Aggregate and Idiosyncratic Political Risk:

Measurement and Effects*

Tarek A. Hassan† Stephan Hollander‡ Laurence van Lent§
Ahmed Tahoun¶

September 2016

Abstract

We propose a new measure of political risk faced by individual US-firms based on textual analysis of earnings conference call transcripts: the share of the conversation between management and analysts that is devoted to political topics. Our measure correlates significantly with firm-level stock return volatility, even after controlling for firm and time fixed effects. We find that increases in idiosyncratic political risk are associated with decreases in investment and hiring, and that the dispersion of idiosyncratic political risk tends to increase significantly in times of high aggregate political risk. About two thirds of the variation in political risk is idiosyncratic in the sense that it is neither captured by firm or time fixed effects, nor by heterogeneous exposure of individual firms to aggregate political risk. Further decomposing our measure by political topic, we find that discussion of risk associated with corporate regulation and health care is associated with the largest decreases in investment. We also find that firms actively manage political risk through lobbying: firms that devote more time to discussing the risk associated with a given political topic tend to increase lobbying expenses on that topic that quarter. These effects are most pronounced for large firms and firms headquartered in states that are associated with higher levels of political corruption.

JEL classification: D80, E22, G18, G38, H32, L50
Keywords: Political uncertainty, quantification, firm-level, lobbying

*We thank seminar participants at the University of Chicago, the University of Melbourne, and the 1st Dutch Accounting Research Conference. We are especially grateful to Menno van Zaanen for generously providing his textual analysis code and for advising on computational linguistics matters. Markus Schwedeler deserves a special thanks for his excellent research assistance. We thank Jakub Dudzic, Chris Emmery, Yusiyu Wang, and Hongcen Wei for their research assistance. We are very grateful to the funding provided by the Institute for New Economic Thinking. Hassan is grateful to the Fama-Miller Center at the University of Chicago for providing financial support. Tahoun gratefully acknowledges financial support from London Business School.

†**University of Chicago**, NBER, and CEPR; Postal Address: 5807 S Woodlawn Avenue, Chicago IL 60637 , USA; E-mail: tarek.hassan@chicagobooth.edu.

‡**Tilburg University**; Postal Address: P.O. Box 90153, 5000 LE Tilburg, the Netherlands; E-mail: s.hollander@tilburguniversity.edu

§**Tilburg University**; Postal Address: P.O. Box 90153, 5000 LE Tilburg, the Netherlands; E-mail: vanlent@uvt.nl

¶**London Business School**; Postal Address: Regent's Park, London NW1 4SA, United Kingdom; E-mail: atahoun@london.edu.

From the United Kingdom's vote to leave the European Union to the threats of the US Congress to shut down the federal government, and major overhauls of regulation in the health care and financial industries, recent events have renewed concerns about the effects of risks emanating from the political system on investment, employment, and other aspects of firm behavior. The size of such effects and the question of which aspects of political decision making might be most disruptive to business are the subject of intense debates among economists, business leaders, and politicians. However, quantifying the effects of political risk has often proven difficult due to a lack of firm-level data on the extent of exposure to political risk, as well as a lack of data on the kind of political decisions firms may be most concerned about.

In this paper, we use textual analysis of quarterly earnings conference call transcripts to construct firm-level measures of the extent and type of political risk faced by individual US firms—and how it varies over time. The vast majority of listed firms in the United States hold regular conference calls with their analysts and other interested parties, a forum where management gives its view on the firm's past and future performance and responds to questions by call participants about any challenges the firm may face. In the past two decades (in particular since Regulation Fair Disclosure was enacted in October 2000), these conference calls have become a primary channel through which market participants resolve questions relating to the value of the firm's equity (Mayew (2008)). Our approach to quantifying the extent of political risk faced by a given firm at a given point in time is simply to measure the share of the conversation between participants and firm management that centers on risks associated with politics in general and with specific political topics.

To this end, we adapt a pattern-based sequence classification method developed in computational linguistics (Song and Wu (2008); Manning et al. (2008)) to distinguish language associated with political and non-political topics. For our baseline measure of overall exposure to political risk, we use a training library of political text (an undergraduate political science textbook or text from the political section of newspapers) and a training library of non-political text (an accounting textbook, text from non-political sections of newspapers, or transcripts of speeches on non-political topics) to identify two-word combinations ("bigrams") that are frequently used in political texts. We then count the number of instances in which conference call participants use these bigrams in conjunction with synonyms for "risk" or "uncertainty" and divide by the total length of the conference call to obtain a measure of the share of the conversation that is concerned with risks associated with politics. For our topic-based decomposition, we similarly use training libraries of text concerned with 24 political topics (including, for example, "health care," "foreign policy," and "social security"), as well as the non-political training library mentioned above, to identify bigrams frequently used when discussing a particular political topic.

This yields a measure of the share of the conversation that is about risks associated with each of the 24 political topics.

Having constructed our measures, we present a body of evidence bolstering our interpretation that we are indeed measuring political risk. First, we show that each of our top-scoring transcripts identifies conversations that center on risks associated with political decision making, including, for example, concerns about regulation, ballot initiatives, and government funding. Similarly, the bigrams identified as most indicative of political text appear intuitive, such as "the constitution," "public opinion," and "the FAA."

Second, the time-series average of our main measure of political risk increases significantly around federal elections and is highly correlated with the index of aggregate economic policy uncertainty proposed by Baker et al. (2016). Similarly, the time-series averages of our topic-based measures appear to line up with the timing of relevant political events (such as health care reform). Third, also consistent with prior research, our measure correlates significantly with firm-level stock return volatility (both implied and realized) and is associated with significant decreases in aggregate investment and hiring.

Going beyond the results in the existing literature, we also show that these correlations remain statistically significant when controlling for firm and time fixed effects, and even for the interaction of time and sector effects, suggesting that the idiosyncratic (that is, cross-firm and between-time-and-firm) variation in political risk picked up by our measure has economic content. Importantly, these conditional correlations between our measure of political risk and stock return volatility are largely unaffected when we simultaneously control for news about the mean of firm performance, such as the directional surprise of recent earnings announcements or the stock return in the days, months, and weeks prior to the conference call.

Having bolstered our confidence that our measures indeed pick up economically meaningful cross-firm and between-time-and-firm variation in political risk, we show five main results. First, as mentioned above, firms retrench hiring and investment when they face unusually high idiosyncratic political risk. However, firms' sensitivity to this risk differs significantly depending on the type of political risk, where reactions are highest in response to risks associated with corporate regulations, health care, government reform, and the environment, and lowest in response to risks associated with foreign policy.

Second, in addition to these retrenchments, we also find that firms actively manage political risk associated with specific political topics by lobbying on these topics. The 1995 lobbying disclosure act requires firms that engage in lobbying of any branch of government to disclose their total expenditure on lobbying by political topic. That is, lobbying data uniquely allows us to observe a firm's reactions to risks associated with specific political topics, and to create a mapping between the political topics

discussed in conference calls and the topics that are the object of the same firm's lobbying activities. Using this mapping, we are able to show that firms that devote more time to discussing risk associated with a given political topic tend to increase lobbying expenses on that topic, and not on other topics. A one-standard-deviation increase in political risk associated with a particular topic results in a 4% increase in lobbying expenditure on that topic in that quarter. That is, there is a significant association between higher political risk and lobbying that holds not only conditional on firm, time, and time $\times$ sector effects, but also within firm and topic. Because of this fine granularity of our results, as well as additional evidence weighing against other potentially confounding channels, we believe that these results warrant a causal interpretation of the effect of political risk on lobbying expenditure.

While small firms decrease hiring relatively more than large firms when they face more political risk, this latter effect on lobbying is concentrated in large firms (consistent with the classic conjecture in Olson (1965) that the burden of collective action is carried by large organizations). In this sense, large firms tend to actively manage political risk with directed lobbying efforts. These effects of political risk on lobbying are significantly larger for firms headquartered in states that are associated with higher levels of political corruption. The elasticity of lobbying with respect to political risk is also significantly larger for risks associated with health care, energy, environment, tax reform, and corporate regulation, which are presumably areas of legislation that firms are relatively more able to influence.

Third, while we do not interpret the associations between our measures of political risk and stock return volatility, hiring, and investment as causal, we believe that the persistence of these associations conditional on firm and time effects rule out some potentially confounding factors and thus go some way towards establishing such causal effects of political risk. However, we also find that including fixed effects substantially reduces the size of the correlation between political risk, stock return volatility, and investment. For example, regressing stock return volatility on the average of our measure of political risk across firms at each point in time ("aggregate political risk") shows that a one-standard-deviation increase in aggregate political risk is associated with a 0.4-standard-deviation increase in stock return volatility (similar to the size of the correlation documented by Baker et al. (2016)). By contrast, a one-standard-deviation increase in our measure of political risk at the firm level, conditional on firm and time fixed effects, is associated with only a 0.03-standard deviation increase in stock return volatility. While part of this difference in the size of correlations with aggregate and idiosyncratic political risk may be due to differential measurement error or the presence of large macroeconomic multipliers, it also suggests that part of the strong association between aggregate political risk and macroeconomic outcomes may be driven by reverse causality where, for example, politicians entertain reform (and create political risk) as a response to deteriorating macroeconomic conditions.

Fourth, although the association between idiosyncratic political risk and firm-level outcomes is smaller than that with aggregate political risk, it nevertheless accounts for much of the variation in these outcomes, because most of the variation in political risk (70%) is idiosyncratic (in the sense that it is explained by neither firm nor time fixed effects). Even controlling for heterogeneous exposure of individual firms to aggregate political risk or including the interaction of time and sector fixed effects leaves about two thirds of the variation in political risk unexplained. By contrast, time fixed effects (and thus aggregate political risk) account for only 0.7% of the variation. In other words, much of the effects of political risk are the result of variation over time in the identity of firms most affected by political risk—consistent, for example, with a model where aggregate political risk does not change much over time but affects changing small sets of firms that have the attention of regulators at a given point in time, with this attention shifting over time to other sets of affected firms within a given sector.

Fifth, the cross-sectional dispersion in exposure to idiosyncratic political risk increases significantly when average political risk is high, suggesting that times identified by the previous literature as suffering from a high degree of aggregate political risk (such as after the collapse of Lehman Brothers) are also times when firms differ most in their exposure to idiosyncratic political risk.

In sum, our new measure of political risk at the firm level allows us to quantify, and decompose by topic, the extent of political risk faced by individual firms over time. We use this measure to establish novel stylized facts about the extent of aggregate and idiosyncratic political risk faced by US firms, and time variation in its dispersion across firms. Taking full advantage of our decomposition by firm and topic, we show evidence of a causal effect of political risk on lobbying activities. While stopping short of making causal claims about the effect of political risk on other outcomes, we hope that the ability to observe between-firm-and-time variation in political risk will contribute to identifying causal effects of political risk in these other dimensions in the future.

Our efforts relate to several strands of prior literature. An important set of studies documents that shocks emanating from the political system are a major determinant of long-term growth (North (1981); Acemoglu et al. (2002)). Mounting evidence suggests that risk and uncertainty about these shocks also affect macroeconomic outcomes in developed economies (Kelly et al. (2016); Baker et al. (2016)). However, this literature has stopped short of establishing causal effects of political risk, partially due to a lack of a firm-specific and time-varying measure of political uncertainty. Our study introduces such a measure and does so by building on important work by Baker et al. (2016), who develop an index of economic policy uncertainty (EPU) based on newspaper coverage of political events. Their paper documents significant macro-level variation in EPU over a period dating back to 1900. This aggregate policy uncertainty is associated with higher stock price volatility as well as lower employment

and investments at the firm level. Relative to this existing work, our efforts provide not just the first micro-level measure of political risk, uniquely allowing a meaningful distinction between aggregate and idiosyncratic exposure, but also a flexible decomposition into topic-specific components, identifying which types of political risk are most strongly associated with firm-level outcomes.

Another closely related literature studies the value of connections to powerful politicians (Fisman (2001); Leuz and Oberholzer-Gee (2006); Johnson and Mitton (2003); Khwaja and Mian (2005); Acemoglu et al. (2016); Cooper et al. (2010); Acemoglu et al. (2016); Roberts (1990); Jayachandran (2006)).[1] This literature suggests that firms may actively cultivate connections to politicians through lobbying, documenting that lobbying is pervasive in the US political system (Milyo et al. (2000)), engaged in mostly by large corporations and industry associations (De Figueiredo (2004); Ansolabehere et al. (2002); Richter et al. (2009); Hill et al. (2013)), and aimed at issues with bigger potential payoffs for the interested parties (Caldeira et al. (2000); de Figueiredo (2014); de Figueiredo and Cameron (2014)). Importantly, Akey and Lewellen (2016) suggest that firms may respond to political uncertainty by donating to law-makers' election campaigns. Nevertheless, as De Figueiredo and Richter (2014) point out, the largest empirical challenge in this line of work is causal inference. A few recent papers have used difference-in-difference designs (Vidal et al. (2012)), instrumental variable approaches (De Figueiredo and Silverman (2006)), or have adopted a structural model (Kang (2015)) to address these difficulties. Our approach is to refine the measure of political risk individual firms face, which allows for a tighter relation between shocks particular to the firm and their (lobby) response. What is more, we exploit our ability to decompose our measure of political risk into political topics and directly map those into the firm's expenditures on lobbying on the same topics.

Our paper also relates to a literature that investigates the effect of political risk on asset prices, cost-of-capital, and macroeconomic fluctuations (Pastor and Veronesi (2013, 2012); Belo et al. (2013); Kelly et al. (2016); Koijen et al. (2016); Caldera Sánchez et al. (2016); Gilchrist et al. (2014); Born and Pfeifer (2014); Fernandez-Villaverde et al. (2013)). This literature has highlighted that uncertainty associated with election outcomes is reflected in asset prices (Li and Born (2006); Pantzalis et al. (2000); Boutchkova et al. (2012); Gemmill (1992); Goodell and Vähämaa (2013); Snowberg et al. (2007)). More generally, studies have documented a risk premium associated with political uncertainty (Brogaard and Detzel (2015); Bittlingmayer (1998); Voth (2002); Koijen et al. (2016)). Our results suggest firm-level effects of political risk, including idiosyncratic political risk, on investment, employment, and stock return volatility.

[1] In turn, politicians reciprocate by distributing favors in the form of bailouts (Faccio et al. (2006); Tahoun and Van Lent (2016)), reduced government oversight (Correia (2014); Yu and Yu (2012)), more government contracts (Goldman et al. (2009); Tahoun (2014)), and reduced market competition (Benmelech and Moskowitz (2010)).

Finally, some recent studies in economics and finance have adopted methods developed in computational linguistics and natural language processing. These studies tend to use pre-defined dictionaries of significant words and text search methods to process source documents. We go one step further and use an algorithm which learns what word combinations identify text associated with particular political topics. Thus, rather than using an exogenously specified set of words (Loughran and McDonald (2011); Baker et al. (2016)), our approach aims to endogenously capture those word combinations that are indicative of political discourse about a given topic. Alternative text mining approaches (such as Latent Dirichlet Allocation (LDA)) enable automated topic classification. While these methods have been used recently to identify issues reported in Federal Open Market Committee (FOMC) meeting minutes (Jegadeesh and Wu (2015)), concurrent work in finance and accounting suggests that this approach might be less suitable in our context of corporate conference calls (Dyer et al. (2016)). For example, Huang et al. (2016) document that conference call participants focus their discussion mostly on issues of firm performance, valuation, and financial outlook. Thus, LDA-type methods are likely to lack the power to detect politics-related issues as a separate topic. Reflecting the possibly limited advance offered by more sophisticated methods, the literature in computational linguistics has documented that our simple, yet intuitive approach is remarkably robust (Ramos (2003); Mishra and Vishwakarma (2015)). In addition, whereas prior studies have relied on newspaper archives and firm disclosures as source texts (Baker et al. (2016); Koijen et al. (2016); Wiesen and Wysocki (2015); Gentzkow and Shapiro (2010)), we introduce the idea that (transcripts of) conference calls provide a natural context to learn about the risks firms face and market participants' views thereof. Importantly, conference calls capture both supply of and demand for information as management presents its views and then answers questions from call participants.

1 Data

In this section we describe our data. We begin with our main dataset of earnings conference call transcripts and then turn to our lobbying and campaign contributions data. Finally, we briefly describe the other data sources that we use.

We collect the complete transcripts of all 89,897 conference calls held in conjunction with an earnings release (hereafter "earnings conference call" or "earnings call" in short) of US firms from 2002 to 2010 from Thomson Reuters' StreetEvents. During our sample window, firms commonly host an earnings conference call every fiscal quarter, thus generating roughly four observations per firm per year.[2] For

[2]Firms are not mandated to host conference calls, but illustrative of their importance is the 2014 National Investor Relations Institute survey, which suggests that 97 percent of investor relations officers report that their firms hold quarterly

corporate conference calls, it is the custom to start with a presentation by company management, during which corporate executives (e.g., the Chief Executive Officer, the Chief Financial Officer) share information they wish to disclose or further emphasize, followed by a question-and-answer (Q&A) session with market participants (e.g., financial analysts, institutional investors). Our measure of political risk is constructed using the entire conference call. Prior research finds that managers' and non-corporate call participants' discussions typically center around uncertainties that the firm is facing (Hollander et al. (2010); Bowen et al. (2002); Matsumoto et al. (2011); Huang et al. (2016)).[3]

For our lobbying data, we take advantage of the Lobbying Disclosure Act of 1995, amended by the the Honest Leadership and Open Government Act (HLOGA) of 2007, which requires lobbyists and lobbying firms to file their lobbying details and activities with the Clerk of the House of Representatives and the Secretary of the Senate. The HLOGA amendments increased the filing frequency for lobby reports from semi-annually to quarterly. We rely on the Center for Responsive Politics (CRP), a nonpartisan not-for-profit research group that collects data on money in US politics. The CRP 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 their clients. 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 24 topics encompassed by our topic-based measure of political uncertainty. See Appendix Table 7 for the mapping of these 80 lobbying issues to the 24 political topics and Appendix Table 8 for descriptive statistics of lobbying expenditures on each of these topics.

We also obtain data on campaign contributions by the Political Action Committees (PAC) associated with our sample firms from the CRP, which in turn relies on the PAC's filings with the Federal Election Commission. Table 1, Panel A, shows summary statistics.

Data on government contracts is provided by Eagle Eye Publishers, which in turn collect this information from the Federal Procurement Data System-Next Generation (FPDS-NG), the contract data collection and dissemination system administered by the US General Services Administration. FPDS-NG provides information on procurement contracts awarded by the US government. Eagle Eye tracks contracts awarded to subsidiaries to their parent companies, ensuring that the database contains com-

earnings calls. Firms provide access to their calls via live webcasting and, afterwards, make transcripts and audio files available on their investors' relations website, public databases, or other websites aimed at investors (such as seekingalpha.com).

[3]In untabulated analysis, we find that the average number of words spoken in our sample conference calls is 7,533. Matsumoto et al. (2011) obtain the start and end times of each portion of the call. They find that a typical earnings conference call lasts for about 45 minutes, with on average 18 minutes for the managerial presentation and 28 minutes for the Q&A. Supporting the premise that uncertainty is driving conversations in conference calls, these authors further show that managers alleviate pre-call uncertainty with lengthier conference calls.

prehensive information of each firm's direct and indirect (through their affiliated companies) reliance on federal contracts. These data cover the subset of our sample firms that joined the S&P 500 index at any time between January 2004 and April 2009.

Data on state corruption conviction rates are taken from table III in the annual Report to Congress on the Activities and Operations of the Public Integrity Section of the Criminal Division of the US Department of Justice. We obtain data from the Pew Charitable Trust on the dependence of each state on federal funding.

Finally, for each firm-quarter or, if not available, firm-year, we obtain employment, investment, and basic balance sheet (e.g., total assets) and income statement (e.g., quarterly earnings) information from Standard and Poors' Compustat. OptionMetrics provides firm-quarter level implied volatility.[4] Finally, we obtain stock price and return data from the Center for Research in Security Prices. The descriptive statistics, reported in Table 1, Panel B, for the accounting and market data are generally consistent with those of previous studies.

2 Measuring Political Risk at the Firm Level

In this section we introduce our firm-level measure of political risk. To separate measurement from interpretation, we begin by defining a measure of the share of the quarterly conversation between call participants and firm management that centers on risks associated with political topics. In a second step, we then argue that this measure can be interpreted as a proxy for the political risk and uncertainty faced by individual firms.

2.1 Defining measures of political risk

We begin with a simple objective: *to measure the share of the quarterly conversation between analysts and firm management that centers on risks associated with political topics*. Clearly, any topic that is raised during an earnings conference call will tend to be of some concern either for the firm's management or its analysts (the majority of participants on earnings conference calls are financial, sell- and buy-side, analysts), such that quantifying the allocation of attention between different topics is interesting in its own right.

Rather than a priori deciding on specific words associated with different topics, we distinguish political from non-political topics using a pattern-based sequence classification method developed in

[4]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 volatilies by applying a proprietary pricing algorithm based on the Cox-Ross-Rubinstein binomial tree model.

computational linguistics (Song and Wu (2008); Manning et al. (2008)). Using this approach, we correlate language patterns used by conference call participants to that of a text that is either political in nature (for example, an undergraduate political science textbook) or indicative of a specific political topic (for example, speeches by politicians about health care). Similarly, we identify the association with risk simply by the use of synonyms of the words "risk" and "uncertainty" in conjunction with this language.

We construct our measure of overall political risk by first defining a training library of "political" text, archetypical of the discussion of political topics, $\mathbb{P}$, and another training library of "non-political" text, archetypical of the discussion of non-political topics, $\mathbb{N}$. Each training library is the set of all adjacent two-word combinations ("bigrams") contained in the respective political and non-political texts (after removing all punctuation). We then similarly decompose each conference call transcript of firm i in quarter t into a list of bigrams contained in the transcript $b = 1, ..., B_{it}$.[5] We then count the number of occurrences of bigrams indicating discussion of a given political topic within the set of ten words surrounding a synonym for risk or uncertainty and divide by the total number of bigrams in the transcript:

$$PRisk_{it} = \frac{\sum_{b}^{B_{it}} (1[b \in \mathbb{P} \backslash \mathbb{N}] \times 1[|b - r| < 10] \times f_{b,\mathbb{P}}/B_{\mathbb{P}})}{B_{it}}, \tag{1}$$

where $1[\bullet]$ is the indicator function, $\mathbb{P}\backslash\mathbb{N}$ is a set of bigrams contained in $\mathbb{P}$ but not $\mathbb{N}$, and r is the position of the nearest synonym of risk or uncertainty. The first two terms in the numerator thus simply count the number of bigrams associated with discussion of political but not non-political topics that occur in proximity to a synonym for risk. In most of our specifications, we also weight each bigram with a score (the third term in the numerator) that reflects how strongly the bigram is associated with the discussion of political topics, where $f_{b,\mathbb{P}}$ is the frequency of bigram b in the political training library and $B_{\mathbb{P}}$ is its total number of bigrams. Our overall measure of the share of the conversation devoted to risk associated with political topics is thus the weighted sum of bigrams associated with political (rather than non-political) text that are used in conjunction with synonyms for risk or uncertainty.

For our topic-based measures, we similarly identify a set of training libraries $\mathbb{Z} = \{\mathbb{P}_1, ..., \mathbb{P}_Z\}$, each containing the complete set of bigrams occurring in one of Z texts archetypical of discussion of a particular political topic, such as health care or national security. As above, we then calculate the share of the conversation between management and participants that centers on risks associated with political topic T as the number of bigrams occurring in $\mathbb{P}_T$ but not the non-political library, $\mathbb{N}$, that are

[5] We have experimented with more involved procedures for preparing the text contained in the transcript, such as removing stop words and lemmatizing. However, we found that these procedures did not substantially affect our results.

used in conjunction with a synonym for risk or uncertainty, weighted by their relative frequency:

$$PRisk_{it}^{T} = \frac{\sum_{b}^{B_{it}} \left(1[b \in \mathbb{P}_T \backslash \mathbb{N}] \times 1[|b - r| < 10] \times \frac{f_{b,\mathbb{P}_T}}{B_{\mathbb{P}}} log(Z/f_{b,\mathbb{Z}}) \right)}{B_{it}}. \tag{2}$$

However, because we must now distinguish between multiple political topics, each bigram's weighting is now adjusted for how unique the use of this bigram is to the discussion of a specific topic compared to all the other political topics by multiplying with $log(Z/f_{b,\mathbb{Z}})$, where $f_{b,\mathbb{Z}}$ is the number of libraries in $\mathbb{Z}$ that contain bigram b. For example, a bigram that occurs in all political libraries is not useful for distinguishing a particular topic and is thus assigned a weight of $log(Z/Z) = 0$. By contrast, this weight increases the more unique the use of this bigram is when discussing topic T and is highest ($log(Z/1)$) for a bigram that is used only in discussion of topic T but not in the discussion of any other topic.

We thus have flexible measures of the share of the conversation devoted to risks associated with various political topics that do not require us to exogenously specify which words or word patterns may be associated with which topic. Instead, the only judgements we have to make is about training libraries—what text may be considered archetypical discussions of a given political topic or non-political topics.

In our applications below, we use two alternative approaches to defining the political and non-political libraries ($\mathbb{P}$ and $\mathbb{N}$). In the first, we use undergraduate textbooks, where the non-political library consists of bigrams extracted from a textbook on financial accounting (Libby et al. (2011)), to reflect that earnings conference calls tend to focus on financial disclosures and accounting information. As the source for the bigrams in the corresponding political training library we use Bianco and Canon's textbook, *American Politics Today* (3rd ed.; Bianco and Canon (2013)).

In an alternative approach, we construct the non-political library by selecting in the Factiva database any newspaper articles published in the *New York Times*, *USA Today*, the *Wall Street Journal*, and the *Washington Post* on the subject of "performance," "ownership changes,' or "corporate actions" during our sample period and contrast it with a political training library derived from newspaper articles from the same sources on the subject of "Domestic Politics."

In both cases, we also include all bigrams from the Santa Barbara Corpus of Spoken American English (Du Bois et al. (2000)) as part of the non-political library to filter out bigrams that are specific to spoken language, such as "next question" or "we should break for lunch." This source records a vast library of face-to-face conversations, on-the-job talk, classroom lectures, sermons, etc., where we exclude a small part of this library for containing conversations related to politics (mentioning "politics," "democratic," "government," etc.).

We will show below that both approaches yield similar results in terms of our analysis, although they identify slightly different bigrams as pivotal for political text. Whereas the textbook-based approach identifies bigrams such as "the constitution" and "interest groups" as most pivotal, the newspaper-based approach identifies more topical expressions such as "[health] care reform" and "the epa." In our baseline specification, we therefore use a hybrid between the two: we first define $\mathbb{P}_T$ and $\mathbb{N}$ using the textbook-based training libraries, yielding 101,273 bigrams in the set $\mathbb{P}_T \backslash \mathbb{N}$. We then add the same number of bigrams from the newspaper-based approach (adding 88,817 bigrams that were not already in the set) and normalize the score of these additional bigrams ($f_{b,\mathbb{P}}/B_{\mathbb{P}}$) such that it is equal to the mean of the bigrams identified using only the textbook-based libraries.[6]

For the topics-based measure, we require a set of libraries of political text that have been pre-classified into topics. We rely on the collection of newspaper articles, speeches, press releases, books, voting records, and bill sponsorships, compiled by ontheissues.org, which is a nonpartisan not-for-profit organization that uses this information to educate voters about the positions politicians take on key topics such as health care, foreign policy, employment, etc. We believe this source is particularly useful, because it includes a wide variety of written texts as well as transcripts of spoken words.

Finally we obtain the list of synonyms for "risk" and "uncertainty" from the Oxford dictionary. Because they are likely to have different meaning the context of conference calls we exclude the words "question," "questions" (moderators asking for "the next question"), "unknown" ("unknown caller"), "venture," and "prospect" from this list (for a similar approach, see Allee and DeAngelis (2015)). Appendix Table 9 gives the complete list of the remaining synonyms, as well as the frequency with which they appear in proximity to bigrams contained in $\mathbb{P} \backslash \mathbb{N}$ across the transcripts in our sample.

To facilitate interpretation of our measures, we standardize them with their respective sample standard deviations whenever reporting them.

2.2 Validation

We next describe the output of the measures described above and verify that they indeed capture passages of text that discuss risk associated with particular political topics. Table 2 shows the standardized score ($PRisk_{it}$) of the transcript, and the text surrounding the top-scoring political bigram in each of the 20 transcripts with the highest $PRisk_{it}$. It shows that each of the highest-scoring transcripts indeed contains discussions of risk associated with political topics. For example, the transcript with the highest score (Nevada Gold Casino Inc in September of 2008) features a discussion of a ballot initiative autho-

[6] Because the newspaper-based libraries are significantly longer than the textbook-based libraries, we chose this approach to ensure that both sources of text receive equal weight. Simply adding the newspaper-based and texbook-based political libraries would largely collapse to using only the newspaper-based library simply due to the different sizes of original texts.

rizing an increase in betting limits. Other excerpts of text in the table show discussions of uncertainty of surrounding tort reform, government funding, and legislation. Appendix A gives details on each of these top 20 transcripts and shows that, as intended, each of these transcripts contains a large number of such passages relative to the overall length of the transcript.

In only three occasions, as the text in Table 2 shows, does the conditioning on proximity to synonyms produce false positives, one where the word "bet" is not meant to refer to risks associated with the ballot initiative but rather to the betting limits, another where "government pressures" are discussed in proximity to discussion of "currency risks," and a third where the word "uncertainty" is used in proximity to a discussion of "government bureaucrats." Nevertheless, in all three cases associate risks with political topics, as is made implicit in the context. Accordingly, we argue below that conditioning on synonyms for risk has economic content and on average improves the properties of our measure, although it is not crucial for our results. Overall, across the 20 excerpts from the highest-scoring transcripts, 15 are clearly related to discussion of risks associated with political topics, just based on the excerpt shown in the table. For two out of the remaining five transcripts, the more detailed excerpts in Appendix A show that the uncertainties referred to are indeed in the context of gubernatorial elections (Magellan Health Services) and legislation (TRC companies), while the context appears more generic for the remaining three (Piedmont Natural Gas, Metalink, and Equinix Inc.).

Table 3 further illustrates the workings of our classification by listing the bigrams in $\mathbb{P}\backslash\mathbb{N}$ with the highest score, $(f_{b,\mathbb{P}}/B_{\mathbb{P}})$, that is, the bigrams associated most strongly with discussion of political versus non-political topics. These are almost exclusively bigrams with strong political connotations, such as "the constitution," "the states," and "public opinion." The right column of the table shows similar results when sorting bigrams by their relative influence on the score (thus sorting by average within-transcript frequency $\times$ $s(b, P)$). A full list of all 50,422 bigrams used in the scoring is given in a separate document on the authors' websites. Appendix Figure 1 shows a histogram of these bigrams by their score. It shows that the distribution is highly skewed (with the median score being 0.25×10^{-5}), that is, the top scoring bigrams in Table 3 (with scores ranging from 84.45×10^{-5} to 10.59×10^{-5}) are among the primary drivers of $PRisk_{it}$.

Table 4 similarly shows the 10 most influential bigrams in the construction of each of our 24 topic-based measures, as well as excerpts showing the top-scoring bigram from the top-scoring transcript for each topic in context. These are again intuitive, where top bigrams identifying text concerned with the "budget & economy" include "free markets," "home values," and "deficit in"; while influential patterns in the "crime" topic are "the death," "three strikes," and "justice system." Appendix A gives more detailed lists of top-scoring transcripts and bigrams for each topic.

Having examined the workings of our pattern-based classifications, we next examine the properties of the measures generated by them. Figure 1 plots the average across firms of our measure of overall political risk at each point in time, $1/N \sum_i PRisk_{it}$. The plot also highlights some important political and economic events, and plots the newspaper-based measure of economic policy uncertainty (EPU) constructed by Baker et al. (2016) for comparison. The two series have a correlation coefficient of 0.83 and thus visibly capture many of the same events driving uncertainty about economic policy. This high correlation is reassuring because both series are constructed using very different data sources and methodologies, but nevertheless yield similar results. It also suggests that, as one might expect, uncertainty about economic policy is a major component of the political risks on the mind of managers and conference call participants.

The same authors also propose newspaper-based measures of policy uncertainty regarding specific topics. Not all of these topics map directly to the political topics defined by ontheissues.org and thus our own topic-based measures. However, Figure 2 shows health care as one example where this mapping is straight forward. As above, the plot shows the average across firms of our topic-based measure for health care as well as the corresponding measure of policy uncertainty by Baker et al. (2016). We again see that the two series are highly correlated (with a correlation coefficient of 0.64).

Panel A of Figure 3 plots the mean of $PRisk_{it}$ by sector (SIC division), showing that participants in conference calls of firms in the "finance, insurance, and real estate" sector spend the highest proportion of their time discussing risks associated with political topics, followed by the "construction" and "transportation and communication" sectors. By contrast, firms in the "retail trade" sector have the lowest average $PRisk_{it}$. Panel B repeats this exercise for a finer sectoral classification (SIC 2-digit) and shows the eight sectors with the highest overall means: insurance, credit institutions, and construction sectors among them. Overall, these means line up intuitively with parts of the economy that may be considered most dependent on government for regulation or expenditure.

Finally, we might expect that part of the overall political risk faced by firms arises due to uncertainty about the identity of future decision makers. For example, Democrats may be more inclined to pass tough environmental regulations than Republicans. Elections should thus resolve some of uncertainties about the actions of future decision makers and thus reduce political risk at regular intervals. Figure 4 shows results from a regression relating $PRisk_{it}$ to a set of dummy variables indicating quarters with federal elections (presidential and congressional), as well as dummies for the two quarters pre and post these elections. We can see that political risk is significantly higher in the quarters in which elections are held and the quarters before, but falls off in the quarter after elections. This effect is most pronounced for presidential elections, when overall political risk tends to be 7.8% of a standard

deviation higher (s.e.=1.62%). Congressional elections have an effect about one-half that size (3.0% higher, s.e.=0.80%), while state elections have a positive but not statistically significant effect on the overall political risk faced by firms headquartered in that state (0.98%, s.e.=9.83%; see Appendix Table 1 for details). The relative size of these effects is again intuitive because presidential elections always also entail congressional elections and are thus arguably more decisive for the future political direction of the country than congressional elections alone and state elections.

We next show that $PRisk_{it}$ correlates significantly with realized and implied volatility of stock returns. Our main specification takes the form

$$y_{it} = \delta_t + \delta_i + \beta\ PRisk_{it} + \gamma X_{it} + \epsilon_{it}, \tag{3}$$

where δ_t and δ_i represent a full set of time and firm fixed effects and the vector X_{it} always contains the log of the firm's assets as a control for its size. Throughout, we use standard errors clustered by firm.[7]

Panel A of Table 5 uses realized stock return volatility, that is, the standard deviation of the firm's stock holding returns during the quarter, as the dependent variable. Column 1 shows our most parsimonious specification where we regress this variable on $PRisk_{it}$ and the size control. The coefficient of interest is positive and statistically significant at the 1% level (0.187, s.e.=0.013), suggesting that a one-standard-deviation increase in political risk at the firm level is associated with a 0.187-standard-deviation increase in the firm's stock return volatility. Column 2 shows that much of this association is driven by the time-series dimension: when adding the mean of $PRisk_{it}$ across firms at each point in time as a control, the coefficient of interest drops by about half (0.077, s.e.=0.018), but remains statistically significant at the 1% level. The coefficient on the mean itself suggests that a one-standard-deviation increase in the time series is associated with a 0.44 (s.e.=0.006)-standard-deviation-increase in volatility, a number very similar to that documented in previous research (Baker et al. (2016)). Columns 3-5 build up to our standard specification by adding time, sector, and, finally, firm fixed effects. Throughout, the estimates of β remain highly statistically significant, but fall to 0.028 (s.e.=0.007) once we go from sector fixed effects to the more demanding specification with firm fixed effects.

Our measure of political risk at the firm level is thus significantly correlated with stock market volatility even when focusing only on between-time-and-firm variation, bolstering our confidence that $PRisk_{it}$ indeed measures a type of risk. The fact that this association is smaller between-time-and-firm than in

[7] To corroborate our choice of standard errors, Appendix Figure 2 shows the results of a falsification exercize in the spirit of Fisher's randomization inference procedure, where we repeatedly assign the $PRisk_{it}$ to a randomly selected other firm with replacement. The figure shows a histogram of t-statistics on the estimated coefficient on $PRisk_{it}$ across 100 random assignments. The t-statistics are centered around zero, with no noticeable tendency for positive or negative estimates. Reassuringly, the rates of false positives and negatives are about 2.5%. Appendix Table 2 shows alternative standard errors clustered by sector and time.

the time series is interesting, because it suggests that part of the strong association between aggregate political risk and aggregate stock market volatility may be driven by reverse causality, where, for example, politicians entertain reform (and create political risk) as a response to deteriorating macroeconomic conditions.

To the extent that introducing fixed effects rules out this kind of confounding effect at the macroeconomic level, the smaller estimates we obtain in the between-firm-and-time dimension may thus aid with future efforts to isolate the causal effect of political risk on volatility and other outcomes (for example, using a natural experiment that generates exogenous variation in political risk). However, we also cannot exclude the possibility that part of the difference in the size of coefficients may be due to differential measurement error or the presence of large macroeconomic multipliers, where firms react much more strongly if they know that other firms are also affected by higher political risk.

In column 6 we go one step further and control for the interaction of time and sector fixed effects, thus absorbing any variation over time that is common to firms in the same sector. This specification is particularly interesting because the remaining (within sector and time) variation in $PRisk_{it}$ is truly idiosyncratic, in the sense that it focuses on variation where firms within a given sector differ their exposure to political risk over time, and nevertheless retains a highly statistically significant association with volatility (0.021, s.e.=0.007).

One potential concern with our measure of political risk is that managers' incentives to discuss risks associated with political topics might vary over time. For example, they may have an incentive to blame risks associated with politics for bad performance, and thus talk more about political risks whenever performance is bad. To test for this possibility, column 7 adds to our standard specification a control for the cumulated return on the firm's stock during the seven days prior to the call (typically the time frame during which the firm made the earnings announcement that is the object of the conference call). Column 8 instead adds a conventional measure for the earnings surprise during the latest announcement.[8] Even after including these controls, the coefficients of interest are similar to the one in column 5, although the inclusion of cumulated returns raises the coefficient by about one standard error to 0.037 (s.e.=0.008). The fact that the coefficient increases in this specification is consistent with the view that managers indeed occasionally blame political risks for bad performances, such that including a control for such a motive strengthens the correlation between $PRisk_{it}$ and realized volatility. However, the change in the coefficient is not large, suggesting that this potential confound does not have a large effect on our measure. Appendix Table 3 shows that the same holds true when controlling for cumulated returns

[8] Consistent with many prior studies, we define earnings surprise as earnings per share before extraordinary items minus earnings per share in the same quarter of the prior year, scaled by the price per share at the beginning of the quarter (Ball and Bartov (1996)).

over longer time periods. Panel B of Table 5 shows parallel results for a subset of firms for which we can measure implied, rather than realized, volatility.[9]

The conclusion from these validation exercises is that $PRisk_{it}$ indeed measures the firm's exposure to risk associated with political topics. We have verified that the transcripts with the highest $PRisk_{it}$ indeed center on the discussion of political risk and found that the time-series and cross-sectional variations of our measure line up intuitively with episodes of high aggregate political risk and with sectors that are often regarded as most dependent on political decision making. Importantly, the between-time-and-firm variation of our measure is economically meaningful in the sense that it correlates significantly with the volatility of the firm's stock returns.

2.3 Idiosyncratic Political Risk

Having bolstered our confidence in the economic content of $PRisk_{it}$, we now use it to establish new stylized facts. We begin with a simple analysis of variance (shown in Appendix Table 6), by asking how much of the variation in our measure is accounted for by various sets of fixed effects. The perhaps surprising finding from this analysis is that time fixed effects, and thus the time-series variation of aggregate political risk shown in Figure 1, accounts for only 0.7% of the variation. Firm fixed effects account for an additional 29.0%, such that 70.1% of the variation is between-time-and-firm, meaning that most of the variation in political risk is variation over time in the identity of firms most affected by political risk. Even combining firm, time, and the interaction of time and SIC 2-digit sector fixed effects leaves 67.5% of the variation in political risk unexplained.

One possibility is that this within-firm-and-sector variation might simply be driven by heterogenous exposure to aggregate political risk. To probe this possibility, we construct a "political risk beta" for each firm by regressing its daily stock return on EPU_t, and then include the interaction of this political risk beta with EPU_t in our analysis of variance, that is, we include it as a control in addition to the full set of time and firm fixed effects. While the coefficient on this interaction is positive and statistically significant, it accounts for little of the between-time-and-firm variation, suggesting that the remaining 64.5% of the variation is indeed idiosyncratic political risk.

Consistent with this result, Table 6 shows that the association between stock return volatility and $PRisk_{it}$ remains almost unchanged when we include as controls the interaction between the political

[9] Appendix Tables 4 and 5 show how the various steps in constructing $PRisk_{it}$, that is, using a hybrid of bigrams from newspapers and texbooks to construct $\mathbb{P}\backslash\mathbb{N}$, weighting bigrams with their relative frequency, and restricting attention to bigrams used in conjuction with synonyms for risk and uncertainty, affect its statistical properties. The tables show that the latter step has a large effect. For example, dropping this restriction reduces the correlation with EPU in the time series from .833 to .626. The remaining steps have relatively small effects, such that, for example, using only the textbook-based political library or dropping the weighting across bigrams continues to produce similarly statistically significant correlations with stock return volatility.

risk beta and EPU_t or, alternatively, its interaction with the mean across firms of $PRisk_{it}$ (columns 1-3 of Table 6). In columns 4-6, we restrict our sample to the 550 firms for which we have data on the dollar value of their federal contracts. Including this variable as a control, or its interaction with the mean of $PRisk_{it}$ again has little effect on the coefficient of interest, suggesting that variation in current government contracts is also not the primary driver of idiosyncratic political risk (although concerns about the future allocation of government contracts might well be).

While part of this perhaps surprisingly large variation in idiosyncratic political risk may be explained by differential measurement error, it nevertheless suggests that a lot of the political risk experienced by US firms plays out within time and sector. This finding is important because it suggests that political decision making may have important effects not only by affecting aggregate political risk, but also by altering the identity of firms affected by political risk and the dispersion of idiosyncratic political risk over time. (We will show below that this part of the variation in $PRisk_{it}$ is not only significantly associated with stock return volatility but also with other outcomes such as hiring and employment.)

To probe this latter possibility, we take the residuals from the regression above, projecting $PRisk_{it}$ on firm, time, and the interaction of time and SIC 2-digit sector fixed effects, calculate their cross-sectional standard deviation at each point in time, and plot this variation in Figure 5 as a proxy for the time-series variation in the dispersion of (idiosyncratic) political risk. For comparison, the figure also plots the average across firms of $PRisk_{it}$. The figure shows that the two series are highly correlated, suggesting that the dispersion in political risk across firms is high precisely when aggregate political risk is high. Regressing the residuals on the mean of $PRisk_{it}$ yields of coefficient of 0.505 (s.e.=0.051), suggesting that a one-percentage-point increase in aggregate political risk is associated with a 0.5-percentage-point increase in the cross-sectional standard deviation of idiosyncratic political risk.

This very sizable association between aggregate political risk and the dispersion of idiosyncratic political risk suggests that events that increase aggregate political risk may have sizable additional effects, transmitting themselves through an increase in idiosyncratic variation.

3 Managing Political Risk

We next relate political risk to the behavior of the firm. We begin by examining firms' lobbying activities and how they change in the face of political risk. The lobbying data are particularly attractive because we have information on the extent of lobbying of each firm by political topic, allowing us to relate this information directly to our topic-based measures of political risk. In a second step, we then examine other outcome variables that vary only at the firm-quarter or firm-year level, such as hiring

and investment.

3.1 Lobbying by Topic

Our main specification relating lobbying activity to our topic-based measures of political risk takes the form

$$y_{it}^T = \delta_t + \delta_i + \delta_T + \theta PRisk_{it}^T + \gamma^T X_{it} + \epsilon_{it}^T, \tag{4}$$

where y_{it}^T is the log of firm i's lobbying expense on topic T in quarter t, δ_T is a full set of topic fixed effects, and X_{it} again always contains a control for the log of the firm's assets.[10]

Table 7 shows estimates of θ, were column 3 corresponds directly to (4). The coefficient of interest (0.044, s.e.=0.006) implies that a one-standard-deviation increase in the political risk associated with a given political topic is associated with a 4.4% increase in lobbying expenditure on that topic in that same quarter. Column 4 shows that the coefficient estimate is almost unaffected when we include sector $\times$ time effects. Column 5 shows our most demanding specification where we now also include a firm $\times$ topic fixed effect, thereby only focusing on variation within firm and topic. Doing so reduces the coefficient of interest by an order of magnitude, although it remains statistically significant at the 5% level. Firms thus significantly increase lobbying expenditure on a specific topic when they face unusually high political risk associated with that topic in a given quarter.

Our first conclusion from this set of results is that the within-firm and topic variation of our topic-based measure has economic content, in the sense that firms actively manage political risk by lobbying on the political topics they are most concerned about.

Figure 6 goes one step further and probes the heterogeneity of this effect across topics by allowing the coefficient θ in (4) to vary by topic, that is, interacting $PRisk_{it}$ with a full set of dummy variables indicating each of the 24 political topics. The figure plots the coefficients and standard errors on each of the 24 interactions. We find that the elasticity of lobbying expenditure with respect to political risk associated with health care is the largest (0.182, s.e.=0.024), followed by corporate regulation (0.107, s.e.=0.049), the environment (0.055, s.e.=0.024), energy & oil (0.034, s.e.=0.009), and war & peace (0.029, s.e.=0.012), suggesting that firms expect to manage political risk associated with these topics most effectively by lobbying. The remaining interactions are statistically not distinguishable from zero.

Table 8, in the same vein, probes the heterogeneity of the effect of $PRisk_{it}^T$ on lobbying across different types of firms, by including the interaction of $PRisk_{it}^T$ with firm characteristics in (4). The table

[10] Because the lobbying data are semi-annual rather than quarterly before 2007, we drop the first and third quarters prior to 2007 from the sample and assign the outcome variable for the first half of the year to the second quarter and to the fourth quarter for the second half of the year.

shows that, perhaps unsurprisingly, larger firms are significantly more inclined to engage in lobbying conditional on facing higher political risk in a given topic than smaller firms. The same is true for firms headquartered in states that have relatively high levels of conviction rates for political corruption. By contrast, we find no significant difference in this elasticity across firms based in states more or less dependent on federal funds. Columns 4-6 similarly probe heterogeneity in the effect over time, but find no systematic differences depending on the timing of elections, consistent with a conjecture in the lobbying literature that effective political action needs sustained effort rather than ad hoc spending around political events (see, for example, Heitshusen (2000)).

Given the granularity of the results linking within firm and topic variation in political risk to lobbying expenditures, we believe we can also attribute a causal interpretation to this relationship. The main identifying assumption for a causal interpretation of this relationship is that $cov\left(PRisk_{it}^{T}, \epsilon_{it}^{T}\right) = 0$: conditional on the controls included in the regression, there are no omitted variables that are correlated with both $PRisk_{it}^{T}$ and lobbying expenditure. In particular, when including the firm $\times$ topic fixed effects, such an omitted variable would have to increase simultaneously the extent of conversation about risks associated with a given political topic and lobbying in the same quarter on that topic.

In our view, there are two main challenges to this identifying assumption. The first is that an unobserved non-political event simultaneously increases the share of the conversation devoted to risks associated with a particular political topic and, for reasons unrelated to this risk, increases the propensity to lobby on that same topic, but not other topics. While it is somewhat difficult to think of examples of such unobserved events, we cannot exclude this possibility. However, if such omitted events indeed drive the identification of θ, we may expect them to affect lobbying expenditures before as much as after the discussion of the political topic in question. If, however, the causality runs from political risk to lobbying as a device for managing this risk, we might expect lobbying to respond in the same quarter or after the increase in $PRisk_{it}^{T}$. To probe this relationship, column 1 of Table 9 replicated our most demanding specification from column 5 of Table 7 , while including both the lead and the lag of $PRisk_{it}^{T}$ in the regression. The results show that the coefficient on contemporary $PRisk_{it}^{T}$ is almost unchanged (0.004, s.e.=0.002), while both the lead (0.000, s.e.=0.002) and the lag (0.004, s.e.=0.005) are statistically insignificant. If anything, the lag thus dominates the lead, consistent with a causal interpretation of the results (although we interpret this result with caution given the relatively low frequency of the data).

The second main challenge to a causal interpretation is that a politically engaged firm may lobby the government on a given issue (regardless of the risks associated with the issue) and then have to defend financial or other risks resulting from this lobbying during a conference call. Again, the timing

of the effect weights somewhat against this interpretation. Nevertheless, as an additional probe into this relationship, in column 2 of Table 9 we instrument $PRisk_{it}$ with its mean across firms in the (2-digit SIC) sector. That is, to the extent that the number of firms in each sector is large, we now exclude any firm-specific variation from the identification. The coefficient of interest remains positive and increases in statistical significance (0.032, s.e.=0.010). While the large increase in the coefficient points to significant measurement error in our measure of firm-topic-specific political risk, its sign and significance speak strongly against the form of reverse causality outlined above.

In sum, we find that firms tend to actively manage political risk associated with specific topics by engaging in lobbying activities, especially when these risks are associated with health care, corporate regulation, or the environment. Moreover, the collage of our results supports a causal interpretation of this effect, where firms lobby, at least in part, because of political risk.

3.2 Donations, Hiring, and Investment

We next probe the association of political risk with other dimensions of firm behavior for which we cannot differentiate by topic. Because of this lower level of granularity, we refrain from making causal statements about these outcomes. Nevertheless, it is interesting to see how firms *may* react to political risk in other dimensions. Motivated by recent research, we begin by considering the effects on firms' investment and hiring decisions. Then we turn to estimating the association of political risk with firms' donations to politicians.

Table 10 reports the the association between $PRisk_{it}$, again standardized by its standard deviation, and corporate investment decisions: capital investments (columns 1-3) and human capital investments (columns 4-7). Capital investment, $I_{i,t}/K_{i,t-1}$ * 100, measured quarterly, is calculated recursively using a perpetual-inventory method as described in Stein and Stone (2013). Net hiring, $\Delta \text{emp}_{i,t}/\text{emp}_{i,t-1}$ * 100, is the change in year-to-year employment over last year's value. As in Stein and Stone (2013), we winsorize capital and human capital investments. All specifications are in the same form as (3), always including firm and time fixed effects as well as controlling for the log of the firm's assets. Columns 1 and 3 show the most parsimonious specifications, suggesting that a one-standard-deviation increase in political risk is associated with a 0.191-percentage-point decrease in a firm's capital investment rate (s.e.=0.070) and a 1.169-percentage-point decrease in its employment growth rate (s.e.=0.326). By further conditioning on sector-time fixed effects (columns 2 and 5), we again show that this effect is almost unchanged when we condition on idiosyncratic (within sector and time) variation in political risk.[11] Column 5 shows that the association between employment growth and $PRisk_{it}$ is significantly

[11] These findings complement the results of prior studies (including Baker et al. (2016)), which document a negative

smaller for large firms, potentially suggesting that these firms may manage idiosyncratic political risk more actively (by lobbying) than passively (by retrenching hiring). By contrast we find no statistically significant difference in the association with investment for small and large firms.

Figure 7 plots the coefficients and 95% confidence intervals from a regression of capital investment $I_{i,t}/K_{i,t-1}$ on $\text{PRisk}_{i,t}^{T}$ (standardized by its standard deviation), $T = \{1, \ldots, 24\}$, firm and time fixed effects, and the log of one plus firm assets. Discussions related to corporate regulation ("Corporations") and "War & Peace" (military- and defense-related firms) are associated with the largest decreases in investment, while more ideological topics (e.g., "Abortion" and "Principles"), have regressions coefficients close to zero. Appendix Figure 3 shows the same exercise for employment growth, where discussion of risks relating to "Budget & Economy," "Crime," and "Health care" appear to have the biggest impact, although all standard errors are larger for this variable, most likely because employment data is available only at the annual, rather than at the quarterly frequency.

Finally, in column 7 of Table 10, we consider the impact on sales as a placebo test. As argued in Baker et al. (2016), while uncertainty should suppress demand for *input* factors with adjustment costs, the short-run impact on *output* should be smaller according to the real-options literature. Consistent with this prediction, and in line with the finding in Baker et al. (2016), the estimated effect of $PRisk_{i,t}$ on sales growth is not statistically distinguishable from zero. Hence, our results suggest that political uncertainty at the firm level has a contemporaneous effect on capital and labor input (capital and human capital investments decline), while its short-run effect on output growth rates is absent.

Table 11 presents the estimates of regressions of $PRisk_{it}$ on a given firm's contributions to election campaigns (columns 1-5) as well as the overall level of their lobbying activity (columns 6-9). Recall that campaign donation data are reported on an annual basis, whereas lobbying activity is filed quarterly (or semi-annually before 2007). This difference accounts for the number of periods included in each of the regressions. We find a significant association between political risk and the dollar amount of campaign donations (column 1) as well as the number of politicians who receive contributions to their election campaigns from the firm (in column 2). These associations are economically meaningful, as a one-standard-deviation increase in political risk raises the number of donation recipients by 5.139 (s.e.=1.48), although this association breaks down when including both firm rather than just sector fixed effects. We also examine whether political risk may spur firms to develop ties with both major political parties at the same time, using $Hedge_{it}$, which is an indicator variable that captures those instances wherein firms donate economically meaningful amounts to both Democrats and Republicans.[12] Our

relation between aggregate policy uncertainty and firm-level investment rates and employment growth.

[12]Specifically, if donations to Republicans over donations to Democrats are between the 25th and 75th percentile of the sample

intuition is that uncertainty about the identity of future political decision makers increases the benefit of having established connections with both parties. Consistent with this intuition, we find that as political risk increases, so does the likelihood of the firm "hedging" its political ties.

Turning to the firm's overall lobbying expenditure, the variable for which we have the highest frequency of observations, we first regress the natural logarithm of dollar amount of lobby expenditure on $PRisk_{it}$, including time and sector fixed effects in column 4. We then replace the sector fixed effects by firm fixed effects in column 5, before adding time $\times$ sector fixed effects in column 6. Our main finding, already suggested by the results above, is that firms appear to manage their political risk through lobbying: lobbying more when they are exposed to more idiosyncratic political risk. The coefficient of interest is statistically significant across specifications, although the size of the coefficient is again smaller once firm fixed effects are added.

In sum, higher idiosyncratic political risk is significantly associated with lower hiring, lower investment, more donations to politicians, and higher overall lobbying expenditure. Overall, these results bolster our confidence that idiosyncratic variation in $PRisk_{it}$ is associated with economically meaningful variation in firm behavior, suggesting that firms actively and passively manage idiosyncratic, as well as aggregate, political risk. Moreover, the pattern of results is consistent with reactions to risk, where firms retrench hiring and investment in response to increased uncertainty, while also increasing their engagement in the political process through lobbying and donations.

4 Conclusion

Political decisions on regulation, taxation, expenditure, and the enforcement of rules have a major impact on the business environment. Even in well-functioning democracies, the outcomes of these decisions are often hard to predict, generating risk, as witnessed for example by the recent episodes surrounding the shutdown of the US federal government or large-scale reforms like the Sarbanes-Oxley Act. A major concern among economists is that the effects of such political risk on the decisions of households and firms might entail social costs that may outweigh potential upsides even of well-meaning reforms, prompting questions about the social costs of the fits and starts of political decision making. Quantifying the effects of political risk associated with specific political decisions has however often proven difficult, partially do to a lack of measurement.

In this paper, we introduce a new measure of political risk at the firm-level that allows us to quantify, and decompose by topic, the extent of political risk faced by individual firms over time. We use this measure to document new stylized facts about the extent of aggregate and idiosyncratic political risk

faced by US firms, its effect on firm behavior, and time variation in its dispersion across firms.

We show a range of results that corroborate that our measures, based on analysis of transcripts of quarterly conference calls between the firm's management and its analysts, indeed pick up meaningful variation in exposure to political risk. For example, we report that the mean of our measure across firms flags up episodes of high aggregate political risk (such as the 2008 financial crisis), and also, when decomposed into topics, that our measure reflects significant policy events related to these topics. We document also that both idiosyncratic and the aggregate variation in political risk is correlated with firms' implied and realized stock return volatility.

Analysing our measures of political risk we show five main results. First, we show that increases in idiosyncratic political risk are associated with significant retrenchments in hiring and investment. These reactions are highest in response to political risk associated with health care, government reform, and the environment, suggesting that political decision making on these topics is associated with particularly high levels of uncertainty. Second, in addition to these retrenchments, we find, using our topic-based measure of political risk in conjunction with a detailed dataset of each firm's lobbying expenditure by topic, that firms actively manage political risk associated with specific political topics by increasing their lobbying expenditure on these topics. The elasticity of lobbying is particularly high with respect to political risk associated with health care, energy, and the environment, suggesting that firms most expect to be able to influence political decisions on these topics.

Third, we generally find that the association with stock return volatility, and investment (but not employment growth) tends to be smaller for idiosyncratic than aggregate political risk, possibly suggesting that some of the association between aggregate political risk and these outcomes in the time-series may be attributable to reverse causality. Fourth, although the association with these outcomes are smaller for idiosyncratic than for aggregate political risk, idiosyncratic political risk may nevertheless play an important role in determining outcomes because more than two thirds in the variation of political risk is idiosyncratic, in the sense that it is neither explained by firm fixed effects, time fixed effects, nor heterogeneous loadings on aggregate political risk, suggesting that political risk has major effects because the identity of firms most affected by political risk changes substantially over time. Fifth, the dispersion in idiosyncratic risk across firms increases precisely when aggregate political risk is high, suggesting that uncertainty surrounding major political events affect outcomes not just through their effect on aggregate political risk but also by increasing the dispersion of idiosyncratic political risk.

Our results leave a number of avenues for future research. While stopping short of making causal claims about the effect of political risk on employment, investment, and stock return volatility, we hope that the ability to observe between-firm-and-time variation in political risk will contribute to identifying

causal effects of political risk in future work, for example by combining our data with information about natural experiments affecting the degree of political risk associated with particular topics. As highlighted by De Figueiredo and Richter (2014), data challenges have so far stymied progress in causal inference on the role of lobbying in politics. As we have demonstrated, these challenges can be met, at least to some extent, by a measure such as ours, in particular as we can also decompose risk into topics, allowing for a close direct mapping between the firm's political action and the political risk it faces.

Our results are intriguing also with an eye towards previous studies that have shown political risk to be priced on financial markets. If indeed a large part of this risk is idiosyncratic, then the previously documented risk premiums might indicate limits to portfolio diversification on the political dimension. One possibility is that uncertainty about exactly which firms in a sector are subject to political risk at any given point in time makes it difficult for investors to construct portfolios that effectively eliminate the associated risk. However, the availability of our time-varying firm-specific political risk measure also justifies reexamining the original question in prior studies of whether political risk is actually priced or not.

Another implication of our findings is that firms have scope for actively managing their exposure to (idiosyncratic) political risk through such activities as lobbying and donating to election campaigns. Indeed, we show that firms significantly increase both lobbying and campaign spending with political risk. Interestingly, Tahoun (2014) suggests that politicians take care to hone mutually-beneficial relations with specific firms within sectors, avoiding relations with competitors. Future work could explore whether this result together with our findings implies that firms are more subject to political risk when they have forged these ties with politicians (as they run the risk of losing benefits) or less so (as the politicians help them to reduce the risk).

References

Acemoglu, D., T. A. Hassan, and A. Tahoun (2016). The power of the street: Evidence from egypt's arab spring. *Fama-Miller Working Paper*, Available at SSRN 2485984.

Acemoglu, D., S. Johnson, A. Kermani, J. Kwak, and T. Mitton (2016). The value of connections in turbulent times: Evidence from the united states. *Journal of Financial Economics*, Forthcoming.

Acemoglu, D., S. Johnson, and J. A. Robinson (2002). Reversal of fortune: Geography and institutions in the making of the modern world income distribution. *The Quarterly Journal of Economics 117*(4), 1231–1294.

Akey, P. and S. Lewellen (2016). Policy uncertainty, political capital, and firm risk-taking. *Working paper*, London Business School.

Allee, K. D. and M. D. DeAngelis (2015). The structure of voluntary disclosure narratives: Evidence from tone dispersion. *Journal of Accounting Research 53*(2), 241–274.

Ansolabehere, S., J. M. Snyder Jr, and M. Tripathi (2002). Are pac contributions and lobbying linked? new evidence from the 1995 lobby disclosure act. *Business and politics 4*(2), 131–155.

Baker, S. R., N. Bloom, and S. J. Davis (2016). Measuring economic policy uncertainty. *Quarterly Journal of Economics*, Forthcoming.

Ball, R. and E. Bartov (1996). How naive is the stock market's use of earnings information? *Journal of Accounting and Economics 21*(3), 319–337.

Belo, F., V. D. Gala, and J. Li (2013). Government spending, political cycles, and the cross section of stock returns. *Journal of Financial Economics 107*(2), 305–324.

Benmelech, E. and T. J. Moskowitz (2010). The political economy of financial regulation: Evidence from us state usury laws in the 19th century. *The journal of Finance 65*(3), 1029–1073.

Bianco, W. T. and D. T. Canon (2013). *American Politics Today (Third Essentials Edition)*. McGraw-Hill/Irwin.

Bittlingmayer, G. (1998). Output, stock volatility, and political uncertainty in a natural experiment: Germany, 1880–1940. *The Journal of Finance 53*(6), 2243–2257.

Born, B. and J. Pfeifer (2014). Policy risk and the business cycle. *Journal of Monetary Economics 68*, 68–85.

Boutchkova, M., H. Doshi, A. Durnev, and A. Molchanov (2012). Precarious politics and return volatility. *Review of Financial Studies 25*(4), 1111–1154.

Bowen, R. M., A. K. Davis, and D. A. Matsumoto (2002). Do conference calls affect analysts' forecasts? *The Accounting Review 77*(2), 285–316.

Brogaard, J. and A. Detzel (2015). The asset-pricing implications of government economic policy uncertainty. *Management Science 61*(1), 3–18.

Caldeira, G. A., M. Hojnacki, and J. R. Wright (2000). The lobbying activities of organized interests in federal judicial nominations. *The Journal of Politics 62*(01), 51–69.

Caldera Sánchez, A., M. Rasmussen, and O. Röhn (2016). Economic resilience: what role for policies? *Journal of International Commerce, Economics and Policy 7*(02), 1650009.

Cooper, M. J., H. Gulen, and A. V. Ovtchinnikov (2010). Corporate political contributions and stock returns. *The Journal of Finance 65*(2), 687–724.

Correia, M. M. (2014). Political connections and sec enforcement. *Journal of Accounting and Economics 57*(2), 241–262.

de Figueiredo, J. (2014). The timing of lobbying. *Corruption, Business Law, and Business Ethics*.

de Figueiredo, J. and C. Cameron (2014). Endogenous cost lobbying. *NBER Working paper*.

De Figueiredo, J. M. (2004). The timing, intensity, and composition of interest group lobbying: An analysis of structural policy windows in the states. *National Bureau of Economic Research*.

De Figueiredo, J. M. and B. K. Richter (2014). Advancing the empirical research on lobbying. *Annual Review of Political Science 17*, 163–185.

De Figueiredo, J. M. and B. S. Silverman (2006). Academic earmarks and the returns to lobbying. *Journal of Law and Economics 49*(2), 597–625.

Du Bois, J. W., W. L. Chafe, C. Meyer, S. A. Thompson, and N. Martey (2000). Santa barbara corpus of spoken american english. *CD-ROM. Philadelphia: Linguistic Data Consortium*.

Dyer, T., M. H. Lang, and L. Stice-Lawrence (2016). The evolution of 10-k disclosure: Evidence from latent dirichlet allocation. pp. Working paper, University of North Carolina at Chapel Hill.

Faccio, M., R. W. Masulis, and J. McConnell (2006). Political connections and corporate bailouts. *The Journal of Finance 61*(6), 2597–2635.

Fernandez-Villaverde, J., L. Garicano, and T. Santos (2013). Political credit cycles: the case of the eurozone. *The Journal of Economic Perspectives 27*(3), 145–166.

Fisman, R. (2001). Estimating the value of political connections. *The American Economic Review 91*(4), 1095–1102.

Gemmill, G. (1992). Political risk and market efficiency: tests based in british stock and options markets in the 1987 election. *Journal of Banking & Finance 16*(1), 211–231.

Gentzkow, M. and J. M. Shapiro (2010). What drives media slant? evidence from us daily newspapers. *Econometrica 78*(1), 35–71.

Gilchrist, S., J. W. Sim, and E. Zakrajšek (2014). Uncertainty, financial frictions, and investment dynamics. Technical report, National Bureau of Economic Research.

Goldman, E., J. Rocholl, and J. So (2009). Do politically connected boards affect firm value? *Review of Financial Studies 22*(6), 2331–2360.

Goodell, J. W. and S. Vähämaa (2013). Us presidential elections and implied volatility: The role of political uncertainty. *Journal of Banking & Finance 37*(3), 1108–1117.

Heitshusen, V. (2000). Interest group lobbying and u.s. house decentralization: Linking informational focus to committee hearing appearances. *Political Research Quarterly 53*(1), 151–176.

Hill, M. D., G. W. Kelly, G. B. Lockhart, and R. A. Ness (2013). Determinants and effects of corporate lobbying. *Financial Management 42*(4), 931–957.

Hollander, S., M. Pronk, and E. Roelofsen (2010). Does silence speak? an empirical analysis of disclosure choices during conference calls. *Journal of Accounting Research 48*(3), 531–563.

Huang, A., R. Lehavy, A. Zang, and R. Zheng (2016). Analyst information discovery and interpretation roles: A topic modeling approach. *Ross School of Business Paper*.

Jayachandran, S. (2006). The jeffords effect. *Journal of Law and Economics 49*(2), 397–425.

Jegadeesh, N. and D. Wu (2015). Deciphering fedspeak: The information content of fomc meetings. pp. Working paper, Emory University.

Johnson, S. and T. Mitton (2003). Cronyism and capital controls: evidence from malaysia. *Journal of Financial Economics 67*(2), 351–382.

Kang, K. (2015). Policy influence and private returns from lobbying in the energy sector. *The Review of Economic Studies*, rdv029.

Kelly, B., L. Pástor, and P. Veronesi (2016). The price of political uncertainty: Theory and evidence from the option market. *The Journal of Finance*, Forthcoming.

Khwaja, A. I. and A. Mian (2005). Do lenders favor politically connected firms? rent provision in an emerging financial market. *The Quarterly Journal of Economics*, 1371–1411.

Koijen, R. S., T. J. Philipson, and H. Uhlig (2016). Financial health economics. *Econometrica 84*(1), 195–242.

Leuz, C. and F. Oberholzer-Gee (2006). Political relationships, global financing, and corporate transparency: Evidence from indonesia. *Journal of Financial Economics 81*(2), 411–439.

Li, J. and J. A. Born (2006). Presidential election uncertainty and common stock returns in the united states. *Journal of Financial Research 29*(4), 609–622.

Libby, R., P. A. Libby, and D. G. Short (2011). *Financial accounting*. McGraw-Hill/Irwin.

Loughran, T. and B. McDonald (2011). When is a liability not a liability? textual analysis, dictionaries, and 10-ks. *The Journal of Finance 66*(1), 35–65.

Manning, C. D., P. Raghavan, and H. Schütze (2008). *Introduction to information retrieval*. Cambridge University Press.

Matsumoto, D., M. Pronk, and E. Roelofsen (2011). What makes conference calls useful? the information content of managers' presentations and analysts' discussion sessions. *The Accounting Review 86*(4), 1383–1414.

Mayew, W. J. (2008). Evidence of management discrimination among analysts during earnings conference calls. *Journal of Accounting Research 46*(3), 627–659.

Milyo, J., D. Primo, and T. Groseclose (2000). Corporate pac campaign contributions in perspective. *Business and Politics 2*(1), 75–88.

Mishra, A. and S. Vishwakarma (2015, Dec). Analysis of tf-idf model and its variant for document retrieval. In *2015 International Conference on Computational Intelligence and Communication Networks (CICN)*, pp. 772–776.

North, D. C. (1981). *Structure and change in economic history*. Norton.

Olson, M. (1965). *The logic of collective action*. Harvard University Press.

Pantzalis, C., D. A. Stangeland, and H. J. Turtle (2000). Political elections and the resolution of uncertainty: the international evidence. *Journal of Banking & Finance 24*(10), 1575–1604.

Pastor, L. and P. Veronesi (2012). Uncertainty about government policy and stock prices. *The Journal of Finance 67*(4), 1219–1264.

Pastor, L. and P. Veronesi (2013). Political uncertainty and risk premia. *Journal of Financial Economics 110*(3), 520–545.

Ramos, J. (2003). Using tf-idf to determine word relevance in document queries. In *Proceedings of the first instructional conference on machine learning*.

Richter, B. K., K. Samphantharak, and J. F. Timmons (2009). Lobbying and taxes. *American Journal of Political Science 53*(4), 893–909.

Roberts, B. E. (1990). A dead senator tells no lies: Seniority and the distribution of federal benefits. *american Journal of Political science*, 31–58.

Snowberg, E., J. Wolfers, and E. Zitzewitz (2007). Partisan impacts on the economy: evidence from prediction markets and close elections. *The Quarterly Journal of Economics 122*(2), 807–829.

Song, M. and Y.-f. B. Wu (2008). *Handbook of research on text and web mining technologies*. IGI Global.

Stein, L. C. and E. C. Stone (2013). The effect of uncertainty on investment, hiring, and r&d: Causal evidence from equity options. *Working paper*, Available at SSRN 1649108.

Tahoun, A. (2014). The role of stock ownership by us members of congress on the market for political favors. *Journal of Financial Economics 111*(1), 86–110.

Tahoun, A. and L. Van Lent (2016). The personal wealth interests of politicians and government intervention in the economy. *Available at SSRN 1570219*.

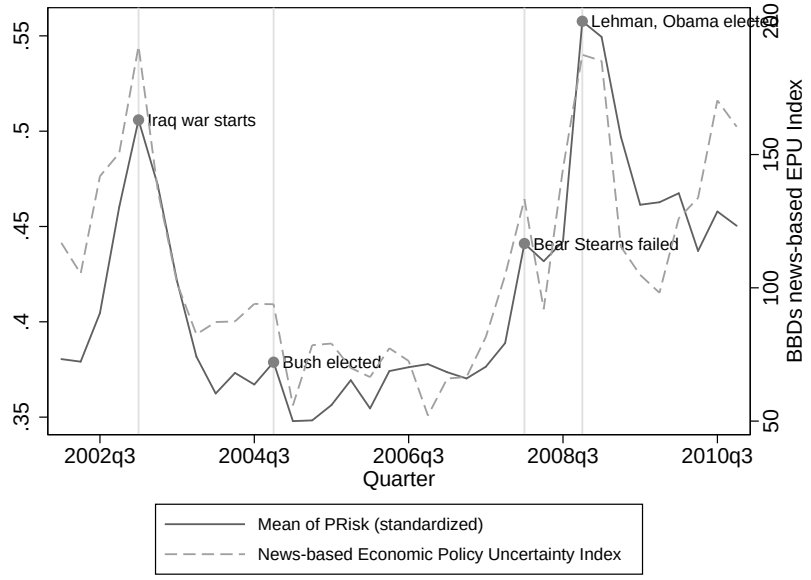
Vidal, J. B. I., M. Draca, and C. Fons-Rosen (2012). Revolving door lobbyists. *The American Economic Review 102*(7), 3731–3748.

Voth, H.-J. (2002). Stock price volatility and political uncertainty: Evidence from the interwar period. pp. MIT Department of Economics Working Paper.

Wiesen, T. and P. Wysocki (2015). Which firms are affected by regulation? a new text-based measure from corporate disclosures. *Working Paper*.

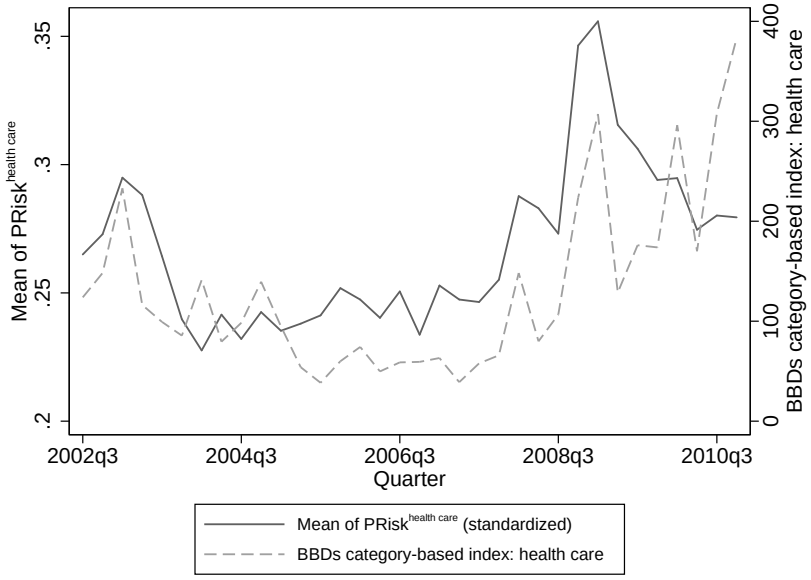
Yu, F. and X. Yu (2012). Corporate lobbying and fraud detection. *Journal of Financial and Quantitative Analysis 46*(06), 1865–1891.

Figure 1: Time-average of $\text{PRisk}_{i,t}$



Notes: This figure shows the time-average of $\text{PRisk}_{i,t}$ (standardized) together with the news-based Economic Policy Uncertainty Index developed by Baker, Bloom, and Davis (2016). The Pearson correlation between the two is 0.845 with a p-value of 0.000. The same correlation for large firms (with assets greater than the median in our sample) is 0.882 with a p-value of 0.000. $\text{PRisk}_{i,t}$ is standardized by its standard deviation.

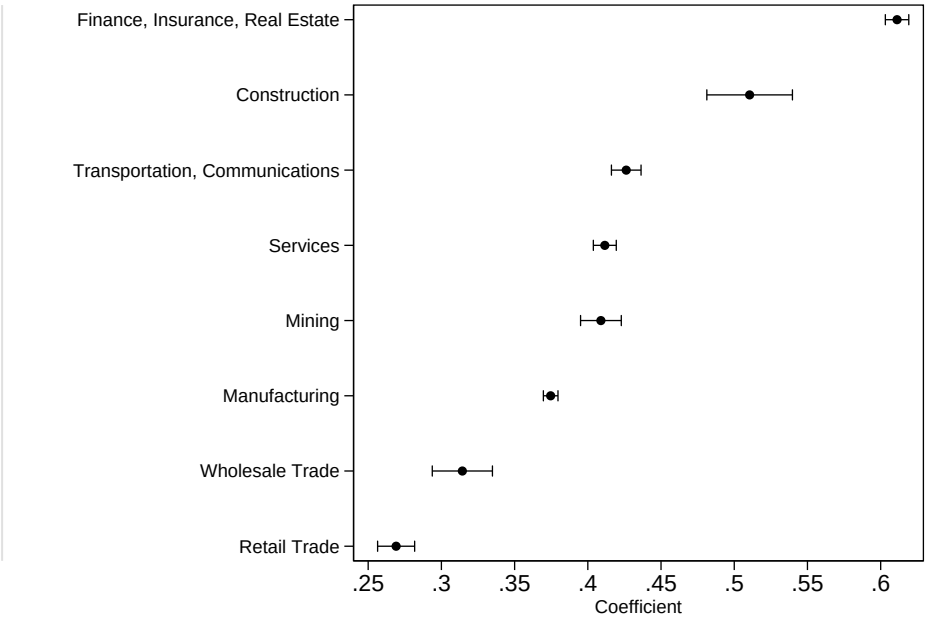
Figure 2: Time-average of $\text{PRisk}_{i,t}^{T}$ associated with $T =$ health care



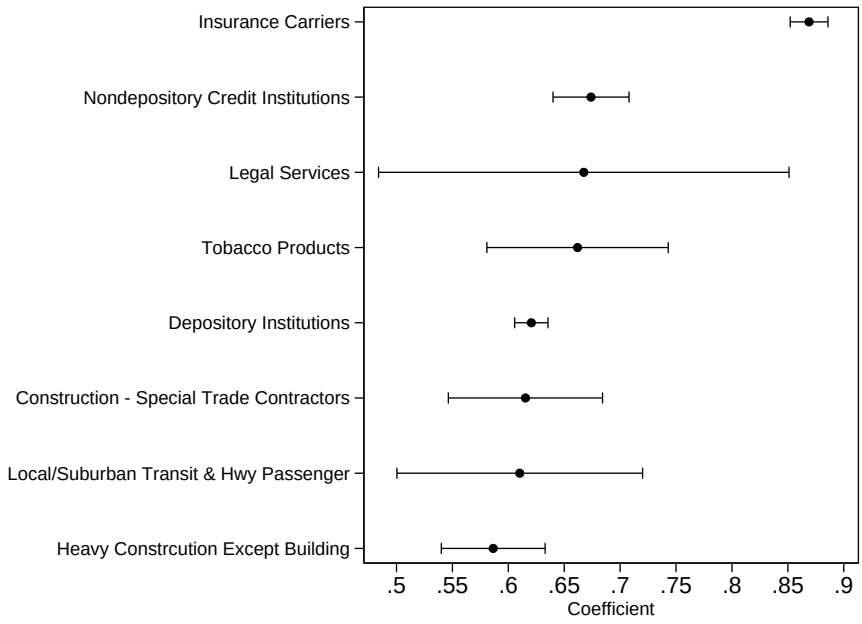
Notes: This figure shows the time-average of $\text{PRisk}_{i,t}^{T}$ (standardized) with $T =$ health care together with the category-based health care index developed by Baker, Bloom, and Davis (2016). The correlation between the two series is 0.663 with a p-value 0.000. $\text{PRisk}_{i,t}^{T}$ is standardized by its standard deviation.

Figure 3: Average $\text{PRisk}_{i,t}$ by sector

Panel A: Mean of $\text{PRisk}_{i,t}$ by SIC division

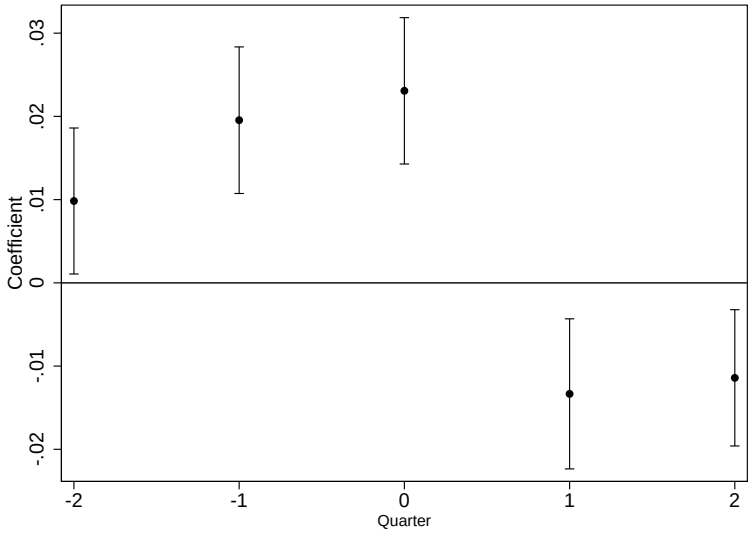


Panel B: 2-digit SIC sectors with highest mean of $\text{PRisk}_{i,t}$



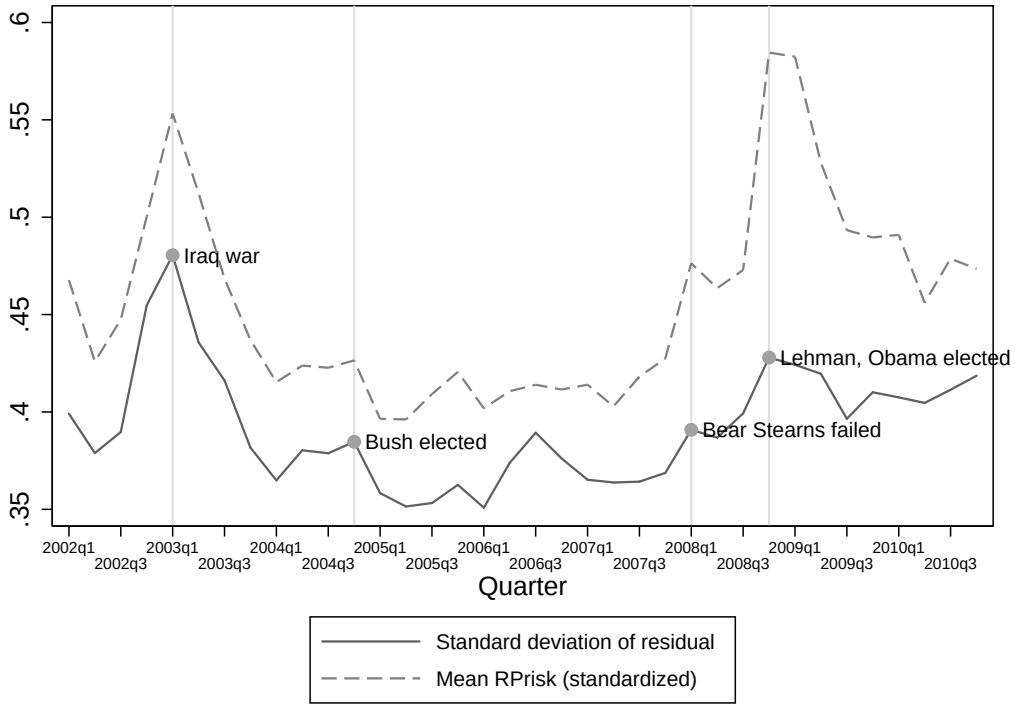
Notes: This figure plots the coefficients and 95% confidence intervals from a projection of $\text{PRisk}_{i,t}$ (standardized) on a complete set of sector dummies without a constant. In Panel A we use a dummy for each 1-digit SIC industry division and plot the top 8 coefficients; in Panel B we use a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

Figure 4: $\text{PRisk}_{i,t}$ around federal elections



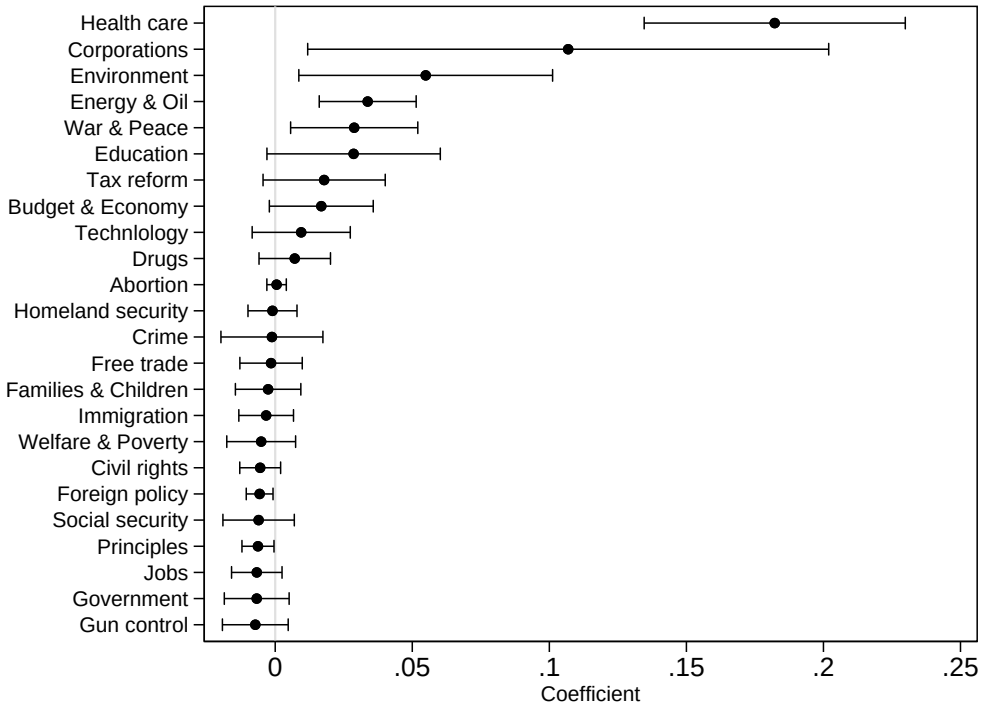
Notes: This figure plots the coefficients and 95% confidence intervals from a regression of $\text{PRisk}_{i,t}$ (standardized) on dummy variables indicating quarters with federal elections, as well as two leads and lags. The specification also controls for firm fixed effects and the log of firm assets $\text{PRisk}_{i,t}$ is standardized by its standard deviation. Standard errors are clustered at the firm level.

Figure 5: Time variation of idiosyncratic $\text{PRisk}_{i,t}$



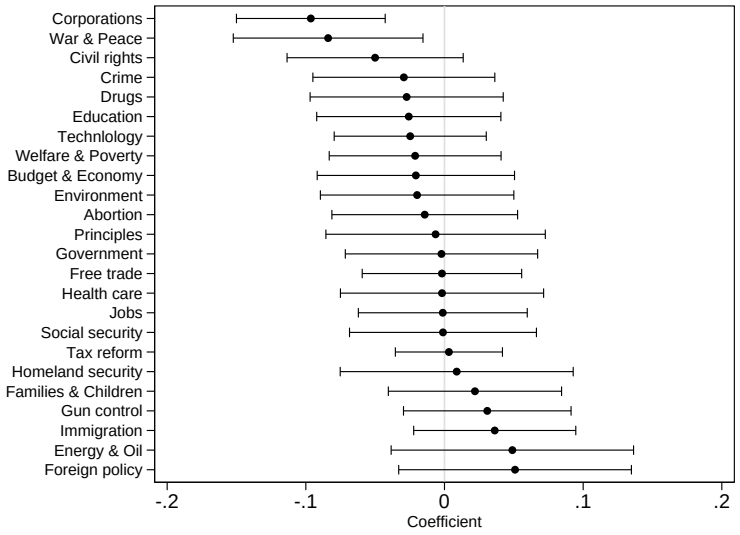
Notes: This figure shows the time variation of the standard deviation of the residual from a projection of $\text{PRisk}_{i,t}$ (standardized) on firm and industry $\times$ time fixed effects together with the mean of $\text{PRisk}_{i,t}$ (standardized) across firms at each point in time. A regression of the former on the latter yields a coefficient of .505 (s.e. = .0512). $\text{PRisk}_{i,t}$ is standardized by its standard deviation.

Figure 6: Lobby expenditure by political topics



Notes: This figure plots the coefficients and 95% confidence intervals of $\text{topic}_{i,t}^{T} \times \text{PRisk}_{i,t}^{T}$ for $T = \{1, \ldots, 24\}$ from a regression of $\log(1+\$ \text{ lobby expense}_{i,t}^{T})$ on $\text{topic}_{i,t}^{T} \times \text{PRisk}_{i,t}^{T}$ (standardized) for $T = \{1, \ldots, 24\}$, firm, topic, time fixed effects, and log of firm assets. The variables $\text{topic}_{i,t}^{T}$ are dummy variables for each given topic. $\text{PRisk}_{i,t}$ is standardized by its standard deviation. Standard errors are clustered at the firm level.

Figure 7: Investment by political topics



Notes: This figure plots the coefficients and 95% confidence intervals from a regression of capital investment $I_{i,t}/K_{i,t-1}$ (defined as in Table 10) on our topic-based measure of political risk, $\text{PRisk}_{i,t}^{T}$ (standardized). The specification controls for firm and time fixed effects, and the log of firm assets. $\text{PRisk}_{i,t}$ is standardized by its standard deviation. Standard errors are clustered at the firm level.

Table 1: Summary statistics

Panel A: Firm-year summary statistics	Mean	Median	St. dev.	Min	Max	N
$\text{PRisk}_{i,t}$ (not standardized)	121.40	74.68	188.38	0.00	5,009.33	24,261
Log(1+\$ federal contracts$_{i,t}$)	10.23	12.52	7.63	0.00	24.31	2,428
Log(assets$_{i,t}$)	7.02	6.93	2.08	0.16	14.94	23,839
$\Delta\text{emp}_{i,t}/\text{emp}_{i,t-1}$	0.06	0.03	0.19	–0.50	1.00	22,198
Log(1+\$ donation expense$_{i,t}$)	2.15	0.00	4.30	0.00	14.94	24,261
Number of donations$_{i,t}$	13.31	0.00	57.72	0.00	1,387.00	24,261
$\text{Hedge}_{i,t}$	0.10	0.00	0.29	0.00	1.00	24,261
Panel B: Firm-quarter summary statistics	**Mean**	**Median**	**St. dev.**	**Min**	**Max**	N
$\text{PRisk}_{i,t}$ (not standardized)	120.02	58.19	235.58	0.00	8,268.97	85,152
Unrestricted $\text{PRisk}_{i,t}$ (not standardized)	4,717.94	4,612.01	768.75	1,980.20	10,296.14	85,152
Unweighted $\text{PRisk}_{i,t}$ (not standardized)	69.37	49.48	75.14	0.00	1,933.51	85,152
Textbook-based $\text{PRisk}_{i,t}$ (not standardized)	90.44	35.33	209.33	0.00	7,793.15	85,152
Realized $\text{volatility}_{i,t}$	0.03	0.03	0.02	0.00	1.16	81,310
Implied $\text{volatility}_{i,t}$	0.44	0.40	0.21	0.01	2.00	55,152
Log(1+\$ lobby expense$_{i,t}$)	2.43	0.00	4.85	0.00	16.76	61,584
$\Delta\text{sales}_{i,t}/\text{sales}_{i,t-1}$	0.16	0.02	14.90	–28.20	3,964.00	81,581
$I_{i,t}/K_{i,t-1}$	0.10	0.08	0.07	–0.10	0.40	55,266
$(\text{EPS}_{i,t} - \text{EPS}_{i,t-4})/\text{price}_{i,t}$	–0.00	0.00	0.59	–66.19	51.08	80,114
Log(1+\$ federal contracts$_{i,t}$)	10.25	12.59	7.64	0.00	24.31	9,431
Average stock return 7 days prior to earnings $\text{call}_{i,t}$	0.00	0.00	0.01	–0.15	0.31	63,345
Average stock return 30 days prior to earnings $\text{call}_{i,t}$	0.00	0.00	0.01	–0.06	0.11	63,179
Average stock return 90 days prior to earnings $\text{call}_{i,t}$	0.00	0.00	0.00	–0.03	0.08	62,730
$\mathbb{1}\{\text{Presidential elections}\}_t$	0.06	0.00	0.24	0.00	1.00	72,368
$\mathbb{1}\{\text{Congressional elections}\}_{i,t}$	0.20	0.00	0.40	0.00	1.00	72,368
$\mathbb{1}\{\text{State election}\}_{i,t}$	0.30	0.00	0.46	0.00	1.00	72,368
Log(assets$_{i,t}$)	7.09	6.99	2.02	–0.17	15.11	82,540
$\mathbb{1}\{\text{assets}_{i,t} > \text{p50}\}$	0.50	0.50	0.50	0.00	1.00	82,540
Panel C: Firm-topic-quarter summary statistics	**Mean**	**Median**	**St. dev.**	**Min**	**Max**	N
$\text{PRisk}^T_{i,t}$ (not standardized)	9.07	0.00	23.98	0.00	2,841.26	2,043,648
Log(assets$_{i,t}$)	7.09	6.99	2.01	0.61	15.11	1,980,960
$\mathbb{1}\{\text{average assets} > \text{p50}\}_{i,t}$	0.50	0.50	0.50	0.00	1.00	1,980,960
$\mathbb{1}\{\text{average dependence on federal gov} > \text{p50}\}_s$	0.18	0.00	0.38	0.00	1.00	1,736,832
$\mathbb{1}\{\text{average state corruption rate} > \text{p50}\}_s$	0.48	0.00	0.50	0.00	1.00	1,736,832
$\mathbb{1}\{\text{federal election quarter}\}_t$	0.23	0.00	0.42	0.00	1.00	1,736,832
$\mathbb{1}\{\text{state election year}\}_{s,t}$	0.30	0.00	0.46	0.00	1.00	1,736,832
$\mathbb{1}\{\text{incumbent not candidate}\}_{s,t}$	0.15	0.00	0.35	0.00	1.00	1,736,832

Notes: This table shows the mean, median, standard deviation, minimum, maximum, and number of non-missing observations of all variables that are used the regressions. Panel A summarizes the variables used in the regressions on firm-year units, Panel B the variables used in regressions on firm-quarter units, and Panel C the variables used in regressions on firm-topic-quarter units.

Table 2: Transcript excerpts with highest $\text{PRisk}_{i,t}$

Firm Name	Call Date	$\text{PRisk}_{i,t}$ (standardized)	Text surrounding bigram with highest weight ($f_{b,\mathbb{P}}/B_{\mathbb{P}}$)
NEVADA GOLD CASINOS INC	10-Sep-08	37.36	gaming industry is currently **supporting a ballot** initiative to **amend the constitution to authorize an** increase in the —BET— limits allow additional
Axis Capital Holdings Limited	9-Feb-10	34.98	accident year ratios the combined ratios we have talked about **the political** —RISK— business particularly really shouldnt be looked at on a
Female Health	10-Feb-09	31.82	market acceptance the economic and business environment and the impact **of government pressures** currency —RISKS— capacity efficiency and supply **constraints and** other
Applied Energetics, Inc.	11-May-09	29.29	of products and the —UNCERTAINTY— of the timing and **magnitude of government funding and** customer orders **dependence on** sales **to government** customers
FPIC Insurance Group, Inc.	30-Oct-08	28.01	a —CHANCE— for national **tort reform and** i dont see **the constitution of** congress **changing in** such a way after **this election**
BANKFINANCIAL CORP	4-Nov-08	27.59	was **an accurate** metaphor and really given all the —UNCERTAINTIES— **of government involvement** in operations and business activities and given the capital
World Acceptance Corporation	25-Jul-06	26.46	management analyst i wanted to followup on the regulatory **front the states** that you had **mentioned the** —POSSIBILITY— of some positive **legislation**
Magellan Health Services	29-Jul-10	25.31	future so this is a time of quite —UNCERTAINTY— for **the states** they are not **sure what** the fmap will be if
Piedmont Natural Gas	9-Jun-09	24.76	your point as you will recall in all three of **the states** that we have serve jim we are —EXPOSED— only to
Platinum Underwriters Holdings Ltd	18-Feb-10	23.95	we have had historically had a very small participation in **the political** —RISK— market backing only a couple of players **parties that**
Mechanical Technology Inc.	12-May-08	21.78	measurement business on a **small number** customers an potential loss **of government funding** —RISK— related to developing mobion direct methanol **fuel cells**
Advanced Photonix	14-Aug-06	19.04	market due primarily to the —UNPREDICTABLE— nature of the timing **of government contracts** overall revenue growth met the companys expectations for the
TravelCenters of America	24-Feb-10	18.75	in the future whether due to speculation or the impact **of government policy such** an increase or the —POSSIBILITY— of one requires
Metalink	25-Jul-02	18.36	important to alcatel especially given the situation **economic situation** in **the states** ph and **the** —**threat**— **that** alcatel **is seeing** in china
GTSI Corp.	7-Aug-08	17.85	is somewhat —**uncertain**— **but** thank god we a whole bunch **of government** bureaucrats **that spend** the money that will still be in
TRC Companies	12-Aug-04	17.76	and this is where we are going to allocate it **the states** are —HESITANT— to move forward so until the tbbill **is**
ResCare Inc.	5-Nov-10	17.27	covenants and other —RISK— **factors and** various trends concerning **privatization of government programs** in our filings under federal securities **laws including** our
Equinix Inc.	5-Nov-02	16.68	that may mean for exodus base of customers here in **the states all** of this presents a very —UNCERTAIN— landscape for the
Merge Healthcare, Inc.	30-Apr-09	16.60	the market this sentiment was echoed by mckessons senior vp **of government** strategy last week in businessweek and i quote —UNCERTAINTY— creates
ADDUS HOMECARE CORP	4-Nov-10	16.52	for joint venture and acquisition candidates changes in the interpretation **of government regulations and** other —RISKS— set forth in the —RISK— factor

Notes: This table lists the top 20 transcripts sorted on $\text{PRisk}_{i,t}$ together with their associated firm name, earnings call date, transcript score, and the text snipped surrounding the bigram that has received the highest weight in the transcript. Bigrams such that $b \in \mathbb{P}\backslash\mathbb{N}$ are marked bold; the bigram that received the highest weight is precisely in the middle of the text snipped. A synonym of risk, risky, uncertain, or uncertainty is written with small caps and surround by dashes. $\text{PRisk}_{i,t}$ is normalized by its standard deviation. Duplicate firms are removed from this top list.

Table 3: Top 60 political bigrams used in construction of $\text{PRisk}_{i,t}$

Bigram	$(f_{b,\mathbb{P}}/B_{\mathbb{P}}) \times 10^5$	Across-transcript frequency	Bigram	$(f_{b,\mathbb{P}}/B_{\mathbb{P}})$*within-transcript frequency
the constitution	84.45	5	the constitution	84.45
the states	56.38	156	the states	61.08
public opinion	49.98	3	public opinion	49.98
interest groups	49.74	7	interest groups	49.74
of government	48.51	150	of government	49.50
in congress	32.75	72	in congress	33.21
national government	28.56	1	national government	28.56
the civil	25.61	15	the civil	25.61
elected officials	25.36	2	elected officials	25.36
politics is	22.65	4	the political	24.89
the political	21.42	294	politics is	22.65
office of	21.42	30	office of	22.16
the bureaucracy	20.19	1	the bureaucracy	20.19
for governor	19.65	2	for governor	19.65
and senate	19.45	11	and senate	19.45
government and	18.71	95	care reform	19.31
support for	16.74	60	government and	18.91
in government	16.25	77	support for	17.03
congress to	15.51	10	the epa	16.44
political process	15.27	3	in government	16.25
care reform	15.02	63	congress to	15.51
government in	14.77	27	the legislative	15.34
due process	14.77	2	political process	15.27
the epa	14.66	46	and social	15.03
president obama	14.53	4	government in	14.77
and social	14.53	30	due process	14.77
congress the	14.28	4	president obama	14.53
the republican	14.03	4	congress the	14.28
tea party	14.03	1	the republican	14.03
the legislative	14.03	47	tea party	14.03
of civil	13.79	2	court has	13.79
court has	13.79	17	of civil	13.79
groups and	13.54	51	ruled that	13.68
civil war	13.30	2	groups and	13.54
the congress	13.30	28	the presidential	13.34
shall have	13.30	1	civil war	13.30
the constitutional	12.56	3	the congress	13.30
new deal	12.56	9	shall have	13.30
ruled that	12.31	10	the constitutional	12.56
the presidential	12.31	26	new deal	12.56
of representatives	12.06	5	governor and	12.48
a yes	12.01	7	of representatives	12.06
yes no	11.88	57	a yes	12.01
african americans	11.82	2	yes no	11.88
economic policy	11.82	2	african americans	11.82
a political	11.82	35	economic policy	11.82
of social	11.82	7	a political	11.82
government policy	11.57	15	of social	11.82
federal courts	11.57	2	and political	11.78
the democratic	11.33	2	government policy	11.57
argued that	11.33	3	federal courts	11.57
the faa	11.30	10	the democratic	11.33
government the	11.08	13	argued that	11.33
governor and	10.92	8	the faa	11.30
president has	10.83	4	government the	11.08
the politics	10.83	8	president has	10.83
white house	10.83	8	the politics	10.83
policy is	10.59	48	white house	10.83
and political	10.59	316	policy is	10.81
general election	10.59	3	general election	10.59

Notes: This table shows the top 60 political bigrams near synonyms sorted on their individual score and sorted on score*average within-transcript frequency in the left and right panel, respectively. The left panel shows in an additional column the frequency of the bigram in across all transcripts.

Table 4: Top 10 political bigrams per topic ($T = 24$)

Topic	Top ten bigrams
Abortion	"embryonic stem", "stem cell", "stem cells", "the fetus", "pregnant woman", "litmus test", "of unintended", "cell lines", "taken across", "womens health"
Budget & Economy	"free markets", "home values", "the subprime", "home mortgages", "the deficit", "buy up", "subprime mortgages", "and freddie", "spending freeze", "mortgage industry"
Civil Rights	"the flag", "domestic partners", "the patriot", "the civil", "union of", "el paso", "the institution", "the constitution", "the aclu", "their spouses"
Corporations	"of commerce", "bain capital", "filing for", "community banks", "timber company", "on corporations", "which move", "subsidy for", "free markets", "auto industry"
Crime	"three strikes", "justice system", "the ranger", "local law", "law enforcement", "second chance", "the byrd", "criminal justice", "dna testing", "all capital"
Drugs	"in colombia", "illegal drugs", "of drug", "on drugs", "for drug", "drug testing", "the combat", "disparity between", "of drugs", "drug treatment"
Education	"private school", "pell grants", "public schools", "teachers and", "math and", "schools to", "and math", "schools that", "education reform", "in reading"
Energy & Oil	"global warming", "nuclear power", "climate change", "greenhouse gas", "clean energy", "the arctic", "energy independence", "gas emissions", "dependence on", "the kyoto"
Environment	"clean air", "in mercury", "great lakes", "for clunkers", "air act", "environmental health", "environmental protection", "mercury emissions", "the clean", "air and"
Families & Children	"child welfare", "entertainment media", "children from", "foster care", "sexually transmitted", "entertainment products", "conference on", "video games", "for adoption", "flexible work"
Foreign Policy	"nuclear weapons", "the nuclear", "government of", "with russia", "georgia and", "a nuclear", "of nuclear", "free markets", "and ukraine", "the taiwan"
Free Trade	"trade agreement", "the wto", "trade barriers", "of cape", "trade with", "duties on", "open markets", "in jordan", "fast track", "on trade"
Government Reform	"general elections", "the lineitem", "voter registration", "of dc", "the polls", "from federal", "for representation", "on rules", "suppress the", "representation in"
Gun Control	"the nra", "gun control", "second amendment", "the gun", "gun laws", "waiting period", "guns in", "checked baggage", "of gun", "day waiting"
Health Care	"part d", "prescription drug", "medicare part", "generic drugs", "care plan", "drugs from", "have health", "community health", "their health", "childrens health"
Homeland Security	"nuclear weapons", "missile defense", "the patriot", "the intelligence", "our troops", "in afghanistan", "of military", "on terror", "of war", "armed forces"
Immigration	"illegal immigrants", "illegal immigration", "the border", "illegal aliens", "temporary worker", "operational control", "the borders", "the shadows", "the immigration", "secure our"
Jobs	"pay raises", "overtime pay", "air traffic", "job growth", "wage to", "unemployment benefits", "million jobs", "the faa", "higher when", "jobs lost"
Principles & Values	"of hawaii", "third way", "john f", "on principles", "run for", "justice of", "democratic leadership", "leadership council", "of church", "of hope"
Social Security	"younger workers", "private accounts", "retirement age", "of social", "their retirement", "personal retirement", "trust fund", "interest saved", "security system", "their social"
Tax Reform	"estate tax", "the estate", "the amt", "tax cuts", "bush tax", "tax relief", "alternative minimum", "tax cut", "minimum tax", "tax plan"
Technology	"the fcc", "on internet", "space program", "fairness doctrine", "internet a", "top markets", "privacy is", "internet is", "on technology", "internet to"
War & Peace	"our troops", "nuclear weapons", "from iraq", "to war", "in afghanistan", "of iraq", "a nuclear", "osama bin", "the surge", "mass destruction"
Welfare & Poverty	"home ownership", "block grants", "the proportion", "reducing by", "on less", "extreme global", "service by", "of extreme", "drug treatment", "south side"

Notes: This table lists for each of the $T = \{1, \ldots, 24\}$ topics the topic name (column 1) and the top ten bigrams (column 2). We obtain the top ten bigrams from a list of all bigrams in a topic category that is sorted on $f_{b,\mathbb{P}}/B_{\mathbb{P}}$ * average within-trascript frequency of that bigram.

Table 5: Validating the $\text{PRisk}_{i,t}$ measure (1)

Panel A	Realized volatility$_{i,t}$ (standardized)							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\text{PRisk}_{i,t}$ (standardized)	0.187***	0.076***	0.062***	0.061***	0.028***	0.021***	0.036***	0.025***
	(0.013)	(0.012)	(0.011)	(0.010)	(0.007)	(0.007)	(0.008)	(0.007)
Mean of $\text{PRisk}_{i,t}$ (standardized)		0.441***						
		(0.006)						
Stock return 7 days prior$_{i,t}$							4.233***	
							(0.664)	
Earnings announcement surprise$_{i,t}$								–0.040
								(0.029)
R^2	0.108	0.299	0.465	0.491	0.640	0.687	0.664	0.644
N	80,370	80,370	80,370	80,370	80,370	80,370	62,156	77,946
Panel B	Implied volatility$_{i,t}$ (standardized)							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\text{PRisk}_{i,t}$ (standardized)	0.199***	0.100***	0.086***	0.071***	0.031***	0.022***	0.036***	0.031***
	(0.016)	(0.015)	(0.015)	(0.012)	(0.007)	(0.006)	(0.007)	(0.007)
Mean of $\text{PRisk}_{i,t}$ (standardized)		0.409***						
		(0.006)						
Stock return 7 days prior$_{i,t}$							0.473	
							(0.438)	
Earnings announcement surprise$_{i,t}$								–0.112**
								(0.050)
R^2	0.178	0.342	0.448	0.499	0.730	0.776	0.742	0.731
N	54,882	54,882	54,882	54,882	54,882	54,882	43,808	53,750
Time FE	no	no	yes	yes	yes	yes	yes	yes
Firm FE	no	no	no	no	yes	yes	yes	yes
Sector FE	no	no	no	yes	implied	implied	implied	implied
Sector*time FE	no	no	no	no	no	yes	no	no

Notes: This table shows results of panel regressions with realized and implied volatility as the dependent variable in Panel A and B, respectively. Realized volatility$_{i,t}$ is the standard deviation of stock holding returns for the 90 days of firm i in quarter t and is winsorized as in Stein and Stone (2013). Implied volatility$_{i,t}$ is for 90-day at-the-money options of firm i and time t and is also winsorized as in Stein and Stone (2013). $\text{PRisk}_{i,t}$ is our measure for political risk. Stock return 7 days prior$_{i,t}$ is the average stock return for the 7 days prior to the earnings call event. Earnings announcement surprise$_{i,t}$ is defined as $(\text{EPS}_{i,t} - \text{EPS}_{i,t-4})/\text{price}_{i,t}$, where $\text{EPS}_{i,t}$ are earnings per share (basic) of firm i in time t and $\text{price}_{i,t}$ is the closing price of quarter t. All regressions control for the log of firm assets. Realized volatility$_{i,t}$, implied volatility$_{i,t}$, and $\text{PRisk}_{i,t}$ are standardized by their respective standard deviation. Standard errors are clustered at the firm level. ***, **, and * denote statistical significance at the 1, 5, and 10% level, respectively.

Table 6: Idiosyncratic Political Risk

Panel A	Realized volatility$_{i,t}$ (standardized)					
	(1)	(2)	(3)	(4)	(5)	(6)
PRisk$_{i,t}$ (standardized)	0.028***	0.029***	0.029***	0.048***	0.049***	0.046***
	(0.007)	(0.007)	(0.007)	(0.016)	(0.016)	(0.016)
EPU beta$_{i,t}$ × mean of PRisk$_{i,t}$		71.313				
		(50.917)				
EPU beta$_{i,t}$ × EPU$_t$			41.349*			
			(21.644)			
Log(1+$ federal contracts$_{i,t}$					–0.001	0.093***
					(0.004)	(0.015)
Log(1+$ federal contracts$_{i,t}$) × mean of PRisk$_{i,t}$						–0.014***
						(0.002)
R^2	0.640	0.638	0.638	0.714	0.714	0.725
N	80,370	78,248	78,248	9,099	9,099	9,099
Panel B	Implied volatility$_{i,t}$ (standardized)					
	(1)	(2)	(3)	(4)	(5)	(6)
PRisk$_{i,t}$ (standardized)	0.031***	0.031***	0.031***	0.056***	0.056***	0.053***
	(0.007)	(0.007)	(0.007)	(0.016)	(0.016)	(0.016)
EPU beta$_{i,t}$ × mean of PRisk$_{i,t}$		87.777*				
		(47.300)				
EPU beta$_{i,t}$ × EPU$_t$			25.849			
			(17.788)			
Log(1+$ federal contracts$_{i,t}$)					0.001	0.092***
					(0.004)	(0.014)
Log(1+$ federal contracts$_{i,t}$) × mean of PRisk$_{i,t}$						–0.014***
						(0.002)
R^2	0.730	0.729	0.728	0.758	0.758	0.769
N	54,882	54,696	54,696	8,862	8,862	8,862
Time FE	yes	yes	yes	yes	yes	yes
Firm FE	yes	yes	yes	yes	yes	yes
Sector FE	implied	implied	implied	implied	implied	implied
Sector*time FE	no	no	no	no	no	no

Notes: This table is similar to Table 5; it shows results of panel regressions with realized and implied volatility as the dependent variable in Panel A and B, respectively. EPU beta$_{i,t}$ is the firm-specific regression beta obtained from a regression of daily stock returns on Baker, Bloom, and Davis' daily Econonmic Policy Uncertainty Index; mean of PRisk$_{i,t}$ is the cross-sectional average at each point in time of PRisk$_{i,t}$; EPU$_t$ is the afromentioned Economic Policy Index; log(1+$ federal contracts$_{i,t}$ is the total amount of federal contracts awarded to firm i in quarter t. All regressions control for the log of firm assets. All remaining variables are defined as in Table 5. Standard errors are clustered at the firm level. ***, **, and * denote statistical significance at the 1, 5, and 10% level, respectively.

Table 7: Lobbying by political topics

	$\text{Log}(1+\$ \text{ lobby})^T_{i,\tau,t}$				
	(1)	(2)	(3)	(4)	(5)
$PRisk^T_{i,t}$ (standardized)	0.051***	0.052***	0.044***	0.045***	0.004**
	(0.006)	(0.006)	(0.006)	(0.006)	(0.002)
Time FE	yes	yes	yes	implied	yes
Firm FE	no	yes	yes	yes	implied
Topic FE	no	no	yes	yes	implied
SIC2 FE	yes	implied	implied	implied	implied
SIC2*time FE	no	no	no	yes	no
Firm*topic FE	no	no	no	no	yes
Number of firms	3,633	3,633	3,633	3,633	3,521
Number of periods	24	24	24	24	24
R^2	0.015	0.042	0.064	0.066	0.506
N	1,437,144	1,437,144	1,437,144	1,437,144	1,434,456

This table shows the results from regressions of $\text{Log}(1+\$ \text{ lobby})^T_{i,t}$ on $\text{PRisk}^T_{i,t}$ (standardized). Lobby expense is semi-annual for all pre-2008 quarters; the quarters for which there is no lobby expense are excluded from the regression. $\text{PRisk}^T_{i,t}$ 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.

Table 8: Lobbying by political topics: Heterogeneity

	$\text{Log}(1+\$ \text{ lobby})_{i,\tau,t}$					
	(1)	(2)	(3)	(4)	(5)	(6)
$PRisk^T_{i,t}$	0.015***	0.047***	0.038***	0.051***	0.048***	0.050***
	(0.004)	(0.007)	(0.008)	(0.007)	(0.007)	(0.007)
$PRisk^T_{i,t} \times \mathbb{1}\{\text{av firm assets} > \text{median}\}_i$	0.063***					
	(0.012)					
$PRisk^T_{i,t} \times \mathbb{1}\{\text{av dependence on federal gov} > \text{median}\}_{s,t}$		0.012				
		(0.015)				
$PRisk^T_{i,t} \times \mathbb{1}\{\text{av state corruption rate} > \text{median}\}_{s,t}$			0.025**			
			(0.011)			
$PRisk^T_{i,t} \times \mathbb{1}\{\text{federal election quarter}\}_t$				–0.003		
				(0.006)		
$PRisk^T_{i,t} \times \mathbb{1}\{\text{state election year}\}_{s,t}$					0.008	
					(0.007)	
$PRisk^T_{i,t} \times \mathbb{1}\{\text{incumbent not candidate}\}_{s,t}$						–0.000
						(0.009)
$\text{Log(assets)}_{i,t}$		0.030***	0.030***	0.031***	0.031***	0.031***
		(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Year-quarter FE	yes	yes	yes	yes	yes	yes
Firm FE	yes	yes	yes	yes	yes	yes
Topic FE	yes	yes	yes	yes	yes	yes
Number of firms	3,633	3,109	3,109	3,109	3,109	3,109
Number of periods	24	24	24	24	24	24
R^2	0.064	0.065	0.065	0.065	0.065	0.065
N	1,437,144	1,253,952	1,253,952	1,253,952	1,253,952	1,253,952

Notes: $\mathbb{1}\{\text{av firm assets} > \text{median}\}_i$ is an indicator equal to one if firm i's assets are larger than the median firm assets of the regression sample; $\mathbb{1}\{\text{av state dependence on federal gov} > \text{median}\}_{s,t}$ is a time-varying state-level indicator equal to one if the federal $\text{funds}_{s,t}$/$\text{income tax}_{s,t}$, where federal $\text{funds}_{s,t}$ are total funds received by state s in year t and $\text{income tax}_{s,t}$ are the sum of business and individual income tax collected by state s in year t, is greater than the median state dependences in time t; $\mathbb{1}\{\text{av state corruption} > \text{median}\}_{s,t}$ is a time-varying state-level indicator equal to one if the time average of political $\text{convictions}_{s,t}$/$\text{state population}_{s,t}$, where political $\text{convictions}_{s,t}$ are the number of convicted politicians in state s in year t and $\text{state population}_{s,t}$ is the total population of state s in year t, is greater than the median convicted politicians in time t; $\mathbb{1}\{\text{federal election quarter}\}_t$ is a time-varying indicator equal to 1 if there is a presidential or congressional election in year t; $\mathbb{1}\{\text{election year}\}_{s,t}$ is a state-level time-varying indicator equal to 1 if there is a state governor election in state s and year t; and $\mathbb{1}\{\text{incumbent not candidate}\}_{s,t}$ is a state-level time-varying indicator equal to 1 if there are governor elections and the incumbent governor in state s and year t is running again. $\text{PRisk}^T_{i,t}$ is standardized by it standard deviation. Lobby expense is semi-annual for all pre-2008 quarters; the quarters for which there is no lobby expense are excluded from the regression. $\text{PRisk}^T_{i,t}$ is standardized by its standard deviation. Standard errors are clustered at the firm level. ***, **, and * denote statistical significance at the 1, 5, and 10% level, respectively.

Table 9: Lobbying by political topics: Causality

	Log(1+$ lobby)$^T_{i,t}$			$PRisk^T_{i,t}$ (standardized)
	(1)	(2)	(3)	(4)
$PRisk^T_{i,t}$ (standardized)	0.004**	0.032***		
	(0.002)	(0.010)		
$\text{PRisk}^T_{i,t-1}$ (standardized)	0.000			
	(0.005)			
$\text{PRisk}^T_{i,t+1}$ (standardized)	0.004			
	(0.005)			
$\text{PRisk}^T_{a,t}$ (industry average, standardized)			0.011***	0.343***
			(0.003)	(0.024)
IV specification	no	IV	reduced form	first stage
Time FE	yes	yes	yes	yes
Firm FE	implied	implied	implied	implied
Topic FE	implied	implied	implied	implied
Firm*topic FE	yes	yes	yes	yes
Number of firms	3,437	3,521	3,521	3,521
Number of periods	23	24	24	24
R^2	0.502	0.506	0.506	0.365
N	1,350,288	1,434,456	1,434,456	1,434,456

This table shows the results from various regressions of Log(1+$ lobby)$^T_{i,t}$ on $\text{PRisk}^T_{i,t}$. $\text{PRisk}^T_{i,t}$ is standardized by its standard deviation. Lobby expense 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.

Table 10: The effect of $\text{PRisk}_{i,t}$ on investment and hiring

	$I_{i,t}/K_{i,t-1}$ * 100			$\Delta\text{emp}_{i,t}/\text{emp}_{i,t-1}$ * 100			$\Delta\text{sales}_{i,t}/\text{sales}_{i,t-1}$ * 100
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
$\text{PRisk}_{i,t}$ (standardized)	–0.191***	–0.165**	–0.180*	–1.169***	–1.128***	–2.001***	2.949
	(0.070)	(0.071)	(0.103)	(0.326)	(0.329)	(0.506)	(8.095)
$\text{PRisk}_{i,t} \times \mathbb{1}\{\text{assets}_{i,t} > \text{median assets}\}$			–0.024			1.614***	
			(0.140)			(0.624)	
$\mathbb{1}\{\text{assets}_{i,t} > \text{median assets}\}$			–0.368			–1.334	
			(0.281)			(0.873)	
Time FE	yes	yes	yes	yes	yes	yes	yes
Firm FE	yes	yes	yes	yes	yes	yes	yes
SIC2*time FE	no	yes	no	no	yes	no	no
Number of firms	2,568	2,568	2,568	3,544	3,544	3,544	3,608
Number of periods	36	36	36	9	9	9	36
R^2	0.309	0.352	0.309	0.342	0.374	0.343	0.045
N	55,261	55,261	55,261	22,198	22,198	22,198	81,437

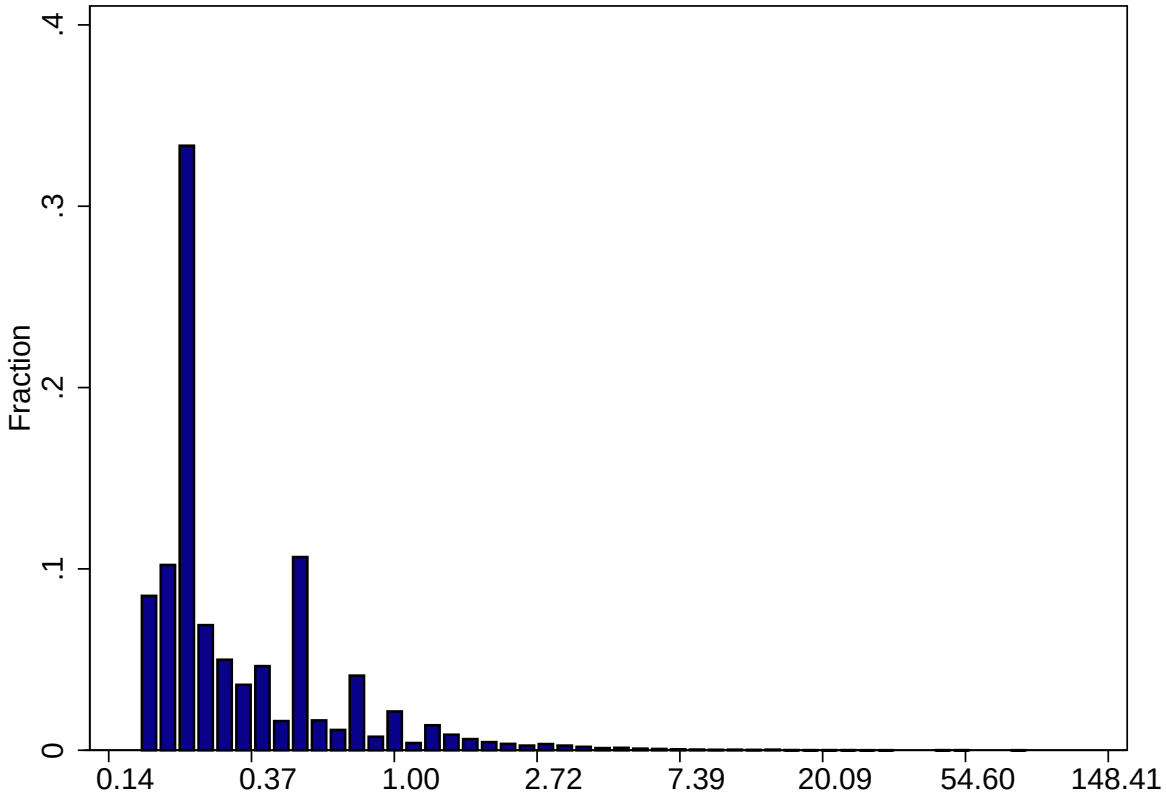
Notes: This table shows the results from various regressions of capital investment (columns 1-3), net hiring (columns 4-6), and net sales (column 7) on $\text{PRisk}_{i,t}$. Capital investment, $I_{i,t}/K_{i,t-1}$ * 100, is calculated recursively using a perpetual-invetory method as described in Stein and Stone (2013). Net hiring, $\Delta\text{emp}_{i,t}/\text{emp}_{i,t-1}$ * 100 is the change in year-to-year employment over last years' value. Net sales is defined similarly. Capital investment and net hiring are winsorized as in Stein and Stone (2013). $\text{PRisk}_{i,t}$ 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.

Table 11: Managing $\text{PRisk}_{i,t}$

	$\text{Log(1+\$ donations)}_{i,t}$		$\#\text{ of recipients}_{i,t}$		$\text{Hedge}_{i,t}$		$\text{Log(1+\$ lobby)}_{i,t}$		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
$\text{PRisk}_{i,t}$ (standardized)	0.429***	0.050*	5.139***	0.326	0.026***	0.007*	0.343***	0.053**	0.046*
	(0.082)	(0.029)	(1.475)	(0.381)	(0.005)	(0.004)	(0.080)	(0.024)	(0.024)
Time FE	yes	yes	yes	yes	yes	yes	yes	yes	yes
Firm FE	no	yes	no	yes	no	yes	no	yes	yes
SIC2 FE	yes	implied	yes	implied	yes	implied	yes	implied	implied
SIC2*time FE	no	no	no	no	no	no	no	no	yes
Number of firms	3,692	3,692	3,692	3,692	3,692	3,692	3,633	3,633	3,633
Number of periods	9	9	9	9	9	9	24	24	24
R^2	0.326	0.917	0.205	0.896	0.181	0.587	0.294	0.852	0.858
N	23,839	23,839	23,839	23,839	23,839	23,839	59,881	59,881	59,881

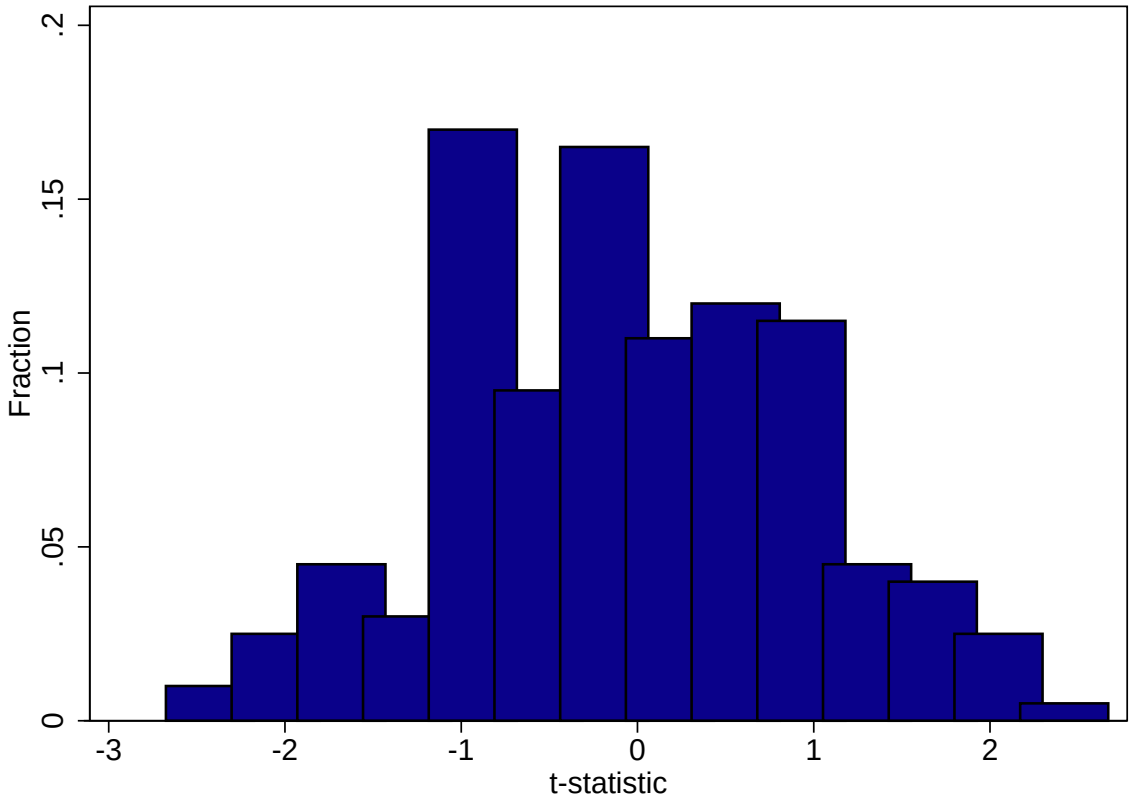
Notes: This table shows the results of various regressions of donation and lobby activity by firms on $\text{PRisk}_{i,t}$. $\text{Donations}_{i,t}$ is the log of one plus the sum of all contributions paid to federal candidates; $\#\text{ of recipients}_{i,t}$ are defined as the number of receipients of donations; $\text{hedge}_{i,t}$ is a dummy equal to one if donations to Republicans over donations to Democrats are between the 25th and 75th percentile of the sample. $\text{Lobby}_{i,t}$ is the log of one plus total lobbying expenditures. All regressions control for the log of firm assets. $\text{PRisk}_{i,t}$ is standardized by its standard deviation. Lobby expense is semi-annual for all pre-2008 quarters; the quarters for which there is no lobby expense are excluded from the regression. Standard errors are clustered at the firm level. ***, **, and * denote statistical significance at the 1, 5, and 10% level, respectively.

Appendix Figure 1: Distribution of bigram scores



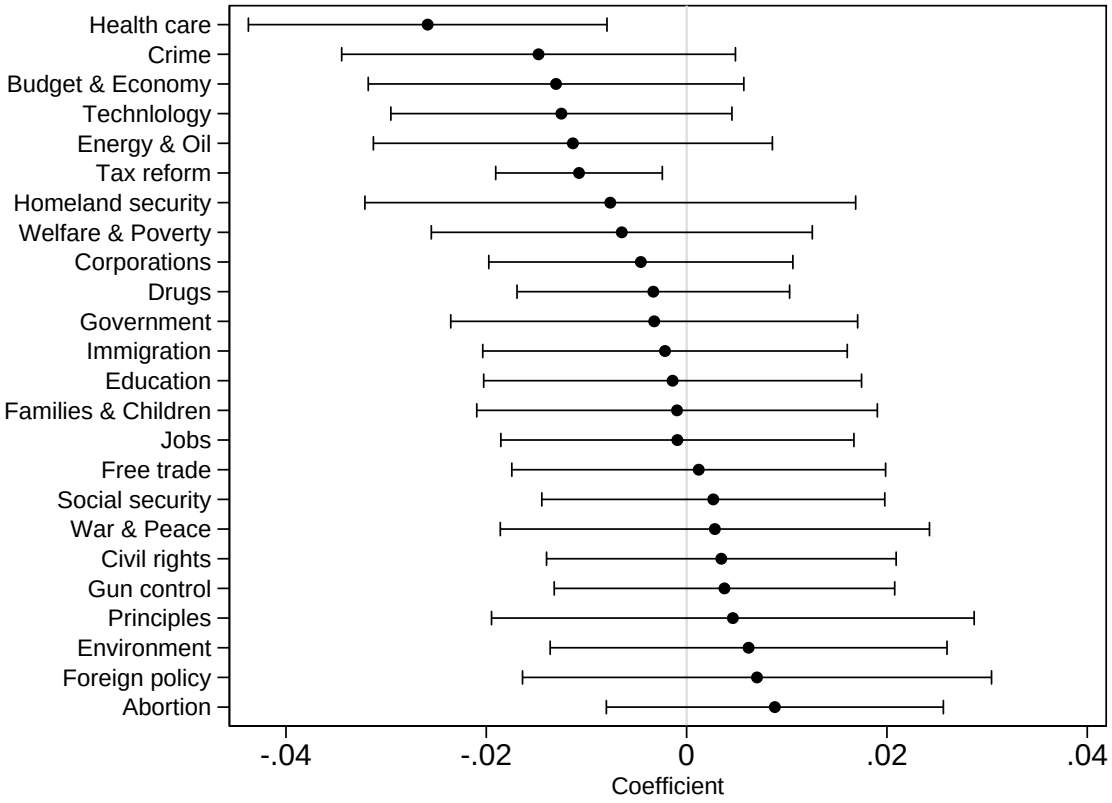
Notes: This figure plots a histogram of the log of bigram scores $(f_{b,\mathbb{P}}/B_{\mathbb{P}}) \times 10^5$. The number of birams is 50422. The mean, median, standard deviation, min, and max of $(f_{b,\mathbb{P}}/B_{\mathbb{P}}) \times 10^5$ are .464, .246, .966, .168, 84.45, respectively.

Appendix Figure 2: T-Statistics from placebo regressions



Notes: This figure plots a histogram of the t-statistics from 200 regressions of volatility$_{i,t}$ (as defined in Table 5) on PRisk$_{i,t}$ where the time series of PRisk 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 is 2 and 30.5 percent, respectively.

Appendix Figure 3: Employment by political topics



Notes: This figure plots the coefficients and 95% confidence intervals of $T = \{1, \ldots, 24\}$ topics of $\text{PRisk}_{i,t}^{T}$ (standardized) from a regression of net hiring $\Delta\text{emp}_{i,t}/\text{emp}_{i,t-1}$ on $T = \{1, \ldots, 24\}$ topics of $\text{PRisk}_{i,t}^{T}$ (standardized), firm and time fixed effects, and log of firm assets. $\text{PRisk}_{i,t}$ is standardized by its standard deviation. Standard errors are clustered at the firm level.

Appendix Table 1: PRisk_{it} and Elections

	$\text{PRisk}_{i,t}$ (standardized)
	(1)
Presidential elections$_t$	0.061***
	(0.007)
Congressional elections$_t$	0.025***
	(0.005)
State elections$_{s,t}$	0.001
	(0.004)
Year FE	no
Firm FE	no
Number of firms	3,124
Number of periods	36
R^2	0.005
N	72,347

Notes: All regressions control for the log of firm assets. $\text{PRisk}_{i,t}$ is standardized by its standard deviation. Standard errors are clustered at the firm level. ***, **, and * denote statistical significance at the 1, 5, and 10% level, respectively.

Appendix Table 2: Standard errors

	Realized volatility$_{i,t}$ (standardized)			
	(1)	(2)	(3)	(4)
$\text{PRisk}_{i,t}$ (standardized)	0.028***	0.028***	0.028**	0.028***
	(0.006)	(0.007)	(0.012)	(0.005)
Time FE	yes	yes	yes	yes
Firm FE	yes	yes	yes	yes
R^2	0.640	0.640	0.640	0.640
N	80,370	80,370	80,370	80,370

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

Appendix Table 3: Validating PRisk_{it}

Panel A	Realized volatility$_{i,t}$ (standardized)		
	(1)	(2)	(3)
$\text{PRisk}_{i,t}$ (standardized)	0.036***	0.037***	0.036***
	(0.008)	(0.008)	(0.008)
Average stock return 7 days prior$_{i,t}$	4.233***		
	(0.664)		
Average stock return 30 days prior$_{i,t}$		2.966*	
		(1.536)	
Average stock return 90 days prior$_{i,t}$			–5.006**
			(2.395)
R^2	0.664	0.661	0.661
N	62,156	62,005	61,577
Panel B	Implied volatility$_{i,t}$ (standardized)		
	(1)	(2)	(3)
$\text{PRisk}_{i,t}$ (standardized)	0.036***	0.035***	0.035***
	(0.007)	(0.007)	(0.007)
Absolute difference (actual - mean estimated EPS)$_{i,t}$			
Scaled absolute difference (actual - mean estimated EPS)$_{i,t}$			
Average stock return 7 days prior$_{i,t}$	0.473		
	(0.438)		
Average stock return 30 days prior$_{i,t}$		–5.704***	
		(0.942)	
Average stock return 90 days prior$_{i,t}$			–12.562***
			(1.765)
R^2	0.742	0.743	0.745
N	43,808	43,745	43,547
Time FE	yes	yes	yes
Firm FE	yes	yes	yes

Notes: All regressions control for the log of firm assets. $\text{PRisk}_{i,t}$ is standardized by its standard deviation. Standard errors are clustered at the firm level. ***, **, and * denote statistical significance at the 1, 5, and 10% level, respectively.

Appendix Table 4: The contribution of the different components of PRisk_{it}

Panel A: Firm-quarter data	$\text{PRisk}_{i,t}$	Unweighted $\text{PRisk}_{i,t}$	Unrestricted $\text{PRisk}_{i,t}$	Textbook-based $\text{PRisk}_{i,t}$
$\text{PRisk}_{i,t}$	1.000	0.604	0.234	0.984
Unweighted $\text{PRisk}_{i,t}$	0.604	1.000	0.305	0.527
Unrestricted $\text{PRisk}_{i,t}$	0.234	0.305	1.000	0.208
Textbook-based $\text{PRisk}_{i,t}$	0.984	0.527	0.208	1.000

Panel B: Quarter data	PRisk_t	Unweighted PRisk_t	Unrestricted PRisk_t	Textbook-based PRisk_t	BBD news-based$_t$
$\text{PRisk}_{i,t}$	1.000	0.957	0.841	0.997	0.833
Unweighted PRisk_t	0.957	1.000	0.844	0.939	0.788
Unrestricted PRisk_t	0.841	0.844	1.000	0.835	0.626
Textbook-based PRisk_t	0.997	0.939	0.835	1.000	0.836
BBD news-based$_t$	0.833	0.788	0.626	0.836	1.000

Notes: Unrestricted $PRisk_t$ is the number of political bigrams (not restricted to be near synonyms of risk) divided by the transcript length; unweighted $PRisk_t$ is the number of political bigrams near synonyms divided by the transcript length but the numerator is not weighted by the scores of the bigrams; textbook-based $PRisk_t$ is our measure but based on a list of political bigrams from the textbook-based library that is not appended with political bigrams from the newspaper-based training library. In Panel B, the three variables are the cross-sectional average over time. BBD news-based$_t$ is the news-based Economic Policy Uncertainty Index developed by Baker, Bloom, and Davis (2016).

Appendix Table 5: The contribution of the different components of PRisk_{it}

Panel A: Volatility regressions	Realized volatility$_{i,t}$ (standardized)				Implied volatility$_{i,t}$ (standardized)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Unrestricted $\text{PRisk}_{i,t}$ (standardized)	0.043***				0.036***			
	(0.006)				(0.007)			
Unweighted $\text{PRisk}_{i,t}$ (standardized)		0.022***				0.027***		
		(0.005)				(0.005)		
$\text{PRisk}_{i,t}$ (standardized)			0.028***				0.031***	
			(0.007)				(0.007)	
Textbook-based $\text{PRisk}_{i,t}$ (standardized)				0.029***				0.030***
				(0.008)				(0.007)
N	80,370	80,370	80,370	80,370	54,882	54,882	54,882	54,882
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)	(5)	(6)	(7)	(8)
Unrestricted $\text{PRisk}_{i,t}$ (standardized)	–0.094				–0.997***			
	(0.060)				(0.301)			
Unweighted $\text{PRisk}_{i,t}$ (standardized)		–0.123***				–1.186***		
		(0.048)				(0.247)		
$\text{PRisk}_{i,t}$ (standardized)			–0.191***				–1.169***	
			(0.070)				(0.326)	
Textbook-based $\text{PRisk}_{i,t}$ (standardized)				–0.201***				–1.133***
				(0.075)				(0.342)
N	55,261	55,261	55,261	55,261	22,198	22,198	22,198	22,198
Time FE	yes	yes	yes	yes	yes	yes	yes	yes
Firm FE	yes	yes	yes	yes	yes	yes	yes	yes

Notes: Unrestricted $PRisk_{i,t}$ is the number of political bigrams (not restricted to be near synonyms of risk) divided by the transcript length; unweighted $PRisk_{i,t}$ is the number of political bigrams near synonyms divided by the transcript length but the numerator is not weighted by the scores of the bigrams; textbook-based $PRisk_{i,t}$ is our measure but based on a list of political bigrams from the textbook-based library that is not appended with political bigrams from the newspaper-based training library. Realized and implied volatility are defined as before. Unrestricted $PRisk_{i,t}$, unweighted $PRisk_{i,t}$, textbook-based $PRisk_{i,t}$ and $PRisk_{i,t}$ are standardized by their respective standard deviations. Standard errors are clustered at the time and firm level in Panel A and B, respectively. ***, **, and * denote statistical significance at the 1, 5, and 10% level, respectively.

Appendix Table 6: Variance decomposition

	PRisk$_{i,t}$								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Log(1+$ federal contracts$_{i,t}$) × mean of PRisk$_{i,t}$								0.007	
								(0.006)	
EPU beta$_{i,t}$ × mean of PRisk$_{i,t}$									–1275.403
									(3,963.318)
Time FE	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	No	No	Yes	No	No	Yes	Yes	Yes	Yes
SIC2 FE	No	Yes	Implied	Yes	Yes	Implied	Implied	Implied	Implied
SIC2*time FE	No	No	No	No	Yes	No	Yes	Yes	Yes
R^2	0.007	0.046	0.294	0.053	0.078	0.300	0.325	0.355	0.325
N	85,152	82,708	85,152	82,708	82,708	85,152	82,708	9,356	79,837

Notes: This table shows projects of our measure on various sets of fixed effects. Column 8 controls for log(1+$ federal contracts$_{i,t}$) × mean of PRisk$_{i,t}$; column 9 controls for EPU beta × mean of PRisk$_t$. All variables are defined as in Table 6.

Appendix Table 7: Mapping of Lobbying Issues to Political Topics

Political Topics	Lobbying issues
Abortion	Family, Abortion & Adoption
Budget & Economy	Federal Budget & Appropriations
	Economics & Economic Development
	Roads & Highways
	Minting/Money/Gold Standard
	District of Columbia
Civil Rights	Constitution
	Civil Rights & Civil Liberties
	Indian/Native American Affairs
Corporations	Aviation, Airlines & Airports
	Manufacturing
	Radio & TV Broadcasting
	Finance
	Copyright, Patent & Trademark
	Consumer Product Safety
	Beverage Industry
	Accounting
	Telecommunications
	Bankruptcy
	Insurance
	Transportation
	Chemical Industry
	Food Industry
	Trucking & Shipping
	Marine, Boats & Fisheries
	Railroads
	Gaming, Gambling & Casinos
	Banking
	Travel & Tourism
	Advertising
	Small Business
	Media Information & Publishing
	Apparel, Clothing, & Textiles
	Tobacco
	Automotive Industry
	Arts & Entertainment
Crime	Law Enforcement & Crime
Drugs	Alcohol & Drug Abuse
Education	Education
	Sports & Athletics
Energy & Oil	Energy & Nuclear Power
	Fuel, Gas & Oil
	Utilities
Environment	Environment & Superfund
	Agriculture
	Clean Air & Water
	Hazardous & Solid Waste
	Natural Resources
	Animals
	Real Estate & Land Use
Families & Children	N/A
Foreign Policy	N/A
Free Trade	Trade
	Postal
	Commodities
	Tariffs
	Foreign Relations
Government Reform	Government Issues
	Torts
Gun Control	Firearms, Guns & Ammunition
Health Care	Pharmacy
	Medicare & Medicaid
	Health Issues
	Medical Research & Clinical Labs
Homeland Security	Homeland Security
	Disaster & Emergency Planning
	Intelligence
Immigration	Immigration
Jobs	Labor, Antitrust & Workplace
	Unemployment
Principles & Values	N/A
Social Security	Retirement
Tax Reform	Taxes
Technology	Computers & Information Technology
	Aerospace
	Science & Technology
War & Peace	Defense
	Veterans Affairs
Welfare & Poverty	Housing
	Welfare

Appendix Table 8: Lobbying expenditures by political topics

Lobby expense (in $) on	Mean	Median	St. Dev.	Min	Max	*N*
Abortion	79.33	0.00	10,547.65	0	1,810,524	59,881
Budget & Economy	14,868.30	0.00	197,379.75	0	18,150,000	59,881
Civil rights	214.68	0.00	24,657.50	0	4,079,110	59,881
Corporations	32,001.54	0.00	286,350.29	0	15,460,000	59,881
Crime	249.38	0.00	19,169.41	0	3,560,000	59,881
Drugs	109.68	0.00	9,298.62	0	1,323,877	59,881
Education	598.79	0.00	25,739.96	0	3,140,000	59,881
Energy & Oil	7,136.29	0.00	130,051.23	0	8,870,000	59,881
Environment	11,251.46	0.00	174,598.91	0	19,090,000	59,881
Families & Children	0.00	0.00	0.00	0	0	59,881
Foreign policy	0.00	0.00	0.00	0	0	59,881
Free trade	3,777.92	0.00	89,575.56	0	6,720,000	59,881
Government	2,292.77	0.00	76,556.34	0	6,960,000	59,881
Gun control	0.33	0.00	81.73	0	20,000	59,881
Health care	7,828.45	0.00	112,390.60	0	9,602,148	59,881
Homeland security	1,265.26	0.00	53,232.65	0	6,550,936	59,881
Immigration	517.84	0.00	33,449.70	0	4,770,389	59,881
Jobs	625.34	0.00	27,511.77	0	3,040,000	59,881
Principles	0.00	0.00	0.00	0	0	59,881
Social security	1,144.93	0.00	52,552.99	0	4,600,000	59,881
Tax reform	4,994.76	0.00	102,805.13	0	9,080,000	59,881
Technlology	6,473.05	0.00	140,819.21	0	8,320,000	59,881
War & Peace	3,223.25	0.00	76,459.69	0	7,874,365	59,881
Welfare & Poverty	308.24	0.00	30,350.00	0	5,020,000	59,881

Notes: This table shows summary statistics for lobby expense (in $) broken down by topic for the regression sample in column 1 of Table 7.

Appendix Table 9: Frequency of all synonyms

Synonym	Frequency	Synonym	Frequency	Synonym	Frequency
risk	155645	unstable	841	hairy	68
risks	45650	query	791	insecurity	61
uncertainty	33278	erratic	782	perilous	55
variable	30566	unsettled	754	riskiest	55
chance	25354	dilemma	729	dubious	51
pending	23947	jeopardize	722	wariness	43
possibility	22695	unpredictability	685	oscillating	41
uncertainties	21623	hesitancy	663	unreliability	39
uncertain	16883	jeopardy	565	riskiness	38
doubt	13983	unsure	509	insecure	37
bet	10708	unresolved	462	tentativeness	36
likelihood	8403	suspicion	452	qualm	30
variability	8152	riskier	443	vagueness	26
exposed	6931	irregular	374	equivocation	26
threat	6797	risking	305	menace	20
probability	6760	chancy	279	scepticism	19
varying	3995	peril	266	indecisive	17
unpredictable	3872	unreliable	265	vacillating	13
unclear	3766	halting	224	imperil	13
speculative	3707	hesitating	216	dodgy	12
fear	3516	risked	205	gnarly	12
gamble	3137	unsafe	193	disquiet	9
hesitant	2849	wager	171	vacillation	9
reservation	2393	debatable	170	equivocating	9
hazard	1937	dicey	169	incalculable	8
risky	1883	undecided	161	unconfident	7
tentative	1881	undetermined	160	ambivalence	6
doubtful	1867	precarious	153	parlous	6
dangerous	1692	apprehension	137	diffident	5
instability	1381	indecision	136	untrustworthy	5
sticky	1371	wavering	128	changeability	4
tricky	1368	faltering	114	misgiving	4
hazardous	1318	iffy	111	undependable	3
queries	1020	quandary	87	fickleness	3
danger	1002	hazy	84	fitful	2
vague	987	treacherous	76	doubtfulness	1
fluctuating	971	changeable	74	fluctuant	1

Notes: This table shows the frequency across all transcripts of the top 60 single-word synonyms of 'risk', 'risky', 'uncertain', and 'uncertainty' as given in the Oxford Dictionary (excluding 'question', 'questions', 'unknown', 'venture', and 'prospect') that are near political bigrams.

Online Appendix

A Details on top-scoring transcripts

TranscriptID=1944400; rank=1

Appendix Table 10: Transcript summary statistics

company name:	NEVADA GOLD CASINOS INC
date:	10-Sep-08
total bigrams:	2732
rtotal90nratio:	37.36
bigrams used to score:	15

Appendix Table 11: All transcript bigrams in score

bigram	bigram score	synonyms	context string
the constitution	84.45	1	gaming industry is currently **supporting a ballot** initiative to **amend the constitution to authorize an** increase in the —BET— limits allow additional
constitution to	3.20	1	industry is currently **supporting a ballot** initiative to **amend the constitution to authorize an** increase in the —BET— limits allow additional types
amend the	1.72	1	the gaming industry is currently **supporting a ballot** initiative to **amend the constitution to authorize an** increase in the —BET— limits allow
to authorize	0.49	1	is currently **supporting a ballot** initiative to **amend the constitution to authorize an** increase in the —BET— limits allow additional types of
parties that	0.49	1	it thats always of course —DANGEROUS— when youve got two **parties that** both have to agree but we have i can tell
time frame	0.49	1	that are **continuing and** i dont want to put a **time frame on** it thats always of course —DANGEROUS— when youve got
county there	0.25	1	additional development since we last **spoke about** this publicly **the county there** has been a federal lawsuit filed its been —PENDING— for
frame on	0.25	1	are **continuing and** i dont want to put a **time frame on** it thats always of course —DANGEROUS— when youve got two
dismiss that	0.25	2	—PENDING— for quite some time theres a —PENDING— **motion to dismiss that complaint which** has not **been ruled** upon yet by the
been ruled	0.25	1	a —PENDING— **motion to dismiss that complaint which** has not **been ruled** upon yet by the **court the tribes** lawyers are cautiously
motion to	0.25	2	its been —PENDING— for quite some time theres a —PENDING— **motion to dismiss that complaint which** has not **been ruled** upon yet
to dismiss	0.25	2	been —PENDING— for quite some time theres a —PENDING— **motion to dismiss that complaint which** has not **been ruled** upon yet by
the county	0.25	1	one additional development since we last **spoke about** this publicly **the county there** has been a federal lawsuit filed its been —PENDING—
authorize an	0.21	1	currently **supporting a ballot** initiative to **amend the constitution to authorize an** increase in the —BET— limits allow additional types of table
complaint which	0.17	1	quite some time theres a —PENDING— **motion to dismiss that complaint which** has not **been ruled** upon yet by the **court the**

TranscriptID=2663156; rank=2

Appendix Table 12: Transcript summary statistics

company name:	Axis Capital Holdings Limited
date:	9-Feb-10
total bigrams:	8095
rtotal90nratio:	34.98
bigrams used to score:	49

Appendix Table 13: All transcript bigrams in score

bigram	bigram score	synonyms	context string
the political	21.42	1	accident year ratios the combined ratios we have talked about **the political** —RISK— business particularly really shouldnt be looked at on a
the political	21.42	1	with respect to **the professional** lines dampo as well as **the political** —RISK— john charman axis capital holdings limited ceo amp president
the political	21.42	1	**for david** greenfield axis capital holdings limited cfo for on **the political** —RISK— we were at around combined ratio and for credit
the political	21.42	1	i have given in the prior quarters which is on **the political** —RISK— business the accident year **loss ratio** at the end
and political	10.59	1	do you expect the accident year loss ratios for credit **and political** —RISK— bond reinsurance and dampo to get back to kind
and political	10.59	1	an important role within that **with regard** to our credit **and political** —RISK— business back in the middle of essentially we put
and political	10.59	1	the earned premiums and the loss ratios for the credit **and political** —**risk**— **insurance** and the credit and bond reinsurance for this
and political	10.59	1	we dont have any material credit exposures in our credit **and political** —RISK— account to spain portugal or greece and that is
and political	10.59	1	unique and exceptional in **size the** balance of our credit **and political** —RISK— portfolio is well diversified in the emerging markets with
and political	10.59	1	for blue city loss activity has normalized in our credit **and political** —RISK— business we look very carefully at actual claims we
and political	10.59	1	of business the **balance came** from professional lines and credit **and political** —RISK— business we did add to prioryear reserves in the
and political	10.59	1	these amounts are comparable the accident **year includes** increased credit **and political** —RISK— reserves and includes hurricane ike losses our reinsurance segments
and political	10.59	1	otherwise showed significant improvement this quarter ibnr reserves for credit **and political** —RISK— business which include the reserving provision for blue city
and political	10.59	1	million related to the contract loss activity related to credit **and political** —RISK— business otherwise showed significant improvement this quarter ibnr reserves
and political	10.59	2	related to the blue city peak —RISK— in our credit **and political** —RISK— portfolio which had been stressed by the global economic
and political	10.59	1	underwriting income which was affected by an increase to credit **and political** —RISK— loss reserves positively impacting insurance underwriting income was the
and political	10.59	1	of points primarily due to reserving **actions in** the credit **and political** —RISK— line in our insurance segment total underwriting income was
and political	10.59	1	of this decline came **significantly reduced** writings in our credit **and political** —RISK— line of business this was partially offset by substantially
to political	3.45	1	just to make sure the company whether it be relating **to political** —RISK— and trade credit maybe that is really the only
to political	3.45	1	like for the first three quarters of as it relates **to political** —RISK— and trade credit you were surely sort of inward
to political	3.45	1	one adjustment we made in earned premiums as it relates **to political** —RISK— but if you would like i will go through
actions in	1.97	1	quarter of an increase of points primarily due to reserving **actions in** the credit **and political** —RISK— line in our insurance segment
within our	1.23	2	we took our entire portfolios which are diversified and well **within our** —RISK— tolerance limits set by our —RISK— committee we took
within our	1.23	1	losses as of january at various return periods we remain **within our** tolerance levels for these —RISKS— our european wind aggregates have
foundations of	0.98	1	sound —**risk**— **management practices and professionalism** that have been **the foundations of** our success our gross written premiums were up approximately although
for regional	0.92	1	one of **our most** attractively priced lines of business pricing **for regional** property per —RISK— and excessive loss accounts was for the
appropriate balance	0.74	1	not meet our high standards for underwriting profitability with an **appropriate balance** of —RISK— and reward our consolidated combined ratio for the
our most	0.74	1	these matters please refer to the —RISK— factors section in **our most** recent form k on file with the securities and exchange
practices and	0.49	1	excellent profitability in short we **demonstrated the** sound —**risk**— **management practices and professionalism** that have been **the foundations of** our success our
with regard	0.49	1	and we **have played** quite an important role within that **with regard** to our credit **and political** —RISK— business back in the
the foundations	0.49	1	the sound —**risk**— **management practices and professionalism** that have been **the foundations of** our success our gross written premiums were up approximately
loss ratio	0.34	1	which is on **the political** —RISK— business the accident year **loss ratio** at the end of the year stands at and that

negotiate on	0.25	1	analyst sure you mentioned that you had a —CHANCE— to **negotiate on** the contract could you elaborate more have you managed to
cancellation of	0.25	3	—RISK— loss reserves positively impacting insurance underwriting income was the **cancellation of** our only indemnity contract —EXPOSED— to longevity —RISK— we worked
unchanged from	0.25	1	—RISK— line in our insurance segment total underwriting income was **unchanged from** the prioryear quarter contributing to this was an increase in
size the	0.25	2	the peak blue city —RISK— **was unique** and exceptional in **size the** balance of our credit **and political** —RISK— portfolio is well
nevertheless be	0.25	1	addition there are always unforeseen —RISKS— for which we must **nevertheless be** prepared over axiss history we **have built** a company that
was unique	0.25	1	relative to our original expectations the peak blue city —RISK— **was unique** and exceptional in **size the** balance of our credit **and**
balance came	0.25	1	this quarter was generated from shorttail lines of business the **balance came** from professional lines and credit **and political** —RISK— business we
the professional	0.25	1	a little bit easier to see but with respect to **the professional** lines dampo as well as **the political** —RISK— john charman
diligently to	0.25	1	level of quarterly underwriting profit during this quarter we worked **diligently to** resolve certain peak —RISKS— and have achieved a rebalancing of
resolution to	0.25	2	a rebalancing of our overall underwriting portfolio first we bought **resolution to** our exposure to an indemnity contract —EXPOSED— to longevity —RISK—
significantly reduced	0.25	1	of were billion down **from much** of this decline came **significantly reduced** writings in our credit **and political** —RISK— line of business
global financial	0.25	1	—RISKS— are probably not very good when you get a **global financial crisis and** so it will be much better balanced going
demonstrated the	0.25	1	and under the circumstances achieved excellent profitability in short we **demonstrated the** sound —**risk**— **management practices and professionalism** that have been **the**
and professionalism	0.21	1	profitability in short we **demonstrated the** sound —**risk**— **management practices and professionalism** that have been **the foundations of** our success our gross
year includes	0.21	1	compared to in although these amounts are comparable the accident **year includes** increased credit **and political** —RISK— reserves and includes hurricane ike
management practices	0.21	1	achieved excellent profitability in short we **demonstrated the** sound —**risk**— **management practices and professionalism** that have been **the foundations of** our success
with ample	0.21	1	summarize we ended the year in an excellent financial position **with ample** capital for the —RISKS— we hold and we are wellplaced

TranscriptID=2089175; rank=3

Appendix Table 14: Transcript summary statistics

company name:	Female Health
date:	10-Feb-09
total bigrams:	1732
rtotal90nratio:	31.82
bigrams used to score:	4

Appendix Table 15: All transcript bigrams in score

bigram	bigram score	synonyms	context string
of government	48.51	1	market acceptance the economic and business environment and the impact **of government pressures** currency —RISKS— capacity efficiency and supply **constraints and** other
detailed in	0.97	2	currency —RISKS— capacity efficiency and supply **constraints and** other —RISKS— **detailed in** the companys press releases shareholder communications and securities and exchange
government pressures	0.49	2	acceptance the economic and business environment and the impact **of government pressures** currency —RISKS— capacity efficiency and supply **constraints and** other —RISKS—
constraints and	0.25	2	impact **of government pressures** currency —RISKS— capacity efficiency and supply **constraints and** other —RISKS— **detailed in** the companys press releases shareholder communications

TranscriptID=2211818; rank=4

Appendix Table 16: Transcript summary statistics

company name:	Applied Energetics, Inc.
date:	11-May-09
total bigrams:	2179
rtotal90nratio:	29.29
bigrams used to score:	14

Appendix Table 17: All transcript bigrams in score

bigram	bigram score	synonyms	context string
of government	48.51	1	of products and the —UNCERTAINTY— of the timing and **magnitude of government funding and** customer orders **dependence on** sales **to government** customers
funding and	1.72	2	and the —UNCERTAINTY— of the timing and **magnitude of government funding and** customer orders **dependence on** sales **to government** customers economic —**uncertainty**—
to government	1.48	2	**magnitude of government funding and** customer orders **dependence on** sales **to government** customers economic —**uncertainty**— **and** changes in government spending —RISKS— related
of choice	1.23	1	for the us military roadside **bombs have** become **the weapon of choice** for nonstate and insurgent fighters suppressing the ied —THREAT— **in**
detailed in	0.97	1	impact of competitive products and pricing litigation and other —RISKS— **detailed in** the companys filings with the securities and exchange commission the
magnitude of	0.74	1	number of products and the —UNCERTAINTY— of the timing and **magnitude of government funding and** customer orders **dependence on** sales **to government**
dependence on	0.74	1	the timing and **magnitude of government funding and** customer orders **dependence on** sales **to government** customers economic —**uncertainty**— **and** changes in government
dependence on	0.74	1	statements such factors include but are not limited to the **dependence on** sales of a limited number of products and the —UNCERTAINTY—
weapon of	0.59	1	**priority for** the us military roadside **bombs have** become **the weapon of choice** for nonstate and insurgent fighters suppressing the ied —THREAT—
priority for	0.49	1	ied —THREAT— **in todays** conflicts is a critical urgent military **priority for** the us **government and** we believe that fully equipping **our**
uncertainty and	0.25	1	and customer orders **dependence on** sales **to government** customers economic —**uncertainty**— **and** changes in government spending —RISKS— related to government contracts the
in todays	0.25	1	choice for nonstate and insurgent fighters suppressing the ied —THREAT— **in todays** conflicts is a critical urgent military **priority for** the us
government funding	0.25	1	products and the —UNCERTAINTY— of the timing and **magnitude of government funding and** customer orders **dependence on** sales **to government** customers economic
of third	0.21	1	of strategic alliances the —UNCERTAINTY— of management tenure the impact **of third** party suppliers manufacturing constraints or difficulties managements ability to achieve

TranscriptID=1990385; rank=5

Appendix Table 18: Transcript summary statistics

company name:	FPIC Insurance Group, Inc.
date:	30-Oct-08
total bigrams:	4246
rtotal90nratio:	28.01
bigrams used to score:	13

Appendix Table 19: All transcript bigrams in score

bigram	bigram score	synonyms	context string

the constitution	84.45	1	a —CHANCE— for national **tort reform and** i dont see **the constitution of** congress **changing in** such a way after **this election**
national and	8.62	1	existing business at a consistently high level in fact **our national and florida** policyholder counts excluding policyholders under alternative —RISK— arrangements reached
reform and	5.88	1	i dont think there was a —CHANCE— for national **tort reform and** i dont see **the constitution of** congress **changing in** such
constitution of	3.20	1	—CHANCE— for national **tort reform and** i dont see **the constitution of** congress **changing in** such a way after **this election as**
tort reform	1.60	1	mean i dont think there was a —CHANCE— for national **tort reform and** i dont see **the constitution of** congress **changing in**
financial markets	1.23	1	under **pressure from** the current volatility and —UNCERTAINTIES— in the **financial markets** we continue to take comfort in the quality and diversification
a response	0.74	1	longer really the underwriting thats occurring right now **is perhaps a response of** just mix price —RISK— that we think months down
and florida	0.74	1	business at a consistently high level in fact **our national and florida** policyholder counts excluding policyholders under alternative —RISK— arrangements reached their
response of	0.71	1	really the underwriting thats occurring right now **is perhaps a response of** just mix price —RISK— that we think months down the
our national	0.49	1	our existing business at a consistently high level in fact **our national and florida** policyholder counts excluding policyholders under alternative —RISK— arrangements
pressure from	0.25	1	cash and investments while investment portfolio valuations generally are under **pressure from** the current volatility and —UNCERTAINTIES— in the **financial markets** we
is perhaps	0.25	1	very much longer really the underwriting thats occurring right now **is perhaps a response of** just mix price —RISK— that we think
road this	0.21	1	just mix price —RISK— that we think months down the **road this** pricing is going to go in the **other direction** bob

TranscriptID=2011696; rank=6

Appendix Table 20: Transcript summary statistics

company name:	BANKFINANCIAL CORP
date:	4-Nov-08
total bigrams:	1969
rtotal90nratio:	27.59
bigrams used to score:	3

Appendix Table 21: All transcript bigrams in score

bigram	bigram score	synonyms	context string
of government	48.51	1	was **an accurate** metaphor and really given all the —UNCERTAINTIES— **of government involvement** in operations and business activities and given the capital
government involvement	0.74	1	**an accurate** metaphor and really given all the —UNCERTAINTIES— **of government involvement** in operations and business activities and given the capital **strength**
an accurate	0.25	1	in erasable ink and we actually thought that that was **an accurate** metaphor and really given all the —UNCERTAINTIES— **of government involvement**

TranscriptID=1355778; rank=7

Appendix Table 22: Transcript summary statistics

company name:	World Acceptance Corporation
date:	25-Jul-06
total bigrams:	4755
rtotal90nratio:	26.46
bigrams used to score:	7

Appendix Table 23: All transcript bigrams in score

bigram	bigram score	synonyms	context string
the states	56.38	1	management analyst i wanted to followup on the regulatory **front the states** that you had **mentioned the** —POSSIBILITY— of some positive **legislation**
the states	56.38	1	knowledge there are no negative **legislation** —**pending**— in any of **the states** that we operate or in **other states** however there are
front the	0.49	1	capital management analyst i wanted to followup on the regulatory **front the states** that you had **mentioned the** —POSSIBILITY— of some positive
legislation would	0.49	1	states that you had **mentioned the** —POSSIBILITY— of some positive **legislation would** any of those be significant to world im presuming **that**
say just	0.34	1	arizona are or i **can name** right now like i **say just** because its being considered doesnt mean there is the —LIKELIHOOD—
about matters	0.29	2	expectations or beliefs concerning future events such forwardlooking statements are **about matters** inherently suggest to —RISKS— and —UNCERTAINTIES— factors that could cause
mentioned the	0.25	1	followup on the regulatory **front the states** that you had **mentioned the** —POSSIBILITY— of some positive **legislation would** any of those be

TranscriptID=1893036; rank=8

Appendix Table 24: Transcript summary statistics

company name:	NEVADA GOLD CASINOS INC
date:	24-Jul-08
total bigrams:	3882
rtotal90nratio:	25.86
bigrams used to score:	8

Appendix Table 25: All transcript bigrams in score

bigram	bigram score	synonyms	context string
the constitution	84.45	1	gaming industry is currently **supporting a ballot** initiative to **amend the constitution to authorize an** increase in the —BET— limits allow different
constitution to	3.20	1	industry is currently **supporting a ballot** initiative to **amend the constitution to authorize an** increase in the —BET— limits allow different types
amend the	1.72	1	the gaming industry is currently **supporting a ballot** initiative to **amend the constitution to authorize an** increase in the —BET— limits allow
moving ahead	0.92	1	insure **the tribes** plans become reality and look forward to **moving ahead** with this project this should eliminate any —**doubt**— **about** the
to authorize	0.49	1	is currently **supporting a ballot** initiative to **amend the constitution to authorize an** increase in the —BET— limits allow different types of
limits should	0.25	1	cripple creek is well positioned to benefit from increased —BET— **limits should** the amendment pass we believe this could strengthen performance in
authorize an	0.21	1	currently **supporting a ballot** initiative to **amend the constitution to authorize an** increase in the —BET— limits allow different types of table
for questions	0.21	1	once its filed we will once **again make ourselves** available **for questions** because we want everybody to have the —CHANCE— to ask

TranscriptID=3199230; rank=9

Appendix Table 26: Transcript summary statistics

company name:	Magellan Health Services
date:	29-Jul-10
total bigrams:	8786
rtotal90nratio:	25.31
bigrams used to score:	37

Appendix Table 27: All transcript bigrams in score

bigram	bigram score	synonyms	context string
the states	56.38	1	future so this is a time of quite —UNCERTAINTY— for **the states** they are not **sure what** the fmap will be if
the states	56.38	1	thanks a lot i was wondering in your discussions with **the states** if you could give us some sense of the —VARIABILITY—
the political	21.42	1	activity over the next several months given the —UNCERTAINTY— in **the political environment** as **gubernatorial elections in** states this **fall will** likely
care reform	15.02	1	**background noise** multiple **priorities and** given the —UNCERTAINTIES— **with health care reform** he delay the decision as you know governor richardson is
care reform	15.02	1	there are still lots of open issues related **to health care reform that** are —PENDING— but in general even the absence of
care reform	15.02	1	procurement at this time due to the —UNCERTAINTY— of health **care reform and** may revisit this decision next year we are not
reform and	5.88	1	at this time due to the —UNCERTAINTY— of health **care reform and** may revisit this decision next year we are not likely
elections in	2.95	1	months given the —UNCERTAINTY— in **the political environment** as **gubernatorial elections in** states this **fall will** likely delay major decision making we
political environment	1.76	1	over the next several months given the —UNCERTAINTY— in **the political environment** as **gubernatorial elections in** states this **fall will** likely delay
with health	1.72	1	decision inaudible **background noise** multiple **priorities and** given the —UNCERTAINTIES— **with health care reform** he delay the decision as you know governor
to health	1.48	1	core business there are still lots of open issues related **to health care reform that** are —PENDING— but in general even the
our goal	0.98	1	—UNCERTAINTIES— around the ifr and the **characteristics associated** with it **our goal the coalitions** goal was to generate greater clarity from **the**
lives are	0.63	1	is related to —RISK— revenue the vast majority of the **lives are** aso and going back when we first acquired nia four
the caption	0.55	2	entirety by the complete discussion of —RISKS— set forth under **the caption** —RISK— factors in magellans annual report on form k for
services chairman	0.50	1	would somehow convert to —RISK— rbm rene lerer magellan **health services chairman** ceo well as you know we have the vast majority
reform that	0.49	1	are still lots of open issues related **to health care reform that** are —PENDING— but in general even the absence of that
of care	0.49	1	are primarily locked clearly the biggest —VARIABLE— is on cost **of care over** the balance of the year and our guidance at
sure what	0.49	1	time of quite —UNCERTAINTY— for **the states** they are not **sure what** the fmap will be if they will have one and
have large	0.49	1	you guys have and am i understanding that right youd **have large** selffunded employer groups that would somehow convert to —RISK— rbm
gubernatorial elections	0.46	1	several months given the —UNCERTAINTY— in **the political environment** as **gubernatorial elections in** states this **fall will** likely delay major decision making
and understanding	0.46	1	again it relates primarily we think to predictability of —RISK— **and understanding** of future mlr josh raskin barclays capital analyst okay and
early but	0.42	1	—RISK— we havent signed any we are in discussions its **early but** its a **discussion that** we havent had for a while
match in	0.34	2	changing **their medicaid eligibility** and the —FEAR— of losing that **match in** the future so this is a time of quite —UNCERTAINTY—
medicaid eligibility	0.25	1	health care comes in they have **challenges in changing their medicaid eligibility** and the —FEAR— of losing that **match in** the future
challenges in	0.25	1	the matching **programs as health** care comes in they have **challenges in changing their medicaid eligibility** and the —FEAR— of losing that
changes are	0.25	1	working capital **changes the** main drivers of the working capital **changes are** increased cash flows related to the companys —RISK— radiology contract

priorities and	0.25	1	think the consortium made the decision inaudible **background noise** multiple **priorities and** given the —UNCERTAINTIES— **with health care reform** he delay the
in changing	0.25	1	matching **programs as health** care comes in they have **challenges in changing their medicaid eligibility** and the —FEAR— of losing that **match**
health services	0.25	1	that would somehow convert to —RISK— rbm rene lerer magellan **health services chairman** ceo well as you know we have the vast
their medicaid	0.25	1	**as health** care comes in they have **challenges in changing their medicaid eligibility** and the —FEAR— of losing that **match in** the
much state	0.25	1	this decision next year we are not likely to see **much state** procurement activity over the next several months given the —UNCERTAINTY—
goals one	0.25	1	we first acquired nia four years ago one of **our goals one** of our growth opportunities was to convert aso to —RISK—
characteristics associated	0.25	1	the complexities and the —UNCERTAINTIES— around the ifr and the **characteristics associated** with it **our goal the coalitions** goal was to generate
their costs	0.25	1	of the smaller clients an interest in getting predictability in **their costs** by converting their aso business to —RISK— we havent signed
care over	0.21	1	primarily locked clearly the biggest —VARIABLE— is on cost **of care over** the balance of the year and our guidance at this
full service	0.17	1	early discussions with some of our aso customers regarding our **full service** —**risk**— product on the federal front late last week cms
background noise	0.17	1	current vendor i think the consortium made the decision inaudible **background noise** multiple **priorities and** given the —UNCERTAINTIES— **with health care reform**

TranscriptID=2246209; rank=10

Appendix Table 28: Transcript summary statistics

company name:	Piedmont Natural Gas
date:	9-Jun-09
total bigrams:	2664
rtotal90nratio:	24.76
bigrams used to score:	6

Appendix Table 29: All transcript bigrams in score

bigram	bigram score	synonyms	context string
the states	56.38	1	your point as you will recall in all three of **the states** that we have serve jim we are —EXPOSED— only to
circumstances that	1.72	1	times it was **felt to be appropriate** given the **economic circumstances that** we faced and in these —UNCERTAIN— times i **am sure**
be appropriate	0.84	1	wide but in these —UNCERTAIN— times it was **felt to be appropriate** given the **economic circumstances that** we faced and in these
am sure	0.76	1	**circumstances that** we faced and in these —UNCERTAIN— times i **am sure** you can appreciate it is difficult to predict short term
economic circumstances	0.21	2	—UNCERTAIN— times it was **felt to be appropriate** given the **economic circumstances that** we faced and in these —UNCERTAIN— times i **am**
felt to	0.17	1	guidance that wide but in these —UNCERTAIN— times it was **felt to be appropriate** given the **economic circumstances that** we faced and

TranscriptID=2637786; rank=11

Appendix Table 30: Transcript summary statistics

company name:	Platinum Underwriters Holdings Ltd
date:	18-Feb-10
total bigrams:	6792
rtotal90nratio:	23.95
bigrams used to score:	50

Appendix Table 31: All transcript bigrams in score

bigram	bigram score	synonyms	context string
the political	21.42	1	we have had historically had a very small participation in **the political** —RISK— market backing only a couple of players **parties that**
the political	21.42	1	ceo first i agree with you that the nature of **the political** —RISK— business has **changed over** time as the primary underwriters
the political	21.42	1	right you could see favorable **development in** future periods on **the political** —RISK— class from us ian gutterman adage capital management analyst
the political	21.42	1	enough can you give me just a ballpark of what **the political** —RISK— in that was just so i can take **a**
the political	21.42	2	well michael price platinum underwriters holdings ltd ceo ian on **the political** —RISK— we have a pretty small book of political —RISK—
in political	5.17	1	underwriters holdings ltd ceo i think the signs are there **in political** —RISK— but in our view it is not as clean
in political	5.17	1	or strengthening reserves in the current accident year one was **in political** —RISK— **plant where** we had a number of notices of
on political	4.19	1	with your **goals and objectives and** so were more cautious **on political** —RISK— than we are **on trade** credit ron bobman capital
to political	3.45	1	**in trade** credit reinsurance do you have a similar **view to political** —**risk**— **insurance** now has that market shown signs of turning
goals and	2.95	2	the nature of the —RISKS— underwritten are **compatible with** your **goals and objectives and** so were more cautious **on political** —RISK— than
our political	2.95	1	appropriate action to establish reserves that **are sufficient** to pay **our political** —RISK— **claims there** is actually **some potential** that we will
guided by	1.60	1	hold —RISKIER— assets or buy back shares we will **be guided by** the pricing that we observe in the various marks based
view to	1.23	1	reentry **in trade** credit reinsurance do you have a similar **view to political** —**risk**— **insurance** now has that market shown signs of
recovery and	0.98	1	have **taken a** more conservative view of the potential for **recovery and** essentially discounted the —LIKELIHOOD— that we would actually get money
a threat	0.98	1	the —RISK— that were taking on we view **inflation as a** —**threat**— **but** we dont view it as the most **likely outcome**
inflation as	0.76	2	suitable for the —RISK— that were taking on we view **inflation as a** —**threat**— **but** we dont view it as the most
characterized by	0.67	1	investing activities this has led to an operating environment in **characterized by** ample capacity for insurance —RISKS— and therefore riskadjusted pricing is
threat but	0.59	1	—RISK— that were taking on we view **inflation as a** —**threat**— **but** we dont view it as the most **likely outcome** when
surprised at	0.55	1	a certain defined sub segment of political —RISK— were you **surprised at** all by the nature of losses that were reported to
fulfill their	0.50	1	they relate to lenders in those regions **being unable** to **fulfill their** lending commitments due to resource **constraints and** so political —RISK—
are sufficient	0.50	1	think that weve taken appropriate action to establish reserves that **are sufficient** to pay **our political** —RISK— **claims there** is actually **some**
obligations and	0.49	1	and so political —RISK— coverage comes in to **satisfy those obligations and** therein **creates the** opportunity for the recovery to the **extent**
development in	0.49	1	they turn out to be right you could see favorable **development in** future periods on **the political** —RISK— class from us ian
harder to	0.49	1	**harder to** understand it **is harder to** quantify it **is harder to** ensure that the nature of the —RISKS— underwritten are **compatible**
changed over	0.49	1	you that the nature of **the political** —RISK— business has **changed over** time as the primary underwriters view of opportunities has **changed**
duration in	0.49	1	you take the step now of **going very** short on **duration in my view** youre taking a big —BET— youre willing to
parties that	0.49	1	**the political** —RISK— market backing only a couple of players **parties that** were open with us about sharing the nature of **their**
is harder	0.49	1	**is harder to** understand it **is harder to** quantify it **is harder to** ensure that the nature of the —RISKS— underwritten are
plant where	0.29	1	in the current accident year one was **in political** —RISK— **plant where** we had a number of notices of one seat and
objectives and	0.29	2	of the —RISKS— underwritten are **compatible with** your **goals and objectives and** so were more cautious **on political** —RISK— than we are
a guess	0.25	1	political —RISK— in that was just so i can take **a guess** of what i think recovery might be down the road
competition for	0.25	1	startups in recent periods in the eamps space there is **competition for** the tougher commercial casualty —RISKS— coming now from the standard

my view	0.25	1	the step now of **going very** short on **duration in my view** youre taking a big —BET— youre willing to forego a
about political	0.25	1	provided i think it was in response to ians question **about political** —RISK— losses you gave a little bit of description about
be guided	0.25	1	underwriting hold —RISKIER— assets or buy back shares we will **be guided by** the pricing that we observe in the various marks
europe for	0.25	1	from various markets such as australia france **germany and central europe for** all other property and marine business including marine international —RISK—
some potential	0.25	1	sufficient to pay **our political** —RISK— **claims there** is actually **some potential** that we will make recoveries that will result in the
satisfy those	0.25	1	resource **constraints and** so political —RISK— coverage comes in to **satisfy those obligations and** therein **creates the** opportunity for the recovery to
likely outcome	0.25	1	**a** —**threat**— **but** we dont view it as the most **likely outcome** when you think about what has to happen in order
creates the	0.25	1	—RISK— coverage comes in to **satisfy those obligations and** therein **creates the** opportunity for the recovery to the **extent that** these banks
the mid	0.25	1	wind —PERIL— we have the opportunity to adjust it at **the mid** year renewal period if desired we generally expect property and
flexibility to	0.25	1	over time under those conditions we would have the financial **flexibility to** expand our underwriting hold —RISKIER— assets or buy back shares
compatible with	0.25	1	to ensure that the nature of the —RISKS— underwritten are **compatible with** your **goals and objectives and** so were more cautious **on**
been shrinking	0.25	1	pretty small book of political —RISK— business and it has **been shrinking** we think that weve taken appropriate action to establish reserves
constraints and	0.25	1	**being unable** to **fulfill their** lending commitments due to resource **constraints and** so political —RISK— coverage comes in to **satisfy those obligations**
the surplus	0.25	1	markets and theyre absorbing —RISKS— that were previously written in **the surplus excess and** surplus markets and there is a lot of
claims there	0.25	1	establish reserves that **are sufficient** to pay **our political** —RISK— **claims there** is actually **some potential** that we will make recoveries that
on trade	0.25	1	so were more cautious **on political** —RISK— than we are **on trade** credit ron bobman capital returns analyst okay thanks a lot
and objectives	0.17	2	nature of the —RISKS— underwritten are **compatible with** your **goals and objectives and** so were more cautious **on political** —RISK— than we
excess and	0.17	1	theyre absorbing —RISKS— that were previously written in **the surplus excess and** surplus markets and there is a lot of competition on

TranscriptID=2709551; rank=12

Appendix Table 32: Transcript summary statistics

company name:	Female Health
date:	8-Feb-10
total bigrams:	2684
rtotal90nratio:	23.76
bigrams used to score:	11

Appendix Table 33: All transcript bigrams in score

bigram	bigram score	synonyms	context string
of government	48.51	1	market acceptance the economic and business environment and the impact **of government pressures** currency —RISKS— capacity efficiency and supply **constraints and** other
groups in	4.68	1	**and involve** —RISK— the company works with various **public sector groups in** providing **education training and** the related materials in reference to
public sector	0.98	1	are expensive **and involve** —RISK— the company works with various **public sector groups in** providing **education training and** the related materials in
detailed in	0.97	2	currency —RISKS— capacity efficiency and supply **constraints and** other —RISKS— **detailed in** the companys press releases shareholder communication and security and exchange
programs are	0.74	1	in reference to sexually transmitted infection including hivaids prevention these **programs are** much less expensive and lower —RISK— than classic advertising and
government pressures	0.49	2	acceptance the economic and business environment and the impact **of government pressures** currency —RISKS— capacity efficiency and supply **constraints and** other —RISKS—
programs the	0.49	1	less expensive and lower —RISK— than classic advertising and marketing **programs the** company believes it has a great opportunity for continued growth

programs which	0.49	1	sell **third the** company doesnt conduct classic advertising and marketing **programs which** are expensive **and involve** —RISK— the company works with various
exclude the	0.25	1	we have received certainly the payment of a dividend doesnt **exclude the** —POSSIBILITY— of acquiring a product or other products if they
and involve	0.25	1	doesnt conduct classic advertising and marketing **programs which** are expensive **and involve** —RISK— the company works with various **public sector groups in**
constraints and	0.25	2	impact **of government pressures** currency —RISKS— capacity efficiency and supply **constraints and** other —RISKS— **detailed in** the companys press releases shareholder communication

TranscriptID=3073659; rank=13

Appendix Table 34: Transcript summary statistics

company name:	Applied Energetics, Inc.
date:	17-May-10
total bigrams:	2681
rtotal90nratio:	23.59
bigrams used to score:	11

Appendix Table 35: All transcript bigrams in score

bigram	bigram score	synonyms	context string
of government	48.51	1	of products and the —UNCERTAINTY— of the timing and **magnitude of government funding and** customer orders **dependence on** sales **to government** customers
the battlefield	2.06	1	our opportunity to demonstrate the power **of electrical** discharge on **the battlefield** and it **gives our** company the —CHANCE— to demonstrate our
funding and	1.72	2	and the —UNCERTAINTY— of the timing and **magnitude of government funding and** customer orders **dependence on** sales **to government** customers economic —**uncertainty**—
to government	1.48	2	**magnitude of government funding and** customer orders **dependence on** sales **to government** customers economic —**uncertainty**— **and** changes in government spending —RISKS— related
detailed in	0.97	1	impact of competitive products and pricing litigation and other —RISKS— **detailed in** the companys filings with the securities and exchange commission the
magnitude of	0.74	1	number of products and the —UNCERTAINTY— of the timing and **magnitude of government funding and** customer orders **dependence on** sales **to government**
dependence on	0.74	1	the timing and **magnitude of government funding and** customer orders **dependence on** sales **to government** customers economic —**uncertainty**— **and** changes in government
dependence on	0.74	1	statements such factors include but are not limited to the **dependence on** sales of a limited number of products and the —UNCERTAINTY—
uncertainty and	0.25	1	and customer orders **dependence on** sales **to government** customers economic —**uncertainty**— **and** changes in government spending —RISKS— related to government contracts the
government funding	0.25	1	products and the —UNCERTAINTY— of the timing and **magnitude of government funding and** customer orders **dependence on** sales **to government** customers economic
gives our	0.17	1	the power **of electrical** discharge on **the battlefield** and it **gives our** company the —CHANCE— to demonstrate our ability to be a

TranscriptID=3425259; rank=14

Appendix Table 36: Transcript summary statistics

company name:	World Acceptance Corporation
date:	26-Oct-10
total bigrams:	3115
rtotal90nratio:	22.52
bigrams used to score:	10

Appendix Table 37: All transcript bigrams in score

bigram	bigram score	synonyms	context string
the states	56.38	1	state **level with** no material **legislation** —**pending**— in any of **the states where** we operate however this is an ongoing challenge that
and legislative	2.22	1	would like to provide a brief update on the **regulatory and legislative** landscape the companys greatest —RISK— factor currently there is very
federal level	1.05	1	the —UNCERTAINTY— from what is currently going on in the **federal level is certainly** something that we **are monitoring** very closely david
are inherently	0.98	2	concerning future events such forwardlooking statements are **about matters that are inherently** subject to —RISKS— and —UNCERTAINTIES— factors that could cause actual
matters that	0.76	2	**and beliefs** concerning future events such forwardlooking statements are **about matters that are inherently** subject to —RISKS— and —UNCERTAINTIES— factors that could
states where	0.74	1	**level with** no material **legislation** —**pending**— in any of **the states where** we operate however this is an ongoing challenge that we
regulatory and	0.74	1	i would like to provide a brief update on the **regulatory and legislative** landscape the companys greatest —RISK— factor currently there is
level with	0.49	1	factor currently there is very little **activity at** the state **level with** no material **legislation** —**pending**— in any of **the states where**
about matters	0.29	2	expectations **and beliefs** concerning future events such forwardlooking statements are **about matters that are inherently** subject to —RISKS— and —UNCERTAINTIES— factors that
activity at	0.25	2	the companys greatest —RISK— factor currently there is very little **activity at** the state **level with** no material **legislation** —**pending**— in any

TranscriptID=1826368; rank=15

Appendix Table 38: Transcript summary statistics

company name:	Mechanical Technology Inc.
date:	12-May-08
total bigrams:	2649
rtotal90nratio:	21.78
bigrams used to score:	8

Appendix Table 39: All transcript bigrams in score

bigram	bigram score	synonyms	context string
of government	48.51	1	measurement business on a **small number** customers an potential loss **of government funding** —RISK— related to developing mobion direct methanol **fuel cells**
small number	1.72	1	the **dependence of** our test and measurement business on a **small number** customers an potential loss **of government funding** —RISK— related to
cells and	0.88	1	**government funding** —RISK— related to developing mobion direct methanol **fuel cells and** whether we will ever successfully develop **reliable and** commercially viable
fuel cells	0.46	1	**of government funding** —RISK— related to developing mobion direct methanol **fuel cells and** whether we will ever successfully develop **reliable and** commercially
of continued	0.25	1	to our history of recurring net losses and the —RISK— **of continued** net losses our independent auditors raising substantial concern about our
government funding	0.25	1	business on a **small number** customers an potential loss **of government funding** —RISK— related to developing mobion direct methanol **fuel cells and**
our common	0.25	1	to **continue as** a going **concern the** potential listing of **our common** stock from the nasdaq global market the —**possibility**— **that** sales
also seen	0.25	1	earlier **with** —**varying**— increases across all product categories we have **also seen** progress in new product **development in** january mti **expanded its**

TranscriptID=2158533; rank=16

Appendix Table 40: Transcript summary statistics

company name:	Axis Capital Holdings Limited
date:	28-Apr-09
total bigrams:	7950
rtotal90nratio:	21.71
bigrams used to score:	36

Appendix Table 41: All transcript bigrams in score

bigram	bigram score	synonyms	context string
the political	21.42	1	**blue in** the face because weve been going on about **the political** —RISK— business quite appropriately for probably a year now but
the political	21.42	1	getting specific you could kind of describe **a claim** on **the political** —RISK— business what a typical claim would be and why
the political	21.42	1	great answer thank you one other quick followup here on **the political** —RISK— business perhaps john **without getting** specific you could kind
the political	21.42	1	morning **matt matt** heimermann jpmorgan analyst good morning question on **the political** —RISK— side as we just just going forward with respect
and political	10.59	1	scenarios we do not expect net losses from our credit **and political** —**risk**— **insurance** portfolio to exceed annual earnings this portfolio is
and political	10.59	1	we have also analyzed extremely stress scenarios across our credit **and political** —**risk**— **insurance** portfolio as well as **our trade** credit and
and political	10.59	1	insurance and reinsurance trade credit and bond reinsurance and credit **and political** —**risk**— **insurance** first i would like to specifically discuss loss
and political	10.59	1	losses partially offsetting this was claims activity on our credit **and political** —**risk**— **insurance** line of business this quarter john will provide
and political	10.59	1	the decrease **was driven** by a reduction in our credit **and political** —RISK— business we are not yet seeing the return of
evidence that	4.43	1	unlike the period following the hurricane season there is **strong evidence that** price **is increasing** for **the california** earthquake —PERIL— various market
our political	2.95	1	incurred losses observed in the through period moving on to **our political** —RISK— and credit insurance line we have **received only** three
actions taken	1.72	1	through this first part of and that the —**risk**— **management actions taken** by our cedents to **manage their way** through **the unfolding**
to mobilize	1.23	1	the —RISK— reward characteristics have sufficiently swung in our favor **to mobilize ourselves for** a full offensive we believe by yearend our
our most	0.74	1	these matters please refer to the —RISK— factor section in **our most** recent form k on file with the securities and exchange
strong evidence	0.74	1	season unlike the period following the hurricane season there is **strong evidence that** price **is increasing** for **the california** earthquake —PERIL— various
received only	0.63	1	to **our political** —RISK— and credit insurance line we have **received only** three notifications of loss in the first quarter of one
some additional	0.49	1	—**risk**— **insurance** line of business this quarter john will provide **some additional** color on this in his commentary on credit exposures from
will depend	0.49	1	—RISK— retentions more than ever now perspective returns to shareholders **will depend** on real underwriting **profits being** made with this in mind
manage their	0.49	1	that the —**risk**— **management actions taken** by our cedents to **manage their way** through **the unfolding** credit crisis may take some time
was driven	0.49	1	were million down from the prior year quarter the decrease **was driven** by a reduction in our credit **and political** —RISK— business
and geography	0.38	1	we believe by yearend our market leading diversification by product **and geography** together with our strong underwriting skills and —**risk**— **management** framework
mobilized to	0.38	1	strong underwriting skills and —**risk**— **management** framework will be fully **mobilized to** deliver high quality outperformance now i would like to open
without getting	0.29	1	quick followup here on **the political** —RISK— business perhaps john **without getting** specific you could kind of describe **a claim** on **the**
matt matt	0.25	1	charman axis capital holdings limited chairman amp president good morning **matt matt** heimermann jpmorgan analyst good morning question on **the political** —RISK—
the california	0.25	1	season there is **strong evidence that** price **is increasing** for **the california** earthquake —PERIL— various market dynamics support sustained hardening including the
for opportunities	0.25	1	—RISK— assumed than proportional reinsurance business however we still look **for opportunities** in proportional reinsurance business particularly with good quality well run

much earlier	0.25	1	of this cedents needing certainty are coming to the market **much earlier** to secure cat coverage overall our —RISK— appetite in targeted
our trade	0.25	1	our credit **and political** —**risk**— **insurance** portfolio as well as **our trade** credit and bond reinsurance portfolio these stress scenarios assume extreme
a claim	0.25	1	perhaps john **without getting** specific you could kind of describe **a claim** on **the political** —RISK— business what a typical claim would
most efficient	0.25	1	cash and i think the insurance marketplace is still the **most efficient** use of selling —RISK— into and the most price sensitive
frequency and	0.25	1	points from the prior year quarter driven by a lower **frequency and** severity of property —RISK— losses partially offsetting this was claims
its way	0.25	2	are reliance on insurance products is lessened but that works **its way** through balance sheets because —RISK— is —RISK— and losses occur
is increasing	0.25	1	following the hurricane season there is **strong evidence that** price **is increasing** for **the california** earthquake —PERIL— various market dynamics support sustained
their way	0.25	1	the —**risk**— **management actions taken** by our cedents to **manage their way** through **the unfolding** credit crisis may take some time to
was billion	0.25	1	and the —RISKS— we are targeting total capitalization at march **was billion** including million of longterm debt and million of preferred equity
not risk	0.21	1	a lot of shortterm action being taken by finance directors **not** —**risk**— managers the —RISK— managers in a lot of these fortune

TranscriptID=2327308; rank=17

Appendix Table 42: Transcript summary statistics

company name:	Axis Capital Holdings Limited
date:	4-Aug-09
total bigrams:	11288
rtotal90nratio:	20.20
bigrams used to score:	44

Appendix Table 43: All transcript bigrams in score

bigram	bigram score	synonyms	context string
the political	21.42	2	**here john** i wonder if you could remind us on **the political** —RISK— business what are the kind of average limits —EXPOSED—
the political	21.42	1	president ceo good morning david david small jpmorgan analyst on **the political** —RISK— you had mentioned i just want **to clarify** so
the political	21.42	1	help me understand was it that an earnings pattern for **the political** —RISK— business where you earned more premiums this quarter versus
the political	21.42	1	ceo in **my view** will be the worse year for **the political** and credit —RISK— business terry shu pioneer investments analyst okay
the political	21.42	1	me and as i said earlier that these three **lines the political** and credit —**risk**— **insurance** portfolio the reinsurance credit and bond
the political	21.42	2	been very good for claims activity we i talked about **the political** —RISK— increase in reserves and i no —DOUBT— will be
and political	10.59	1	just a follow up to dans question on the credit **and political** —**risk**— **insurance** business just looking at it quarteroverquarter first quarter
and political	10.59	1	increase in the ratio sequentially **is driven** by the credit **and political** —RISK— business there is some other attritional losses that **have**
and political	10.59	1	in the millions during the period finally in our credit **and political** —RISK— lines our estimated accident year combined ratio is for
and political	10.59	1	and bond reinsurance professional lines insurance and reinsurance and credit **and political** —RISKS— insurance starting with the trade credit and bond reinsurance
and political	10.59	1	the quarter higher claims activity this year from our credit **and political** —RISK— line resulted in an upward movement in the accident
and political	10.59	1	decrease **was driven** by a continued reduction in our credit **and political** —RISK— business the impact of these reductions were partially offset
to deploy	1.48	1	we hold and the —RISKS— we are targeting and continue **to deploy** prioritize **deployment of** capital in underwriting opportunities with that id
questions on	0.98	1	in reserves and i no —DOUBT— will be answering more **questions on** that as we go through this qampa which im happy
to clarify	0.98	1	on **the political** —RISK— you had mentioned i just want **to clarify** so are there new **claims that** are coming in this

is driven	0.98	1	i mean much of the increase in the ratio sequentially **is driven** by the credit **and political** —RISK— business there is some
doubt the	0.74	1	of that actually washes through without a shadow of a —**doubt**— **the** —RISK— reward tractors for the primary industry for this year
particular political	0.74	1	the average limits just the average limits there is **one particular political** —RISK— out there that i guess is publicly disclosed and
our most	0.74	1	these matters please refer to the —RISK— factor section in **our most** recent form k on file with the securities and exchange
this shift	0.74	1	in us agency debt securities and high grade corporate debt **this shift** has resulted in reduced extension —RISK— while maintaining our investment
taking place	0.49	1	pretense **about** —**risk**— **monitoring and** the **reality of** what is **taking place from** what is being reported i hope some of that
taking place	0.49	1	far too **detached from** the actual **reality of** what is **taking place** in **their business** and some of **the pretense about** —**risk**—
have come	0.49	1	political —RISK— business there is some other attritional losses that **have come** through but its primarily from that credit book business dan
looking more	0.49	1	of it just i dont understand why companies are not **looking more** closely at the —RISK— reward characteristics of the business theyre
challenged by	0.49	1	that meet our —RISK— return characteristics but were also being **challenged by** a low rate environment vinay misquith credit suisse analyst okay
was driven	0.49	1	were million down from the prior year quarter the decrease **was driven** by a continued reduction in our credit **and political** —RISK—
place from	0.49	1	**about** —**risk**— **monitoring and** the **reality of** what is **taking place from** what is being reported i hope some of that actually
old fashioned	0.49	1	is harvesting for the —RISK— it is accepting in my **old fashioned** sort **of way** i think its still very inappropriate and
one particular	0.42	1	on the average limits just the average limits there is **one particular political** —RISK— out there that i guess is publicly disclosed
credits are	0.38	1	the underlying —RISK— like that youre taking what kind of **credits are** you are you incurring john charman axis capital holdings limited
of way	0.34	1	the —RISK— it is accepting in my **old fashioned** sort **of way** i think its still very inappropriate and i think its
risk insurance	0.29	1	said earlier that these three **lines the political** and credit —**risk**— **insurance** portfolio the reinsurance credit and bond —RISK— portfolio and **the**
are well	0.25	1	—TENTATIVE— about predicting **the scale** of that hardening regardless we **are well** equipped to manage our diverse portfolio to produce good returns
the professional	0.25	1	insurance portfolio the reinsurance credit and bond —RISK— portfolio and **the professional** lines dampo financial institution business in insurance and reinsurance those
the professional	0.25	1	political and credit —RISK— as well as professional lines business **the professional** lines numbers have been remarkably **consistent and** static dan johnson
reality of	0.25	1	and some of **the pretense about** —**risk**— **monitoring and** the **reality of** what is **taking place from** what is being reported i
the scale	0.25	1	absent a major event we remain more —TENTATIVE— about predicting **the scale** of that hardening regardless we **are well** equipped to manage
good opportunities	0.25	1	in **rates so** wherever were moving money were looking for **good opportunities** that meet our —RISK— return characteristics but were also being
lines the	0.25	1	let me and as i said earlier that these three **lines the political** and credit —**risk**— **insurance** portfolio the reinsurance credit and
deployment of	0.25	1	the —RISKS— we are targeting and continue **to deploy** prioritize **deployment of** capital in underwriting opportunities with that id like to turn
take political	0.25	1	thats why we have a diversified portfolio but if you **take political** and credit insurance —RISK— axis is nearly nine years old
monitoring and	0.25	1	in **their business** and some of **the pretense about** —**risk**— **monitoring and** the **reality of** what is **taking place from** what is
the pretense	0.25	1	what is **taking place** in **their business** and some of **the pretense about** —**risk**— **monitoring and** the **reality of** what is **taking**
their business	0.25	1	from the actual **reality of** what is **taking place** in **their business** and some of **the pretense about** —**risk**— **monitoring and** the

TranscriptID=1359215; rank=18

Appendix Table 44: Transcript summary statistics

company name:	Advanced Photonix
date:	14-Aug-06
total bigrams:	2868
rtotal90nratio:	19.04
bigrams used to score:	2

Appendix Table 45: All transcript bigrams in score

bigram	bigram score	synonyms	context string
of government	48.51	1	market due primarily to the —UNPREDICTABLE— nature of the timing **of government contracts** overall revenue growth met the companys expectations for the
government contracts	1.23	1	due primarily to the —UNPREDICTABLE— nature of the timing **of government contracts** overall revenue growth met the companys expectations for the first

TranscriptID=2754769; rank=19

Appendix Table 46: Transcript summary statistics

company name:	TravelCenters of America
date:	24-Feb-10
total bigrams:	3575
rtotal90nratio:	18.75
bigrams used to score:	3

Appendix Table 47: All transcript bigrams in score

bigram	bigram score	synonyms	context string
of government	48.51	1	in the future whether due to speculation or the impact **of government policy such** an increase or the —POSSIBILITY— of one requires
government policy	11.57	1	the future whether due to speculation or the impact **of government policy such** an increase or the —POSSIBILITY— of one requires vigilance
policy such	0.98	1	future whether due to speculation or the impact **of government policy such** an increase or the —POSSIBILITY— of one requires vigilance and

TranscriptID=1997069; rank=20

Appendix Table 48: Transcript summary statistics

company name:	Magellan Health Services
date:	31-Oct-08
total bigrams:	7752
rtotal90nratio:	18.59
bigrams used to score:	20

Appendix Table 49: All transcript bigrams in score

bigram	bigram score	synonyms	context string
the states	56.38	1	bar only a small portion our —RISK— business exists in **the states** that do not have parity we do believe however that
the states	56.38	1	outsourcing —RISK— grows we also continue to see interest from **the states on** the management of radiology services **for medicaid** population nia
state laws	6.16	1	those where small employers are required to offer parity the **state laws** sets the bar only a small portion our —RISK— business
candidates from	4.19	1	youre seeing what impact have you seen on potential acquisition **candidates from** all **the** —**instability**— over the last month or so you
states on	1.72	1	—RISK— grows we also continue to see interest from **the states on** the management of radiology services **for medicaid** population nia will
funding in	0.98	1	of million since december million of which is attributable **to funding in** relation to one of the —RISK— radiology contracts as previously
are clearly	0.74	1	through cms at some point in the future although we **are clearly** disappointed that we havent yet closed any new radiology —RISK—
the caption	0.55	2	entirety by the complete discussion of —RISKS— set forth under **the caption** —RISK— factors in magellans annual report on form k for
maricopa county	0.49	1	added additional revenues from the radiology —RISK— contracts and **the maricopa county** contract in the third quarter of we recognized million of
development in	0.49	1	unfavorable changes of million we continue to see favorable care **development in** our —RISK— radiology contracts relative to our estimated range of
their interest	0.49	1	the past as these health plans feel greater mlr pressure **their interest** in outsourcing —RISK— grows we also continue to see interest
funding of	0.49	1	cash of million for one of the radiology —RISK— contracts **funding of** restricted cash and other working capital of million for other
funding of	0.49	1	stock options of million partially offsetting such items were **the funding of** restricted cash of million for one of the radiology —RISK—
the maricopa	0.25	1	we added additional revenues from the radiology —RISK— contracts and **the maricopa county** contract in the third quarter of we recognized million
that contract	0.25	1	wellchoice is the —RISK— business that we still have and **that contract** as weve stated goes through the end **of scott** fidel
on commercial	0.25	1	—UNCERTAINTY— related to the economy will continue to **put pressure on commercial** margins in as you recall at the end of the
to funding	0.25	1	increase of million since december million of which is attributable **to funding in** relation to one of the —RISK— radiology contracts as
health services	0.25	1	been the wellchoice piece of the business rene lerer magellan **health services** president ceo wellchoice is the —RISK— business that we still
put pressure	0.25	1	with **continued** —**uncertainty**— related to the economy will continue to **put pressure on commercial** margins in as you recall at the end
infrastructure as	0.21	1	due to our ability to leverage our operating and corporate **infrastructure as** we added additional revenues from the radiology —RISK— contracts and