV	-0.01	0.05	0.27	1.00									
5	TANGI	-0.01	0.00	0.32	0.30	1.00								
6	TOBIN'S Q	0.03	0.18	-0.24	-0.10	-0.23	1.00							
7	SLACK	0.08	0.2	-0.43	-0.35	-0.44	0.43	1.00						
8	LOSS	0.06	0.22	-0.39	0.07	-0.09	0.05	0.29	1.00					
9	ZSCORE	-0.03	-0.23	0.07	-0.40	-0.12	0.31	0.17	-0.31	1.00				
10	AGE	0.01	-0.11	0.42	0.07	0.17	-0.20	-0.32	-0.26	-0.05	1.00			
11	LnGDPPC	0.01	0.08	0.10	0.08	-0.01	0.02	-0.02	0.03	-0.06	0.11	1.00		
12	UNEMPLOY	0.08	0.04	-0.01	-0.03	0.01	-0.06	0.00	-0.01	-0.04	0.05	0.04	1.00	
13	INFLATION	-0.07	-0.04	-0.05	-0.06	-0.01	0.03	0.01	-0.07	0.07	-0.08	-0.49	-0.50	1.00

Table 2: Firm-level Political Uncertainty and Risk Taking

This table reports the regression results for the effect of firm-level political uncertainty on firms' risk taking using the following model: $RISK1 = \alpha + \beta_1 \times FPU_{i,t} + \beta_X \times X_{i,t} + \varepsilon_{i,t+1}$, where the dependent variable $RISK1$ is the S.D. over three years of a firm's ROA deviation from the industry-year average ROA (this measure is used by Langenmayr and Lester, 2018 and Acharya et al., 2011). ROA is defined as ratio of EBIT over assets. $FPU_{i,t}$ is firm *i*'s firm-level political uncertainty measure at year quarter *t* (standardized). Column (1) controls for firm-level control variables, and column (2) adds macroeconomic variables to the baseline results. The sample period is 2003 to 2017. Financial firms (SIC 6000-6999) and utilities (SIC 4900-4999) are excluded from the sample. Industry fixed effects are controlled by 2-digit SIC codes. All variables are winsorized at the 1% level on both tails. See the Appendix for variable definitions. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1) RISK1	(2) RISK1
FPU	0.004***	0.004***
	(3.60)	(3.39)
SIZE	-0.008***	-0.008***
	(-15.77)	(-16.47)
LEV	-0.006	-0.007
	(-1.15)	(-1.26)
TANGI	0.008	0.011**
	(1.54)	(2.16)
TOBIN'S Q	0.015***	0.014***
	(14.26)	(13.90)
SLACK	0.061***	0.060***
	(10.04)	(9.96)
LOSS	0.006***	0.006***
	(3.96)	(3.72)
ZSCORE	-0.005***	-0.005***
	(-16.98)	(-16.58)
AGE	0.003**	0.001
	(2.50)	(1.27)
LnGDPPC		0.088***
		(11.60)
UNEMPLOY		0.003***
		(6.48)
INFLATION		0.006***
		(5.32)
Industry F.E.	Yes	Yes
Year F.E.	Yes	No
Clustered by Firm	Yes	Yes
N	28,849	28,849
Adj. R^2	0.343	0.349

Table 3: Alternative Risk-taking Measures

This table presents the results for the alternative risk-taking measures on firm-level political uncertainty. *RISK2* is the difference between the highest and lowest levels of annual EBIT to total assets over four-year periods. *RISK3* is the volatility of firms' EBITDA to total assets over a four-year period (as in Basu et al., 2018). *RISK4* is the S.D. of ROA over overlapping four-year periods [t, t+3]. ROA is defined as the ratio of EBIT over assets. *RISK5* is the S.D. of ROA over four years [t, t+3]. ROA is defined as the ratio of EBIT over sales. Each estimate is reported using robust t-statistics clustered at the firm level. Complete definitions and data sources for the variables are in the Appendix. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	RISK2	RISK3	RISK4	RISK5
FPU	0.013***	0.006***	0.006**	0.172**
	(2.63)	(2.71)	(2.45)	(2.34)
SIZE	-0.039***	-0.018***	-0.018***	-0.096***
	(-16.22)	(-15.58)	(-15.78)	(-3.30)
LEV	-0.011	-0.000	-0.003	-0.070
	(-0.45)	(-0.04)	(-0.26)	(-0.21)
TANGI	0.074***	0.029**	0.034***	0.137
	(2.91)	(2.49)	(2.75)	(0.36)
TOBIN'S Q	0.049***	0.023***	0.023***	0.197***
	(10.65)	(10.62)	(10.40)	(3.09)
SLACK	0.254***	0.116***	0.118***	4.900***
	(9.99)	(9.73)	(9.64)	(10.49)
LOSS	0.038***	0.013***	0.017***	0.651***
	(5.08)	(3.83)	(4.75)	(5.26)
ZSCORE	-0.018***	-0.008***	-0.008***	-0.073***
	(-14.06)	(-13.79)	(-13.78)	(-3.58)
AGE	-0.017***	-0.009***	-0.009***	-0.199***
	(-3.12)	(-3.85)	(-3.48)	(-2.69)
LnGDPPC	0.327***	0.162***	0.166***	2.426***
	(10.78)	(11.40)	(11.21)	(5.78)
UNEMPLOY	-0.031***	-0.016***	-0.016***	-0.160***
	(-13.83)	(-14.86)	(-14.60)	(-5.59)
INFLATION	-0.053***	-0.028***	-0.028***	-0.242***
	(-9.57)	(-10.82)	(-10.41)	(-3.86)
Industry F.E.	Yes	Yes	Yes	Yes
Clustered by Firm	Yes	Yes	Yes	Yes
N	28,849	28,849	28,849	28,849
Adj. R^2	0.221	0.212	0.212	0.132

Table 4: The Mediating Role of Dependence on External Financing

This table reports the results for cross-sectional analyses exploring the role of dependence on external financing. $SDCFO5P$ refers to cash flow volatility, defined as the standard deviation of yearly cash flows from operations over the previous five fiscal years, scaled by total debt. HP_Index refers to the Hadlock and Pierce index (2010). Standard errors are corrected for heteroscedasticity and are clustered at the firm level. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1) RISK1	(2) RISK1
*FPU*SDCFO5P*	0.012**	
	(2.21)	
SDCFO5P	0.049***	
	(6.57)	
*FPU*HP_INDEX*		0.001**
		(2.13)
HP_INDEX		0.066***
		(13.80)
FPU	0.002	0.008***
	(1.50)	(2.71)
SIZE	-0.007***	0.002***
	(-14.60)	(2.87)
LEV	-0.007	0.004
	(-1.38)	(0.85)
TANGI	0.014***	0.015***
	(2.86)	(3.07)
TOBIN'S Q	0.013***	0.012***
	(13.40)	(12.26)
SLACK	0.051***	0.058***
	(8.30)	(9.86)
LOSS	0.005***	0.004**
	(3.20)	(2.44)
ZSCORE	-0.005***	-0.004***
	(-16.00)	(-14.34)
AGE	0.003***	0.001
	(2.99)	(1.04)
LnGDPPC	0.091***	0.087***
	(11.96)	(11.62)
UNEMPLOY	0.003***	0.003***
	(6.90)	(6.35)
INFLATION	0.007***	0.006***
	(5.84)	(5.50)
Industry F.E.		Yes
Clustered by Firm		Yes
N	27,984	28,849
Adj. R^2	0.358	0.363

Table 5: The Mediating Role of Growth Opportunities

This table reports the results for cross-sectional analyses exploring the role of growth opportunities. $SGRW$ refers to sales growth over the sample period, 2003 through 2017. $TOBIN'S\ Q$ is the sum of the market value of equity and the book value of debt divided by total assets. Standard errors are corrected for heteroscedasticity and clustered at the firm level. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1) RISK1	(2) RISK1
*FPU*SGRW*	0.0001**	
	(2.07)	
SGRW	-0.0000	
	(-0.79)	
*FPU*TOBIN'S Q*		0.0020**
		(2.15)
TOBIN'S Q	0.0143***	0.0145***
	(13.49)	(14.20)
FPU	0.0037***	-0.0005
	(3.29)	(-0.28)
SIZE	-0.0084***	-0.0084***
	(-16.42)	(-16.45)
LEV	-0.0058	-0.0068
	(-1.12)	(-1.32)
TANGI	0.0112**	0.0109**
	(2.27)	(2.20)
SLACK	0.0559***	0.0603***
	(9.24)	(9.91)
LOSS	0.0058***	0.0060***
	(3.59)	(3.63)
ZSCORE	-0.0048***	-0.0049***
	(-16.02)	(-16.61)
AGE	0.0016	0.0013
	(1.51)	(1.15)
LnGDPPC	0.0853***	0.0882***
	(11.30)	(11.57)
UNEMPLOY	0.0032***	0.0031***
	(6.71)	(6.46)
INFLATION	0.0063***	0.0061***
	(5.59)	(5.33)
Industry F.E.	Yes	Yes
Clustered by Firm	Yes	Yes
N	28,648	28,848
Adj. R^2	0.345	0.350

Table 6: The Mediating Role of corporate lobbying intensity

This table reports the results for cross-sectional analyses examining the role of corporate lobbying intensity. $LOBBY$ is measured as a firm's annual lobbying expenditure/fees scaled by the total market value of equity (MV) at the beginning of the fiscal year. Corporate lobbying expenditure data are obtained from the Center for Responsive Politics (*CRP*) website. Standard errors are corrected for heteroscedasticity and clustered at the firm level. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1) RISK1
*FPU*LOBBY*	0.0006*
	(1.83)
FPU	0.0002*
	(1.71)
LOBBY	0.0049***
	(2.82)
SIZE	-0.0091***
	(-16.20)
LEV	-0.0166***
	(-2.71)
TANGI	0.0156**
	(2.50)
TOBINQ	0.0166***
	(14.00)
SLACK	0.0528***
	(8.43)
LOSS	0.0099***
	(5.51)
ZSCORE	-0.0052***
	(-15.57)
AGE	0.0019
	(1.29)
LNGDPPC	0.0839***
	(8.15)
UNEMPLOY	-0.0005
	(-0.77)
INFLATION	-0.0029*
	(-1.84)
Industry F.E.	Yes
Clustered by Firm	Yes
N	17,425
Adj. R^2	0.385

Table 7: Cross-sectional Differences with Firm Size: Subsample Analysis

This table reports cross-sectional variations based on firm size. The unit of observation is a firm-year. The dependent variable in all regressions is *RISK1*. Independent variables include $FPU_{i,t}$ (political uncertainty measure), *SIZE*, *LEV*, *TANGI*, *TOBIN'S Q*, *SLACK*, *LOSS*, *ZSCORE*, *Ln GDPPC*, *UNEMPLOY*, and *INFLATION*. See Appendix for detailed variable descriptions. The baseline specifications are used and we control for industry fixed effects. Standard errors are clustered at the firm level and corrected for heteroscedasticity. t-statistics are in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	Firm Size	
	Small	Large
	(1)	(2)
FPU	0.0039**	0.0003
	(2.30)	(0.27)
SIZE	-0.0225***	-0.0008
	(-15.30)	(-1.50)
LEV	0.0017	0.0118**
	(0.23)	(2.38)
TANGI	0.0238**	0.0047
	(2.56)	(1.08)
TOBIN'S Q	0.0140***	0.0004
	(12.00)	(0.40)
SLACK	0.0613***	0.0265***
	(8.12)	(4.20)
LOSS	-0.0002	0.0104***
	(-0.09)	(5.02)
ZSCORE	-0.0044***	0.0002
	(-14.51)	(0.51)
AGE	-0.0010	-0.0014
	(-0.48)	(-1.38)
LnGDPPC	0.0867***	0.0991***
	(6.90)	(12.15)
UNEMPLOY	0.0008	0.0047***
	(1.13)	(8.01)
INFLATION	0.0047**	0.0067***
	(2.57)	(5.12)
p-value of the difference in the *FPU* coefficients	0.0027	
Industry F.E.	Yes	Yes
Clustered by Firm	Yes	Yes
N	14,427	14,421
Adj. R^2	0.358	0.357

Table 8: Cross-sectional Difference Before and After the Financial Crisis: Subsample Analysis

This table reports cross-sectional variations based on the financial crisis. The unit of observation is a firm-year. The dependent variable in all of the regressions is *RISK1*. Independent variables include $FPU_{i,t}$ (firm level political uncertainty), *SIZE*, *LEV*, *TANGI*, *TOBIN'S Q*, *SLACK*, *LOSS*, *ZSCORE*, *LnGDPPC*, *UNEMPLOY*, and *INFLATION*. See Appendix for detailed variable descriptions. The sample period is 2003 to 2017. "Before" indicates the 2002-2007 period and "After" indicates the 2008-2017 period. Financial firms (SIC 6000-6999) and utilities (SIC 4900-4999) are excluded. All regressions include year and industry (2-digit SIC code) fixed effects. All variables are winsorized at the 1% level. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1) Before	(2) After
FPU	0.0035**	0.0044**
	(2.53)	(2.52)
SIZE	-0.0076***	-0.0104***
	(-12.70)	(-13.96)
LEV	-0.0036	-0.0179**
	(-0.58)	(-2.39)
TANGI	-0.0030	0.0269***
	(-0.53)	(3.81)
TOBIN'S Q	0.0139***	0.0165***
	(11.05)	(10.52)
SLACK	0.0563***	0.0591***
	(6.76)	(7.87)
LOSS	0.0035*	0.0085***
	(1.66)	(3.89)
ZSCORE	-0.0047***	-0.0053***
	(-13.43)	(-11.80)
AGE	0.0015	0.0020
	(1.08)	(1.44)
LnGDPPC	0.0432*	0.0763***
	(1.76)	(5.45)
UNEMPLOY	0.0012	-0.0080***
	(1.12)	(-3.23)
INFLATION	0.0119***	-0.0108***
	(6.90)	(-4.58)
Industry F.E.	Yes	Yes
Clustered by Firm	Yes	Yes
N	12,092	16,756
Adj. R^2	0.383	0.372

Table 9: The Effects of topic specific Political Uncertainty on Risk-Taking

This table reports the results of the effects of different types of political uncertainty on risk taking. The unit of observation is a firm-year. The dependent variable in all of the regressions is *RISK1*. Independent variables include topic specific *FPU* (firm political uncertainty), *SIZE*, *LEV*, *TANGI*, *TOBIN'S Q*, *SLACK*, *LOSS*, *ZSCORE*, *LnGDPPC*, *UNEMPLOY*, and *INFLATION*. See Appendix for detailed variable descriptions. The baseline specifications are used and we control for industry fixed effects and standard errors are clustered at the firm level. The t-statistic are in parentheses. Data are from 2003 to 2017.

	(1) RISK1	(2) RISK1	(3) RISK1	(4) RISK1	(5) RISK1	(6) RISK1	(7) RISK1	(8) RISK1
EcoRiskM	0.0005***							
	(3.18)							
EnvRiskM		0.0001						
		(0.80)						
TradeRiskM			0.0001					
			(1.41)					
InstRiskM				0.0004**				
				(2.30)				
HealthRiskM					0.0002***			
					(2.69)			
SecureRiskM						0.0003**		
						(2.44)		
TaxRiskM							0.0003**	
							(2.55)	
TechRiskM								0.0004**
								(2.01)
SIZE	-0.0084***	-0.0084***	-0.0084***	-0.0084***	-0.0084***	-0.0084***	-0.0084***	-0.0084***
	(-16.47)	(-16.46)	(-16.46)	(-16.47)	(-16.46)	(-16.46)	(-16.47)	(-16.46)
LEV	-0.0067	-0.0066	-0.0067	-0.0067	-0.0068	-0.0066	-0.0066	-0.0066
	(-1.30)	(-1.28)	(-1.29)	(-1.29)	(-1.32)	(-1.28)	(-1.28)	(-1.27)
TANGI	0.0108**	0.0104**	0.0104**	0.0106**	0.0106**	0.0108**	0.0106**	0.0107**
	(2.18)	(2.09)	(2.10)	(2.14)	(2.13)	(2.17)	(2.13)	(2.15)
TOBIN'S Q	0.0145***	0.0144***	0.0144***	0.0144***	0.0144***	0.0144***	0.0144***	0.0144***
	(13.91)	(13.88)	(13.88)	(13.90)	(13.91)	(13.89)	(13.89)	(13.87)

SLACK	0.0609***	0.0608***	0.0608***	0.0608***	0.0606***	0.0608***	0.0609***	0.0608***
	(10.07)	(10.03)	(10.04)	(10.04)	(10.01)	(10.04)	(10.05)	(10.04)
LOSS	0.0062***	0.0062***	0.0062***	0.0062***	0.0062***	0.0062***	0.0063***	0.0062***
	(3.79)	(3.78)	(3.79)	(3.77)	(3.77)	(3.77)	(3.82)	(3.77)
ZSCORE	-0.0049***	-0.0049***	-0.0049***	-0.0049***	-0.0049***	-0.0049***	-0.0049***	-0.0049***
	(-16.59)	(-16.55)	(-16.54)	(-16.57)	(-16.59)	(-16.56)	(-16.56)	(-16.56)
AGE	0.0014	0.0015	0.0015	0.0014	0.0014	0.0014	0.0014	0.0014
	(1.26)	(1.34)	(1.34)	(1.32)	(1.31)	(1.29)	(1.31)	(1.31)
LnGDPPC	0.0884***	0.0878***	0.0878***	0.0880***	0.0880***	0.0882***	0.0879***	0.0879***
	(11.63)	(11.55)	(11.55)	(11.58)	(11.58)	(11.60)	(11.56)	(11.56)
UNEMPLOY	0.0031***	0.0031***	0.0031***	0.0031***	0.0031***	0.0031***	0.0031***	0.0031***
	(6.45)	(6.59)	(6.61)	(6.54)	(6.51)	(6.57)	(6.50)	(6.55)
INFLATION	0.0060***	0.0059***	0.0059***	0.0059***	0.0059***	0.0060***	0.0059***	0.0059***
	(5.27)	(5.18)	(5.18)	(5.22)	(5.21)	(5.24)	(5.21)	(5.21)
Industry F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	28,849	28,849	28,849	28,849	28,849	28,849	28,849	28,849
Adj. R^2	0.349	0.349	0.349	0.349	0.349	0.349	0.349	0.349

Table 10: Firm-level Political Uncertainty and Risk-Taking: The PSM Sample

This table presents the results for the effects of firm-level political uncertainty on risk taking using the PSM sample. Industry fixed effects and clustering by firm are included in all of the regressions. All of the regressions are performed using *OLS*, with the *t*-statistics (in parentheses) computed using standard errors robust to both clustering at the firm level and heteroscedasticity. All of the variables are winsorized at the 1% level. See Appendix for the control variable definitions. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1)
	RISK1
DPRISK	0.009**
	(2.10)
SIZE	-0.010***
	(-7.71)
LEV	0.012
	(0.82)
TANGI	0.000
	(0.00)
TOBIN'S Q	0.018***
	(9.49)
SLACK	0.070***
	(5.00)
LOSS	0.007
	(1.58)
ZSCORE	-0.006***
	(-8.91)
AGE	0.002
	(0.72)
LnGDPPC	0.104***
	(4.89)
UNEMPLOY	0.003**
	(2.39)
INFLATION	0.007**
	(2.10)
_cons	-1.036***
	(-4.48)
Industry F.E.	Yes
Clustered by Firm	Yes
N	2,820
Adj. R^2	0.411