Electoral Risk in Firms

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Abstract

This paper introduces a novel measure of firm-level electoral risk derived from abnormal stock returns on poll release and election dates. We construct a dataset of impact dates by analyzing newspapers and news websites covering Brazilian presidential elections from 2002 to 2022. Our measure innovates by capturing uncertainty even in non-competitive and predictable elections, as it tracks price movements throughout the entire year despite the final outcome being largely certain on the electoral day. The empirical analysis reveals that firms with higher electoral risk exposure reduce both investment and financing as elections approach. Furthermore, we develop a measure of electoral risk specifically associated with winning candidates by employing correlation analysis and dimensionality reduction techniques. The results indicate that firms positively correlated with winning candidates strategically adjust their behavior, increasing both investment and new financing in the first quarter of the year following the election.

1 Introduction

Politics plays a fundamental role in firm dynamics, shaping both the regulatory environment and market conditions in which firms operate. Government decisions can affect credit access, define competition standards, and create incentives or barriers for investment. Under conditions of political instability, firms face additional risks that influence their decision-making. A major challenge in studying political risk in economics has been constructing variables

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that effectively capture temporal variations in political conditions. Early research addressed this challenge by developing aggregate variables to measure shocks that affected all firms uniformly (Baker et al. (2016)). However, recognizing that government-firm relationships are heterogeneous, recent literature has shifted focus to firm-level political uncertainty (Hassan et al. (2019)), examining how individual firms perceive and respond to political risk. At present, no measures specifically capture firm-level uncertainty generated by individual elections or candidate characteristics. This paper fills this gap by constructing a novel measure derived from the electoral process itself, leveraging the assumption that elections significantly impact prices, allowing information to be collected from the stock market.

This paper introduces a novel measure of firm-level electoral risk based on absolute abnormal stock price movements following election poll releases and post-election Mondays. The incorporation of poll data is crucial and innovative, as in predictable races, post-election days yield minimal market movements and thus provide limited information. Our measure captures uncertainty in pre-election periods, revealing that firms with higher electoral risk reduce both investment and financing as elections approach, suggesting that companies postpone strategic decisions during periods of electoral uncertainty. Furthermore, using Principal Component Analysis (PCA), we construct a measure that quantifies firms' sensitivity to each of the two leading candidates in the electoral contest.[1] The results show that firms with abnormal valuations positively associated with winning candidates respond distinctively to the election's conclusion, increasing both investment and new financing in the first quarter of the new administration.

Our analysis examines six Brazilian presidential elections between 2002 and 2022. The Brazilian Superior Electoral Court publishes data on all official electoral polls, including the dates of voter response collection. To measure stock price impacts, we construct a novel database identifying the exact dates when major opinion polls were released in national media. Using digital archives and websites from Brazil's two leading newspapers as primary sources, we determine both the poll release dates and their corresponding market impact dates. Simultaneously, we calculate abnormal returns for the 100 most traded stocks in the Brazilian market throughout the study period. From this data, we identify dates with the largest absolute abnormal movements in each election. We then construct our electoral risk measure by identifying firms with the strongest price reactions on poll release dates. This

[1] In appendix, we also present a measure of association using Multidimensional Scaling (MDS) techniques.

process yields a firm-specific electoral risk measure for each election. Comparing these new variables with previously developed political risk measures reveals meaningful associations.

Using our novel measure, we examine how electoral sensitivity affects firm behavior, particularly financial and strategic decisions. Analysis of quarterly financial statements reveals a clear pattern: firms with higher electoral risk exposure significantly reduce both investment activities and new financing as elections approach. This behavior suggests that political uncertainty induces a wait-and-see approach, with firms postponing major capital expenditures and financial commitments until electoral outcomes provide clarity about future economic policies. The documented decline in investment and financing highlights how electoral uncertainty shapes corporate strategy, influencing both immediate financial decisions and long-term growth trajectories. These effects may reflect firms' concerns about potential regulatory changes, shifts in government priorities, or macroeconomic instability. Notably, applying our methodology to the political risk measure developed by Hassan et al. (2019) does not yield similar results, suggesting that electoral risk has distinct characteristics requiring innovative measurement approaches.

Finally, having established how electoral risk affects firm behavior, we further examine whether firms respond differently to specific candidates. Using abnormal price movements on election and poll release dates, we construct correlation matrices to identify firms with coordinated price responses to electoral information. Through dimensionality reduction techniques, we develop an election-specific scale that distinguishes firms positively associated with winning versus losing candidates. Examining post-election outcomes, we find that firms positively associated with winning candidates exhibit distinct behavior from those linked to losing candidates, reversing the patterns documented in the previous section. Specifically, firms associated with winning candidates increase both investment and new financing in the first quarter of the year following the election.

The measurement and economic implications of political risk have been central to finance and political economy research. Our study advances this literature by introducing a novel measure of electoral risk and demonstrating its economic effects through multiple channels. Our measure represents a significant improvement over existing approaches to quantifying political uncertainty in electoral periods. The seminal work by Baker et al. (2016) introduced the Economic Policy Uncertainty (EPU) index based on newspaper coverage of economic and political uncertainty. Their paper shows that the U.S. index spikes near tight presidential

elections, but this aggregate measure cannot capture firm-specific variations. Hassan et al. (2019) addressed this limitation by developing a firm-level measure using earnings call transcripts, showing again increased political discussion during election periods.[2] However, both approaches face inherent limitations in capturing real-time firm responses to electoral uncertainty.

Our measure, derived directly from stock price movements and enhanced with precise polling data, provides several advantages.[3] First, it captures market reactions to electoral uncertainty even in seemingly predictable elections, addressing a key limitation noted by studies examining election impacts on firms (Snowberg et al. (2007), Füss and Bechtel (2008), Imai and Shelton (2011), Carvalho and Guimaraes (2018), Carvalho et al. (2017) and Carnahan and Saiegh (2021)).[4] While Hassan et al. (2019) measure effectively captures political risk in general, it faces challenges with predictable elections since the uncertainty may be resolved by the time of the firm's earnings call, potentially missing the specific periods of electoral uncertainty. Second, our measure captures real-time investor sentiment without the biases inherent in firm narratives or selective risk disclosures. Stock prices aggregate views of all market participants, providing a more comprehensive and objective measure of electoral uncertainty. Additionally, this approach enables broader market-wide analysis, whereas earnings call-based measures are limited to firms that explicitly discuss political risks. By leveraging high-frequency financial data, our measure provides a more immediate and unbiased assessment of electoral risk, enhancing our understanding of how political uncertainty shapes firm behavior.

The relationship between uncertainty and firm behavior is foundational to economics, with seminal contributions by Bernanke (1983), McDonald and Siegel (1986), Pindyck (1988), Dixit (1989), and Bloom (2009) establishing that uncertainty shocks reduce in-

[2]The political risk measure proposed by Hassan et al. (2019) shows aggregate increases during election periods. Their Figure A.1 (reproduced in our appendix) demonstrates elevated political risk during election quarters. Additionally, Table A.1 reveals significant increases in this measure during presidential election semesters across three major democracies with predetermined electoral cycles: Brazil, the United States, and France. Elections clearly generate substantial variations in political uncertainty and risk trajectories (Baker et al. (2020)).

[3]In the literature, some studies show that political risk is associated with stock volatility, supporting the option adopted (Hassan et al. (2019),Baker et al. (2016),Carnahan and Saiegh (2021) and Kelly et al. (2016)).

[4]The problem with predictable elections arises because stock prices or futures prices do not move significantly, making it difficult to separate political and non-political movements. The current paper reinforces that elections that are not close generate little movement in the market. However, by constructing a dataset with the exact day of publication of the polls, we were able to extract uncertainty from previous events within the election year. In the six elections evaluated for the Brazilian case, there was still significant uncertainty about the outcome of the electoral process at some point during the year.

vestment and financing. Political uncertainty, specifically, has been shown to significantly impact firm investment (Baker et al. (2016), Hassan et al. (2019)), with pronounced effects during election years (Jens (2017)). Consistent with this literature, our findings reveal that electoral uncertainty has substantial real effects on corporate behavior. Firms with higher electoral risk exposure significantly reduce both investment and new financing during election periods, confirming that political uncertainty shapes not only market expectations but also firms' concrete strategic and financial decisions.

Beyond traditional political uncertainty analysis, this study differentiates between firms that benefit from and those adversely affected by electoral outcomes, providing deeper insights into the politics-firm relationship. This distinction reveals how expectations about political changes influence sectors and companies based on their alignment with candidates and anticipated policies. Our analysis of electoral risk across specific firm groups demonstrates that political uncertainty effects are asymmetric across economic agents. While previous studies have developed measures to assess firm-candidate associations in close elections, analyzing market reactions to political events (Snowberg et al. (2007), Füss and Bechtel (2008), Imai and Shelton (2011), Carvalho and Guimaraes (2018), Carvalho et al. (2017)), our methodology identifies these associations regardless of electoral competitiveness. This approach offers a more flexible framework for capturing political exposure across varied electoral contexts, extending beyond the limitations of analyses focused solely on tight races.

Our findings reveal that firms positively associated with electoral outcomes increase both investment and financing in the first quarter of the year following the election. While Jens (2017) documented a general resumption of firm investment post-election, our study makes the novel finding that this recovery is specifically concentrated among firms associated with winning candidates. This asymmetric response to electoral outcomes demonstrates how political alignment shapes corporate behavior: firms favored by election results quickly normalize their financial decisions, while others maintain more conservative strategies. These patterns underscore how political cycles differentially affect corporate investment behavior, with firms adjusting their strategies based on their anticipated relationship with the incoming administration.

The paper proceeds as follows. Section 2 presents the construction of our electoral risk measure and describes the underlying data. Section 3 details our empirical strategy and

estimation approach. Section 4 presents our main results on how electoral risk affects real outcomes, including robustness tests. Section 5 develops our measures of winners' risk and analyzes their implications. Finally, in the last section, we analyze the main conclusions of the research.

2 Firm-Level Electoral Risk

2.1 Polls Data

Brazilian electoral law requires pollsters to register survey details with the Superior Electoral Court (TSE) before publishing election poll results.[5] Our study identifies the exact timing of poll releases through media coverage to determine their impact dates on stock prices. To make our analysis tractable, we focus on presidential election polls conducted by Brazil's two leading polling firms, Datafolha and IBOPE/IPEC, that included the two candidates who ultimately reached the second round.[6] These institutes are widely considered the most influential, as evidenced by their citation frequency in Brazil's two major newspapers: O Globo and Folha de São Paulo. Table A.2 in the appendix compares citation counts between these firms and the next eight most active polling institutes in presidential elections during our sample period. Our final sample comprises 434 polls (247 by Datafolha and 187 by IBOPE/IPEC), representing 205 unique release dates due to multiple scenarios being tested in individual polls.

Our data collection draws from four sources spanning Brazil's two major media groups (Globo and Folha): the digital archives of O Globo and Folha de São Paulo newspapers, and their respective news websites (G1/O Globo and Folha de São Paulo). Figure A.2 in the appendix illustrates these sources. For elections between 2002 and 2010, we obtained poll results from digitized print newspapers, while for subsequent elections, we primarily sourced from the newspapers' websites, reflecting their digital transition.

[5] In the Elections Law - Law No. 9. 504, of September 30, 1997, article 33 states: "Entities and companies that carry out public opinion polls on elections or candidates, for public knowledge, are obliged, for each poll, to register the following information with the Electoral Court up to five days before the poll is published: I - who contracted the survey; II - the value and origin of the resources spent on the work; III - the methodology and period of the survey; IV - the sampling plan and weighting in terms of gender, age, level of education, economic level and physical area of the work to be carried out, confidence interval and margin of error; V - the internal system of control and verification, checking and inspection of data collection and fieldwork; VI - the complete questionnaire applied or to be applied; VII - the name of who paid for the work to be carried out and a copy of the respective invoice."

[6] In 2018, with former president Lula's candidacy contested close to the date of the first round, our decision was to keep the polls with Lula or Haddad.

We determine market impact dates based on the earliest documented poll release time.[7] Our data categorizes releases into six timing groups: Morning (pre-market open), Evening (post-market close), Saturday (market closed), Sunday (market closed), Released Yesterday, and During Market Operation. Table A.3 in the appendix provides detailed timing distributions. Most polls are released when markets are closed, with only eleven releases occurring during trading hours (During Market Operate). For these eleven cases, we use the release date as the impact date. For polls noted as released "yesterday," we assume evening release based on observed patterns and set the impact date to the following day. Weekend releases (Saturday and Sunday) have Monday impact dates. Morning releases affect the same day's trading, while evening releases impact the following day.[8] After accounting for same-day releases by both institutes, we identify 182 unique poll impact days. Table A.3 shows the distribution across elections, averaging 30 impact days per election year, with higher frequency in October during the two voting rounds. The average lag between interview completion and public release is two days, ranging from zero (same-day release) to nine days.

2.2 Abnormal Returns

Our analysis focuses on stocks in the IBrX 100, an index tracking the 100 most traded and representative assets in the Brazilian stock market.[9] To isolate firm-specific movements from aggregate and external factors, we calculate abnormal returns for each stock. Following Edmans et al. (2007) and its application to the Brazilian market by Carvalho et al. (2017), we estimate the following OLS model for each stock i:

$$r_{i,t} = \alpha_i + \rho_i r_{i,t-1} + \beta_i X_t + \epsilon_{i,t} \tag{1}$$

where, the excess return $r_{i,t}$ of a stock i in a given date t is calculated using this identity:

$$r_{i,t} = log(p_{i,t}) - log(p_{i,t-1}) - r_{f,t}$$

[7] We review the respective news presenting the survey results to identify any possible mention of a previous disclosure.

[8] In all cases, it is noted whether the market was open due to holidays or special dates.

[9] Companies can enter and leave the index over time since companies are selected based on three factors: among the first 100 assets in descending order of Tradability Index (IN) (buffer 90%); 95% presence on the trading floor; and not being penny stocks. Therefore, we used the companies that made up the IBrX 100 on October 3, 2024; the list of all 100 stocks can be found in the appendix (Table A.3).

where p_i is the closing price of stock i and r_f is the log risk-free rate, the overnight SELIC rate as a proxy in our context.[10] In parallel, X is a vector of controls containing: (i) the excess return associated with the Bovespa Index;[11] (ii) the excess return associated with the exchange rate (R$/U$) depreciation;[12] (iii) the excess return associated with the S&P 500 Index; (iv) the S&P GSCI Crude Oil Excess Return Index; (v) lagged individual stock return to account for illiquidity and lagged external factors to account for the fact that markets open earlier in Brazil than in the US; (vi) dummy variables for Monday through Thursday; (vii) dummy variables for lags between two adjacent dates ranging from two (except weekends) to five days.[13]

Since stocks become sensitive to electoral news beginning in March of election years, we estimate equation (1) using pre-event windows. Following Carvalho et al. (2017), we adopt a conservative estimation window from January to December of the pre-election year. Using the estimated coefficients from equation (1), we calculate abnormal returns for each stock i on date t following MacKinlay (1997) as:

$$AR_{i,t} = r_{i,t} - \hat{\alpha}_i - \hat{\rho}_i r_{i,t} - \hat{\beta} X_t$$

Our analysis yields daily abnormal returns through the election year until the day following the second round, isolating firm-specific movements from aggregate and external factors. While abnormal returns inherently capture all idiosyncratic price movements not explained by market-wide factors, we focus specifically on poll release dates to identify electoral uncertainty. This approach allows us to systematically link stock price movements to the arrival of new electoral information, recognizing that while other unobserved factors may influence these returns, the timing of major poll releases provides a clear identification strategy for isolating electoral effects.

[10] The SELIC is the target policy rate of the Central Bank of Brazil. It is an average of the interbank interest rates on overnight loans that require government bonds as collateral.

[11] The Ibovespa is the main performance indicator for stocks traded on the B3 (São Paulo Stock Exchange) and represents the most important companies on the Brazilian capital market.

[12] The proxy for the US risk-free rate is the 1-month Treasury constant maturity rate.

[13] Due to weekends and holidays, the lag between two adjacent trading days, t and $t-1$, ranges from one to five days.

2.3 Electoral Risk

As our goal is to construct a measure of electoral risk that captures the magnitude of market reactions to electoral news, we begin by taking absolute values of abnormal returns. This transformation ensures that both positive and negative price movements contribute to our measure of electoral sensitivity, preventing offsetting effects when we aggregate across different poll dates. The use of absolute values aligns with the intuition that large price movements in either direction signal heightened electoral risk, as they indicate that new political information substantially affects firm valuations. We calculate this transformation as:

$$AAR_{i,t} = |AR_{i,t}|$$

By taking absolute values, we treat positive and negative price movements symmetrically in our measure of electoral risk. However, not all polls and electoral events generate equal market responses. Some releases provide substantially new information about electoral prospects, triggering large market movements, while others merely confirm existing expectations, yielding minimal price reactions. To avoid overweighting days with politically insignificant movements that might reflect noise rather than genuine electoral information, we estimate date-specific coefficients for each election using the following equation:

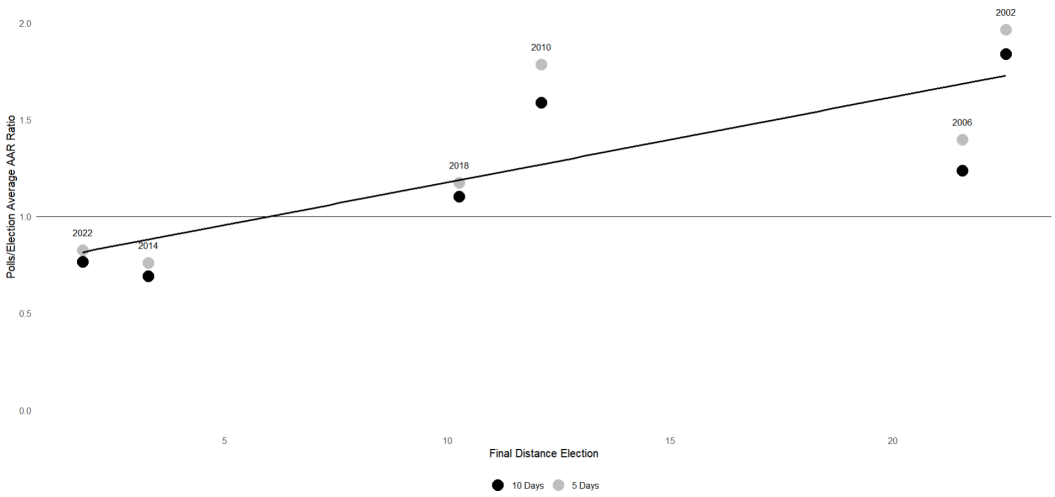
$$AAR_{i,t} = \alpha + \sum_{d \in \mathcal{D}} \beta_d \mathbb{1}\{t = d\} + \epsilon_{i,t}$$

where $\mathcal{D}$ is a vector containing the poll release dates and the days after the first and second rounds. This approach allows us to systematically identify and emphasize dates when poll releases generated substantial market-wide reactions, providing a more precise measure of electoral risk by focusing on events that demonstrably affected investor expectations about election outcomes. In Table A.5, in appendix, we present the coefficients of the ten dates with the largest aggregate absolute movements.

Figure 1 demonstrates, consistent with Carnahan and Saiegh (2021), that predictable elections generate minimal market volatility in post-election days, with the ratio of poll-day to election-day movements exceeding one as poll releases trigger larger price movements than election outcomes. However, in 2014 and 2022, when second-round margins were below 3.5%, post-election dates provided significant information, generating larger movements

in abnormal stock returns. For these close elections, the ratio falls below one, indicating that election days generated larger aggregate price reactions than poll releases. Table A.6, in the appendix, documents that the average aggregate movements around major poll releases in non-competitive election years are comparable in magnitude to those observed in close elections, indicating that there is significant variation at some point during the year of non-tight elections. By incorporating poll releases, our methodology captures electoral uncertainty throughout the campaign period rather than solely around election dates. This approach increases the likelihood of detecting electoral effects on firms, as polls often reveal significant changes in candidates' winning probabilities during the election year. Our measure thus provides an alternative to studies focused exclusively on close elections (Snowberg et al. (2007), Füss and Bechtel (2008), Imai and Shelton (2011), Carvalho and Guimaraes (2018), and Carvalho et al. (2017)).

Figure 1: Polls and Election Days: Effect of Final Electoral Distance



This figure illustrates the relationship between the final election distance and the Polls/Election Average Absolute Abnormal Return Ratio. We present two possibilities, using 10 (black) or 5 (gray) days with the highest absolute abnormal return after the release of an election poll. The line minimizes the distance to all points, highlighting the overall trend. The values above the points correspond to the election years. The final distance between the two leading candidates in each election is presented on the x-axis to indicate the competitiveness of each race. The horizontal line at y = 1 serves as a reference, indicating that values above 1 suggest that abnormal returns are more influenced by polls than election days, while values below 1 suggest that election days have a greater impact.

While election years average 30 poll release dates, many releases merely confirm market expectations and thus generate minimal price reactions. Polls that reiterate existing infor-

mation about candidate standings have little impact on stock prices, as this information is already incorporated into valuations. To construct a more precise measure of electoral risk, we focus on the most significant release dates, as shown in Table A.5. This selective approach serves two purposes: it emphasizes dates when polls conveyed substantial new information about electoral prospects, and it minimizes potential contamination from concurrent non-electoral events that might affect stock prices. We calculate our electoral risk measure using the following formula:

$$ElectoralRisk10_{i,e} = \frac{\text{Mean AAR}_{i,t} \text{ on 10 Relevant Days}}{\text{Mean AAR}_{i,t} \text{ for All Electoral Year}}$$

where for each election e and firm i, we calculate the ratio of average absolute abnormal returns on the most relevant days to average absolute abnormal returns across all election-year dates. This ratio measures how much more a stock moves on poll release days compared to typical trading days during the election year. For example, a ratio of two indicates that a stock's absolute abnormal returns on poll days are twice the magnitude of its typical movements. We similarly construct $ElectoralRisk5_{i,e}$ using only the five most relevant days.[14] These two measures present a methodological trade-off. $ElectoralRisk10_{i,e}$ better isolates electoral effects by reducing the influence of idiosyncratic stock movements, but includes days with smaller aggregate poll effects. In contrast, $ElectoralRisk5_{i,e}$ captures stronger market-wide reactions but may be more sensitive to confounding events on specific days.[15]

Table 1 presents regressions comparing our electoral risk measures with the firm-level political risk measures developed by Hassan et al. (2019).[16] The results show a significant correlation between our proposed measures and existing firm-level political risk metrics, suggesting that our market-based approach captures similar underlying political sensitivities as text-based measures. The measure incorporating ten dates exhibits the strongest association, as indicated by larger coefficient magnitudes, likely because it provides sufficient observations to capture electoral risk while minimizing noise. In contrast, measures using

[14] Finally, $ElectoralRiskElection_{i,e}$ uses only the two days following the rounds; the aim is to demonstrate that without political polls, it is impossible to achieve the results found in this investigation.

[15] As we had six elections, we ended up with a data set with 395 observations. In the appendix, in Table A.7, we present the exact number of firms per election.

[16] In the estimations in Table 1, the number of observations is smaller due to the presence of few Brazilian firms in the data provided by the website: https://www.firmlevelrisk.com/. As the measurements in Hassan et al. (2019) have a quarterly frequency, it was necessary to transform in averages, medians, and maximums to annualize the data.

only post-election days show no significant relationship with general political risk measures. This lack of correlation for post-election measures reinforces the importance of incorporating pre-election information, particularly in elections with predictable outcomes where most relevant information is revealed through polls rather than the final vote count. The stronger performance of our broader temporal measure validates our approach of capturing electoral risk throughout the entire year rather than focusing solely on election outcomes.

Table 1: Effect of Electoral Risk on Firm-Level Political Risk(Hassan et al.(2019))

	Dependent variable:								
	Mean_{PRisk}			Median_{PRisk}			Max_{PRisk}		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ElectoralRisk5	48.576**			47.091**			95.138*		
	(23.028)			(21.447)			(50.609)		
ElectoralRisk10		100.390***			95.147***			204.577***	
		(34.128)			(31.788)			(75.047)	
ElectoralRiskElection			−0.042			3.800			−33.655
			(15.346)			(14.301)			(33.591)
Observations	239	239	239	239	239	239	239	239	239
R^2	0.018	0.035	0.000	0.020	0.036	0.000	0.015	0.030	0.004

This table observes the level of association between the newly created measure of electoral risk and the political risk measures proposed by Hassan et al. (2019). Since the political risk measures are quarterly, we calculated aggregations using the median, mean, and maximum values for each firm. The number of firms is reduced in this exercise because the political risk measure does not exist for all 100 companies on the website https://www.firmlevelrisk.com/. *p<0.1; **p<0.05; ***p<0.01

Throughout our analysis, we demonstrate that the economic effects we identify using our electoral risk measure do not emerge when using the political risk measures of Hassan et al. (2019). This differential performance highlights our measure's greater specificity to electoral dynamics, as it directly captures market responses to electoral information rather than broader political discourse. While text-based political risk measures effectively capture general political uncertainty, they lack the precision needed to isolate electoral risk, particularly in contexts where elections yield predictable outcomes but generate several events of uncertainty during the campaign period.

Table A.7 in the appendix presents descriptive statistics for the *ElectoralRisk* measures. While average values vary across elections due to changes in sample composition, Table 2 provides more interpretable evidence by listing the five firms with highest *ElectoralRisk* values per election.[17] As expected, state-controlled firms represent more than one-third of these high-risk firms (21 of 60), given their direct exposure to government decisions. The

[17]In the estimation, different stocks from the same firm (for example, PETR3 and PETR4) were grouped in order not to work with duplicate companies.

remaining firms predominantly operate in concession-based industries and highly regulated sectors, consistent with greater sensitivity to government policies. While limited historical comparisons exist in the literature, our findings align with Carvalho and Guimaraes (2018), who documented that Petrobras and Banco do Brasil showed the highest electoral sensitivity in 2014 using options data.[18] For other election years in our sample, no comparable results exist in the literature.

Table 2: ElectoralRisk - Top Five Stocks by Year

ElectoralRisk5

	2002		2006		2010		2014		2018		2022	
	Firm	**Sector**	**Firm**	**Sector**	**Firm**	**Sector**	**Firm**	**Sector**	**Firm**	**Sector**	**Firm**	**Sector**
1	GOAU	Basic Materials	WEGE	Capital Goods and Services	DIRR	Consumer Cyclical	PETR	Oil, Gas and Biofuels	BBAS	Financial	SBSP	Utilities
2	PETR	Oil, Gas and Biofuels	ELET	Utilities	FLRY	Health	BBAS	Financial	SUZB	Basic Materials	BBAS	Financial
3	POMO	Capital Goods and Services	BRAP	Basic Materials	LREN	Consumer Cyclical	BRAP	Basic Materials	EMBR	Capital Goods and Services	USIM	Basic Materials
4	CMIG	Utilities	CSAN	Oil, Gas and Biofuels	DXCO	Basic Materials	ECOR	Capital Goods and Services	JBSS	Consumer non Cyclical	PETR	Oil, Gas and Biofuels
5	GGBR	Basic Materials	CMIG	Utilities	EGIE	Utilities	B3SA	Financial	VBBR	Oil, Gas and Biofuels	ASAI	Consumer non Cyclical

ElectoralRisk10

	2002		**2006**		**2010**		**2014**		**2018**		**2022**	
	Firm	**Sector**	**Firm**	**Sector**	**Firm**	**Sector**	**Firm**	**Sector**	**Firm**	**Sector**	**Firm**	**Sector**
1	PETR	Oil, Gas and Biofuels	WEGE	Capital Goods and Services	FLRY	Health	PETR	Oil, Gas and Biofuels	ALPA	Consumer Cyclical	USIM	Basic Materials
2	POMO	Capital Goods and Services	ELET	Utilities	EGIE	Utilities	BBAS	Financial	CCRO	Capital Goods and Services	SBSP	Utilities
3	CMIG	Utilities	BRAP	Basic Materials	DIRR	Consumer Cyclical	BRKM	Basic Materials	SUZB	Basic Materials	TEND	Consumer Cyclical
4	EGIE	Utilities	CSAN	Oil, Gas and Biofuels	EZTC	Consumer Cyclical	BBDC	Financial	BBAS	Financial	MRVE	Consumer Cyclical
5	VALE	Basic Materials	CMIG	Utilities	VIVT	Communications	USIM	Basic Materials	SLCE	Consumer non Cyclical	PETR	Oil, Gas and Biofuels

This Table presents the top five firms with the highest values of $ElectoralRisk5$ and $ElectoralRisk10$ per election. The sectors presented can be found on the B3 (São Paulo Stock Exchange) website.

Individual firms' electoral sensitivity varies across elections, as reflected in their movement in and out of our highest-risk rankings. Importantly, our measure identifies firms whose returns depend on which candidate wins, rather than those uniformly affected by electoral outcomes. For example, a firm that would benefit equally from both candidates' proposed policies would show low electoral risk in our measure, despite being affected by political decisions. Similarly, a firm expecting negative impacts regardless of the winner would also display low electoral risk. In contrast, firms showing high electoral risk are those whose fortunes diverge significantly based on the election winner. This distinction emphasizes that our measures capture candidate-specific sensitivity rather than general political exposure, providing a more nuanced view of how electoral uncertainty affects different firms.

3 Empirical Strategy

Our $ElectoralRisk$ measure yields one observation per firm-election pair, while firms report financial data quarterly.[19] Our empirical strategy accounts for this difference in data frequency. Firstly, we collect quarterly financial data for each election year plus one year before

[18] With an approach closer to the one adopted in this paper, Carvalho et al. (2017) also found more sensitivity in the shares of Petrobras and Banco do Brasil.

[19] In the appendix, session A.2 characterizes the data used as outcomes of interest.

and after, spanning six presidential elections from 2002 to 2022. This generates eighteen years of data, with four quarters per year. We define an election period as a three-year window: Year Before Election ‖ Election Year ‖ Year After Election. Since our $ElectoralRisk$ measure is constant within each election period, we assign the same value to all quarters within that period.

Since political risk should not uniformly affect all quarters within the three-year election period, we create a dummy variable, $DummyElection$, for the third quarter of the election year.[20] Our empirical strategy combines elements from Jens (2017) and Hassan et al. (2019), implementing a continuous Difference-in-Differences (DiD) where treatment intensity varies based on firm-specific electoral risk:

$$\begin{aligned} Y_{i,t} = \alpha + \beta_1 ElectoralRisk_{i,t} + \beta_2 DummyElection_t \\ + \beta_3 ElectoralRisk_{i,t} * DummyElection_t \\ + \beta_4 \log(TotalAssets_{i,t}) + \gamma_{Firma\|Setor} + \delta_{eleicao} + \epsilon_{i,t} \end{aligned}$$

where Y represents our outcomes of interest (liquid assets, investment, financing), ElectoralRisk denotes our electoral risk measures, $log(TotalAssets)$ controls for firm size following Hassan et al. (2019), $\gamma_{Firma|Sector}$ represents firm or sector fixed effects, and $\delta_{election}$ captures election period fixed effects.[21]All monetary variables are deflated to ensure real comparability.

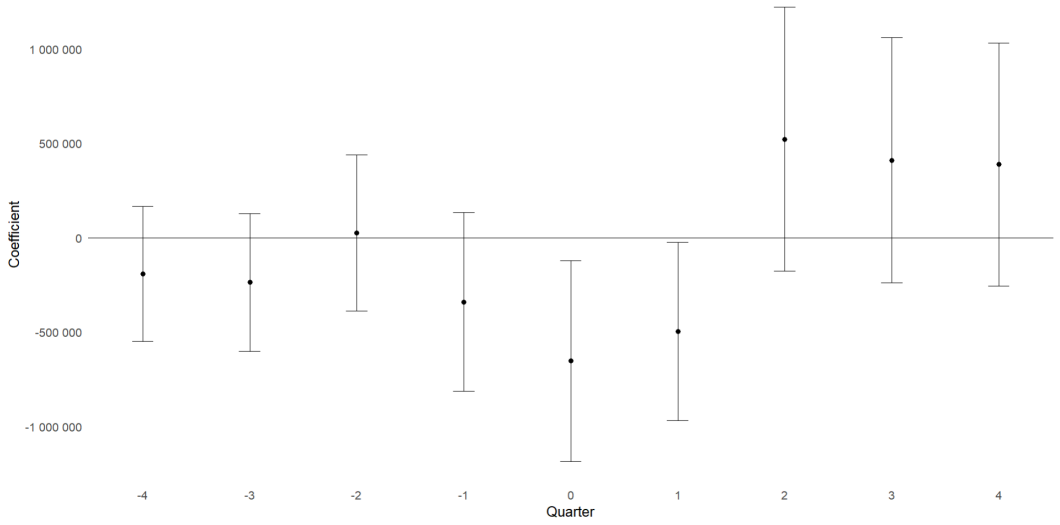
Our analysis examines how electoral risk affects firm behavior in election quarters compared to other periods. The coefficient of interest, β_3, captures this differential effect. While β_1 measures the general effect of electoral risk across all quarters, and β_2 identifies the specific effect of election quarters, β_3 reveals how firms with different levels of electoral risk respond during election quarters. Consistent with existing literature, we expect $\beta_3 < 0$ for investment and financing measures, indicating that firms with higher electoral risk reduce these activities during election quarters. Conversely, we anticipate positive values for liquid assets, suggesting precautionary cash holdings.

[20]In Brazil, the electoral calendar specifies that elections occur on the first Sunday of October for the first round and the last Sunday of October for the second round.

[21]The results found are similar for any of the proposed fixed effects: firm or sector.

Figure 2 validates our focus on the third quarter as the treatment period.[22] We plot the investment response coefficients from interactions between $ElectoralRisk10$ and quarter dummies (third quarter equals 0 (zero))). The effects are strongest in the third quarter, suggesting maximum impact of electoral uncertainty on firm decisions. Adjacent quarters show moderate effects, particularly the fourth quarter of election year, which includes both election rounds in October. The sign reversal in early quarters of the post-election year highlights the importance of studying firm behavior after electoral uncertainty resolves, as it reveals how the resolution of political uncertainty affects firms' strategic decisions.[23]

Figure 2



This figure illustrates the estimated coefficients of the interaction term between Electoral Risk (10-day measure) and the election quarter dummies. The x-axis represents the quarters relative to the third quarter (e.g., -2 for two quarters before the election third quarter, 0 for the election third quarter, and +2 for two quarters after the election third quarter). The y-axis displays the coefficient estimates, measuring the impact of electoral risk on investment, with error bars indicating 90% confidence intervals. The solid horizontal line at y = 0 serves as a reference, showing whether effects are significantly different from zero.

The proposed methodology provides an approach to measuring how electoral uncertainty

[22]This timing aligns with Brazil's electoral regulations, which permit official campaigns to begin either 90 (2002 to 2014) or 45 (2018 to 2022) days before the first election day (first Sunday on October). Political campaigns are prohibited before the third quarter, creating a period of limited political information and formal campaign activity. This regulatory structure likely amplifies electoral uncertainty effects during the third quarter, as it coincides with the official campaign period when firms receive more precise signals about potential electoral outcomes and policy directions.

[23]In appendix, Figure A.3 replicates this analysis using financing as the dependent variable. The temporal pattern of financing responses mirrors our investment findings, with the strongest reduction occurring in the third quarter and similar post-election recovery, suggesting firms simultaneously adjust both investment and financing decisions in response to electoral uncertainty.

affects firm behavior. [24] The combination of our firm-level electoral risk measure with quarterly financial data enables us to precisely estimate when and how firms adjust their behavior in response to electoral risk. Similarly, the same framework allows us to track how firms resume postponed activities in the year following elections when political uncertainty is resolved.

4 Results

4.1 Effect of Electoral Risk on Real Variables

Table 3 presents our main results.[25] Consistent with previous literature, firms with higher electoral risk reduce both investment and financing in the pre-election period.[26] While our liquid assets measure shows no statistical significance, its positive coefficient aligns with prior studies suggesting that electoral risk increases firms' liquid asset holdings.[27] Investment exhibits the largest economic magnitude relative to its mean, indicating substantial real effects. These findings complement existing evidence on how political uncertainty reduces corporate investment (Baker et al. (2016), Hassan et al. (2019), Gulen and Ion (2016), and Jens (2017)). Robustness tests using sector-fixed effects instead of firm-fixed effects yield similar results (Table A.11).[28]

Comparing our two *ElectoralRisk* measures, we find that the 10-date measure yields larger and more statistically significant coefficients than the 5-date measure. The superior performance of the 10-date measure likely reflects its ability to reduce the influence of confounding firm-specific events by averaging over more observations. In contrast, *ElectoralRiskElection*, which uses only post-election day absolute abnormal returns, shows no significance for the three outcomes. As shown in Table A.5, this pattern reinforces that markets often anticipate election outcomes, making post-election day price movements less informative. Our poll-based measure better captures electoral uncertainty because it incor-

[24]

[25] Because firms under state control may act differently from firms under private control in electoral periods, the main estimations exclude these companies from the sample. In the appendix, Table A.10 presents the coefficients including state-controlled firms.

[26] In relation to the Financing outcome, only the *ElectoralRisk*10 measure showed statistical significance.

[27] Contrary to previous studies, Brazil's disposition measure proves noisy because it fails to separate cash holdings from all liquid assets. This item has been broken down only since the 2014 election. To avoid losing half of the observations, we used a broader definition than previous publications.

[28] Analysis of additional financial decisions, including dividend payments, debenture issuance, and seasoned equity offerings (Table A.14), reveals no significant electoral risk effects.

Table 3: Effect of Electoral Risk in Real Variables

	Dependent variable:								
	$\Delta LiquidAssets$			$\Delta Investment$			$\Delta Financing$		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ElectoralRisk5	−160,162			−28,380			−209,015		
	(142,300)			(81,552)			(164,414)		
ElectoralRisk10		−352,410			−80,236			−369,151	
		(306,140)			(168,260)			(328,235)	
ElectoralRiskElection			379,755			−12,199			−205,335
			(339,919)			(87,631)			(216,531)
DummyElection	1,008,986	1,288,130*	1,881,796	581,944**	796,903**	83,897	1,431,224**	1,660,793**	514,782
	(665,760)	(716,830)	(1,175,261)	(283,595)	(387,010)	(158,275)	(614,567)	(754,081)	(326,683)
ElectoralRisk5:DummyElection	300,089			−338,591*			−450,297		
	(340,693)			(182,274)			(481,124)		
ElectoralRisk10:DummyElection		145,283			−652,658**			−1,030,649*	
		(266,756)			(323,127)			(569,961)	
ElectoralRiskElection:DummyElection			−675,186			−70,586			−71,118
			(709,238)			(114,008)			(237,909)
Mean	148,935	148,935	148,935	363,783	363,783	363,783	3,334,135	3,334,135	3,334,135
Election FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,405	3,405	3,405	2,899	2,899	2,899	3,100	3,100	3,100
R^2	0.021	0.021	0.021	0.143	0.143	0.142	0.450	0.450	0.450

This table observes the effect of the three created measures of electoral risk on outcomes of interest: liquid assets, investment, and financing. The measure *DummyElection* is equal to 1 in third quarters of election years. In all models, we use firm and election fixed effects. Standard errors (in parentheses) are clustered at the firm level. *p<0.1; **p<0.05; ***p<0.01

porates market reactions throughout the entire election year, when significant uncertainty about electoral outcomes often exists. Additionally, when we apply our empirical strategy to the political risk measure of Hassan et al. (2019), Table A.12 shows no statistically significant effects, demonstrating the value of our election-specific measure. In Table A.13, we further test the robustness of our findings by including both measures in the same specification; our electoral risk measures retain their statistical significance.

4.2 Robustness Checks

Third Quarter. To address concerns that firms with higher electoral risk might systematically reduce investment and financing in third quarters regardless of election year, we conduct a placebo test. We construct $DummyNoElection$, an indicator for third quarters in non-election years, and augment our baseline specification with this variable and its interaction with our electoral risk measures.

Table A.15 demonstrates that our main results remain robust to this placebo test. The original coefficients maintain their significance, while the interaction term $ElectoralRisk * DummyNoElection$ shows no significance across outcomes, confirming that our findings are not driven by systematic quarterly patterns. For liquid assets, the similar coefficients on $DummyElection$ and $DummyNoElection$ support our earlier finding of no distinct electoral

effects on firms' liquid asset holdings.

Aggregate Movements. Because our *ElectoralRisk* measure is constructed using days with the highest aggregate market movements during poll releases, we conduct a exercise to ensure our results are not driven by general market volatility. We create *AggregateRisk*, a measure constructed from the days with the highest aggregate movement in the market, regardless of poll releases. Table 4 shows that this alternative measure yields no significant results, confirming that our findings reflect electoral risk rather than firms' general sensitivity to market volatility. This test demonstrates that our electoral risk measure captures firms' specific responses to political information rather than their reaction to broader market movements.

Table 4: Using Days with more Aggregate Absolute Abnormal Returns (Not necessarily Polls or Election Days)

	Dependent variable:					
	$\Delta LiquidAssets$		$\Delta Investment$		$\Delta Financing$	
	(1)	(2)	(3)	(4)	(5)	(6)
AggregateRisk5	−588,958*		−35,173		−819,677	
	(331,415)		(97,483)		(646,489)	
AggregateRisk10		−79,208		156,900		−910,588
		(238,288)		(125,733)		(944,196)
DummyElection	2,164,540	2,235,552	31,348	25,257	527,550	538,137
	(1,347,587)	(1,407,131)	(177,049)	(188,248)	(408,881)	(423,066)
AggregateRisk5:DummyElection	−912,892		7,371		−71,641	
	(806,352)		(121,372)		(271,626)	
AggregateRisk10:DummyElection		−1,075,442		15,979		−90,909
		(939,445)		(143,362)		(303,720)
Mean	148,935	148,935	363,783	363,783	3,334,135	3,334,135
Election FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,405	3,405	2,899	2,899	3,100	3,100
R^2	0.021	0.021	0.142	0.142	0.451	0.450

This table observes the effect of the two measures of Aggregate Risk on three outcomes of interest: liquid assets, investment, and financing. The *AggregateRisk* measure follows the same methodology as *ElectoralRisk*, but selects days with the highest absolute abnormal returns, regardless of whether they coincide with polls or election days. In all models, we use firm and election fixed effects. Standard errors (in parentheses) are clustered at the firm level. *p<0.1; **p<0.05; ***p<0.01

Movementes on Third Quarter. The institutes conduct most polls in the months close to the election, placing them in the year's third quarter. In other words, the continuous measure of propensity to be treated aligns with the period when the treatment occurs. Therefore, there is a possibility that the measure created only captured firms that had a lot of movement during this period, mechanically generating less investment and financing. I, therefore, used the busiest days in the third quarter, regardless of the existence of electoral

polls.

Table A.16 shows that firms with high price movements in the third quarter, absent poll releases, do not exhibit reduced investment or financing, addressing concerns about mechanical relationships with the treatment period. We extend this analysis to all quarters, replacing *DummyElection* with indicators for each quarter tested. The results reveal no systematic relationship between quarterly price movements and corporate decisions in any period, further supporting our electoral risk interpretation.

Simulation. Finnaly, we simulate 1,000 alternative combinations of 5/10 days to construct electoral risk measures. Table 5 presents results from two simulation approaches: one weighted by months with higher polling frequency and one with uniform weights across months. We report the percentage of simulations where the $ElectoralRisk{*}DummyElection$ interaction yields statistically significant negative coefficients. While approximately 5% of simulations show significance for individual outcomes, only 1% demonstrate significance for both investment and financing simultaneously. This low joint probability suggests that our findings are uniquely associated with poll release dates rather than arbitrary market movements.

Table 5: Simulation

	With Month Weights								
	Investiment			Financing			Both		
	Coef Negative	P Value	Coef & P Value	Coef Negative	P Value	Coef & P Value	Coef Negative	P Value	Coef & P Value
ElectoralRisk5:DummyElection	55.3%	11.3%	6.6%	46.6%	7.9%	4.3%	31.9%	1.3%	0.8%
ElectoralRisk10:DummyElection	55.1%	11.0%	6.6%	46.7%	7.2%	4.0%	33.5%	2.1%	1.3%
Both	42.6%	4.5%	2.5%	34.3%	2.6%	1.4%	19.9%	0.3%	0.1%
	Without Month Weights								
	Investiment			Financing			Both		
	Coef Negative	P Value	Coef & P Value	Coef Negative	P Value	Coef & P Value	Coef Negative	P Value	Coef & P Value
ElectoralRisk5:DummyElection	48.3%	10.8%	5.5%	50.7%	11.2%	5.6%	29.4%	1.1%	0.6%
ElectoralRisk10:DummyElection	47.1%	12.1%	6.3%	51.1%	11.3%	5.3%	30.2%	2.1%	1.1%
Both	35.7%	4.3%	2.2%	38.7%	4.3%	1.8%	18.6%	0.2%	0.1%

This table presents the results of 1000 simulations of days for constructing the measures of $ElectoralRisk5$ and $ElectoralRisk10$. We present the percentage of times that the coefficient of $ElectoralRisk : DummyElection$ displayed a negative sign, statistical significance, and these two attributes together for the investment and financing outcomes. In the first part of the table, we present simulations with weights relative to the months in which the electoral polls are conducted. In the second part, there are no weights.

4.3 Effects After Election

Previous studies document that firms resume investment after electoral uncertainty resolves (Jens (2017); Julio and Yook (2012)). For countries with elections in the second semester, this recovery typically occurs in the first quarter of the following year. To examine this pattern, we re-estimate our models replacing *DummyElection* with *DummyPost*, an indicator for the first quarter of the post-election year. Table 6 presents estimates examining effects in the first post-election quarter. The coefficients reverse signs across all specifications, suggesting firms adjust their behavior once electoral uncertainty resolves. However, statistical significance appears only for financing when using the $ElectoralRisk10$ measure. While investment coefficients show the expected positive sign, they lack statistical significance. The absence of significant post-election effects may reflect offsetting behaviors between winners and losers, as firms benefiting from and those harmed by the election outcome could neutralize each other.

Table 6: Effects of Electoral Risk on After Election Real Variables

	Dependent variable:					
	$\Delta LiquidAssets$		$\Delta Investment$		$\Delta Financing$	
	(1)	(2)	(3)	(4)	(5)	(6)
ElectoralRisk5	−144,236		−57,484		−244,412	
	(125,148)		(62,966)		(170,031)	
ElectoralRisk10		−268,004		−205,474*		−529,364
		(228,910)		(107,952)		(338,118)
DummyPostElection	343,993	820,070	−651,007	−697,061	−1,990,947***	−2,289,504***
	(924,704)	(1,533,339)	(400,932)	(452,809)	(438,641)	(555,134)
ElectoralRisk5:DummyPostElection	109,454		193,266		344,777	
	(224,844)		(195,324)		(319,916)	
ElectoralRisk10:DummyPostElection		−431,824		515,469		750,197**
		(583,501)		(451,565)		(339,110)
Mean	148,935	148,935	363,783	363,783	3,334,135	3,334,135
Election FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,405	3,405	2,899	2,899	3,100	3,100
R^2	0.020	0.020	0.143	0.144	0.457	0.458

This table observes the effect of the created measures of electoral risk on outcomes of interest: liquid assets, investment, and financing. The measure *DummyPostElection* is equal to 1 in the first quarter of post-election years. In all models, we use firm and election fixed effects. Standard errors (in parentheses) are clustered at the firm level. *p<0.1; **p<0.05; ***p<0.01

The relationship between government and firms in Brazil suggests that post-election investment recovery may depend on electoral outcomes, particularly which firms benefit from the winning candidate's victory. While our initial electoral risk measure captures the magnitude but not the direction of price movements, understanding these asymmetric effects is crucial for identifying how electoral outcomes differently affect firms. Previous

studies have not distinguished how firm-level political risk varies with specific political forces. We address this gap by developing measures that separate firms positively and negatively associated with electoral winners, allowing us to examine how political alignment influences firms' investment and financing decisions in the first quarter after electoral uncertainty resolves.

5 Winners and Losers

We initially considered classifying polls based on whether they favored winning or losing candidates. However, this approach proves challenging as market participants may interpret electoral trajectories in varied ways, with reactions often reflecting interpretations that depend heavily on the temporal context of when the poll is released.[29] Therefore, market reactions to a poll might reflect not just the polling numbers, but also whether the poll confirms or refutes the expected impact of recent news events, making it infeasible to construct a classification based solely on published polling data.

Rather than attempting to classify polls directly, we develop a methodology that exploits correlational movements between firms' abnormal returns on poll release days. Unlike our previous analysis, we use Abnormal Returns (AR) rather than Absolute Abnormal Returns (AAR). We construct a correlation matrix between all firms for each election using ARs on poll days.[30] This matrix captures the co-movement patterns between each pair of stocks on poll release days. We employ Principal Component Analysis (PCA) to reduce the dimensionality of this matrix into a single scale that orders firms based on their poll-day return patterns. The appendix provides formal derivations of this method. This dimensionality reduction places firms with positively correlated poll-day returns close together while

[29]For example, in the second round of the 2018 election, in the last week before the election, we have a reduction of 6 percentage points between the two candidates in the race. However, the gap between the two candidates was 12 points five days before the vote. In most contexts, the market views a 6-point decrease in the gap as favorable for the second candidate. However, for this poll close to the election, the market perceives it as a positive result for the frontrunner, given that a 12-point gap was too large to close in five days. The example presented is just one possibility within a set of countless scenarios, making constructing a single metric for classifying polls difficult. In the literature, some models seek to control these patterns, such as the electoral option model (see Alesina et al. (1997)). However, none was more informative than the stock price movement itself.

[30]In comparison with the $ElectoralRisk$ measure, which used 5 or 10 days, we decided to use only the 10 days with the most movement shown in Table A.5. We included more cases in calculating the correlation matrix to ensure greater accuracy and reduce the impact of small stochastic events that could introduce significant noise.

separating firms with negatively correlated returns.[31]

The dimensionality reduction produces a scale with both positive and negative values, but these signs do not inherently identify electoral winners and losers. To orient the scale, we use abnormal returns from the day following the second-round election results. We calculate the correlation between these post-election returns and our initial scale: maintaining the original scale if the correlation is positive and inverting it if negative. This approach aligns our scale with electoral outcomes, using second-round results as the definitive marker of electoral success.

This process yields $WinnersRisk_{PCA}$, a measure that differs fundamentally from our electoral risk measures. High absolute values at both extremes of the scale indicate firms with strong electoral sensitivity, with positive values representing firms potentially benefiting from the winning candidate and negative values indicating firms potentially harmed by the election outcome. This bidirectional measure allows us to test whether firms' post-election investment and financing decisions diverge based on their political alignment.

Table A.8 in the appendix provides descriptive statistics for our winners-losers measure, which is constructed to have a zero mean. The medians vary across elections, indicating asymmetric distributions of firms associated with winners versus losers. Table 7 lists the five firms most strongly associated with winning and losing candidates. For the 2014 election, where external validation is possible, our measure correctly identifies Petrobras as negatively associated with the winning PT government, consistent with existing literature. Again, these associations should be interpreted within the context of both candidates, as firms may show limited sensitivity when neither candidate poses significant risks to their operations.

Petrobras's trajectory illustrates how market perceptions of political risk evolve over time. In 2002, its negative ranking reflected the "Efeito Lula", when markets reacted adversely to Lula's expected victory due to concerns about state intervention. The firm's absence from our rankings in 2006 and 2010 coincides with a period when PT governments were viewed positively, as Petrobras benefited from rising commodity prices and pre-salt oil discoveries. However, by 2014, Petrobras appears as negatively associated with the

[31] We also employ Multidimensional Scaling (MDS) as an alternative approach. For MDS, we transform the correlation matrix into a distance matrix using:

$$Distance_{i,j} = 1 - Correlation_{i,j}$$

where $Distance_{i,j}$ represents an element of the distance matrix and $Correlation_{i,j}$ represents an element of the correlation matrix. The new estimations using the MDS variable are presented in the appendix.

Table 7: WinnersRisk - Top Five Winners and Losers Firms by Year

	$WinnersRisk_{PCA}$											
	2002 (Lula)		**2006 (Lula)**		**2010 (Dilma)**		**2014 (Dilma)**		**2018 (Bolsonaro)**		**2022 (Lula)**	
	Firm	**Sector**	**Firm**	**Sector**	**Firm**	**Sector**	**Firm**	**Sector**	**Firm**	**Sector**	**Firm**	**Sector**
1	EGIE	Utilities	TRPL	Utilities	YDUQ	Consumer Cyclical	WEGE	Capital Goods and Services	GGBR	Basic Materials	AZZA	Consumer Cyclical
2	TRPL	Utilities	PCAR	Consumer non Cyclical	UGPA	Oil, Gas and Biofuels	USIM	Basic Materials	BPAC	Financial	HAPV	Health
3	BRAP	Basic Materials	VIVT	Communications	ALPA	Consumer Cyclical	BRKM	Basic Materials	BRAP	Basic Materials	GMAT	Consumer non Cyclical
4	ELET	Utilities	CCRO	Capital Goods and Services	DIRR	Consumer Cyclical	EMBR	Capital Goods and Services	BRKM	Basic Materials	ASAI	Consumer non Cyclical
5	PCAR	Consumer non Cyclical	USIM	Basic Materials	JBSS	Consumer non Cyclical	VALE	Basic Materials	ABEV	Consumer non Cyclical	B3SA	Financial
-1	BRFS	Consumer non Cyclical	ITUB	Financial	USIM	Basic Materials	ABEV	Consumer non Cyclical	ENEV	Utilities	PETR	Oil, Gas and Biofuels
-2	PETR	Oil, Gas and Biofuels	BRAP	Basic Materials	GOAU	Basic Materials	PETR	Oil, Gas and Biofuels	VBBR	Oil, Gas and Biofuels	SUZB	Basic Materials
-3	VIVT	Communications	VALE	Basic Materials	VALE	Basic Materials	ITSA	Financial	MRVE	Consumer Cyclical	KLBN	Basic Materials
-4	ITSA	Financial	ABEV	Consumer non Cyclical	GGBR	Basic Materials	ITUB	Financial	SANB	Financial	BBAS	Financial
-5	ABEV	Consumer non Cyclical	WEGE	Capital Goods and Services	CSNA	Basic Materials	EZTC	Consumer Cyclical	RADL	Health	JBSS	Consumer non Cyclical

This Table presents the top 5 and bottom 5 stocks with the highest and lowest values of $WinnersRisk_{PCA}$ per election. The sectors presented can be found on the B3 (São Paulo Stock Exchange) website.

PT government, coinciding with the Lava Jato corruption investigations that exposed systematic fraud and triggered an investor confidence crisis. This shift marked a fundamental change in market sentiment, as concerns about governance, financial management, and state intervention intensified. This negative outlook persisted in subsequent years, with Petrobras becoming a focal point of political and economic debates, especially during periods of heightened uncertainty regarding government policies and intervention.

The interpretation of $WinnersRisk_{PCA}$ requires caution, as individual firm values may lack intuitive meaning due to the abstract nature of their underlying linear combinations. Nevertheless, these dimension reduction techniques prove valuable for analyzing aggregate patterns, particularly when examining broad relationships rather than firm-specific metrics. This methodological trade-off reflects the nature of dimensionality reduction: while potentially obscuring individual-level interpretation, it effectively captures systematic patterns across the full sample. Given that firms within the same sector often show similar patterns, in estimations using $WinnersRisk_{PCA}$ sector fixed effects play an important role in isolating firm-specific electoral sensitivity from broader sectoral responses.[32]

5.1 Effect of Winners Risk on Real Variables

We apply our previous empirical strategy to examine winners' effects by replacing our variable of electoral risk as $WinnersRisk$. Table 8 shows results for the election period. While liquid assets and investment show no statistically significant effects, firms associated with winners significantly reduce financing during this period. This financing pattern may reflect winning firms strategically postponing credit raises until post-election, when their increased valuations could secure better terms, while losing firms accelerate financing to avoid further

[32]The models that include sector fixed effects are presented in the appendix. Additionally, we estimate alternative specifications with sector-election fixed effects, where a unique fixed effect is assigned to each sector-election pair. This approach reinforces that the results are not being driven by sectoral movements.

stock price deterioration.[33] This strategic timing of financing decisions represents a novel finding in the literature. Table A.18, in the appendix, replicates these results using sector rather than firm fixed effects, helping rule out that sectoral correlations drive our findings.[34]

Table 8: Effect of Winners Risk on Real Variables

	Dependent variable:					
	$\Delta LiquidAssets$		$\Delta Investment$		$\Delta Financing$	
	(1)	(2)	(3)	(4)	(5)	(6)
WinnerRisk_{PCA}	47,742	49,266	4,832	−143	−36,795	−53,269
	(36,912)	(40,308)	(27,364)	(25,017)	(44,371)	(49,567)
DummyElection	1,519,557*		41,148		511,310**	
	(780,981)		(130,647)		(231,297)	
DummyPostElection		788,504		−215,052**		−2,194,024***
		(1,429,795)		(102,587)		(423,823)
WinnerRisk_{PCA}:DummyElection	−136,402		−13,744		−88,856*	
	(119,482)		(31,790)		(51,303)	
WinnerRisk_{PCA}:DummyPostElection		−154,928		47,035**		112,354*
		(182,463)		(22,195)		(57,367)
Mean	148,935	148,935	363,783	363,783	3,334,135	3,334,135
Election FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,405	3,405	2,899	2,899	3,100	3,100
R^2	0.021	0.021	0.144	0.144	0.458	0.458

This table observes the effect of Winners Risk on outcomes of interest: liquid assets, investment, and financing. The measure *DummyElection* is equal to 1 in third quarters of election years and *DummyPostElection* is equal to 1 in first quarters of post-election years. In all models, we use firm and election fixed effects. Standard errors (in parentheses) are clustered at the firm level. *p<0.1; **p<0.05; ***p<0.01

These findings complement those in Table 3, suggesting that elections generate uncertainty for both winning and losing firms. The absence of significant investment effects using $WinnersRisk$ variables indicates that electoral uncertainty dampens investment across firms regardless of their political alignment. However, these measures reveal important differences after electoral uncertainty resolves. Table 8 shows that firms associated with winners significantly increase investment in the first post-election quarter.[35] This finding represents a novel contribution to the literature. Similarly, financing patterns reverse, with winning

[33]Similar results emerge when using our alternative measure constructed with Multidimensional Scaling techniques (see appendix Table A.17).

[34]In parallel, as in the previous subsection, as a robustness analysis, we tested whether these results occur in the third quarter of non-election years. In Table A.20, we observe that the results remain solid with the insertion of the *DummyNoElection* variable. Our robustness tests using the market's busiest days, rather than poll release days, show coefficient sign reversals (Table A.21), indicating these effects are specific to electoral information. In addition, in Table A.22, we used only the busiest movements restricted to the third quarter of the election year.

[35]In the appendix, Table A.23 presents the same models with sector fixed effects. Generally speaking, the results remain similar, with statistical significance for the two measures of $WinnersRisk$ across investment and financing outcomes. Additionally, we include models in Table A.19 and A.24 that incorporate sector-election fixed effects, ensuring that our findings are not driven by sector-specific movements within each election cycle. The results remain consistent across these specifications.

firms resuming financing activities, likely capitalizing on improved valuations.[36]

Our two empirical approaches reveal the complex dynamics of firm behavior around elections. Electoral uncertainty reduces investment across all firms, regardless of their political alignment. However, our $WinnersRisk$ measures uncover an important asymmetry: firms associated with electoral winners drive the investment recovery in the post-election period. This finding extends the literature by identifying a novel channel through which political alignment shapes corporate investment patterns.

6 Discussion

This paper examines how electoral processes shape firm behavior. We find that firms with higher electoral risk significantly reduce investment and financing as elections approach. While these activities typically recover in the first half of the post-election year, we make the novel finding that this recovery is driven by firms positively associated with winning candidates.

To identify these electoral effects on firm behavior, we develop novel measures of electoral risk using stock price reactions to poll releases, addressing the limited information content of post-election returns in non-competitive races. By capturing market responses to polls throughout the election year, we identify meaningful variation in electoral sensitivity even when final outcomes are predictable. This approach also enables us to construct measures that distinguish between firms positively and negatively associated with electoral outcomes based on their asymmetric price responses to polling information.

Our findings on the real effects of electoral risk have important implications for macroeconomic policy management during and after elections. Since electoral uncertainty affects firm-level investment and financing decisions, which aggregate to influence broader economic outcomes, policymakers need to understand these patterns when calibrating their responses. Our methodology, which allows rapid construction of firm-level measures, provides timely information about the distribution of electoral sensitivity across firms. For instance, when large firms are predominantly aligned with winning candidates, expansionary policies may

[36] Newly, as a robustness exercise, we decided to observe the effect on other first quarters outside the electoral scope. The results of Table A.25, found in the appendix, show that the coefficient relating to investment is not significant for other first quarters. However, the coefficient for the Financing measure is significant for other first quarters. Therefore, the results relating to financing found in Table 8 should be observed with caution, as they may only represent the temporal behavior of these firms.

have amplified effects. Conversely, when major firms are associated with losing candidates, different policy approaches may be warranted to maintain economic stability.

Future research should examine how firms mitigate electoral risk exposure. Prior work shows that firms with higher political risk increase political donations and lobbying expenditures (Hassan et al. (2019)). Beyond political strategies, understanding the financial instruments firms employ to manage electoral risk remains an important area for investigation. Equally important is identifying the specific channels through which electoral outcomes affect firm behavior, particularly how political alignment influences access to credit, allocation of public contracts, and changes in regulatory frameworks. These mechanisms could explain the heterogeneous corporate responses to electoral uncertainty documented in this paper.

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A Appendix

A.1 Electoral Risk

Figure A.1: Firm-Level Political Risk and Elections (Hassan et al. (2019))

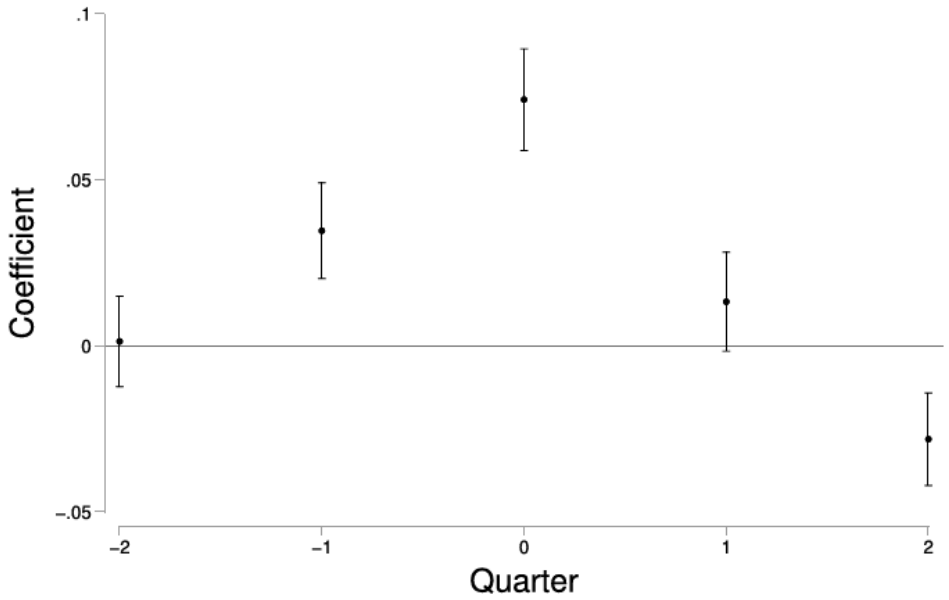


FIGURE II

Variation in $PRisk_{i,t}$ around Federal Elections

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

Table A.1: Effect of Presidential Elections on Firm Political Risk (Hassan et al. (2019))

	PRisk Hassan et al. (2019)		
	(Brazil)	(United States)	(France)
Presidential Election	49.664**	14.329***	32.449*
	(23.680)	(1.754)	(18.185)
Firm FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Observations	5,259	225,954	4,155
R^2	0.107	0.225	0.223

This table observes the effect of the presidential electoral semesters on the political risk measures proposed by Hassan et al (2019). In the first column, we analyze the results for the Brazilian context, in the second, the US firms, and in the last column, the French case. In all models, we use firm and year fixed effects. Standard errors (in parentheses) are clustered at the firm level.*p<0.1; **p<0.05; ***p<0.01

Table A.2: Number of mentions in the collections of O Globo and Folha de São Paulo

Research Institute	**Acervo O Globo**	**Acervo Folha de São Paulo**	**Total**
Datafolha	4738	25222	29960
Ibope/Ipec	10718	6429	17147
Sensus	2007	1744	3751
MDA	656	1407	2063
Vox Populi	1243	629	1872
Ipespe	145	1009	1154
Quaest	566	342	908
Ideia Big Data	507	354	861
FSB	335	409	744
Veritá	279	205	484

This table presents the number of mentions of polls research institutes in the collections of the two main newspapers in Brazil: O Globo and Folha de São Paulo.

Figure A.2: Newspapers and Websites

In this figure, we present the four main data sources for building the dataset of Polls days: the newspapers O Globo and Folha de São Paulo, provided by their respective archives and the websites G1/Globo and Folha de São Paulo.

Table A.3: Polls Summary by Election

	2002	2006	2010	2014	2018	2022	Total
Research Institute							
Ibope	49	10	48	40	21	19	187
Datafolha	56	42	54	41	24	30	247
Election Round							
Round 1	57	26	46	41	20	21	211
Round 2	48	26	56	40	25	28	223
Diff Research and Publication							
Mean(ResearchDay-PublicationDay)	2.190	1.777	2.804	2.100	1.925	1.500	2.050
Total polls and Days Impact							
Total	105	52	102	81	45	49	434
Total Unique Polls	42	27	41	40	27	28	205
Total Unique Days	38	24	37	32	25	26	182
Publication Time							
Night	17	11	6	18	17	20	89
Morning	7	5	8	6	2	0	28
Sunday	9	5	5	1	3	2	25
Saturday	0	1	13	4	1	3	22
Market Open(Before 17:00)	0	0	5	3	2	1	11
Yesterday	5	2	0	0	0	0	7
Month Day of Impact							
January	1	1	0	0	0	0	2
February	1	2	1	1	0	0	5
March	2	0	3	1	0	1	7
April	3	1	2	2	1	0	9
May	2	1	1	2	0	1	7
June	2	1	2	3	2	1	11
July	5	1	3	3	0	1	13
August	5	3	7	3	2	3	23
September	8	6	9	8	8	9	48
October	9	8	8	9	12	10	56
November	0	0	1	0	0	0	1

Table A.4: IBrX 100 - Portfolio of October 3, 2024

Code	Stock	Type	Quantity	Participation(%)
ALOS3	ALLOS	ON NM	502,481,592	0.477
ALPA4	ALPARGATAS	PN N1	166,460,180	0.051
ABEV3	AMBEV S/A	ON	4,394,835,131	2.577
AMBP3	AMBIPAR	ON NM	41,041,780	0.245
ASAI3	ASSAI	ON NM	1,349,687,675	0.412
AURE3	AUREN	ON NM	291,727,616	0.130
AZUL4	AZUL	PN N2	328,421,113	0.088
AZZA3	AZZAS 2154	ON NM	127,330,493	0.230
B3SA3	B3	ON EDJ NM	5,511,401,013	2.577
BBSE3	BBSEGURIDADE	ON NM	637,332,335	0.966
BBDC3	BRADESCO	ON EJ N1	1,484,426,957	0.849
BBDC4	BRADESCO	PN EJ N1	5,129,958,973	3.332
BRAP4	BRADESPAR	PN N1	250,969,312	0.218
BBAS3	BRASIL	ON NM	2,842,613,858	3.298
BRKM5	BRASKEM	PNA N1	265,388,400	0.230
BRAV3	BRAVA	ON NM	463,981,130	0.348
BRFS3	BRF SA	ON NM	814,523,002	0.831
BPAC11	BTGP BANCO	UNT N2	1,287,247,964	1.785
CXSE3	CAIXA SEGURI	ON NM	517,500,000	0.320
CRFB3	CARREFOUR BR	ON NM	531,901,983	0.206
CCRO3	CCR SA	ON NM	991,920,937	0.524
CMIG4	CEMIG	PN EJ N1	1,858,636,840	0.906
COGN3	COGNA ON	ON NM	1,872,454,628	0.102
CSMG3	COPASA	ON NM	188,462,398	0.189
CPLE3	COPEL	ON EDJ N2	1,300,330,190	0.505
CPLE6	COPEL	PNB EDJ N2	1,679,233,590	0.728
CSAN3	COSAN	ON NM	1,165,337,843	0.674
CPFE3	CPFL ENERGIA	ON NM	187,732,538	0.272
CMIN3	CSNMINERACAO	ON N2	1,110,559,345	0.348
CURY3	CURY S/A	ON NM	133,117,425	0.133
CVCB3	CVC BRASIL	ON NM	525,591,097	0.042
CYRE3	CYRELA REALT	ON NM	264,710,610	0.244
DXCO3	DEXCO	ON NM	301,760,723	0.113
DIRR3	DIRECIONAL	ON NM	109,826,474	0.145
ECOR3	ECORODOVIAS	ON NM	334,032,615	0.101
ELET3	ELETROBRAS	ON N1	1,977,170,723	3.322
ELET6	ELETROBRAS	PNB N1	268,733,136	0.502
EMBR3	EMBRAER	ON NM	734,632,601	1.455
ENGI11	ENERGISA	UNT N2	326,175,300	0.624
ENEV3	ENEVA	ON NM	1,579,821,370	0.963
EGIE3	ENGIE BRASIL	ON NM	255,236,938	0.464
EQTL3	EQUATORIAL	ON NM	1,244,602,400	1.730
EZTC3	EZTEC	ON NM	97,334,950	0.060
FLRY3	FLEURY	ON NM	464,420,650	0.302
GGBR4	GERDAU	PN N1	1,242,683,687	1.029
GOAU4	GERDAU MET	PN N1	661,577,619	0.314
GGPS3	GPS	ON NM	395,604,037	0.311
GMAT3	GRUPO MATEUS	ON EJ NM	462,506,420	0.149
NTCO3	GRUPO NATURA	ON NM	849,350,756	0.518
HAPV3	HAPVIDA	ON NM	4,779,395,040	0.846
HYPE3	HYPERA	ON EJ NM	409,310,634	0.467
IGTI11	IGUATEMI S.A	UNT N1	211,468,849	0.191
IRBR3	IRBBRASIL RE	ON NM	81,838,243	0.158
ITSA4	ITAUSA	PN N1	5,504,638,590	2.571
ITUB4	ITAUUNIBANCO	PN EJ N1	4,791,715,383	7.315
JBSS3	JBS	ON NM	1,142,696,472	1.614

Continuation IBrX 100 - Portfolio of October 3, 2024

Code	Stock	Type	Quantity	Participation(%)
KLBN11	KLABIN S/A	UNT N2	765,785,673	0.696
RENT3	LOCALIZA	ON EJ NM	977,700,485	1.746
LREN3	LOJAS RENNER	ON EJ NM	952,487,418	0.747
LWSA3	LWSA	ON NM	420,626,825	0.075
MGLU3	MAGAZ LUIZA	ON NM	353,448,195	0.149
POMO4	MARCOPOLO	PN N2	666,378,439	0.234
MRFG3	MARFRIG	ON NM	302,019,876	0.178
BEEF3	MINERVA	ON NM	261,359,935	0.072
MOVI3	MOVIDA	ON NM	121,834,637	0.032
MRVE3	MRV	ON NM	375,335,828	0.127
MULT3	MULTIPLAN	ON N2	318,010,631	0.348
PCAR3	P.ACUCAR-CBD	ON NM	379,327,171	0.048
PETR3	PETROBRAS	ON N2	3,514,947,134	6.127
PETR4	PETROBRAS	PN N2	4,431,132,660	7.098
RECV3	PETRORECSA	ON NM	275,699,226	0.213
PRIO3	PETRORIO	ON NM	798,909,771	1.506
PETZ3	PETZ	ON NM	307,729,428	0.064
PSSA3	PORTO SEGURO	ON EJ NM	182,560,698	0.290
RADL3	RAIADROGASIL	ON NM	1,279,770,315	1.438
RAIZ4	RAIZEN	PN N2	1,192,947,233	0.161
RDOR3	REDE D OR	ON EJ NM	1,145,289,019	1.489
RAIL3	RUMO S.A.	ON NM	1,215,994,115	1.042
SBSP3	SABESP	ON NM	683,508,570	2.632
SANB11	SANTANDER BR	UNT	356,586,730	0.443
STBP3	SANTOS BRP	ON NM	855,712,622	0.538
SMTO3	SAO MARTINHO	ON NM	142,348,116	0.167
CSNA3	SID NACIONAL	ON	736,268,400	0.418
SLCE3	SLC AGRICOLA	ON NM	194,261,422	0.154
SMFT3	SMART FIT	ON NM	322,604,918	0.300
SUZB3	SUZANO S.A.	ON NM	630,821,784	1.485
TAEE11	TAESA	UNT N2	218,568,234	0.322
VIVT3	TELEF BRASIL	ON	407,257,128	0.976
TEND3	TENDA	ON NM	121,480,372	0.071
TIMS3	TIM	ON EJ NM	807,495,418	0.647
TOTS3	TOTVS	ON NM	540,206,440	0.680
TRPL4	TRAN PAULIST	PN N1	395,801,044	0.413
UGPA3	ULTRAPAR	ON NM	1,090,134,379	1.001
USIM5	USIMINAS	PNA N1	515,193,199	0.139
VALE3	VALE	ON NM	4,270,903,023	11.713
VAMO3	VAMOS	ON NM	485,166,826	0.125
VBBR3	VIBRA	ON EJ NM	1,023,392,529	1.023
VIVA3	VIVARA S.A.	ON NM	125,823,025	0.152
WEGE3	WEG	ON EJ NM	1,482,105,837	3.506
YDUQ3	YDUQS PART	ON NM	290,010,465	0.114
Total Quantity			102.378.796.751	100

Table A.5: Absolute Abnormal Returns in Polls and Election Days (Important Dates)

Date 2002	Coef 2002	Date 2006	**C**oef 2006	**D**ate 2010	**C**oef 2010	Date 2014	**C**oef 2014	**D**ate 2018	**C**oef 2018	**D**ate 2022	**C**oef 2022
09/08/2002	0.0145	25/05/2006	0.0085	02/08/2010	0.0123	27/10/2014*	0.0163	03/10/2018	0.0073	31/10/2022*	0.0093
14/08/2002	0.0126	19/07/2006	0.0060	24/05/2010	0.0112	06/10/2014*	0.0111	26/10/2018	0.0053	03/10/2022*	0.0031
10/07/2002	0.0124	13/10/2006	0.0050	30/08/2010	0.0090	21/10/2014	0.0097	02/10/2018	0.0038	30/09/2022	0.0030
30/09/2002	0.0122	09/08/2006	0.0023	07/06/2010	0.0065	29/09/2014	0.0073	04/10/2018	0.0037	29/07/2022	0.0023
03/10/2002	0.0121	28/09/2006	0.0013	20/09/2010	0.0036	01/10/2014	0.0060	11/06/2018	0.0036	20/10/2022	0.0018
24/10/2002	0.0116	25/09/2006	0.0012	23/08/2010	0.0027	07/04/2014	0.0058	19/10/2018	0.0032	02/09/2022	0.0016
31/07/2002	0.0107	20/01/2006	0.0012	01/03/2010	0.0023	24/10/2014	0.0055	11/10/2018	0.0030	20/09/2022	0.0006
25/09/2002	0.0086	30/08/2006	0.0000	27/09/2010	0.0014	18/07/2014	0.0041	26/09/2018	0.0025	16/08/2022	0.0001
23/10/2002	0.0074	02/10/2006*	-0.0003	23/09/2010	0.0013	24/02/2014	0.0035	29/10/2018*	0.0017	19/08/2022	-0.0008
16/10/2002	0.0059	06/02/2006	-0.0006	27/10/2010	0.0007	22/10/2014	0.0029	28/06/2018	0.0017	17/10/2022	-0.0010
Distance (%)	**22.54**		**21.56**		**12.1**		**3.28**		**10.26**		**1.8**

This table observes the days with the highest aggregate abnormal returns for each election. The reported dates will be used to construct the *ElectoralRisk* measures, the top five for *ElectoralRisk*5 and all ten for *ElectoralRisk*10. The dates with an asterisk represent Mondays after Electoral Sunday. In the last row, we present the final distances between the two candidates for each election to illuminate close elections.

Table A.6: Average Absolute Abnormal Returns after Polls and Elections Days

Year	**Distance**	**Average Election** AAR	**Average Polls** AAR_{10}	$Ratio_{10}$	**Average Polls** AAR_5	$Ratio_5$
2002	22.54	0.015	0.028	1.838	0.030	1.965
2006	21.56	0.014	0.017	1.237	0.019	1.396
2010	12.10	0.017	0.027	1.586	0.031	1.784
2014	3.28	0.028	0.020	0.692	0.021	0.759
2018	10.26	0.017	0.019	1.102	0.020	1.174
2022	1.80	0.024	0.019	0.766	0.020	0.824

This table presents the average for aggregate movements after polls and elections. The column *Distance*, represents the final margin between the two leading candidates in each election. Average Election AAR and Average Polls AAR capture the average absolute abnormal returns on election days and for the highest movement poll days, respectively. Finally, $Ratio_{10}$ and $Ratio_5$ represent the ratios of abnormal returns on the 10 and 5 days with the largest movements after poll releases, relative to election-day movements (points in Figure 1).

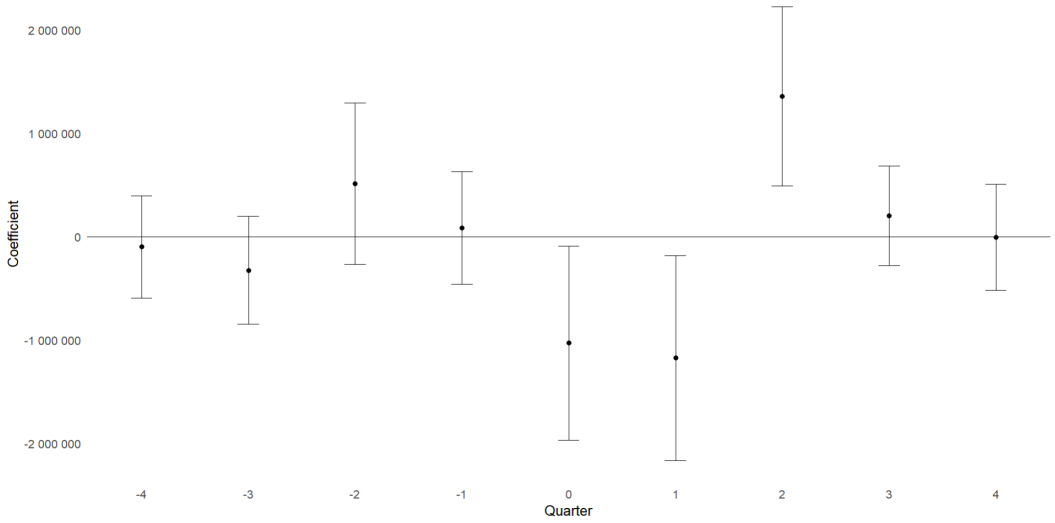
Table A.7: Summary ElectoralRisk

	ElectoralRisk5						
Year	**Min**	**Q1**	**Median**	**Mean**	**Q3**	**Max**	Number of Firms
2002	0.870	1.254	1.638	1.644	2.030	2.602	34
2006	0.463	0.927	1.202	1.456	1.481	11.795	44
2010	0.008	0.738	0.968	0.999	1.237	2.079	64
2014	0.362	1.346	1.711	1.742	2.167	4.066	71
2018	0.422	0.917	1.263	1.284	1.568	2.487	82
2022	0.300	0.897	1.233	1.245	1.506	2.838	100
	ElectoralRisk10						
Year	**Min**	**Q1**	**Median**	**Mean**	**Q3**	**Max**	Number of Firms
2002	0.933	1.335	1.595	1.560	1.716	2.291	34
2006	0.553	0.915	1.158	1.217	1.253	6.029	44
2010	0.007	0.813	0.993	0.971	1.137	1.620	64
2014	0.515	1.203	1.438	1.508	1.727	2.950	71
2018	0.551	0.979	1.148	1.211	1.372	2.224	82
2022	0.553	0.910	1.097	1.115	1.252	1.834	100

Table A.8: Summary WinnersRisk

	$WinnersRisk_{PCA}$					
Year	**Min**	**Q1**	**Median**	**Mean**	**Q3**	**Max**
2002	-5.300	-2.353	-0.312	0.000	1.050	6.135
2006	-6.926	-3.814	0.389	0.000	3.076	6.010
2010	-8.319	-2.471	0.061	0.000	3.042	7.262
2014	-7.771	-5.279	-0.544	0.000	4.453	10.900
2018	-7.869	-3.893	0.024	0.000	4.404	8.427
2022	-16.822	-2.398	1.747	0.000	4.286	7.830
	$WinnerRisk_{MDS}$					
Year	**Min**	**Q1**	**Median**	**Mean**	**Q3**	**Max**
2002	-0.872	-0.357	0.027	0.000	0.206	0.804
2006	-0.823	-0.442	0.014	0.000	0.368	0.777
2010	-0.902	-0.295	0.038	0.000	0.318	0.755
2014	-0.758	-0.514	-0.068	0.000	0.437	1.052
2018	-0.726	-0.372	0.006	0.000	0.356	0.822
2022	-1.229	-0.197	0.138	0.000	0.271	0.585

Figure A.3: Effect of Electoral Risk in $\Delta Financing$ by Quarters



This figure illustrates the estimated coefficients of the interaction term between Electoral Risk (10-day measure) and the election quarter dummies. The x-axis represents the quarters relative to the third quarter (e.g., -2 for two quarters before the election third quarter, 0 for the election third quarter, and +2 for two quarters after the election third quarter). The y-axis displays the coefficient estimates, measuring the impact of electoral risk on financing, with error bars indicating 90% confidence intervals. The solid horizontal line at y = 0 serves as a reference, showing whether effects are significantly different from zero.

A.2 Outcome Variables and Controls

In Brazil, every company listed on the B3 (the Brazilian stock exchange based in the city of São Paulo) is obliged by law to publish its Financial Statements (DFs) every quarter.[37] This publicly available data can be found by subscription to a software called Economática, which compiles financial information on different markets worldwide. The most important outcomes used in this work are in the Cash Flow Statement (CFS) section, an accounting report that records a company's cash inflows and outflows over a given period. In addition, we collected data from balance sheets, a document that presents a company's financial situation, listing its assets and liabilities on the specific date of publication.[38]

$\Delta Investiment$ - In the Cash Flow Statements (Cash generated by Investment), the item "Net Purchase of Permanent Assets" contains three elements for calculating the balance: "Purchase of Permanent Investment", "Purchase of Fixed Assets" and "Sale of Permanent Investment".

$\Delta Financing$ - In the Cash Flow Statements (Cash generated by Financing), the item "Net Financing Obtained" contains two elements for calculating the balance: "Financing Obtained" and "Financing Paid".

$\Delta LiquidAssets$ - In the Balance Sheet (Assets), item "Current Assets". To remove the flow, a first difference transformation was performed. As of the 2014 election, we only have the item "Cash and Cash Equivalents", which is close to the "Cash Holding" measures used in the literature.

$\Delta Dividends$ - In the Cash Flow Statements (Cash generated by Financing), the item "Dividends Paid".

ΔSEO - In the Cash Flow Statements (Cash generated by Financing), the item "Net Capital Increase" is a proxy for Seasoned equity offering. The item refers to net cash inflows from: Issues of shares or quotas in the share capital, additional contributions made by

[37] The laws oblige companies to present their results in a standardized way, so the headings don't change over time.

[38] Monetary measures have been duly deflated to ensure comparability in real terms.

partners or shareholders, capital subscriptions that have been paid in.

$\Delta Debentures$ - In the Balance Sheet (Liabilities), item "Short-term Debentures". To remove the flow, a first difference transformation was performed.

$TotalAssets$ - On the Balance Sheet (Assets), contains the items "Current Assets" and "Non-Current Assets".

A.3 Dimensionality Reduction Techniques

Principal Component Analysis

Principal Component Analysis (PCA) can be applied to a dataset where the input is a *correlation matrix* capturing the pairwise relationships between variables. In this case, the correlation matrix is constructed from all possible combinations of two pairs of firms.

Let $\mathbf{R} \in \mathbb{R}^{p \times p}$ represent the symmetric correlation matrix, where p is the number of firms. Each element ρ_{ij} in $\mathbf{R}$ represents the correlation coefficient between firm i and firm j. The diagonal elements $\rho_{ii} = 1$ represent the perfect correlation of each firm with itself. PCA identifies the principal components by solving the eigenvalue problem for the correlation matrix:

$$\mathbf{R}\mathbf{v} = \lambda\mathbf{v}$$

where $\lambda \in \mathbb{R}$ is an eigenvalue, and $\mathbf{v} \in \mathbb{R}^p$ is the corresponding eigenvector. The eigenvalues represent the amount of variance explained by each principal component, and the eigenvectors provide the directions of these components in the original firm space.

The principal components(T) are computed by projecting the data onto the eigenvectors of the correlation matrix:

$$\mathbf{T} = \mathbf{R}\mathbf{V}$$

where $\mathbf{V}$ is the matrix of eigenvectors.

Multidimensional Scaling

Multidimensional Scaling (MDS) is a technique used to visualize the level of similarity or dissimilarity between objects in a lower-dimensional space, based on a given distance matrix. The objective of MDS is to preserve the pairwise distances as faithfully as possible in the reduced space.

The distance between two firms is computed based on the correlation between their attributes:

$$d_{ij} = 1 - \text{cor}(\mathbf{x}_i, \mathbf{x}_j)$$

where $\mathbf{x}_i$ and $\mathbf{x}_j$ are the vectors of abnormal returns for firms i and j, $\text{cor}(\mathbf{x}_i, \mathbf{x}_j)$ is the Pearson correlation coefficient between firms i and j and d_{ij} is the dissimilarity, with $d_{ij} \in [0, 2]$. The distance matrix $\mathbf{D} \in \mathbb{R}^{n \times n}$ is formed as:

$$\mathbf{D} = \{d_{ij}\}_{i,j=1}^{n}$$

where n is the number of firms. Transform the distance matrix $\mathbf{D}$ into the scalar product (Gram) matrix $\mathbf{B}$ using double centering:

$$\mathbf{B} = -\frac{1}{2}\mathbf{H}\mathbf{D}^2\mathbf{H}$$

where $\mathbf{D}^2$ is the element-wise squared distance matrix, $\mathbf{H} = \mathbf{I} - \frac{1}{n}\mathbf{1}_n\mathbf{1}_n^T$ is the centering matrix, $\mathbf{I}$ is the identity matrix of size n and $\mathbf{1}_n$ is a column vector of ones of size n.

Perform eigenvalue decomposition on the centered matrix $\mathbf{B}$:

$$\mathbf{B} = \mathbf{V}\mathbf{\Lambda}\mathbf{V}^T$$

where $\mathbf{V} \in \mathbb{R}^{n \times n}$ contains the eigenvectors, $\mathbf{\Lambda} \in \mathbb{R}^{n \times n}$ is the diagonal matrix of eigenvalues.

To tranform the data in k-dimensional space ($k \leq n$), retain the top k eigenvalues and their corresponding eigenvectors:

$$\mathbf{X}_k = \mathbf{V}_k\mathbf{\Lambda}_k^{1/2}$$

where $\mathbf{V}_k \in \mathbb{R}^{n \times k}$ contains the top k eigenvectors, $\mathbf{\Lambda}_k \in \mathbb{R}^{k \times k}$ contains the top k eigenvalues and $\mathbf{\Lambda}_k^{1/2}$ is the diagonal matrix of the square roots of the eigenvalues. In our context, the matrix $\mathbf{X}_1$ represents the coordinates of the firms in the reduced 1-dimensional space.

A.4 Tables

Table A.9: Effect of Electoral Risk in Real Variables - Parallel Trends (Last Semester(Previous Election Year) and First Semester(Election Year))

	Dependent variable:					
	$\Delta LiquidAssets$		$\Delta Investiment$		$\Delta Financing$	
	(1)	(2)	(3)	(4)	(5)	(6)
ElectoralRisk5	−236,967		−4,975		−240,495	
	(271,354)		(112,405)		(174,465)	
ElectoralRisk10		−612,987		−40,549		−443,700
		(612,630)		(228,419)		(344,306)
DummyLastSemester	243,499	125,144	109,563	259,566	878,969***	1,077,457**
	(333,917)	(563,924)	(163,921)	(295,615)	(258,094)	(414,451)
DummyFirstSemester	−1,541,064	−2,578,298	−7,733	22,214	−1,219,736***	−1,563,945***
	(1,551,180)	(2,508,129)	(219,730)	(353,807)	(311,885)	(464,449)
ElectoralRisk5:DummyLastSemester	113,107		−123,441		−8,219	
	(276,913)		(145,812)		(131,395)	
ElectoralRisk5:DummyFirstSemester	497,775		−182,264		4,163	
	(692,369)		(198,076)		(266,115)	
ElectoralRisk10:DummyLastSemester		222,742		−262,180		−176,450
		(495,882)		(284,474)		(313,966)
ElectoralRisk10:DummyFirstSemester		1,412,927		−222,650		300,819
		(1,557,822)		(327,654)		(382,720)
Mean	148,935	148,935	363,783	363,783	3,334,135	3,334,135
Election FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,405	3,405	2,899	2,899	3,100	3,100
R^2	0.021	0.021	0.144	0.144	0.457	0.458

This table observes the effect of Parallel Trends. The measure *DummyLastSemester* is equal to 1 in last semesters of previous election years. In addition, the measure *DummyFirstSemester* is equal to 1 in first semesters of election years. In all models, we use firm and election fixed effects. Standard errors (in parentheses) are clustered at the sector level. *p<0.1; **p<0.05; ***p<0.01

Table A.10: Effect of Electoral Risk in Real Variables - Including State Owned Firms

	Dependent variable:								
	$\Delta LiquidAssets$			$\Delta Investiment$			$\Delta Financing$		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ElectoralRisk5	−87,672			−23,126			256,207		
	(158,325)			(75,122)			(561,206)		
ElectoralRisk10		−171,022			−70,816			857,841	
		(359,619)			(156,931)			(1,332,299)	
ElectoralRiskElection			446,291			22,219			−1,275,121
			(288,703)			(82,465)			(1,092,119)
DummyElection	1,911,877**	2,387,312*	2,822,637**	383,811*	678,158*	124,546	−748,020	−609,909	659,459*
	(953,828)	(1,263,362)	(1,393,880)	(206,571)	(356,025)	(147,827)	(1,702,282)	(2,228,320)	(336,971)
ElectoralRisk5:DummyElection	−224,297			−250,357			1,059,343		
	(539,564)			(164,496)			(1,429,129)		
ElectoralRisk10:DummyElection		−639,655			−522,142*			1,034,003	
		(782,398)			(295,329)			(1,987,226)	
ElectoralRiskElection:DummyElection			−1,933,594			−89,969			−100,772
			(1,386,135)			(104,673)			(209,713)
Mean	148,935	148,935	148,935	363,783	363,783	363,783	3,334,135	3,334,135	3,334,135
Election FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,733	3,733	3,733	3,160	3,160	3,160	3,376	3,376	3,376
R^2	0.020	0.020	0.021	0.143	0.143	0.143	0.472	0.473	0.476

This table observes the effect of the three created measures of electoral risk on outcomes of interest: liquid assets, investment, and Financing. In these models, state-owned companies are included. The measure *DummyElection* is equal to 1 in third quarters of election years. In all models, we use firm and election fixed effects. Standard errors (in parentheses) are clustered at the firm level. *p<0.1; **p<0.05; ***p<0.01

Table A.11: Effect of Electoral Risk in Real Variables (Sector FE)

	Dependent variable:								
	$\Delta LiquidAssets$			$\Delta Investiment$			$\Delta Financing$		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ElectoralRisk5	−202,885			44,460			−203,099*		
	(222,391)			(105,288)			(95,188)		
ElectoralRisk10		−340,352			40,316			−575,856*	
		(342,954)			(168,267)			(276,964)	
ElectoralRiskElection			81,564			−10,208			−554,685
			(88,071)			(54,275)			(397,788)
DummyElection	1,022,804	1,340,694	1,939,987	554,929**	720,471**	91,774	1,463,712*	1,789,636**	505,925
	(662,402)	(734,510)	(1,262,886)	(216,502)	(290,212)	(75,962)	(698,428)	(775,170)	(332,737)
ElectoralRisk5:DummyElection	310,260			−255,712*			−438,889		
	(374,302)			(127,901)			(545,715)		
ElectoralRisk10:DummyElection		136,619			−573,868**			−1,100,420*	
		(266,180)			(238,075)			(523,009)	
ElectoralRiskElection:DummyElection			−697,623			−60,271			18,008
			(744,383)			(92,370)			(238,523)
Mean	148,935	148,935	148,935	363,783	363,783	363,783	3,334,135	3,334,135	3,334,135
Election FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sector FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,357	3,357	3,357	2,853	2,853	2,853	3,054	3,054	3,054
R^2	0.009	0.009	0.009	0.062	0.062	0.061	0.259	0.260	0.260

This table observes the effect of the three created measures of electoral risk on outcomes of interest: liquid assets, investment, and Financing. The measure *DummyElection* is equal to 1 in third quarters of election years. In all models, we use sector and election fixed effects. Standard errors (in parentheses) are clustered at the sector level. *p<0.1; **p<0.05; ***p<0.01

Table A.12: Effect of Firm Political Risk (Hassan et al., 2019) in Real Variables

	Dependent variable:								
	$\Delta LiquidAssets$			$\Delta Investiment$			$\Delta Financing$		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Median_{PRisk}	801.606			829.686			5,591.580		
	(503.382)			(632.560)			(3,431.080)		
Mean_{PRisk}		703.022			594.449			4,413.817	
		(510.989)			(432.915)			(2,912.662)	
Max_{PRisk}			229.365			187.962			1,138.569
			(244.544)			(156.472)			(986.826)
DummyElection	911,475.900***	927,265.400***	905,042.200***	−53,251.400	−41,727.130	742.758	175,299.000	172,775.300	229,332.400
	(270,528.800)	(263,401.700)	(222,743.200)	(199,117.500)	(194,648.900)	(186,980.200)	(227,854.000)	(205,787.300)	(178,710.500)
$\text{Median}_{PRisk} : DummyElection$	−581.575			58.894			253.658		
	(831.419)			(597.209)			(1,187.575)		
$\text{Mean}_{PRisk} : DummyElection$		−579.659			−27.612			228.520	
		(649.190)			(549.438)			(977.440)	
$\text{Max}_{PRisk} : DummyElection$			−231.693			−161.473			−73.403
			(216.694)			(245.735)			(360.180)
Mean	148934.706	148934.706	148934.706	363782.74	363782.74	363782.74	3334134.575	3334134.575	3334134.575
Election FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,181	2,181	2,181	1,927	1,927	1,927	2,086	2,086	2,086
R^2	0.031	0.031	0.031	0.128	0.127	0.127	0.462	0.461	0.457

This table observes the effect of the three created measures of Political risk using Hassan et al. (2019) on outcomes of interest: liquid assets, investment, and Financing. The measure *DummyElection* is equal to 1 in third quarters of election years. In all models, we use firm and election fixed effects. Standard errors (in parentheses) are clustered at the firm level. *p<0.1; **p<0.05; ***p<0.01

Table A.13: Effect of Firm Political Risk (Hassan et al., 2019) and Electoral Risk in Real Variables

	Dependent variable:								
	$\Delta LiquidAssets$			$\Delta Investiment$			$\Delta Financing$		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Median_{Prisk}	714.185			524.863			5,796.909		
	(546.105)			(585.518)			(3,685.042)		
Mean_{Prisk}		636.596			404.585			4,577.909	
		(531.152)			(452.750)			(3,103.937)	
Max_{Prisk}			210.140			152.393			1,184.218
			(245.728)			(167.317)			(1,027.831)
DummyElection	907,213.200*	914,083.200*	883,640.000*	1,070,334.000	1,075,748.000*	1,103,605.000*	1,480,983.000**	1,474,062.000**	1,518,756.000**
	(492,204.100)	(483,735.700)	(475,075.800)	(646,275.600)	(633,546.900)	(639,207.800)	(728,177.200)	(734,262.000)	(753,820.000)
ElectoralRisk10	−84,082.900	−75,736.210	−83,272.520	111,480.300	119,211.300	116,016.000	−7,069.657	60,786.290	−1,743.171
	(263,538.500)	(263,181.400)	(264,513.900)	(506,062.400)	(502,135.400)	(499,400.600)	(719,331.700)	(702,080.500)	(673,591.700)
$\text{Median}_{Prisk} : DummyElection$	−591.783			157.433			515.242		
	(883.833)			(667.101)			(1,192.778)		
$\text{Mean}_{Prisk} : DummyElection$		−595.702			126.464			449.651	
		(696.765)			(629.032)			(1,003.766)	
$\text{Max}_{Prisk} : DummyElection$			−244.792			−64.374			12.562
			(236.959)			(288.922)			(360.924)
ElectoralRisk10:DummyElection	16,606.450	25,413.670	33,102.920	−970,130.300*	−974,585.000*	−965,156.400	−1,157,899.000*	−1,155,012.000*	−1,135,695.000*
	(389,294.200)	(393,644.300)	(396,108.800)	(566,385.300)	(571,155.500)	(578,713.800)	(680,209.700)	(683,028.800)	(675,095.200)
Mean	148934.706	148934.706	148934.706	363782.74	363782.74	363782.74	3334134.575	3334134.575	3334134.575
Election FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,097	2,097	2,097	1,848	1,848	1,848	2,002	2,002	2,002
R^2	0.032	0.032	0.032	0.157	0.157	0.157	0.467	0.466	0.462

This table observes the effect of the three created measures of Political risk using Hassan et al. (2019) and $ElectoralRisk10$ on outcomes of interest: liquid assets, investment, and Financing. The measure *DummyElection* is equal to 1 in third quarters of election years. In all models, we use firm and election fixed effects. Standard errors (in parentheses) are clustered at the firm level. *p<0.1; **p<0.05; ***p<0.01

Table A.14: Effect of Electoral Risk in Real Variables (Other Outcomes)

	Dependent variable:					
	ΔSEO		$\Delta Dividends$		$\Delta Debentures$	
	(1)	(2)	(3)	(4)	(5)	(6)
ElectoralRisk5	10,567		−65,022		18,566	
	(23,343)		(63,338)		(18,221)	
ElectoralRisk10		32,421		−293,854		23,873
		(63,466)		(194,286)		(45,215)
DummyElection	−526	3,230	92,486	8,286	416,258***	495,101**
	(154,957)	(164,121)	(80,309)	(146,771)	(148,113)	(243,212)
ElectoralRisk5:DummyElection	−37,029		19,796		−39,120	
	(108,180)		(64,388)		(49,361)	
ElectoralRisk10:DummyElection		−43,098		92,189		−108,819
		(121,980)		(120,568)		(137,867)
Mean	283,579	283,579	1,048,196	1,048,196	117,307	117,307
Election FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,070	3,070	3,165	3,165	3,405	3,405
R^2	0.053	0.054	0.364	0.364	0.056	0.056

This table observes the effect of the three created measures of electoral risk on outcomes of interest: SEO(Seasoned Equity Offering), Dividends, and Debentures. The measure *DummyElection* is equal to 1 in third quarters of election years. In all models, we use firm and election fixed effects. Standard errors (in parentheses) are clustered at the firm level. *p<0.1; **p<0.05; ***p<0.01

Table A.15: Effect on Third Quarters using Years without Elections

	Dependent variable:					
	$\Delta LiquidAssets$		$\Delta Investment$		$\Delta Financing$	
	(1)	(2)	(3)	(4)	(5)	(6)
ElectoralRisk5	−736,946		−37,813		−210,392	
	(847,686)		(76,077)		(165,091)	
ElectoralRisk10		−2,432,754		−94,415		−344,932
		(2,330,023)		(157,028)		(325,941)
DummyElection	−1,432,467	−1,784,545	456,263**	785,925**	1,127,069*	1,790,529**
	(1,689,613)	(1,968,189)	(221,310)	(375,609)	(610,675)	(771,072)
DummyNoElection	387,177	749,968	−31,636	−54,861	548,107***	699,924**
	(516,568)	(909,218)	(61,706)	(91,926)	(171,388)	(265,984)
ElectoralRisk5:DummyElection	−40,090		−329,681*		−450,254	
	(321,790)		(175,203)		(471,475)	
ElectoralRisk5:DummyNoElection	−65,348		44,563		−5,539	
	(241,118)		(47,850)		(80,213)	
ElectoralRisk10:DummyElection		251,008		−639,281**		−1,057,111*
		(609,744)		(309,924)		(569,787)
ElectoralRisk10:DummyNoElection		−376,969		68,725		−134,902
		(626,312)		(84,738)		(125,676)
Mean	148,935	148,935	363,783	363,783	3,334,135	3,334,135
Election FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,427	3,427	2,899	2,899	3,100	3,100
R^2	0.525	0.525	0.143	0.143	0.451	0.451

This table observes the effect of two measures of electoral risk on three outcomes of interest: liquid assets, investment, and financing. We present two third-quarter indicator variables to demonstrate that the effects do not arise from non-election periods. The measure *DummyElection* is equal to 1 in third quarters of election years. On the other hand, *DummyNoElection* is equal to 1 in third quarters of non-election years. In all models, we use firm and election fixed effects. Standard errors (in parentheses) are clustered at the firm level. *p<0.1; **p<0.05; ***p<0.01

Table A.16: Using Days in the Third Quarter with More Aggregate Absolute Abnormal Returns (Not Necessarily Polls or Election Days)

	Dependent variable:					
	$\Delta LiquidAssets$		$\Delta Investment$		$\Delta Financing$	
	(1)	(2)	(3)	(4)	(5)	(6)
ThirdQuarterRisk5	−48,780		134,604		−289,256	
	(161,457)		(151,919)		(425,446)	
ThirdQuarterRisk10		−6,941		526,736		−383,682
		(312,387)		(484,777)		(652,949)
DummyElection	2,166,609	2,282,039	22,320	40,287	500,103	539,349
	(1,313,310)	(1,385,951)	(172,664)	(174,957)	(377,560)	(401,670)
ThirdQuarterRisk5:DummyElection	−1,098,260		24,773		−45,967	
	(903,091)		(127,530)		(261,389)	
ThirdQuarterRisk10:DummyElection		−1,341,395		−1,368		−107,805
		(1,066,636)		(166,334)		(317,574)
Mean	148,935	148,935	363,783	363,783	3,334,135	3,334,135
Election FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,405	3,405	2,899	2,899	3,100	3,100
R^2	0.021	0.021	0.143	0.144	0.450	0.450

This table observes the effect of the two measures of Third Quarter Risk on three outcomes of interest: liquid assets, investment, and financing. We present two third-quarter indicator variables to demonstrate that the effects do not arise from non-election periods. The $ThirdQuarterRisk$ measure follows the same methodology as $ElectoralRisk$ but selects days with the highest absolute abnormal returns in the electoral third quarter, regardless of whether they coincide with polls or election days. In all models, we use firm and election fixed effects. Standard errors (in parentheses) are clustered at the firm level. *p<0.1; **p<0.05; ***p<0.01

Table A.17: Effect of Winners Risk (MDS) on Real Variables

	Dependent variable:					
	$\Delta LiquidAssets$		$\Delta Investment$		$\Delta Financing$	
	(1)	(2)	(3)	(4)	(5)	(6)
$WinnerRisk_{MDS}$	678,733	714,711	−22,298	−75,077	−564,244	−735,868
	(527,022)	(605,369)	(300,272)	(274,260)	(520,031)	(554,390)
DummyElection	1,532,563*	808,243	40,367	−214,005**	507,576**	−2,182,968***
	(784,417)	(1,444,695)	(130,965)	(101,962)	(232,229)	(419,196)
$WinnerRisk_{MDS}$:DummyElection	−2,019,632		−147,448		−972,659*	
	(1,676,380)		(373,252)		(580,861)	
$WinnerRisk_{MDS}$:DummyPostElection		−2,451,003		510,796**		1,167,798**
		(2,791,780)		(241,379)		(566,837)
Mean	148,935	148,935	363,783	363,783	3,334,135	3,334,135
Election FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,405	3,405	2,899	2,899	3,100	3,100
R^2	0.021	0.021	0.144	0.144	0.458	0.458

This table observes the effect of $WinnersRisk_{MDS}$ on outcomes of interest: liquid assets, investment, and financing. The measure $DummyElection$ is equal to 1 in third quarters of election years. In all models, we use firm and election fixed effects. Standard errors (in parentheses) are clustered at the firm level. *p<0.1; **p<0.05; ***p<0.01

Table A.18: Effect of WinnerRisk on Real Variables (Sector FE)

	Dependent variable:					
	$\Delta LiquidAssets$		$\Delta Investiment$		$\Delta Financing$	
	(1)	(2)	(3)	(4)	(5)	(6)
WinnersRiks_{PCA}	59,269.840		−10,349.390		−98,338.670	
	(46,355.600)		(5,796.556)		(89,244.230)	
WinnersRiks_{MDS}		782,774.100		−182,177.000		−1,147,464.000
		(637,129.500)		(102,502.500)		(829,297.000)
DummyElection	1,563,605.000*	1,577,061.000*	54,197.530	53,031.070	562,637.600*	558,941.300**
	(846,881.800)	(850,365.900)	(79,996.000)	(80,804.640)	(249,648.000)	(245,635.200)
$\text{WinnersRiks}_{PCA} : DummyElection$	−138,779.500		−14,049.250		−86,467.950**	
	(130,668.800)		(18,199.160)		(35,215.060)	
$\text{WinnersRiks}_{MDS} : DummyElection$		−2,048,862.000		−158,457.200		−953,393.600**
		(1,805,393.000)		(150,744.200)		(412,492.000)
Election FE	Yes	Yes	Yes	Yes	Yes	Yes
Sector FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,357	3,357	2,853	2,853	3,054	3,054
R^2	0.010	0.010	0.062	0.063	0.265	0.265

This table observes the effect of the two created measures of Winners Risk on outcomes of interest: liquid assets, investment, and Financing. The measure *DummyElection* is equal to 1 in third quarters of election years. In all models, we use Sector and election fixed effects. Standard errors (in parentheses) are clustered at the firm level. *p<0.1; **p<0.05; ***p<0.01

Table A.19: Effect of WinnerRisk on Real Variables (Sector-Election FE)

	Dependent variable:					
	$\Delta LiquidAssets$		$\Delta Investiment$		$\Delta Financing$	
	(1)	(2)	(3)	(4)	(5)	(6)
WinnerRiskPCA	21,728		−27,752**		−162,547	
	(18,135)		(11,405)		(123,056)	
WinnerRiskMDS		463,671		−324,466*		−1,591,301
		(393,395)		(160,169)		(1,065,774)
DummyElection	1,553,817*	1,567,177*	53,111	52,239	594,593*	590,667*
	(834,402)	(837,806)	(79,525)	(80,244)	(264,868)	(261,742)
WinnerRiskPCA:DummyElection	−136,292		−15,340		−83,048**	
	(127,689)		(19,292)		(34,938)	
WinnerRiskMDS:DummyElection		−2,009,898		−170,616		−906,748*
		(1,758,622)		(161,888)		(404,899)
Sector-Election FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,357	3,357	2,853	2,853	3,054	3,054
R^2	0.039	0.039	0.097	0.097	0.299	0.298

This table observes the effect of the two created measures of Winners Risk on outcomes of interest: liquid assets, investment, and Financing. The measure *DummyElection* is equal to 1 in third quarters of election years. In all models, we use Sector-Election fixed effects. Standard errors (in parentheses) are clustered at the Sector level. *p<0.1; **p<0.05; ***p<0.01

Table A.20: Effect on Third Quartes using Years without Elections (WinnersRisk))

	Dependent variable:					
	$\Delta LiquidAssets$		$\Delta Investiment$		$\Delta Financing$	
	(1)	(2)	(3)	(4)	(5)	(6)
WinnersRisk_{PCA}	68,246.470		5,204.332		−36,906.720	
	(54,264.800)		(26,444.660)		(43,637.800)	
WinnersRisk_{MDS}		968,872.800		−28,895.180		−578,235.700
		(790,606.300)		(296,927.500)		(523,968.500)
DummyElection	1,793,824.000*	1,808,298.000*	46,032.480	44,957.900	609,219.600**	605,241.100**
	(907,537.200)	(911,855.100)	(128,059.700)	(128,536.900)	(234,283.300)	(235,194.000)
DummyNoElection	1,505,653.000**	1,514,156.000**	26,745.450	24,929.300	537,150.400**	535,631.500**
	(715,611.800)	(720,579.300)	(36,519.060)	(37,064.830)	(208,419.200)	(206,141.300)
$\text{WinnersRisk}_{PCA} : DummyElection$	−156,944.300		−14,120.750		−88,639.180*	
	(138,213.000)		(30,865.070)		(51,623.790)	
$\text{WinnersRisk}_{PCA} : DummyNoElection$	−113,241.700		−2,106.165		664.406	
	(126,659.400)		(7,945.846)		(34,337.000)	
$\text{WinnersRisk}_{MDS} : DummyElection$		−2,311,684.000		−140,933.900		−958,135.100*
		(1,945,273.000)		(371,459.100)		(587,010.700)
$\text{WinnersRisk}_{MDS} : DummyNoElection$		−1,609,301.000		35,896.940		72,376.850
		(1,679,968.000)		(85,735.240)		(365,882.300)
Election FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,405	3,405	2,899	2,899	3,100	3,100
R^2	0.023	0.023	0.142	0.142	0.452	0.452

This table observes the effect of the two created measures of Winners Risk on outcomes of interest: liquid assets, investment, and Financing. The measure *DummyElection* is equal to 1 in third quarters of election years. The measure *DummyNoElection* is equal to 1 in third quarters of non election years. In all models, we use firm and election fixed effects. Standard errors (in parentheses) are clustered at the firm level. *p<0.1; **p<0.05; ***p<0.01

Table A.21: Using Days With more Absolute Aggregate Abnormal Returns(WinnersAggregateRisk)

	Dependent variable:					
	$\Delta LiquidAssets$		$\Delta Investiment$		$\Delta Financing$	
	(1)	(2)	(3)	(4)	(5)	(6)
$\text{WinnersAggregateRisk}_{PCA}$	−46,493.180		6,747.705		3,239.754	
	(51,388.090)		(9,461.181)		(54,902.510)	
$\text{WinnersAggregateRisk}_{MDS}$		−889,053.400		−140,006.000		−846,643.700*
		(796,678.300)		(190,169.800)		(480,381.100)
DummyElection	693,154.800	722,918.900	−171,578.800	−197,657.200*	−2,147,684.000***	−2,146,882.000***
	(1,340,645.000)	(1,369,505.000)	(117,168.900)	(107,611.800)	(414,780.300)	(409,523.000)
$\text{WinnersAggregateRisk}_{PCA} : DummyElection$	229,729.100		8,323.665		47,583.550	
	(216,120.100)		(6,482.311)		(47,622.500)	
$\text{WinnersAggregateRisk}_{MDS} : DummyElection$		2,159,067.000		148,969.700		560,009.400
		(1,903,295.000)		(94,933.320)		(654,327.800)
Election FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,405	3,405	2,853	2,899	3,100	3,100
R^2	0.021	0.021	0.062	0.143	0.457	0.459

This table observes the effect of the two created measures of Winners Aggregate Risk on outcomes of interest: liquid assets, investment, and Financing. The WinnersAggregateRisk measure uses the same methodology as WinnersRisk, but uses the days with the highest absolute abnormal returns (regardless of whether there are polls or elections). The measure *DummyElection* is equal to 1 in third quarters of election years. In all models, we use firm and election fixed effects. Standard errors (in parentheses) are clustered at the firm level. *p<0.1; **p<0.05; ***p<0.01

Table A.22: Using Days in the Third Quarter with more Absolute Aggregate Abnormal Returns(WinnersThirdQuarterRisk)

	Dependent variable:					
	$\Delta LiquidAssets$		$\Delta Investment$		$\Delta Financing$	
	(1)	(2)	(3)	(4)	(5)	(6)
$\text{WinnersThirdQuarterRisk}_{PCA}$	0.000		7,213.625		13,633.820	
	(0.000)		(23,768.720)		(31,213.430)	
$\text{WinnersThirdQuarterRisk}_{MDS}$		0.000		49,230.070		210,222.900
		(0.000)		(273,391.800)		(376,641.100)
DummyElection	0.000	0.000	41,908.260	44,312.960	458,535.700**	454,042.700**
	(0.000)	(0.000)	(128,094.500)	(127,250.300)	(213,811.800)	(212,157.500)
$\text{WinnersThirdQuarterRisk}_{PCA} : DummyElection$	0.000		−11,557.010		18,766.060	
	(0.000)		(27,146.150)		(39,271.100)	
$\text{WinnersThirdQuarterRisk}_{MDS} : DummyElection$		0.000		−195,077.500		298,025.000
		(0.000)		(320,802.100)		(531,373.400)
Election FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,427	3,427	2,899	2,899	3,100	3,100
R^2			0.143	0.142	0.450	0.450

This table observes the effect of the two created measures of Winners Aggregate Risk on outcomes of interest: liquid assets, investment, and Financing. The WinnersThirdQuarterRisk measure uses the same methodology as WinnersRisk, but uses the days with the highest absolute abnormal returns on electoral third quarter (regardless of whether there are polls or elections). The measure $DummyElection$ is equal to 1 in third quarters of election years. In all models, we use firm and election fixed effects. Standard errors (in parentheses) are clustered at the firm level. *p<0.1; **p<0.05; ***p<0.01

Table A.23: Effect of Winners Risk on After Election Real Variables (Sector FE)

	Dependent variable:					
	$\Delta LiquidAssets$		$\Delta Investment$		$\Delta Financing$	
	(1)	(2)	(3)	(4)	(5)	(6)
WinnerRiskPCA	60,386.280		−15,331.570*		−115,552.900	
	(53,572.470)		(7,799.487)		(96,004.980)	
WinnerRiskMDS		816,198.900		−235,365.000		−1,330,256.000
		(754,312.900)		(130,319.700)		(890,321.700)
DummyPosElection	850,036.000	871,701.000	−187,592.900**	−186,032.200**	−2,132,593.000***	−2,122,486.000***
	(1,578,960.000)	(1,591,974.000)	(79,435.470)	(75,047.160)	(615,139.600)	(611,720.600)
WinnerRiskPCA:DummyPostElection	−152,463.500		47,040.790*		120,568.200*	
	(215,118.800)		(22,710.700)		(62,423.930)	
WinnerRiskMDS:DummyPostElection		−2,450,207.000		503,811.300*		1,252,086.000*
		(3,213,427.000)		(259,715.500)		(565,703.100)
Election FE	Yes	Yes	Yes	Yes	Yes	Yes
Sector FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,405	3,405	2,899	2,899	3,100	3,100
R^2	0.023	0.024	0.145	0.145	0.464	0.465

This table observes the effect of the two created measures of Winners risk on outcomes of interest: liquid assets, investment, and Financing. The measure $DummyPosElection$ is equal to 1 in first quarters of post-election years. In all models, we use sector and election fixed effects. Standard errors (in parentheses) are clustered at the sector level. *p<0.1; **p<0.05; ***p<0.01

Table A.24: Effect of Winners Risk on After Election Real Variables (Sector-Election FE)

	Dependent variable:					
	$\Delta LiquidAssets$		$\Delta Investiment$		$\Delta Financing$	
	(1)	(2)	(3)	(4)	(5)	(6)
WinnerRiskPCA	22,771		−32,711***		−178,771	
	(60,458)		(11,007)		(138,250)	
WinnerRiskMDS		494,289		−377,095**		−1,762,774
		(598,909)		(144,859)		(1,333,904)
DummyPostElection	840,589	861,019	−182,296*	−180,637*	−2,103,180***	−2,094,333***
	(1,164,080)	(1,184,479)	(106,863)	(107,119)	(361,211)	(356,793)
WinnerRiskPCA:DummyPostElection	−148,861		46,239**		116,199	
	(131,685)		(19,896)		(90,701)	
WinnerRiskMDS:DummyPostElection		−2,375,016		496,089**		1,212,190
		(2,074,143)		(212,944)		(959,297)
Sector-Election FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,405	3,405	2,899	2,899	3,100	3,100
R^2	0.038	0.039	0.098	0.098	0.307	0.305

This table observes the effect of the two created measures of Winners risk on outcomes of interest: liquid assets, investment, and Financing. The measure *DummyPosElection* is equal to 1 in first quarters of post-election years. In all models, we use sector-election fixed effect. Standard errors (in parentheses) are clustered at the sector level. *p<0.1; **p<0.05; ***p<0.01

Table A.25: Effect on First Quartes using Years without Elections

	Dependent variable:					
	$\Delta LiquidAssets$		$\Delta Investiment$		$\Delta Financing$	
	(1)	(2)	(3)	(4)	(5)	(6)
$WinnerRisk_{PCA}$	10,410.620		−2,851.107		−67,193.850	
	(15,464.870)		(26,704.710)		(55,996.500)	
$WinnerRisk_{MDS}$		256,874.100		−110,219.000		−900,700.800
		(211,951.100)		(296,415.700)		(622,745.100)
DummyPostElection	633,822.000	654,154.900	−236,257.500**	−235,374.400**	−2,354,257.000***	−2,343,038.000***
	(1,312,357.000)	(1,329,434.000)	(104,396.100)	(103,906.900)	(452,322.000)	(447,333.800)
DummyPostNoElection	−1,918,035.000	−1,928,202.000	−243,991.300**	−246,147.000**	−1,905,511.000***	−1,907,728.000***
	(1,495,257.000)	(1,484,293.000)	(97,635.580)	(99,296.270)	(398,973.400)	(399,524.200)
$WinnerRisk_{PCA}$: *DummyPostElection*	−116,233.100		49,706.080**		125,842.000**	
	(144,090.100)		(22,819.850)		(63,020.020)	
$WinnerRisk_{PCA}$: *DummyPostNoElection*	443,290.300		28,708.880		144,801.000*	
	(459,417.400)		(26,085.530)		(84,948.220)	
$WinnerRisk_{MDS}$: *DummyPostElection*		−1,998,630.000		544,871.000**		1,323,074.000**
		(2,361,546.000)		(249,733.100)		(620,394.600)
$WinnerRisk_{MDS}$: *DummyPostNoElection*		5,414,220.000		371,885.100		1,707,667.000*
		(5,268,532.000)		(320,081.100)		(912,296.000)
Election FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,405	3,405	2,899	2,899	3,100	3,100
R^2	0.023	0.024	0.145	0.145	0.464	0.465

This table observes the effect of the two created measures of Winners risk on outcomes of interest: liquid assets, investment, and Financing. The measure *DummyPosElection* is equal to 1 in first semesters of post-election years. In all models, we use firm and election fixed effects. Standard errors (in parentheses) are clustered at the firm level. *p<0.1; **p<0.05; ***p<0.01