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Firm-Level Political Risk: Measurement and Effects

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Online Appendix

to
“Firm-Level Political Risk: Measurement and Effects”

by

Tarek A. Hassan, Stephan Hollander, Laurence van Lent, and Ahmed Tahoun

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A Data Appendix

A.1 Earnings conference call transcripts

We start with all conference call transcripts held between 2002 and 2016 from Thomson Reuters' StreetEvents: N = 307,754. In the process, we lose:

- 52,764 transcripts because they are not transcripts of earnings conference calls and/or duplicate transcripts;
- 34,601 transcripts because we could not reliably fuzzy name match them to a company name in Compustat;
- 2,334 transcripts because they are shorter than 50 words

We excluded (modified) the following bigrams from (in) transcripts:

- We modify "Bill" to "bbill" to avoid inflating bill as in "proposed law" with bill as in a person's name;
- We modify "Constitution" to "cconstitution" to avoid inflating "constitution" as in "the United States constitution" with "constitution" as in "a pipeline project";

- We remove "risk officer", "risk credit officer" to avoid the synonym "risk" catching these persons/positions;
- We remove "unknown speaker", "unknown participant", "unknown speaker", "unknown participant", "unknown caller", "unknown operator", and "unknown firm analyst" to avoid the synonym "unknown" catching these persons;
- We remove "in the states".

In addition, we removed 17,750 "safe harbor" snippets from transcripts. Specifically, if in a snippet from the first half of the transcript, either more than 2 words are safe harbor key words (see next) or less than 2 words are safe harbor key words and the word "forwardlooking" is in the snippet, then the snippet is removed. Safe harbor key words used: ['safe', 'harbor', 'forwardlooking', 'forward', 'looking', 'actual', 'statements', 'statement', 'risk', 'risks', 'uncertainty', 'uncertainties', 'future', 'events', 'sec', 'results']. Safe harbor statements use formulaic legal language to remind participants at the beginning of the call that forward looking information disclosed in the call will not be considered fraudulent unless it is made in bad faith or without reasonable basis.

A.2 Other data sources

Lobby and donation data. To obtain data on corporate lobby and donation expenditures, we take advantage of the Lobbying Disclosure Act of 1995, which requires lobbyists and lobbying firms to file their lobbying activities with the Clerk of the House of Representatives and the Secretary of the Senate. We rely on the Center for Responsive Politics (see <http://www.OpenSecrets.org/lobby/>, a nonpartisan not-for-profit research group that obtains these reports and standardizes the names of firms and a breakdown of the lobbying expenditures by issues or topics. Lobbying firms are required to provide a good-faith estimate, rounded to the nearest USD 10,000, of all lobbying-related income from each of their clients, as well as a list of topics on which each client lobbies. The Center assigns the value of zero to all those cases in which the lobby expenditure falls below the disclosure threshold. We then manually match the 80 issues from the disclosure forms to the eight topics our topic-based measure of political risk encompasses; see Appendix Table I for the resulting mapping. To merge the lobbying data with our main data set, we fuzzy name match lobbying organizations with firm names from Compustat. Due to a change in the lobbying disclosure regulation, the data on lobbying is semi-annual prior to 2007 and quarterly thereafter.

Our variables are defined as follows: $\text{Lobby expense}_{i,t}$ is the total lobby expense during quarter t by firm i ; $\text{Donation expense}_{i,t}$ is the sum of all contributions paid to federal candidates in quarter t by firm i ; $\#\text{ of recipients}_{i,t}$ is the total number of recipients of donations made in quarter t by firm i ; and $\text{Hedge}_{i,t}$ is a dummy variable equal to one if donations to Republicans over donations to Democrats are between the 25th and 75th percentile of the sample.

Implied volatility. We obtain implied volatility data from OptionMetrics. For European options, OptionMetrics first calculates the theoretical option price as the midpoint of the best closing bid and offer prices, and then computes the implied volatility by inverting the Black-Scholes formula. For American

options, OptionMetrics obtains implied volatilities by applying a proprietary pricing algorithm based on the Cox-Ross-Rubinstein binomial tree model. We define Implied volatility_{*i,t*} as the end-of-quarter implied volatility from 90-day at-the-money options of firm *i* and quarter *t*. We winsorize the variable at the first and last percentile.

Realized volatility and stock return. We obtain stock information and returns from the Center for Research in Security Prices. We define Realized volatility_{*i,t*} as the standard deviation of 90-day stock holding returns of firm *i* in quarter *t*, winsorized at the first and last percentile. Stock return 7 days prior to earnings call_{*i,t*} is the average stock return of firm *i* for the 7 days prior to its earnings call in quarter *t*.

Investment rate, capital expenditure, sales, employment, and earnings announcement surprise. We obtain data on earnings per share, capital expenditure, property, plant, and equipment, investment, sales, and employment from Compustat. Our measure for capital expenditure, $I_{i,t}/K_{i,t-1}$, is calculated recursively using a perpetual-inventory method. Specifically, we calculate the investment rate as follows: for $t = 2$, $\frac{\text{Capxy}_2}{\text{PPent}_1}$, for $t > 2$, $\frac{\text{capxy}_t}{\text{Recursive } K_{t-1}}$, where the denominator for $t > 2$ is calculated recursively as Recursive $K_{t-1} = \Delta p_K \times \delta \times \text{Recursive } K_{t-2} + \text{Capxy}_{t-1}$, where Capxy is Compustat's out-of-the-box capital expenditure, PPent is Compustat's out-of-the box property, plant, and equipment, and Δp_K is the ratio of this period's to last period's Producer Price Index (obtained from FRED), and δ is depreciation and set at 10%. We winzorize the variable at the first and last percentile. Change in sales, $\Delta \text{sales}_{i,t}/\text{sales}_{i,t-1}$, is the change in quarter-to-quarter sales over last quarter's value, winsorized at the first and last percentile. Employment change, $\Delta \text{emp}_{i,t}/\text{emp}_{i,t-1}$, is the change in year-to-year employment over last year's value, winsorized at the first and last percentile. And Earnings announcement surprise_{*i,t*} is defined as $(\text{EPS}_{i,t} - \text{EPS}_{i,t-4})/\text{price}_{i,t}$, where EPS_{*i,t*} is earnings per share (basic) of firm *i* at time *t*, and price_{*i,t*} is the closing price of quarter *t*.

Capital expenditure guidance. We obtain data on capex guidance from I/B/E/S. Our measure of the change in capital expenditure guidance, $\Delta \text{capexg}_{i,t}/\text{capexg}_{i,t-1}$, is the quarter-to-quarter percentage change of the capital expenditure guidance about the closest (usually current) fiscal year-end. We allow for a quarter gap if no guidance (about the same fiscal year-end) was given in the preceding quarter and winsorize the resulting variable at the first and last percentile.

Government contracts. We retrieve data on government contracts from USAspending.gov, an official government website. We use primary contract awards and take the sum of the net value of all new contracts for a given firm and quarter in which the contract was signed. Using a fuzzy matching algorithm, we match firm names with Compustat firm names. Altogether, 2,944 of the 7,357 unique firms in our dataset receive federal contracts during our sample period. Federal contracts_{*i,t*} is then defined as the net value from all federal contracts (excluding modifications) of firm *i* in quarter *t*.

B Training Libraries

As explained in the paper, in the construction of $PRisk_{i,t}$, we use training libraries of political (\mathbb{P}) and nonpolitical (\mathbb{N}) text, earnings conference call transcripts, and a list of synonyms for “risk,” “risky,” “uncertain,” and “uncertainty” from the Oxford dictionary.

We use the following training libraries: (a) undergraduate textbooks: William T. Bianco and David T. Canon’s *American Politics Today* (\mathbb{P}) and Robert Libby, Patricia A. Libby, and Daniel G. Short’s *Financial Accounting* (\mathbb{N}), (b) newspaper articles, obtained through Factiva, published in the *New York Times*, *USA Today*, the *Wall Street Journal*, and the *Washington Post* on the subject of “domestic politics” (\mathbb{P}) and newspaper articles from the same sources on the subject of “performance,” “ownership changes,” or “corporate actions” (\mathbb{N}) (note: for \mathbb{P} (\mathbb{N}), we took the 100 most recent newspaper articles for a given month (in January, April, July, and October; i.e. the “earnings season” months, in which most U.S. firms announce their quarterly earnings) from 2002-2016), and (c) the Santa Barbara Corpus of Spoken American English (<http://www.linguistics.ucsb.edu/research/santa-barbara-corpus>), as part of (\mathbb{N}), to filter out bigrams that are specific to spoken language (note: we exclude the following episodes containing conversations related to politics: SBC004 (*Raging Bureaucracy*), SBC011 (*This Retirement Bit*), SBC012 (*American Democracy is Dying*), SBC019 (*Doesn’t Work in this Household*), SBC026 (*Hundred Million Dollars*), SBC030 (*Vision*), SBC032 (*Handshakes All Around*), SBC035 (*Hold My Breath*), and SBC038 (*Good Strong Dam*)).

Using a part-of-speech tagger (i.e. the NLTK Perceptron Tagger), we remove all of the following bigrams from the training libraries:

- Of the form “pronoun_pronoun,” where pronoun is for example [hers, herself, him, himself, it, itself, me, myself, etc];
- Of the form “preposition_preposition,” where preposition is for example [among, upon, whether, out, inside, pro, despite, on, by, throughout, below, etc];
- Of the form “adverb_adverb,” where adverb is for example [occasionally, unabatingly, maddeningly, adventurously, professedly, stirringly, etc];
- Of the form “wh-adverb_adverb,” where wh-adverb is for example [how, however, whence, whenever, where, whereby, whereever, wherein, whereof, etc];
- Of the form “preposition_adverb” or “adverb_preposition”;
- Of the form “preposition_wh-adverb” or “wh-adverb_preposition”;
- Of the form “preposition_determiner” or “determiner_preposition,” where determiner is for example [all, an, another, any, both, del, each, either, every, half, many, etc];
- Of the form “adverb_wh-adverb” or “wh-adverb_adverb”;
- Of the form “adverb_determiner” or “determiner_adverb”;

- Of the form “wh-adverb_determiner” or “determiner_wh-adverb”

In that same step, we additionally remove:

- Bigrams that contain “i,” “ive,” “youve,” “weve,” “im,” “youre,” “were,” “id,” “youd,” “wed,” and “thats”;
- “princeton university”

Synonyms

As mentioned in the main text, we removed “questions,” “question,” and “venture” from the list of synonyms.

C Additional Validation: Manual Reading of Transcripts

As an additional validation exercise we manually read excerpts of hundreds of transcripts to verify the information content of $PRisk_{it}$ at various points of its distribution. As in Table III, we selected the 20 transcripts that are at a given percentile of the distribution of $PRisk_{it}$ and read the snippet of text surrounding the bigram with the highest term frequency. We then counted the number of transcripts at that percentile that contain a clear discussion of risks associated with politics within that snippet.

Although we emphasize that our algorithm should be judged in the context of the entire transcript, here we focus only on that one snippet of 20 words within the transcript as an effective way of making it feasible to quickly sample across hundreds of transcripts. For example, using this approach we count 18/20 instead of 19/20 true positives at the 100th percentile (Table 3), as the political content of the discussion in one of the transcripts is not readily discernible from the snippet of text surrounding the highest-scoring bigram.

Appendix Figure VI plots the share of true positives (as judged only by the text surrounding the top-scoring snippet) at each percentile sampled along with the median transcript score at that percentile, while also imposing the cap of the transcript score at the 99th percentile that we use in our regressions. The figure shows a clear positive, near linear, relationship between the share of true positives and the capped transcript score.

D Quantifying Measurement Error

Suppose, for example, that true political risk follows a first-order auto-regressive process, and that $PRisk_{it}$ measures this true political risk with classical (i.i.d.) measurement error. If we could identify a valid instrument for $PRisk_{i,t-1}$ we could then back out the share of its variation consisting of measurement error by comparing the OLS and IV coefficients. Appendix Table XXII shows three such attempts: panel A for the overall variation in $PRisk_{it}$, and panel B for its firm-level component. Column 1 shows the OLS estimates of the autocorrelation in $PRisk_{it}$. In column 2 we instrument $PRisk_{i,t-1}$ using our alternative measure of political risk constructed by applying (1) to 10-K filings. Under the assumption that this alternative $PRisk10K_{it}$ is also an unbiased measure of true political risk, and

that measurement error is uncorrelated between the two measures, the IV estimates shown in column 2 are unbiased. Using this estimate, we calculate that 48.5% (s.e.=1.8%) of the overall variation and 53.8% (s.e.=2.5%) of the firm-level variation in $PRisk_{it}$ consists of measurement error, while the remaining variation reflects true political risk.¹ Columns 3 and 4 repeat the same calculations using the second lags, $PRisk10K_{i,t-2}$ and $PRisk_{i,t-2}$, as instruments, respectively. Across all three specifications, the share of variation accounted for by measurement error is about four percentage points higher in firm-level variation than in the overall variation.

Although we interpret these results with due caution, they suggest that the implied measurement error in the firm-level dimension is not dramatically higher than in the overall variation. Moreover, it is comforting that these shares of measurement errors are very similar to the degree of measurement error found in other firm-level variables measured using accounting data, such as the measures of TFP constructed by Bloom et al. (2018) and Collard-Wexler (2011).

E Firm-level Risk and Total Factor Productivity

To illustrate the effect of firm-level political risk on total factor productivity, consider a simple model in which a unit mass of firms produce output using capital, $Y_{it} = K_{it}^\alpha$, with $\alpha < 1$ and $\int K_{it} di \equiv \bar{K}_t$. Capital investment decisions are made one period in advance subject to adjustment costs. In addition, assume that each firm faces uncertainty about some political decision that affects its profits; and that this uncertainty makes it privately optimal to reduce the level of investment so that $K_{it} = K^* e^{-b(\sigma_t + \sigma_{it})}$, where b is some positive constant and σ_t and σ_{it} are the aggregate and firm-level components of political risk, respectively. Both components are known to the firm, and the dispersion of political risk across firms follows a normal distribution, $\sigma_{it} \sim N(b \frac{\Sigma_t^2}{2}, \Sigma_t)$. For the sake of argument, let us also assume that this political risk is unrelated to economic fundamentals and originates exclusively from failings in the political system itself (e.g., an inability to reach compromise), so that the socially optimal level of investment is $K_{it} = K^*$.

Within this model, the conventional concern is that aggregate political risk depresses \bar{K}_t below its optimal level and that spikes in aggregate political risk may cause business cycles by inducing the average firm to temporarily lower investment. (Taking our results in Table V at face value, we are inclined to add socially wasteful lobbying activities and donations to politicians to this list.)

Solving the model, we can show that in addition to these aforementioned effects, the dispersion in political risk across firms lowers total factor productivity: $Y_t = e^{-\phi \Sigma_t^2} \bar{K}_t^\alpha$, where $\phi = \frac{1}{2} b^2 (1 - \alpha) \alpha > 0$. That is, the mere existence of dispersion of political risk across firms directly lowers aggregate total factor productivity and output, even if we hold constant the aggregate capital stock. In addition, any temporary increase in this dispersion causes a recession by causing total factor productivity to fall.

¹If firms, indeed, disclose only severe and longer-term risks in 10-Ks, it is likely that our instrumentation strategy isolates more persistent elements of the true underlying political risk, so that the estimates of measurement error in Table XXII may be more appropriately interpreted as upper bounds of the true measurement error.

F Case Studies: Three Federal Budget Crises

In the third quarter of 2011 the federal government had reached its debt limit and an imminent default on federal debt was averted only by a last-minute budget deal between President Obama and Congress. As shown in Appendix Figure VII, the use of the bigram “debt ceiling” in conference calls peaks around that time. In December 2012, the expiration of the Bush-era tax cuts and a scheduled reduction in government spending (“sequestration”) threatened to send America hurtling over the “fiscal cliff.” In addition, on December 31, 2012, the debt ceiling was expected to be reached once more. As shown in Appendix Figure VII, the occurrence of the bigrams “fiscal cliff” and “debt ceiling” peaks in q4 2012 to q1 2013. Finally, on October 1, 2013, Congress failed to pass a budget, resulting in a partial government shutdown which lasted for 16 days, before a compromise was reached. Appendix Figure VII shows the use of the bigram “government shutdown” peaks sharply around q4 2013. Notably, the figure further shows each of these episodes is associated with a marked increase in the average across firms in our measure of political risk associated with “economic policy & budget,” $PRisk_{it}^{ep\&b}$.

Appendix Table XXIII probes this apparent effect of the three budget crises on $PRisk_{it}^{ep\&b}$ by examining the cross section of firms. Columns 1-3 in Panel A report that firms that use the bigrams “debt ceiling,” “fiscal cliff,” and “government shutdown” more frequently in their earnings calls held during these respective periods tend to experience a significantly higher increase in $PRisk_{it}^{ep\&b}$ relative to the previous quarter.

Although we have no quasi-experimental variation in the identities of the firms most affected by these episodes, we can show the firms using the three bigrams more frequently tend to rely on the federal government for significantly larger shares of their revenues. Moreover, this approach arguably enables us to isolate variation in political risk induced by the political process itself, namely, the inability of decision makers to arrive at compromises in a timely fashion.

How might firms react to this politically-induced increase in risk associated with the federal budget? Panel B of Appendix Table XXIII reports estimates of a regression of a dummy variable that equals 1 if a firm lobbies on the topic “economic policy & budget” in a given quarter on a full set of time and firm fixed effects, and the number of times a conference call contains any of the three bigrams associated with the three crises. We find one additional mention of one of the three bigrams is associated with a 0.698-percentage-point increase (s.e.=0.299) in the probability that the firm lobbies the federal government on the topic of “economic policy & budget” in the following quarter.²

In column 2, we regress the dummy for lobbying on this specific topic on $PRisk_{it}^{ep\&b}$, returning a positive and significant coefficient (0.183, s.e.=0.084). Finally, in column 3, we use polynomials of the number of mentions of “debt ceiling,” “fiscal cliff,” and “government shutdown” during the three respective periods as instruments for $PRisk_{it}^{ep\&b}$. The result suggests a one-standard-deviation increase in political risk associated with “economic policy & budget” attributable to the three budget crises is associated with a 2.430-percentage-point increase (s.e.=0.937) in the probability that a given firm lobbies on that topic. We cautiously interpret this coefficient as the local average treatment effect of the Obama-presidency budget crises on the probability that firms most concerned with these crises lobby the federal government on the topic of “economic policy & budget” in the subsequent quarter.

²In total, 2,160 firm-quarters show use of one of these bigrams (on average used 1.69 times).

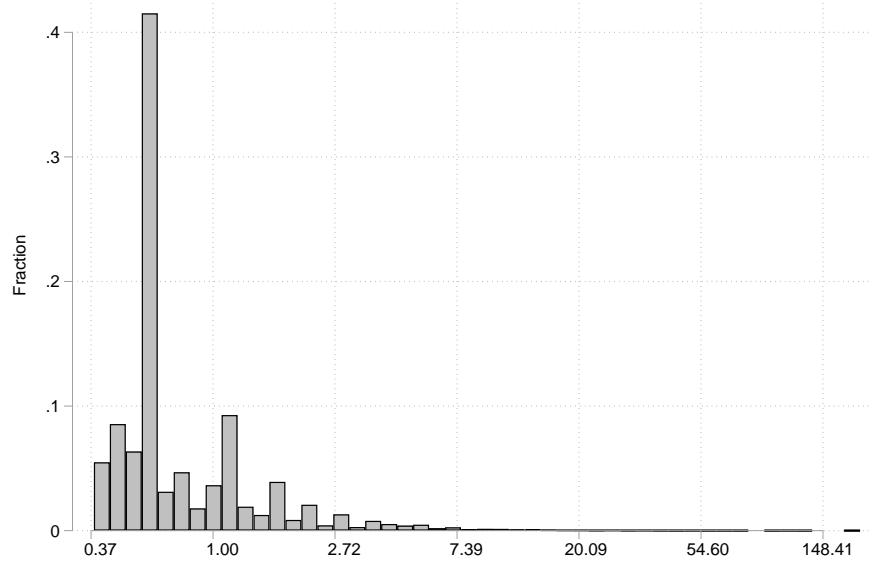
The notable increase in the coefficient between the OLS and IV specifications (by a factor of 14) is consistent with the view that political risks attributable to the political process itself may be more amenable to influencing by lobbying than political risks resulting from some external force. Alternatively, the increase may also be explained by the presence of substantial measurement error or some other force contributing to endogenous selection.

References

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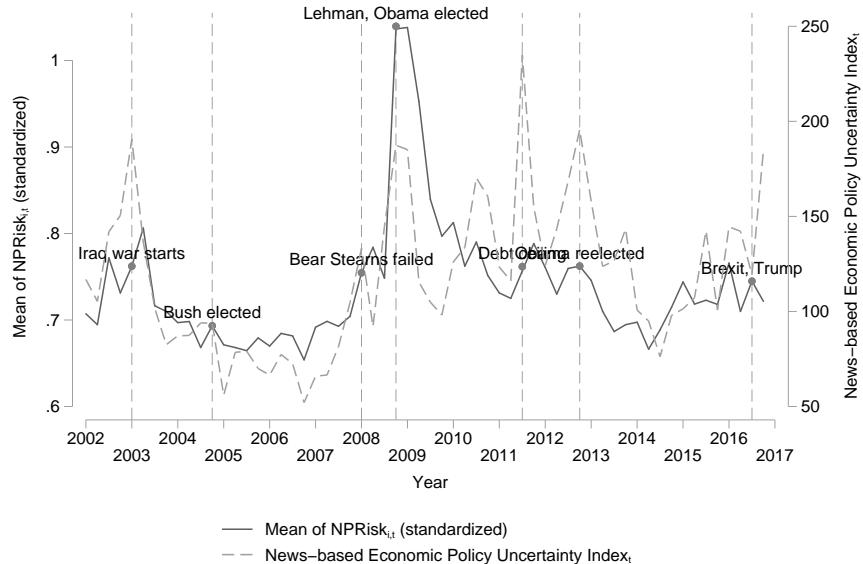
G Additional Figures and Tables

Appendix Figure I: Term frequency of political bigrams ($\mathbb{P} \setminus \mathbb{N}$) in earnings call transcripts



Notes: This figure plots a histogram of the log of bigram scores $(f_{b,\mathbb{P}}/B_{\mathbb{P}}) \times 10^5$. The number of bigrams is 69,818. The mean, median, standard deviation, min, and max of $(f_{b,\mathbb{P}}/B_{\mathbb{P}}) \times 10^5$ are 1.048, 0.586, 2.128, 0.376, 201.15, respectively.

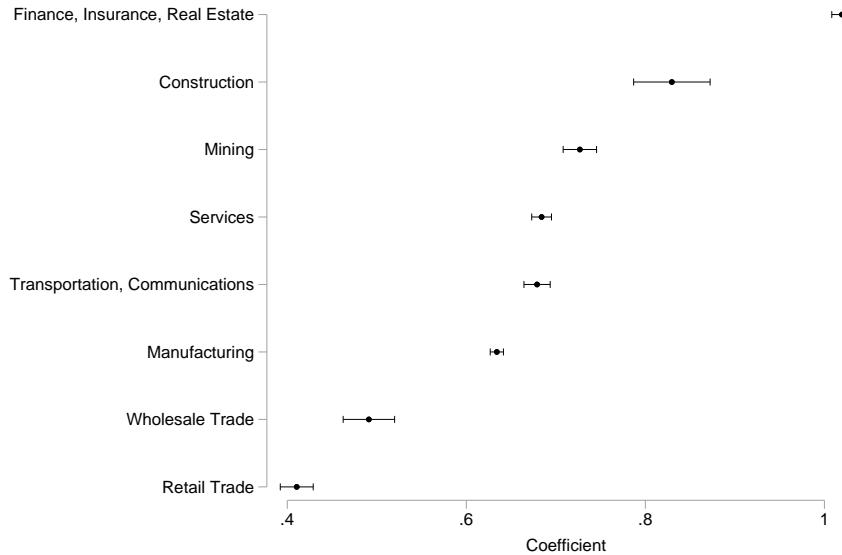
Appendix Figure II: Time-series of non-political risk ($NPRisk_{i,t}$)



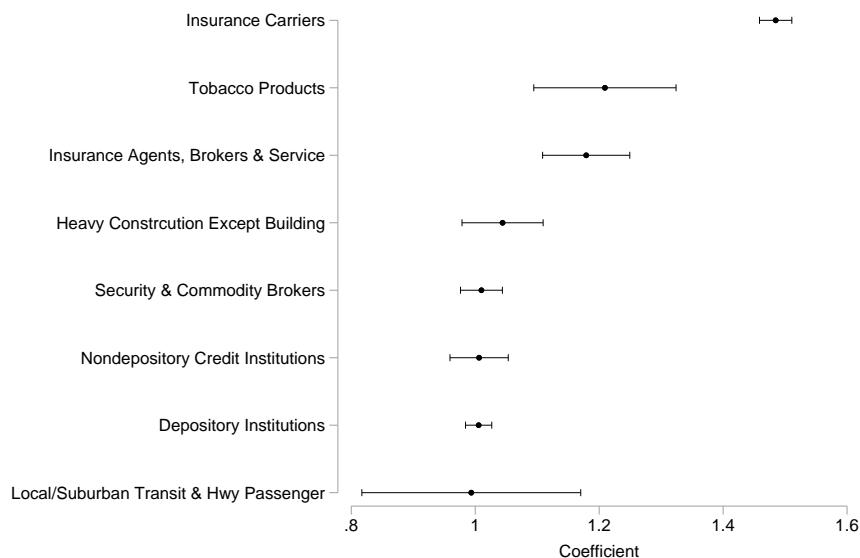
Notes: This figure shows the mean of $NPRisk_{i,t}$ (standardized by its standard deviation in the time series) across firms in each quarter together with the news-based Economic Policy Uncertainty (EPU) Index developed by Baker, Bloom, and Davis (2016). The Pearson correlation between the two series is 0.538 with a p-value of 0.000. The Pearson correlation between the mean of $NPRisk_{i,t}$ and the Chicago Board Options Exchange Volatility Index (CBOE VIX) is 0.846 with a p-value of 0.000.

Appendix Figure III: Mean of $PRisk_{i,t}$ across sectors

Panel A: 1-digit SIC sectors with highest mean of $PRisk_{i,t}$



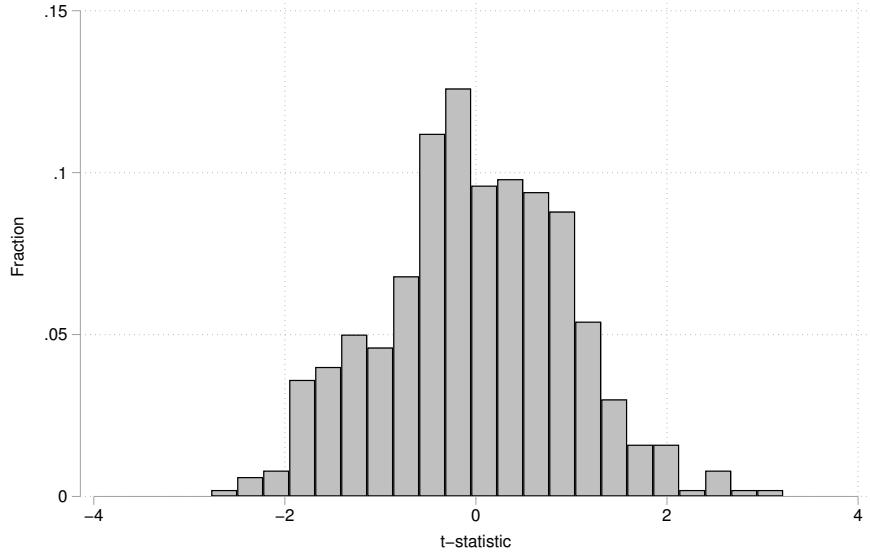
Panel B: 2-digit SIC sectors with highest mean of $PRisk_{i,t}$



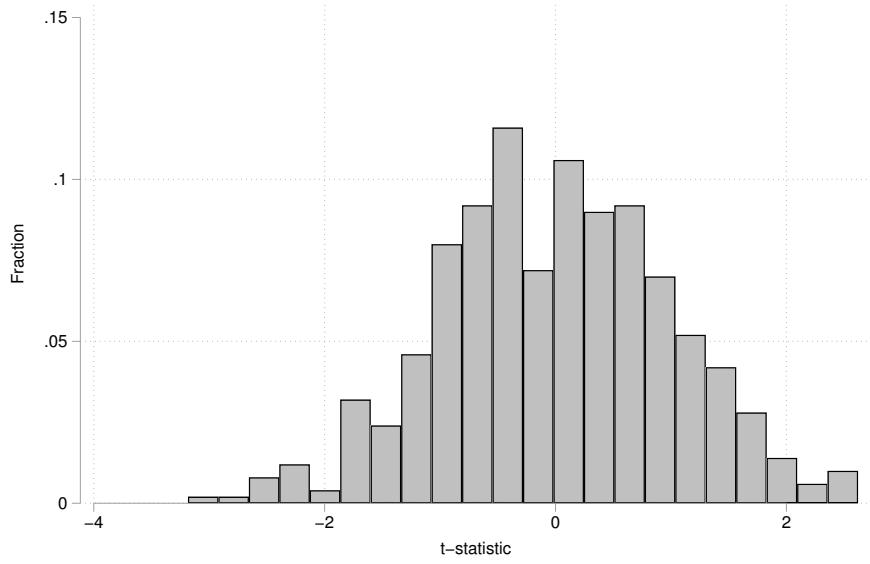
Notes: This figure plots the coefficients and 95% confidence intervals from a projection of $PRisk_{i,t}$ (standardized) on a complete set of sector dummies without a constant. In Panel A, we use a dummy for each 1-digit SIC division; in Panel B, we use a dummy for each 2-digit SIC sector. In both panels we plot the top 8 coefficients. $PRisk_{i,t}$ is standardized by its standard deviation.

Appendix Figure IV: Distribution of t-statistics from placebo regressions

Panel A: Firm-quarter unit of analysis

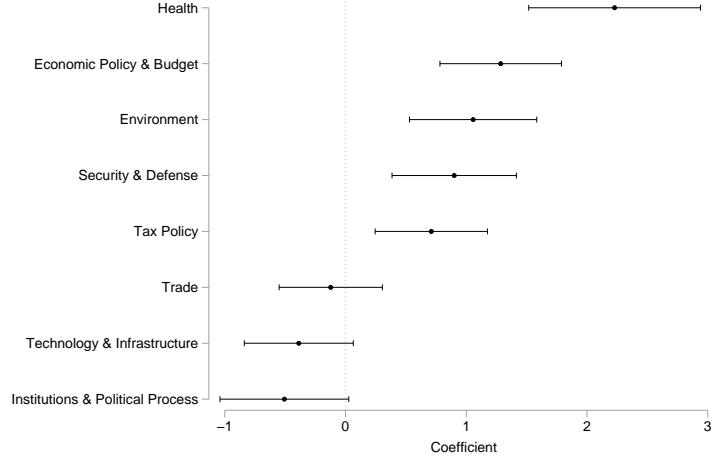


Panel B: Firm-topic-quarter unit of analysis



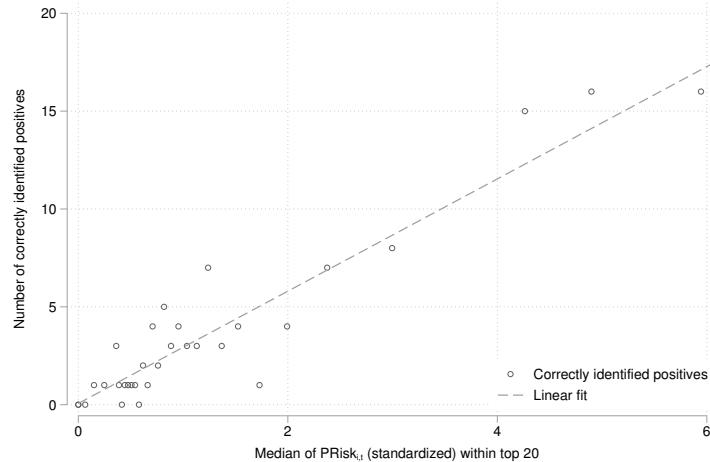
Notes: Panel A plots a histogram of the t-statistics from 500 regressions of realized volatility_{i,t} (standardized) on PRisk_{i,t} (as in column 4 of Table IV) where the time series of PRisk_{i,t} belonging to a given firm has been randomly assigned (with replacement). Standard errors are clustered at the firm level. The number of false positives and negatives at the two-sided 95% confidence interval is 2.6 and 1.60 percent, respectively. Panel B plots a histogram of the t-statistics from 500 regressions of $\mathbb{1}[\text{lobbying}_{i,t+1}^T > 0] * 100$ on PRisk_{i,t}^T (as in column 3 of Table X) where the time series of PRisk_{i,t}^T belonging to a given firm-topic unit has been randomly assigned (with replacement). Standard errors are clustered at the firm level. The number of false positives and negatives at the two-sided 95% confidence interval is 2 and 2.60 percent, respectively.

Appendix Figure V: Elasticity of lobbying with respect to topic-specific political risk



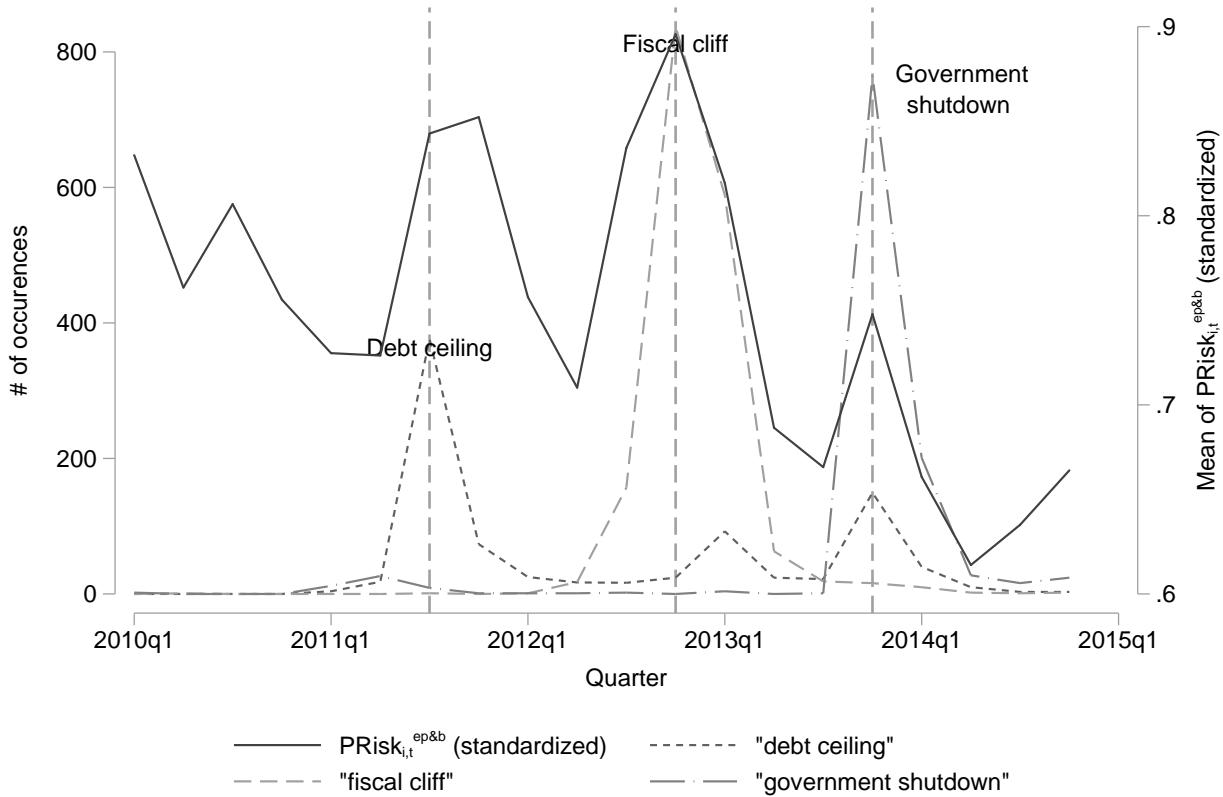
Notes: This figure plots the coefficients and their 95% confidence intervals of $\text{topic}^T \times PRisk_{i,t}^T$ for $T = \{1, \dots, 8\}$ from a regression of $1[\text{lobbying}_{i,t+1}^T > 0] * 100$ on $\text{topic}^T \times PRisk_{i,t}^T$ (standardized) for $T = \{1, \dots, 8\}$, firm, topic, time fixed effects, and log of firm assets. topic^T is a set of dummy variables for each given topic. $PRisk_{i,t}^T$ is standardized by its standard deviation. Standard errors are double clustered at the firm and topic level.

Appendix Figure VI: Distribution of correctly identified positives over median scores



Notes: This figure shows the results of an additional validation exercise where we manually read excerpts of hundreds of transcripts to verify the information content of $PRisk_{it}$ at various points of its distribution. As in Table III, we selected the 20 transcripts that are at a given percentile of the distribution of $PRisk_{it}$ and read *only* the snippet of text surrounding the bigram with the highest term frequency. The figure plots the number (out of 20) of true positives (identified only based on the top snippet) pertaining to political risk (vertical axis) over the median of $PRisk_{i,t}$ within different percentiles of $PRisk_{i,t}$ (horizontal axis). The median score of $PRisk_{i,t}$ for the 100th and 99.5th percentile is capped at the 99th percentile (6.084).

Appendix Figure VII: Case studies: Debt ceiling, fiscal cliff, and government shutdown



Notes: This figure plots the total number of occurrences of the terms “debt ceiling,” “fiscal cliff,” and “government shutdown” across all transcripts within a given quarter together with the average across firms of our measure of political risk associated with the topic “economic policy & budget,” $PRisk_{i,t}^{ep\&b}$. $PRisk_{i,t}^{ep\&b}$ is standardized by its standard deviation in the panel.

Appendix Table I: Mapping of political topics to Center for Responsive Politics (CRP) lobbying issues

Political topic	Lobbying issues
Economic Policy & Budget	Accounting; Advertising; Apparel, Clothing, & Textiles; Arts & Entertainment; Automotive Industry; Aviation, Airlines & Airports; Banking; Bankruptcy; Beverage Industry; Chemical Industry; Consumer Product Safety; Copyright, Patent & Trademark; District of Columbia; Economics & Economic Development; Federal Budget & Appropriations; Finance; Food Industry; Gaming, Gambling & Casinos; Manufacturing, Insurance; Labor, Antitrust & Workplace; Marine, Boats & Fisheries; Media Information & Publishing; Minting/Money/Gold Standard; Radio & TV Broadcasting; Railroads; Roads & Highways; Small Business; Telecommunications; Tobacco; Transportation; Travel & Tourism; Trucking & Shipping; Unemployment
Environment	Agriculture; Animals; Clean Air & Water; Environment & Superfund; Fuel, Gas & Oil; Hazardous & Solid Waste; Natural Resources; Real Estate & Land Use; Utilities
Trade	Commodities; Foreign Relations; Postal; Tariffs; Trade
Institutions & Political Process	Government Issues; Torts
Health	Health Issues; Medicare & Medicaid; Medical Research & Clinical Labs; Pharmacy
Security & Defense	Defense; Disaster & Emergency Planning; Homeland Security; Intelligence; Veterans Affairs
Tax Policy	Taxes
Technology & Infrastructure	Aerospace; Computers & Information Technology; Science & Technology

Notes: This table shows our manual mapping between our eight political topics (left column) and lobbying issues as given in the lobbying data from the Center for Responsive Politics (CRP) (right column). Note that the lobbying issues in the CRP lobbying data are the same as in the original Senate's Office of Public Records (SOPR) data.

Appendix Table II: Top 100 positive and negative sentiment words in $PSentiment_{i,t}$

word	frequency	word	frequency	word	frequency	word	frequency
good	2,641,408	exciting	125,149	loss	467,845	negatively	58,012
strong	1,722,126	achieving	124,735	decline	429,914	unemployment	56,743
great	1,062,140	enable	120,768	difficult	389,060	worse	56,076
better	1,044,778	successfully	116,105	against	317,498	lag	55,132
opportunities	943,258	efficiencies	110,269	negative	310,768	wrong	55,089
able	828,658	easy	102,912	restructuring	268,455	bridge	54,903
positive	801,637	strengthen	98,139	challenges	251,140	delayed	54,439
progress	767,047	enhanced	88,684	force	214,267	severe	53,619
opportunity	761,564	encouraging	80,381	late	208,239	dropped	51,672
best	586,648	strengthening	79,861	closing	201,021	volatile	50,101
improvement	578,902	innovative	78,270	declined	190,489	lose	49,996
benefit	545,925	stability	74,459	losses	186,988	disclosed	49,461
improve	491,591	excellence	72,222	critical	176,951	shut	48,688
pleased	472,508	satisfaction	70,475	challenging	172,838	complicated	46,154
improved	399,832	pleasure	69,950	weak	147,742	breakdown	45,190
improving	393,062	winning	69,761	closed	141,847	slowing	44,031
success	372,656	superior	68,689	problem	141,206	serious	43,591
effective	337,530	gaining	68,179	claims	140,602	difficulties	42,743
profitability	326,058	perfect	66,669	break	126,092	disclose	42,695
successful	305,358	easier	65,672	slow	121,636	losing	41,206
greater	304,344	alliance	60,327	recall	119,959	slowed	40,555
stronger	301,302	collaboration	60,090	challenge	118,675	stress	40,184
strength	299,641	enabled	59,525	delay	114,017	caution	39,621
advantage	281,246	advantages	54,330	concerned	113,522	disruption	39,382
leadership	273,733	exceptional	53,971	bad	113,416	discontinued	38,879
achieve	259,392	stabilize	51,977	cut	109,198	failure	38,639
despite	250,814	gained	51,765	concern	108,700	challenged	37,776
confident	246,215	strongest	49,524	problems	108,547	downward	37,597
improvements	244,112	accomplished	48,676	litigation	105,754	poor	36,464
achieved	241,412	enhancing	47,817	weakness	103,443	deficit	34,792
excited	236,622	enables	47,758	volatility	103,236	suspect	34,719
favorable	229,367	valuable	47,491	difficulty	99,148	slowly	33,622
stable	226,222	impressive	46,205	lost	98,587	nonperforming	33,240
leading	220,624	progressing	45,966	crisis	97,581	unfavorable	33,165
efficiency	219,873	strengthened	44,440	concerns	93,580	deterioration	30,689
gain	215,827	enjoy	43,041	declines	91,712	opportunistic	30,593
happy	212,745	positively	42,027	weaker	89,910	termination	29,859
optimistic	184,364	efficiently	41,960	delays	87,772	miss	29,821
gains	182,624	exclusive	41,163	impairment	83,706	investigation	29,702
profitable	168,303	achievement	41,120	opposed	81,317	breaking	29,454
innovation	163,060	strengths	41,004	recession	75,221	shortage	29,249
excellent	161,468	enabling	39,380	slowdown	74,771	attrition	28,658
encouraged	153,800	easily	38,297	downturn	74,492	damage	28,519
attractive	151,848	stabilized	38,076	slower	68,496	chargeoffs	28,456
win	147,404	satisfied	37,099	closure	67,907	worst	28,432
efficient	146,568	accomplish	36,791	lack	67,044	drag	28,308
benefited	132,346	benefiting	36,606	unfortunately	65,115	hurt	27,999
highest	131,666	accomplishments	36,427	missed	64,440	disappointed	27,415
tremendous	130,119	transparency	35,139	declining	62,109	bankruptcy	26,730
enhance	126,034	diligently	33,363	adverse	58,552	shutdown	26,657

Total sentiment words found: 40,207,559

This table shows the frequency across all transcripts of all positive and negative sentiment words from Loughran and McDonald (2011), excluding “question,” “questions,” and “ill” that appear within 10 words of a political but not non-political bigram.

Appendix Table III: All synonyms of “risk,” “risky,” “uncertain,” and “uncertainty” found when measuring $PRisk_{i,t}$

word	frequency	word	frequency	word	frequency
risk	413,925	jeopardize	1,821	riskiness	135
risks	106,858	unsettled	1,664	treacherous	130
uncertainty	91,775	unpredictability	1,563	oscillating	112
variable	68,138	dilemma	1,547	perilous	92
chance	60,863	skepticism	1,502	tentativeness	85
possibility	57,599	hesitancy	1,491	unreliability	72
pending	53,318	riskier	1,352	wariness	70
uncertainties	51,092	unresolved	1,214	vagueness	59
uncertain	39,191	unsure	1,151	dodgy	58
doubt	39,022	irregular	1,123	equivocation	55
prospect	30,926	jeopardy	1,077	indecisive	43
bet	21,279	suspicion	1,027	chancy	40
variability	21,215	risking	863	menace	38
exposed	19,553	peril	660	qualm	35
likelihood	19,280	hesitating	628	vacillating	33
threat	19,021	risked	577	gnarly	32
probability	15,791	unreliable	550	disquiet	30
unknown	12,050	unsafe	486	ambivalence	30
varying	9,442	hazy	472	imperil	28
unclear	9,036	apprehension	466	vacillation	22
unpredictable	8,467	unforeseeable	466	incalculable	17
speculative	8,132	halting	453	untrustworthy	17
fear	7,939	wager	446	equivocating	15
reservation	7,026	torn	437	diffident	15
hesitant	6,275	precarious	362	fickleness	11
gamble	6,065	undetermined	349	misgiving	11
risky	5,227	insecurity	348	changeability	11
instability	4,762	debatable	346	undependable	9
doubtful	4,736	undecided	341	incertitude	8
hazard	4,626	dicey	330	fitful	8
tricky	4,359	indecision	324	parlous	8
sticky	4,325	wavering	266	unconfident	6
dangerous	4,297	iffy	235	defenseless	5
tentative	4,018	faltering	212	unsureness	3
hazardous	3,155	endanger	205	fluctuant	3
queries	2,676	quandary	204	niggle	3
danger	2,465	insecure	189	diffidence	3
fluctuating	2,462	changeable	189	precariousness	1
unstable	2,440	riskiest	183	doubtfulness	1
vague	2,427	hairy	177		
erratic	1,876	ambivalent	169		
query	1,826	dubious	158		

Total synonyms found: 1,287,932

This table shows the frequency across all transcripts of all single-word synonyms of “risk,” “risky,” “uncertain,” and “uncertainty” as given in the Oxford Dictionary (excluding “question,” “questions,” and “venture”) that appear within 10 words of a political but not non-political bigram.

Appendix Table IV: Event studies: Brexit and Trump's tweeting

	$\Delta PRisk_{i,t}$ (standardized)	
	(1)	(2)
# of 'brexit'	0.028*** (0.006)	
# of 'trump' and ('twitter' or 'tweet')		0.140*** (0.038)
# of firms with regressor > 0	954	5
Sample period	2016q3	2016q4
R^2	0.009	0.001
N	3,573	3,527

Notes: This table shows regressions of $\Delta PRisk_{i,t}$ (the difference of a firm's $PRisk_{it}$ to the previous quarter) on word counts of 'brexit' (column 1) and word counts of 'trump' together with 'twitter' or 'tweet' (column 2). The regression samples are restricted to 2016-q3 (column 1) and 2016-q4 (column 2). The average number of mentions (for firms with at least one mention) is 6.15 ('brexit') and 6.4 ('trump' and 'twitter,' or 'trump' and 'tweet'). Multiplying these numbers with the coefficients above yields the average increases cited in the text: $6.15 \times 0.029 = 0.178$ and $6.40 \times 0.197 = 0.1260$, respectively. Standard errors are robust. ***, **, and * denote statistical significance at the 1, 5, and 10% level, respectively.

Appendix Table V: Standard errors: Firm-quarter specifications

	Realized volatility $_{i,t}$ (standardized)			
	(1)	(2)	(3)	(4)
$PRisk_{i,t}$ (standardized)	0.020*** (0.002)	0.020*** (0.007)	0.020*** (0.002)	0.020*** (0.004)
Standard error	robust	clustered by sector	clustered by quarter	clustered by firm
Time FE	yes	yes	yes	yes
Sector FE	yes	yes	yes	yes
R^2	0.438	0.438	0.438	0.438
N	162,153	162,153	162,153	162,153

Notes: $PRisk_{i,t}$ is standardized by its standard deviation. All specifications include log of firm assets as a control. Standard errors are robust in column 1, clustered at the SIC-2 level in column 2, clustered by year-quarter in column 3, and clustered at the firm level in column 4. ***, **, and * denote statistical significance at the 1, 5, and 10% level, respectively.

Appendix Table VI: Annualized PRisk_{i,t} and PRisk10K_{i,t}

PANEL A	Realized volatility _{i,t} (standardized)		Implied volatility _{i,t} (standardized)	
	(1)	(2)	(3)	(4)
PRisk _{i,t} (standardized)	0.025*** (0.006)		0.038*** (0.008)	
PRisk10K _{i,t} (standardized)		0.012* (0.006)		0.020** (0.008)
N	44,039	36,871	31,307	26,627
PANEL B	$\frac{I_{i,t}}{K_{i,t-1}} * 100$		$\frac{\Delta \text{emp}_{i,t}}{\text{emp}_{i,t-1}} * 100$	
	(1)	(2)	(3)	(4)
PRisk _{i,t} (standardized)	-0.792*** (0.216)		-0.769*** (0.155)	
PRisk10K _{i,t} (standardized)		-0.321 (0.250)		0.000 (0.189)
N	42,958	33,535	45,930	36,715
PANEL C	Log(1+\$ lobby _{i,t})		Log(1+\$ donations _{i,t})	
	(1)	(2)	(3)	(4)
PRisk _{i,t} (standardized)	0.286*** (0.037)		0.135*** (0.027)	
PRisk10K _{i,t} (standardized)		0.291*** (0.053)		0.212*** (0.042)
N	48,679	38,038	48,679	38,038
PANEL D	# of recipients _{i,t}		Hedge _{i,t}	
	(1)	(2)	(3)	(4)
PRisk _{i,t} (standardized)	0.617*** (0.144)		0.010*** (0.002)	
PRisk10K _{i,t} (standardized)		1.028*** (0.211)		0.013*** (0.002)
N	48,679	38,038	48,679	38,038

Notes: This table shows regressions at the firm-year level. PRisk_{i,t} is our standard measure of political risk aggregated to the annual frequency; PRisk10K_{i,t} is calculated as PRisk_{i,t} but based on the MD&A section of the company's (annual) 10-K report. All other variables are defined as in the preceding tables. Each regression specification controls for the log of firm assets, as well as time and sector fixed effects. Standard errors are clustered at the firm level. ***, **, and * denote statistical significance at the 1, 5, and 10% level, respectively.

Appendix Table VII: Transcript excerpts with highest $PSentiment_{i,t}$

Firm name	Call date	$PSentiment_{i,t}$ (standardized)	Discussion of political news associated with:	Text surrounding bigram with high weight ($f_{b,\mathbb{P}}/B_{\mathbb{P}}$)
Central Public Service	11-May-2006	20.934	<ul style="list-style-type: none"> - Firm lobbying and applying for various favorable regulatory changes on electricity rates, etc. 	(strength) to choose the (best) options for the company and the states future energy supply all of these goals are interdependent and impacted by the change in (leadership) with a (greater) proportion of government business in these regions trading in resort locations was (stronger)
InterContinental Hotels Group PLC	08-May-2013	14.689	<ul style="list-style-type: none"> - Dip in China business due to tightened government spending in particular areas expected to be temporary. 	continue the establishment of nationwide centralized mess to drive management reform and (enhance) (efficiency) third (improve) cost control to (enhance) cost structure
China Telecom Corp Ltd	19-Aug-2015	14.034	<ul style="list-style-type: none"> - Company expects to benefit from national macro policy of Made-in-China 2025 and Internet+. 	with one set of rules and standards for all of the states that we do business would probably be a (positive) as the pharmacy (benefit) can certainly help the state most of the states are under significant budget pressures and they are looking for
Mercury General	3-Aug-2009	13.820	<ul style="list-style-type: none"> - Anticipated benefits from proposed legislation for harmonized national insurance regulation. - Confident about prospects of securing additional government contracts, federal drug benefit program likely to also have positive effects. 	create new growth drivers to deploy premium network and (strengthen) support for frontline and customer services to (strengthen) (innovation) in systems and growth by making key adjustments to our business to (better) address the evolving hawaii solar market we made key additions to our
Catalyst Health Solutions, Inc.	29-Jul-2004	13.319		pureplay utility our regulatory efforts continue to play out across the states and were very (encouraged) by the (opportunities) we see in pretty (good) as well and there was some talk by the legislature of passing some initiatives to help the race-tracks out without
China Unicom Hong Kong Ltd	17-Aug-2016	12.045		ensure that the deal is in their (best) interest and the states (best) interest and we are (confident) that the public service
Real Goods Solar Inc	23-Aug-2016	11.867	False positive	number three we are (able) to offer a high amount of government subsidy to be applied in the first half zhongyin financing (success) in building businesses managing contracts and a robust rolex of government contracts were (confident)
NiSource Inc	03-Aug-2015	11.847	<ul style="list-style-type: none"> - Improved opportunities from regulatory efforts in various states, including Indiana and Washington. 	he will be (able) to (improve) the
Dover Downs Gaming and Entertainment, Inc.	27-Oct-2005	11.816	<ul style="list-style-type: none"> - Expect favorable regulatory decision to expand gambling operations, favorable legislation on race tracks. 	
Central Public Service Corp	09-Nov-2011	11.661	<ul style="list-style-type: none"> - Improved public support for merger in Vermont Public Service Board, approval from DOJ and FTC for merger. 	
Yanzhou Coal Mining Co Ltd	31-Aug-2015	11.595	<ul style="list-style-type: none"> - Secured government subsidy, favorable effect of new import restrictions, positive government actions to combat illegal mining. - Recruitment of executive with extensive government contacts. 	
Global Options	14-May-2008	11.346		

Notes: This table lists the top 12 transcripts sorted on $PSentiment_{i,t}$ together with their associated firm name, earnings call date, $PSentiment_{i,t}$ (standardized), a summary of relevant discussions of political news in the transcript, and the text surrounding one of top three bigrams that have received the highest weight in the transcript. Bigrams for which $b \in \mathbb{P} \setminus \mathbb{N}$ are marked bold; the bigram for which the weight is used is precisely in the middle of the text excerpt. $PSentiment_{i,t}$ is standardized by its standard deviation, but not capped because all transcripts shown are in the 99th percentile. Duplicate firms are removed from this top list.

Appendix Table VIII: Transcript excerpts with lowest $P\text{Sentiment}_{i,t}$

Firm name	Call date	$P\text{Sentiment}_{i,t}$ (standardized)	Discussion of political news associated with:	Text surrounding bigram with high weight ($f_{b,\mathbb{P}}/B_{\mathbb{P}}$)
ARCTIC GLACIER IN-COME FD	12-May-2009	-15.914	- Antitrust action against US packaged ice industry.	production of documents to the doj ((antitrust)) division and to the states attorneys general and is in the process of providing the
Gabriel Resources Ltd.	7-May-2008	-15.078	- Romanian government delays environmental impact assessment, obstructs.	year later we are being quite candid on these instances of government ((inaction)) as they are symptoms of the concerns) held more
Arbitron Inc.	21-Oct-2008	-14.692	- Firm under investigation for insider trading, false advertising, and deceptive business practices.	middlesex county ((alleging)) ((Violations)) of new jersey consumer ((fraud)) and civil rights laws in each case relating to the marketing and commercialization
Omega HealthCare Investors, Inc.	5-Nov-2008	-14.001	- Negative impact of state fiscal situation on Medicaid rates.	state medicaid rates as you know many states are projecting budget ((deficits)) the most significant projected ((deficits)) where omega owns facilities are
Polaris Materials Corp	22-Mar-2012	-13.931	- Government program for surface transportation not authorized.	to the general (improvements) in california where ((serious)) ((concerns)) over the states ability to handle its debt appeared to be ((easing)) ((unfortunately))
Natural Gas Services Group Inc	10-May-2012	-13.715	- Regulatory action regarding ground water contamination from fracking.	after the epa ((dropped)) their case the railroad commission ((accused)) the epa of quote — FEAR — mongering gross ((negligence)) and ((severe)) ((mishandling)) un-
Vector Group Ltd	24-Feb-2012	-13.632	- FDA action against tobacco industry, regulators not taking action on competitors' tax evasion.	quote to date have not been (successful) and the florida supreme court has ((declined)) to review ((verdicts)) ((against)) the tobacco industry ((defendants)) while
Empresas ICA SAB de CV	30-Mar-2016	-13.554	False positive.	of operating concessions and our subsidiary for airport operation onto the civil construction business is where our biggest ((challenge)) lies civil construction
Radcom Ltd.	19-Jul-2004	-13.154	False positive.	of our expectation due to ((poor)) sales in north america the states and canada are ((critical)) markets for us and we must
COMFORCE CORP	23-Mar-2010	-12.582	- Negative expected effects of state unemployment funds.	high ((unemployment)) tax rates for a while because many of the states funds are ((depleted)) and until they get restored the states
Assured Guaranty Ltd	06-Nov-2015	-12.270	- Concerns about Puerto Rico bankruptcy proceedings.	((claims)) the only viable solution is for the us congress to permit a wholesale ((abrogation)) of contracts many of which are
Symmetricon	27-Apr-2006	-12.260	- Negative financial consequences of delay in government orders, costs associated with complying to EU regulations.	of the quarter while we were ((disappointed)) in the ((delay)) of government orders in the timing test and measurement division which reduced

Notes: This table lists the bottom 12 transcripts sorted on $P\text{Sentiment}_{i,t}$ together with their associated firm name, earnings call date, $P\text{Sentiment}_{i,t}$ (standardized), a summary of relevant discussions of political news in the transcript, and the text surrounding one of bottom three bigrams that have received the highest weight in the transcript. Bigrams for which $b \in \mathbb{P} \setminus \mathbb{N}$ are marked bold; the bigram for which the weight is used is precisely in the middle of the text excerpt. $P\text{Sentiment}_{i,t}$ is standardized by its standard deviation, but not capped because all transcripts shown are in the 1st percentile. Duplicate firms are removed from this top list.

Appendix Table IX: Validation of $PSentiment_{i,t}$

PANEL A	Average return 7 days prior $_{i,t}$ (%)			
	(1)	(2)	(3)	(4)
PSentiment $_{i,t}$ (standardized)	0.033*** (0.005)	0.027*** (0.005)		-0.010 (0.006)
Sentiment $_{i,t}$ (standardized)			0.058*** (0.005)	0.065*** (0.006)
NPSentiment $_{i,t}$ (standardized)		0.019*** (0.005)		
R^2	0.046	0.046	0.047	0.047
N	148,202	148,202	148,202	148,202

PANEL B	Average return 30 days prior $_{i,t}$ (%)			
	(1)	(2)	(3)	(4)
PSentiment $_{i,t}$ (standardized)	0.029*** (0.002)	0.024*** (0.002)		-0.003 (0.003)
Sentiment $_{i,t}$ (standardized)			0.046*** (0.002)	0.048*** (0.003)
NPSentiment $_{i,t}$ (standardized)		0.017*** (0.002)		
R^2	0.182	0.182	0.183	0.183
N	148,304	148,304	148,304	148,304

Notes: Stock return X days prior $_{i,t}$ is the average stock return for the 7 days (Panel A) or 30 days (Panel B) prior to the earnings call at date t . In all regressions, $Sentiment_{i,t}$ and $PSentiment_{i,t}$ are standardized by their standard deviation. All specifications control for the log of firm assets, sector, and time fixed effects. Standard errors are clustered at the firm level. ***, **, and * denote statistical significance at the 1, 5, and 10% level, respectively.

Appendix Table X: Interactions with $Sentiment_{i,t}$

PANEL A	$\frac{I_{i,t}}{K_{i,t-1}} * 100$			$\frac{\Delta emp_{i,t}}{emp_{i,t-1}} * 100$		
	(1)	(2)	(3)	(4)	(5)	(6)
PRisk _{i,t} (std.)	-0.150*** (0.042)	-0.121*** (0.041)	-0.154*** (0.046)	-0.717*** (0.158)	-0.585*** (0.158)	-0.617*** (0.163)
PSentiment _{i,t} (std.)	0.221*** (0.044)			1.226*** (0.159)		
PRisk _{i,t} (std.) \times PSentiment _{i,t} (std.)	-0.024 (0.026)			-0.165 (0.106)		
Sentiment _{i,t} (std.)		0.454*** (0.048)			2.259*** (0.161)	
PRisk _{i,t} (std.) \times Sentiment _{i,t} (std.)		-0.003 (0.036)			-0.175 (0.122)	
Av stock return 7 days prior _{i,t}			2.683 (2.241)			30.460* (16.690)
PRisk _{i,t} (std.) \times Av stock return 7 days prior _{i,t}			-0.679 (1.876)			2.501 (11.850)
R ²	0.035	0.036	0.037	0.026	0.029	0.025
N	119,853	119,853	100,951	45,930	45,930	41,431
PANEL B	Log(+\$ lobby _{i,t+1})			Log(+\$ donations _{i,t+1})		
	(1)	(2)	(3)	(4)	(5)	(6)
PRisk _{i,t} (std.)	0.196*** (0.027)	0.205*** (0.027)	0.215*** (0.031)	0.095*** (0.018)	0.103*** (0.018)	0.099*** (0.020)
PSentiment _{i,t} (std.)	0.207*** (0.032)			0.117*** (0.022)		
PRisk _{i,t} (std.) \times PSentiment _{i,t} (std.)	-0.015 (0.016)			0.003 (0.010)		
Sentiment _{i,t} (std.)		0.202*** (0.037)			0.115*** (0.026)	
PRisk _{i,t} (std.) \times Sentiment _{i,t} (std.)		0.005 (0.022)			0.024 (0.015)	
Av stock return 7 days prior _{i,t}			2.682*** (0.727)			1.170*** (0.402)
PRisk _{i,t} (std.) \times Av stock return 7 days prior _{i,t}			0.887 (0.643)			-0.018 (0.376)
R ²	0.269	0.269	0.290	0.251	0.251	0.281
N	147,228	147,228	122,170	176,173	176,173	148,202
PANEL C	# of recipients _{i,t+1}			Hedge _{i,t+1}		
	(1)	(2)	(3)	(4)	(5)	(6)
PRisk _{i,t} (std.)	0.496*** (0.124)	0.542*** (0.132)	0.508*** (0.136)	0.007*** (0.001)	0.008*** (0.001)	0.008*** (0.001)
PSentiment _{i,t} (std.)	0.468*** (0.098)			0.008*** (0.001)		
PRisk _{i,t} (std.) \times PSentiment _{i,t} (std.)	0.023 (0.047)			0.001 (0.001)		
Sentiment _{i,t} (std.)		0.537*** (0.131)			0.007*** (0.002)	
PRisk _{i,t} (std.) \times Sentiment _{i,t} (std.)		0.124* (0.074)			0.002* (0.001)	
Av stock return 7 days prior _{i,t}			3.038** (1.285)			0.059** (0.027)
PRisk _{i,t} (std.) \times Av stock return 7 days prior _{i,t}			-0.696 (1.126)			0.021 (0.028)
R ²	0.148	0.149	0.171	0.141	0.141	0.157
N	176,173	176,173	148,202	176,173	176,173	148,202

Notes: This table shows regressions at the firm-year level (columns 4-6 of Panel A) and firm-quarter level (all other columns). All interactions are centered to ease interpretation. The variables are defined as in the previous tables. All specifications control for the log of firm assets, sector, and time fixed effects. Standard errors are clustered at the firm level. ***, **, and * denote statistical significance at the 1, 5, and 10% level, respectively.

Appendix Table XI: Interactions with $Sentiment_{i,t}$ (alternative)

PANEL A	$\frac{I_{i,t}}{K_{i,t-1}} * 100$			$\frac{\Delta \text{emp}_{i,t}}{\text{emp}_{i,t-1}} * 100$		
	(1)	(2)	(3)	(4)	(5)	(6)
PRisk _{i,t}	-0.165*** (0.056)	-0.236*** (0.054)	-0.159*** (0.048)	-0.791*** (0.232)	-0.815*** (0.224)	-0.809*** (0.204)
1(PSentiment _{i,t} ≤ $r(p50)$)	-0.248*** (0.080)			-2.152*** (0.306)		
PRisk _{i,t} × 1(PSentiment _{i,t} ≤ $r(p50)$)	0.019 (0.071)			0.122 (0.292)		
1(Sentiment _{i,t} ≤ $r(p50)$)		-0.608*** (0.088)			-3.117*** (0.315)	
PRisk _{i,t} × 1(Sentiment _{i,t} ≤ $r(p50)$)		0.143* (0.073)			0.282 (0.289)	
1(Av stock return 7 days prior _{i,t} ≤ $r(p50)$)			-0.073 (0.069)			-0.890*** (0.284)
PRisk _{i,t} × 1(Av stock return 7 days prior _{i,t} ≤ $r(p50)$)			-0.000 (0.066)			0.091 (0.278)
R ²	0.035	0.036	0.035	0.026	0.027	0.025
N	119,853	119,853	119,853	45,930	45,930	45,930
PANEL B	Log(1+\$ lobby _{i,t+1})			Log(1+\$ donations _{i,t+1})		
	(1)	(2)	(3)	(4)	(5)	(6)
PRisk _{i,t}	0.189*** (0.033)	0.179*** (0.033)	0.169*** (0.029)	0.103*** (0.022)	0.105*** (0.024)	0.076*** (0.019)
1(PSentiment _{i,t} ≤ $r(p50)$)	-0.341*** (0.054)			-0.197*** (0.037)		
PRisk _{i,t} × 1(PSentiment _{i,t} ≤ $r(p50)$)	0.005 (0.037)			-0.022 (0.024)		
1(Sentiment _{i,t} ≤ $r(p50)$)		-0.282*** (0.061)			-0.149*** (0.041)	
PRisk _{i,t} × 1(Sentiment _{i,t} ≤ $r(p50)$)		0.027 (0.041)			-0.023 (0.028)	
1(Av stock return 7 days prior _{i,t} ≤ $r(p50)$)			0.213*** (0.037)			0.122*** (0.024)
PRisk _{i,t} × 1(Av stock return 7 days prior _{i,t} ≤ $r(p50)$)			0.040 (0.026)			0.026 (0.017)
R ²	0.269	0.268	0.268	0.251	0.250	0.250
N	147,228	147,228	147,228	176,173	176,173	176,173
PANEL C	# of recipients _{i,t+1}			Hedge _{i,t+1}		
	(1)	(2)	(3)	(4)	(5)	(6)
PRisk _{i,t}	0.553*** (0.152)	0.576*** (0.178)	0.471*** (0.131)	0.008*** (0.001)	0.008*** (0.002)	0.006*** (0.001)
1(PSentiment _{i,t} ≤ $r(p50)$)	-0.832*** (0.183)			-0.012*** (0.002)		
PRisk _{i,t} × 1(PSentiment _{i,t} ≤ $r(p50)$)	-0.133 (0.116)			-0.002 (0.002)		
1(Sentiment _{i,t} ≤ $r(p50)$)		-0.755*** (0.199)			-0.009*** (0.002)	
PRisk _{i,t} × 1(Sentiment _{i,t} ≤ $r(p50)$)		-0.149 (0.142)			-0.002 (0.002)	
1(Av stock return 7 days prior _{i,t} ≤ $r(p50)$)			0.157 (0.112)			0.005*** (0.002)
PRisk _{i,t} × 1(Av stock return 7 days prior _{i,t} ≤ $r(p50)$)			-0.022 (0.086)			0.001 (0.001)
R ²	0.148	0.148	0.147	0.141	0.140	0.140
N	176,173	176,173	176,173	176,173	176,173	176,173

Notes: This table reports estimates of regressions at the firm-year level (columns 4-6 of Panel A) and firm-quarter level (all other columns). In all specifications, $1(X \leq r(p50))$ is an indicator equal to one if X is weakly below the median of X in the regression sample. All interactions are centered to ease interpretation. The variables are defined as in the previous tables. In all specifications, PRisk_{i,t}, PSentiment_{i,t}, and Sentiment_{i,t} are all standardized by their standard deviation. All specifications control for the log of firm assets, sector, and time fixed effects. Standard errors are clustered at the firm level. ***, **, and * denote statistical significance at the 1, 5, and 10% level, respectively.

Appendix Table XII: Alternative implementations of $PRisk_{it}$: Correlations

	$PRisk_{i,t}$	Textbook-based $PRisk_{i,t}$	Newspaper-based $PRisk_{i,t}$	Unweighted $PRisk_{i,t}$	$PRisk_{i,t}$ w/o stopwords	Firm-level $EPU_{i,t}$ (1)
$PRisk_{i,t}$	1.000					
Textbook-based $PRisk_{i,t}$	0.970	1.000				
Newspaper-based $PRisk_{i,t}$	0.663	0.519	1.000			
Unweighted $PRisk_{i,t}$	0.759	0.681	0.784	1.000		
$PRisk_{i,t}$ w/o stopwords	0.628	0.584	0.596	0.669	1.000	
Firm-level $EPU_{i,t}$ (1)	0.190	0.180	0.172	0.199	0.210	1.000

Notes: This table reports correlations between various alternative implementations of $PRisk_{i,t}$. $PRisk_{i,t}$ (standardized) is defined as before; *Textbook-based* $PRisk_{i,t}$ (standardized) is like $PRisk_{i,t}$ but based on a list of political bigrams from the textbook-based library that is not appended with political bigrams from the newspaper-based library; *Newspaper-based* $PRisk_{i,t}$ (standardized) is like $PRisk_{i,t}$ but based on a list of political bigrams from only the newspaper-based library; *Unweighted* $PRisk_{i,t}$ (standardized) counts, like $PRisk_{i,t}$, the number of political bigrams near synonyms divided by the transcript length, but unlike $PRisk_{i,t}$ the numerator is not weighted by the scores of the bigrams; $PRisk_{i,t}$ w/o stopwords (standardized) is constructed exactly as $PRisk_{i,t}$ but based on a version of the training library and earnings transcripts that have been cleared from a list of stopwords; and *Firm level EPU_{i,t}* (1) is a dummy variable equal to one if the transcript has at least one of the word combinations specified in Baker, Bloom, and Davis (2016). $PRisk_{i,t}$, *Textbook-based* $PRisk_{i,t}$, *Newspaper-based* $PRisk_{i,t}$, and $PRisk_{i,t}$ w/o stopwords are standardized by their respective standard deviations.

Appendix Table XIII: Alternative implementations of $PRisk_{it}$: Estimations

	Implied volatility $_{it}$ (standardized)						Log(1+\$lobby $_{it+1}$)								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
Prisk $_{it}$ (standardized)	0.025*** (0.005)								0.186*** (0.027)						
Textbook-based PRisk $_{it}$ (standardized)		0.022*** (0.005)							0.163*** (0.026)						
Newspaper-based PRisk $_{it}$ (standardized)			0.028*** (0.005)						0.209*** (0.027)						
PRisk $_{it}$ (standardized, not capped)				0.018*** (0.005)					0.153*** (0.029)						
Unweighted PRisk $_{it}$ (standardized)					0.042*** (0.006)				0.174*** (0.031)						
PRisk $_{it}$ (standardized) w/o stopwords						0.016*** (0.005)			0.214*** (0.027)						
Firm level EPU $_{it}$ (1)							0.019 (0.013)			0.605*** (0.083)					
N	115,059	115,059	115,059	115,059	115,059	115,059	115,059	115,059	147,228	147,228	147,228	147,228	147,228	147,228	
PANEL B															
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
Prisk $_{it}$ (standardized)	-0.159*** (0.041)								-0.769*** (0.155)						
Textbook-based PRisk $_{it}$ (standardized)		-0.161*** (0.040)							-0.730*** (0.151)						
Newspaper-based PRisk $_{it}$ (standardized)			-0.096** (0.045)						-0.715*** (0.162)						
PRisk $_{it}$ (standardized, not capped)				-0.146*** (0.042)					-0.560*** (0.180)						
Unweighted PRisk $_{it}$ (standardized)					-0.175*** (0.049)				-0.935*** (0.176)						
PRisk $_{it}$ (standardized) w/o stopwords						-0.127*** (0.042)			-0.793*** (0.152)						
Firm level EPU $_{it}$ (1)							-0.303*** (0.114)			-2.577*** (0.672)					
N	119,853	119,853	119,853	119,853	119,853	119,853	119,853	119,853	45,930	45,930	45,930	45,930	45,930	45,930	
Time FE	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	
Sector FE	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	

Notes: This table reports estimation results from replications of key findings using alternative implementations of $PRisk_{it}$. $PRisk_{it}$ (standardized) is defined as before; *Textbook-based PRisk $_{it}$* (standardized) is like $PRisk_{it}$, but based on a list of political bigrams from the textbook-based library; *Newspaper-based PRisk $_{it}$* (standardized) is like $PRisk_{it}$, but based on a list of political bigrams from only the newspaper-based library; *Unweighted PRisk $_{it}$* (standardized) counts, like $PRisk_{it}$, the number of political bigrams near synonyms divided by the transcript length, but unlike $PRisk_{it}$, the numerator is not weighted by the scores of the bigrams; $PRisk_{it}$ (standardized) w/o stopwords is constructed exactly as $PRisk_{it}$, but based on a version of the training library and earnings transcripts that have been cleaned from a list of stopwords; and *Firm level EPU $_{it}$* (1) is a dummy variable equal to one if the transcript has at least one of the word combinations specified in Baker, Bloom, and Davis (2016). Implied volatility, investment, employment, and lobbying are defined as before. $PRisk_{it}$, *Textbook-based PRisk $_{it}$* , *Newspaper-based PRisk $_{it}$* , *Unweighted PRisk $_{it}$* , and $PRisk_{it}$ w/o stopwords are standardized by their respective standard deviations. Standard errors are clustered at the firm level. ***, **, and * denote statistical significance at the 1, 5, and 10% level, respectively.

Appendix Table XIV: Horse-race between $PRisk_{it}$ and *Firm-level EPU* _{i,t} (1)

PANEL A: VOLATILITY REGRESSIONS	Realized volatility _{i,t} (standardized)		Implied volatility _{i,t} (standardized)	
	(1)	(2)	(3)	(4)
Firm level EPU _{i,t} (1)	0.026** (0.010)	0.016 (0.010)	0.019 (0.013)	0.006 (0.013)
PRisk _{i,t} (standardized)		0.019*** (0.004)		0.025*** (0.005)
<i>N</i>	162,153	162,153	115,059	115,059
PANEL B: CORPORATE OUTCOMES	$I_{i,t}/K_{i,t-1} * 100$		$\Delta \text{emp}_{i,t}/\text{emp}_{i,t-1} * 100$	
	(1)	(2)	(3)	(4)
Firm level EPU _{i,t} (1)	-0.303*** (0.114)	-0.230** (0.115)	-2.577*** (0.672)	-1.921*** (0.692)
PRisk _{i,t} (standardized)		-0.148*** (0.042)		-0.681*** (0.159)
<i>N</i>	119,853	119,853	45,930	45,930
Time FE	yes	yes	yes	yes
Sector FE	yes	yes	yes	yes

Notes: Firm level EPU _{i,t} (1) is a dummy variable equal to one if the transcript has at least one of the word combinations specified in Baker, Bloom, and Davis (2016). PRisk _{i,t} , realized and implied volatility, investment, and employment are defined as before. Standard errors are clustered at the firm level. ***, **, and * denote statistical significance at the 1, 5, and 10% level, respectively.

Appendix Table XV: Firm-level political risk and firm actions: Alternative definitions of sectors

	2-digit SIC		3-digit SIC		4-digit SIC		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
$\frac{I_{i,t}}{K_{i,t-1}} * 100$	-0.162*** (0.043)	-0.159*** (0.042)	-0.188*** (0.039)	-0.182*** (0.045)	-0.179*** (0.043)	-0.205*** (0.048)	-0.188*** (0.045)
$\frac{\Delta \text{capexg}_{i,t}}{\text{capexg}_{i,t-1}} * 100$	-0.347*** (0.121)	-0.391*** (0.124)	-0.337** (0.141)	-0.427*** (0.155)	-0.346* (0.181)	-0.517*** (0.169)	-0.373* (0.195)
$\frac{\Delta \text{emp}_{i,t}}{\text{emp}_{i,t-1}} * 100$	-0.806*** (0.149)	-0.725*** (0.156)	-0.772*** (0.188)	-0.810*** (0.164)	-0.774*** (0.197)	-0.846*** (0.170)	-0.762*** (0.201)
Sector FE	no	yes	n/a	yes	n/a	yes	n/a
Time FE	no	yes	yes	yes	yes	yes	yes
Sector \times time FE	no	yes	yes	yes	yes	yes	yes
Firm FE	no	no	yes	no	yes	no	yes
# of sectors		65		258		407	
<i>Variance decomposition</i>							
Firm-level variation		91.69%		82.93%		78.33%	
Permanent differences across firms within sector (Firm FE)		19.87%		17.52%		16.82%	
Variation over time in identity of firms within sector most affected (residual)		71.82%		65.41%		61.51%	

Notes: This table shows results from regressions of the variable indicated in the most left column on $PRisk_{it}$ using different industry classifications — 2-digit (columns 2-3), 3-digit (columns 4-5), and 4-digit SIC (columns 6-7) — as fixed effects. Capital investment, capital expenditure guidance, and net hiring are defined as in Table V. In all regressions, $PRisk_{it}$ is standardized by its standard deviation. All specifications control for the log of firm assets. Standard errors are clustered at the firm level. ***, **, and * denote statistical significance at the 1, 5, and 10% level, respectively. The lower panel of the table shows tabulations of the R^2 from a projection of $PRisk_{it}$ on various sets of fixed effects.

Appendix Table XVI: Explained variation of main outcomes

	$\frac{I_{i,t}}{K_{i,t-1}} * 100$	$\frac{\Delta \text{emp}_{i,t}}{\text{emp}_{i,t-1}} * 100$	$\frac{\Delta \text{capexg}_{i,t}}{\text{capexg}_{i,t-1}} * 100$
	(1)	(2)	(3)
$\text{PRisk}_{i,t} - \overline{\text{PRisk}}_{s,t}$	-0.159*** (0.034)	-0.721*** (0.149)	-0.400*** (0.140)
$\overline{\text{PRisk}}_{s,t}$	-0.202* (0.113)	-1.486*** (0.419)	-0.070 (0.318)
<i>N</i>	119,853	45,930	22,520
Share firm-level variation in $\text{PRisk}_{i,t}$	0.917	0.884	0.838
Share sector \times time variation in $\text{PRisk}_{i,t}$	0.083	0.116	0.162
Share of explained variation at firm level	0.872	0.642	0.994
Share of explained variation at sector \times time level	0.128	0.358	0.006

Notes: This table shows the estimated coefficients from firm-time level regressions of the form $y_{i,t} = \alpha + \beta_f (\text{PRisk}_{i,t} - \overline{\text{PRisk}}_{s,t}) + \beta_{st} \overline{\text{PRisk}}_{s,t} + \varepsilon_{i,t}$ where $y_{i,t}$ is the outcome indicated on top of the respective column, and $\overline{\text{PRisk}}_{s,t}$ is the sector \times time average of $\text{PRisk}_{i,t}$. The share of firm-level variation is defined as $\text{var}(\text{PRisk}_{i,t} - \overline{\text{PRisk}}_{s,t}) / (\text{var}(\text{PRisk}_{i,t} - \overline{\text{PRisk}}_{s,t}) + \text{var}(\overline{\text{PRisk}}_{s,t}))$, while the share of explained variation at firm level is defined as $\widehat{\beta}_f^2 \times \text{var}(\text{PRisk}_{i,t} - \overline{\text{PRisk}}_{s,t}) / (\widehat{\beta}_f^2 \times \text{var}(\text{PRisk}_{i,t} - \overline{\text{PRisk}}_{s,t}) + \widehat{\beta}_{st}^2 \times \text{var}(\overline{\text{PRisk}}_{s,t}))$. The share of sector-time level variance and variation are defined similarly. All variables are defined on $\text{PRisk}_{i,t}$ that is standardized and capped as in previous tables. All specifications control for the log of firm assets. Standard errors are clustered at the firm level. ***, **, and * denote statistical significance at the 1, 5, and 10% level, respectively.

Appendix Table XVII: Specifications of Table IX using other firm-level outcomes

	(1)	(2)	(3)	(4)	(5)
PANEL A					
			$\frac{I_{i,t}}{K_{i,t-1}} * 100$		
PRisk _{i,t} (standardized)	-0.159*** (0.042)	-0.181*** (0.043)	-0.167*** (0.044)	-0.153*** (0.042)	-0.155*** (0.042)
R ²	0.076	0.078	0.078	0.076	0.076
N	119,853	113,169	110,313	119,853	119,853
PANEL B					
			$\frac{\Delta \text{capex}_{i,t}}{\text{capex}_{i,t-1}} * 100$		
PRisk _{i,t} (standardized)	-0.391*** (0.124)	-0.405*** (0.125)	-0.435*** (0.126)	-0.389*** (0.124)	-0.391*** (0.124)
R ²	0.183	0.187	0.189	0.183	0.183
N	22,520	21,738	21,136	22,520	22,520
PANEL C					
			$\frac{\Delta \text{emp}_{i,t}}{\text{emp}_{i,t-1}} * 100$		
PRisk _{i,t} (standardized)	-0.725*** (0.156)	-0.619*** (0.163)	-0.725*** (0.156)	-0.660*** (0.156)	-0.662*** (0.157)
R ²	0.056	0.057	0.056	0.058	0.058
N	45,930	43,312	45,930	45,930	45,930
PANEL D					
			Log(1+\$ donations _{i,t+1})		
PRisk _{i,t} (standardized)	0.086*** (0.018)	0.093*** (0.019)	0.096*** (0.019)	0.070*** (0.018)	0.070*** (0.018)
R ²	0.264	0.281	0.288	0.292	0.292
N	176,173	166,923	161,581	176,173	176,173
PANEL E					
			# of recipients _{i,t+1}		
PRisk _{i,t} (standardized)	0.468*** (0.120)	0.495*** (0.127)	0.506*** (0.131)	0.413*** (0.114)	0.411*** (0.114)
R ²	0.163	0.174	0.182	0.182	0.182
N	176,173	166,923	161,581	176,173	176,173
PANEL F					
			Hedge _{i,t+1}		
PRisk _{i,t} (standardized)	0.007*** (0.001)	0.007*** (0.001)	0.007*** (0.001)	0.006*** (0.001)	0.006*** (0.001)
R ²	0.160	0.171	0.174	0.176	0.176
N	176,173	166,923	161,581	176,173	176,173
PANEL G					
			Log(1+\$ lobby _{i,t+1})		
PRisk _{i,t} (standardized)	0.184*** (0.028)	0.196*** (0.029)	0.207*** (0.029)	0.159*** (0.026)	0.159*** (0.026)
R ²	0.282	0.295	0.300	0.317	0.317
N	147,228	139,004	133,994	147,228	147,228
Time FE	yes	yes	yes	yes	yes
Sector FE	yes	yes	yes	yes	yes
Sector × time FE	yes	yes	yes	yes	yes

Notes: This table is similar to Table IX; it shows results of the same regressions as in columns 1-3, 6, and 7, but instead of using realized and implied volatility as outcome, we use the outcome specified above the respective panel. We only report the coefficient of PRisk_{i,t}. All remaining variables and regression specifications are defined as in Table IX (for example, all specifications control for the log of firm assets). Standard errors are clustered at the firm level. ***, **, and * denote statistical significance at the 1, 5, and 10% level, respectively.

Appendix Table XVIII: Dispersion of firm-level political risk

	Standard deviation of residual				
	(1)	(2)	(3)	(4)	(5)
Mean of $PRisk_{i,t}$ (standardized)	0.790*** (0.056)		0.875*** (0.057)	0.843*** (0.080)	0.820*** (0.054)
Real GDP growth $_t$ (% change)		-2.804* (1.670)	2.789*** (0.829)		
R^2	0.777	0.046	0.814	0.656	0.808
N	60	60	60	60	58

This table reports estimates from OLS regressions using the standard deviation of the residual from a projection of $PRisk_{i,t}$ (standardized) on firm, time, and sector \times time fixed effects, calculated by quarter, as dependent variable. Column 1 corresponds to the data plotted in Figure V. Mean of $PRisk_{i,t}$ is the time-average of capped $PRisk_{i,t}$, standardized by its standard deviation in the time series. Column 2 uses real GDP growth $_t$ (% change) instead of the mean of $PRisk_{i,t}$. Column 3 adds both. Column 4 replicates column 1 but restricts the data to firms with non-missing data at least 58 of the 60 quarters. Column 5 replicates column 1 and controls for EPU beta (2-year rolling) $_{i,t} \times$ mean of $PRisk_{i,t}$ when projecting $PRisk_{i,t}$ on the set of fixed effects. Standard errors are clustered at the firm level. ***, **, and * denote statistical significance at the 1, 5, and 10% level, respectively.

Appendix Table XIX: Mapping of political topics to topics given by OnTheIssues.org

Political topic	OnTheIssues.org topics
Economic Policy & Budget	Budget & Economy; Jobs; Corporations
Environment	Energy & Oil; Environment
Trade	Free Trade
Institutions & Political Process	Government Reform
Health	Health Care
Security & Defense	Homeland Security; War & Peace
Tax Policy	Tax Reform
Technology & Infrastructure	Technology & Infrastructure Not used: Abortion; Civil Rights; Crime; Drugs; Education; Families & Children; Foreign Policy; Gun Control; Immigration; Principles & Values; Social Security; Welfare & Poverty

Notes: This table shows the mapping between the final eight political topics we converged on (left column) and our raw training libraries, which are based on the 24 topics as defined by OnTheIssues.org (right column).

Appendix Table XX: Top bigrams and transcript excerpts for each topic-specific measure of political risk

Topic name	Top fifteen bigrams	Top three text snippets
Economic Policy, Budget & Regulation	minimum wage, balanced budget, legislation provides, bankruptcy bill, medicaid matching, time congress, emergency economic, and discourages, surpluses in, aid, create jobs, government when, congress does, waste by, government taxes	<p>1) ‘of <i>the states</i> aren’t <i>really</i> that <i>significant</i> for us reza valahzadeh lehman brothers analyst okay but i mean away from minimum wage rates in texas are you seeing wage rates going higher just because of scarcity of labor by any —CHANCE— tilman’ (Landry’s Restaurants on 10-May-2006)</p> <p>2) ‘before its all about for many of our franchisees the level of —uncertainty— whether it be on the political front minimum wage different bills being introduced that may impact their profitability <i>that concern still exists for many and while we remain pretty</i>’ (Dunkin’ Brands Group Inc on 21-Jul-2016)</p> <p>3) ‘to obtain there are a number of <i>encouraging indicators of government support for the institutional construction sector</i> in order to <i>create jobs and invest</i> in an aging infrastructure however with the <i>new administration</i> <i>there remains shortterm —UNCERTAINTY</i>— also the <i>residential housing market</i>’ (Ashhead Group plc on 9-Dec-2008)</p>
Trade	free trade, trade agreement, trade agreements, trade barriers, freetrade agreement, up markets, the andean, globalization is, labor standards, all trade, policy objectives, jordan the, american free, trade relations, duties on	<p>1) ‘<i>the — risks— moving forward</i> are what happens with the state of <i>government intervention</i> around the <i>world as it pertains to free trade</i> as it <i>pertains to taxing and changing of tax structure of multinational companies</i> and we are <i>obviously</i> trying to influence’ (Procter Gamble Company on 27-Oct-2010)</p> <p>2) ‘we continue to look at that project and do what we can while were waiting for <i>approval</i> of our nonfree <i>trade agreement</i> permit that is —PENDING— with the <i>government and</i> were hopeful well get <i>that permit</i> approved soon <i>in the meantime we</i>’ (Exxon Mobil Corp on 31-Oct-2013)</p> <p>3) ‘<i>on safety in upper</i> without there is <i>some inherent degree of —UNPREDICTABILITY— associated with legislative processes</i> we’ve been working with the <i>trade associations in europe</i> which is <i>comprised of other companies and other interest groups associated with building the case around healthcare</i>’ (Becton, Dickinson and Company on 24-Jul-2003)</p>
Technology & Infrastructure	street station, fairness doctrine, cyber warfare, on highways, faithbased organizations, human services, require public, and faithbased, proposals during, private entities, the fcc, structurally deficient, hightech jobs, highspeed rail, every government on terror, from iraq, bin laden, nuclear weapons, our troops, commander in, in chief, al qaeda,	<p>1) ‘<i>act on</i> their own ultimately letting the courts decide it eschelon wants <i>the states to set rates because we —fear— the fcc will leave</i> special access rates alone <i>while states might insist on costbased rates</i> which is what we prefer a <i>decision</i>’ (Eschelon Telecom, Inc. on 15-May-2006)</p> <p>2) ‘<i>i think theres a lot of —uncertainty</i>— out there regarding the regulatory situation both <i>in congress and the courts at the fcc</i> and a lot has happened this year and i would tell you that the vast majority of it has been’ (XO HDGS INC on 29-Oct-2002)</p> <p>3) ‘with the monthly audience up yearonyear to million in the fall of according to fom <i>public opinion foundation the frequency of internet</i> use grew as well the number of <i>search —QUERIES—</i> on yandex increased yearonyear in fourth quarter while we maintained our’ (Yandex NV on 22-Feb-2012)</p>
Security & Defense		<p>1) ‘<i>the defense side of aerospace defense markets continue to have —UNCERTAINTY</i>— for due to limited <i>budgets and the winding down of military activities in iraq and afghanistan and</i> we continue to <i>watch</i> for the effects of <i>government budget cuts</i> specifically we are’ (CIRCOR International Inc on 05-May-2011)</p> <p>2) ‘<i>that are really relevant in todays defense and intelligence market</i> there are vagaries and —UNCERTAINTIES— to the <i>government budget</i> but the <i>intelligence and surveillance and reconnaissance</i> the isr <i>world will remain a high area of government investment</i> as we move forward and’ (PAR Technology Corp on 30-Mar-2016)</p> <p>3) ‘all of our markets since businesses have less clarity about the future the <i>impact of a struggling economy the —threat— of war along with record budget deficits in</i> many of <i>the states where</i> we operate is proving to be as challenging as’ (PS Business Parks on 28-Feb-2003)</p>

Notes: This table lists the topic name (column 1), the top 15 bigrams most indicative of each of our eight political topics (the bigrams with the highest $\frac{f_b}{B_{\mathbb{P}_T}} \log(Z/f_{b,\mathbb{Z}})$) (column 2), and the text surrounding the highest-scoring bigrams within the three highest-scoring transcripts for each topic (column 3). The bigram in question is underlined and in the middle of the text excerpt, topic bigrams are in italic, and political bigrams (such that $b \in \mathbb{P} \setminus \mathbb{N}$) are in bold. A synonym of ‘risk’ or ‘uncertainty’ is written in small caps and surrounded by dashes. Duplicate firms are removed from the text excerpt list.

Appendix Table XX: Top bigrams and transcript excerpts for each topic-specific measure of political risk (continued)

Topic name	Top fifteen bigrams	Top three text snippets
Health	prescription drug, cut medicare, government takeover, drug plan, for lowincome, health care, human services, medicare prescription, have health, generic drugs, ship benefits, like medicaid, provide health, of health, health insurance	<p>1) “the internet site of the commission at http://www.sec.gov these — risks— and —UNCERTAINTIES— include among others the impact of the medicare <u>prescription drug improvement act of and other healthcare reforms and initiatives</u> possible reductions of changes in <u>reimbursements</u> from form ph of <u>government</u>” (Medcah Corporation on 12-Aug-2004)</p> <p>2) “rate reduction built into the states <u>fiscal budget</u> for later this year and the state has also reinstated its <u>child health insurance plan</u> program there is still the rate reduction —PENDING— for this october that we have to <u>contend with our team</u>” (American Dental Partners on 27-Jul-2010)</p> <p>3) “remain —UNCERTAIN— however are the regulations that will govern <u>such changes to the healthcare industry reimbursement rate expansion of government health insurance programs</u> new payment systems the effectiveness and lasting power of valuebased reimbursement and payforperformance incentives and the cost of the” (Healthcare Realty Trust Inc on 02-May-2012)</p>
Environment	air act, from renewable, climate change, clean air, states rights, greenhouse gas, nuclear power, nations energy, foreign oil, with opec, global warming, energy independence, legislators are, emissions from, carbon emissions	<p>1) “from convincing to compelling the most recent scientific report issued by the <u>united nations</u> foundation has dispelled any lingering —doubt— <u>climate change is real</u> it is pervasive and the time to begin acting is now both <u>public opinion and the body politic</u>” (Exelon Corporation on 25-Apr-2007)</p> <p>2) “to be the case for that will be very similar to or <u>virtually identical</u> to thereafter we are —unsure— <u>the clean air act program provides that the states should figure out how to do this</u> and how they will go about it” (GenOn Energy Inc on 09-Nov-2011)</p> <p>3) “<u>stabilize</u> is that throughout the <u>three states</u> or have you seen — VARYING— improvements in the different regions tom skans piedmont <u>natural gas</u> chairmen president ceo yes we believe its what weve noticed and <u>our observation is</u> its proportional among <u>the states</u> that” (Piedmont Natural Gas on 9-Sep-2010)</p>
Tax Policy	estate tax, tax relief, bush tax, the estate, middleclass tax, continued unfair, full repeal, typical american, increase taxes, raise taxes, tax cuts, largest budget, repeals the, tax reform, tax cut	<p>1) “quantitative easing coming to <u>an end</u> a budget crisis coming theres been a lot of <u>government money</u> being thrown around <u>tax relief</u> thrown around thats stimulating spending i think there is a lot of —uncertainty— on okay what is going to happen” (Novellus Systems Inc on 27-Apr-2011)</p> <p>2) “here are theres the —suspicion— that there will be <u>in congress</u> <u>an attempt to remove the sunset provision from the estate tax</u> as you know the way its currently drafted it goes away in for one year and comes back into full” (Manulife Financial Corporation on 4-Feb-2003)</p> <p>3) “corp president i wouldnt equate the potential <u>win by de blasio in november</u> as in any way connected to real <u>estate tax</u> increase i think everyone always has a —FEAR— <u>with incumbents and with new administrations that real estate taxes become a</u>” (SL Green Realty Corp on 24-Oct-2013)</p>
Institutions & Political Process	campaign finance, constitution to, finance reform, federal elections, appropriations bills, political system, constitution and, public financing, of voters, in politics, on immigration, constitution the, presidential elections, federal election, political parties	<p>1) “president and ceo absolutely yes andrew marcus deutsche bank securities analyst i —DOUBT— for obviously there has been <u>some campaign finance reform</u> how do you think it is going to affect <u>the political trends in david j barrett</u> hearstargyle television inc president” (Hearst-Argyle Television, Inc. on 30-Oct-2002)</p> <p>2) “introduced during our visits on the hill we continue to <u>hear a resounding support for private capital</u> in overall <u>housing finance reform efforts</u> obviously the <u>fha has already taken steps to decrease its —risk— and the ultimate —risk— to taxpayers by implementing</u>” (Radian Group Inc on 05-May-2011)</p> <p>3) “<u>states</u> that awards are —PENDING— meaning our fees <u>have come out</u> and <u>the states</u> are making decisions we <u>hope to be considered if not win more than half of</u> those so i think we are going to see more rac activity throughout” (HMS Holdings Corp on 29-Apr-2011)</p>

Notes: This table (continued from the previous page) lists the topic name (column 1), the top 15 bigrams most indicative of each of our eight political topics (the bigrams with the highest $\frac{f_b \cdot \mathbb{P}_T}{B_{\mathbb{P}_T}} \log(Z/f_b, Z)$) (column 2), and the text surrounding the highest-scoring bigrams within the three highest-scoring transcripts for each topic (column 3). The bigram in question is underlined and in the middle of the text excerpt, topic bigrams are in italic, and political bigrams (such that $b \in \mathbb{P}(\mathbb{N})$) are in bold. A synonym of “risk” or “uncertainty” is written in small caps and surrounded by dashes. Duplicate firms are removed from the text excerpt list.

Appendix Table XXI: Timing of associations between lobbying and topic-specific political risk

	$\mathbb{1}[\text{lobbying}_{i,t+1}^T > 0] * 100$		
	(1)	(2)	(3)
PRisk $_{i,t}^T$ (standardized)	0.098*** (0.030)		0.081*** (0.030)
PRisk $_{i,t+1}^T$ (standardized)	0.069** (0.032)	0.072** (0.032)	0.064** (0.030)
PRisk $_{i,t+2}^T$ (standardized)		0.051 (0.031)	0.048 (0.031)
Time FE	yes	yes	yes
Sector FE	n/a	n/a	n/a
Topic FE	yes	yes	yes
Firm FE	yes	yes	yes
Firm×topic FE	yes	yes	yes
Number of firms	5962	5626	5626
Number of periods	36	35	35
Number of topics	8	8	8
R^2	0.702	0.721	0.721
N	860,504	791,568	791,568

This table shows the results from a regression of $\mathbb{1}[\text{lobbying}_{i,t+1}^T > 0] * 100$ on two leads of $PRisk_{i,t}^T$. $PRisk_{i,t}^T$ is standardized by its standard deviation. Lobbying is semi-annual for all pre-2008 quarters; the quarters for which there is no lobby expense are excluded from the regression. All specifications control for the log of firm assets. Standard errors are clustered at the firm level. ***, **, and * denote statistical significance at the 1, 5, and 10% level, respectively.

Appendix Table XXII: Measurement error

PANEL A: OVERALL VARIATION		$PRisk_{i,t}$ (standardized)			
		(1)	(2)	(3)	(4)
PRisk _{i,t-1} (standardized)		0.475*** (0.005)	0.924*** (0.033)	0.958*** (0.039)	0.813*** (0.011)
N		31,906	31,906	26,811	34,101
Specification Instrument	OLS	IV $PRisk10K_{i,t-1}$	IV $PRisk10K_{i,t-2}$	IV $PRisk_{i,t-2}$	
Implied share M.E.		0.485 (0.018)	0.496 (0.019)	0.406 (0.015)	
PANEL B: FIRM-LEVEL VARIATION		$PRisk_{i,t}$ (standardized)			
		(1)	(2)	(3)	(4)
PRisk _{i,t-1} (standardized)		0.422*** (0.005)	0.913*** (0.056)	0.934*** (0.068)	0.781*** (0.013)
N		31,883	31,883	26,789	34,079
Specification Instrument	OLS	IV $PRisk10K_{i,t-1}$	IV $PRisk10K_{i,t-2}$	IV $PRisk_{i,t-2}$	
Implied share M.E.		0.538 (0.025)	0.541 (0.028)	0.445 (0.017)	

Notes: This table shows AR(1) regressions of $PRisk_{i,t}$ at the annual level. In columns 2-4, $PRisk_{i,t}$ is instrumented by the variable indicated in the column. $PRisk10K_{i,t}$ is calculated in the same manner as $PRisk_{i,t}$ but using the MD&A section of the firm's 10K report. The implied share of measurement error in columns 2-4 is calculated as $1 - (\hat{\beta}_{OLS}/\hat{\beta}_{IV})$ where $\hat{\beta}_{OLS}$ is the estimated coefficient in $PRisk_{i,t} = \alpha + \beta PRisk_{i,t-1} + \varepsilon$ and where $\hat{\beta}_{IV}$ is the coefficient on the instrumented $PRisk_{i,t}$ in the same specification. To obtain bootstrapped standard errors, we repeat the following procedure 500 times: draw a random sample of the same size (with replacement and clustered by firm) from our regression sample, run the two regressions, and obtain the implied share of measurement error. All specifications control for the log of firm assets. Standard errors are clustered at the firm level. ***, **, and * denote statistical significance at the 1, 5, and 10% level, respectively.

Appendix Table XXIII: Case studies: Obama-era budget crises

PANEL A	$\Delta \text{PRisk}_{i,t}^{ep\&r}$			$\text{PRisk}_{i,t}^{ep\&r}$
	(1)	(2)	(3)	(4)
# of 'debt ceiling'	0.257*** (0.075)	0.506*** (0.190)	0.468*** (0.155)	
# of 'fiscal cliff'		0.018 (0.048)		
# of 'government shutdown'			0.129*** (0.049)	
# of 'debt ceiling,' 'fiscal cliff,' and 'government shutdown'				0.253*** (0.023)
Time FE	no	no	no	yes
Firm FE	no	no	no	yes
Time \times sector FE	no	no	no	yes
Sample period	2011-q3	2013-q1	2013-q4	All
R^2	0.009	0.007	0.027	0.316
N	3,342	2,891	2,967	147,228
PANEL B	$\mathbb{1}[\text{lobbying}_{i,t+1}^T > 0] * 100$			$\text{Log}(1 + \$ \text{lobbying}_{i,t}^{ep\&r})$
	(1)	(2)	(3)	(4)
# of 'debt ceiling,' 'fiscal cliff,' and 'government shutdown'	0.698** (0.299)			
$\text{PRisk}_{i,t}^{ep\&r}$		0.183** (0.084)	2.430*** (0.937)	0.303*** (0.106)
Time FE	yes	yes	yes	yes
Firm FE	yes	yes	yes	yes
Time \times sector FE	yes	yes	yes	yes
Sample period	All	All	All	All
Model	OLS	OLS	IV	IV
F-statistic on instruments			76.786	76.786
R^2	0.679	0.679	0.676	0.719
N	147,228	147,228	147,228	147,228

Notes: The regressions in columns 1, 2, and 3 of Panel A are restricted to 2011-q3, 2013-q1, 2013-q4, respectively. $\text{PRisk}_{i,t}^{ep\&b}$, where "ep&b" stands for topic "Economic Policy & Budget," is standardized by its standard deviation. In columns 3 and 4 of Panel B, $\text{PRisk}_{i,t}^{ep\&b}$ is instrumented by # of 'debt ceiling,' # of 'fiscal cliff,' # of 'government shutdown'; # of 'debt ceiling', 'fiscal cliff', and 'government shutdown' together; and their second- and third-order polynomials. The dummy variable $\mathbb{1}[\text{lobbying}_{i,t+1}^{ep\&r} > 0] * 100$, where "ep&r" likewise stands for topic "Economic Policy & Budget," is multiplied by 100 for readability. Standard errors are robust. ***, **, and * denote statistical significance at the 1, 5, and 10% level, respectively. A pooled OLS regression of # of 'debt ceiling,' 'fiscal cliff,' and 'government shutdown' on a firm's share in revenue from government contracts, using all firms and quarters, gives a coefficient (standard error) of .154***(.059, clustered by firm).