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Firm-level political risk and equity issuance

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ABSTRACT

We examine whether firm-level political risk influences the issuance of equity (debt) to finance corporate investment. With a sample of 64,693 firm-quarter observations from 2002 to 2020, we find that firm-level political risk is significantly and positively associated with subsequent equity issuance as opposed to debt issuance. To mitigate endogeneity, we estimate firm fixed-effects regression, perform nearest-neighbor score matching technique and Heckman's (1979) two-step correction procedure, and employ gubernatorial elections in different states of the U.S. as a shock to the firm-level political risk. We also test for two potential economic mechanisms, financial flexibility and information asymmetry, and find that our baseline results are more pronounced for these channels. Our study presents new evidence on firms' financing choices in the presence of firm-level political risk.

1. Introduction

Our study examines whether firms prefer to issue equity securities over debt instruments to finance corporate investment when they are exposed to an elevated level of political risk. While an emerging strand of the literature examines the association between political risk and different outcome variables, most of these studies rely on aggregate or sector-level measures of political risk (Pástor and Veronesi, 2012; Baker et al., 2016). Hassan et al. (2019) report that a substantial part of political risk is at the firm level. They, therefore, argue that macro proxies may provide an incomplete picture of the whole spectrum. Following this argument, we examine the association between political risk and a firm's financing choice between equity and debt to gain a better understanding of the nature of the link at the firm level.

Political risk[1] is inevitable at the firm level as firms operate within a political system affected by a confluence of factors including political actors, government actions and the dynamic nature of public policies (Pástor and Veronesi, 2012). Markets and firms need to

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[1] In this paper, we use the terms 'political uncertainty' and 'political risk' interchangeably. Although Knight (1971) and Keynes (1921) have long established the conceptual distinction between risk and uncertainty. Boubaker et al., (2016,p. 126) define political risk as the quantifiable form of political uncertainty. Accordingly, researchers in financial economics (e.g., Julio and Yook, 2012; Baker et al., 2016) often use 'economic policy uncertainty' and 'economic political risk' interchangeably.

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respond and adapt to political risk emanating from many of these external factors (Çolak et al., 2017).[2] For example, the government in any country shapes the political environment for firms by levying taxes, allocating subsidies, and developing and implementing laws and regulations within which firms operate (Ben-Nasr et al., 2020). While political risk is shown to have influence on several firm-level outcome variables, it is not clear *a priori* how such risk is associated with a firm's capital structure decision. Guided by the theoretical predictions in the capital structure[3] literature, we evaluate several arguments to find a directional relationship (or a lack thereof) between political risk and capital structure.

Based on the market timing hypothesis, we argue that a firm will issue a particular type (i.e., equity or debt) of security if that type is relatively overvalued. This line of argument suggests that political risk may allow firms to prefer equity over debt as prior studies show that political risk reduces the degree of IPO underpricing (Kesten and Mungun, 2015) while increasing credit rationing (Ben-Nasr et al., 2020) and interest rates and financing costs (Waisman et al., 2015; Wang et al., 2019; Brogaard et al., 2020; Kaviani et al., 2020; Gad et al., 2023) with more restrictive covenants (Tran and Phan, 2017). Other theoretical lenses, however, do not necessarily offer unequivocal support for a positive relation between political risk and equity issuance. Consistent with the trade-off theory, Frank and Goyal (2003) suggest that firms with higher firm-level risk use less (more) leverage (equity). To the extent that political risk is aligned with firm-level risks such as bankruptcy risk, one may argue that firms with greater political risk exposure use more equity. Given the exogenous source of political risk, how such alignment is achieved with bankruptcy risk, for example, is not clear. Likewise, prior studies suggest that political risk increases information uncertainty as it is difficult to forecast cashflows in a politically uncertain environment. Consistent with the pecking order theory (Myers, 1984), the presence of information asymmetry suggests that firms prefer debt to external equity to solve the adverse selection problems. Some empirical evidence, on the other hand, shows that political uncertainty increases the cost of debt (Waisman et al., 2015; Kaviani et al., 2020; Gad et al., 2023) and thus may discourage debt issues. Lastly, some studies suggest that financial flexibility is important for capital structure decision (Graham and Harvey, 2001; Gamba and Triantis, 2008) and more equity financing offer more financial flexibility (Graham, 2000). A manager may not know the optimal level of equity to that end and may make a suboptimal decision for shareholders by foregoing the debt-related tax benefits. Overall, the effect of political risk on financing choice is not clear *a priori*. We, therefore, study the research question empirically.

In our empirical analysis, we employ a sample of 64,693 firm-quarter observations of 4459 US-listed companies between 2002 and 2020. We use Hassan et al.'s (2019) measure of firm-level political risk to examine our research question, as country-level or sector-level measures are assumed to have uniform political risk exposure for all firms. Hassan et al. (2019) argue that firm-level exposure is meaningfully distinct from aggregate or sector-level exposure. Furthermore, the authors find that aggregate measures, to a large extent, fail to capture the heterogeneity of firm-level political risk. Specifically, variation in aggregate political risk measures over time and across sectors collectively accounts for less than 10 %, while firm-level variation accounts for more than 90 % variation in political risk (Hassan et al., 2019). To test the effect of political risk on financing choice, we run ordinary least squares (OLS) regressions of equity (debt) issuance on firm-level political risk and find that equity issuance is positively associated with political risk. Conversely, we find an insignificant association between political risk and debt issuance. Taken together, these results suggest that firms prefer equity issuance when exposed to higher political risk. Our results are also economically meaningful. For an increase of one standard deviation in firm-level political risk, net equity issuance increases by 40.88 %. We also perform several robustness and sensitivity checks and include multi-faceted (industry-by-time and state-by-time) fixed effects. Overall, our results support the conjecture that firms prefer equity issuance during times of higher political risk.

One caveat to our empirical results is that political risk and equity issuance could both be endogenously determined. Although our baseline results control for time-invariant, omitted industry and firm characteristics, we conduct several tests to address endogeneity issues. First, to address any systematic differences in firms in our sample, we perform the nearest-neighbor matching technique, finding that our results remain substantially unchanged. Next, we estimate Heckman's (1979) two-step correction model to identify any sample selection bias. Our results illustrate that the relationship between political risk and equity issuance remains positively significant after addressing any selection bias. Finally, we use gubernatorial elections in different states of the US as a shock to firm-level political risk and find that equity issuance is more prevalent during election quarters when firm-level political risk is significantly high. Overall, all these tests further support our baseline results, that is, the positive association between firm-level political risk and a firm's preference for equity issuance as its financing choice.

We next examine the potential economic mechanisms through which political risk affects the equity issuance decision. Firstly, it is reasonable to expect that firms want to safeguard their financial flexibility. Previous studies suggest that managers prefer financial flexibility when deciding upon their capital structure choice (e.g., Graham and Harvey, 2001; Lemmon and Zender, 2010). Our expectation is that firms seeking greater financial flexibility would prefer equity issuance. In other words, if a firm already has sufficient financial flexibility, greater political risk may not necessarily lead to a further increase in its equity issuance. To test this conjecture, we use several measures of financial constraints as proxies for financial flexibility: corporate debt rating ('investment grade' vs. 'speculative'); profitability ('profitable' vs. 'unprofitable'); firm size ('big' vs. 'small'); and the Whited Wu (WW) Index ('high' vs. 'low'). We expect that firms with a non-investment grade, speculative credit rating would have a greater wish to maintain financial flexibility as they do not have easy access to capital markets. Likewise, firms that are unprofitable and small and have a higher WW Index score would prefer financial flexibility as they too have limited financial access. Consistent with this expectation, our results

[2] We recognise government policies and central bank actions as external factors creating inherent political risk; however, political risk is commonly associated with both domestic and international circumstances.

[3] We use multiple theories for guidance as Myers (2002) suggests that there are only conditional theories and no universal theory of capital structure.

reveal that firm-level political risk increases equity issuance when firms have higher financial constraints (i.e., less financial flexibility). This result is in line with the argument that the choice of equity issuance is associated with a greater need for financial flexibility. Secondly, the information environment is also likely to affect our baseline relationship. Fosu et al. (2016) report that firms prefer equity issuance to avoid higher debt pricing in an asymmetric information environment. Thus, our study expects a positive link between political risk and equity issuance to significantly hold and persist when information asymmetry is more prevalent. We use several proxies for information asymmetry: idiosyncratic volatility, analyst forecast dispersion, the Bog Index and management's voluntary guidance. We split firms in our sample into 'high' vs. 'low' groups, based on the median values of these information asymmetry measures. Consistent with our prediction, we find that information asymmetry is a channel through which political risk increases equity issuance.[4]

Our study contributes to several streams of the finance literature. Firstly, we utilize a novel firm-specific measure of political risk, following Hassan et al. (2019), to understand corporate capital expenditure financing behavior. Our findings add to a growing body of literature that empirically demonstrates the link between firm-level political risk and corporate structure decisions (e.g., Gyimah et al., 2022; Huang et al., 2023; Jang et al., 2023). Recent empirical evidence shows that high political risk is negatively associated with total and long-term leverage (Gyimah et al., 2022) while, it is positively related to net equity issuance (Jang et al., 2023). We find similar evidence that firms with high political risk prefer to issue more equity than debt to finance their capital investments.

Secondly, our study complements previous studies that employ aggregate political risk indices (e.g., Pástor and Veronesi, 2012; Baker et al., 2016) and link them with capital structure (e.g., Çolak et al., 2018; Ben-Nasr et al., 2020). We offer incremental evidence by exploiting a time-varying, firm-level measure of political risk as anecdotal evidence suggests that firms are exposed to firm-specific political risk which aggregate measures of political uncertainty cannot capture (Hassan et al., 2019). For example, in the first week of December 2016, the US stock market witnessed the unexpected effect of a single tweet by US President Donald Trump which caused Boeing's stock price to fall by 1.6 % to US$149.75[5] (Thielman, 2016).

Finally, our study extends the literature on financing choice. Previous studies, such as the works of Fama and French (2002) and Leary and Roberts (2010), examine the link between financing choices and firm characteristics. For example, firms are more likely to use external equity when investment increases or cash decreases. Our study, on the other hand, examines the behavior of a firm's financing choice in the presence of external friction, i.e., political risk. Thus, our evidence offers incremental insights into firm-level financing decisions.

The rest of this paper is organised as follows. Following the introduction, Section 2 discusses the related literature, with the study's hypotheses then developed. Section 3 describes the data and methodology, while Section 4 reports the empirical findings. Section 5 presents the cross-sectional heterogeneity test results and the economic mechanisms, with Section 6 concluding the study.

2. Related literature and hypotheses development

This section presents a review of the extant literature and describes the development of our study's testable hypotheses.

Political risk is important and distinct from business risk as it arises due to the uncertainty related to firms' growth as government changes existing legislation or implements new regulations (Pástor and Veronesi, 2012). Firm-level political risk goes beyond this regulatory uncertainty and captures any exposure arising out of changes in the economy, environment, health, security, tax, technology, and trade (Hassan et al., 2019). Table I presents two examples of how the firm-level political risk measure captures various aspects of political exposure. For instance, Nevada Gold Casino Inc.'s conference call on September 10, 2008, highlights the discussion of a ballot initiative to amend the constitution to remove betting limits for the gaming industry. In contrast, the Female Health conference call on February 2, 2009, shows discussions related to the approval of their products by the FDA and a government initiative to restrict funding organizations that permit abortion. These examples demonstrate that managers are concerned about any risk that arises from government actions and initiatives. Therefore, they communicate any such political risk to investors as it can have significant corporate policy implications.

While prior literature finds an association between political risk and several firm-level outcome variables, it is not clear *ex ante* how such a risk is associated with a firm's capital structure decision. This is particularly true since prior literature suggests that there are only conditional theories and no unified theory of capital structure (Myers, 2002). We, therefore, conjecture that there are several reasons why the level of political risk may favor either debt or equity capital.

One scenario based on the market timing hypothesis suggests that firms may favor equity financing when they face political risk. The argument is as follows. Political risk is likely to affect the valuation of equity and debt securities. If a firm finds that a particular type of security is relatively overvalued, it is likely to issue that kind of security to take advantage of such a situation. For such a scenario to happen, it does not require that one kind is overvalued while the other is undervalued. Rather a relative overvaluation between these two types should be sufficient. This argument is consistent with the market timing hypothesis. Prior theoretical and

[4] We explicitly test for the significance in differences between the impact of firm-level political risk on equity issuance decision across firms with various degrees of financial constraints and/or informational asymmetry. Our results show that information asymmetry channel of political risk dominates financial constraints for the capital structure decision. The results are untabulated and available upon request.

[5] Tweet (6.12.2016): "Boeing is building a brand new 747 Air Force One for future presidents, but costs are out of control, more than $4 billion. Cancel order!".

empirical literature provides some support for this argument with regard to political risk. A strand of the literature finds that political risk enhances average IPO quality.[6] For instance, Kesten and Mungan (2015) document that higher political risk reduces the degree of IPO underpricing. This evidence lends support to the notion that equity issuance becomes more favorable (Lewis and Tan, 2016). Political risk also affects the actions of participants in the debt market less favorably. Ben-Nasr et al. (2020) find that information asymmetry, induced by political risk, increases credit rationing in the debt market. This, in turn, decreases a firm's capacity to raise funds from public debt markets. Lenders are uncertain about the effect of government policies on firms' cash flows. Consequently, they are unwilling to offer loans and, even if they do, often charge higher interest rates (Wang et al., 2019; Brogaard et al., 2020; Kaviani et al., 2020). As a result, firms experience higher financing costs for bank loans (Kim, 2019) as well as for public debt (Waisman et al., 2015). Similarly, Tran and Phan (2017) find that debts issued during periods of political instability are loaded with restrictive covenants and higher interest rates. Overall, these studies suggest that political risk negatively influences both the pricing and non-pricing elements of debt contracts while it may have positive implications for equity issuance in terms of IPO quality and valuation. In summary, this line of argument suggests that political risk may allow firms to prefer equity over debt.

On the other hand, several other scenarios based on theories such as trade-off theory and pecking order theory do not provide any clear direction of the relationship. First, prior studies suggest that firm-level risk (e.g., bankruptcy risk) is negatively associated with the use of leverage (e.g., Frank and Goyal, 2003). In other words, this strand of literature expects that firms exposed to elevated risks are likely to prefer equity over debt issues as the preferred method of financing. As argued by Frank and Goyal (2003), such association is consistent with the trade-off theory. Using the same line of reasoning, one can argue that political risk may also have similar effects and exposed firms may avoid debt. However, one concern with this prediction is that the channel through which political risk translates into other known types of risk, such as bankruptcy risk, is not clear.

Second, it is possible that political risk may increase the overall uncertainty of a firm's financial outcomes. This may translate into greater information uncertainty as stakeholders face greater challenges in forecasting firms' future cashflows (Pham, 2019). Prior literature suggests that, in the presence of information asymmetry, firms prefer debt to external equity financing to avoid the resultant adverse selection problems. This is consistent with the pecking order theory (Myers, 1984). However, it is not clear *ex ante* how information asymmetry alone will play out for debt as the financing choice since other factors emanating from political risk may dissuade a firm from issuing debt. Waisman et al. (2015) and Kaviani et al. (2020) argue that political uncertainty drives up the cost of debt and the extent of credit spreads. Moreover, it is also conceivable that firms may use alternative channels to reduce information asymmetry. Some studies (e.g., Balakrishnan et al., 2014) show that when information asymmetry increases, firms provide more voluntary disclosure to reduce such asymmetry. Taken together, we can surmise an incomplete picture as to the effect of political risk on information asymmetry and capital structure decision.

Lastly, some studies suggest that financial flexibility is important for capital structure decision (Graham and Harvey, 2001). For example, Gamba and Triantis (2008) demonstrate that financial flexibility is valuable for firms as it reduces underinvestment due to a lack of financing opportunities and helps to avoid financial distress. Prior studies also suggest that equity financing may provide greater financial flexibility as firms can preserve their debt capacity (Graham, 2000). Exposed to political risk, firms may opt to get greater flexibility and prefer equity to debt. However, it is not clear what the exact level of equity that gives a firm a non-trivial level of flexibility. Along the same line of reasoning, a firm may have to make a tradeoff by foregoing the debt-related tax benefits by using a greater level of equity. This may turn out to be value-decreasing for shareholders.

Overall, it is not clear *ex ante* whether greater political risk induces managers to prefer one source of financing over another. Given the uncertainty in the direction of the relationship, we test it empirically using the following hypothesis:

H1: Firm-level political risk is positively associated with equity issuance.

2.1. Potential economic mechanisms

This section discusses our conjecture that financial flexibility and information asymmetry are two important economic channels through which political risk affects financing choice.

2.1.1. Political risk and equity issuance: Role of financial flexibility

Political risk and the associated uncertainty affect corporate investment decisions. Several studies (e.g., Julio and Yook, 2012; Gulen and Ion, 2016; Jens, 2017) show that firms delay their investment decisions when political uncertainty is high. Corporate investment declines mainly owing to the increasing cost of external financing (e.g., Gilchrist et al., 2013), with the value of the option to delay increasing until some of the uncertainty is resolved (e.g., Dixit et al., 1994). Firms tend to exhaust any unused debt capacity when political shocks settle down. In other words, firms value financial flexibility when uncertainty is high.

Financial flexibility is an important consideration for managers when deciding on a firm's capital structure (Graham and Harvey, 2001). Firms tend to preserve their debt capacity for future investments and acquisitions (Graham, 2000). To avoid the high cost of borrowing and to safeguard some financial flexibility, it is plausible that firms finance any immediate cash shortfall with the issuance of equity as opposed to debt. Gamba and Triantis (2008) demonstrate that financial flexibility is valuable for firms as it reduces underinvestment due to a lack of financing opportunities and helps to avoid financial distress. Consistent with this line of reasoning, we argue that when political risk is high, firms prefer to preserve some of their financial flexibility by choosing to issue equity. This leads

[6] Pástor and Veronesi (2012, 2013), on the other hand, argue and predict that political risk lowers asset prices and increases the risk premium. Thus, equity issuance is less likely to occur during periods of tightened political uncertainty.

Table 1
Sample distribution.

Industry category	Observations	Percent
Panel A: Industry-wise		
Consumer non-durables	3631	5.61 %
Consumer durables	1697	2.62 %
Manufacturing	7847	12.13 %
Oil, gas, and coal extraction and products	2863	4.43 %
Chemicals and allied products	1837	2.84 %
Electric & electrical equipment	16,548	25.58 %
Telephone and television transmission	2494	3.86 %
Wholesale, retail and some services	8066	12.47 %
Healthcare, medical equipment and drugs	8813	13.62 %
Other	10,897	16.84 %
Total	64,693	100 %
Fiscal year	**Observations**	**Percent**
Panel B: Year-wise		
2002	778	1.20%
2003	2140	3.31%
2004	2890	4.47%
2005	3137	4.85%
2006	3425	5.29%
2007	3584	5.54%
2008	4026	6.22%
2009	4002	6.19%
2010	3944	6.10%
2011	3985	6.16%
2012	3919	6.06%
2013	3560	5.50%
2014	3805	5.88%
2015	3841	5.94%
2016	3558	5.50%
2017	3891	6.01%
2018	4193	6.48%
2019	4402	6.80%
2020	1613	2.49%
Total	64,693	100%

The table shows industry- and year-wise distribution of our regression sample. In Panel A, we use the Fama-French 10 industry classification. The sample is from 2002 Q1 to 2020 Q4.

us to the following hypothesis which highlights the economic channel through which political risk affects financing choice:

H2a: Faced with higher political risk, firms issue more equity when they require greater financial flexibility.

2.1.2. Political risk and equity issuance: Role of information asymmetry

Political risk intensifies the problem of information asymmetry between firms and their investors. As previously discussed, information asymmetry increases borrowing friction, thus intensifying capital rationing and making it difficult for firms to raise capital from debt markets. Cao et al. (2013) show that when political uncertainty is high during an election year, firms avoid issuing debt. Moreover, uncertainty makes cash flow more volatile and increases the risk of default. Waisman et al. (2015) and Kaviani et al. (2020) argue that political uncertainty, because of changes in government policies in election years, drives up the cost of debt and the extent of credit spreads. Our study argues that firms, at times of high information asymmetry, may prefer equity issuance to avoid the high cost of borrowing and to reduce the risk of bankruptcy. This leads to the following hypothesis:

H2b: Faced with higher political risk, firms issue more equity in an asymmetric information environment.

3. Data and methodology

3.1. Data

We collect all firm-specific quarterly accounting data from Compustat. We obtain stock return data from the Center for Research in Security Prices (CRSP), with macroeconomic data sourced from the US Bureau of Economic Analysis (BEA) website. Our sample period is from January 2002–December 2020. We begin in 2002 as Hassan et al.'s (2019) firm-level political risk measure became available from that year onwards.[7] We exclude both utility firms (Standard Industrial Classification [SIC] codes 4900-4999) and financial firms (SIC codes 6000-6999) from our sample. For all explanatory variables, our study considers a lag of 1-period to mitigate reverse

[7] The data are publicly available at <https://www.firmlevelrisk.com/>.

Table 2
Summary statistics.

Variable	Mean	Standard deviation	25th Percentile	Median	75th Percentile	Observations
Panel A: Dependent variables						
EI	2.547	21.041	−0.272	0.000	0.163	64,693
DI	0.094	6.592	−0.282	0.000	0.301	62,023
Panel B: Key independent variable						
PRISK	102.264	148.734	15.575	53.448	123.536	64,693
Panel C: Firm-level explanatory variables						
SIZE	6.818	1.768	5.602	6.764	7.964	64,693
PROFIT	0.005	0.066	−0.000	0.015	0.027	64,693
MTB	1.862	1.518	0.937	1.374	2.199	64,693
TANGIBILITY	0.250	0.236	0.070	0.160	0.366	64,693
RESEARCH	0.900	0.299	1.000	1.000	1.000	64,693
DIVIDEND	0.319	0.466	0.000	0.000	1.000	64,693
DEBT_EQUITY	0.476	0.960	0.030	0.177	0.464	64,693
CASH_HOLDING	0.552	1.467	0.040	0.127	0.394	64,693
EXCESS_RETURN	0.002	0.073	−0.037	0.001	0.039	64,693
GDP_GROWTH	0.068	0.061	0.044	0.078	0.106	64,693
SENT	84.180	11.631	75.000	86.900	94.200	64,693
EPU	119.584	34.291	91.984	113.737	142.917	64,693

The table shows summary statistics for all the key variables used in our regression Eqs. (2) and (3). The sample is from 2002 Q1 to 2020 Q4. All variable definitions are available in Appendix A.

causality and simultaneity. Finally, we winsorize all continuous variables at the 1st and 99th percentiles to eliminate errors and outliers from the data set. Thus, we have a final sample of 64,693 firm-quarter observations from 2002 to 2020.

Table 1 shows the sample distribution by Fama–French's 10 industry classifications and year. Panel A shows that our study's observations come from a wide variety of industries, with electric and electrical equipment (25.58 %); healthcare, medical equipment and drugs (13.62 %); wholesale, retail and some services (12.47 %); manufacturing (12.13 %); and other (16.84 %) sectors representing the highest concentrations in our regression sample. In Panel B, we find that firms in our sample have representative distribution across all fiscal years of the period 2002–2020.

3.1.1. Firm-level political risk

Measuring political risk is important as about 55 % of global organizations with revenues of more than US$1 billion have experienced at least one political risk-related loss worth over US$100 million.[8] To understand the significance of political risk on firms' financing decisions, we follow recent empirical studies (see for example, Gyimah et al., 2022; Huang et al., 2023; Jang et al., 2023) and employ a firm-level political risk measure.

Firm-level political risk captures any political exposure such as climate regulation, trade policy etc. that management thinks may impact corporate policies. Hassan et al. (2019) perform a textual analysis of quarterly earnings conference calls to develop their novel firm-level political risk index *(PRISK)*. These conference calls generally include managements' views and opinions on past performance, future potentials, risks and threats. They linguistically separate political content from non-political themes, quantifying the extent to which a firm faces political risk in a specific quarter. Hassan et al. (2019) use political ($\mathbb{P}$) and non-political ($\mathbb{N}$) training libraries to identify two-word combinations ('bigrams') commonly used to describe and reflect political risk in the English language. The authors include the total number of times that a conference call mentions any of these bigrams in conjunction with words such as 'risk' or 'uncertainty'. They then calculate political risk as the ratio of weighted bigrams to the length of the conversations in conference calls:

$$PRisk_{it} = \Sigma_b^{B_{it}} \left(1 \left[b \in \frac{\mathbb{P}}{\mathbb{N}} \right] \right) \times 1[|b - r| < 10] \times \frac{f_{b,p}}{B_p} \tag{1}$$

where r measures the position of the nearest risk or uncertainty synonym and b is the index for bigrams in the firm i's conference call at time t. Each bigram has a weight depending on the strength of its association with a political term. For weighting, $f_{b,p}$ acts as the frequency of bigram b and B_p is the total number of bigrams.

The firm-level political risk measure has some unique properties relevant to our study. First, changes in the political and regulatory environment impact firms uniformly (Pástor and Veronesi, 2012). In contrast, firm-level political risk is idiosyncratic and time-varying, which is useful to identify any potential impact on corporate decision making. Second, by construction, firm-level political risk measure is different from economic policy uncertainty (EPU) index developed by Baker et al. (2016). EPU utilizes policy-related economic uncertainty mentioned in the newspaper articles, Congressional Budget Office (CBO) reports, and Federal Reserve Bank of Philadelphia's Survey of Professional Forecasters. On the contrary, firm-level political risk only considers the narratives on political

[8] See https://www.insurancebusinessmag.com/us/news/breaking-news/willis-towers-watson-examines-whats-fueling-political-risk-losses-112969.aspx.

Table 3
Sample Correlation Matrix.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(1) EI	1														
(2) DI	0.005	1													
(3) PRISK	0.052***	0.003	1												
(4) SIZE	−0.189***	0.002	−0.029***	1											
(5) PROFIT	−0.135***	−0.033***	−0.033***	0.234***	1										
(6) MTB	0.185***	0.081***	0.017***	−0.186***	−0.010*	1									
(7) TANGIBILITY	−0.092***	−0.020***	−0.036***	0.224***	0.070***	−0.207***	1								
(8) RESEARCH	0.045***	−0.008	0.059***	−0.037***	−0.045***	0.062***	−0.131***	1							
(9) DIVIDEND	−0.103***	0.005	−0.013**	0.407***	0.158***	−0.079***	0.159***	−0.009*	1						
(10) DEBT_EQUITY	−0.038***	−0.019***	−0.004	0.142***	−0.043***	−0.264***	0.276***	−0.026***	−0.044***	1					
(11) CASH_HOLDING	0.408***	0.067***	0.064***	−0.282***	−0.160***	0.312***	−0.252***	0.096***	−0.181***	−0.133***	1				
(12) EXCESS_RETURN	0.023***	−0.017***	−0.015***	−0.008*	0.124***	0.153***	−0.030***	−0.001	−0.021***	−0.103***	0.011**	1			
(13) GDP_GROWTH	−0.002	0.004	−0.045***	−0.008*	0.080***	0.085***	−0.009*	−0.007	0.011**	−0.109***	0.012**	0.015***	1		
(14) SENT	0.045***	0.039***	−0.039***	0.078***	−0.018***	0.135***	0.000	−0.005	0.047***	−0.020***	0.026***	−0.030***	0.398***	1	
(15) EPU	0.022***	0.005	0.059***	0.033***	−0.038***	−0.088***	0.018***	0.010*	−0.006	0.113***	−0.010**	−0.028***	−0.507***	−0.438***	1

***, **, and * denote the significance level at 1%, 5%, and 10%, respectively.

Table 4
Political Risk and Equity Issuance: Baseline Results.

Independent variable: *PRISK*	Dependent variable: *EI*			Dependent variable: *DI*		
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
PRISK	0.003***	0.002**	0.007**	−0.000	−0.000	−0.000
	(3.20)	(2.36)	(1.97)	(−0.23)	(−0.73)	(−1.053)
SIZE	−0.919***	−1.030***	−15.647*	0.106***	0.087***	0.292**
	(−9.79)	(−10.24)	(−1.88)	(3.96)	(3.05)	(2.281)
PROFIT	−17.991***	−16.741***	−12.386	−2.907***	−2.800***	−1.886**
	(−7.10)	(−6.91)	(−0.71)	(−3.48)	(−3.31)	(−2.133)
MTB	0.826***	0.772***	3.579	0.313***	0.304***	0.137**
	(5.09)	(4.79)	(1.31)	(7.86)	(7.46)	(2.335)
TANGIBILITY	2.342***	−0.099	12.837	−0.015	0.104	0.698
	(5.35)	(−0.14)	(0.81)	(−0.07)	(0.34)	(0.917)
RESEARCH	0.233	−0.414	0.245	−0.387***	−0.318	−0.370
	(1.23)	(−1.16)	(0.14)	(−3.57)	(−1.62)	(−0.951)
DIVIDEND	0.164	−0.207	0.401	0.152*	0.134	0.450***
	(0.95)	(−1.08)	(0.24)	(1.90)	(1.46)	(3.113)
DEBT_EQUITY	0.570***	0.376***	1.245	−0.018	−0.032	−0.197**
	(6.86)	(4.20)	(1.25)	(−0.25)	(−0.43)	(−2.577)
CASH_HOLDING	5.266***	4.669***	2.099	0.225***	0.188***	0.070
	(14.81)	(13.06)	(0.34)	(3.71)	(2.98)	(0.683)
EXCESS_RETURN	6.818***	7.116***	44.542***	−2.104***	−1.656***	−1.568***
	(4.18)	(4.23)	(3.31)	(−4.69)	(−3.66)	(−3.689)
GDP_GROWTH	−0.193	−1.227	−26.674	−0.232	0.458	0.201
	(−0.12)	(−0.59)	(−1.07)	(−0.36)	(0.53)	(0.236)
SENT	0.101***	0.056***	0.068	0.019***	0.015	0.012
	(7.64)	(2.65)	(0.29)	(4.65)	(1.35)	(1.102)
EPU	0.032***	0.004	−0.090	0.004***	0.008***	0.008***
	(8.13)	(0.60)	(−0.87)	(3.68)	(2.78)	(2.981)
Constant	−9.252***	0.270	93.747	−3.165***	−4.977***	−4.557***
	(−6.76)	(0.10)	(1.45)	(−6.76)	(−3.28)	(−2.723)
Observations	64,693	64,693	64,693	62,023	62,023	62,023
R-squared adjusted	0.185	0.200	0.001	0.0122	0.0201	0.0076
Industry FE	No	Yes	No	No	Yes	No
Firm FE	No	No	Yes	No	No	Yes
Year and quarter FE	No	Yes	Yes	No	Yes	Yes

This table presents the baseline regression results. The dependent variables are equity issuance (*EI*) and debt issuance (*DI*). The key independent variable is the firm-level political risk *(PRISK)*. The control variables include *SIZE, PROFIT, MTB, TANGIBILITY, RESEARCH, DIVIDEND, DEBT_EQUITY, CASH_HOLDING, EXCESS_RETURN, GDP_GROWTH, SENT* and *EPU*. All variable definitions are available in Appendix A. Standard errors are clustered at the firm level and *t*-values are reported in parentheses. ***, **, and * denote the significance level at 1%, 5%, and 10%, respectively.

shocks that a company's management finds relevant enough to mention in its communication. The emphasis on any such events has implications for future corporate decisions. Finally, the political risk index satisfies a battery of rigid validity checks.[9]

3.1.2. Equity (debt) issuance

We use the propensity to raise equity for capital expenditure as our proxy for equity issuance *(EI)*. Following Cheung et al. (2017), we measure equity issuance as the ratio of net sales of common and preferred stock to cash used for net capital expenditure and acquisitions. To compute debt issuance *(DI)*, we take the ratio of net long-term debt issuance to cash used for net capital expenditure and acquisitions. In the robustness checks, we use both the book value of equity to debt *(EQUITY_DEBT)* and the market value of equity to debt *(MVE_DEBT)* as two additional proxies for equity issuance.

3.1.3. Other explanatory variables

Following the extant literature, our study includes a large set of firm-level control variables that can affect financing choices (e.g., Hovakimian et al., 2001; Flannery and Rangan, 2006; Gatchev et al., 2009; De Jong et al., 2011). For our explanatory variables, we measure size *(SIZE)* as the natural logarithm of the book value of total assets. We define profitability *(PROFIT)* as the earnings before interest and taxes (*EBIT)* divided by the market value of equity at the end of each quarter. The market-to-book ratio *(MTB)* is the ratio of the sum of the total book value of debt, the liquidated value of preferred shares and the market value of equity to the book value of total assets. The tangibility of a firm *(TANGIBILITY)* is the total property, plant and equipment net of accumulated depreciation divided by the book value of total assets. Research and development (R&D) expenditure is an indicator variable *(RESEARCH)*, which takes the value of 1 if a firm reports R&D expenditure at time $t-1$, and 0 otherwise. We also include a dividend dummy *(DIVIDEND)*, which equals 1 if a firm has reported a positive dividend at time $t-1$, and 0 otherwise. To control for the existing capital structure, we use the

[9] For details of the construction of the firm-level political risk measure, see Hassan et al. (2019).

Table 5
Nearest Neighbor Matching and Matching Regression.

Variables	Treated firms (1) Mean	(2) Standard Deviation	Control firms (3) Mean	(4) Standard Deviation	Treated minus control firms (5) Difference in Means
Panel A: Ex-ante summary statistics					
SIZE	6.838	1.799	6.836	1.735	0.002
PROFIT	0.007	0.063	0.006	0.063	0.001
MTB	1.858	1.523	1.856	1.489	0.002
TANGIBILITY	0.250	0.239	0.250	0.233	0.000
RESEARCH	0.912	0.283	0.914	0.280	−0.002
DIVIDEND	0.323	0.467	0.321	0.467	0.002
DEBT_EQUITY	0.473	0.956	0.472	0.937	0.001
CASH_HOLDING	0.499	1.263	0.496	1.319	0.003
EXCESS_RETURN	0.002	0.073	0.002	0.072	0.000

Panel B: Regression results	
Variables	(1) Model 1
Prisk	0.001**
	(2.08)
All other controls	Yes
Observations	57,882
Adjusted R-squared	0.018
Firm FE	Yes
Year and Quarter FE	Yes

The table reports the nearest-neighbor score matching approach. Following Hasan et al. (2022), we define *'Treated Firms'* as those with PRISK values above the sample median and *'Control firms'* as those with values below the sample median. Panel A shows the ex-ante summary statistics for our matching variables. Panel B shows the regression analysis using a matched sample. The dependent variable is equity issuance *(EI)* and the key independent variable is the firm-level political risk *(PRISK)*. The control variables include *SIZE, PROFIT, MTB, TANGIBILITY, RESEARCH, DIVIDEND, DEBT_EQUITY, CASH_HOLDING, EXCESS_RETURN, GDP_GROWTH, SENT* and *EPU*. All variable definitions are available in Appendix A. Standard errors are clustered at the firm level and *t*-values are reported in parentheses. ***, **, and * denote the significance level at 1%, 5%, and 10%, respectively.

debt-to-equity ratio *(DEBT_EQUITY)*, which is measured as the ratio of total debt to the total market value of equity. To control for liquidity and market timing, we use corporate cash holdings *(CASH_HOLDING)* and excess return *(EXCESS_RETURN)*. The variable *CASH_HOLDING* is the ratio of cash to net assets, while the variable *EXCESS_RETURN* is the difference between the quarterly stock return and the value-weighted market index return.

To control for macroeconomy-related effects, we include overall economic conditions *(GDP_GROWTH)*, investor sentiment *(SENT)* and economic policy uncertainty *(EPU)*, following Korajczyk and Levy (2003), Deng et al. (2014), and Baker et al. (2016). We use the log of gross domestic product (GDP) per capita growth rate as our measure of *GDP_GROWTH*. Following Lemmon and Portniaguina (2006), we use the University of Michigan's Consumer Sentiment Index as a proxy for investor sentiment *(SENT)*.[10] We include sentiment as Deng et al. (2014) report that investor sentiment is positively linked to pre-seasoned equity offer (SEO) overpricing and plays a significant role in managers' decision making on equity issuance. Finally, we include Baker et al.'s (2016) Economic Policy Uncertainty Index *(EPU)* to rule out any impact of national economic policy-related uncertainty on firm-level equity issuance.[11]

3.2. Empirical design

To examine whether firm-level political risk affects the equity (debt) issuance decisions, we use the following regression models:

$$EI_{i,t} = \alpha_t + \beta \bullet PRISK_{i,t-1} + \gamma \bullet X_{i,t-1} + YEAR\_QUARTER + FIRM + \epsilon_{i,t} \quad (2)$$

$$DI_{i,t} = \alpha_t + \beta \bullet PRISK_{i,t-1} + \gamma \bullet X_{i,t-1} + YEAR\_QUARTER + FIRM + \epsilon_{i,t} \quad (3)$$

where *i* denotes firm, and *t* denotes time. The dependent variables are equity issuance *(EI)* and debt issuance *(DI)*. Firm-level political risk *(PRISK)* for firm *i* at time t −1 is included. The vector *(X)* contains firm-specific and macro-level control variables. We include time *(YEAR_QUARTER)* and firm fixed effects *(FIRM)* to control for potential time effect and any time-invariant, omitted firm characteristics, respectively. We also run separate regressions including industry and time fixed effects to control for any time-invariant, omitted industry characteristics. The industry fixed effects are based on 2-digit SIC classification codes and the standard errors are clustered at

[10] The Index is available at <https://www.sca.isr.umich.edu/tables.html>.
[11] This weighted average measure of uncertainty is related to taxes, government spending and inflation. This index shows considerable variability over time and appears to increase during high levels of economic policy instability, such as debt-ceiling crises, financial conflicts and near US presidential elections. The data are available at <https://fred.stlouisfed.org/series/USEPUINDXD#0>.

Table 6
Heckman two-step correction (addressing selection bias).

Variables	Dependent variables: *PRISK_DUMMY* and *EI*	
	(1)Stage 1 (PRISK_DUMMY)	(2)Stage 2 (EI)
PRISK		0.002**
		(2.385)
INVERSE_MILLS		−20.223***
		(−2.88)
SIZE	0.102***	−1.762***
	(13.58)	(−6.07)
PROFIT	−0.349***	−14.243***
	(−2.90)	(−5.41)
MTB	0.036***	0.518***
	(4.57)	(2.79)
TANGIBILITY	−0.098	0.565
	(−1.36)	(0.76)
RESEARCH	0.058	−0.888**
	(0.96)	(−2.19)
DIVIDEND	−0.052*	0.173
	(−1.92)	(0.76)
DEBT_EQUITY	−0.034***	0.633***
	(−3.50)	(5.00)
CASH_HOLDING	0.014*	4.565***
	(1.74)	(12.69)
EXCESS_RETURN	−0.455***	10.383***
	(−5.40)	(4.77)
GDP_GROWTH	−0.053	−0.956
	(−0.24)	(−0.46)
SENT	0.001	0.049**
	(0.27)	(2.30)
EPU	0.001	−0.003
	(1.36)	(−0.45)
Constant	0.253	11.868**
	(0.51)	(2.42)
Observations	64,630	64,630
R-squared adjusted		0.200
Industry FE	Yes	Yes
Year and quarter FE	Yes	Yes

This table presents the Heckman (1979) two-step correction procedures for sample selection bias. In the first stage, we run a Probit regression with all our controls. The key dependent variable is a dummy variable, PRISK_DUMMY that takes a value of 1 if a firm has received a non-zero PRISK index value and otherwise 0. In the second stage, we create inverse mills ratio (INVERSE_MILLS) from our first stage Probit regression results and control it as one of the additional variables in our baseline regression model. The other control variables include *SIZE, PROFIT, MTB, TANGIBILITY, RESEARCH, DIVIDEND, DEBT_EQUITY, CASH_HOLDING, EXCESS_RETURN, GDP_GROWTH, SENT* and *EPU*. All variable definitions are available in Appendix A. Standard errors are clustered at the firm level and *t*-values are reported in parentheses. ***, **, and * denote the significance level at 1%, 5%, and 10%, respectively.

the firm level.

4. Empirical findings

In this section, we present our empirical findings. We start by presenting descriptive statistics of all variables used in our regression specifications. We then present baseline regression results. After that we provide several tests to mitigate endogeneity related issues. Finally, we present tests pertaining to the economic mechanisms through which firm-level political risk potentially affects a firm's financing choice.

4.1. Summary statistics

Table 2 presents summary statistics of the key variables employed in our study to establish a relationship between firm-level political risk and equity issuance. The key dependent variable, equity issuance *(EI)*, has a mean value of 2.547, with a standard deviation of 21.041. Cheung et al. (2017) report a similar value for *EI* with a mean of 2.883 and a standard deviation of 16.670. Consistent with Hasan et al. (2022), we observe a large variation of the *PRISK* measure across the sample. We find that our firm-level political risk index *(PRISK)* has a mean value of 102.264 and a standard deviation of 148.734. The values for all other control variables are within expected and reasonable levels.

Table 7
The United States gubernatorial elections shock.

Variables	Dependent variable: *EI*	
	(1) Model 1	(2) Model 2
PRISK	0.001	0.001
	(0.644)	(0.598)
ELECTION_DUMMY	0.503*	−0.482
	(1.919)	(−1.402)
PRISK × ELECTION_DUMMY	0.004*	0.005**
	(1.932)	(2.087)
SIZE	−1.033***	−1.059***
	(−9.916)	(−10.139)
PROFIT	−16.806***	−16.452***
	(−6.624)	(−6.536)
MTB	0.790***	0.748***
	(4.681)	(4.414)
TANGIBILITY	−0.212	−0.129
	(−0.267)	(−0.163)
RESEARCH	−0.381	−0.420
	(−1.069)	(−1.158)
DIVIDEND	−0.269	−0.267
	(−1.319)	(−1.303)
DEBT_EQUITY	0.490***	0.438***
	(5.048)	(4.412)
CASH_HOLDING	4.723***	4.714***
	(12.499)	(12.535)
EXCESS_RETURN	6.541***	7.170***
	(3.756)	(3.983)
GDP_GROWTH	−0.953	−1.461
	(−0.544)	(−0.649)
SENT	0.096***	0.040*
	(6.999)	(1.856)
EPU	0.034***	0.002
	(8.141)	(0.267)
Constant	−4.595**	2.904
	(−2.512)	(0.992)
Observations	56,920	56,920
R-squared adjusted	0.204	0.207
Industry FE	Yes	Yes
Year and quarter FE	No	Yes

This table presents the effect of the United States gubernatorial elections shock on the relation between firm-level political risk and equity issuance. The dependent variable is equity issuance (*EI)* and the key variable of interest is the interaction of firm-level political risk *(PRISK)* and gubernatorial elections dummy (*ELECTION_DUMMY*). The control variables include *SIZE, PROFIT, MTB, TANGIBILITY, RESEARCH, DIVIDEND, DEBT_EQUITY, CASH_HOLDING, EXCESS_RETURN, GDP_GROWTH, SENT* and *EPU*. All variable definitions are available in Appendix A. Standard errors are clustered at the firm level and *t*-values are reported in parentheses. ***, **, and * denote the significance level at 1%, 5%, and 10%, respectively.

Table 3 displays the pair-wise correlation matrix. We find that *PRISK* is positively associated with *EI* at the 1 % significance level. However, for *DI*, the correlation is insignificant. These correlations provide preliminary evidence that political risk is positively associated with the propensity for equity issuance. The correlations between all other variables are mostly statistically significant. These correlations are modest in magnitude and, thus, are less likely to give rise to multicollinearity problems.

4.2. Baseline regression results

Our baseline regression results are presented in Table 4. Our study employs an ordinary least squares (OLS) regression model to better understand the relationship between political risk and equity (debt) issuance. Columns (1)–(3) report results for Eq. (2) where equity issuance (*EI*) is the dependent variable. We find that the estimated coefficient estimates of *PRISK* in Columns (1)–(3) are statistically significant.[12] For example, in Column (3), the coefficient of *PRISK* is 0.007 with a *t*-statistic of 1.97. This result is economically meaningful as, with an increase of one standard deviation in firm-level political risk, equity issuance increases by 40.88 %. Columns

[12] As a part of robustness checks, we also use industry-by-time fixed effects to control for any industry-specific time-varying shocks and state-by-time fixed effects to control for local labor market shocks and state-level legislation and regulations. Our results with both the approaches are qualitatively similar to baseline findings. The results are untabulated and available upon request.

Table 8
Political risk and equity issuance: alternative measures of political risk.

Independent variable: *PRISK*				Dependent variable: *EI*				
VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
PRISK_ECONOMIC	0.005**							
	(2.34)							
PRISK_ENVIRONMENT		0.004**						
		(2.50)						
PRISK_TRADE			0.002					
			(0.79)					
PRISK_INSTITUTIONS				0.012***				
				(3.72)				
PRISK_HEALTH					0.013***			
					(4.53)			
PRISK_SECURITY						0.007***		
						(3.21)		
PRISK_TAX							0.004**	
							(2.30)	
PRISK_TECHNOLOGY								0.005*
								(1.92)
All other controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	64,693	64,693	64,693	64,693	64,693	64,693	64,693	64,693
R-squared adjusted	0.200	0.200	0.200	0.200	0.201	0.200	0.200	0.200
Industry and year-quarter FE	No	Yes	No	Yes	Yes	Yes	Yes	Yes

This table presents the sensitivity analysis with eight different types of firm-level political risk. The dependent variable is equity issuance (*EI*). The key variables are firm-level political risk related to economic *(PRISK_ECONOMIC),* environment (PRISK_ENVIRONMENT), trade (PRISK_TRADE), institutions (PRISK_INSTITUTIONS), health (PRISK_HEALTH), security (PRISK_SECURITY), tax (PRISK_TAX), and technology (PRISK_TECHNOLOGY). The control variables include *SIZE, PROFIT, MTB, TANGIBILITY, RESEARCH, DIVIDEND, DEBT_EQUITY, CASH_HOLDING, EXCESS_RETURN, GDP_GROWTH, SENT* and *EPU*. All variable definitions are available in Appendix A. Standard errors are clustered at the firm level and *t*-values are reported in parentheses. ***, **, and * denote the significance level at 1%, 5%, and 10%, respectively.

(4)–(6) present the regression results for Eq. (3) where debt issuance (*DI*) is the dependent variable. We find that the *PRISK* coefficient estimates are statistically insignificant in all the specifications. This shows that during periods of heightened political risk, firms prefer not to issue new debt to finance their capital expenditure. Our baseline results are consistent with the conjecture that firm-level political risk is positively associated with new equity issuance, while the results do not find any statistical association for debt issuance.

Other explanatory variables in our regression specifications mostly show predicted signs. For example, larger firms have more flexible and easier access to external finance and are likely to borrow more from financial institutions and credit markets. Thus, we find a negative coefficient for *SIZE*. We also report a negative association between *PROFIT* and *EI* as profitable firms accumulate more retained earnings and have greater access to credit markets.

4.3. Mitigating endogeneity concerns[13]

As with any corporate finance study, we need to carefully mitigate endogeneity concerns to validate our baseline results. To that end, we employ several techniques. Firstly, we employ nearest-neighbor score matching technique. Secondly, we use Heckman's (1979) two-step correction procedure to further alleviate any non-random sample selection issues. Finally, we use gubernatorial elections in different states of the U.S as a shock to firm-level political risk.

4.3.1. Matched sample analysis: nearest-neighbor score matching technique

To control for any non-random selection issues in our sample, we follow Rosenbaum and Rubin (1983) and use the nearest-neighbor score matching technique. Following Hasan et al. (2022), we divide firms in our sample into *Treated Firms* and *Control Firms* based on their median *PRISK* value. Firms with a *PRISK* value above the sample's *PRISK* median value are assigned to the *Treated Firm* group, while firms with a value less than the sample's *PRISK* median value are allocated to the *Control Firm* group. Our study uses the firm-level controls from our baseline regression model and applies nearest-neighbor matching with a 0.005 caliper. Overall, we find 28,941 firm-quarter observations in each of the *Treated* and *Control* groups.

Table 5 reports the ex-ante summary statistics and the regression results based on the matched samples in Panels A and B, respectively. In Panel A, we find that the matching variables between the *Treated* and *Control* groups are not significantly different, which implies the valid matching of our sample data. We then re-estimate Eq. (2) for this matched sample with equity issuance (*EI*) as the dependent variable. Results for this regression are reported in Table 5, Panel B. The estimated coefficient for *PRISK* remains positive and significant, strengthening the evidence presented in Table 4.

[13] As we find no significant association between political risk and debt issuance (Equation [3]), endogeneity analysis, robustness checks and other cross-sectional heterogeneity analyses include tests for Eq. (2) only, that is, equity issuance.

Table 9
Political risk and equity issuance: alternative measures of equity issuance.

Independent variable: *PRISK*	Dependent variables: *MVE_DEBT and EQUITY_DEBT*	
Variables	(1) Model 1	(2) Model 2
PRISK	0.034***	0.006*
	(2.60)	(1.82)
SIZE	–23.938***	−6.468***
	(–23.01)	(−21.71)
PROFIT	60.513***	13.735***
	(3.82)	(2.62)
MTB	35.035***	0.759*
	(16.15)	(1.67)
TANGIBILITY	−79.097***	−17.285***
	(−11.05)	(−7.89)
RESEARCH	–22.889***	−2.269
	(−3.54)	(−1.17)
DIVIDEND	−0.830	−1.611*
	(−0.26)	(−1.71)
DEBT_EQUITY	−15.832***	−6.478***
	(−17.66)	(–23.82)
CASH_HOLDING	6.895***	2.233***
	(3.94)	(4.98)
EXCESS_RETURN	−51.196**	−15.847**
	(−2.27)	(−2.43)
GDP_GROWTH	−86.249	−17.773
	(−1.38)	(−0.95)
SENT	0.251	0.171
	(0.35)	(0.68)
EPU	0.109	0.028
	(0.59)	(0.52)
Constant	342.345***	49.164*
	(2.65)	(1.82)
Observations	39,455	39,455
R-squared adjusted	0.034	0.209
Industry FE	Yes	Yes
Year and quarter FE	No	Yes

This table presents a sensitivity analysis with two alternative measures of equity issuance. The dependent variables are the market value of equity to debt ratio (*MVE_DEBT)* and book value of equity to total debt (*EQUITY_DEBT)*. The key independent variable is the firm-level political risk *(PRISK)*. The control variables include *SIZE, PROFIT, MTB, TANGIBILITY, RESEARCH, DIVIDEND, DEBT_EQUITY, CASH_HOLDING, EXCESS_RETURN, GDP_GROWTH, SENT* and *EPU*. All variable definitions are available in Appendix A. Standard errors are clustered at the firm level and *t*-values are reported in parentheses. ***, **, and * denote the significance level at 1%, 5%, and 10%, respectively.

4.3.2. Heckman's two-step correction procedure

We are aware of the concern that some firms have zero values in their firm-level political risk index. One can argue that this could be non-random and due to firms' unobserved political risk. To address this self-selection bias, we use Heckman's (1979) two-step correction procedure. In the first stage, we run a probit regression with all our control variables against a dummy variable, *PRISK_DUMMY*, which takes a value of 1 if a firm has received a non-zero *PRISK* value and otherwise 0. The first-stage results are presented in Table 6, Column (1). In the second stage, we include *INVERSE_MILLS* as an additional control in our baseline regression model, with the results reported in Table 6, Column (2). After correcting for self-selection bias, we find that the estimated coefficient of *PRISK* is positive and significant. Both the estimated coefficient and magnitude are also consistent with our baseline results.

4.3.3. The United States gubernatorial elections shock

To provide further support to our identification strategy, we use gubernatorial elections in different states of the US as an exogenous shock to firm-level political risk. Prior studies document that during election quarters, firm-level political risk increases significantly (e.g., Çolak et al., 2017; Hassan et al., 2019). We utilize this in our empirical design and argue that equity issuance to finance corporate investment increases significantly during the quarters of gubernatorial elections. We identify gubernatorial elections quarters in different states (where the firm's headquarters are located) by an indicator variable (*ELECTION_DUMMY*) which takes a value of 1 if elections take place in certain quarters and 0 otherwise. We interact *ELECTION_DUMMY* with our *PRISK* measure in our baseline regression model (2). Table 7 displays the results. We find that the estimated coefficient of our interaction term (*PRISK* × *ELECTION_DUMMY)* is positive and significant. This implies that during election quarters when firm-level political risk is significantly high, equity issuance is more prevalent. Overall, these results further support our baseline findings.

Table 10
Testing the potential economic channels: financial flexibility.

Independent variable: *PRISK*	Dependent variable: *EI*			
Variables	Debt rating		Profitability	
	(1) Investment grade	(2) Speculative	(3) Unprofitable	(4) Profitable
Panel A				
PRISK	−0.001**	0.002**	0.004**	−0.000
	(−2.06)	(2.23)	(2.03)	(−0.88)
SIZE	−0.004	−1.024***	−2.361***	−0.372***
	(−0.12)	(−13.97)	(−12.48)	(−12.43)
PROFIT	−1.537**	−7.232***	−22.846***	4.689
	(−2.26)	(−6.17)	(−7.75)	(1.38)
MTB	−0.309***	1.245***	2.242***	−0.043
	(−5.70)	(8.54)	(9.62)	(−0.79)
TANGIBILITY	2.083***	1.190**	−4.440***	0.531**
	(8.07)	(2.41)	(−2.86)	(2.26)
RESEARCH	−0.601***	−0.438**	−1.406	−0.232**
	(−3.38)	(−2.03)	(−1.47)	(−2.29)
DIVIDEND	0.099	−0.565***	1.745***	−0.335***
	(1.14)	(−5.80)	(4.24)	(−5.31)
DEBT_EQUITY	0.409***	0.504***	−0.231	0.127*
	(3.88)	(8.31)	(−1.13)	(1.78)
CASH_HOLDING	−1.289***	2.946***	4.011***	1.582***
	(−4.61)	(10.64)	(14.46)	(5.75)
EXCESS_RETURN	−0.155	4.474***	12.220***	2.481***
	(−0.12)	(2.74)	(3.32)	(2.94)
GDP_GROWTH	1.588	−0.948	−7.353	1.266
	(1.32)	(−0.34)	(−0.86)	(1.13)
SENT	0.008	0.054**	0.245***	−0.004
	(0.63)	(1.98)	(2.96)	(−0.33)
EPU	0.001	0.008	0.007	0.002
	(0.15)	(0.93)	(0.26)	(0.44)
Constant	−2.634	−1.526	−18.883*	3.470**
	(−1.03)	(−0.48)	(−1.79)	(2.18)
Observations	7,569	35,665	16,439	48,254
R-squared adjusted	0.125	0.136	0.224	0.032
Industry FE	Yes	Yes	Yes	Yes
Year and quarter FE	Yes	Yes	Yes	Yes
Difference in coefficients on PRISK between Yes vs No sub-sample: $\chi 2$ (*p*-value)	9.29***		4.93*	
	(0.009)		(0.085)	

Independent variable: *PRISK*	Dependent variable: *EI*			
Variables	Firm size		Whited Wu-index	
	(1) Big	(2) Small	(3) High	(4) Low
Panel B				
PRISK	−0.000	0.003**	0.002**	0.002
	(−0.90)	(2.52)	(2.42)	(1.60)
SIZE	−0.268***	−2.591***	−0.889***	−1.107***
	(−8.33)	(−12.83)	(−12.37)	(−12.63)
PROFIT	−0.694	−21.125***	−12.154***	−18.054***
	(−1.28)	(−8.71)	(−5.11)	(−8.08)
MTB	−0.448***	1.366***	0.460***	0.927***
	(−5.71)	(9.50)	(3.29)	(6.31)
TANGIBILITY	1.482***	−1.332	1.866***	0.259
	(4.46)	(−1.58)	(3.41)	(0.52)
RESEARCH	0.096	−1.447***	−0.622***	−0.274
	(0.39)	(−3.57)	(−2.90)	(−0.71)
DIVIDEND	−0.268***	−0.773***	0.303**	−0.152
	(−3.11)	(−4.13)	(2.46)	(−1.09)
DEBT_EQUITY	0.027	0.728***	0.482***	0.391***
	(0.91)	(5.36)	(5.23)	(4.87)
CASH_HOLDING	3.594***	4.153***	5.437***	3.194***
	(4.23)	(17.51)	(17.05)	(10.29)
EXCESS_RETURN	2.275**	8.550***	8.025***	6.851***
	(2.56)	(3.63)	(3.45)	(3.02)
GDP_GROWTH	0.168	−1.155	−0.795	−2.404
	(0.16)	(−0.27)	(−0.29)	(−0.64)

(*continued on next page*)

Table 10 (*continued*)

Independent variable: *PRISK*	Dependent variable: *EI*			
Variables	Firm size		Whited Wu-index	
	(1) Big	(2) Small	(3) High	(4) Low
SENT	−0.016	0.121***	0.006	0.109***
	(−1.17)	(3.01)	(0.22)	(3.01)
EPU	−0.001	0.008	−0.000	0.007
	(−0.13)	(0.60)	(−0.02)	(0.56)
Constant	3.059*	0.476	3.131	−3.469
	(1.71)	(0.09)	(0.86)	(−0.75)
Observations	32,346	32,347	34,520	29,819
R-squared adjusted	0.058	0.215	0.242	0.168
Industry FE	Yes	Yes	Yes	Yes
Year and quarter FE	Yes	Yes	Yes	Yes
Difference in coefficients on PRISK between high vs low sub-sample: $\chi 2$ (*p*-value)	7.19**		8.46**	
	(0.027)		(0.015)	

The table presents financial flexibility as one of the potential economic channels. We run sub-sample analysis for four different proxies of financial constraints in firms including corporate debt rating (investment grade vs speculative grade), profitability (profitable vs unprofitable firms), firm size (big vs small), and Whited Wu-index (high vs low). Panel A shows the sub-sample analysis for debt rating and profitability. We create two sub-samples based on whether a firm has an investment grade rating or not and whether a firm makes a loss in a fiscal quarter or not. Panel B shows the sub-sample analysis for firm size and Whited Wu-index. We split our sample into high (low) based on whether a firm lies above (below) their sample median. The control variables include *SIZE, PROFIT, MTB, TANGIBILITY, RESEARCH, DIVIDEND, DEBT_EQUITY, CASH_HOLDING, EXCESS_RETURN, GDP_GROWTH, SENT* and *EPU*. All variable definitions are available in Appendix A. Standard errors are clustered at the firm level and *t*-values are reported in parentheses. ***, **, and * denote the significance level at 1%, 5%, and 10%, respectively.

4.4. Sensitivity analyses: alternative measures

In this section, we report different sensitivity analyses conducted with alternative measures of political risk and equity issuance. Following Hassan et al. (2019), we run separate regressions for eight different constituent firm-level political risk measures. These measures are as follows: *PRISK_ECONOMIC* covers issues pertinent to wages, budget, the bankruptcy bill and job creation; *PRISK_ENVIRONMENT* comprises policies related to climate change, renewable energy, clean air and other environmental factors; *PRISK_TRADE* comprises issues related to trade barriers, agreements, globalisation and labour standards; *PRISK_INSTITUTIONS* covers policies related to finance reform, campaigns, the political system and federal elections; *PRISK_HEALTH* includes issues related to medicare, drugs and drugs control; *PRISK_SECURITY* comprises policies related to terrorism, weapons, etc., *PRISK_TAX* covers issues related to tax, tax relief and tax reforms; and, finally, *PRISK_TECHNOLOGY* includes issue related to cyber warfare, the doctrine of fairness and high-tech jobs. Table 8 displays the results. We find that equity issuance increases with all these different types of firm-level political risk measures, except *PRISK_TRADE*.

Furthermore, we conduct robustness checks for our dependent variable: equity issuance *(EI)*. We consider both the market value of equity to debt ratio *(MVE_DEBT)* and the book value of equity to debt ratio *(EQUITY_DEBT)* as two alternative measures. Table 9 shows the results. We find that our baseline findings of a higher (lower) level of equity issuance for a higher (lower) level of political risk remain qualitatively unchanged.

5. Cross-sectional heterogeneity analyses: economic mechanisms[14]

Our study next examines how firm-level political risk influences equity issuance. More specifically, we conduct several tests to understand the economic mechanisms, financial flexibility, and information asymmetry through which political risk can affect a firm's financing choice.

Financial flexibility is valued by firms for several reasons. Firstly, it helps them to avoid financial distress arising from negative shocks (Gamba and Triantis, 2008). Secondly, it enables firms to make timely investments as profitable opportunities emerge. Political risk both creates and enhances any negative shock leading to an increased need for maintaining financial flexibility. Firms tend to hold more cash and keep their borrowing capacity intact to retain financial flexibility (Chen et al., 2017). Moreover, equity markets are more willing to fund firms that are currently unprofitable but with good growth prospects (Frank and Goyal, 2003). Thus, we argue that high political risk provides the rationale for firms to preserve their financial flexibility and issue equity to tap investment opportunities. We examine this financial flexibility channel by employing several financial constraint proxies: bond credit rating (investment grade or speculative); profitability (profitable or unprofitable); size (big or small); and high or low WW Index score. As

[14] All the regressions of these economic mechanisms are robust to firm-by-time fixed effects. The results are untabulated and available upon request. We thank one of our reviewers for pushing us hard to include this.

Table 11
Testing the potential economic channels: information asymmetry.

Independent variable: *PRISK*	Dependent variable: *EI*			
Variables	Idiosyncratic volatility		Analyst forecast dispersion	
	(1) High	(2) Low	(3) High	(4) Low
Panel A				
PRISK	0.004***	−0.000	0.003**	−0.000
	(3.11)	(−0.40)	(2.56)	(−0.69)
SIZE	−1.495***	−0.258***	−0.808***	−0.573***
	(−14.31)	(−6.55)	(−9.08)	(−9.79)
PROFIT	−14.786***	−6.420**	−11.794***	−13.354***
	(−8.53)	(−2.42)	(−5.41)	(−3.76)
MTB	1.405***	−0.287***	1.112***	−0.285**
	(9.19)	(−3.35)	(6.88)	(−2.41)
TANGIBILITY	−1.354*	1.800***	−1.376**	1.307***
	(−1.85)	(5.05)	(−2.29)	(2.68)
RESEARCH	−0.550	−0.664***	−0.511	−0.616***
	(−1.39)	(−4.31)	(−1.10)	(−4.79)
DIVIDEND	−0.213	−0.043	−0.028	0.005
	(−1.35)	(−0.46)	(−0.18)	(0.04)
DEBT_EQUITY	0.416***	0.436***	0.424***	0.823***
	(5.18)	(4.66)	(5.24)	(5.97)
CASH_HOLDING	4.224***	4.340***	4.771***	5.650***
	(17.01)	(7.71)	(16.24)	(10.83)
EXCESS_RETURN	7.460***	4.551***	10.435***	6.326**
	(3.58)	(2.65)	(4.74)	(2.39)
GDP_GROWTH	−3.970	0.976	−1.200	1.493
	(−0.92)	(0.60)	(−0.29)	(0.75)
SENT	0.130***	−0.001	0.060	−0.009
	(2.90)	(−0.07)	(1.56)	(−0.44)
EPU	0.010	0.004	0.008	0.003
	(0.71)	(0.71)	(0.64)	(0.48)
Constant	−5.675	2.385	−2.554	2.785
	(−1.00)	(1.20)	(−0.54)	(1.01)
Observations	32,922	30,940	28,583	24,842
R-squared adjusted	0.211	0.117	0.216	0.219
Industry FE	Yes	Yes	Yes	Yes
Year and quarter FE	Yes	Yes	Yes	Yes
Difference in coefficients on PRISK between high vs low sub-sample: $\chi 2$ (*p*-value)	9.85***		7.05**	
	(0.007)		(0.029)	

Independent variable: *PRISK*	Dependent variable: *EI*			
Variables	Bog index		Management voluntary guidance	
	(1) High	(2) Low	(3) High	(4) Low
Panel B				
PRISK	0.004***	0.001	0.016	0.006**
	(2.74)	(1.20)	(0.98)	(2.03)
SIZE	−1.593***	−0.686***	−3.046*	−0.873***
	(−15.10)	(−11.96)	(−1.69)	(−3.41)
PROFIT	–23.031***	−13.613***	22.603	−3.425
	(−7.54)	(−6.16)	(0.62)	(−1.40)
MTB	1.242***	0.409***	4.416	1.448**
	(6.77)	(3.91)	(0.75)	(2.06)
TANGIBILITY	−1.842*	−0.011	−18.777	2.063
	(−1.78)	(−0.03)	(−0.93)	(1.10)
RESEARCH	−0.999**	0.017	−0.022	0.034
	(−2.33)	(0.06)	(−0.01)	(0.05)
DIVIDEND	0.402**	−0.477***	−0.783	−0.899*
	(2.07)	(−4.68)	(−0.41)	(−1.78)
DEBT_EQUITY	0.629***	0.141**	−0.391	0.517***
	(4.33)	(2.52)	(−0.53)	(2.93)
CASH_HOLDING	4.720***	1.795***	−19.065	0.974
	(17.62)	(4.00)	(−0.84)	(0.52)
EXCESS_RETURN	13.531***	1.890	−9.178	22.727**
	(4.08)	(1.32)	(−0.20)	(2.55)
GDP_GROWTH	−6.054	3.285*	−24.418	−0.185
	(−1.51)	(1.72)	(−1.31)	(−0.02)

(*continued on next page*)

Table 11 (*continued*)

Independent variable: *PRISK*	Dependent variable: *EI*			
Variables	Bog index		Management voluntary guidance	
	(1) High	(2) Low	(3) High	(4) Low
SENT	0.093**	0.024	−0.277	−0.088
	(2.07)	(1.39)	(−0.80)	(−1.40)
EPU	−0.007	0.005	−0.061	0.011
	(−0.56)	(0.80)	(−1.28)	(0.50)
Constant	−1.869	3.050	55.155	11.486
	(−0.31)	(1.40)	(1.36)	(1.48)
Observations	25,484	28,343	7,772	5,772
R-squared adjusted	0.227	0.069	0.013	0.019
Industry FE	Yes	Yes	Yes	Yes
Year and quarter FE	Yes	Yes	Yes	Yes
Difference in coefficients on PRISK between high vs low sub-sample: $\chi 2$ (*p*-value)	8.99**		5.20*	
	(0.011)		(0.074)	

The table presents information asymmetry as one of the potential economic channels. We run sub-sample analysis for four different proxies of information asymmetry including idiosyncratic volatility, analyst forecast dispersion, Bog index (readability of 10-K reports), and management voluntary guidance. Panel A shows the sub-sample analysis for idiosyncratic volatility and analyst forecast dispersion. We create two sub-samples of high (low) based on whether a firm lies above (below) their sample median. Panel B shows the sub-sample analysis for BOG index and management voluntary guidance. We split our sample into high (low) based on whether a firm lies above (below) their sample median. The control variables include *SIZE, PROFIT, MTB, TANGIBILITY, RESEARCH, DIVIDEND, DEBT_EQUITY, CASH_HOLDING, EXCESS_RETURN, GDP_GROWTH, SENT* and *EPU*. All variable definitions are available in Appendix A. Standard errors are clustered at the firm level and *t*-values are reported in parentheses. ***, **, and * denote the significance level at 1%, 5%, and 10%, respectively.

financially constrained firms need and value financial flexibility more, we expect the impact of firm-level political risk on equity issuance to be predominant for firms experiencing financial constraints.

Likewise, information asymmetry plays a key role in firms' financing decisions (Myers, 1984; Myers and Majluf, 1984). During situations of high political risk, investors are less informed about future government policies (Durnev, 2010): this uncertainty not only increases capital market friction but also makes firms' cash flow estimates more volatile. Under these circumstances, firms prefer not to issue debt as debt servicing becomes increasingly difficult and restrictive covenants make debt financing more expensive and unattractive (Faulkender et al., 2007). Instead, firms can avoid some of these problems by issuing equity. To test this economic mechanism, we explore the information asymmetry channel through several proxies for information asymmetry: idiosyncratic volatility; analyst forecast dispersion; readability of annual reports (Bog Index); and management's voluntary guidance. We conjecture that, in a highly information asymmetric environment, firm-level political risk encourages firms to prefer equity issuance over debt issuance.

5.1. *Financial flexibility*

To test our conjecture that firms requiring financial flexibility prefer equity issuance, we use four proxies following prior literature (e.g., Byoun, 2021; Faulkender and Petersen, 2006): bond credit rating, profitability, size and the WW Index. Specifically, we create two sub-samples for our rating variables: 'investment grade' and 'speculative' (non-investment grade), with Table 10, Panel A, Columns (1) and (2) showing the results. The estimated coefficient for the 'investment grade' group is negative and significant, whereas for the 'speculative' group, it is positive and significant. These results imply that equity issuance increases (decreases) for non-investment (investment) grade-firms which require more financial flexibility in their financing decisions. Table 10, Panel A, Columns (3) and (4) report the results for profitable vs. non-profitable (loss-making) firms. In line with the prediction for the financial flexibility channel, we find that an increase in equity issuance in response to an increase in political risk is exclusive to unprofitable (loss-making) firms.

In Table 10, Panel B, we report sub-sample analyses relating to firm size and the WW Index. We create two sub-samples for each of firm size and the WW Index. These sub-samples are divided based on values/scores above or below their sample's median. Our results in Columns (1) and (2) show that it is only among firms that are 'small' in size that experience an increase in *EI* with firm-level political risk. Columns (3) and (4) present results for the WW Index. The general idea is that the higher the WW Index score, the higher the financial constraints. As expected, we find that our baseline relationship holds only for the 'high' sub-sample group of the WW Index. Overall, these results are consistent with our expectation that the impact of firm-level political risk on equity issuance is driven by firms with less access to public debt markets (i.e., those that are more financially constrained) and those in need of more financial flexibility.

Table A1
Transcript excerpts with political risk.

Firm name	Call date	Excerpts from transcripts	PRISK	Discussion of political risks in relation to:	Source
Nevada Gold Casinos Inc	10/09/2008	… *"Our management team is working hard to navigate this difficult environment, and we will continue to look for ways to improve performance and increase market share at Cripple Creek. In addition, as we have discussed previously, in Colorado the gaming industry is currently* ***supporting a ballot*** *initiative* ***to amend the constitution to authorize*** *an increase in the bet limits, allow additional types of table games, authorize 24 h gaming instead of the current 18 h gaming day and establish a fixed tax rate. Depending on the outcome of the initiative, through the November general election, we believe Cripple Creek is well-positioned to benefit from these changes should the amendment pass. We will keep you posted as events develop. And with this, I will turn the call back to Bob."* …	51.94	A ballot initiative to reform the constitution to remove the ceiling on bets for the gaming industry.	https://www.proquest.com/wire-feeds/q1-2009-nevada-gold-amp-casinos-inc-earnings/docview/466155268/se-2?accountid=13460
Female Health	10/02/2009	… *"On December 11, 2008, the FDA Obstetrics/Gynecology Devices Advisory Committee unanimously recommended that FC2 be approved, and we are* ***working with FDA to secure the final approval.*** *It is going along uneventfully and we expect approval to occur soon.* *Had we not anticipated* ***FDA approval****, then we would have – on FC2, we would have expanded capacity on FC1. We are now planning the discontinuance of FC1 and investing in the expansion of FC2 capacity in Malaysia.* *Now, given final* ***FDA approval****, USAID and South Africa will switch to FC2, eliminating the short-term limitations meeting increased product demand."* … … *"The fifth factor impacting the outlook is the* ***Obama administration*** *in the United States. They have actually already or are likely to eliminate certain restrictions that have existed. The first is elimination of* ***US funding*** *of organizations that permit abortions. The second is requiring elimination of a requirement that recipients of* ***US funds*** *sign a document indicating they oppose prostitution. And the third probably to be eliminated is that a portion of* ***US funds*** *be used to promote abstinence."* …	44.17	Approval of products by the FDA. Restricting funding organizations that permit abortion.	https://www.proquest.com/wire-feeds/q1-2009-female-health-earnings-conference-call/docview/466094589/se-2?accountid=13460

The table shows excerpts from conference call transcripts that feature discussions about political risk. The conference call transcripts are collected from the Fair Disclosure Wire of ProQuest database.

5.2. Information asymmetry

To test our conjecture that the relationship between firm-level political risk and equity issuance is most prevalent in a highly information asymmetric environment, we use several proxies for information asymmetry. Firstly, we use idiosyncratic volatility, measured as the residual standard deviation estimated from Fama–French's (1993) three-factor model.[15] Secondly, we use analyst forecast dispersion, measured as the standard deviation of the current forecasts divided by the absolute mean value of forecasts. Thirdly, we use the readability of annual reports. We capture readability using the Bog Index: the higher the Bog Index score, the lower the readability of the annual report. Finally, we use the total amount (measured as 'number') of voluntary guidance received by management in a year. For all these variables, we create sub-samples of 'high' ('low') based on values higher (lower) than their sample's median. Table 11, Panels A and B show the results. We find that the estimated coefficients of *PRISK* are only significant for the 'high' sample groups of idiosyncratic volatility, analyst forecast dispersion and Bog Index, whereas, for management's voluntary guidance, the result holds only for the 'low' group. Taken together, these results imply that it is only in the high information asymmetric environment that firm-level political risk increases equity issuance.

6. Conclusion

The extant literature broadly discusses the impact of country-level political risk on corporate decision making. In contrast, the impact of firm-level political risk has attracted limited attention. This gap in the literature is the motivation for our study to explore the relationship between firm-level political risk and corporate equity issuance. We hypothesize that firm-level political risk drives firms to issue corporate equity as debt issuance may not be ideal for various reasons. For instance, Gad et al. (2023) show that firm-level political risk increases borrowing costs, while Huang et al. (2023) find that politically-risky firms face more stringent terms and conditions in the bond market. Consequently, firms may find it extremely challenging to issue debt, and may prefer equity issuance instead. To test this conjecture, we employ the novel firm-level political risk measure of Hassan et al. (2019), using a large sample of 64,693 firm-quarter observations from 2002 to 2020. We find a significant positive association between firm-level political risk and equity issuance. In cross-sectional heterogeneity analyses, we show that firms have a greater incentive to rely on equity issuance during periods of heightened political risk as debt issuance in such an environment increases the cost of debt and limits firms' financial flexibility. In addition, we find that firms rely on equity issuance in the presence of information asymmetry.

Overall, our study makes two key contributions to the growing body of capital structure literature. Firstly, we document that firm-specific political risk is an important determinant for financing decisions. Secondly, we show that financial flexibility and information asymmetry play crucial roles in equity issuance decisions. Taken together, we present new evidence on firms' financing choices in the presence of firm-level political risk.

CRediT authorship contribution statement

Dewan Rahman: Conceptualization, Data curation, Formal analysis, Software, Supervision, Writing – original draft, Writing – review & editing. **Anamul Haque:** Conceptualization, Data curation, Formal analysis, Software, Validation, Writing – original draft, Writing – review & editing. **Muhammad Kabir:** Conceptualization, Writing – original draft, Writing – review & editing. **Shehub Bin Hasan:** Conceptualization, Writing – review & editing.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

The authors do not have permission to share data.

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[15] Fama–French's (1993) three-factor model data are from the Kenneth French's Data Library: <https://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html>.

Appendix

Variable name	Symbol	Definition	Data source
A. Description of Key Variables			
Political risk	*PRISK*	Quarterly firm-level political risk index developed by Hassan et al. (2019)	Economic policy uncertainty database
Equity issuance	*EI*	The selling of the common and preferred stock net of the purchase of the common and preferred stock divided by the cash used for net capital expenditure and acquisitions	Compustat
Debt issuance	*DI*	The debt issuance as the net long-term retirement debt divided by the cash used for net capital expenditure and acquisitions	Compustat
Firm size	*SIZE*	The natural logarithm of the book value of total assets	Compustat
Profitability	*PROFIT*	Earnings before interest and taxes divided by the book value of total assets at the beginning of the year.	Compustat
Growth	*MTB*	Market-to-Book Ratio: The sum book value of debt, liquidating value of preferred shares and market value of equity divided by the book value of assets.	Compustat
Tangibility	*TANGIBILITY*	Total property, plant and equipment net of accumulated depreciation divided by total assets.	Compustat
Research	*RESEARCH*	Dummy variable: 1 if firm *i* has reported positive R&D expenses in year *t* and 0 otherwise.	Compustat
Dividend	*DIVIDEND*	Dummy variable: 1 if firm *i* has reported positive dividend in year *t* and 0 otherwise.	Compustat
Debt-to-equity	*DEBT_EQUITY*	The ratio of total debt to the total market value of equity.	Compustat
Cash	*CASH_HOLDING*	The ratio of cash to net assets.	Compustat
Excess return	*EXCESS_RETURN*	Difference between a security's return on income and the return on income of an index.	CRSP
GDP per capital	*GDP_GROWTH*	The logarithm of GDP per capita	Bureau of Economic Analysis
Investor sentiment index	*SENT*	Monthly consumer sentiment index	University of Michigan
Economic policy uncertainty	*EPU*	EPU index developed by Baker et al. (2016)	Economic policy uncertainty database

See Table A1.

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