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Political Environment, Financial Intermediation Costs, and Financing Patterns*

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Abstract

Political environment is an important determinant of financial intermediation costs, which eventually affects the external financing patterns of firms. Political gyrations create policy uncertainty, which increases the information risk, weakens the investor demand, and reduces the offer size. This raises the securities' placement costs for the financial intermediaries, who pass on these costs to the issuing firms in the form of higher underwriter spreads. The issuance costs for new equity and debt capital increase, leading to lower leverage. Simultaneous equation analysis of financing, investment, and cash policies reveals that this channel is distinct from previously documented effects of policy uncertainty on corporate outcomes.

1. Introduction

Unpredictable political events such as election outcomes can create policy uncertainty that disrupts firms' regularly planned activities and alters economic outcomes. Some influential studies (Bloom, 2009; Julio and Yook, 2012, among others) document a significantly negative impact of policy uncertainty on firms' investment expenditures. While the investment decisions of firms under such uncertainty are a heavily researched area, the impact of policy uncertainty on market frictions and firms' financing decisions is a relatively unexplored field of research.

More recently, researchers have started to investigate how and whether political uncertainty impacts the security issuance activities of firms. Pastor and Veronesi (2012, 2013) present a theoretical framework for understanding the adverse effects of policy uncertainty on firms' securities. The empirical studies in this area mostly focus on the issuance patterns of individual securities and document that the volume of municipal debt issuances, seasoned equity offerings, and initial public offerings all decline during periods of higher political uncertainty (Gao and Qi, 2013; Brogaard and Detzel, 2015; Colak, Durnev, and Qian, 2016a). Furthermore, firms have to pay higher costs of equity (Brogaard and Detzel, 2015; Colak, et al., 2016a) and debt (Gao and Qi, 2013; Francis, et al., 2014) as investors require higher risk premium due to elevated political uncertainty. These papers study either debt or equity contracts but not both. By considering stock and bond issuance and repurchase activities together one can analyze how a firm chooses the optimal mix of debt and equity in its capital structure. Also, they typically analyze only the U.S. firms, which limits the range of financial topics that can be addressed.

Existing studies reveal two main economic mechanisms through which policy uncertainty affects external financing of firms. First, uncertainty makes it more difficult to forecast future cash flows, and thus when faced with political uncertainty, firms are likely to delay new investment (Julio and Yook, 2012) and any external financing that would otherwise be needed to undertake these investments. Second, the aforementioned rise in the costs of debt and equity during high political uncertainty periods would likely discourage individual security issuances.

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Our study contributes to this literature by providing international evidence of another economic channel – the financial intermediation frictions channel – through which policy uncertainty affects firm's financing activities, and by establishing a direct link between the estimated financial intermediation costs and a firm's leverage. Higher information risk, weakened investor demand, and reduced issue size under policy uncertainty increase the placement and marketing costs and certification and reputation risks for the financial intermediaries, who pass through these costs to the issuing firms. Since the issuance costs of new securities are higher when uncertainty looms, the firms lower their leverage. A simultaneous equations analysis of the three important endogenous corporate policies – investment, financing, and cash holding – reveals that the financial intermediation frictions channel leads to a significant decrease in leverage even after isolating it from the reduction in investments, the rise in cash, and the increased costs of capital.

We consider several sources of policy uncertainty. A binary variable captures election-driven policy uncertainty prevalent before national elections and a continuous proxy captures policy uncertainty due to the turnover of a major veto player (e.g. The Congress in USA switching control from one party to another).[1] We employ two other measures that are not necessarily event driven, but they reflect the prevailing economic and political conditions that might affect the policy making in that country. These variables capture whether the country is run by a coalition government and the frequency with which the news media discusses issues related to policy uncertainty (the economic policy uncertainty index of Baker, Bloom, and Davis, 2016).[2]

A significant jump in policy uncertainty serves as an exogenous shock that distorts the information environment of the firms (Boutchkova, et al., 2012; Durnev, 2011) and dampens investor demand for risky assets (Pastor and Veronesi, 2012; 2013). Prior research suggests that information risk (Zhang, Cai, and Keasey, 2013), investor demand, and offer size (Inmoo, Lochhead, Ritter, and Zhao, 1996) are important

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[1] Veto players are the president and the largest party in the legislature for a presidential system, and the prime minister and the parties in the majority government coalition for a parliamentary system. See Table 1, Panel C for more details.
[2] Political elections are considered as exogenous prescheduled events, which makes them popular measures of political uncertainty (see Julio and Yook, 2012; Boutchkova, Doshi, Durnev, and Molchanov, 2012; Durnev, 2011). See Section 3.2 for further details on the advantages and disadvantages of various policy uncertainty measures.

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determinants of transaction costs. If so, political uncertainty should increase underwriter spreads. We confirm these effects in our data using augmented versions of Altinkilic and Hansen (2000)'s models.

Altinkilic and Hansen (2000) documents that marginal (placement) costs are an increasing function of adverse selection costs, agency costs, and/or marketing costs for U.S. firms. For the first time in the literature, we apply enriched versions of their models to a multinational sample of firms (across 38 countries) to analyze the gross spreads charged on seasoned common stock offerings (SEOs) and straight bond offerings (bond issuances) by underwriting firms. The application of these models to an international sample of bonds and SEOs yields valuable insights into the transmission channel through which policy uncertainty affects firms' activities. Each component of Altinkilic and Hansen's decomposition of gross spreads is significantly affected by policy uncertainty. Furthermore, all three hypothesized channels, namely higher information risk, weakened investor demand, and reduced offer size provide a credible explanation of the positive relationship between political uncertainty and underwriter spreads.

Specifically, gross spreads, marginal spreads, and marginal spread slopes all increase significantly for both debt and equity issues during politically uncertain periods. When political uncertainty is high, the underwriters increase the gross spread (i.e. required cash compensation relative to gross proceeds) on equity (debt) by 8-33 (32-41) basis points in absolute terms and 2.63%-11.00% (16.84%-21.47%) in relative terms, making it harder to raise large amounts of capital. The marginal underwriting fee on equity (debt) is about $32,904-$33,166 ($27,271-$30,973) for the first million with the marginal fee rising at a rate of $232-$284 ($23.33-$25.49) per million under low political uncertainty and $34,849-$84,067 ($28,593-$32,652) for the first million with the marginal fee rising at a rate of $412-$1,339 ($29.34-$45.69) per million under high political uncertainty. A switch from low to high uncertainty regime results in a relative increase by 5.07%-155.49% (4.85%-10.12%) in the marginal underwriting fee on equity (debt) for the first million and a relative increase by 45.07%-477.16% (15.10%-95.84%) in the change in the marginal fee on equity (debt). These significant increases in the marginal costs and the marginal spread slope imply exponentially rising transaction costs under policy uncertainty.

Furthermore, political uncertainty exposes firms' equity to three times higher underpricing; raises the average rating for the bonds issued by 8%; decreases the dollar proceeds per bond offering by 5.3%; and reduces the average price-to-book ratio, the number of SEOs, the number of bond offerings per country by 47%, 60%, and 66% respectively, relative to non-election years. In short, policy uncertainty increases the information risk (as captured by equity underpricing and bond credit rating) and weakens the investor demand (as reflected in the price-to-book ratio and the frequency of issuances), which raises underwriting costs. These findings are novel to the literature and provide a detailed description of the behavior of spreads paid in underwritten seasoned common stock offerings and straight bond offerings when firms are subject to elevated policy uncertainty.[3]

We show that firms are less likely to make significant changes to their capital structure as the issuance costs become more prohibitive. The unconditional frequencies of net short-term debt, net long-term debt, total net debt, and net equity issuances are on average 59%, 70%, 85%, and 43%, respectively. Political uncertainty lowers the odds of long-term and total net debt issuances by 23 and 8 percentage points, respectively. The adverse effects of policy uncertainty on financing patterns are primarily driven by elevated issuance costs in debt and equity markets. Specifically, higher debt issuance costs lower the odds of long-term and total net debt issuances by 24 and 11 percentage points, respectively. Similarly, higher equity issuance costs lead to a reduction in the likelihood of equity issuances by 21 percentage points.

Using Blundell and Bond's (1998) GMM estimator, we show that higher debt and equity issuance costs under policy uncertainty reduce the desired leverage levels, regardless of the uncertainty measure used. Using our election indicator, the effect of higher policy uncertainty is to lower leverage in the long-run by about 7% (sample median is 22%). Our subsample analyses reveal that leverage of firms that i) are financially constrained, ii) are internationally undiversified, iii) are exposed to competitive elections, iv)

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[3] Colak, et al. (2016b) report that gross underwriter spreads increase due to policy uncertainty, but it does not decompose the spreads into its components (marginal costs, marginal spread slope, etc.). These components are important, as they affect the amount of capital that can be raised in an elevated policy uncertainty environment. An increase in the marginal cost and/or the marginal spread slope implies incrementally higher sensitivity of transaction costs to political uncertainty. Consequently, companies who are in need of large external equity capital would naturally be inclined to delay or cancel their security offering. We also go farther than Colak, et al. (2016b) in exploring the economic mechanisms through which political uncertainty affects underwriter spreads; an issue we explain in the next section.

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operate in politically sensitive industries, and v) are from countries where political connections are heavily regulated is more sensitive to political uncertainty. We also find that the results are robust to the possible endogeneity of election timing as the findings are similar (and even stronger) for the sample of countries for which the timing of elections is fixed by electoral law.

Various cross-country analyses reveal further insights into the workings of policy uncertainty around the globe. Firms from countries with sophisticated financial intermediaries and deeper bond markets seem to weather policy uncertainty shocks better (whereas stock market development and market-based financial structure do not seem to be effective in reducing the adverse effects of political uncertainty on leverage). Furthermore, for firms located in countries with advanced legal, political, and democratic rights, countries that allow proportional representation and constitutional review, and countries that impose rules on financial conflict disclosure by the members of parliament, policy uncertainty seems to be less disruptive. Thus, strong political institutions alleviate the information risk induced by elections. In general, our empirical models are saturated with country and time fixed effects for the proper identification of the economic channel. However, directly controlling for various country dimensions (such as ownership structure, financial development, legal and institutional characteristics) leave our conclusions unchanged.

Two contemporaneous working papers analyze leverage under political uncertainty but with different angles. The study by Cao, Duan, and Uysal (2013) models the time-gap between capital structure adjustments under policy uncertainty as measured by the news-based index of Baker, et al. (2016) for U.S. firms only. We use a sample of firms from 38 different countries and several policy uncertainty measures. The study by Colak, et al. (2016b) examines speed of leverage adjustments under political uncertainty. Unlike these two studies that specifically explore the deviations from optimal leverage, we focus on firm's general financing patterns and leverage levels, and we analyze in detail the financial intermediation channel. We also go farther than both studies in ruling out alternative explanations by considering how policy uncertainty simultaneously changes a firm's investment, cash holding, and capital structure.

The rest of the paper is organized as follows. Section 2 reviews the literature and presents our hypotheses. Section 3 describes our data sources and our policy uncertainty measures. Section 4 investigates

how financial intermediation costs are affected by policy uncertainty. Section 5 and Section 6 analyze the effects of policy uncertainty on firms' financing patterns and capital structures, respectively. Section 7 evaluates alternative explanations and isolates the financial intermediation frictions channel from the investment, cash holding, and cost of capital channels. Section 8 discusses the implications of our empirical results. Section 9 concludes the study.

2. Literature review and hypotheses

Two theoretical studies by Pastor and Veronesi (2012, 2013) claim that political uncertainty commands a risk premium in the prices of securities, which, in turn, dissuades firms from issuing these undervalued securities to raise external capital. Subsequent empirical studies have found that firms' financing costs are unfavorably affected by the politically charged atmosphere. For equity, Colak et al. (2016a) find that the number of IPOs originating from a state that is scheduled to have a gubernatorial election is significantly reduced, and that the cost of new equity increases around these elections. Similarly, using Baker et al.'s (2016) policy uncertainty index (a non-election news-based measure) and a sample of U.S. seasoned stocks, Brogaard and Detzel (2015) empirically show that an increase in political uncertainty raises the risk premium of stocks, which, in turn, is likely to increase the cost of equity financing. For debt-related capital, Gao and Qi (2013) find that the cost of financing is higher for U.S. municipal bonds originating from a state when the state is exposed to policy uncertainty due to approaching gubernatorial elections. Francis, Hasan, and Zhu (2014) employ Baker et al.'s (2016) policy uncertainty index and find that a one standard deviation increase in political uncertainty leads to around ten basis points of additional spread on U.S. bank loans.

While existing evidence indicates that political uncertainty increases the cost of capital through valuation changes, we hypothesize that political uncertainty increases the intermediation costs of debt and equity issuances as well. Put differently, we test whether the financial intermediaries and the marketing, placement, certification, and monitoring costs they charge for external financing are also influenced by

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political uncertainty, which in turn should influence a firm's optimal leverage. We develop three main hypotheses related to financing patterns under elevated political uncertainty.

Hypothesis 1: Our financial intermediation frictions hypothesis posits that the gross and marginal spreads demanded by underwriting firms increase with political uncertainty for debt and equity offerings.

For a sample of U.S. firms, Altinkilic and Hansen (2000) find that underwriters' marginal (placement) costs rise when adverse selection problems are exacerbated in the presence of an external shock, such as an election driven uncertainty shock that affects the information environment of investors and firms. To test the financial intermediation cost hypothesis, we adopt enhanced versions of Altinkilic and Hansen's underwriter spread models, which enable estimations of the fixed and variable (marginal) components of costs incurred by underwriters for their certification, monitoring, and marketing efforts.

Political uncertainty – which encloses the uncertainty about who will get elected, which new policies will be implemented, and what will be the impact of these polices on firms' cash flows – could affect underwriting firms' gross spreads through several economic mechanisms.[4] We test the forces and frictions that influence the issuance spreads by forming sub-hypotheses.

Hypothesis 1A: The asymmetric information (information risk) sub-hypothesis postulates that the information environment deteriorates in the financial markets during periods of high political uncertainty. The elevated information risk about firms' future prospects results in greater certification and reputation risk incurred by the intermediary firms during the issuance of new equity and debt securities.

The first mechanism through which political uncertainty could increase the underwriter spreads is the asymmetric information (adverse selection) costs. The elections may bring new governments and polices and thereby create uncertainty about how the new polices will impact firm's cash flows.[5] Accordingly, the financial markets become more volatile (Bialkowski et al., 2008) and the risk become

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[4] While throughout the paper, we use political uncertainty and policy uncertainty interchangeably, we conduct a test to isolate the effects of policy uncertainty by using Baker, et al. (2016)'s index. See Section 6 for further details.

[5] Underwriting firms reduce the asymmetric information between firms and potential investors through their certification role. During high political uncertainty periods, the asymmetric information problem between firms and outside investors worsens. Corporate insiders may have a better insight and/or differing beliefs on how each election outcome and the resultant new policies would affect the firm's performance and corporate decision-making (Jung and Subramanian, 2014). As the asymmetric information problem worsens, the certification role by underwriters becomes more difficult and their reputation risk increases.

more idiosyncratic (Boutchkova et al., 2012). Thus, during periods of high political uncertainty, equity and debt offerings of some firms are subject to elevated information risk about these firms' future cash flows. This rise in asymmetric information, in turn, increases the certification and reputation risk for the intermediaries. Consequently, underwriters demand a higher compensation for the offering.

A commonly used proxy for asymmetric information (i.e., information risk) prevalent in the equity markets is the underpricing (first day stock return) that the firms conducting initial public offerings (IPO) experience. According to Rock (1986), an IPO's underpricing is positively related to the information risk (i.e., the likelihood of a failure) of the issuing firm. To test this link, we calculate average IPO (and SEO) underpricing per year separately for each country, since the asymmetric information may vary from country to country. For debt offerings, to infer changes in the inherent information risk (adverse selection), we rely on the variation in the average debt rating of the issued bonds with the degree of political uncertainty.

Hypothesis 1B: The investor demand sub-hypothesis conjectures that the demand for new securities weakens under higher political uncertainty, causing a rise in underwriters' marketing and placement costs.

The second mechanism through which policy uncertainty could raise underwriter's gross spread is the weakened investor demand. During high policy uncertainty periods the demand for new securities decreases as investors update their Bayesian beliefs about asset valuations (Pastor and Veronesi, 2012; 2013). When investor demand is weaker, underwriters must exert more effort in marketing and placing these securities, which also increases their costs. Underwriters will likely pass through such marketing and placement costs to the issuing firms in the form of higher financial intermediation costs.

Measuring investor demand precisely is a challenging task. We use the average price-to-book ratio of firms conducting an SEO (calculated separately for each country and year) as a proxy for investor demand. The SDC data provides this variable for equity offerings only. As an alternative proxy that is readily available for both equity and debt issues, we rely on the number of SEOs and bond offerings conducted in each country per year.

Hypothesis 1C: The offer size sub-hypothesis proposes that when political uncertainty increases, firms reduce the size of their offerings, leading to higher percentage spreads charged by the underwriters.

The third mechanism through which policy uncertainty raises underwriter's gross spread is the reduced offer size. Under elevated political uncertainty, the issuing firms would tend to and/or will have to reduce the size of their offering. Uncertainty about investor demand and higher cost of capital could be the impetus for this decision. Underwriters themselves may advise the issuing firms to shrink the offering size. Regardless of the reason, if a firm reduces its offering size, this should reflect as a higher percentage spread charged by the intermediaries.[6] We measure the size of an issue using the total proceeds raised in each offer, which is readily available in the SDC data.

The financial intermediation cost hypothesis and its subcomponents explain the expected negative relationship between policy uncertainty and financial intermediation costs for debt and equity issuances. If such a negative relationship between policy uncertainty and underwriter spreads exists, it will disrupt firms' financing activities. Thus, our second and third hypotheses claim that political uncertainty would alter firms' financing patterns and leverage levels.

Hypothesis 2: Our capital market access hypothesis posits that during politically uncertain periods, firms reduce the propensity of their capital market access through issuances and repurchases of equity and/or debt securities due to the higher financial intermediation costs.

Hypothesis 3: Our leverage hypothesis states that firms operate with lower levels of financial leverage under elevated political uncertainty due to the higher costs of issuance in the securities markets.

The existing studies in the capital structure literature shed some light into how elevated financing costs under political uncertainty could reflect into a firm's leverage. DeAngelo, DeAngelo, and Whited (2011) predict a drop in leverage when firms face elevated issuance costs in the debt and equity markets, for two reasons. First, equity is more attractive as a marginal financing vehicle when the cost of debt issuances go up. Hence, an increase in debt issuance costs would lead to lower debt and higher equity issuances, leading to lower leverage. Second, a firm typically maintains higher leverage when it faces lower

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[6] Since intermediary firms face certain fixed costs for issuing securities (Altinkilic and Hansen, 2000), these costs would be charged to the issuing firm regardless of the size of the issue. Thus, there is a negative relationship between the size of the issue and the percentage spread charged by the underwriters. This explanation is consistent with Inmoo, Lochhead, Ritter, and Zhao (1996).

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costs of accessing equity capital to meet financing needs, whereas it adopts more conservative leverage levels to preserve the debt capacity when faced with higher equity costs. The opportunity cost of depleting debt capacity ceases to be deterrent to levering up only at times when it is cheap to tap equity markets. Accordingly, there is a negative relation between equity issuance costs and leverage in the long-run.[7] This posited negative relationship between (debt and equity) issuance costs and leverage is consistent with the findings of Leary and Roberts (2005), as well.

To verify our capital market access and leverage hypotheses, we conduct a detailed analysis of firms' observed balance sheet adjustments and financing patterns under political uncertainty. This is complemented with various cross-sectional tests that emphasize the importance of countries' institutional strength, industry characteristics, and firm features. In addition, we conduct analyses that isolate financial intermediation costs channel from the other channels (investments, cash holding, cost of capital, etc.). Our empirical approach is a mix of logistic regressions, Blundell and Bond (1998)'s system generalized method of moments (GMM), and three-stage least squares (3SLS).

3. Sample selection, variables, and data sources

This section provides information on the sample selection criteria, the variables used in the empirical analysis, and the data sources used to retrieve firm and country characteristics.

3.1. Firm-specific data

We combine data from several sources for a sample period of 1990-2012. The starting year is determined by the availability of reliable firm-level data and by the lack of elections in many countries prior to the 1989. Some of our analyses are focused only on 1990-2006 period to avoid the financial crisis years (2007-2008).[8] The accounting data for the sample firms in each country is taken from Compustat Global Vantage. We apply several selection criteria. First, we eliminate firms headquartered in countries where

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[7] As acknowledged in DeAngelo, et al. (2011), this is in contrast to Myers and Majluf (1984) and others who suggest that firms conduct equity issuances in periods of low equity issuance costs. The discrepancy in predictions arises because DeAngelo, et al. (2011) study the equilibrium (long-run) leverage ratios, like our paper, whereas others offer insights about firms' marginal financing decisions at particular times.

[8] During the financial crisis, debt and equity issuances were non-existent in the majority of our sample countries. This makes it impossible to investigate our channel of impact, namely the financial intermediation frictions channel, during the crisis period.

national elections are not conducted, countries ruled by a strong monarchy, or countries with a one party system. Additionally, to deal with short panel bias, we delete firms that report information for fewer than five consecutive years (see Flannery and Hankins, 2013).We also eliminate financial firms (SICs 6000-6999) and utilities (SICs 4000-4999). Finally, to attain a reasonable cross-sectional variation within each country, we drop countries that have fewer than ten firms reporting the required accounting data.

We obtain information on domestic and global SEOs and straight bond offerings from the Security Data Co. (SDC)'s Global New Issues Database between 1990 and 2006. We follow the sample selection criteria in Altinkilic and Hansen (2000) by excluding unit offerings, rights offerings, shelf offerings[9]; private placements, observations with missing proceeds and gross spread data; and very small (proceeds under $10 million) or very large (over $1 billion) issues. This yields a sample of 7,405 SEOs and 1,751 bond offerings.

3.2. Country-level data

We rely on several sources to retrieve information regarding firms' macroeconomic, financial, and political environment. The macroeconomic data is from the World Development Indicators (WDI) database. The financial and political environment data is collected from various sources, including the law and finance literature (see Table 1). For policy uncertainty measures, we begin with the Database of Political Institutions (DPI) developed by the Development Research Group of the World Bank. We verify this data using the Election Results Archive (ERA) of the Center on Democratic Performance (CDP), the Center for Systemic Peace's Polity IV Project dataset, and the Inter-parliamentary Union's PARLINE database.

We retrieve data on the election date and outcome for each election. Following Durnev (2011) and Julio and Yook (2012), we define national elections as those where the nation's most powerful politician(s) get elected. We also use the elections that change one of the country's "veto players." Veto players are politicians or political parties who can block various proposals that might change the current status quo. Turnover in these veto players is important enough to generate certain level of political uncertainty.

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[9] A shelf offering is spread throughout time, making it difficult to pinpoint whether the offering is in a high or low political uncertainty period. The inclusion of large issues over $1 billion in proceeds does not alter our conclusions.

Using the DPI data and the ERA data, we devise several political uncertainty measures in order to capture various (major) sources of political uncertainty. Each political uncertainty measure has its advantages and disadvantages. Two of our indicators capture the political uncertainty prevalent prior to the election (*Election Indicator, ELI* and *Change Veto Players, CVP*) that typically occurs due to the uncertainty of economic agents concerning which party/candidate will win the election. Political elections are a widely used method in the extant literature (Durnev, 2011; Julio and Yook, 2012; Boutchkova, et al., 2012) to measure policy uncertainty as they are considered largely as exogenous events.

Our non-election based political uncertainty indicators (*Coalition* and *Economic Policy Uncertainty Index, EPUI*), on the other hand, intend to capture various other (not election driven) sources of political uncertainty (e.g., the government's failure to win confidence votes in the parliament in countries with the parliamentary system or the 2013 government shutdown in the U.S.). In a sense, they capture the residual political uncertainty remaining after the elections are over. For example, if the outcome of the election is a coalition government with dispersed power centers, this outcome would not fully eliminate all of the political uncertainty that was prevalent prior to the election. The economic agents would still not know whether and which of the promised policies will be implemented. *Coalition* variable has a mean of zero for only a few countries (see Table 2), thus for a wide range of countries it can reliably indicate how centralized is the decision making in a given year. The *Economic Policy Uncertainty Index, EPUI*, of Baker et al. (2016) is a continuous variable, and can be calculated even for non-election years. This index is primarily used for robustness reasons, since it is unavailable for many countries in our sample.[10] To save space, most of our reported results are focused on *ELI* measure. It is important to note that, our qualitative conclusions are not sensitive to the choice of the political uncertainty measure.[11]

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[10] In our sample, this index is available for Canada (starting in 1990), France (starting in 1997), Germany (starting in 1997), India (starting in 2003), Italy (starting in 1997), Spain (starting in 2001), United Kingdom (starting in 1997), and U.S. (starting in 1990).
[11] Our empirical analyses employ four different political uncertainty measures as there is no consensus in the literature about which measure is superior. First, elections do not necessarily resolve political uncertainty, limiting the usefulness of *ELI* and *CVP*. *Coalition* and *EPUI*, on the other hand, are not election-based and capture the residual political uncertainty after the elections are over. Second, elections are rare (occurring once every three to four years on average), making *ELI* an imperfect measure of political uncertainty. *CVP*, *Coalition*, and *EPUI*, however, do not describe rare events. *CVP* could vary on a yearly basis depending on whether the political orientation of the veto players (congress or senate) is changing with midterm elections, resignations, or party-changes by the congress members. Similarly, *Coalition* can take a value of one even during non-election years. *EPUI* measure is

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Our sample is an unbalanced panel with 128,790 observations consisting of 16,509 firms from 38 countries.[12] Continuous variables are winsorized at the 1% and 99% levels to mitigate the impact of outliers. Table 1 provides information regarding the definition, source, construction, and summary statistics of the firm- and country-level variables that are used to explain firm financing decisions under political uncertainty. Summary statistics concerning the political uncertainty variables for our sample countries are displayed in Table 2. Our election sample is comparable to other studies (Julio and Yook, 2012; Boutchkova, et al., 2012). Our average ELI is 0.2539, which translates to having an election every 3.94 years. Julio and Yook (2012) reports a similar average of 3.8 years between the elections.

Insert Table 1 and Table 2 about here.

4. Political uncertainty and its impact on financial intermediation costs

It has been shown that policy uncertainty increases the cost of equity (Brogaard and Detzel, 2015; Colak et al., 2016a) and the cost of debt (Francis et al., 2014; Gao and Qi, 2013). However, variations in capital structure also depend upon transaction costs (Strebulaev, 2007; Öztekin and Flannery, 2012). The impact of political uncertainty on the transaction costs of issuing equity or debt securities is an unexplored area in the literature.[13] We begin our analyses by determining whether the costs paid by issuing firms to financial intermediaries are affected by political uncertainty (Hypothesis 1), and if so, through which channels (Hypotheses 1A-1C).

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continuous and reflects high frequency (monthly) data. Third, attributing all changes in an election year to political uncertainty is a strong assumption. So, while *ELI* relies on elections, *EPUI* is a more comprehensive measure that "captures uncertainty about who will make economic policy decisions, what policy actions will be undertaken and when, and the economic effects of policy actions, including uncertainties related to non-economic policy matters." However, *EPUI* is only available for ten developed countries. The countries with high policy uncertainty are typically the developing countries, and they lack *EPUI* data. Furthermore, the endogeneity problem with this index is more severe: the *EPUI* measure is highly correlated with recessions and stock market crashes, rendering it more difficult to isolate whether the macroeconomic conditions are causing the changes in corporate policies (such as capital structure), or the political uncertainty. National elections in many countries, on the other hand, are largely exogenous, pre-scheduled events. Finally, by focusing on elections with fixed timing and by conducting placebo tests, we confirm that our findings are not driven by the endogeneity of elections with respect to economic performance.

[12] When we apply the stringent filtering requirements (described in Section 3.1) warranted by our research question (see Flannery and Hankins, 2013), some firm-years and countries drop out of our sample, creating differences between our sample and other studies in the literature. For example, Julio and Yook (2012) include nine additional years (1980-1989) and ten additional countries that are not included in our sample due to lack of proper firm-level time series data needed to conduct target leverage estimations.

[13] Two exceptions are Öztekin and Flannery (2012) and Öztekin (2015). There are two important differences between these studies and ours. First, both studies assume that the transaction costs are constant through time. Second, they evaluate the impact on firms' capital structures of cross-sectional differences in institutional features alone, without focusing on political uncertainty.

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4.1. Estimation models

A large portion of the transaction costs are the gross spreads paid to intermediaries (or underwriting firms). As explained above, it is likely that underwriters' costs of certification, monitoring, and marketing will rise with political uncertainty. We test this hypothesis by applying Altinkilic and Hansen's (2000) model of underwriters' gross spread to a sample of international SEOs and straight bond offerings.

To estimate the influences of political uncertainty on SEO underwriters' spreads, we run a regression model that distinguishes between fixed and marginal costs as in Altinkilic and Hansen's (2000) Model 3 (in their Table 2) with the inclusion of macroeconomic factors, country fixed effects, and year fixed effects to control for the country-specific[14] and time-specific variation in underwriting services and the corresponding spreads:

$$S_i = \alpha + \beta \frac{1}{x_i} + \gamma \frac{x_i}{y_i} + \sum_{jt} \mu_{jt} M_{jt} + \sum_j \delta_j C_j + \sum_t \upsilon_t T_t + \varepsilon_i \tag{1}$$

where S_i is the percentage of underwriter spread for a particular issuance event i as reported in SDC, x_i represents the gross proceeds raised during the issuance event i, y_i is the market value of the issuing firm's equity immediately prior to the offering as reported in SDC, M_{jt} is a set of macroeconomic factors including the GDP growth rate and the inflation rate, C_j is a dummy variable equal to one if the issue i is in country j, T_t is a dummy variable equal to one if the issue i is in year t, and ε_i is the error term.

For straight bond offerings we apply Altinkilic and Hansen's (2000) Model 4 (in their Table 5) with the addition of macroeconomic factors, country fixed effects, and year fixed effects:

$$S_i = \alpha + \beta \frac{1}{x_i} + \gamma \frac{x_i}{y_i} + \sum_{SP=B}^{A} \varphi_{SP} R_{SP} + \sum_{jt} \mu_{jt} M_{jt} + \sum_j \delta_j C_j + \sum_t \upsilon_t T_t + \varepsilon_i \tag{2}$$

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[14] An alternative approach to the inclusion of country fixed effects in Equation (1) would be the estimation of Equation (1) on a country-by-country basis in order to allow country-specific heterogeneity. However, this is not feasible due to the small sample size in some countries.

where R_{SP} are four dummy variables indicating whether the issue has an S&P bond rating of B, BB, BBB, or A, with CCC rated bonds included in the B category. R_{SP} variables measure the firm's access to public bond markets (Faulkender and Peterson, 2006).[15] Remaining variables are defined as in Equation (1).

The presence of macroeconomic factors in Equation (1) and Equation (2) ensures that the effect of political uncertainty is distinct from that of macroeconomic conditions. The inclusion of county fixed effects prevent unobserved heterogeneity across countries from biasing the coefficient estimates. The time fixed effects serve as controls for unknown global trends and economic conditions (including time varying sources of uncertainty aside from policy uncertainty) that could influence underwriter spreads as well as our policy uncertainty measures. The standard errors are double-clustered by country and year in both Equation (1) and Equation (2). On the one hand, clustering of standard errors by year allows for arbitrary cross-sectional correlation, which may occur due to potential regional and/or global nature of economic shocks. On the other hand, clustering by country allows for heteroscedasticity across countries.

Using one of our policy uncertainty indicators, we group equity and debt issuances based on their time of issuance: high (High PU) or low political uncertainty (Low PU) periods. With *ELI* and *Coalition* dummies, the grouping is based on whether they are zero (Low PU) or one (High PU). For *Change Veto Players*, the grouping is relative to its median value with above (below) median denoting High PU (Low PU) states. Within each High or Low PU sample, we estimate the parameters in (1) and (2) by Ordinary Least Squares (OLS) with standard errors double-clustered by country and year, and construct a fitted spread for each issue. We also use the estimated parameters to compute an estimated marginal spread and the marginal spread's slope.[16] We expect higher (total and marginal) spreads and a steeper marginal spread slope during high political uncertainty periods.

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[15] In our bond-issuers sample, only 17.61% of the observations represent issues that are not rated. A univariate comparison of underwriter spreads across the rated and unrated sub-samples indicates that the average underwriter spread is 10 basis points lower for the rated issues, but the difference is not statistically significant. Consistent with this, the omission of credit rating from the empirical analysis (Equation 2) does not generate a meaningful bias in our sample. Our original conclusions continue to hold.

[16] The marginal spread (marginal spread's slope) refers to the first (second) derivative of gross spreads with respect to proceeds, i.e. the change in gross spread (marginal spread) for a change in proceeds. The annotations of Tables 3 and 4 contain the formulas, which are computed following Altinkilic and Hansen (2000).

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4.2. Empirical results

4.2.1. Results for equity offerings

The tests of our Hypothesis 1 employ equity gross spreads from Equation (1) and their results are summarized in Panel A of Table 3 for issuances taking place during low and high political uncertainty periods.[17] We present the results using only three of our political uncertainty indicators (*Election Indicator, Change Veto Players,* and *Coalition*), since the fourth one, *EPUI*, is unavailable for most of the countries for most of our sampling period (see Section 3.2). To judge the economic significance of the financial intermediation costs, we use three measures: the estimated gross underwriter spreads, the marginal spread, and the marginal spread slope. The median estimated underwriter spreads, i.e. the total cash compensation paid to the underwriter relative to the gross proceeds, hovers around 3% in our international SEOs sample. In order to shed light on whether the estimated financial intermediation costs would significantly affect capital structure decisions, we contrast the behavior of firms under Low PU and High PU. When political uncertainty is high, the underwriters increase the gross spread by 8-33 basis points in absolute terms and 2.63%-11.00% in relative terms. The estimated marginal spread (i.e. the change in total cash compensation paid to the underwriter for a unit change in proceeds) and marginal spread slope (i.e. the change in the marginal spread for a unit change in proceeds) increase by an even larger amount, suggesting that political uncertainty affects marginal costs of issuing equity more severely. The marginal underwriting fee on equity is $32,904-$33,166 for the first million with the marginal fee rising at a rate of $232-$284 per million under Low PU and $34,849-$84,067 for the first million with the marginal fee rising at a rate of $412-$1,339 per million under High PU.[18] The marginal spread for an additional million dollars is $1,683-$51,163 higher under High PU states compared to Low PU states, translating into a relative change of 5.07%-155.49%. This corresponds to a jump in financial intermediation costs (as measured by marginal spread slope) from

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[17] To preserve the sample size, we run our estimations on the pooled sample. Our qualitative conclusions are unchanged if we estimate the coefficients separately for the high and low political uncertainty subsamples.

[18] To put our numbers in perspective, Altinkilic and Hansen (2000) estimate that in their sample the marginal underwriting fee on equity is $51,488 for the first million with the marginal fee rising at a rate of $299 per million, translating into an increase of $299/$51,488 = 0.58% for an additional $1 million in proceeds. The corresponding ranges for the increase in the marginal fee for an additional $1 million in proceeds in our Table 3 are 0.70% ($32,904/$232)-0.86% ($33,166/$283) for Low PU states and 0.97% ($48,676/$474)-1.59% ($84,067/$1,339) for High PU states, depending on the uncertainty measure.

$128-\$1,107$ per \$1 million of equity raised, implying a relative change of 45.07%-477.16%. The incremental transaction costs imposed on the firms' equity financing due to political uncertainty are economically nontrivial and statistically significant at the 1% level. This finding is important as a significant jump in the marginal costs would affect the size of the equity offerings. It would make it incrementally harder for firms to raise large amounts of external capital when policy uncertainty is high. Thus, both the total costs and the marginal costs significantly affect external financing, validating our financial intermediation cost hypothesis (Hypothesis 1).

Next, we analyze the economic mechanisms through which policy uncertainty induces underwriters to charge higher financial intermediation costs (our Hypotheses 1A-1C). To test our information asymmetry hypothesis (Hypothesis 1A), we utilize an adverse selection measure that captures the information risk for investors and underwriters during the equity issuance process. Prior studies claim that when adverse selection problems are severe (i.e., information risk is high), initial public offerings (IPOs) tend to be more underpriced.[19] Thus, to detect whether a certain period is characterized by high asymmetric information (or severe adverse selection problems), we calculate the average IPO underpricing in each country during a given year.[20,21] Our goal is to determine whether high political uncertainty periods (i.e. national elections) create high information risk environments. The results displayed in Panel B of Table 3 show that underpricing is up to three times higher during High PU periods. Thus, High PU periods are characterized by significantly higher information risk, which suggests that underwriters' placement risk is higher during these periods. This confirms our information asymmetry hypothesis (Hypothesis 1A).

Testing our investor demand hypothesis (Hypothesis 1B) requires measuring the variation in investor demand, which is a challenging task. We use the price-to-book ratio (measured just before the offer date) of the SEOs in each year to gage the prevailing investor demand during that year for equity securities.

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[19] See Rock (1986) and Yung, Colak, and Wang (2008), among others, for theoretical and empirical evidence on the link between underpricing and information risk in the IPO markets.

[20] IPO data for each country in our sample is obtained from the SDC database. We remove from the sample IPOs that are ETFs, close-end funds, offers with warrants, private placements, investment trusts and REITs. As a measure for IPO undepricing, we use the change in the stock price one day after offer (in %).

[21] If we use SEOs' own underpricing as a measure of asymmetric information in the marketplace in lieu of the IPO underpricing, our results continue to hold with similar economic impact.

As a more direct measure, we also compare the total number of equity offerings during high and Low PU periods. The results shown in Panel B of Table 3 indicate that both the average price-to-book ratios and the number of SEOs go down during High PU periods. As an example, using our election indicator, the price-to-book ratio and the number of SEOs decline by about 47% and 60%, respectively. The investor demand towards equity securities declines when policy uncertainty increases, consistent with our investor demand hypothesis (Hypothesis 1B). Such a lackluster demand towards equity securities is likely to increase the marketing costs of the underwriters during the SEOs.

Finally, our offer size hypothesis (Hypothesis 1C) implies a negative relationship between the offer size and political uncertainty. Consistent with this hypothesis, we find that during elevated policy uncertainty periods, the size of the offering shrinks by 12%-14%. If the size of the offering is lower during High PU periods, the underwriters cannot take advantage of the economies of scale and they would need to charge a higher percentage of each offering as an underwriter spread.

Insert Table 3 and Table 4 about here.

4.2.2. *Results for bond offerings*

Bonds have features that are not relevant for equity offerings, but are important characteristics of debt issuances (such as the credit rating of the issued bond). Therefore, for bond offerings, we report few additional statistics that might describe the reaction of the bond markets to political uncertainty.

Based on our estimation results for straight bond spreads from Equation (2) (see Table 4, Panel A), the average gross underwriter spread in our international bonds sample is around 2%, and it increases with political uncertainty by about 32-41 basis points in absolute terms and 16.84%-21.47% in relative terms, depending upon the uncertainty measure used. The marginal underwriting fee on debt is $27,271-$30,973 for the first million with the marginal fee rising at a rate of $23.33-$25.49 per million under Low PU, and $28,593-$32,652 for the first million with the marginal fee rising at a rate of $29.34-$45.69 per million under High PU.[22] The marginal spread for an additional million dollars is $1,322-$3,002 higher under High

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[22] Altinkilic and Hansen (2000) estimate that the marginal underwriting fee on debt is $17,369 for the first million with the marginal fee rising at a rate of $22.22 per million, translating into an increase of $22.22/$17,369 = 0.13% for an additional $1 million in

PU states compared to Low PU states, translating into a relative difference of 4.85%-10.12%. This corresponds to a jump in the rate of increase in financial intermediation costs (as measured by marginal spread slope) by $3.85-$22.36 per $1 million of equity raised, implying a relative increase of 15.10%-95.84%. Thus, our financial frictions hypothesis (Hypothesis 1) is also confirmed for the spreads applied to bond offerings.

In Table 3, Panel B, we have reported that asymmetric information is higher during High PU periods in the context of equity offerings. The elevated information risk during such periods should affect all risky securities, including bonds. To test the information risk mechanism of underwriter spreads in the context of the bond offerings, we report whether the average debt rating of the bonds offered varies with political uncertainty (in Panel B of Table 4). If in a given period only high-quality issuers (i.e., firms that are not much affected by asymmetric information) are able to raise debt capital, it may indicate the presence of severe information risks. We quantify S&P bond ratings using a point system similar to the one in Brisker, Colak, and Peterson (2013), where AAA rated bonds are assigned 20 points and D rated bonds are assigned one point.[23] The results indicate that the average ratings for the bonds issued in High PU periods is about one level higher than the average bonds issued in Low PU periods (~10 vs. ~9). This suggests that bond issuers who are able or willing to issue during High PU periods need to have higher credit ratings than usual in order to be able to raise debt capital. This, in turn, is a sign of risk aversion by bond investors during politically charged periods and lends support to our information risk hypothesis (Hypothesis 1A).

Furthermore, during elevated PU periods, the number of bond offerings per year declines, in line with our investor demand hypothesis (Hypothesis 1B) and the average proceeds per offer shrinks, consistent with our offer size hypothesis (Hypothesis 1C). The number of bond issuances during the politically uncertain periods drops by 45%-95%, while the average size of the offerings declines by about 1.62%-

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proceeds. By way of contrast, the corresponding ranges for the increase in the marginal fee for an additional $1 million in proceeds in our Table 4 are 0.08% ($29,650/$23.33)-0.09% ($27,271/$25.49) for Low PU states and 0.10% ($28,593/29.34)-0.14% ($32,652/45.69) for High PU states, depending on the uncertainty measure.

[23] More specifically, the mapping of the S&P ratings with numerical values is done as follows: AAA=20, AA=19, AA-=18, A+=17, A=16, A-=15, BBB+=14, BBB=13, BBB-=12, BB+=11, BB=10, BB-=9, B+=8, B=7, B-=6, CCC+=5, CCC=4, CCC-=3, CC=2, D=1, and nonrated bonds=0.

5.30%. It is worth noting that the results for issue size using *Coalition* constitute an outlier, possibly due to the exceptionally low number of observations in High PU (76 vs. 1,675) states. Collectively, these results confirm the weakening demand on the investors' part and an aversion by the firms of conducting debt offerings of large sizes during periods of elevated political uncertainty.

It is important to note that our results from the spread models documented in Tables 3 and 4 are unlikely to be driven by omitted variables, such as economic conditions, or other measures of uncertainty that are potentially correlated with political uncertainty. Data limitations do not permit us to directly control for all sources of uncertainty, such as the volatility of debt and equity markets. However, the inclusion of country and time fixed effects in these regressions allow for any unobserved heterogeneity across the sample countries and the sample years. In addition, the standard errors are double-clustered by country and year. In untabulated tests, we further investigate this issue by orthogonalizing our political uncertainty measures to economic conditions.[24] Our results continue to hold with qualitatively similar economic impact.

In summary, our findings in this section suggest that elevated information risk, lackluster investor demand, and reduced offer size under political uncertainty all contribute to the certification and reputation risks and the marketing and placement costs of financial intermediaries who, in turn, pass along these costs to the issuing firms in the form of higher transaction costs for both debt and equity securities. In the following two sections, we examine the consequences of elevated issuance costs for firms' financing patterns and leverage levels.

5. The impact of policy uncertainty on firms' financing patterns

5.1. Capital structure changes and the related accounting variables: A univariate analysis

The results thus far indicate that the financial intermediation costs associated with the issuance of new debt or equity securities increase under political uncertainty. To analyze the financing consequences of political

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[24] We run separate OLS egressions where the dependent variable is one of the political uncertainty measures and the independent variables are GDP Growth, stock market capitalization, and bond market capitalization (the inclusion of additional time-varying country-level and macroeconomic controls such as inflation rate, real interest rate, stock market and turnover, credit market development, etc. along with country and year fixed effects leaves our results unchanged). We retain the residuals. We create macroeconomic-adjusted versions of the political uncertainty variables using these residuals.

uncertainty, we initially utilize the following accounting identity as it allows us to track what happens to the cash flows from financing activities:

$$CFF_t \equiv \Delta Cash_t - CFI_t - CFO_t - Other \tag{3}$$

Insert Table 5 about here.

Table 5, Panel A, describes each component of this identity during high vs. low election uncertainty periods. The variables are scaled by lagged assets to control for size differences between the election (*ELI*=1) and non-election subsamples (*ELI*=0).[25] For the first time in the literature, we report that firms' cash flows from financing activities (CFF) fall during periods of elevated election uncertainty. This, in turn, leads to the deterioration of financing sources for these firms from 1.32% to 0.66% (of the lagged assets), translating into a decrease of 50%. The change in cash holdings (ΔCASH) increases in magnitude, pointing to a precautionary savings motive under political uncertainty. The magnitude of cash outflows due to investment activities (CFI) declines, implying reduced investment during election years. Similar results are reported by Julio and Yook's (2012) with regard to cash holdings and investment, but our findings associated with CFF are novel to this literature. The cash flow from operations (CFO) and the other reconciliatory items (e.g. exchange rate effects) also change during election years. These changes, however, are less voluntary and manipulable, and may not be directly related to changes in political uncertainty.

Panel B of Table 5 decomposes the cash flow from financing activities, CFF, into its subcomponents (i.e., each financing items forming CFF). We find that, on average, both the sale (SSTK) and the purchase (PRSTKC) of common and preferred stock decline during election years. Median dividend spending (DIV) is slightly higher, probably due to a regular uptrend in dividend payments. Similar to equity financing, a decline is observed for long-term debt issuances (DLTIS) and retirements (DLTR). The change in current debt (DLCCH) is reduced in size implying a lower decline in the magnitude of current debt.

In short, the findings from Table 5 confirm that when facing political uncertainty, firms adopt a more passive/conservative approach of "wait-and-see" with regard to their financing activities, in line with

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[25] The unreported results without any size adjustment (scaling) lead to similar conclusions.

our Hypothesis 2. This leads to the deterioration of funding sources for these firms. These findings suggest that an increase in political uncertainty can temporarily lead to suboptimal outcomes.

5.2. Capital structure changes and the related accounting variables: A multivariate analysis

Next, we build on Table 5 results, and we estimate the determinants of capital market access in a multivariate setting to establish whether political uncertainty is a significant predictor of the likelihood of access after controlling for various firms characteristics (Hypothesis 2). Essentially, in Table 6, we estimate several logit models with our measure of election-driven political uncertainty, *ELI*, and issuance cost measures as independent variables. For the issuance costs, we construct two dummy variables, *ICE* and *ICD*, indicating whether the median issuance costs for equity and debt events in a country in a given year, respectively, are higher than the median in the overall sample for that year.[26] The issuance costs dummies represent any firm-specific factors that could drive up the issuance costs (e.g., underwriters charging higher spreads to a riskier firm), which in turn reduces a firm's leverage. The dependent variables are binary indicators created using the accounting subcomponents of *CFF* (see the previous subsection). We analyze each form of capital market access separately: net short-term debt issuance (*DLCCH*), net long-term debt issuance (*DLTIS–DLTR*), total net debt issuance (*DLTIS–DLTR+DLCCH*), net equity issuance (*SSTK – PRSTKC*). If these capital access variables exceed 5% of the total assets, the corresponding binary dependent variable takes a value of 1 and zero otherwise. The control variables we use are commonly employed in the capital structure literature: firm size, market-to-book, leverage, profitability, expected capital expenditures, R&D expenses, cash holdings, depreciation, tangibility, selling expenses, and Z-score.[27] The estimated coefficients on the control variables are aligned with the findings of the existing literature and hence are not reported to save space.[28] All the right hand side variables except expected capital

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[26] This procedure attenuates the estimation bias resulting from potential misspecification of Equations (1) and (2). Our conclusions do not depend on how we define our issuance cost proxies. In untabulated results, continuous versions of the variables yield similar results throughout the paper.

[27] Credit ratings are likely an important determinant of financial intermediation costs and leverage decisions. Due to data limitations, we are not able to directly control for firm's credit rating in leverage regressions. However, debt issuance costs predicted from Equation (2) incorporates the credit rating information of the bond issue. Thus, we indirectly control for the impact of the credit rating on leverage.

[28] Due to space limitations we do not discuss the estimated effects of each control variable on the variables of interest. An overwhelming majority of our control variables are with a similar sign and significance to other studies. A noticeable exception is

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expenditures are lagged one period to alleviate endogeneity concerns. We include country fixed effects to control for unobserved national effects that might influence a firm's decision to access the capital markets.[29]

Panel A results suggest that while the short-term net debt issuance is not substantially affected by the elevated financial intermediation costs and elevated policy uncertainty, the net long-term and the total net debt issuances are significantly negatively affected. This result is novel to the literature, and suggests that long-term debt is more sensitive to policy uncertainty than the short-term debt. The odds of firms making changes to their net long-term and total net debt during election years are 23.49 and 8.23 percentage points lower, respectively. Furthermore, higher debt (issuance) costs lead to lower probability of net long-term and total net debt issuances and in similar magnitudes (24.14 and 11.06 percentage points, respectively). In additional tests, we orthogonalize *ICD* to *ELI* (using similar approach described in footnote 24, Section 4, but replacing *ELI* with *ICD* and macroeconomic factors with *ELI*), and run again the same logit estimation for total net debt issuance. We find that while *ELI* stays significantly negative, the explanatory power of *ICD* fades away implying that the impact of debt issuance costs on total net debt issuance is driven primarily by higher political uncertainty. For equity, on net (equity issuance minus equity repurchases), national elections (*ELI*) do not cause a significant change in issuance patterns. However, higher equity (issuance) costs do reduce the odds of issuance by 21.36 percentage points.

The recent financial crisis (2007-2008)[30] could also constitute a major source of policy uncertainty, because it created an unprecedented reaction from the policy makers (governments and central banks) all around the world. In Panel B of the same table, we conduct a subsample analysis for the financial crisis years and the normal times using the same regression setup. Such an analysis aims to evaluate how the combined policy uncertainty due to elections and due to unprecedented policy responses during the

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the estimated effect of Firm Size in Panel A of Table B1, which is not significant in the first six columns, but is significantly negative in the last two columns (net equity issuance). The latter finding is consistent with that of (Table V, p. 2607) in Leary and Roberts (2005).

[29] Countries may differ along many dimensions, such as legal and institutional environment, financial development, and culture. In our empirical specifications, any unobserved time-invariant (or slowly evolving) country feature such as legal, institutional, and cultural factors are controlled by the inclusion of country-fixed effects. In unreported tests, throughout the paper, our conclusions continue to hold controlling for time-varying national characteristics (e.g. inflation rate, real interest rate, stock market liquidity, stock market turnover and capitalization, bond market capitalization, private credit market development, GDP growth rate, etc.).

[30] Specifying the crisis period as years 2007-2009 leads to similar conclusions.

financial crisis affected the capital markets access of the firms. Running separate regressions for each subsample allows for slope coefficients to vary across normal and crisis times, and hence is more appropriate. However, the results with one regression, but with interaction terms are qualitatively the same. To summarize, the financial crisis changes the relationship between policy uncertainty and leverage only when leverage is adjusted through short-term debt or through equity issuance activities.

Insert Table 6 about here.

To save space, we report only the results with *ELI* (Tables 5 and 6). However, the results using the other three political uncertainty measures (*Coalition*, *CVP*, and *EPUI*) yield qualitative similar conclusions.

6. Leverage under policy uncertainty

So far, the results indicate that net long-term and total net debt issuances are hindered by election induced political uncertainty. This might imply that, when facing high policy uncertainty, firms are becoming more conservative and are reluctant (or unable) to carry high leverage. Accordingly, it is plausible that firms could target (or desire) lower levels of leverage under political uncertainty. Thus, in this subsection, we analyze how firms' target leverage is affected by higher financial intermediation costs and elevated political uncertainty (Hypothesis 3). First, we present our estimation methodology on leverage determination by firms across the globe. Then, we provide the empirical results associated with the impact of policy uncertainty on their capital structure choices.

6.1. Empirical methodology

Our approach in testing the effect of political uncertainty on leverage is based on Blundell and Bond (1998) and employs a system generalized method of moments (GMM).[31] The selection of firm-specific variables that describe leverage is based on prior literature (Hovakimian et al., 2001; Flannery and Rangan, 2006; Huang and Ritter, 2009; Frank and Goyal, 2009; Gungoraydinoglu and Öztekin, 2011). We

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[31] Flannery and Hankins (2013) conclude that this is the right estimator in the presence of an endogenous transformed lagged-dependent variable and a short panel, which is the case in our data. Since the inclusion of firm fixed effects can lead to collinearity problems, in alternative robustness tests, we run our baseline regression using Ordinary Least Squares (OLS) replacing the firm fixed effects by industry fixed effects, and obtain almost identical results.

use the following firm characteristics: earnings before interest and taxes as a proportion of total assets, book liabilities plus the market value of equity to total assets, depreciation expense as a proportion of total assets, the log of lagged sales to total sales (a measure of firm size), fixed assets as a proportion of total assets, research and development (R&D) expenses as a proportion of total assets where missing values are set equal to zero, a dummy variable that is equal to one if R&D expenditures are not reported and zero otherwise, and the median leverage ratio for the firm's industry based on the Fama and French (1997) 48 industry categories.

In a frictionless world, firms would always remain at their targeted level of leverage. However, adjustment costs such as those arising from uncertain political environments and the resulting increase in intermediation frictions, may prevent instantaneous adjustments to a firm's target. To allow for this possibility, we estimate a model that permits incomplete adjustment of the firm's initial leverage toward its target each time period. In equilibrium (long-run), the leverage for firm i in country j at year t ($DL_{ij,t}$) is determined by the β coefficient vector to be estimated and $X_{ij,t-1}$, the vector of firm characteristics:

$$DL_{ij,t} = \beta X_{ij,t-1}. \tag{4}$$

Based on the cost-benefit analysis of rebalancing their capital structure, firms assess how quickly to close any gap between their actual ($L_{ij,t-1}$) and their long-run desired (target) capital structure ($DL_{ij,t}$):

$$L_{ij,t} - L_{ij,t-1} = \lambda_j (DL_{ij,t} - L_{ij,t-1}) + \varepsilon_{ij,t}. \tag{5}$$

Each year, the average firm closes a proportion λ of the gap between its actual and its desired leverage levels. To obtain the specification that we use to estimate leverage, we substitute Equation (4) into Equation (5):

$$L_{ij,t} = (\lambda\beta)X_{ij,t-1} + (1 - \lambda)L_{ij,t-1} + \varepsilon_{ij,t} \tag{6}$$

The long-run impact of X (e.g. political uncertainty or issuance costs) on leverage is given by its estimated coefficient, divided by λ (one minus the coefficient on the lagged dependent variable). Throughout the analysis (Table 7-Table 9), we discuss the estimated long-run impact of policy and issuance cost variables on leverage obtained from estimations of Equation (6).

6.2. The effect of policy uncertainty on leverage

To examine the effect of political uncertainty (and higher issuance costs) on the choice of leverage, we estimate Equation (6) with the inclusion of country fixed effects and our political uncertainty measures (or our issuance cost measures from Section 4). The results on how policy uncertainty affects firms' desired levels of leverage are shown in Table 7.

Insert Table 7 about here.

The first two columns report the relationship between issuance costs (debt or equity) and leverage. The remaining columns report how political uncertainty affects leverage for various measures of political uncertainty. We estimate our baseline regression (Equation 6) for the pooled sample with policy uncertainty (or issue costs) indicators added to the right hand side variables.

First, we discuss the impact of policy uncertainty through the financial intermediation costs channel. Specifically, in the first two columns we focus on how the variation in debt and equity issuance costs affects the choice of leverage, respectively. As explained in Section 4, this is a novel analysis in the capital structure literature, as it shows how time-varying issuance costs affect the determination of leverage of firms. We find that the long-run impact of an increase in debt and equity issuance costs is to decrease a firm's desired leverage by 1.5% and 5.42%, respectively. Considering that the median leverage in our sample is 22%, this is a non-trivial (6.8% and 24.6%) drop in desired leverage levels. This is an expected result, but it was not previously evidenced in the capital structure literature due to lack of detailed issuance costs data that varies over time and across firms. Most importantly, these findings point to an important channel through which political uncertainty impacts various aspects of the real economy (in our case the leverage of firms); namely, the elevated intermediation risk and the associated increase in issuance costs.

Next, we discuss the economic impact of policy uncertainty on leverage. In unreported univariate tests, leverage is on average 2%-9% lower under higher policy uncertainty, corresponding to a long-run decrease of 13%-60% in relative terms. In our multivariate analyses reported in Table 7, firms prefer to operate with lower leverage in countries where various elections (indicated by *ELI* and *CVP*) are more likely to cause substantial shifts in government policy. Specifically, the long-run impact of an election-

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related variable (*ELI* or *CVP*) is to decrease a firm's desired leverage by 6.75%-17.75%. In relative terms, when compared to the sample median of 22%, this constitutes a non-negligible (31%-81%) drop in leverage. This economic impact is comparable in magnitude to other estimated impacts in the capital structure literature.[32] Similarly, the two remaining policy uncertainty measures (*Coalition* and *EPUI*) are also associated with lower leverage by 5%-17% in the long-run, corresponding to a drop of 23%-77% in leverage relative to the sample median. All four measures of policy uncertainty lead to the same conclusion. Thus, it is not the quirks of a particular policy uncertainty measure that drive our results. To save space, for the rest of our analyses, we report only the results using our election-based policy uncertainty measure, *ELI*, however the results with the other three measures (*Coalition*, *CVP*, and *EPUI*) are qualitatively the same.

6.3. The effect of policy uncertainty on leverage: Cross-sectional analyses

In Table 8, we conduct various cross-sectional analyses to establish whether different firms react differently to policy uncertainty. We also look at how election timing and closeness affects firms and how policy uncertainty associated with the financial crisis (2007-2008) affected firm leverage across the world. The control variables are not displayed to conserve space, but most of them are of similar sign and significance to the ones in Table 7.

Insert Table 8 about here.

The first column of the table reports how financially constrained firms react to policy uncertainty. We define the payout ratio as the ratio of dividends and common stock repurchases to operating income, similar to Almeida, Campello, and Weisbach (2004). We then rank firms based on their payout ratio over the sample period and assign to the financially constrained (unconstrained) group those firms that are in the bottom (top) three deciles of the payout distribution. The intuition that financially constrained firms have significantly lower payout ratios follows from Fazzari et al. (1988), among many others. In the capital structure literature, Fama and French (2002) use payout ratios as a measure of the financial difficulties firms

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[32] Oztekin and Flannery (2012) report the long-run effect of Aggregate Adjustment Costs, AAC on leverage to be -1.39% (in their Table 11, -0.0029/(1-0.7910) where -0.0029 is the coefficient estimate on AAC and 0.7910 is the coefficient estimate on lagged leverage). Lin and Flannery (2012) find the economic impact of higher taxes to be an increase in leverage by 1.68%-5.13%.

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may face in the financial markets.[33] The significantly negative coefficients on the financially constrained dummy ($FC = 1$) and the interaction term of FC and ELI suggests that the leverage of these firms is reduced more than unconstrained firms during elevated policy uncertainty periods. In economic terms, a financially constrained firm carries 6.4% lower leverage in normal times and leverage is reduced by another 6% under policy uncertainty. Put differently, the impact of policy uncertainty is to decrease leverage by 4.2% for an average firm, and this effect is amplified by 6% for a financially constrained firm.

The second column examines whether the degree of internationalization of firms influences the extent to which political uncertainty affects leverage. We are not able to directly measure the degree of internationalization of firms due to data limitations. We postulate that firms that report either foreign income or foreign exchange income are likely to be the multinational firms (*Multinational*=1). Our findings suggest that multinational firms typically desire to operate with significantly higher (6.4%) leverage. Furthermore, they are not as much affected by the political uncertainty induced by elections because of their diversified operation across several countries, as indicated by the positive and significant interaction coefficient (*Multinational* x *ELI*). The impact of policy uncertainty is to decrease leverage by 10.7% for an average firm, but this effect is reversed by 8.4% for a multinational firm. These results highlight the benefits of international diversification in attenuating the negative influences of political risks (Cosset and Suret, 1995). Defining multinational firms as the largest 20% of the firms in each country (alternative cut offs, e.g., largest 50%, 30%, 10%, etc. yield similar results) leads to the same conclusion.

In the third column, following Julio and Yook (2012), we conduct a cross-sectional test across the election closeness within each country. To determine how close a particular election is, we collect data (using our data sources described in Section 3.2) on the percentage of votes received by the winning candidate/party and the runner-up candidate/party. We conjecture that, ceteris paribus, the smaller the difference in votes, the higher is the political uncertainty prior to the election, leading to even lower

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[33] The results using financial constraint indices computed based on Kaplan and Zingales (1997), Whited and Wu (2006), and Lin and Flannery (2012), as well as an alternative dividend-based financial constraint measure (an indicator variable for firms that do not pay dividends) yield qualitatively similar and quantitatively stronger results.

leverage. We create a binary variable, *Election Closeness*, that equals one for the year when the election in a country is closer than the median for that country during the sample period, and zero otherwise. Then, we include this dummy together with our political uncertainty measure, *ELI,* in our baseline leverage regression (Equation 6). Consistent with our expectations, we find that the leverage is reduced even further for the closer elections, i.e. the coefficient of *Election Closeness* is significantly negative at 1% level. While an election induced political uncertainty causes the firm's leverage to drop by 5% in the long-run, this reduction is further amplified by 3.7% with competitive elections.

In related analyses, we check whether i) *Election Closeness* has an impact on our transaction costs (*ICD* and *ICE*), and ii) whether it is through the transaction cost channel that *Election Closeness* affects a firm's leverage. Simple univariate analyses show that *ICD* (transaction costs for debt) and *ICE* (transaction costs for equity) are 12.36% and 44.44% higher, respectively, for close elections relative to those with large margins of victory. Furthermore, untabulated multivariate analyses using our baseline leverage regression (as in Equation 6) supplemented with interaction terms between our transaction cost measures and *Election Closeness* yield valuable insights. Close elections create more political uncertainty, which reduces leverage through increased debt (*ICD*) and equity (*ICE*) transaction costs (as captured by the significantly negative interaction terms between the transaction cost measures and *Election Closeness*). In the regression that includes *ICE*, the significance of *Election Closeness* disappears, because the interaction term absorbs all of the economic impact. That is, our *ICE* transaction cost channel explains almost all of the economic impact of close elections on leverage.

We also contemplate that the firms in certain industries are more sensitive to political uncertainty than others (Julio and Yook, 2012; Colak et al., 2016a). For these firms, we should observe a larger decline in leverage due to political uncertainty. To test our assertion, we classify firms in pharmaceuticals, health care, defense, petroleum, natural gas, telecommunications, and transportation as politically sensitive industry (Julio and Yook, 2012). If a firm operates in these industries, *Politically Sensitive Industry* is 1; and 0 otherwise. The results are reported in column 4 of Table 8. As expected, the interaction term between the politically sensitive industry and the political uncertainty measure is negative and significant. Greater

uncertainty induced by an election leads to (3%) lower leverage in the long-run and this negative effect is further amplified (5%) for firms in politically sensitive industries.

In developing countries, politically connected firms could borrow more easily from the state owned banks. Thus, political connections should have the effect, if any, of reducing the negative effects of political uncertainty on leverage. However, it is also possible that the actions of the incumbents could lead to a crowding-out of private investment in election years, lowering the need for firm financing. If such firm behavior generates the results attributed to elections, then once we control for political connectedness of firms, our results should disappear. To test of the presence of such effects, we conduct two tests.

In column five, we explore whether the strictness of a country's regulations against opportunistic behavior by politically connected firms affects the sensitivity of leverage to political uncertainty. According to the seminal work of Faccio (2006), the incidence of political connections depends on the regulatory restrictions in the country. For each country, Faccio (2006) constructs a regulatory score that is based on "regulations that prohibit or set limits on the business activities of public officials." The higher this regulatory score is, the more difficult it is for the firms to benefit from political connections. We borrow the variable regulatory score from Faccio (2006) (see her Table 3), and include it as a control variable in our leverage regressions. Our results suggest that political uncertainty affects leverage even after controlling for a country's regulations against profiteering from politically connections. Thus, our results are not entirely driven by the pervasiveness of the political connections in certain countries. The coefficients on the *Regulatory Index* and the interaction term *ELI x Regulatory Index* are both significantly negative, implying that in countries where political connectedness is heavily regulated, leverage is lower and the impact of political uncertainty on leverage is more pronounced. This suggests that politically connected firms have preferential access to finance from state owned banks in countries where regulations are less stringent, and they are better able to exploit their political connections around election times.

In the sixth column of the table, we re-run our regressions excluding the connected firms identified by Faccio (2006) to test whether the leverage effects are primarily driven by the politically connected firms. Faccio (2006) classifies a firm as politically connected if one of its officers or larger shareholders is a

member of parliament, a minister, or closely related to a top politician or party in that country. The coefficient on the election dummy, *ELI* is still negative and is even of a larger magnitude (-0.0077 vs -0.0036 in Table 7) after dropping these firms. Thus, leverage dynamics around the elections are not likely driven by politically connected firms.

In column seven, to ensure that the reduction in leverage is not purely driven by the decline in investments, we isolate firm-years that show no substantial change in their capital expenditures. As before, leverage is significantly reduced (2%) under policy uncertainty. This result is important, as it hints that the investment channel is not the only mechanism that drives the drop in leverage. We revisit this issue in the next section, where we simultaneously analyze investment, cash holdings, and capital structure policies.

In column eight, we address the concern that incumbents may opportunistically time elections to maximize their chances of being re-elected by repeating our tests within the subsample of countries for which elections are fixed in time by electoral law. The results are similar but quantitatively stronger in the subsample of elections with exogenous timing. In unreported tests, we also run placebo tests by assigning random election years throughout the sample. The results no longer hold for random elections, confirming that our findings are not driven by the endogeneity of elections with respect to economic performance.

Finally, we consider the joint effect of the financial crisis (*Crisis Years* = 1 for years 2007 and 2008) and the elections in the last column. As before, firms decrease their leverage during politically uncertain periods. Consistent with the finding of Bhamra, Kuehn, and Strebulaev (2010) that leverage is counter-cyclical in aggregate dynamics, we report that firm leverage increases during macroeconomic downturns as indicated by the positive coefficient on the *Crisis Years*. In addition, we find that the negative effect of political uncertainty on leverage is intensified if an election coincides with a financial crisis. Thus, the interaction term *ELI x Crisis Years* is negative and significant.

6.4. Country characteristics, policy uncertainty, and leverage

We also conduct several cross-country analyses. Specifically, we analyze how a country's financial, legal, and political environment affect the relationship between policy uncertainty and a firm's leverage. We hypothesize that better institutions would lead to higher ability to manage political uncertainty risk,

ameliorating some of the adverse effects of policy shocks on leverage. For example, the availability of information on politicians' finances or the strength of law and its enforcement could help lower the information risk (Verrecchia, 2001) induced by elections.

The financial environment characteristics we consider are the overall financial development, the financial intermediary development, the bond market development, the stock market development, and the financial structure in a country. The legal environment feature we use is the legal origin of the country, with common law origin offering stronger laws and enforcement. The variables capturing the quality of a country's political institutions are the strength of the political and democratic rights, the quality of constitutional review, the presence of the proportional representation rule and the extent and the quality of disclosure by members of parliament (the requirement of internal disclosure to parliament and the quality of public disclosure).

We add financial development and structure as well as legal and political characteristics along with the control variables employed in Table 7 in our main specification and report the results in Table 9. Panel A of the table reports the estimation results for the financial development and structure indicators as well as the legal system and Panel B reports the results for the variables related to country political institutions. For brevity, we report the results only with one of our policy uncertainty measures (*ELI*), and the control variables are not tabulated (they are of similar signs and significance level as in Table 7). The results with the alternative policy uncertainty measures (*Coalition*, *CVP*, and *ELI*) are qualitatively similar.

Insert Table 9 about here.

The statistically significant negative sign for *ELI* is preserved in all regressions. The first three columns in Panel A document a significantly positive coefficient on the interaction term between *ELI* and country characteristics. This indicates that the decline in leverage is generally moderated in financially advanced countries and in countries with better financial intermediation and deeper bond markets, in particular. For example, when financial intermediary development (in column two) increases by one unit while political uncertainty is high (i.e., *ELI* = 1), the initial drop in leverage (2%) is offset by even a larger amount (3%). The last column in Panel A indicates that the long-run effect of *ELI* is to significantly (5%)

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decrease leverage, even after controlling for country's origin of law. Furthermore, the negative and significant coefficient on the interaction term between *ELI* and *Common Law Origin Indicator* shows that leverage of firms in common law countries is significantly (5%) lower compared to civil law countries around election times due to lower reduction in outside equity. This finding indicates that common law countries offer outside investors better protection than civil law countries, resulting in more outside equity in general (Fan, Titman, and Twite, 2012), and around election times in particular.[34]

In Panel B, we report that the presence of strong political institutions mitigates the negative impact of policy uncertainty on leverage: all six political institution measures have positive interaction term with *ELI*. That is, for firms located in countries with strong and reliable political institutions, the policy uncertainty is of a lesser concern when establishing capital structure policies. Specifically, political environments with proportional representation, political systems that enable and facilitate constitutional review, political markets that impose financial business and interests' disclosure requirements on the members of parliament and make these disclosures public are able to fully offset the negative impact of political uncertainty on leverage. While the economic impact of strong democratic rights is trivial in ameliorating the adverse effects of political uncertainty (1% of the 10% decline), political rights reverse the majority of its negative influence on leverage (10% of the 12% decline).

In summary, the tests in this section show that: 1) firms take political uncertainty into account when determining their leverage; 2) an important channel through which political uncertainty impacts firms' desired level of leverage is the rise in the financial intermediation costs; 3) the negative impact of policy uncertainty on leverage varies from firm to firm, from election to election, from industry to industry, and from time period to time period; and 4) countries can help their firms weather policy uncertainty better by developing reliable legal and political institutions and improving the conditions of their financial markets.

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[34] Common vs. civil law is a permanent country characteristic that doesn't change over time. To explore its importance, we have removed the country fixed effects and re-run the regressions in Table 9 using the *Common Law Origin Indicator* and its interaction with the *Election Indicator*, *ELI*, along with firm and year fixed effects. Firms from common law countries operate with lower leverage than civil law countries (Fan, Titman, and Twite, 2012). The long-run effect of *ELI* is to decrease leverage (5%) even after controlling for country's origin of law. The interaction term between *ELI* and *Common Law Dummy* is insignificant, implying that leverage of firms in the common law countries is not as severely impacted by political uncertainty, as stronger investor protection offsets the adverse effects of political uncertainty on leverage.

7. Isolating the financial intermediation frictions channel: Joint determination of leverage, investment, and cash management

Current literature points to an alternative channel through which uncertain political events could affect a firm's leverage. Namely, firms facing policy uncertainty tend to delay their commitments to large and irreversible investments (Leahy and Whited, 1996; Bloom, 2009; and Julio and Yook, 2012). Thus, policy uncertainty would negatively affect a firm's desired level of leverage due to the reduction in the need for external capital that would otherwise be used for investments. This, in turn, leads firms to delay external financing and hoard cash until the uncertainty affecting investments is resolved.

A major goal of this study is to assess whether policy uncertainty impacts a firm's leverage only indirectly through the investment channel (Julio and Yook, 2012), or whether there is a distinct financing frictions channel of impact. To this effect, we first evaluate whether after endogenously controlling (using a 3SLS estimation) for the decline in investment needs and the increased urge to pile up cash, policy uncertainty still significantly negatively affects a firm's desired leverage.

Throughout the analysis, we discuss estimates obtained from the following 3SLS system:

$$L_{ij,t} = a_0 I_{ij,t} + a_1 \Delta C_{ij,t} + \beta X_{ij,t-1} + \varepsilon_{ij,t} \tag{7}$$
$$I_{ij,t} = b_0 L_{ij,t} + b_1 \Delta C_{ij,t} + \theta Y_{ij,t-1} + \delta_{ij,t} \tag{8}$$
$$\Delta C_{ij,t} = c_0 L_{ij,t} + c_1 I_{ij,t} + \mu Z_{ij,t-1} + \vartheta_{ij,t} \tag{9}$$

where X, Y, Z are a set of firm and macroeconomic characteristics, L is the leverage ratio, I is the capital expenditures to total assets, ΔC is the change in cash and cash equivalents scaled by total assets, β, θ, μ are vector of coefficients, and $\varepsilon, \delta, \vartheta$ are random error terms. The control variables in the leverage equation (X) are the same as before (see Table 7). The control variables in the investment equation (Y) consist of market-to-book, firm size, cash flow, GDP growth, and a constant. The control variables in the cash equation (Z) are market-to-book, firm size, cash flow, cash, and a constant. All right-hand side variables (with the exclusion of the endogenous policy variables) are lagged and are employed as instruments for the endogenous variables ($L, I, \Delta C$) in these regressions.

To examine the effect of political uncertainty (and higher issuance costs) on the joint determination of financing, investment, and cash policies, we estimate Equations (7)-(9) with the inclusion of our political uncertainty measures (and our issuance costs measures from Section 4). Rather than taking these policy decisions orthogonal to each other, we fully endogenize policies in our empirical estimations. In fitting the data, we allow residuals to be correlated across the leverage, investment, and cash holdings models. Specifically, the reported statistics account for cross-equation residual correlation.

Table 10 presents the results from such a 3SLS estimation analysis that allows for firms' investment, leverage, and cash management policies to be simultaneously determined when there is policy uncertainty. We provide two versions of this estimation. First one, reported under columns (1), shows the estimation results in the pre-financial-crisis period (i.e. 1990-2006), and second one reported under columns (2) shows the results for the period including the financial crisis (i.e., 1990-2012), controlling for year fixed effects. Since financial crisis may have changed the relationship between firm leverage and policy uncertainty, such a robustness test may be warranted. In both versions of the estimation, the three simultaneous equations are jointly estimated with the inclusion of the endogenous policy variables as right-hand side independent variables in each equation.

Insert Table 10 about here.

The results suggest that political uncertainty indicator, *ELI*, significantly reduces investments and increases cash (the change in cash is statistically significant at conventional levels, but only in the first estimation). Most importantly, however, even after controlling for these changes in investments and cash policies, political uncertainty still has a direct negative impact on leverage. Thus, the reduction in leverage due to policy uncertainty that we report in Section 6 is not solely driven by the investment channel. Put differently, increased financing costs (cost of capital and issuance costs) must be important transmission mechanisms through which policy uncertainty impacts a firm's desired leverage.

Next, we distinguish our financial frictions channel from the increased costs of external capital channel by estimating the impact of issuance (transaction) costs on leverage, while directly controlling for the impact of the cost of capital. Existing studies on political uncertainty such as Brogaard and Detzel

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(2015), Colak, et al., (2016a), and Francis, et al., (2014) estimate either the cost of debt or the cost of equity, but not both. To estimate the cost of capital, we use the procedure described in Frank and Shen (2016). [35]

In our 3SLS equation, we interact our measures of equity, debt, and total issuance costs (*ICE*, *ICD*, and *IC*) with the policy uncertainty variable, *ELI*. As before, the high policy uncertainty dummy (*ELI*) represents the direct impact of policy uncertainty on leverage. The interaction terms between *ELI* and the issuance cost measures (*ELI* x *IC*) are particularly important as they are directly controlling for the financial frictions channel. In Table 3 and Table 4 we have shown that financial intermediation costs increase with policy uncertainty. Thus, these interaction terms capture the increase in a firm's issuance costs that occur only during elevated policy uncertainty periods, and hence reflect the financial intermediation cost channel of impact of policy uncertainty on leverage. Specifically, if we find a negative relation between issuance costs and leverage, and that this relation is more pronounced during periods of greater political uncertainty (i.e. if the coefficients on both the issuance cost variables and on their interactions with ELI are negative), this would reinforce our previous findings and constitute additional evidence that an increase in political uncertainty increases financial intermediation costs, which in turn affects leverage.

Insert Table 11 about here.

The results are reported in Table 11. The coefficient for *ELI* term is negative as before. As expected, higher issuance costs and higher cost of capital induce firms to lower their leverage as captured by the significantly negative coefficients on *ICE*, *ICD*, *IC* and on *CCD, CCE, WACC*. The interaction terms of *ELI* and *ICE / ICD / IC* are also significantly negative, confirming that the financial intermediation cost channel has a distinct impact of its own. For example, in column 1, when the interaction term takes the value of one (i.e., when both *ELI* and *ICE* are 1), leverage decreases by 4.28%. The median leverage in our

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[35] We compute the implied cost of equity using one period Gordon Growth Model (GGM) as Equity Cost of Capital (CCE), $r_e = \frac{EPS_{t+1}}{P_t}$ where EPS refers to earnings per share and P_t is the stock price. Debt Cost of Capital (CCD), r_d = Total interest and related expenses / (Long-term debt + Debt in current liabilities). Weighted Average Cost of Capital, WACC = $r_e(1 - Lev) + r_d Lev(1 - Tax)$ where Lev = (Long-term debt + Debt in current liabilities) / (Total assets + Market value of equity – Stockholders equity – Deferred taxes) and Tax = Income taxes/Pretax Income. Since international data on analysts' earnings forecasts is unavailable for the non-US firms, we rely on a perfect foresight model, where we implicitly assume that managers possess an unbiased expectation of future earnings. As we are not testing a trading rule, the use of forward-looking data should not bias our results.

sample is about 22%. Hence, a drop of 4.28% corresponds to a 19.45% relative change, and it can be considered an economically significant event. Most importantly, the above results confirm that the financial intermediation cost channel has a distinct impact of its own.

To summarize, after modeling the investment and the cash holdings channels through endogenous estimation, and after directly controlling for the costs of capital, the financial intermediation cost channel is still negatively associated with a firms' leverage. This is a novel result in the literature, and it establishes that policy uncertainty affects firms' balance sheets also through a transmission mechanism that is associated with the financial intermediaries and the placement risks they face under policy uncertainty.

8. Discussion: Demand vs. Supply Effects

The decline in firm issuance activity and leverage under high policy uncertainty could occur due to firms' "inability to raise capital" (lower capital supply by investors) and/or firms' "lower demand for capital" (i.e., lower investment spending by firms).

Does political uncertainty affect firm's ability to raise capital? The theoretical studies by Pastor and Veronesi (2012; 2013) suggest that policy uncertainty reduces the demand for any asset as investors update their Bayesian beliefs about asset valuations. Several empirical studies have provided evidence corroborating this claim. Brogaard and Detzel (2015) have shown that there is a negative contemporaneous correlation between policy uncertainty changes and stock market returns in the U.S. This finding suggests that the demand for existing (publicly traded) equity securities is lower during high policy uncertainty periods. Another study by Colak, et al (2016a) find that the cost of capital for the IPOs issued during high policy uncertainty is significantly higher. This again points towards a lackluster demand for new securities by investors, raising the cost of capital for firms and undermining their ability to obtain external capital.

We report several results consistent with the lackluster demand claim for both debt and equity securities. First, in Section 4, in support of our Hypothesis 1B, we show that the number of bond and seasoned equity offerings decline and the price-to-book ratios on SEOs are lower (Tables 3 and 4) under elevated policy uncertainty. Second, in Section 7 (Table 11), we show that the cost of capital increases and

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leverage decreases during high policy uncertainty periods. Overall, the aforementioned theoretical and empirical studies and our own findings suggest that the demand for new securities is substantially negatively affected by political uncertainty. Therefore, the "inability to raise capital" is an important driver for the decline in issuance activities and leverage (as reported in our Section 5, Tables 5 and 6; Section 6, Tables 7 and 8; Section 7, Table 11).

Does demand for financing decrease during high policy uncertainty periods? Julio and Yook (2012) show that a firm's investment decreases during elevated political uncertainty periods. We corroborate their claim with our finding of lower cash flow from investment (CFI) when policy uncertainty is higher (Section 5, Table 5). We further show, in a 3SLS regression setting, that investment of firms drops under policy uncertainty even after taking into account firms' financing and cash policy decisions (Section 7, Table 10). However, policy uncertainty leads to lower leverage, even after controlling for the change in investment and the change in cash balances. Thus, the observed decline in leverage is not entirely due to lower investment channel. While "lower demand for capital" is a driver for the reduced financing activity, "inability to raise capital" must also be a factor during high policy uncertainty periods.

In short, while both "inability to raise capital" and "lower demand for capital" explanations account for the decline in the leverage ratios and in the securities' issuance activity, our paper's emphasis is primarily on showing how increased financial intermediation costs contribute to the firms' inability to raise external capital when political uncertainty is high.

9. Conclusion

Political uncertainty increases the information risk of firms, weakens the investor demand, and reduces the issue size. As a result, underwriters raise the fees they charge to firms issuing securities during elevated political uncertainty periods. Higher financial intermediation costs, in turn, discourage the issuances of debt and equity securities during such times. This is a major channel through which policy uncertainty affects corporate activities.

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We report a drop in leverage levels for firms exposed to policy uncertainty. Such a decline is observed even for the subsample of firms that have not experienced a noticeable change in investment spending, confirming that the investment channel is not the sole means through which policy uncertainty affects leverage. Simultaneous equation estimations also confirm this notion by showing that our proposed financial intermediation costs channel is distinct from other previously documented channels.

We analyze this financial intermediation channel in detail and report that the underwriter's marginal spreads increase under political uncertainty due to a positive shock to information risk and negative shocks to investor demand and issue size. The bonds issued have higher credit ratings, the SEOs are subject to higher underpricing, the number of bond and SEO offerings decline considerably, and both debt and equity offerings yield smaller proceeds under political uncertainty, confirming the difficulty of raising external capital during politically uncertain episodes. Larger financial intermediation costs reduce the likelihood of corporate security offerings and firms' desired level of leverage. Long-term leverage is affected more by binding issuance costs and political uncertainty than short-term leverage.

Cross-sectional tests reveal that firms that are financially-constrained and non-diversified internationally, or firms that belong to politically sensitive industries are more prone to policy uncertainty risks. Moreover, in countries where political connections are heavily regulated, leverage is lower and the impact of political uncertainty on leverage is more pronounced. This suggests that politically connected firms have preferential access to finance from state owned banks in countries where regulations are less stringent, and they are better able to exploit their political connections around election times. Cross-country analyses suggest that firms from countries with better financial development (effective financial intermediation and deeper bond markets) and stronger political institutions (political rights, democratic rights, proportional representation, constitutional review, financial and conflict disclosure by members of parliament) reduce their leverage less drastically. Finally, common law countries offer outside investors better protection than civil law countries, resulting in more outside equity in general and around election times in particular. In other words, better financial, legal, and political institutions are able to alleviate the adverse effects of the election-induced information risk on firm financing.

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Table 1.

Data description, source, construction, and summary statistics

Panel A. Firm, industry, and macroeconomic variables			
Variable. Definition. *Source.*	Mean	Median	Std. Dev.
Equity spread. Total compensation paid to the syndicate on an SEO as a percentage of the proceeds. *SDC Global New Issues.*	4.74	5.00	1.20
Equity proceeds. Total proceeds raised in all markets on an SEO in millions of U.S. dollars. *SDC Global New Issues.*	117.87	70.00	124.79
Market capitalization. Market value of the issuing firm's equity prior to the offering (millions of $s). *SDC Global New Issues.*	1,308.85	444.20	2,096.87
Debt spread. Total compensation paid to the syndicate on a bond offering as a percentage of the proceeds. *SDC Global New Issues.*	1.89	2.13	1.20
Debt proceeds. Total proceeds raised in all markets on a bond offering in millions of U.S. dollars. *SDC Global New Issues.*	254.54	187.81	217.64
S&P score. The mapping of the S&P bond ratings with numerical values as described in footnote 23. *SDC Global New Issues.*	9.70	8.00	4.81
Cash flow from financing (CFF). Net cash flow from financing activities in millions of U.S. dollars. *Global Vantage.*	-1,879.81	-3,202.00	18,293.30
Cash flow from investments (CFI). Net cash flow from investing activities in millions of U.S. dollars. *Global Vantage.*	-2,643.04	-17.01	14,036.68
Cash flow from operations (CFO). Net cash flow from operating activities in millions of U.S. dollars. *Global Vantage.*	3,246.33	20.94	16,475.51
Change in cash holdings (ΔCASH). Change in cash and cash equivalents. *Global Vantage.*	111.26	0.20	3,001.41
Sale of common and preferred stock (SSTK) in millions of U.S. dollars**.** *Global Vantage.*	38.55	0.15	207.58
Purchase of common and preferred stock (PRSTKC) in millions of U.S. dollars**.** *Global Vantage.*	8.29	0.00	84.01
Long-term debt issuance (DLTIS) in millions of U.S. dollars**.** *Global Vantage.*	128.42	1.00	428.41
Long-term debt reduction (DLTR) in millions of U.S. dollars**.** *Global Vantage.*	104.29	2.86	342.05
Change in current debt (DLCCH) in millions of U.S. dollars**.** *Global Vantage.*	-1,521.43	0.00	10,719.56
Cash dividend (DV) in millions of U.S. dollars**.** *Global Vantage.*	355.62	0.82	1,651.83
Leverage. (Long-term debt+Short-term debt)/Total assets. *Global Vantage.*	0.24	0.22	0.20
Profitability. (Operating Income+ Interest and related expense+Current income taxes)/Total assets. *Global Vantage.*	0.03	0.06	0.18
Market-to-book. (Long-term debt+Short-term debt+Preferred capital+Market value of equity)/Total assets. *Global Vantage.*	1.22	0.85	1.33
Price-to-book. Stock price at the end of fiscal year / book value per share. *Global Vantage.*	35.66	2.25	324.83
Depreciation. Total depreciation and amortization/Total assets. *Global Vantage.*	0.05	0.04	0.03
Firm size. Log (Lagged sales)/Sales. *Global Vantage.*	0.01	0.01	0.44
Tangibility. Fixed assets/Total assets. *Global Vantage.*	0.32	0.28	0.22
R&D dummy. A dummy variable equal to one if R&D expenditures are not reported and zero otherwise. *Global Vantage.*	0.38	0.00	0.49
R&D expenses. Research and development Expense/Total assets. *Global Vantage.*	0.02	0.00	0.06
Industry median leverage. Median leverage for the firm's industry. Fama and French (1997) industry categories. *Global Vantage.*	0.20	0.20	0.10
Inflation rate. Yearly change in a country's consumer price index; GDP deflator**.** *WDI (World Development Indicators), World Bank.*	0.02	0.02	0.24
IPO underpricing. Change in firm's stock price during its first trading day after its initial public offering. *SDC Global New Issues.*	0.28	0.10	0.64
Expected capital expenditures (Investment). Capital expenditures/Total assets. *Global Vantage.*	0.06	0.04	0.06
Cash. Cash and equivalents/Total assets. *Global Vantage.*	0.14	0.09	0.16
Cash flow. (Operating income before depreciation–interest and related expense–income taxes–dividends) / Total assets. *Global Vantage.*	0.04	0.06	0.13
Selling expenses. Selling expenses/Total assets. *Global Vantage.*	0.23	0.16	0.24
Z-score. (3.3*Profitability+Sales+1.4*Retained Earnings+1.2*Working capital+0.6*Market value of equity)/Total assets. *Global*	2.05	1.98	2.95
GDP growth. Growth in real GDP. *WDI (World Development Indicators), World Bank.*	0.02	0.02	0.02
Financially constrained (FC). A dummy that equals one if the firm is in the bottom three deciles of the total payout distribution of its country, and zero otherwise. *Global Vantage.*	0.44	0.00	0.50
Multinational. A dummy that equals one if the firm reports foreign income (*PIFO*) or foreign exchange income (*FCA*), and zero otherwise. *Global Vantage.*	0.73	1.00	0.44
Politically sensitive industries (PSI). A dummy that equals one if a firm's industry is pharmaceuticals, health care, defense, petroleum, natural gas, telecommunications, and transportation; and zero otherwise. *Global Vantage.*	0.19	0.00	0.39

Politically Connected Firms. Sample of politically-connected firms as identified by Faccio (2006). *Source: Website of American Economic Review Journal.*	0,02	0.00	0.14
Regulatory Index. An index (least regulated=0; most regulated=6) constructed using Faccio (2006)'s *Regulatory Score* variable (see Table 3 in her study). *Source*: *Faccio (2006).*	2.40	2.00	1.65
Crisis Years. A dummy that equals one if the year is 2007 or 2008, and zero otherwise.	0.12	0.00	0.32
Panel B. Financial development (structure) and legal environment measures			
Financial development. A dummy variable equal to unity if the financial system is developed and 0 if otherwise. *Source: Levine (2002).*	0.88	0.33	1.00
Financial intermediary development. Private credit divided by GDP. *Source: Beck, Demirguc-Kunt, and Levine (2000)*	0.00	1.00	-0.49
Bond market development. Outstanding domestic debt securities divided by GDP. *Source: Beck et al. (2000)*	0.53	0.31	0.49
Stock market development. The value of listed shares divided by GDP. *Source: Beck et al. (2000)*	0.98	0.45	0.92
Financial structure. A dummy variable equal to 1 if the financial structure is market-based and 0 if otherwise. *Source: Levine (2002).*	0.92	0.27	1.00
Legal origin. A dummy variable equal to 1 if the country's legal system is based on common law. *Source: La Porta et al. (2004)*	0.60	1.00	0.48
Panel C. Issuance costs (transaction costs) measures			
Estimated underwriter's spread for equity (%). The predicted value from our Eqn. 1. *Source: SDC Global New Issues.*	3.08	3.05	0.62
Estimated underwriter's spread for debt (%). The predicted value from our Eqn. 2. *Source: SDC Global New Issues.*	2.11	2.31	0.78
Debt Issuance Costs (ICD) dummy. A dummy indicating whether the median estimated underwriter spread for debt in a country in a given year is higher than the corresponding median in the overall sample for that year.	0.07	0.00	0.25
Equity Issuance Costs (ICE) dummy. A dummy indicating whether the median estimated underwriter spread for equity in a country in a given year is higher than the corresponding median in the overall sample for that year. Similar dummy for the total (equity plus debt) issuance costs.	0.14	0.00	0.34
Issuance Costs (IC) dummy. A dummy indicating whether the median estimated total issuance costs (*ICE* plus *ICD*) for a country is higher than the corresponding median in the overall sample for that year.	0.20	0.00	0.43
Panel D. Cost of Capital Measures			
Debt cost of capital (CCD). r_d = Total interest and related expenses / (Long-term debt + Debt in current liabilities). *Global Vantage.*	0.07	0.08	0.30
Equity cost of capital (CCE). Measured through the implied cost of equity using one period Gordon Growth Model (GGM) as $r_e = \frac{EPS_{t+1}}{P_t}$ where *EPS* refers to earnings per share and P_t is the stock price. *Global Vantage.*	0.19	0.11	1.21
Weighted average cost of capital (WACC). Measured using WACC = r_e(1–Lev)+ r_dLev(1–Tax), where Lev = (Long-term debt + Debt in current liabilities) / (Total assets + Market value of equity – Stockholders equity – Deferred taxes) and Tax = Income taxes / Pretax Income. *Global Vantage.*	0.18	0.08	0.36

Panel E. Policy uncertainty measures

Election Indicator (ELI). It indicates that there was an election during that year. If the election is in the first-half of the year (on or before June 30th), the previous calendar year is considered as the one with high election uncertainty. We focus on the elections where the chief executive of the government is changing. Thus, in the presidential system, it is the presidential elections, while in the parliamentary system, it is the parliamentary elections. *Various sources. World Bank's Database of Political Institutions (DPI2012).*	0.25	0.00	0.43
Change veto players (CVP). The variable tabulates the percent of veto players who drop from the government in any given year. The veto players are defined in the following fashion. In presidential systems, if the president does not control the legislature (via closed list and a majority), then veto players are the president and each chamber. If the president gains control of the legislature in time t, then the chambers are counted as no longer being veto players. Similarly, if the president changes and the largest opposition party has a majority in the legislature in time t-1, but not in time t, a change in veto players is again recorded. If the largest government party has a majority in the legislature (and there is no closed list) in time t-1, but not in time t, a change in veto players is again recorded. In parliamentary systems, if members of the government coalition in t-1 are no longer in government in t, that number of veto players changes. If the prime minister changes and an opposition party has a majority in t-1, but that same party does not have a majority in t, then one veto player is said to have dropped. If parliamentary systems go from no government majority or no closed list to a government majority and closed list in time t, the chambers are counted as no longer being veto players. *World Bank's Database of Political Institutions (DPI2012).*	0.10	0.00	0.20
Coalition. The Herfindahl index of the government parties forming the coalition (using their seats in the parliament). If the Herfindahl index is < 1, then Coalition = 1; otherwise it is zero. *Various sources. World Bank's Database of Political Institutions (DPI2012).*	0.35	0.00	0.48
Economic policy uncertainty index (EPUI). A policy-related economic uncertainty index created by Baker et al., (2016). Since our accounting variables are in annual frequency, we use the annualized version of this index by taking the average of the monthly values. *Source: www.policyuncertainty.com.*	91.47	89.99	17.17
Election closeness. A dummy that equals one for the year when the election in a country is closer than the median for that country during the sample period, and zero otherwise. *Various sources. World Bank's Database of Political Institutions (DPI2012).*	0.10	0.00	0.30
Fixed Election. A country is classified as having *Fixed Elections* (=1) if the national leader or legislative body does not have the option to call an election before the regularly scheduled election date; otherwise *Fixed Elections* is zero. *Source: Julio and Yook (2012).*	0.54	1.00	0.50

Panel F. Political institutions

Political rights. Index of political rights. Higher ratings indicate countries that come closer to the ideals: (1) free and fair elections; (2) those elected rule; (3) there are competitive parties or other competitive political groupings; (4) the opposition has an important role and power; and (5) the entities have self-determination or an extremely high degree of autonomy. *Source: La Porta et al. (2004).*	0.91	0.19	1.00
Democratic rights. A measure of the degree of democracy in a given country based on: (1) the competitiveness of political participation; (2) the openness and competitiveness of executive recruitment; and (3) the constraints on the chief executive. The variable ranges from zero to ten, where higher values equal a higher degree of institutionalized democracy. *Source: Djankov et al. (2002).*	8.99	2.42	10.00
Proportional representation. An indicator variable equal to one for each year in which candidates were elected using a proportional representation system; equals zero otherwise. Proportional representation means that candidates are elected based on the percentage of votes received by their party. *Source: Beck et al. (2001).*	0.37	0.47	0.00
Constitutional review. Constitutional review reflects the extent to which judges (either Supreme Court or constitutional court) have the power to review the constitutionality of laws in a given country and the ease of changing the constitution in a given country. Higher values indicate a higher degree of constitutional review by the courts. *Source: La Porta et al. (2004).*	0.71	0.28	0.83
Disclosure requirement. This variable takes a value of 1 if the law or regulations of the country require members of the parliament to provide financial and/or business interests disclosures; zero otherwise. *Source: Djankov, LaPorta, Lopez-de-Silanes, and Shleifer (2010).*	0.92	1.00	0.27
Public disclosure. This variable takes a value of 1 if there is public access to the financial and business interests' disclosures in the country; 0.5 if the country has two different standards for public availability of disclosures for the financial and the business interest forms, and only one of them was available (Belgium, Colombia, Italy, and Spain); and 0 if there is no access to the disclosures or if the country has no public disclosure required. *Source: Djainkov, LaPorta, Lopez-de-Silanes, and Shleifer (2010).*	0.88	1.00	0.32

Table 2.

Summary statistics of the election sample

The table presents some descriptive statistics of the election sample. For each country, we report the number of firms and firm-years, the number of national elections conducted during our sampling period from1990-2006 [these elections are used to create our *Election Indicator*, *ELI*], the average number of years in which the country is under election uncertainty (using our *ELI* indicator), the change in percentage of veto players that were voted out of office per year (i.e., the mean of the *CVP*), what percentage of years the country was run with a coalition government, the average of Baker, et al. (2016)'s EPUI across the years for which it is available, and the political system of the country.

Country	Firms	Firm Years	Elections	Average ELI	Average CVP	Coalition	EPUI (years)
Argentina	35	172	3	0.1765	0.1520	35.29%	--
Australia	736	4,124	6	0.2941	0.0588	58.82%	--
Austria	62	524	6	0.3529	0.0588	100.00%	--
Belgium	85	646	4	0.2353	0.0588	100.00%	--
Brazil	65	238	4	0.2353	0.1029	100.00%	--
Canada	185	1,568	5	0.2941	0.0588	0.00%	96.97 (17)
Chile	38	193	3	0.1765	0.1961	70.59%	--
Columbia	10	55	5	0.2353	0.1912	70.59%	--
Denmark	103	871	5	0.2941	0.1265	100.00%	--
Finland	114	855	4	0.2941	0.1324	100.00%	--
France	501	3,556	3	0.1765	0.1667	100.00%	80.34 (10)
Germany	537	4,023	5	0.2941	0.0765	100.00%	91.93 (10)
Greece	98	468	5	0.2353	0.2353	17.65%	--
India	460	1,501	5	0.2941	0.2863	100.00%	78.56 (4)
Indonesia	179	1,392	4	0.2353	0.1765	41.18%	--
Ireland	33	301	3	0.2353	0.0980	100.00%	--
Israel	23	134	6	0.3529	0.1853	100.00%	--
Italy	168	1,032	5	0.2941	0.2912	29.41%	101.48 (10)
Japan	2,764	18,864	6	0.2941	0.2451	64.71%	--
Malaysia	723	4,807	4	0.2353	0.0706	88.24%	--
Mexico	58	414	3	0.1765	0.0882	35.29%	--
N. Zealand	61	394	6	0.3529	0.2157	70.59%	--
Norway	113	830	4	0.2353	0.2235	76.47%	--
Pakistan	74	341	4	0.2353	0.2206	46.67%	--
Peru	25	140	5	0.2353	0.1275	58.82%	--
Philippines	66	446	3	0.1765	0.1716	82.35%	--
Portugal	43	276	5	0.2941	0.2157	17.65%	--
Singapore	383	2,627	4	0.2353	0.0588	0.00%	--
S. Africa	173	1,118	3	0.1765	0.1765	70.59%	--
S. Korea	366	2,330	3	0.1765	0.1373	35.29%	--
Spain	98	750	4	0.2353	0.1235	23.53%	98.72 (6)
Sweden	245	1,725	5	0.2941	0.1598	76.47%	--
Switzerland	166	1,536	4	0.2353	0.0588	100.00%	--
Taiwan	743	2,648	5	0.2941	0.0343	17.65%	--
Thailand	333	2,128	6	0.3529	0.2471	93.75%	--
Turkey	60	268	4	0.2353	0.2549	64.71%	--
UK	1,281	11,128	4	0.2353	0.0784	0.00%	78.30 (10)
U.S.	5,299	54,367	4	0.2353	0.0441	0.00%	94.33 (17)
Total	16,506	128,790	167	--	--	--	--
Average	--	--	4.3947	0.2539	0.1475	0.6174	--

Table 3.

Policy uncertainty and equity underwriting costs

The table summarizes the impact of policy uncertainty on equity underwriter spreads (Hypothesis 1) and the economic mechanisms through which this effect takes place (Hypotheses 1A-1C). Using one of our policy uncertainty indicators, we group the issuances based on when they were conducted: during high (High PU) or low political uncertainty (Low PU) periods. With *ELI* and *Coalition* dummies, the grouping is based on whether they are zero (Low PU) or one (High PU). For *Change Veto Players*, the grouping is relative to its median value with above (below) median denoting High PU (Low PU) states. Panel A summarizes equity underwriter spreads obtained from the estimation of Equation (1) for issuances taking place when policy uncertainty is high (High PU) vs. the rest of the years (Low PU):

$$S_i = \alpha + \beta \frac{1}{x_i} + \gamma \frac{x_i}{y_i} + \sum_{jt} \mu_{jt} M_{jt} + \sum_j \delta_j C_j + \sum_t \upsilon_t T_t + \varepsilon_i \tag{1}$$

where S_i is the percentage of underwriter spread for a particular issuance event i as reported in SDC, x_i represents the gross proceeds raised during the issuance event i, y_i is the market value of the issuing firm's equity immediately prior to the offering as reported in SDC, M_{jt} is a set of macroeconomic factors including the GDP growth rate and the inflation rate, C_j is a dummy variable equal to one if the issue i is in country j, T_t is a dummy variable equal to one if the issue i is in year t, and the error term is shown with ε_i. The standard errors are double-clustered by country and year. Panel A shows how policy uncertainty affects equity underwriter spreads (Hypothesis 1). The estimated underwriter's spread (%), the marginal spread (US $), and the marginal spread's slope (US $) are calculated using the coefficient estimates $(\hat{\alpha}, \hat{\beta}, \hat{\gamma}, \hat{\mu})$ from Equation (1) and the actually observed values for proceeds, market

capitalization, and macroeconomic factors as: $\left[\hat{\alpha} + \hat{\beta} \frac{1}{x_i} + \hat{\gamma} \frac{x_i}{y_i} + \sum_{jt} \hat{\mu}_{jt} M_{jt} \right]$; $\left[10,000 \times \left(\hat{\alpha} + 2\hat{\gamma} \frac{x_i}{y_i} + \sum_{jt} \hat{\mu}_{jt} M_{jt} \right) \right]$;

and $\left[10,000 \times \left(2\hat{\gamma} \frac{1}{y_i} \right) \right]$, correspondingly. Panel B displays the results on the effects of policy uncertainty on i) the information risk as measured by average IPO underpricing (Hypothesis 1A); ii) the investor demand as reflected in average price-to-book ratio just before the SEO and the number of SEOs (Hypothesis 1B); and iii) the issue size as proxied by average proceeds per offer (Hypothesis 1C). *, **, and *** indicate the significant difference between the Low and High PU groups at the 10%, 5%, and 1% levels, respectively.

Panel A: Policy uncertainty's impact on equity underwriter spreads

	Low PU	High PU	Difference			
Variables	*Median*	*Median*	*Absolute*		*Relative (%)*	
Estimated equity underwriter spreads (%)						
Election Indicator (ELI)	3.04	3.12	0.08	***	2.63	***
Change Veto Players (CVP)	3.00	3.26	0.26	***	8.67	***
Coalition	3.00	3.33	0.33	***	11.00	***
Marginal spread (US $)						
Election Indicator (ELI)	33,166	34,849	1,683	***	5.07	***
Change Veto Players (CVP)	32,904	84,067	51,16	***	155.4	***
Coalition	33,166	48,676	15,51	***	46.76	***
Marginal spread slope (US $)						
Election Indicator (ELI)	284	412	128	***	45.07	***
Change Veto Players (CVP)	232	1,339	1,107	***	477.1	***
Coalition	283	474	191	***	67.49	***

Panel B: Policy uncertainty and equity underwriting costs: Testing the economic channels

	Low PU	High PU	Difference			
Variables	*Median*	*Median*	*Absolute*		*Relative (%)*	
Information risk (average IPO underpricing)						
Election Indicator (ELI)	26.30	87.50	61.20	***	232.70	***
Change Veto Players (CVP)	17.94	59.72	41.78	***	232.89	***
Coalition	31.70	131.65	99.95	***	315.30	***
Investor demand (average price- to-book ratio)						
Election Indicator (ELI)	4.68	2.47	-2.21	***	-47.22	***
Change Veto Players (CVP)	5.23	4.89	-0.34	***	-6.50	***
Coalition	5.23	3.80	-1.43	***	-27.34	***
Investor demand (the number of SEO offerings per country per year)						
Election Indicator (ELI)	240	97	-143	***	-59.58	***
Change Veto Players (CVP)	243	94	-149	***	-61.32	***
Coalition	274	62	-212	***	-77.37	***
Issue size (average proceeds per offer, in millions of U.S. dollars)						
Election Indicator (ELI)	131.86	115.45	-16.41	***	-12.45	***
Change Veto Players (CVP)	121.77	105.21	-16.56	***	-13.60	***
Coalition	119.42	123.42	4.00		3.35	

Table 4.

Policy uncertainty and debt underwriting costs

The table summarizes the impact of policy uncertainty on debt underwriter spreads (Hypothesis 1) and the economic mechanisms through which this effect takes place (Hypotheses 1A-1C). Using one of our policy uncertainty indicators, we group the issuances based on when they were conducted: during high (High PU) or low political uncertainty (Low PU) periods. With *ELI* and *Coalition* dummies, the grouping is based on whether they are zero (Low PU) or one (High PU). For *Change Veto Players*, the grouping is relative to its median value with above (below) median denoting High PU (Low PU) states. Panel A summarizes debt underwriter spreads obtained from the estimation of Equation (2) for issuances taking when policy uncertainty is high (High PU) vs. the rest of the years (Low PU):

$$S_i = \alpha + \beta \frac{1}{x_i} + \gamma \frac{x_i}{y_i} + \sum_{SP=B}^{A} \varphi_{SP} R_{SP} + \sum_{jt} \mu_{jt} M_{jt} + \sum_j \delta_j C_j + \sum_t \upsilon_t T_t + \varepsilon_i \tag{2}$$

where R_{SP} are dummy variables indicating whether the issue has an S&P bond rating ranging from B to A (B, BB, BBB, A) with CCC rated bonds included in the B category. M_{jt} is a set of macroeconomic factors including the GDP growth rate and the inflation rate. C_j is a dummy variable equal to one if the issue i is in country j, T_t is a dummy variable equal to one if the issue i is in year t, and the error term is shown with ε_i. The standard errors are double-clustered by country and year. Panel A shows how policy uncertainty affects debt underwriter spreads (Hypothesis 1). The estimated underwriter's spread (%), the marginal spread (US $), and the marginal spread's slope (US $) are calculated using the coefficient estimates ($\hat{\alpha}, \hat{\beta}, \hat{\gamma}, \hat{\varphi}, \hat{\mu}$) from Equation (2) and the actually observed values for proceeds, market capitalization, S&P bond ratings, and macroeconomic factors as:

$$\left[\hat{\alpha} + \hat{\beta} \frac{1}{x_i} + \hat{\gamma} \frac{x_i}{y_i} + \sum_{SP=B}^{A} \hat{\varphi}_{SP} R_{SP} + \sum_{jt} \hat{\mu}_{jt} M_{jt} \right]; \left[10,000 \times \left(\hat{\alpha} + 2\hat{\gamma} \frac{x_i}{y_i} + \sum_{SP=B}^{A} \hat{\varphi}_{SP} R_{SP} + \sum_{jt} \hat{\mu}_{jt} M_{jt} \right) \right]; \quad \text{and}$$

$$\left[10,000 \times \left(2\hat{\gamma} \frac{1}{y_i} \right) \right], \text{ correspondingly. Panel B displays the results on the effects of policy uncertainty on i) the}$$

information risk as measured by the average S&P bond ratings prevalent during a given year (Hypothesis 1A); ii) investor demand as captured by the number of bond offerings (Hypothesis 1B); and iii) the issue size as measured by average proceeds per offer (Hypothesis 1C) [*], [**], and [***] indicate the significant difference between the Low and High PU groups at the 10%, 5%, and 1% levels, respectively.

Panel A: Policy uncertainty's impact on debt underwriter spreads

Variables	Low PU	High PU	Difference			
	Median	*Median*	*Absolute*		*Relative (%)*	
Estimated debt underwriter spreads (%)						
Election Indicator (ELI)	1.90	2.22	0.32	***	16.84	***
Change Veto Players (CVP)	1.88	2.20	0.32	***	17.02	***
Coalition	1.91	2.32	0.41	***	21.47	***
Marginal spread (US $)						
Election Indicator (ELI)	27,271	28,593	1,322	***	4.85	***
Change Veto Players (CVP)	30,973	32,538	1,565	***	5.05	***
Coalition	29,650	32,652	3,002	***	10.12	***
Marginal spread slope (US $)						
Election Indicator (ELI)	25.49	29.34	3.85	***	15.10	***
Change Veto Players (CVP)	25.49	43.07	17.58	***	68.97	***
Coalition	23.33	45.69	22.36	***	95.84	***

Panel B: Policy uncertainty and debt underwriting costs: Testing the economic channels

Variables	Low PU	High PU	Difference			
	Median	*Median*	*Absolute*		*Relative (%)*	
Information risk (Standard & Poor's Rating Score (min=0; max=20)						
Election Indicator (ELI)	9.28	10.05	0.77	***	8.31	***
Change Veto Players (CVP)	9.23	9.28	0.05	***	0.51	***
Coalition	9.28	10.33	1.06	***	11.39	***
Investor demand (the number of bond offerings per country per year)						
Election Indicator (ELI)	76	26	-50	***	-65.79	***
Change Veto Players (CVP)	73	40	-33	***	-45.21	***
Coalition	93	5	-88	***	-94.62	***
Issue size (average proceeds per offer, in millions of U.S. dollars)						
Election Indicator (ELI)	233.54	221.15	-12.38	***	-5.30	***
Change Veto Players (CVP)	237.39	233.54	-3.85	***	-1.62	***
Coalition	233.54	245.57	12.04	***	5.15	***

Table 5.

Capital structure changes, the related accounting variables, and policy uncertainty

The table summarizes various accounting variables during election years. Election years are defined using the *Election Indicator (ELI)*. We include only the accounting variables that are closely associated with capital structure. Panel A reports the main variables associated with the accounting identity, $CFF_t \equiv \Delta Cash_t - CFI_t - CFO_t - Other$. N indicates the number of firm-year observations used in calculating the corresponding statistics. Panel B displays the decomposition of the CFF into its main components $CFF = SSTK - PRSTKC + DLTIS - DLTR - DV + DLCCH + Other$. The accounting variables are defined as follows. $\Delta CASH$ = the change in cash and cash equivalents, CFF = cash flow from financing, CFI = cash flow from investments, CFO = cash flow from operations, $SSTK$ = sale of common and preferred stock, $PRSTKC$ = purchase of common and preferred stock, DV = cash dividends, $DLTIS$ = long-term debt issuance, $DLTR$ = long-term debt reduction, and $DLCCH$ = current debt changes. All the accounting variables are scaled by lagged assets. When the mean (median) of the election years sample is significantly different from that of the non-election years sample at the 10%, 5%, and 1% significance level it is indicated by *, **, and ***, respectively. For the differences in means, we use the *t*-test. For differences in medians, we employ the Wilcoxon nonparametric rank-sum test.

Variables	LOW PU Non-Election Years (ELI=0)			HIGH PU Election Years (ELI=1)				
	Mean	Median	N	Mean	Significance	Median	Significance	N
Panel A. Accounting Identity: $CFF_t \equiv \Delta Cash_t - CFI_t - CFO_t - Other$								
CFF	0.0132	-0.0113	39,300	0.0066	***	-0.0142	***	14,305
ΔCASH	0.0120	0.0016	77,296	0.0141	***	0.0021	**	26,395
CFI	-0.0826	-0.0491	70,328	-0.0786	*	-0.0455	***	24,219
CFO	0.0690	0.0744	77,125	0.0647	***	0.0699	***	26,346
Other	0.0074	-0.0120	83,432	0.0094		0.0039	***	27,287
Panel B. Decomposition of CFF: CFF = SSTK - PRSTKC - DV + DLTIS - DLTR + DLCCH + Other								
SSTK	0.0562	0.0016	67,698	0.0424	***	0.0013	***	20,628
PRSTKC	0.0079	0.0000	65,824	0.0073	*	0.0000	***	20,692
DV	0.0122	0.0025	69,295	0.0114	***	0.0035	**	23,589
DLTIS	0.0522	0.0000	37,025	0.0499	*	0.0000	***	11,783
DLTR	0.0418	0.0000	82,467	0.0401	*	0.0000	***	27,556
DLCCH	-0.0027	0.0000	42,509	-0.0021		0.0000	***	15,182

Table 6.

Capital structure changes and policy uncertainty

This table presents estimation results from logistic regressions modeling the main capital structure variables comprising CFF, *CFF = SSTK - PRSTKC + DLTIS - DLTR- DV + DLCCH + Other*. Net short term debt, ΔSTDEBT refers to DLCCH; net long term debt, ΔLTDEBT corresponds to DLTIS-DLTR; total net debt, ΔDEBT is calculated as DLTIS-DLTR+DLCCH; and net equity, ΔEQUITY is measured as SSTK-PRSTKC. All of these accounting variables are scaled by lagged total assets. The dependent variable corresponding to each accounting variable is defined as one if the variable exceeds 5% of the total assets, zero otherwise. Debt issuance costs, *ICD* and Equity issuance costs, *ICE* are two dummy variables indicating whether the median costs for debt and equity issuance events in a country in a given year, respectively, are higher than the median costs in the overall sample for that year. Control variables include market-to-book ratio, firm size, profitability, expected capital expenditures, R&D expenses, cash, depreciation expenses, tangibility, selling expenses, Z-score, and a constant. To minimize the endogeneity problem, all of the control variables, except for *Expected CAPX*, are lagged by one year. The variable definitions and sources are provided in Table 1 and Table 5. The estimated coefficients on control variables are not reported to save space (available upon request). In Panel A, the sample period covers 1990-2006. In Panel B, the sample period covers 1990-2012, the crisis period indicates years 2007 and 2008, and separate regressions allow the slope coefficients to vary across normal and crisis times. Robust standard errors are reported beneath the coefficient estimates. *, **, and *** indicate significant difference between the groups at the 10%, 5%, and 1% levels, respectively.

Panel A: Capital markets access and election-driven policy uncertainty

	Net short-term debt issuance (DLCCH)		Net long-term debt issuance (DLTIS-DLTR)		Total net debt issuance (DLTIS-DLTR+DLCCH)		Net equity issuance (SSTK-PRSTKC)	
Debt issuance costs (ICD)	-0.0291		-0.3229***		-0.1330***			
	(0.109)		(0.000)		(0.000)			
Equity issuance costs (ICE)							-0.2403***	
							(0.000)	
Election Indicator (ELI)	-0.0183	-0.0153	-0.3238***	-0.2677***	-0.1102***	-0.0859***	-0.0026	-0.0010
	(0.238)	(0.320)	(0.000)	(0.000)	(0.000)	(0.000)	(0.883)	(0.957)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	107,789	107,789	99,867	99,867	97,461	97,461	107,789	107,789
Implied change in the odds	-0.0262	-0.0152	-0.2414	-0.2349	-0.1106	-0.0823	-0.2136	-0.0010

Panel B: Capital markets access, election-driven policy uncertainty, and the financial crisis

	Net short-term debt issuance (DLCCH)		Net long-term debt issuance (DLTIS-DLTR)		Total net debt issuance (DLTIS-DLTR+DLCCH)		Net equity issuance (SSTK-PRSTKC)	
	Normal times	Crisis times	Normal	Crisis times	Normal times	Crisis times	Normal times	Crisis times
Election Indicator (ELI)	-0.0524***	-0.0319	-0.2853***	-0.1865***	-0.0951***	0.0012	-0.1368***	-0.1060**
	(0.000)	(0.426)	(0.000)	(0.006)	(0.000)	(0.985)	(0.000)	(0.022)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	155,552	23,294	144,196	13,406	139,424	11,290	155,552	23,307
Implied change in the odds	-0.0511	-0.0314	-0.2482	-0.1701	-0.0907	0.0012	-0.1279	-0.1006

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Table 7.

Leverage and policy uncertainty

The table illustrates the impact of policy uncertainty on leverage for the firms in our 38-country sample. We estimate the following reduced-form model of leverage, where λ is the adjustment parameter, x is a set of firm and industry characteristics, L is the leverage ratio, and ε is a random error term, with the inclusion of firm, country, and year fixed effects:

$$L_{ij,t} = (\lambda\beta)X_{ij,t-1} + (1-\lambda)L_{ij,t-1} + \varepsilon_{ij,t} \tag{6}$$

We estimate this equation using Blundell and Bond's (1998) GMM estimator. The definitions and the sources of the variables are provided in Table 1 and/or in the text. The p-values are reported beneath the coefficient estimates. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Debt Issuance Costs, ICD	Equity Issuance Costs, ICE	ELI	CVP	Coalition	EPUI
Issuance Cost Measure	-0.0029***	-0.0083***				
	(0.009)	(0.000)				
Policy Uncertainty Measure			-0.0098***	-0.0275**	-0.0245***	-0.0082***
			(0.000)	(0.032)	(0.000)	(0.002)
Lagged Leverage	0.8072***	0.8469***	0.8547***	0.8451***	0.8558***	0.8385***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Profitability	0.0217*	0.0055	-0.0084	-0.0407***	-0.0094*	0.0553***
	(0.091)	(0.387)	(0.138)	(0.000)	(0.097)	(0.000)
Market-to-book	0.0029***	-0.0033***	-0.0028***	-0.0056***	-0.0030***	-0.0064***
	(0.009)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Depreciation	-0.1169*	-0.1984***	-0.2466***	-0.4965**	-0.2356***	0.0915
	(0.079)	(0.000)	(0.000)	(0.029)	(0.000)	(0.159)
Firm size	0.0029	0.0083***	0.0055*	0.0058*	0.0061**	0.0254
	(0.201)	(0.005)	(0.050)	(0.052)	(0.030)	(0.112)
Tangibility	0.0089	0.0377***	0.0436***	-0.2844***	0.0442***	0.0634***
	(0.564)	(0.002)	(0.000)	(0.003)	(0.000)	(0.000)
R&D Dummy	0.0074	-0.0099***	-0.0104***	0.0720**	-0.0056*	-0.0448***
	(0.221)	(0.004)	(0.000)	(0.024)	(0.059)	(0.000)
R&D Expenses	0.0278	0.0173	0.0270	-0.0637	0.0129	0.6007***
	(0.422)	(0.559)	(0.336)	(0.232)	(0.642)	(0.000)
Median Industry Leverage	0.2026***	0.3336***	0.3847***	0.5716**	0.2067***	0.1423***
	(0.000)	(0.000)	(0.000)	(0.012)	(0.007)	(0.000)
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	128,790	128,790	128,790	128,790	128,790	72,198
Economic Impact of PU (Costs)	-0.0150	-0.0542	-0.0675	-0.1775	-0.1699	-0.0508

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Table 8.

Leverage and policy uncertainty: Subsample analyses

The table illustrates the impact of policy uncertainty on leverage across various groups of firms. The empirical methodology is identical to the one presented in Table 7. To conduct our subsample analyses various sorting criteria are applied. Some subsample analyses are conducted using dummies and some by restricting the sample to a subset of our firms. (1) A firm is considered as financially constrained (*FC*=1) if it is in the bottom three deciles of the payout distribution in its country. (2) *Multinational* is an indicator variable that is 1 if the firm reports foreign income or foreign exchange income. (3) *Election closeness* is 1 for the year when the election in a country is closer than the median for that country during the sample period, and 0 otherwise (there is no need for an interaction term with *ELI*, because *Election Closeness* is a subset of *ELI*). (4) *Politically sensitive industries* (=1) are pharmaceuticals, health care, defense, petroleum, natural gas, telecommunications, and transportation. (5) *Regulations on Politically Connected Firms* is a country-specific index (least regulated when *Regulatory Index*=0; most regulated when =6) constructed using Faccio (2006)'s *Regulatory Score* variable. (6) *Excluding Politically Connected Firms* column displays the results for our firms' samples when politically connected firms, as identified by Faccio (2006), are excluded from the analyses. (7) *No Substantial Change in Investment* column shows the results for the sample that includes only the firm-years with a change in capital expenditures to total assets that is less than 1% compared to the previous year. (8) A country is classified as having *Fixed Elections* (=1) if the national leader or legislative body does not have the option to call an election before the regularly scheduled election date; the column shows the results when only the firms from countries with fixed elections are included in the analysis. (9) *Crisis Years* is 1 if the year is 2007 or 2008, and zero otherwise. The regressions include unreported firm, year, and country fixed effects. The definitions and the sources of the remaining variables are provided in Table 1 and/or in the text. The control variables are the same as in Table 7 and are omitted for brevity. The *p*-values are reported beneath the coefficient estimates. [*], [**], and [***] indicate significance at the 10%, 5%, and 1% levels, respectively.

	(1) Financially Constrained Firms (FC)	(2) Multinational Firms	(3) Election Closeness	(4) Politically Sensitive Industries	(5) Regulations on Politically Connected Firms	(6) Excluding Politically Connected Firms	(7) No Substantial Change in Investment	(8) Fixed Elections	(9) Crisis Years
Election Indicator, ELI	-0.0048*** (0.000)	-0.0107*** (0.000)	-0.0079*** (0.000)	-0.0031*** (0.001)	-0.0061* (0.075)	-0.0077*** (0.000)	-0.0024*** (0.005)	-0.0071*** (0.000)	-0.0054*** (0.002)
Financially Constrained, FC	-0.0073*** (0.002)								
FC x ELI	-0.0067*** (0.005)								
Multinational		0.0064*** (0.006)							
Multinational x ELI		0.0084*** (0.000)							
Election Closeness			-0.0058** (0.010)						
Politically Sens. Ind., PSI				-0.0217 (0.181)					
PSI x ELI				-0.0053*** (0.005)					
Regulatory Index, RI					-0.0295*** (0.000)				
RI x ELI					-0.0002* (0.075)				
Crisis Years									0.0443*** (0.000)
ELI x Crisis Years									-0.1151*** (0.001)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	128,790	128,790	128,790	128,790	128,449	126,325	73,367	70,042	201,760

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Table 9.

The role of country's financial and legal development and its political institutions

The table illustrates the role of country's financial development as well as legal and political institutions in reducing the negative impact of policy uncertainty on firm financing. Panel A shows the interaction effects of country's financial and development structure as well as legal system (all denoted by the generic name *FIN*), and political uncertainty (*ELI*), on leverage. Panel B displays the interaction effects of country's political institutions (denoted generically by *Institution*), and policy uncertainty (*ELI*) on leverage. The control variables are the same as in Table 7 and are omitted for brevity. The variables related to a country's financial development structure are: financial development, financial intermediary development, bond market development, stock market development, and financial structure. The legal environment feature we use is the legal origin of the country: an indicator variable that takes the value of one if the country's legal system is based on common law and zero otherwise. The variables related to a country's political institutions are: political rights, democratic rights, proportional representation, constitutional review, disclosure requirement, and public disclosure. These variables are explained in detail in Table 1. We estimate the following reduced-form model of leverage, where λ is the adjustment parameter, X is a set of firm characteristics, L is the leverage ratio, and ε is a random error term, with the inclusion of firm, country, and year fixed effects:

$$L_{ij,t} = (\lambda\beta)X_{ij,t-1} + (1 - \lambda)L_{ij,t-1} + \varepsilon_{ij,t} \tag{6}$$

We estimate this equation using Blundell and Bond's (1998) GMM estimator. The definitions and the sources of the variables are provided in Table 1 and/or in the text. The *p*-values are reported beneath the coefficient estimates. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Panel A: Leverage, country's financial and legal development, and policy uncertainty

	Financial Development	Financial Intermediary Development	Bond Market Development	Stock Market Development	Financial Structure	Legal Origin
Election Indicator,	-0.0055**	-0.0039***	-0.0044***	-0.0050***	-0.0038*	-0.0071**
	(0.012)	(0.000)	(0.001)	(0.001)	(0.085)	(0.032)
FIN x ELI	0.0048**	0.0053***	0.0001***	0.0000	0.0028	-0.0069**
	(0.036)	(0.000)	(0.000)	(0.163)	(0.228)	(0.043)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	128,790	125,167	122,969	125,705	122,441	122,441

Panel B: Leverage, country's political institutions, and policy uncertainty

	Political Rights	Democratic Rights	Proportional Representation	Constitutional Review	Disclosure Requirement	Public Disclosure
Election Indicator, ELI	-0.0206**	-0.0180**	-0.0061***	-0.0039**	-0.0851**	-0.0734*
	(0.023)	(0.018)	(0.000)	(0.027)	(0.034)	(0.083)
Institution x ELI	0.0165*	0.0013*	0.0065***	0.0041*	0.0817**	0.0731*
	(0.081)	(0.089)	(0.002)	(0.078)	(0.049)	(0.090)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	128,790	128,790	128,790	128,790	128,790	128,790

Table 10. Leverage, investment, and cash management under policy uncertainty

The table represents the estimation results from two 3SLS systems. Columns under (1) show the estimation results in the pre-financial-crisis period (i.e. 1990-2006). Columns under (2) show the results for the period including the financial crisis (i.e., 1990-2012). Estimation equations assume that all three policies are simultaneously and endogenously determined. In other words, the remaining endogenous policy variables are included as a right hand side independent variable in each policy equation:

$$L_{ij,t} = a_0 I_{ij,t} + a_1 \Delta C_{ij,t} + \beta X_{ij,t-1} + \varepsilon_{ij,t} \tag{7}$$

$$I_{ij,t} = b_0 L_{ij,t} + b_1 \Delta C_{ij,t} + \theta Y_{ij,t-1} + \delta_{ij,t} \tag{8}$$

$$\Delta C_{ij,t} = c_0 L_{ij,t} + c_1 I_{ij,t} + \mu Z_{ij,t-1} + \vartheta_{ij,t} \tag{9}$$

where X, Y, Z are a set of firm and macroeconomic characteristics, L is the leverage ratio, I is the capital expenditures to total assets, ΔC is the change in cash and cash equivalents scaled by total assets, β, θ, μ are vector of coefficients, and $\varepsilon, \delta, \vartheta$ are random error terms. The control variables in the leverage equation (X) are the same as before (see Table 7). The control variables in the investment equation (Y) consist of market-to-book, firm size, cash flow, GDP growth, and a constant. The control variables in the cash equation (Z) are market-to-book, firm size, cash flow, cash, and a constant. All right-hand side variables (with the exclusion of the endogenous policy variables) are lagged and are employed as instruments for the endogenous variables (L, I, ΔC) in these regressions. The empirical error structure allows for unstructured correlation across models. The regressions include unreported year fixed effects. The definitions and the sources of the variables are provided in Table 1 and/or in the text. The *p*-values are reported beneath the coefficient estimates. *, **, and *** indicate significance at the 10%, 5%, and 1% levels.

	(1)			(2)		
	Leverage	Investment	ΔCash	Leverage	Investment	ΔCash
Election Indicator, ELI	-0.0259***	-0.0012*	0.0023***	-0.0162***	-0.0014**	0.0009
	(0.000)	(0.053)	(0.002)	(0.001)	(0.022)	(0.229)
Profitability	0.1358***			0.0110		
	(0.000)			(0.441)		
Market-to-book	0.0025	0.0187***	0.0216***	0.0040*	0.0131***	0.0138***
	(0.618)	(0.000)	(0.000)	(0.075)	(0.000)	(0.000)
Depreciation	2.3863***			2.0760***		
	(0.000)			(0.000)		
Firm size	0.0133**	-0.0014	-0.0003	-0.0022	-0.0017***	0.0014**
	(0.029)	(0.195)	(0.791)	(0.449)	(0.002)	(0.032)
Tangibility	0.5880***			0.5316***		
	(0.000)			(0.000)		
R&D Dummy	-0.0414***			-0.0425***		
	(0.000)			(0.000)		
R&D Expenses	-0.2430***			-0.1347***		
	(0.000)			(0.000)		
Median Industry Leverage	0.6245***			0.5716***		
	(0.000)			(0.000)		
Cash flow		0.1257***	0.0047		0.1154***	-0.0024
		(0.000)	(0.201)		(0.000)	(0.378)
GDP Growth		0.2284***			0.1604***	
		(0.000)			(0.000)	
Cash			-0.1104***			-0.1027***
			(0.000)			(0.000)
Investment	-5.3706***		-0.3752***	-4.0172***		-0.3495***
	(0.000)		(0.000)	(0.000)		(0.000)
ΔCash	2.6259***	-0.4827***		2.7393***	-0.5257***	
	(0.000)	(0.000)		(0.000)	(0.000)	
Leverage		0.2118***	-0.0082		0.1988***	-0.0291***
		(0.000)	(0.300)		(0.000)	(0.000)
Constant	0.1081***	-0.0205***	0.0220***	0.0817***	-0.0093***	0.0336***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	84,655	84,655	84,655	128,758	128,758	128,758

Table 11. Leverage, investment, and cash management under policy uncertainty: Isolating the financial intermediation frictions channel

The empirical methodology is identical to the one presented in Table 10. Four different specifications of Equation (7), that employ alternative combinations of issuance costs while controlling for various measures of cost of capital, are reported in columns 1-4, *ICE* and *ICD* are two dummy variables indicating whether the median issuance costs of equity and debt within a country in a given year, respectively, are higher than the median costs in the overall sample for that year. *IC* is a similar dummy for the total (equity plus debt) issuance costs. We compute the implied cost of equity using one period Gordon Growth Model (GGM) as equity cost of capital, CCE, $r_e = \frac{EPS_{t+1}}{P_t}$ where *EPS* refers to earnings per share and P_t is the stock price. Debt cost of capital (CCD), r_d = Total interest and related expenses / (Long-term debt + Debt in current liabilities). Weighted average cost of capital, WACC $= r_e(1 - Lev) + r_d Lev(1 - Tax)$ where *Lev* = (Long-term debt + Debt in current liabilities) / (Total assets + Market value of equity – Stockholders equity – Deferred taxes) and *Tax* = Income taxes/Pretax Income. The regressions include unreported year fixed effects. The remaining control variables are the same as in Table 10, except for the addition of the cost of capital measures in the investment equation (Equation (8)) and are omitted for brevity. The definitions and the sources of the variables are provided in Table 1 and/or in the text. To save space, the estimation results for Equations (8) and (9) are not reported, but they are very similar to the ones reported in Table 10. The *p*-values are reported beneath the coefficient estimates. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)	(3)	(4)
Election Indicator, ELI	-0.0146***	-0.0252***	-0.0141***	-0.0192***
	(0.001)	(0.000)	(0.000)	(0.000)
Equity Issuance Costs, ICE	-0.0362***		-0.0280***	
	(0.000)		(0.000)	
ELI x ICE	-0.0428***		-0.0474***	
	(0.000)		(0.000)	
Equity Cost of Capital, CCE	-0.0650***		-0.0486***	
	(0.000)		(0.000)	
Debt Issuance Costs, ICD		-0.0292***	-0.0358***	
		(0.000)	(0.000)	
ELI x ICD		-0.0239*	-0.1125***	
		(0.040)	(0.000)	
Debt Cost of Capital, CCD		-0.0275***	-0.0405***	
		(0.000)	(0.000)	
Issuance Costs, IC				-0.0473***
				(0.000)
ELI x IC				-0.0184***
				(0.000)
Weighted Average Cost of Capital, WACC				-0.0451***
				(0.000)
Control Variables	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Observations	75,078	85,351	75,078	84,547