

# **Insider Trading amidst Political Uncertainty**

## **Abstract**

With political uncertainty elevated recently, we examine the role of political uncertainty among insiders. By measuring firm-specific political risk measured from conference calls, we observe insiders trade more actively during uncertain periods with trading volume and transaction value increasing alongside political uncertainty. The results are driven by non-routine insider transactions and purchases at firms with CEO duality and fewer insider trading restrictions. Next, we observe similar results when exploiting variation in election timing across states and alternative external measures. Moreover, we find evidence of informed insider trading by observing higher abnormal returns following insider trades amidst political uncertainty. Finally, we find political uncertainty is linked to higher bid-ask spreads but observe spreads tighten with more insider trading, consistent with insiders informing markets and improving liquidity. Overall, these results suggest insiders purchase more actively and opportunistically amidst political uncertainty, improving market information quality, especially when internal governance is accommodating.

**JEL Classification Codes:** G14; D82; G30; K22; G41

**Keywords:** Political Uncertainty; Opportunistic Insiders; Informed Trading and Market Quality

## 1. Introduction

While all investors constantly assess risk related to equity market investments, insiders often have better information or superior information processing, allowing insiders to generate abnormal returns more persistently than other market participants (Aboody and Lev, 2000). Uncertainty related to the size and likelihood of potential future cash flows may be linked to the information asymmetry, whereby insiders hold informational advantages that may result in more profitable trading. Alternatively, high uncertainty may restrain insiders' trading due to large risks, limited liquidity or higher transaction costs that may result from investors pricing uncertainty. Moreover, political uncertainty is one form of uncertainty related to changes in government policy that impact stock prices due to changes (Pastor and Veronesi, 2012; Baker, Bloom, and Davis, 2016). Such government policy changes provide opportunities to insiders since they have more information about the firm and understand the potential impact of the firm's political uncertainty (Jagolinzer, Larcker, Ormazabal, and Taylor 2020). Since political uncertainty could increase the information gap between inside and outside investors, corporate insiders may have additional trading advantages when political uncertainty is higher, resulting in superior subsequent stock performance. Moreover, political (and economic) uncertainty has risen substantially as of late (Baker, Bloom, Davis and Terry 2020; Tiberiu and Albulescu 2020), and influencing firms' decision-making and potentially exacerbating the information gap resulting from political uncertainty.<sup>1</sup> As a result, we investigate insider trading amidst political uncertainty.

Since political uncertainty can impact market participants' risk perception, both the cost of capital and return investors require may rise, especially if outside investors perceive information

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<sup>1</sup> See, e.g., "Who's Betting on a Rebound in Stocks? Corporate Insiders: Executives and directors have bought shares of their own companies at a breakneck pace in March in a signal of corporate optimism," by Caitlin McCabe: <https://www.wsj.com/articles/whos-betting-on-a-rebound-in-stocks-corporate-insiders-11585220400>.

disadvantages (Dai and Zhang, 2019; Pastor and Veronesi, 2013; Chan, Saffar, and Wei, 2019). Political uncertainty can increase risk, which could result in high-risk premia and lower market valuations. Therefore, insiders may either (1) trade more due to informational advantages or (2) trade less because of the higher costs imposed by outside investors. Specifically, if transaction costs are sufficiently high and liquidity is limited, even normal trading may be prohibitively costly. For example, Çolak, Durnev, and Qian (2017) find that firm decisions to raise capital are delayed amidst uncertainty. On the other hand, if investors accurately assess risks in advance, they may benefit from the volatility that results from uncertainty, offering informed investors like insiders additional trading opportunities. Specifically, insiders can extract benefits from a firm by trading asymmetric information (Aboody and Lev, 2000). To the extent that insiders are involved with corporate decisions that enable them to assess risk, they may possess superior information or process information more effectively to understand the impact of political uncertainty and potential market disruption. Therefore, insiders may make informed trades amidst uncertainty as political threats such as oil crises, terrorist attacks, financial crises, trade tension, and health crises (Altig, Barrero, Bloom, Davis, Meyer, and Parket, 2019; Hassan, Hollander, van Lent, and Tahoun, 2020).

As a result, we analyze the role of uncertainty in insider trading by employing a measure of political risk recently developed by Hassan, Hollander, van Lent, and Tahoun (2019), which assesses firm conference call content and the relation to political risk and sentiment. To better understand the impact of political uncertainty on insider trades, we use several measures to examine how insiders trade, primarily focusing on when they purchase firm equity amidst uncertainty, measured as firm-level political uncertainty (Hassan, Hollander, van Lent, and Tahou, 2019). To measure political uncertainty at the firm level, we employ two measures: political risk and sentiment. Political risk is developed using textual analysis of US-listed firms' regular earning

conference calls, counting the number of times words like “risk,” “uncertainty,” and other synonyms are used. Political sentiment captures the number of positive and negative words used to describe the political risk.<sup>2</sup> Whereas political risk quantifies the volume of uncertainty, the political sentiment can capture the directional impact of political risk on the firm.

With specific information about firm-level political uncertainty, we investigate each firm’s insider trading activity amidst uncertainty. To explore how political uncertainty influences financial markets, we compare insider trading activities during high and low political risk periods and observe that insider trading is higher during the high political risk period, with the results driven by insider purchases.<sup>3</sup> Moreover, to examine insider characteristics, we compare routine and non-routine trades during political uncertainty.<sup>4</sup> The results show that only non-routine insiders purchase more actively during high political uncertainty. Additionally, we examine the sentiment linked to political uncertainty and observe that insiders purchase more when sentiment is high, suggesting they take long positions when the uncertainty has more upside potential. Overall, the results suggest insiders trade more actively during political uncertainty, and the higher trading activity is not the result of routine transactions, which suggests insiders may behave more opportunistically during politically uncertain periods.

We also perform additional analysis to confirm this finding with two alternative measures of political uncertainty: Economic Policy Uncertainty (EPU) Index (Baker, Bloom, and Davis,

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<sup>2</sup> Hassan et al. (2019) study about 7,357 firms listed in the United States from Thomson Reuters’ StreetEvents. They list the positive and negative words counted to capture the sentiment of political uncertainty, such as good, strong, or great or loss, decline, and difficult.

<sup>3</sup> I use two definitions of high and low political risk: (1) whether political risk is above the average, using corporate conference calls to identify political uncertainty, and (2) whether the current year contains an election, which also results in political uncertainty due to the potential for unexpected outcomes.

<sup>4</sup> Following Cohen, Malloy, and Pomorski (2012), I divide insiders into two groups: routine and non-routine. Routine insiders are those who make a trade in the same calendar month for at least three consecutive years. The remaining insider transactions are classified as non-routine.

2016), and election uncertainty, measuring election predictability with data from the Federal Election Commission.<sup>5</sup> The EPU Index captures market-level political uncertainty, which is constructed from three components: news coverage of policy-related economic uncertainty, tax code expiration, and economic forecaster disagreement. Further, election uncertainty is plausibly exogenous to the firm. Therefore, we compare insider trading during both election and non-election years and find insider purchase activity (e.g., trade frequency, share volume, or the transaction value) is higher during election years, similar to the conclusions of multivariate analysis. Besides, we perform instrumental variable analysis by using bilateral currencies, price growth of energy (oil price), and realized volatility for political uncertainty. Again, we observe that insider trading activity, such as frequency of the trades, valuation of the trades, and traded shares, increases when uncertainty is high. The results confirm my prior analysis and suggest political uncertainty is linked to more active insider trading, regardless of the measurement thereof.

To test whether the insider trading during uncertainty is informative, we perform additional analysis of stock market performance following insider trades by looking at (short-term) cumulative abnormal returns and (long-term) buy-and-hold abnormal returns. Political risk is positively related to both short- and long-term returns. When examining cumulative abnormal returns, the results show firm stock performance is significantly higher in a three and fifteen-day window following an increase in political risk, with similar (untabulated) results for alternative five- and seven-day windows. Similarly, we find that buy-and-hold abnormal returns are significantly higher during the subsequent 180 days. These results show political uncertainty impacts firm value in ways that insiders trade on more effectively. Moreover, this result provides

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<sup>5</sup> See e.g., the Federal Election Commission's information on historical elections and voting results: <https://www.fec.gov/introduction-campaign-finance/election-and-voting-information/>.

evidence insiders either have more access to information about the firm or can better forecast the impact of political uncertainty on the firm (Çolak, Durnev, and Qian, 2017). Overall, we observe more informed and opportunistic insider trading activity amidst high political uncertainty.

We also perform cross-sectional analyses related to the type of firms where the impact of uncertainty on insider trading may be strongest. To account for the role of internal firm governance on insider trading, we examine corporate governance measures like CEO duality and insider trading restrictions. We find insiders trade more at firms with dual CEO-chairs during high political uncertainty. Moreover, we find insiders with stricter insider trading restrictions exhibit less insider trading during high political uncertainty, suggesting the insiders trading most are ones with relatively flexible internal governance. Together, these results clarify where insiders trade more amidst political uncertainty and suggest firm governance is a significant factor in altering the relation between insider trading and political uncertainty, which is novel to the literature. Overall, insiders purchase more at firms with flexible governance.

Finally, we examine the implications of this insider activity on capital markets. In particular, we study stock market liquidity amidst political uncertainty and find higher bid-ask spreads amidst political risk. However, when insiders trade more amidst the uncertainty, spreads are lower, suggesting insider trading during political uncertainty may inform the market and reduce trading frictions. Both liquidity (i.e., bid-ask spreads) and access to capital (measured as outstanding shares) are higher when insiders trade more actively during uncertain periods. These results suggest the information insiders have is impounded into equity markets during uncertainty, leading to positive impacts for market liquidity and quality.

Our study contributes to the literature on informed trading in multiple dimensions. While research on the impact of economic and political uncertainty on firms has begun to grow (Baker,

Bloom, and Davis, 2016; Gulen and Ion, 2016; Bonaime, Gulen, and Ion, 2018; Hassan, Hollander, van Lent, and Tahou, 2019), prior research has yet to focus on the impact of firm-specific uncertainty on insider trading activity at that firm. While some researchers find that forecasting amidst uncertainty is challenging (Baloria and Mamo, 2018; Dai and Ngo, 2021), my study shows that insiders impound additional information into markets, which reduces frictions. While Li (2020) examines insider trading and firm performance across countries with higher uncertainty, we offer a more direct, comprehensive examination of firm-level uncertainty and document a positive relation between political uncertainty and trading activity by specific insiders in the firm during a year-quarter, which contributes to the literature by clarifying some of their analysis and alleviating alternative explanations related to differences in cultural behavior and risk tolerance. Moreover, we offer details regarding the types of firms (i.e., those with more flexible governance and insider restrictions in place) and insiders (i.e., non-routine) driving the differences in activity. Finally, my research provides evidence that insider activity amidst uncertainty is followed by higher stock market performance (i.e., informed) and improves market quality (i.e., more capital access), consistent with the findings by Çolak, Durnev, and Qian (2017) that suggest insiders have more information about the firm and can predict the firm's future performance during the politically uncertain periods.<sup>6</sup> The remainder of the paper is organized as follows: Section II introduces hypothesis development, while Section III summarizes the data and sample. Section IV analyzes empirical findings, while Sections V presents a conclusion.

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<sup>6</sup> They find fewer IPOs during political uncertainty (gubernatorial elections) since it is more costly to raise capital. In which case, firms delay IPOs due to such a high cost of capital, such that financing decision like IPOs are affected by uncertainty.

## 2. Hypothesis Development

The existing literature suggests political uncertainty can increase information asymmetry (Wittenberg-Moerman, 2008; Khan and Watts, 2009; Lu and Chen, 2010; Boone, Kim, and White, 2017; Nagar, Schoenfeld, and Wellman, 2019). Further, corporate insiders can trade profitably on asymmetric information. (Aboody and Lev, 2000; Frankel and Li, 2004; Piotroski and Roulstone, 2005; Huddart and Ke, 2007; Ravina and Sapienza, 2010). However, the literature has yet to study the relation between insider trading and political uncertainty. As a result, we study whether corporate insiders take advantage of political uncertainty, where investors have less information relative to insiders and make informed trades to increase their profitability. To better understand the link between insider trading and political uncertainty, we exploit three measures of political uncertainty: gubernatorial elections, news implied political uncertainty, and firm conference call suggested uncertainty.

Political uncertainty can impact corporate decision-making and firm valuation through elections, market-level uncertainty, and firm-level uncertainty, which all reflect possible future changes in government policies (Kurz and Motolese, 2001; Mei and Guo, 2004; Arnold and Vrugt, 2008; Pasquariello and Zafeiridou, 2014; Liu and Zhang, 2015; Baker, Bloom, and Davis, 2016). Further, Pástor and Veronesi (2013) provide a theoretical argument that elections impose government policy uncertainty affecting a firm's cash flow. They also find that political uncertainty increases stock volatility, which reduces market quality. Baker, Bloom, and Davis (2016) find uncertainty related to government policy change also raises stock price volatility and unemployment while reducing firm investment. We expect corporate investment, valuation, and market liquidity to decrease as political uncertainty rises.



Recent research documents that firms act amidst political uncertainty (Atanassov, Julio, and Leng, 2015; Gulen and Ion, 2016; Hassan, Hollander, van Lent, and Tahoun, 2021). Hassan, Hollander, van Lent, and Tahoun (2021) find some firms increase firm value when the market suffers from the recession caused by the spread of Covid-19, SARS, and H1N1 (e.g., some firms that produce face masks and hand sanitizers). When facing high policy uncertainty, the firm reduces firm-level capital investment in the short-run (Gulen and Ion, 2016). Furthermore, political uncertainty also discourages mergers and acquisitions, which slow down the firm's development (Bonaime, Gulen, and Ion, 2018). This implies that firm would change their investment decisions or corporate structure during political uncertainty periods. Consistent with the findings in the literature, we find that firms reduce their total debts, resulting in a decrease in leverage during the politically uncertain periods. Other literature reveals that insiders and analyst forecasters are affected by political uncertainty. Specifically, Li (2020) finds that insider trades increase when political uncertainty is high, which is associated with a decrease in firm value over an across-country analysis. Dai and Ngo (2021) find accounting disclosure is reported in favor of insiders during political uncertainty. However, researchers have not yet examined a link between firm-level political uncertainty and informed trading, to date. As a result, we follow insider trading and uncertainty literature and use political uncertainty to measure market volatility to examine the relationship between informed trading and market volatility (Hassan, Hollander, van Lent, and Tahoun, 2019; Boone, Kim, and White, 2018).

### ***2.1. Political uncertainty and insider trading profitability***

Do political uncertainty and volatility also result in more insider trading? To the extent that political uncertainty can escalate information asymmetry, insiders might make informed trades to obtain benefits. Internally, political uncertainty slows down firm financing activities, which

delayed the timing of firms' activities such as M&A and IPOs (Nguyen and Phan, 2017; Çolak, Durnev, and Qian2016). Externally, political uncertainty is also associated with an increase in credit default swap spread, where it increases the amount of risk-taking for investors, therefore hindering investors' investment. Under this setting where the firm slows down its financing activities and investors slow down its investment activities, the information asymmetry between insiders and investors is increased. With more information asymmetry, insiders could obtain profits by making informed trades. As a result, the firm's performance is reduced since insiders would sacrifice its performance for profits. There are three different measurements of political uncertainties, including election uncertainty at the state level, news-related uncertainty at the market level, and conference call discussion at the firm level. A gubernatorial election on the state level can impose state-level uncertainty (Besley and Case, 1995). Newspaper articles related to government policy changes could also impose uncertainty (Baker, Bloom, and Davis, 2016). On the firm level, conference calls involving government policy changes can affect firm-level decision-making (Hassan, Hollander, van Lent, and Tahoun, 2019). The firm's insiders can obtain information about the gubernatorial election if they provide sponsorships to the candidate (Pástor and Veronesi, 2013; Boone, Kim, and White, 2017). There are more information asymmetries between insiders and other market participants. Insiders could also get access to information if they joined the firm's conference calls. Therefore, both state-level and firm-level uncertainty could allow insiders to generate more profits while making informed trades. But on the contrary, market-level uncertainty collected from newspaper articles is observed by both insiders and investors. **We expect insiders to obtain less profit during high market-level uncertainty since the information asymmetry between insiders and investors is less.** To date, minimal research examines the role of

firm-level measures of political uncertainty on insider trading. We hypothesize that insiders trade more when firm-level political uncertainty is highest and leads to uncertain gubernatorial elections.

**H1.** *Insiders have more trading activities on asymmetric information following an increase in both firm-level political uncertainty and gubernatorial elections uncertainty.*

## **2.2. Political uncertainty, routine insider, and opportunistic insider**

Given that insiders might increase their informed trading to generate abnormal returns and profit, we examine whether informed trading is more prominent during high uncertainty periods. To explore this question, we decode informed insider trades by splitting insiders into routine insider and opportunistic insiders, following Cohen, Pomorski, and Malloy (2012). According to their paper, routine insider trading is less informed than opportunistic insider trading for firms' future. They also find that opportunistic insiders' trades are more frequent with a large volume around news announcements than trades of routine insiders. We further argue that trades made by opportunistic insiders increase following an increase in political uncertainty, which has a more negative influence on a firm's stock price and market outcome than routine insiders. We also hypothesize that routine insiders might even reduce trades to alleviate or avoid the political uncertainty's negative impact.

**H2.** *Opportunistic insider trading is positively related to political uncertainty, while routine insider trading is either unrelated or negatively related to political uncertainty.*

## **2.3. Political uncertainty and capital access**

Suppose an informed trade made by insiders increases following political uncertainty. In that case, the next question is whether the informed trade is detrimental to the market and firm or is a cure to reduce the negative impact of political uncertainty. On the one hand, political

uncertainty increases the uncertainty of the firm's future performance and investment strategies, providing opportunities for an insider to obtain benefits from insider trading, resulting in a decrease in the firm's future value. Dai and Ngo (2021) find information asymmetry is negatively correlated with political uncertainty where financial managers have more access to corporate's private information, evaluate the company's performance, and prepare for the upcoming government policy changes. Furthermore, Political uncertainty could also have a significant effect on firm-decision making. Bonaime, Gulen, and Ion (2018) find that there will be fewer merger and acquisition activities when there is more political uncertainty. This implies that political uncertainty slows down firms' development and growth where firms would delay or cancel their M&A event during political uncertainty periods.

In addition, Liu and Zhang (2015) find a negative relationship between economic policy uncertainty and stock market volatility. As a results, both firms and market would be de-escalating during uncertainty periods. They also provide evidence that the application of EPU in the volatility model has benefits in enhancing the forecast's accuracy. In terms of the impact of political uncertainty on firm performance and the market, Brogaard and Detzel (2015) find economic policy uncertainty (Baker, Bloom, and Davis 2013) is an important factor influencing a firm's performance. Furthermore, it also harms the firm's valuations. Pastor and Veronesi (2012, 2013) find that political news can also increase volatility and reduce stock valuation since it negatively impacts the market. On the other hand, political uncertainty can also make managers more conservative on investment and trading. Since there will be more uncertain information on the market, insiders will also be more conservative and reduce their trading activities. This will also change the company's investment strategies by deferring or cutting down short-term investment to hedge the risks and invest more into long-term projects, encouraging its R&D investment.

Atanssov, Julio, and Leng (2015) find that political uncertainty encourages firm-level R&D. They find that postponing short-term projects and reserving investments for long-term projects will reduce the firm's current profits. But these may help the firm hedge the risks from political uncertainty. Pinyck (1993) and Bar-Ilan and Strange (1996) find that uncertainty could promote the firm to launch R&D for challenging projects sooner. We hypothesize that the increase in insider trading could increase the firms' capital access.

**H3.** *Incremental inside trading resulting from political uncertainty is positively related to the firm's capital access.*

#### ***2.4. Firm governance, political uncertainty, and insider trading***

There is also a relation between firm governance, political uncertainty, and insider trading. Executives often gather information about government policies as one way to forecast uncertainty. This also impacts firm decision-making in both the short-run and long-run. However, not all investors are affected in the same way. Firms that with different governance and political involvement also behave differently during high political uncertainty period. For better-governed firms, they could better prevent insiders from rent-seeking and making profits at the expense of investors or firms. On the one side, firms with strong governance will limit insiders' access to asymmetric information and restrict insiders' trading. On the other side, those firms that have weak governance may experience less informed trades since insiders have other ways to make profits and bear less risks (e.g., influence compensation package). Brockman, Rui, and Zou (2013) find that politically connected bidders generate more abnormal stock return than unconnected bidders in countries with weak regulation environment and high corruption. In this paper, we hypothesize that the insiders of firms with strong governance will make more trade since they can better anticipate the impact of political uncertainty on the market.

**H4.** *Insider trading of firms with strong governance is positively related to political uncertainty*

### **3. Data and Empirical Approach**

Our empirical analysis data comes from several sources, including quarterly Compustat Fundamentals, CRSP database, Thomson Reuters, and Political Uncertainty Index<sup>7</sup>. We also require all control variables to be one year lagged for the non-missing values. The entire sample contains 472,152 firm-daily level observations listed as U.S. public firms from 2002 to 2019. We use three political uncertainty measures for the primary independent variable, political uncertainty: state-level, market-level, and firm-level uncertainty. On the state level, following Çolak, Durnev, and Qian (2017), we construct several state-year level variables: *Competitive*, *Election*, and *Voting ratio*. *Competitive* represents Herfindahl–Hirschman Index, which is calculated by squaring the ratio of each party’s voting to the total votes during the election year. *Election* equal to one when there is a gubernatorial election in the state during the fiscal year. *Voting ratio* is measured by using the max value of party’s votes divided by the minimum value of the party’s votes, which capture how close the vote is between the two parties. There are two advantages of using the gubernatorial election as a measurement of political uncertainty. Firstly, since gubernatorial election timing is predetermined, which is independent of the firm's activities, it could also be used to construct a quasi-natural experiment to examine the difference in the impact of this uncertainty between the treated group and control group (Çolak, Durnev, and Qian, 2017). Secondly, the

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<sup>7</sup> Firm-level political uncertainty from Hassan, Hollander, van Lent, and Tahoun (2019), US economic political uncertainty from Baker, Bloom, and Davis (2016), and Gubernatorial election data from Federal Election Commission which collects historical elections and voting results: <https://www.fec.gov/introduction-campaign-finance/election-and-voting-information/>.

gubernatorial election is staggered when comparing my sample yearly (Boone, Kim, and White, 2017). On the market level, we use the EPU index (Economic policy uncertainty) from Baker, Bloom, and Davis (2016).<sup>8</sup> This political uncertainty measurement is advantageous because the EPU index is constructed by using newspapers to capture daily policy uncertainty. On the firm level, we use Hassan, Hollander, van Lent, and Tahoun's (2019) firm-level political uncertainty<sup>9</sup> captured by valuing the corporate's conference calls. The advantage of firm-level measurement is that it can better represent the firm's expectations and predictions on a firm-level basis, which is different across individual firms in the industry. In this paper, we apply all three measurements of political uncertainty to study the impact of political uncertainty on insider trading.

To examine my hypotheses of the relationship between political uncertainty and insider trading, we conduct several tests. First, for the dependent variable, we construct five measurements of insider trading through two dimensions, including insider activities (*insider trading frequency*, *insider trading volume*, and *insider trading value*), and insider trading profitability (*BHAR* and *CAR*). For the insider trading activity dimension, there are three measurements that present insiders' trading behavior. *Insider trading frequency* captures how many times each insider makes informed trades during a day. *Insider trading volume* represents the volume of insider trading on a transaction date basis. *Insider trading value* measures the total valuation of informed trading. Through insider profitability dimension, *Insider trading profitability (BHAR and CAR)*. During higher political uncertainty periods, such as firms in election states, there is more information asymmetry where firms are more willing to provide informed disclosure before the election period (Boone, Kim, and White, 2017). Dai and Ngo (2021) also find that information asymmetry is

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<sup>8</sup> Economic policy uncertainty (EPU) is based on newspaper coverage frequency (Baker, Bloom, and Davis, 2016)

<sup>9</sup> Following Hassan, Hollander, van Lent, and Tahoun (2019), firm-level uncertainty is winsorized at level 1% and 99% for each year and weighted by its standard deviation.

positively related to political uncertainty, increasing accounting conservatism. There is a lack of studies on how exactly insiders make trades and obtain benefits from political uncertainty. Thus, we examine the relationship between insiders' trading behavior and political uncertainty. We also expect an increase in both insider trading activities and profitability during a high political uncertainty period.

To study the relationship between political uncertainty and the firm's market outcome, we employ two proxies for market stability/efficiency: *bid-ask spread* (Leuz and Verrecchia, 2000; Boone, Kim, and White, 2017) and *Outstanding shares*. *Outstanding shares* and *bid-ask spread* measure market liquidity and firm's capital access. *Outstanding shares* measures a firm's total number of shares existed in the market. We construct the *bid-ask spread*<sup>10</sup>quote ratio, which is the ratio of the difference between the bid-ask price to ask price multiplied by 100, to measure its liquidity. According to Boone, Kim, and White (2017), *bid-ask spread* is also indirect measurements for asymmetric information. Since if there is more information asymmetry, investors are less willing to make trades. We expect an increase in political uncertainty could decrease bid-ask spreads, making the market more efficient. This would then encourage more informed trades from insiders during the high uncertainty stage. To accounting for the firm-level characteristics, we use CEO *duality* (Rechner and Dalton, 1991; Gompers, Ishii, and Metrick, 2003) and *restrict* (Cohen, Malloy, and Pomorski, 2012) to measure the firm governance. Whereas CEO *duality* measures whether a CEO is also a board member, *restrict* captures the level of restriction on insider trading for each firm.

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<sup>10</sup> To account for the firm's event such as stock split or dividend issuing, I construct the adjusted bid/ask price by using bid/ask price divided by CFACPR (adjusting factors for price).



To test the impact of political uncertainty on insider trading, we conduct an examination based on a quarterly change for insider-level measures. Following the prior literature (Cohen, Malloy, and Pomorski, 2012; Dai and Ngo, 2021; Akbas, Jiang, and Koch, 2020), we use the following model to examine the relationship between political uncertainty and insider trading:

$$Insider\ trading\ activities_{i,j,d} = \beta_0 + \beta_1 PRisk_{j,q} + \beta_2 Controls_{j,q} \quad (1)$$

While on the left-hand side, *Insider trading activities*<sub>*i,d*</sub> is the daily measurement of insider trading activities of insider *i* at firm *j* on daily *d*. The dependent variable *Insider trading activities*<sub>*i,d*</sub> is measured by the number of insider trades (Frequency), the total volume of shares from informed trades, and the total value of those informed trades, which is the total traded shares multiplied by the stock price on insider and daily basis. *PRisk*<sub>*j,q*</sub> and *Controls*<sub>*j,q*</sub> are measured on firm *j* and quarter *q* level on the right-hand side. Our primary variable of interest is the political uncertainty, measured by three methods using gubernatorial election uncertainty, newspaper article uncertainty, and conference call related uncertainty. As for the control variables, there are two groups of control variables, including firm-level controls and insider-level control. Firm-level control includes (1) *Size*<sub>*j,q*</sub>, natural log of one plus book value of total assets; (2) *PPE*<sub>*j,q*</sub>, property, plant, and equipment scaled by total assets; (3) *Tobin's Q*<sub>*j,q*</sub>, firm *i*'s market-to-book ratio during fiscal quarter *q*, calculated as the market value of equity plus book value of assets minus book value of equity minus balance sheet deferred taxes divided by book value of assets; (4) *ROA*<sub>*j,q*</sub>, firm *i*'s operating income scaled by total assets; (5) *Leverage*<sub>*j,q*</sub>, firm *i*'s total book value of debt scaled by the total book value of assets at the end of fiscal quarter *q*; (6) *Market cap*<sub>*j,q*</sub>, the total number of outstanding shares of firm *i* multiplied by the stock price; (7) *R&D*<sub>*j,q*</sub>, the research and development expenditure scaled by total assets; (8) *Acquisitions*<sub>*j,q*</sub>, cash outflow used for acquisition of a company in the current quarter *q*; (9) *Capital Expense*<sub>*j,q*</sub>, the capital expense to total assets.

## 4. Results

Following Hassan, Hollander, van Lent, and Tahoun (2019), we use political risk, which is constructed from measuring the connectedness between the conference call and risks involved with political materials. Political sentiment measures whether political uncertainty will create a positive or negative impact on the market. If the firm has more information about the incoming risk, the political risk will become higher. Furthermore, if the political sentiment is greater than zero, it indicated that insiders believe those political uncertainties will positively impact the market. If political sentiment is below zero, it implies a negative signal to the market. This section presents results on the relationship between uncertainty and the level of insider trading activities. We first examine how insiders trade differently when facing uncertainty, political uncertainty, and non-political uncertainty. We then look at how the different characteristics of political uncertainty can affect the insider's trading activity. Last, we examine the test again from inside's characteristics and explore which type of insider is more willing to benefit from political uncertainty.

### *A. Political uncertainty and insider trading activities*

What are some potential reasons explaining insiders' activity affected by policy uncertainty? One explanation could be derived from the principal and agent problems. Fama (1980) thinks that there are no agency costs since outside labor markets, monitoring devices, and outside takeovers are three ways that force the management team's efficiency. Jensen and Meckling (1976) think agency costs are based on the discrepancy between shareholders' and debtholders' interests. Later, some scholars such as Baker, Jensen, and Murphy (1988) suggest a necessity for optimal contract theory for the company to follow to maximize shareholder benefits. Some firms did not follow the optimal contract theory; therefore, the overpowering CEO and insiders were referred to as the reasons for the inefficiency of the contract inside the firm. The costs and benefits of insider trading

offered by insider trading regulations are controversial. This is one reason that encourages insiders to take advantage and trade more actively when firms and markets embrace political uncertainty.

The entire sample data is constructed on an insider and quarterly level with 158,021 observations after joining with political uncertainty data<sup>11</sup>. In Table 1, the summary statistics show that there is a right skewness on the distribution of insider trading activities and political uncertainty where the mean of frequency and political risks are close or higher than 75 percentiles of those. Overall, the summary statistics table has shown that insiders are making informed trades in the firms related to higher political risk. This result is consistent with our hypothesis that insiders are more likely to make informed trades when facing political uncertainty. Furthermore, in Table 2, the univariate analysis shows that insiders make more purchase of firm shares when there is a high political risk or if it is during an election year. On the contrary, insider trading sales decline when the political risk is high.

Under multivariate analysis, in Table 3, we perform an OLS regression analysis to study the relationship between insider trading activities and political uncertainty changes. The results show that insiders will trade more and make more profits by taking political uncertainty. Since insiders can get information on political risks through conference calls and meetings with other committee members, insiders would know that information earlier than the market's reaction. Moreover, political risk's sentiment is also positively related to the insider trading valuation and volume. Together, the table shows that not only the number of uncertain matters to the insider trading activity, the sentiment of political risk is also an essential factor influencing insider trading. Most of the literature ignores the content of political risk, which matters a lot. In this paper, we focus on

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<sup>11</sup> The primary uncertainty data used in this paper is from Hassan, Hollander, van Lent, and Tahoun (2019)

both the amount and sentiment of the political risk. When we control non-political risk, we found the results are still robust, confirming that political uncertainty is the driving force that stimulates more informed trades. Based on Table 1's results, to explore which type of political uncertainty has the most impact on insider trading behavior, we perform another analysis by looking at the relationship between different components of political uncertainty and insider trading behavior.

Since both the amount and sentiment of the political risk are interesting factors of insider trading, we perform the interaction between political risk amount and political risk sentiment. In Table 4, we find that when the sentiment of political risk is positively related to inside trading value and volume when political risk is high. It means that if the upcoming political risks can positively impact the firms, insiders are more willing to make purchases of the firm shares. When there is an interaction between the amount of political risk and the sentiment of political risk, the political risk does not carry any significance. This further implies that the political risk itself doesn't matter too much to the firms' insiders. Moreover, insiders care more about the sentiment of the political risk or even the type of political risks, which are missing in the literature. Overall, this finding supports Hypothesis 1 that insiders make more informed trades during political uncertainty periods.

Furthermore, in appendix II, we find that political uncertainty related to economic, trade, institutions, health, and tax has positively impacted the trade frequency. On the other hand, insider trading volume and valuation is affected by the trade type political risk only. Together, institution-related political uncertainty seems to be the most important component that stimulates both the trades' frequency and volume. Appendix I explores the relationship between insider trading in the politically connected firms and political uncertainty. We find that insiders in the political active firms are trading more actively during high political uncertainty periods.

## ***B. Insider characteristic, insider trades, and political risk***

Whereas we looked at the firm's characteristics in the previous section, we investigate the individual's aspects in this section. This section split insiders into two groups, including routine and opportunistic insiders based on their historical trading behavior. While routine insiders make trades following a persistent schedule related to the firm's operation, opportunistic insiders make informed trade for their benefit. Based on my hypothesis, not all insiders are making informed trades to take benefits from the firm.

$$Ret_{i,j,d} = \beta_0 + \beta_1 PRisk_{j,q} \times Non - rountie_{j,q} + \beta_2 Controls_{j,q} \quad (2)$$

To distinguish routine insiders from non-routine insiders, we follow Cohen, Malloy, and Pomorski (2012) 's methodology on separating insiders by their historical trading behaviors into persistent insiders and opportunistic insiders. In equation (2), we interact *Non-Routine*<sub>*j,q*</sub> with *PRisk*<sub>*j,q*</sub> to examine whether opportunistic insiders are driving factors that are affected by political uncertainty. Compared opportunistic insiders with persistent insiders, we find that not all the insiders are making informed trades where only opportunistic insiders are abstract benefits from the firm.

Table 5 looks at insider trading activities measured by insider trading frequency, insider trading value, and insider trading volume. We also construct variables as *High PRisk*, *Non-routine*, and the interaction between *Non-routine* and *High PRisk*. *High PRisk* equals to one if political risk is above the 75<sup>th</sup> percentile. In terms of the trades' value and volume, we find that the interaction between non-routine and political is positively related to the trading value and volume. Surprisingly, we find some evidence that routine insiders make more trades when non-political risk is high. Specifically, when political uncertainty is high, non-routine insider purchase volume is 1% (1,765.575 number of shares) higher with a total increase of 0.8% (21,213.167 dollars) in

trading value. It also means that opportunistic insiders are making more informed trades following an increase in political uncertainty. Collectively, we find evidence supporting Hypothesis 2 that not all insiders actively benefit from the firm facing political uncertainty. Specifically, only non-routine insiders make more trades and taking advantage of the high political uncertainty.

### ***C. Economic Political Uncertainty (EPU) Index and Gubernatorial Election***

In this section, we look at the other measurements on political uncertainty using the EPU index and gubernatorial election data and their impacts on insider trading. While *PRisk* in Table 3 captures the firm-level perspective on the political uncertainty, the EPU index captures how the public, such as newspapers, views the political uncertainty. On the other side, a gubernatorial election refers to the shock that directly comes from political events that are more exogenous. Even if all those measurements capture political uncertainty, we expect to see different reactions from insiders on viewing them. Compared with firm-level uncertainty, the public view of uncertainty may negatively impact insider trading since insiders would also be uncertain about the impact on the firm and less likely to make trades.

In Table 6, we examine the relationship between the economic-political uncertainty index and insider trading. News based policy uncertainty index is constructed based on ten prominent domestic newspapers such as the *Wall Street Journal*, the *New York Times*, etc. We find a significant positive relationship between the policy uncertainty index and insider trading activities. This result shows that newspaper articles reveal more political uncertainty, increase information gaps, and increase the information asymmetry and the insiders' incentives to make an informed trade. Table 7 explores how insiders respond to the gubernatorial election, which is the staggering effect. There are three measurements for the gubernatorial election, including *Competitive*, *Election*, and *Voting Ratio*. *Competitive* represents the Herfindahl–

Hirschman Index measured by squaring the ratio of each party's voting to the total votes during the election year. *The election* is a dummy variable indicating whether the fiscal year is an election year. *The voting ratio* is the ratio of the max value of the party's votes to the minimum value of the party's votes, which captures how close the vote is between the two parties. The gubernatorial election is determined by the government, which is a direct shock to the public. We find that insiders are trading more during the gubernatorial election year or when the two parties have a close voting rate. In Table 7, panel B, when we look at the log form of insider trading activities, we find an increase in *Competitive* leads to a significant reduction in the total frequency, value, and volume of the informed trades. When *Competitive* is high, the difference between the two parties' vote rate is significant, meaning less political uncertainty. As a result, the negative relationship between *Competitive* and insider trading activity shows that insiders are trading more when political uncertainty (whether there is a big win or a small win for a party) is high. Collectively, we find evidence that uncertainty revealed in public prevents insiders from making informed trades, providing more additional evidence to Hypothesis 1.

#### ***D. Are those insider trades informed?***

While in both Table 2 and Table 3, the results show that insiders are more likely to make informed trade during a high political uncertainty period. But the next question is whether those trades are informative? This paper measures profitability using cumulative abnormal return (CAR) and buy and hold abnormal returns (BHAR). Suppose there is a positive relation between BHAR and political risk. It can also provide evidence that insiders make informed trade for the profits, indicating the compensation package's potential problem.

$$BHAR_{i,t} = \prod_{t=a}^b (1 + R_{i,t}) - \prod_{t=a}^b (1 + R_{m,t}) \quad (3)$$

Following Barber and Lyon (1997) and Lyon, Barber, and Tsai (1999), buy-and-hold abnormal returns (BHARs) is a better way to capture the abnormal returns than the cumulative abnormal returns (CARs) where BHARs is a less biased estimator for the long-term stock return performance. Equation (3) explains the calculation of the Ret, which is BHAR as the buy-and-hold abnormal return for firm  $i$  over the period from time  $a$  to time  $b$  and regenerated by using daily level data. Sepcifically,  $R_{i,t}$  measures the return for the firm  $i$  on day  $t$  and  $R_{m,t}$  measures the equally-weighted market return on day  $t$ .

Furthermore, we perform a regression analysis between political risk and insider purchase 's impact on the stock market performance, measured as CAR and BHAR. The main variables are *PRisk* and *PSentiment*, which refer to political uncertainty and the amount of positive or negative words used in the conference. we also controlled *NPrisk* and *NPSentiment*, which measure the risk that is not relevant to policy change. Since insider trading purchase is more informative than sales, we only limit the sample data to insider trading purchase in Table 8. In Table 8, we find that stock market performance is higher following insider trades amidst higher political uncertainty. The result has shown that stock market has higher abnormal returns on insiders' purchases when there are more positive words regarding political uncertainty. Furthermore, Table 9 shows insiders' buy and holds abnormal returns from day 0 to day 180, where day 0 is when they made the trade transaction. The results suggest insider trading exhibits significantly higher performance amidst elevated political uncertainty.

#### ***E. IV Estimation***

There are several major concerns about the relationship between political uncertainty and insider trading mentioned above. Firstly, the primary concern is reverse causality. Insider trading might also influence political uncertainty since severe informed trades could shape public opinions



towards the firm, leading the market into bearing big uncertainty. Those uncertainty would deeply affect social medias' views including newspaper, magazine, TV, and internet, resulting in a large uncertainty to outside investors in the markets. Secondly, there would be also selection bias coming from measurement of firm-level political uncertainty. Since the main variable focus the uncertainty that capture the level of political uncertainty based on the conference call, it could be that insiders intentionally overstate the severity of political uncertainty and provide themselves a way to make some room for profits.

To solve the potential problems from reverse causality and selection bias, we performance perform two-stager least squares regressions by using three instrumental variables: price growth of energy, realized Volatility, and CAD (Alfaro, Bloom, and Lin, 2019). Alfaro, Bloom, and Lin (2019) construct instruments by examining firm exposure to price shocks, including oil, policy, and Canadian Dollar, to alleviate endogeneity in uncertainty measurements. Even though a shock such as a change in oil price is a generic shock to the overall market, it could still have different impacts on various firms. For instance, an oil exploration firm would increase its profitability as oil prices rise. On the contrary, an airline company would suffer from an increase in oil price. Having those shocks constructed on a market level would help improve the accuracy of the specific impact that uncertainty does to a firm, which on the other side is not relevant to insider trading.

As shown in Table 10, first stage, all the instruments: price growth of energy, realized volatility, and CAD, are positively related to political uncertainty at the 1% level, suggesting that increases in instrumental variables will lead to more political uncertainty. This also shows that our instruments are correlated with political risk with expected direction and level of significance. In addition, following Staiger and Stock (1997), F-statistics is greater than 10, which also alleviates our concerns from weak instrument bias. In the second stage, we further show the price growth of

energy (oil price), realized volatility, and CAD rise positively affect insider trading including trading frequency and total number of shares traded and abnormal return (CAR and BHAR) through political uncertainty. From the Hansen J overidentification test, the results show that all the p-values are insignificant, implying that we cannot reject the null hypothesis that instruments are valid with conditions on at least on the instrument being valid.

#### ***F. Firm characteristic, insider trading, and political risk***

The previous sections document that stock performance increases as insiders trade more during the uncertainty period, supporting Hypothesis 1 that insiders are trading more and firm stock performance increases during politically uncertain periods. For the firm governance, we want to investigate how insiders trade in the firm with CEO duality (Rechner and Dalton, 1991; Gompers, Ishii, and Metrick, 2003) and insider trading restriction (Cohen, Malloy, and Pomorski, 2012). We now examine Hypothesis 4, that insiders in the firm with strong governance make less informed trades during uncertainty periods.

Firm governance is an important factor influencing insiders' trading behavior amidst political uncertainty. A firm with strong governance could prevent insiders from rent-seeking when there is an information gap between the firm and investors. In Table 11, in panel A, the results show that insiders are making more informed trades in the firm with CEO duality during high uncertainty periods. This implies that poor firm governance could further encourage insiders to trade more during uncertainty periods. Furthermore, in Panel B of Table 11, we use *restrict* to capture the firm governance on insider trading. Surprisingly, the interaction between insider trading restriction and political uncertainty shows that insiders would even reduce their trading in the firm with strong restrictions on insider trading. While a firm with weak governance (CEO duality) provides a good environment for insider trading, a firm with strong governance (insider trading restriction) could

prevent insiders from making informed trades during political uncertainty periods. This implies that not all insiders are trading more during political uncertainty. Hence, corporate governance plays an important role in affecting insiders' trading behavior during political uncertainty periods. In sum, we find supporting evidence for Hypothesis 4 and show that opportunistic insiders are more likely to make informed trade in the firm with weak governance.

In addition, in Appendix I, we provide a cross-sectional analysis to understand better how insiders make the trade in lobbying firms when affected by political uncertainty. Based on the results from Appendix I, we can conclude that politically active firms (lobbying firms) are more likely to get involved by political uncertainty. Typically, insiders in those types of firms are making more informed trades.

### ***G. Capital Access and insider trading during political risk***

The previous section showed how the difference in firm governance affects the relationship between insider trading and political risk. This section focuses on the connection between insider trading and the firm's access to capital measured as bid-ask spread and outstanding shares during political uncertainty periods.

There are several potential reasons for the positive relationship between access to capital and insider trading behavior during political uncertainty periods. On the one hand, insiders make more informed trades during politically uncertain periods due to the large information gap. Since the level of insider trading increases, the price accuracy and market efficiency increase, resulting in increased market liquid and easier access to capital. On the other hand, since the information gap between insiders and outside investors increases as insiders trade more during political uncertainty periods, investors would either defer their investments (e.g., R&D investment) or ask for a higher

risk premium, increasing in the cost of raising capital. In Table 12, we look at the effects of insider trading during political uncertainty periods on firm's access to capital. The results show that firms can get more capital when there are higher political risks and more informed trades since the market is more liquid. This result is consistent with the paper's hypothesis where insider trading increases market liquidity during political uncertainty periods. In terms of the market liquidity, the results show that when political risk is high, the bid-ask spread will decrease as insiders trade more, which means that market liquidity will increase. We also observe more outstanding shares during political uncertainty periods as insiders trade more. This provides more opportunity for insiders to make informed trades, providing supporting evidence in Hypothesis 3. By knowing this kind of information, insiders could make informed trades.

## **5. Conclusion**

This paper provides new insights into analyzing political uncertainty and information asymmetry, focusing on insider trading. Political uncertainty increases market volatility and the information gap between investors and insiders. In this paper, using firm-level political uncertainty by Hassan et al. (2019), we examine the impact of political uncertainty on insider trading and the characteristic of firms that experience the most. The results suggest that political uncertainty is positively associated with insider trading activity, including the volume of shares and total value traded. In addition, evidence shows that these insiders' trades are followed by a positive performance (CAR and BHAR) during politically uncertain periods. This implies that shares traded by insiders are informed. Besides, we also employ instrumental variables: price growth of energy, realized volatility, and CAD (Alfaro, Bloom, and Lin, 2019) to address the endogeneity concerns and our results remain robust. Furthermore, alternative measurements, including election

and EPU index, show similar results as the baseline model. Finally, we find that insiders make more trades in the politically active firm with CEO duality for the firm characteristics. When accounting for the insider characteristics, the results suggest that non-routine trades make more purchases of shares during political uncertainty periods. This finding is not consistent with Li (2020)'s finding that insiders increase trading frequency, volume, and the total value of the trades through the across-country analysis. The difference in the findings could be driven by the sample selection. Whereas Li studies based on a cross-country sample, this paper's study focuses on U.S. market, which allows to control on insiders and firms' characteristics. Overall, political uncertainty is positively associated with insider trading activities and negatively related to firm performance.

This paper has important implications for regulators, policymakers, investors, and shareholders. First, we analyze political uncertainty from regulatory changes and elections, which shows that stock performance increases when the firm or the market bears a significant risk. One important implication of my study is that not all insiders increase their trades during high political uncertainty. Insider types and firm governance are important factors shaping how insiders behave amidst political uncertainty. These findings may help regulators understand that sometimes regulation needs to be more stringent even if the market takes a high threat from political uncertainty. Furthermore, policymakers could realize that the regulatory decision related to economic, trade, and tax might significantly impact insiders' trading behavior, affecting the market and investors. Second, when investors are making investments during the political uncertainty periods, they need to gather more information about the insiders within the firm. Third, for the shareholders, the paper provides supporting evidence that insiders make more informed trades in the weak-governance firm (CEO duality). Hence, increasing corporate governance can reduce

insider trading activities during political uncertainty periods. Together, this study points out the importance of firm governance and regulation on insider trading amidst political uncertainty.

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## Appendix - Variable Definitions and Data Sources

Dependent Variable	Definition	Source
Frequency	Insider trading frequency, measured as total number of insider transactions for a firm during a quarter	Thomson Reuter
Volume	Insider trading volume, measured as total number of shares outstanding traded by an insider for a firm during a quarter	Thomson Reuter
Value	Insider trading value, measured as total shares traded multiple transaction price by an insider for a firm during a quarter	Thomson Reuter
CAR	Cumulative abnormal return for a firm following an insider trading transaction	CRSP
BHAR	Buy and hold abnormal return for a firm following an insider trading transaction	CRSP
Shrout	Log of the total existing common outstanding shares for a firm	CRSP
Bid_ask	The difference between bid-ask price scaled by ask price multiplied by 100	CRSP

Independent Variable	Definition	Source
PRisk	Political risk is developed using textual analysis of US-listed firms' regular earning conference calls, counting the number of times words like "risk," "uncertainty," and other synonyms	Hassan, Hollander, van Lent, and Tahou (2019)
PSentiment	The number of positive and negative words used to describe the political risk such as "good", "strong", "grate", and "loss", "decline", and "difficult", respectively	Hassan, Hollander, van Lent, and Tahou (2019)
High PRisk	Equals to one if political risk is higher than the mean value or median value	Hassan, Hollander, van Lent, and Tahou (2019)
High PSentiment	Equals to one if political sentiment is higher than the mean value or median value	Hassan, Hollander, van Lent, and Tahou (2019)
BBD_Index	Economic policy uncertainty index from Baker, Bloom, and Davis (2016)	Baker, Bloom, and Davis (2016)
Non-Routine	Insiders are divided into two groups: routine and non-routine. Routine insiders are those who make a trade in the same calendar moth for at least three consecutive years. The remaining insider transactions are classified as non-routine.	Thomson Reuter
Restrict	Dummy variable that equals one if Total number of insiders trading within 30-days after the earnings report date divided by the total number of insiders trading is above 75%, and zero otherwise during the year	Thomson Reuter
Competitive	Herfindahl–Hirschman Index, which is calculated by squaring the ratio of each party's voting to the total votes during the election year	Federal Election Commission
Election	Equal to one when there is a gubernatorial election in the state during the fiscal year	Federal Election Commission
Voting Ratio	Measured by using the max value of party's votes divided by the minimum value of the party's votes, which capture how close the vote is between the two parties	Federal Election Commission

Control Variable	Definition	Source
NPRisk	Other non-political risks	Hassan, Hollander, van Lent, and Tahou (2019)
NPSentiment	The number of positive and negative words used to describe the non-political risk such as “good”, “strong”, “grate”, and “loss”, “decline”, and “difficult”, respectively	Hassan, Hollander, van Lent, and Tahou (2019)
Market Cap	Natural log of (1 + the number of outstanding shares multiplied by price of the stock)	Compustat
Total Assets	Natural log of (1 + total assets)	Compustat
ROA	Return on asset ratio defined as operating income before depreciation divided by book value of total assets, end of fiscal year t	Compustat
Tobin’s Q	Firm i’s market-to-book ratio during fiscal year t, calculated as market value of equity plus book value of assets minus book value of equity minus balance sheet deferred taxes divided by book value of assets	Compustat
PPE	Property, plant & equipment divided by book value of total assets measured at the end of fiscal year t	Compustat
R&D	Research and development expenditures	Compustat
Acquisition	Acquisition expense, measured as cash outflow in the current year or carried over from a prior year	Compustat
Capital Exp	Capital expenditure scaled by total assets	Compustat
Leverage	Firm i’s leverage ratio, defined as book value of debt divided by book value of total assets measured at the end of fiscal year t, set to zero if missing	Compustat
CEO	Equals to one if an insider is a CEO	ExecuComp

**Table 1 – Descriptive Statistics**

Table 1 is jointly covered in the CRSP, Compustat, Thomson Reuters, and Firm-level uncertainty Database from Hassan, Hollander, van Lent, Tahoun (2019) 2002 to 2019. *PRisk* represents political risks for each firm-quarter. *PSentiment* represents sentiment to political uncertainty captured by how much positive and negative words included in the conference call each firm-quarter observation. *NPRisk* represents non-political risk. *NPSentiment* measures non-political risk sentiment. *Risk* measures all types of political risk. *Sentiment* measures how sensitive the market respond to this political risk. *Frequency* represents the number of trades made by insiders. *Value* captures the total number of shares trades by insiders multiply by the price of the traded stock. *Volume* measures the total number of shares traded by insiders. *Leverage* is (Short-term debt + Long-term debt) divided by Assets. *Total Assets* is log (total assets +1). *ROA* is EBITDA/Assets. *PPE* is net Property, Plant, and Equipment. *Market cap* is manually figuring the market value of Common Stock. The dependent variable is insider trading frequency, total value, and total shares traded.

	<i>Full Sample (158,021 firms)</i>				<i>Purchase Sample (45,194 firms)</i>			
	Mean	Percentile			Mean	Percentile		
		25 <sup>th</sup>	50 <sup>th</sup>	75 <sup>th</sup>		25 <sup>th</sup>	50 <sup>th</sup>	75 <sup>th</sup>
<b><i>Insider Trading Activity</i></b>								
Frequency	6.36	1	1	3	4.97	1	1	3
Value	4,783,087	47,565	180,000	694,969.3	2,500,070	16,430.5	52,800	198,750
Volume	203,852.2	2,250	7,500	25,000	176,557.5	1,335	5,000	19,413
<b><i>Firm-level Political Uncertainty</i></b>								
PRisk	0.75	0.13	0.40	0.92	0.76	0.13	0.40	0.94
PSentiment	1.07	0.47	1.02	1.64	0.93	0.34	0.89	1.5
NPRisk	0.77	0.15	0.45	0.98	0.83	0.17	0.49	1.03
NPSentiment	0.68	0.16	0.66	1.22	0.45	-0.13	0.47	1.04
Risk	1.21	0.51	0.97	1.64	1.26	0.54	1.02	1.72
Sentiment	1.61	0.95	1.61	2.27	1.39	0.72	1.38	2.05
<b><i>Firm Characteristics</i></b>								
Total Assets	7.44	5.96	7.34	8.76	7.07	5.42	7.01	8.39
Leverage	0.22	0.04	0.19	0.34	0.24	0.062	0.19	0.37
Market-to-Book	3.48	1.45	2.33	3.94	2.54	1.088	1.70	2.85
PPE	0.23	0.05	0.14	0.33	0.26	0.054	0.14	0.43
R&D	0.01	0.00	0.00	0.02	0.013	0	0	0.012
Acquisitions	0.01	0.00	0.00	0.00	0.007	0	0	0
Capital Expense	0.01	0.00	0.01	0.01	0.012	0.0025	0.0066	0.014
CEO	0.10	0.00	0.00	0.00	0.12	0	0	0
ROA	0.00	0.00	0.01	0.02	-0.014	-0.012	0.002	0.012

**Table 2 – Insider Trading during High and Low Political Risk**

Table 2 reports the comparison insider trading behaviors between high political risk and low political risk period. Specifically, we classify high political risk periods as if the *PRisk* is above the mean of value among the sample or if it is during election year. *PRisk* represents political risks for each firm-quarter. Panel A and Panel B shows the insider trading activities on both purchase and sales comparing the high-risk periods with low-risk period. Panel C and Panel D compare election year’s insider trading activities with non-election year’s trading behaviors. *Frequency* represents the number of trades made by insiders. *Value* captures the total number of shares trades by insiders multiply by the price of the traded stock. *Volume* measures the total number of shares traded by insiders. The symbols \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively.

***Panel A – High Political Risk and Low Political Risk: Insider Purchases***

	<i>Low-Political risk</i>		<i>High- Political risk</i>		Difference	t-test
	N	Mean	N	Mean		
Frequency	30,126	4.718	15,068	5.481	0.762*	1.836
Volume	30,126	166,838.7	15,068	195,988.7	29,150	0.684
Value	30,126	2,178,242	15,068	3,143,449	965,206.3*	1.494

***Panel B – High Political Risk and Low Political Risk: Insider Sales***

	<i>Low- Political risk</i>		<i>High- Political risk</i>		Difference	t-test
	N	Mean	N	Mean		
Frequency	76,048	7.413	36,779	5.889	-1.524***	-4.503
Volume	76,048	212,359.3	36,779	219,802	7,442.713	0.297
Value	76,048	5,759,261	36,779	5,569,856	-189,404.6	-0.384

***Panel C – Election Year: Insider Purchases***

	<i>Non-Election Year</i>		<i>Election Year</i>		Difference	t-test
	N	Mean	N	Mean		
Frequency	35,113	4.77	10,081	5.679	0.908***	1.930
Volume	35,113	160,827.4	10,081	231,346.8	70,519.41*	1.4617
Value	35,113	2,492,932	10,081	2,524,938	32,005.7	0.0438

***Panel D – Election Year: Insider Sales***

	<i>Non-Election Year</i>		<i>Election Year</i>		Difference	t-test
	N	Mean	N	Mean		
Frequency	86,003	6.973	26,824	6.735	-0.238	-0.639
Volume	86,003	215,388.3	26,824	212,852.5	-2,535.845	-0.092
Value	86,003	5,980,075	26,824	4,791,607	-1,188,467***	-2.188

**Table 3 – Political Uncertainty and Insider Purchases**

Table 3 analyzes the relation between political uncertainty and change in insider trading. *PRisk* represents political risks for each firm-quarter. *PSentiment* represents sentiment to political uncertainty captured by how much positive and negative words included in the conference call each firm-quarter observation. *Leverage* is (Short-term debt + Long-term debt) divided by Assets. *Total Assets* is log (total assets +1). *ROA* is EBITDA/Assets. *PPE* is net Property, Plant, and Equipment. *Market cap* is manually figuring the market value of Common Stock. Constant terms are included but not reported. In all regressions, insider, industry, quarter, and year fixed effects are included, and standard errors presented parenthetically are robust and clustered at the industry level. The symbols \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	Δ Value	Δ Value	Δ Volume	Δ Volume
PRisk	30.32** (12.39)	27.33** (12.55)	27.17** (13.46)	24.02* (13.64)
PSentiment	43.97*** (13.27)	47.42*** (13.81)	44.13*** (14.42)	48.82*** (15.01)
NPRisk		18.26 (12.35)		19.33 (13.42)
NPSentiment		-8.936 (13.57)		-13.19 (14.75)
Total Assets	-4.466 (34.36)	-4.184 (34.36)	6.524 (37.35)	6.830 (37.35)
PPE	-70.42 (231.5)	-71.43 (231.6)	-105.8 (251.6)	-107.8 (251.6)
Tobin's Q	310.7** (151.2)	303.5** (151.5)	356.7** (164.4)	346.6** (164.6)
ROA	144.6 (208.2)	148.1 (208.3)	202.0 (226.3)	207.4 (226.3)
Leverage	-209.8 (181.1)	-206.1 (181.2)	-246.1 (196.8)	-240.8 (196.9)
Market Cap	-0.888 (2.130)	-0.858 (2.130)	-1.883 (2.315)	-1.845 (2.315)
R&D	-296.7 (618.8)	-271.6 (619.0)	-200.4 (672.6)	-170.8 (672.8)
Acquisitions	-213.3 (306.1)	-217.7 (306.1)	-239.4 (332.6)	-243.2 (332.6)
Capital Exp	-4,597*** (1,119)	-4,580*** (1,119)	-4,736*** (1,216)	-4,716*** (1,216)
CEO	-18.17 (34.21)	-18.04 (34.21)	-19.33 (37.18)	-19.29 (37.18)
Constant	31.98 (819.2)	18.98 (819.4)	-23.87 (890.4)	-35.01 (890.6)
Observations	43,388	43,388	43,392	43,392
R-squared	0.103	0.103	0.096	0.096
Firm FE	YES	YES	YES	YES
Year-Quarter FE	YES	YES	YES	YES

**Table 4 – Political Uncertainty and  $\Delta$  Insider Trading**

Table 4 analysis the relationship between the interaction of political risk and sentiment of political risk and changes in insider trading. In panel A, *High PRisk* equals to one if political risk is higher than the mean value or median value. In panel B, *High PSentiment* equals to one if political sentiment is higher than the mean value or median value. *PSentiment (PSen)* represents sentiment to political uncertainty captured by how much positive and negative words include in the conference call each firm-quarter observation. *High PRisk\*PSen* is the interaction between *High PRisk* and *PSentiment*. *High Psen \* PRisk* is the interaction between *PRisk* and *High PSentiment*. The dependent variable is insider trading frequency, total value, and total shares traded. Constant terms are included but not reported. In all regressions, insider, industry, quarter, and year fixed effects are included, and standard errors are robust and clustered at the industry level. The symbols \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively.

**Panel A – High Political Risk and  $\Delta$  Insider Trading**

	(1)	(2)	(3)	(4)
	<i>High PRisk: Above Mean</i>		<i>High PRisk: Above Median</i>	
	$\Delta$ Value	$\Delta$ Volume	$\Delta$ Value	$\Delta$ Volume
High PRisk*PSen	88.06*** (27.83)	84.62*** (30.35)	66.94** (27.37)	64.81** (29.84)
High PRisk	-59.87 (40.77)	-64.23 (44.44)	-72.98* (40.05)	-70.59 (43.66)
PSentiment	24.78 (19.50)	27.35 (21.26)	20.94 (22.31)	23.49 (24.32)
NPRisk	21.02 (14.27)	21.66 (15.56)	23.31 (14.34)	23.23 (15.64)
NPSentiment	-14.89 (15.54)	-18.13 (16.94)	-15.71 (15.54)	-18.88 (16.94)
Total Assets	-7.974 (38.85)	0.608 (42.36)	-7.182 (38.86)	1.316 (42.37)
PPE	-130.5 (267.7)	-154.2 (291.9)	-132.7 (267.7)	-155.9 (291.9)
Tobin's Q	364.4** (173.8)	390.4** (189.5)	361.2** (173.8)	387.0** (189.5)
ROA	158.8 (233.1)	211.4 (254.1)	151.7 (233.1)	205.0 (254.1)
Leverage	-324.3 (211.0)	-333.6 (230.1)	-318.0 (211.0)	-327.1 (230.1)
Market Cap	-1.847 (2.471)	-2.438 (2.694)	-1.725 (2.470)	-2.313 (2.693)
R&D	-299.8 (692.6)	-250.9 (755.2)	-295.6 (692.7)	-246.7 (755.2)
Acquisitions	-86.95 (354.2)	-108.3 (386.1)	-87.71 (354.3)	-107.8 (386.2)
Capital Exp	-5,155*** (1,252)	-5,252*** (1,365)	-5,162*** (1,252)	-5,262*** (1,365)
CEO	-17.08 (38.67)	-17.66 (42.16)	-16.17 (38.67)	-16.84 (42.16)
Constant	96.77 (889.0)	57.41 (969.3)	116.1 (889.2)	76.64 (969.4)
Observations	36,767	36,771	36,767	36,771
R-squared	0.100	0.097	0.100	0.097
Firm FE	YES	YES	YES	YES
Year-Quarter FE	YES	YES	YES	YES

**Table 4 – Political Uncertainty and  $\Delta$  Insider Trading (Continued)**

**Panel B – High Political Sentiment and  $\Delta$  Insider Trading**

	(1)	(2)	(3)	(4)
	<i>High PSentiment: Above Mean</i>		<i>High PSentiment: Above Median</i>	
	$\Delta$ Value	$\Delta$ Volume	$\Delta$ Value	$\Delta$ Volume
High PSen*PRisk	69.36** (29.03)	72.20** (31.66)	68.33** (28.77)	71.43** (31.37)
PRisk	0.889 (19.17)	-3.159 (20.91)	-0.136 (19.45)	-4.356 (21.21)
High PSentiment	18.04 (36.83)	20.23 (40.15)	12.26 (36.70)	13.76 (40.02)
NPRisk	15.82 (14.21)	16.38 (15.49)	15.59 (14.21)	16.15 (15.49)
NPSentiment	-6.715 (15.27)	-9.981 (16.65)	-6.332 (15.28)	-9.559 (16.66)
Total Assets	-11.27 (38.85)	-2.747 (42.36)	-11.12 (38.86)	-2.598 (42.36)
PPE	-134.3 (267.8)	-158.4 (291.9)	-128.8 (267.8)	-152.6 (291.9)
Tobin's Q	348.7** (173.9)	376.0** (189.6)	350.2** (173.9)	377.5** (189.6)
ROA	167.8 (233.1)	220.2 (254.2)	167.7 (233.2)	220.1 (254.2)
Leverage	-303.4 (211.0)	-314.6 (230.1)	-304.5 (211.0)	-315.8 (230.1)
Market Cap	-1.623 (2.471)	-2.216 (2.694)	-1.620 (2.471)	-2.214 (2.694)
R&D	-256.5 (692.8)	-209.8 (755.3)	-256.2 (692.8)	-209.4 (755.3)
Acquisitions	-63.90 (354.1)	-84.11 (386.0)	-61.59 (354.1)	-81.67 (386.0)
Capital Exp	-5,188*** (1,253)	-5,289*** (1,366)	-5,194*** (1,253)	-5,296*** (1,366)
CEO	-15.78 (38.67)	-16.49 (42.16)	-15.70 (38.67)	-16.42 (42.16)
Constant	95.49 (889.3)	57.32 (969.6)	97.61 (889.3)	59.68 (969.6)
Observations	36,767	36,771	36,767	36,771
R-squared	0.100	0.097	0.100	0.097
Firm FE	YES	YES	YES	YES
Year-Quarter FE	YES	YES	YES	YES



**Table 5 – Political Uncertainty and Non-routine insiders**

Table 5 reports the impact of insider’s types affecting the relationship between political uncertainty and insider trading. Insiders are divided into routine traders and opportunistic traders. *High PRisk* equals to one if political risk is higher than 75% of its value. *Non-Routine (NR)* represents insiders who are not routine traders. *PSentiment* represents sentiment to political uncertainty captured by how much positive and negative words include in the conference call each firm-quarter observation. *NR\*High Prisk* is the interaction between *Non-Routine* and *High PRisk*. *Leverage* is (Short-term debt + Long-term debt) divided by Assets. *Total Assets* is log (total assets +1). *ROA* is EBITDA/Assets. *PPE* is net Property, Plant, and Equipment. *Market cap* is manually figuring the market value of Common Stock. The dependent variable is insider trading frequency, total value, and total shares traded. Constant terms are included but not reported. In all regressions, insider, industry, quarter, and year fixed effects are included, and standard errors are robust and clustered at the industry level. The symbols \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively.

**Panel A – Insider and Year-Quarter Fixed Effects**

	(1)	(2)	(3)	(4)	(5)	(6)
	Ln	Ln	Ln	Ln	Ln	Ln
	(Value)	(Value)	(Volume)	(Volume)	(Frequency)	(Frequency)
High PRisk	-0.144*** (0.0341)	-0.157*** (0.0344)	-0.129*** (0.0351)	-0.144*** (0.0353)	-0.0242 (0.0164)	-0.0281* (0.0165)
Non-Routine	-0.0732 (0.0607)	-0.0719 (0.0607)	0.000720 (0.0626)	0.00137 (0.0625)	-0.144*** (0.0292)	-0.144*** (0.0292)
NR* High PRisk	0.125*** (0.0424)	0.125*** (0.0423)	0.144*** (0.0436)	0.146*** (0.0436)	0.0335* (0.0204)	0.0338* (0.0204)
NPRisk		0.0249*** (0.00876)		0.0208** (0.00901)		0.00674 (0.00421)
NPSentiment		-0.0170* (0.00964)		-0.0801*** (0.00992)		-0.0104** (0.00464)
Total Assets	0.213*** (0.0149)	0.215*** (0.0149)	-0.177*** (0.0154)	-0.170*** (0.0154)	-0.0252*** (0.00717)	-0.0243*** (0.00718)
PPE	-0.303*** (0.104)	-0.307*** (0.104)	0.0351 (0.107)	0.0261 (0.107)	-0.211*** (0.0499)	-0.213*** (0.0499)
Tobin’s Q	-0.0356 (0.0896)	-0.0415 (0.0896)	0.425*** (0.0923)	0.402*** (0.0922)	0.0635 (0.0431)	0.0604 (0.0431)
ROA	0.541*** (0.149)	0.542*** (0.149)	-0.806*** (0.154)	-0.784*** (0.153)	0.0785 (0.0717)	0.0806 (0.0717)
Leverage	0.233** (0.108)	0.231** (0.108)	0.669*** (0.112)	0.667*** (0.112)	0.0687 (0.0522)	0.0681 (0.0522)
Market Cap	0.00334** (0.00156)	0.00343** (0.00156)	-0.00637*** (0.00161)	-0.00611*** (0.00161)	0.000210 (0.000752)	0.000250 (0.000752)
R&D	1.790*** (0.406)	1.805*** (0.406)	0.0967 (0.418)	0.0764 (0.417)	-0.0773 (0.195)	-0.0762 (0.195)
Acquisitions	0.499** (0.221)	0.499** (0.221)	-0.152 (0.227)	-0.129 (0.227)	0.125 (0.106)	0.127 (0.106)
Capital Exp	1.621** (0.751)	1.629** (0.751)	-3.791*** (0.774)	-3.729*** (0.772)	0.217 (0.361)	0.224 (0.361)
CEO	0.304*** (0.0533)	0.300*** (0.0533)	0.369*** (0.0549)	0.359*** (0.0549)	0.0521** (0.0256)	0.0505** (0.0257)
Constant	9.763*** (0.433)	9.735*** (0.433)	9.465*** (0.446)	9.464*** (0.446)	1.666*** (0.208)	1.660*** (0.208)
Observations	36,589	36,589	36,592	36,592	36,592	36,592
R-squared	0.839	0.839	0.851	0.852	0.708	0.708
Year-Quarter FE	YES	YES	YES	YES	YES	YES
Trader FE	YES	YES	YES	YES	YES	YES

**Table 5 – Political Uncertainty and Opportunistic insiders (Continued)**

*Panel B – Firm and Year-Quarter Fixed Effects*

	(1) Ln (Value)	(2) Ln (Value)	(3) Ln (Volume)	(4) Ln (Volume)	(5) Ln (Frequency)	(6) Ln (Frequency)
High PRisk	-0.158*** (0.0449)	-0.175*** (0.0452)	-0.0926** (0.0452)	-0.118*** (0.0455)	-0.0236 (0.0163)	-0.0306* (0.0164)
Non-Routine	-0.610*** (0.0297)	-0.611*** (0.0297)	-0.551*** (0.0299)	-0.554*** (0.0298)	-0.262*** (0.0108)	-0.263*** (0.0108)
NR * High PRisk	0.143*** (0.0510)	0.143*** (0.0510)	0.120** (0.0512)	0.123** (0.0512)	0.0177 (0.0185)	0.0183 (0.0185)
NPRisk		0.0323*** (0.0105)		0.0432*** (0.0106)		0.0127*** (0.00382)
NPSentiment		-0.0190* (0.0115)		-0.0825*** (0.0115)		-0.0164*** (0.00416)
Total Assets	0.327*** (0.0286)	0.328*** (0.0286)	-0.110*** (0.0288)	-0.108*** (0.0287)	-0.0211** (0.0104)	-0.0205** (0.0104)
PPE	-0.502** (0.195)	-0.507*** (0.195)	0.462** (0.196)	0.429** (0.196)	-0.142** (0.0709)	-0.148** (0.0709)
Tobin's Q	0.119 (0.127)	0.107 (0.127)	0.531*** (0.128)	0.487*** (0.128)	0.0884* (0.0462)	0.0792* (0.0463)
ROA	0.424** (0.172)	0.431** (0.172)	-0.919*** (0.173)	-0.886*** (0.173)	-0.00339 (0.0626)	0.00302 (0.0626)
Leverage	0.0877 (0.154)	0.0903 (0.154)	0.542*** (0.155)	0.550*** (0.155)	0.0531 (0.0561)	0.0547 (0.0561)
Market Cap	0.00507*** (0.00183)	0.00513*** (0.00183)	-0.00535*** (0.00184)	-0.00520*** (0.00184)	0.000642 (0.000665)	0.000675 (0.000664)
R&D	2.639*** (0.513)	2.690*** (0.513)	-0.204 (0.516)	-0.0860 (0.516)	0.0227 (0.186)	0.0506 (0.186)
Acquisitions	0.293 (0.265)	0.288 (0.265)	-0.311 (0.266)	-0.302 (0.266)	0.0331 (0.0961)	0.0334 (0.0961)
Capital Exp	1.930** (0.909)	1.948** (0.909)	-4.040*** (0.915)	-4.001*** (0.914)	-0.106 (0.330)	-0.0962 (0.330)
CEO	0.401*** (0.0282)	0.401*** (0.0282)	0.445*** (0.0284)	0.444*** (0.0284)	0.0732*** (0.0102)	0.0730*** (0.0102)
Constant	8.672*** (0.521)	8.660*** (0.521)	8.116*** (0.515)	8.134*** (0.515)	1.455*** (0.186)	1.456*** (0.186)
Observations	36,589	36,589	36,592	36,592	36,592	36,592
R-squared	0.412	0.413	0.482	0.483	0.392	0.393
Firm FE	YES	YES	YES	YES	YES	YES
Year-Quarter FE	YES	YES	YES	YES	YES	YES

**Table 6 – Political Uncertainty and Inside Trading**

Table 6 reports OLS regressions with insider trading frequency as dependent variable and *BBD\_Index* as the primary independent variable. *BBD\_Index* represents political risks for each firm-quarter (Baker, Bloom, and Davis, 2016). *Leverage* is (Short-term debt + Long-term debt) divided by Assets. *ROA* is EBITDA/Assets. *PPE* is net Property, Plant, and Equipment. *Market cap* is manually figuring the market value of Common Stock. The dependent variable is insider trading total value, and total shares traded. *Frequency* represents the number of trades made by insiders. Constant terms are included but not reported. In all regressions, insider, industry, quarter, and year fixed effects are included, and standard errors are robust and clustered at the industry level. The symbols \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively.

**Panel A – Frequency**

	(1)	(2)	(3)	(4)
	Frequency	Frequency	Frequency	Frequency
BBD_Index	0.00166* (0.000969)	0.00300*** (0.000844)	0.00160* (0.000910)	0.00248*** (0.000790)
Total Assets	0.583*** (0.140)	0.378*** (0.0686)	0.594*** (0.140)	0.376*** (0.0685)
PPE	-1.684 (1.034)	-0.664 (0.508)	-1.662 (1.034)	-0.653 (0.508)
Tobin's Q	0.446 (0.428)	0.462 (0.293)	0.456 (0.428)	0.458 (0.293)
ROA	0.408 (0.752)	0.368 (0.680)	0.328 (0.751)	0.377 (0.679)
Leverage	-2.186*** (0.645)	-0.668 (0.449)	-2.195*** (0.645)	-0.655 (0.449)
Market Cap	-0.0129 (0.0110)	0.00993 (0.00953)	-0.0128 (0.0110)	0.00988 (0.00953)
R&D	-0.0812 (0.710)	-0.0727 (0.773)	-0.101 (0.710)	-0.0588 (0.773)
Acquisitions	-2.464 (1.768)	-4.000** (1.555)	-2.433 (1.768)	-3.925** (1.555)
Capital Exp	3.546 (4.816)	4.081 (4.108)	3.511 (4.811)	3.819 (4.103)
CEO	0.526*** (0.155)	1.859*** (0.276)	0.530*** (0.155)	1.857*** (0.276)
Constant	0.900 (0.964)	1.420*** (0.534)	0.695 (0.944)	1.635*** (0.506)
Observations	143,722	143,722	143,722	143,722
R-squared	0.221	0.674	0.221	0.674
Firm FE	YES		YES	
Year-Month FE	YES	YES		
Year FE			YES	YES
Trader FE		YES		YES

**Table 6 – Political Uncertainty and Insider Trading (Continued)**

**Panel B – Log (Frequency)**

	(1) Ln (Frequency)	(2) Ln (Frequency)	(3) Ln (Frequency)	(4) Ln (Frequency)	(5) Ln (Frequency)	(6) Ln (Frequency)
BBD_Index	0.0000682** (0.00003)	0.000125*** (0.00003)	0.000106** (0.00004)	0.0000886*** (0.00003)	0.000124*** (0.00003)	0.000137*** (0.00004)
Total Assets	0.0121*** (0.00408)	0.00284 (0.00242)	-0.0211*** (0.00152)	0.0126*** (0.00408)	0.00267 (0.00242)	-0.0213*** (0.00152)
PPE	-0.0958*** (0.0302)	-0.0849*** (0.0180)	-0.0303* (0.0182)	-0.0947*** (0.0302)	-0.0845*** (0.0180)	-0.0299* (0.0182)
Tobin's Q	0.0253** (0.0125)	0.0291*** (0.0103)	0.0111 (0.0104)	0.0255** (0.0125)	0.0287*** (0.0103)	0.0106 (0.0104)
ROA	0.0522** (0.0220)	0.0949*** (0.0240)	0.0763*** (0.0216)	0.0518** (0.0219)	0.0977*** (0.0240)	0.0771*** (0.0216)
Leverage	-0.0167 (0.0188)	0.0244 (0.0159)	0.0190 (0.0154)	-0.0175 (0.0188)	0.0247 (0.0159)	0.0195 (0.0154)
Market Cap	-0.000167 (0.000322)	0.000117 (0.000336)	-4.87e-05 (0.000353)	-0.000163 (0.000322)	0.000112 (0.000337)	-4.18e-05 (0.000353)
R&D	-0.0151 (0.0207)	-0.0174 (0.0273)	0.0219 (0.0209)	-0.0159 (0.0207)	-0.0172 (0.0273)	0.0216 (0.0209)
Acquisitions	-0.124** (0.0516)	-0.122** (0.0549)	-0.269*** (0.0616)	-0.123** (0.0516)	-0.117** (0.0549)	-0.264*** (0.0616)
Capital Exp	-0.00548 (0.141)	0.277* (0.145)	-0.173 (0.146)	-0.0111 (0.141)	0.262* (0.145)	-0.172 (0.146)
CEO	0.0677*** (0.00454)	0.116*** (0.00975)	0.0685*** (0.00645)	0.0681*** (0.00454)	0.115*** (0.00976)	0.0688*** (0.00645)
Constant	0.979*** (0.0282)	1.047*** (0.0189)	1.270*** (0.0164)	0.960*** (0.0276)	1.054*** (0.0179)	1.236*** (0.0133)
Observations	143,722	143,722	85,014	143,722	143,722	85,014
R-squared	0.316	0.582	0.111	0.316	0.582	0.110
Year-Month FE	YES	YES	YES			
Year FE				YES	YES	YES
Firm FE	YES			YES		
Trader FE		YES			YES	
Industry FE			YES			YES

**Table 7 – Political Risk and Insider Trading during Election Period**

Table 7 analysis the impact of political uncertainty, measured as election uncertainty, on insider trading. *Competitive* represents Herfindahl–Hirschman Index which is calculated by squaring the ratio of each party’s voting to the total votes during the election year. *Election* equal to one if it is during an election year and equal to zero otherwise. *Voting ratio* is calculated by using the max value of party’s votes divided by the minimum value of the part’s votes which capture how close the vote is between the two parties. *Leverage* is (Short-term debt + Long-term debt) divided by Assets. *ROA* is EBITDA/Assets. *PPE* is net Property, Plant, and Equipment. *Market cap* is manually figuring the market value of Common Stock. The dependent variable is insider trading frequency, total value, and total shares traded. *Frequency* represents the number of trades made by insiders. *Value* captures the total number of shares trades by insiders multiply by the price of the traded stock. *Volume* measures the total number of shares traded by insiders. Constant terms are included but not reported. In all regressions, insider, industry, quarter, and year fixed effects are included, and standard errors are robust and clustered at the industry level. The symbols \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively.

**Panel A – Trading Frequency**

	(1)	(2)	(3)	(4)	(5)
	Frequency	Frequency	Frequency	Frequency	Frequency
Competitive	-8.147*** (2.765)	-17.51*** (6.220)	-26.05*** (9.848)		
Election	2.638* (1.408)	7.578** (2.987)	12.30*** (4.733)		
Voting Ratio				4.505* (2.588)	8.215** (3.830)
Total Assets	0.799 (0.664)	0.845 (0.683)	0.303 (0.573)	0.595 (0.845)	0.306 (0.704)
PPE	-4.252 (4.577)	-3.062 (4.686)	2.587 (3.901)	-1.711 (5.796)	-1.701 (4.869)
Tobin’s Q	2.354 (2.974)	2.430 (2.928)	6.008* (3.320)	16.65*** (3.698)	14.22*** (4.237)
ROA	2.620 (4.035)	2.848 (3.799)	1.396 (5.480)	1.988 (4.195)	0.742 (6.483)
Leverage	-7.553** (3.624)	-11.74*** (3.655)	-8.744** (4.179)	-26.26*** (4.541)	-18.95*** (5.297)
Market Cap	0.00802 (0.0429)	-0.00206 (0.0426)	-0.00958 (0.0615)	-0.0291 (0.0557)	-0.0410 (0.0874)
R&D	11.57 (11.97)	3.718 (11.38)	-2.551 (14.86)	-14.48 (14.50)	-4.836 (18.14)
Acquisitions	8.104 (6.197)	10.21* (5.977)	8.365 (8.431)	6.076 (6.221)	3.983 (9.624)
Capital Exp	-15.26 (21.45)	-12.56 (21.39)	-13.22 (29.67)	-5.395 (24.92)	20.57 (37.18)
CEO	0.734 (0.669)	1.132* (0.644)	0.457 (2.163)	0.896 (0.694)	-0.396 (2.865)
Constant	-2.158 (12.25)	-1.468 (43.40)	-11.53 (36.28)	-3.508 (9.855)	-2.724 (12.62)
Observations	38,181	29,978	29,978	13,947	13,947
R-squared	0.256	0.355	0.487	0.372	0.585
Firm FE	YES	YES		YES	
Year-Quarter FE	YES	YES	YES	YES	YES
State FE		YES	YES	YES	
Trader FE			YES		YES

**Table 7 – Political Risk and Insider Trading during Election Period (Continued)**

*Panel B – Log (Insider Trading Activities)*

	(1) Ln (Frequency)	(2) Ln (Value)	(3) Ln (Volume)
Competitive	-0.141*** (0.0428)	-0.734*** (0.118)	-0.693*** (0.118)
Election	0.0489** (0.0218)	0.266*** (0.0601)	0.237*** (0.0604)
Total Assets	-0.0163 (0.0103)	0.315*** (0.0283)	-0.119*** (0.0284)
PPE	-0.146** (0.0708)	-0.603*** (0.195)	0.363* (0.196)
Tobin's Q	0.0966** (0.0460)	0.184 (0.127)	0.604*** (0.127)
ROA	0.0133 (0.0624)	0.485*** (0.172)	-0.878*** (0.173)
Leverage	0.0206 (0.0561)	0.0282 (0.155)	0.461*** (0.155)
Market Cap	0.000765 (0.000663)	0.00543*** (0.00183)	-0.00526*** (0.00184)
R&D	-0.0843 (0.185)	2.335*** (0.511)	-0.378 (0.513)
Acquisitions	0.0169 (0.0959)	0.250 (0.264)	-0.368 (0.266)
Capital Exp	-0.00793 (0.332)	2.468*** (0.915)	-3.543*** (0.919)
CEO	0.0727*** (0.0104)	0.367*** (0.0285)	0.411*** (0.0287)
Constant	1.082*** (0.190)	7.907*** (0.532)	7.376*** (0.525)
Observations	38,181	38,178	38,181
R-squared	0.371	0.397	0.470
Firm FE	YES	YES	YES
Year-Quarter FE	YES	YES	YES

**Table 8 – Political Risk and Insider Purchase Short-Term Returns**

Table 8 reports the short-term returns following insider purchase during political risk. *PRisk* represents political risks for each firm-quarter. *PSentiment* represents sentiment to political uncertainty captured by how much positive and negative words included in the conference call each firm-quarter observation. *CAR (0, 3)* represents insider's cumulative abnormal return 3 days after making purchase trade. *CAR (0, 15)* represents insider's cumulative abnormal return 15 days after making purchase trade. *Leverage* is (Short-term debt + Long-term debt) divided by Assets. *ROA* is EBITDA divided by Assets. *PPE* is net Property, Plant, and Equipment. *Market cap* is manually figuring the market value of Common Stock. The dependent variable is insider trading frequency, total value, and total shares traded. Constant terms are included but not reported. In all regressions, insider, industry, quarter, and year fixed effects are included, and standard errors are robust and clustered at the industry level. The symbols \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively.

**Panel A – CAR (0, 3)**

	(1) CAR (0, 3)	(2) CAR (0, 3)	(3) CAR (0, 3)
PRisk	0.00182*** (0.000556)	0.00174*** (0.000557)	0.00175*** (0.000569)
PSentiment		-0.00106* (0.000577)	-0.00109* (0.000599)
NPRisk			-4.88e-05 (0.000521)
NPSentiment			6.91e-05 (0.000568)
Total Assets	-5.50e-05 (0.000854)	-0.000126 (0.000855)	-0.000131 (0.000856)
PPE	0.0128** (0.00591)	0.0126** (0.00591)	0.0127** (0.00591)
Tobin's Q	-0.00215 (0.00522)	-0.00218 (0.00522)	-0.00216 (0.00523)
ROA	0.00538 (0.00876)	0.00567 (0.00876)	0.00565 (0.00876)
Leverage	0.00693 (0.00641)	0.00675 (0.00641)	0.00675 (0.00641)
Market Cap	-0.000346*** (9.37e-05)	-0.000344*** (9.37e-05)	-0.000344*** (9.37e-05)
R&D	0.122*** (0.0237)	0.123*** (0.0237)	0.123*** (0.0237)
Acquisitions	-0.00757 (0.0131)	-0.00681 (0.0131)	-0.00682 (0.0131)
Capital Exp	-0.0801* (0.0447)	-0.0801* (0.0447)	-0.0802* (0.0447)
CEO	-0.000959 (0.00319)	-0.000954 (0.00319)	-0.000943 (0.00319)
Constant	-0.0417 (0.0271)	-0.0403 (0.0271)	-0.0402 (0.0271)
Observations	37,996	37,996	37,996
R-squared	0.466	0.466	0.466
Trader FE	YES	YES	YES
Year-Quarter FE	YES	YES	YES

**Table 8 – Political Risk and Insider Purchase Short-Term Returns (Continued)**

*Panel B – CAR (0, 15)*

	(1) CAR (0, 15)	(2) CAR (0, 15)	(3) CAR (0, 15)
PRisk	0.00460*** (0.00132)	0.00474*** (0.00132)	0.00546*** (0.00135)
PSentiment		0.00189 (0.00137)	0.00184 (0.00142)
NPRisk			-0.00327*** (0.00123)
NPSentiment			-0.000458 (0.00134)
Total Assets	-0.00596*** (0.00202)	-0.00583*** (0.00202)	-0.00580*** (0.00203)
PPE	0.0549*** (0.0140)	0.0552*** (0.0140)	0.0555*** (0.0140)
Tobin's Q	0.0249** (0.0124)	0.0250** (0.0124)	0.0250** (0.0124)
ROA	-0.0723*** (0.0207)	-0.0728*** (0.0207)	-0.0722*** (0.0207)
Leverage	-0.0529*** (0.0152)	-0.0525*** (0.0152)	-0.0522*** (0.0152)
Market Cap	-0.000485** (0.000222)	-0.000488** (0.000222)	-0.000490** (0.000222)
R&D	0.0683 (0.0559)	0.0661 (0.0560)	0.0628 (0.0560)
Acquisitions	-0.0612** (0.0310)	-0.0625** (0.0311)	-0.0618** (0.0311)
Capital Exp	-0.379*** (0.106)	-0.379*** (0.106)	-0.377*** (0.106)
CEO	0.00228 (0.00754)	0.00227 (0.00754)	0.00240 (0.00754)
Constant	-0.00809 (0.0641)	-0.0107 (0.0641)	-0.00631 (0.0641)
Observations	37,972	37,972	37,972
R-squared	0.498	0.498	0.498
Trader FE	YES	YES	YES
Year-Quarter FE	YES	YES	YES



**Table 9 – Political Risk and Insider Purchase Long-Term Returns**

Table 9 analysis the long-term returns following insider purchases during uncertainty periods. *PRisk* represents political risks for each firm-quarter. *PSentiment* represents sentiment to political uncertainty captured by how much positive and negative words included in the conference call each firm-quarter observation. *Bhar+180* represent insider's buy and hold abnormal return after 180 days. *Leverage* is (Short-term debt + Long-term debt) divided by Assets. *ROA* is EBITDA divided by Assets. *PPE* is net Property, Plant, and Equipment. *Market cap* is manually figuring the market value of Common Stock. The dependent variable is insider trading frequency, total value, and total shares traded. Constant terms are included but not reported. In all regressions, insider, industry, quarter, and year fixed effects are included, and standard errors are robust and clustered at the industry level. The symbols \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively.

	(1) BHAR (0, 180)	(2) BHAR (0, 180)	(3) BHAR (0, 180)
PRisk	0.0109*** (0.00373)	0.0106*** (0.00375)	0.00980** (0.00382)
PSentiment		-0.00473 (0.00389)	-0.00160 (0.00405)
NPRisk			0.00319 (0.00351)
NPSentiment			-0.0102*** (0.00385)
Total Assets	-0.169*** (0.00951)	-0.169*** (0.00951)	-0.169*** (0.00951)
PPE	-0.151** (0.0658)	-0.151** (0.0658)	-0.155** (0.0658)
Tobin's Q	0.0236 (0.0438)	0.0230 (0.0438)	0.0178 (0.0439)
ROA	-0.677*** (0.0589)	-0.675*** (0.0589)	-0.670*** (0.0590)
Leverage	0.117** (0.0535)	0.117** (0.0535)	0.118** (0.0535)
Market Cap	-0.00187*** (0.000663)	-0.00186*** (0.000663)	-0.00185*** (0.000663)
R&D	-1.407*** (0.174)	-1.405*** (0.174)	-1.395*** (0.174)
Acquisitions	-0.171* (0.0877)	-0.168* (0.0877)	-0.167* (0.0877)
Capital Exp	-1.475*** (0.308)	-1.477*** (0.308)	-1.472*** (0.308)
CEO	-0.000002 (0.00951)	0.000003 (0.00951)	0.000006 (0.00951)
Constant	0.697*** (0.180)	0.704*** (0.180)	0.705*** (0.180)
Observations	37,032	37,032	37,032
R-squared	0.317	0.317	0.317
Year-Quarter FE	YES	YES	YES
Firm FE	YES	YES	YES

**Table 10 – Two Stage Least Squares (2SLS) Estimation on Insider Trading**

Table 10 explores the impact of instrumental variables (Alfaro, Bloom, and Lin, 2019) of political uncertainty on insider trading activity. Instrumental variables include *Price growth of energy*, *Realized Volatility*, and *CAD*. *Price growth of energy* is measured by oil prices. *Realized Volatility* is an alternative approach to measure 12-month standard deviation of firm daily stock returns for each firm-quarter. *CAD* (Canadian Dollar) is a type of exchange rate. *CAR* is the cumulative abnormal return during 5 days after the trading day. *BHAR* is the buy-and-hold abnormal return during 180 days of the trading day. *Frequency*, *Valuation*, and *Volume* are measured in log form. Control variables are listed below. Econometrically, we follow Staiger and Stock (1997) and Larcker and Rusticus (2010) to report F-statistics for the Weak Instrument test for the first stage and Hansen p-value for the second stage. Constant terms are included but not reported. In all regressions, insider, industry, quarter, and year fixed effects are included, and standard errors are robust and clustered at the industry level. The symbols \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively.

	<i>First Stage</i>	<i>Second Stage</i>				
	Political Risk	Ln(Frequency)	Ln(Value)	Ln(Volume)	CAR	BHAR
PRisk		0.430*** (0.132)	-0.155 (0.336)	1.544*** (0.383)	0.0223* (0.0133)	0.0547*** (0.0173)
Price growth of energy	3.011*** (0.6101)					
Realized Volatility	0.5404*** (0.0987)					
CAD	4.1033*** (2.340)					
Total Assets	0.0947*** (0.0284)	-0.118*** (0.0299)	0.319*** (0.0759)	-0.207** (0.0866)	-0.00402 (0.00300)	-0.0201*** (0.00391)
PPE	0.0791 (0.1713)	-0.293 (0.184)	-1.299*** (0.467)	0.541 (0.533)	-0.0272 (0.0184)	-0.0977*** (0.0240)
Tobin's Q	0.1120 (0.1984)	-0.0209 (0.118)	0.644** (0.299)	0.411 (0.341)	-0.0337*** (0.0118)	-0.0246 (0.0153)
ROA	0.2275 (0.1340)	-0.00586 (0.153)	0.350 (0.388)	-0.870** (0.442)	0.0302** (0.0152)	0.0318 (0.0198)
Leverage	-0.0469 (0.1340)	-0.0189 (0.144)	-0.926** (0.366)	0.0370 (0.418)	0.0436*** (0.0144)	0.0369** (0.0188)
Market Cap	0.002724* (0.001240)	-0.00239* (0.00137)	-0.00379 (0.00349)	-0.0135*** (0.00398)	-0.000146 (0.000143)	-7.16e-05 (0.000186)
R&D	0.6297 (0.4809)	-1.041** (0.526)	2.390* (1.334)	-1.725 (1.522)	0.336*** (0.0526)	0.226*** (0.0684)
Acquisitions	0.01102	0.229	0.869	0.203	-0.0249	-0.0385

(continued on next page)

**Table 10** (continued)

	<i>First Stage</i>	<i>Second Stage</i>				
	Political Risk	Ln(Frequency)	Ln(Value)	Ln(Volume)	CAR	BHAR
	(0.2210)	(0.240)	(0.609)	(0.695)	(0.0240)	(0.0312)
Capital Exp	0.04001	2.140***	5.079***	1.442	-0.272***	-0.388***
	(0.6659)	(0.718)	(1.821)	(2.078)	(0.0717)	(0.0933)
CEO	-0.003940	0.0640**	0.290***	0.348***	-0.00373	-0.00192
	(0.02333)	(0.0254)	(0.0643)	(0.0734)	(0.00253)	(0.00330)
Observations	6,929	6,929	6,929	6,929	6,917	6,916
R-squared	0.519	-0.194	0.007	-0.308	-0.002	-0.100
Firm FE	YES	YES	YES	YES	YES	YES
Year-Quarter FE	YES	YES	YES	YES	YES	YES
F-stat	22.17					
Weak identification Test		22.479	22.479	22.479	22.168	22.274
Under-Identification Test (Chi-sq Test)		74.105	74.105	74.105	73.091	73.438
		(P<0.0001)	(P<0.0001)	(P<0.0001)	(P<0.0001)	(P<0.0001)
Hansen J p-value		0.2543	0.013	0.13	0.0108	0.136

**Table 11 – Firm Governance, Insider Trading, Political Uncertainty**

Table 11 describes the relationship between insider trading of firm and political risk with control on firm governance. Firm governance is measured as *Duality* and *Restrict*. *Duality* is a dummy variable check whether CEO is also a board member. *Restrict* equals to one if firm has restriction on insider trading (Cohen, Malloy, Pomorski, 2012). *PRisk* represents political risks for each firm-quarter. *PSentiment* represents sentiment to political uncertainty captured by how much positive and negative words included in the conference call each firm-quarter observation. The dependent variable is insider trading frequency, total value, and total shares traded. Constant terms are included but not reported. In all regressions, insider, industry, quarter, and year fixed effects are included, and standard errors are robust and clustered at the industry level. The symbols \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively.

**Panel A – CEO Duality**

	(1)	(2)	(3)	(4)	(5)	(6)
	Ln (Frequency)	Ln (Frequency)	Ln (Value)	Ln (Value)	Ln (Volume)	Ln (Volume)
PRisk	0.00630** (0.00269)	0.00729*** (0.00275)	-0.0212*** (0.00560)	-0.0193*** (0.00572)	-0.0212*** (0.00543)	-0.0200*** (0.00555)
Duality	-0.0327*** (0.0115)	-0.0328*** (0.0115)	-0.0684*** (0.0239)	-0.0675*** (0.0239)	-0.0672*** (0.0232)	-0.0671*** (0.0232)
Duality * PRisk	0.0111* (0.00595)	0.0109* (0.00595)	0.105*** (0.0124)	0.101*** (0.0124)	0.112*** (0.0120)	0.111*** (0.0120)
PSentiment	-0.00156 (0.00276)	-0.00172 (0.00288)	0.0250*** (0.00574)	0.00772 (0.00600)	-0.00682 (0.00557)	-0.0105* (0.00582)
NPRisk		-0.00481* (0.00271)		-0.00520 (0.00563)		-0.00531 (0.00547)
NPSentiment		-4.39e-05 (0.00313)		0.0642*** (0.00652)		0.0132** (0.00632)
Total Assets	-0.0316*** (0.00586)	-0.0315*** (0.00586)	0.249*** (0.0122)	0.249*** (0.0122)	0.00363 (0.0118)	0.00375 (0.0118)
PPE	-0.0273 (0.0375)	-0.0270 (0.0375)	-0.296*** (0.0781)	-0.278*** (0.0781)	0.158** (0.0757)	0.162** (0.0758)
Tobin's Q	0.102** (0.0411)	0.103** (0.0411)	-0.319*** (0.0856)	-0.324*** (0.0856)	0.158* (0.0830)	0.158* (0.0830)
ROA	0.187** (0.0736)	0.186** (0.0738)	2.506*** (0.153)	2.412*** (0.153)	-0.137 (0.149)	-0.156 (0.149)
Leverage	-0.0779* (0.0443)	-0.0784* (0.0443)	-0.244*** (0.0923)	-0.231** (0.0922)	-0.0343 (0.0895)	-0.0321 (0.0895)
Market Cap	0.00273*** (0.000444)	0.00273*** (0.000444)	0.0107*** (0.000924)	0.0107*** (0.000924)	0.000537 (0.000896)	0.000518 (0.000896)
R&D	0.546* (0.297)	0.550* (0.297)	2.160*** (0.618)	2.253*** (0.618)	1.981*** (0.599)	2.003*** (0.599)
Acquisitions	0.200*** (0.0624)	0.201*** (0.0624)	-0.0857 (0.130)	-0.100 (0.130)	-0.454*** (0.126)	-0.456*** (0.126)
Capital Exp	-0.0148 (0.297)	-0.0236 (0.297)	4.278*** (0.619)	4.228*** (0.619)	-0.548 (0.600)	-0.566 (0.600)
CEO	0.134*** (0.0151)	0.134*** (0.0151)	0.365*** (0.0315)	0.368*** (0.0315)	0.370*** (0.0306)	0.371*** (0.0306)
Constant	1.490*** (0.0946)	1.494*** (0.0946)	9.770*** (0.199)	9.744*** (0.199)	7.967*** (0.191)	7.965*** (0.191)
Observations	82,282	82,282	82,281	82,281	82,282	82,282
R-squared	0.659	0.659	0.799	0.800	0.791	0.791
Year-Quarter FE	YES	YES	YES	YES	YES	YES
Trader FE	YES	YES	YES	YES	YES	YES

**Table 11 – Firm Governance, Insider Trading, Political Uncertainty (Continued)**

**Panel B – Insider Trading Restriction**

	(1)	(2)	(3)	(4)	(5)	(6)
	Ln (Frequency)	Ln (Frequency)	Ln (Value)	Ln (Value)	Ln (Volume)	Ln (Volume)
PRisk	0.0186*** (0.00433)	0.0158*** (0.00441)	0.00191 (0.00901)	-0.00530 (0.00916)	0.0203** (0.00927)	0.0122 (0.00941)
Restrict	0.0174 (0.0112)	0.0161 (0.0113)	0.00124 (0.0234)	-0.00100 (0.0234)	0.0534** (0.0241)	0.0455* (0.0240)
Restrict*PRisk	-0.0344*** (0.00782)	-0.0330*** (0.00783)	-0.0465*** (0.0163)	-0.0435*** (0.0163)	-0.0522*** (0.0167)	-0.0454*** (0.0167)
PSentiment	-0.0220*** (0.00400)	-0.0183*** (0.00416)	-0.0500*** (0.00831)	-0.0435*** (0.00865)	-0.0812*** (0.00855)	-0.0556*** (0.00888)
NPRisk		0.0121*** (0.00366)		0.0316*** (0.00761)		0.0297*** (0.00781)
NPSentiment		-0.0103** (0.00402)		-0.0160* (0.00835)		-0.0841*** (0.00858)
Total Assets	-0.0244*** (0.00598)	-0.0236*** (0.00599)	0.200*** (0.0124)	0.201*** (0.0124)	-0.175*** (0.0128)	-0.168*** (0.0128)
PPE	-0.160*** (0.0399)	-0.161*** (0.0399)	-0.159* (0.0830)	-0.160* (0.0830)	0.0830 (0.0854)	0.0781 (0.0852)
Tobin's Q	0.0660* (0.0366)	0.0628* (0.0366)	-0.0782 (0.0761)	-0.0836 (0.0761)	0.408*** (0.0782)	0.384*** (0.0781)
ROA	0.0787 (0.0613)	0.0808 (0.0613)	0.548*** (0.127)	0.549*** (0.127)	-0.859*** (0.131)	-0.828*** (0.131)
Leverage	0.0468 (0.0445)	0.0463 (0.0445)	0.174* (0.0925)	0.172* (0.0925)	0.584*** (0.0952)	0.586*** (0.0950)
Market Cap	0.000617 (0.000663)	0.000662 (0.000663)	0.00347** (0.00138)	0.00356*** (0.00138)	-0.00684*** (0.00142)	-0.00654*** (0.00142)
R&D	-0.0494 (0.166)	-0.0483 (0.166)	1.474*** (0.346)	1.486*** (0.346)	0.0732 (0.356)	0.0241 (0.355)
Acquisitions	0.436*** (0.0903)	0.438*** (0.0902)	0.691*** (0.188)	0.692*** (0.188)	-0.0490 (0.193)	-0.0260 (0.193)
Capital Exp	0.140 (0.315)	0.152 (0.315)	2.000*** (0.654)	2.014*** (0.654)	-3.652*** (0.673)	-3.535*** (0.672)
CEO	0.0136 (0.0220)	0.0110 (0.0220)	0.216*** (0.0457)	0.211*** (0.0457)	0.296*** (0.0470)	0.281*** (0.0469)
Constant	1.484*** (0.189)	1.472*** (0.189)	9.835*** (0.392)	9.801*** (0.392)	9.461*** (0.403)	9.456*** (0.403)
Observations	44,447	44,447	44,444	44,444	44,447	44,447
R-squared	0.707	0.708	0.847	0.847	0.856	0.857
Year-Quarter FE	YES	YES	YES	YES	YES	YES
Trader FE	YES	YES	YES	YES	YES	YES

**Table 12 – Political Risk and Capital Access**

Table 12 describes the relationship between insider trading of firm's access to capital during political uncertainty periods. *Bid\_ask* measures the ratio of the difference between the bid-ask price to ask price multiplied by 100. *Shrout* is measured as the log of total outstanding shares for a firm during the quarter. *Volume* measures the number of shares traded by an insider at the firm during a quarter. *PRisk* represents political risks for each firm-quarter. *PSentiment* represents sentiment to political uncertainty captured by how much positive and negative words included in the conference call each firm-quarter observation. The dependent variable is insider trading frequency, total value, and total shares traded. Constant terms are included but not reported. In all regressions, insider, industry, quarter, and year fixed effects are included, and standard errors are robust and clustered at the industry level. The symbols \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively.

	(1) Bid_ask	(2) Bid_ask	(3) Shrout	(4) Shrout
PRisk	0.0767*** (0.0238)	0.0760*** (0.0239)	-0.0105** (0.00510)	-0.0107** (0.00510)
Volume	0.00772* (0.00404)	0.00770* (0.00404)	0.0161*** (0.000862)	0.0161*** (0.000863)
PRisk_volume	-0.0104*** (0.00270)	-0.0104*** (0.00270)	0.00109* (0.000577)	0.00108* (0.000577)
PSentiment	0.0163** (0.00741)	0.0159** (0.00772)	0.00417*** (0.00159)	0.00429*** (0.00165)
NPRisk		0.00680 (0.00690)		0.00163 (0.00148)
NPSentiment		0.00247 (0.00755)		-0.000146 (0.00162)
Total Assets	0.289*** (0.0186)	0.288*** (0.0186)	0.315*** (0.00399)	0.315*** (0.00399)
PPE	-0.360*** (0.127)	-0.359*** (0.127)	0.0252 (0.0271)	0.0253 (0.0271)
Leverage	-0.561*** (0.0666)	-0.560*** (0.0666)	-0.131*** (0.0142)	-0.131*** (0.0142)
Market Cap	0.00243** (0.00119)	0.00244** (0.00119)	0.000744*** (0.000256)	0.000745*** (0.000256)
R&D	0.414 (0.315)	0.421 (0.315)	1.181*** (0.0674)	1.183*** (0.0674)
Acquisitions	-0.528*** (0.172)	-0.531*** (0.172)	-0.368*** (0.0369)	-0.368*** (0.0369)
Capital Exp	3.204*** (0.617)	3.208*** (0.617)	-0.135 (0.132)	-0.134 (0.132)
CEO	-0.0425** (0.0191)	-0.0423** (0.0191)	-0.00598 (0.00410)	-0.00594 (0.00410)
Constant	-3.740*** (0.360)	-3.745*** (0.360)	8.451*** (0.0772)	8.451*** (0.0772)
Observations	45,190	45,190	45,291	45,291
R-squared	0.523	0.523	0.972	0.972
Year-Quarter FE	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES

## Appendix I – Political Risk and Lobbying

This table describes the relationship between insider trading of lobbying firm and political risk. The sample is jointly covered in the CRSP, Compustat, Thomson Reuters, and Firm-level uncertainty Database from Hassan, Hollander, van Lent, Tahoun (2019) 2002 to 2019. *PRisk* represents political risks for each firm-quarter. *PSentiment* represents sentiment to political uncertainty captured by how much positive and negative words included in the conference call each firm-quarter observation. *Leverage* is (Short-term debt + Long-term debt) divided by Assets. *Total Assets* is log (total assets +1). *ROA* is EBITDA divided by Assets. *PPE* is net Property, Plant, and Equipment. *Market cap* is manually figuring the market value of Common Stock. The dependent variable is insider trading frequency, total value, and total shares traded. Constant terms are included but not reported. In all regressions, insider, industry, quarter, and year fixed effects are included, and standard errors are robust and clustered at the industry level. The symbols \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively.

### *Panel A – Insider trading of lobbying firm*

	(1)	(2)	(3)	(4)	(5)	(6)
	Frequency	Frequency	Value	Value	Volume	Volume
PRisk	0.119 (0.186)	0.0784 (0.188)	-119,878 (278,592)	-135,797 (282,899)	270.3 (15,304)	-2,434 (15,540)
Lobbying	1.963*** (0.619)	1.956*** (0.619)	46,968 (928,727)	31,863 (928,858)	56,644 (51,017)	55,731 (51,025)
Lobby * Risk	-0.305 (0.275)	-0.284 (0.275)	711,633* (412,931)	714,438* (413,487)	36,541 (22,683)	37,679* (22,714)
PSentiment	-0.294* (0.152)	-0.215 (0.158)	124,894 (227,719)	10,008 (236,871)	2,345 (12,509)	1,999 (13,012)
NPRisk		0.163 (0.146)		103,597 (219,213)		12,307 (12,042)
NPSentiment		-0.278* (0.163)		448,944* (245,400)		2,902 (13,480)
Total Assets	-5.322*** (0.368)	-5.324*** (0.368)	-138,669 (552,358)	-145,191 (552,384)	-72,640** (30,342)	-72,958** (30,343)
PPE	-4.019 (2.616)	-4.162 (2.617)	-0.000004 (0.000004)	-0.000004 (0.000004)	-242,576 (215,692)	-242,293 (215,785)
Tobin's Q	-4.537** (1.767)	-4.624*** (1.767)	0.000004 (0.000003)	0.000004 (0.000003)	170,141 (145,677)	168,567 (145,720)
ROA	4.907* (2.840)	5.156* (2.844)	0.000004 (0.000004)	0.000003 (0.000004)	-175,973 (234,173)	-177,864 (234,466)
Leverage	4.631** (2.069)	4.663** (2.069)	-0.000006* (0.000003)	-0.000006* (0.000003)	-68,654 (170,597)	-65,622 (170,622)
Market Cap	0.118*** (0.0233)	0.119*** (0.0233)	43,962 (34,978)	44,087 (34,980)	545.1 (1,921)	563.9 (1,922)
R&D	-13.17 (8.872)	-13.05 (8.872)	-0.0000001 (0.0000001)	-0.0000001 (0.0000001)	-809,782 (731,526)	-803,060 (731,561)
Acquisitions	4.925 (3.525)	4.939 (3.525)	0.000005 (0.000005)	0.000004 (0.000005)	-72,945 (290,609)	-76,660 (290,639)
Capital Exp	70.13*** (13.75)	70.51*** (13.75)	0.0000002 (0.0000002)	0.0000002 (0.0000002)	-286,346 (0.000001)	-267,101 (0.000001)
CEO	7.273*** (0.418)	7.279*** (0.418)	-0.000001** (628,136)	-0.000001** (628,147)	-104,461*** (34,505)	-104,308*** (34,506)
Constant	46.16*** (5.671)	46.23*** (5.672)	0.000007 (0.000009)	0.000006 (0.000008)	700,462 (467,623)	693,642 (467,702)
Observations	158,021	158,021	158,017	158,017	158,021	158,021
R-squared	0.094	0.094	0.063	0.063	0.046	0.046
Firm FE	YES	YES	YES	YES	YES	YES
Year-Quarter FE	YES	YES	YES	YES	YES	YES

## Appendix I –Political Risk and Lobbying (Continued)

### *Panel B – Log (Insider trading) of lobbying firms*

	(1)	(2)	(3)	(4)	(5)	(6)
	Ln	Ln	Ln	Ln	Ln	Ln
	(Frequency)	(Frequency)	(Value)	(Value)	(Volume)	(Volume)
PRisk	0.00504*	0.00497*	-0.0105	-0.0112	0.00616	0.000936
	(0.00274)	(0.00278)	(0.00697)	(0.00708)	(0.00685)	(0.00695)
Lobbying	-0.0142	-0.0142	-0.137***	-0.139***	-0.110***	-0.112***
	(0.00912)	(0.00912)	(0.0232)	(0.0232)	(0.0228)	(0.0228)
Lobby * Risk	-0.00573	-0.00570	0.0318***	0.0314***	0.0115	0.0135
	(0.00406)	(0.00406)	(0.0103)	(0.0103)	(0.0101)	(0.0102)
PSentiment	-0.00142	-0.00145	0.0505***	0.0293***	0.0202***	0.0162***
	(0.00224)	(0.00233)	(0.00570)	(0.00592)	(0.00560)	(0.00582)
NPRisk		0.000327		0.00910*		0.0247***
		(0.00215)		(0.00548)		(0.00539)
NPSentiment		0.000133		0.0814***		0.0184***
		(0.00241)		(0.00614)		(0.00603)
Total Assets	-0.0627***	-0.0628***	0.150***	0.149***	-0.299***	-0.300***
	(0.00542)	(0.00543)	(0.0138)	(0.0138)	(0.0136)	(0.0136)
PPE	-0.0418	-0.0418	-1.334***	-1.298***	-0.345***	-0.339***
	(0.0386)	(0.0386)	(0.0983)	(0.0982)	(0.0965)	(0.0965)
Tobin's Q	-0.0441*	-0.0441*	0.109*	0.125*	0.424***	0.423***
	(0.0260)	(0.0261)	(0.0664)	(0.0663)	(0.0652)	(0.0652)
ROA	0.126***	0.125***	1.697***	1.627***	-0.00266	-0.0174
	(0.0419)	(0.0419)	(0.107)	(0.107)	(0.105)	(0.105)
Leverage	0.0451	0.0452	-0.416***	-0.412***	0.0797	0.0861
	(0.0305)	(0.0305)	(0.0777)	(0.0777)	(0.0763)	(0.0763)
Market Cap	0.00208***	0.00208***	0.0141***	0.0141***	0.000778	0.000815
	(0.000344)	(0.000344)	(0.000875)	(0.000875)	(0.000860)	(0.000860)
R&D	-0.110	-0.110	1.986***	1.984***	-0.360	-0.347
	(0.131)	(0.131)	(0.333)	(0.333)	(0.327)	(0.327)
Acquisitions	0.230***	0.230***	0.497***	0.478***	0.116	0.106
	(0.0520)	(0.0520)	(0.132)	(0.132)	(0.130)	(0.130)
Capital Exp	0.324	0.325	5.013***	4.996***	-1.639***	-1.605***
	(0.203)	(0.203)	(0.517)	(0.516)	(0.507)	(0.507)
CEO	0.255***	0.255***	0.852***	0.851***	0.866***	0.866***
	(0.00617)	(0.00617)	(0.0157)	(0.0157)	(0.0154)	(0.0154)
Constant	1.931***	1.931***	11.71***	11.67***	11.27***	11.25***
	(0.0836)	(0.0836)	(0.214)	(0.214)	(0.209)	(0.209)
Observations	158,021	158,021	158,017	158,017	158,021	158,021
R-squared	0.263	0.263	0.331	0.332	0.298	0.298
Firm FE	YES	YES	YES	YES	YES	YES
Year-Quarter FE	YES	YES	YES	YES	YES	YES



## Appendix II –Decomposed Political Uncertainty and Insider Trading

This table describes the relationship between insider trading of firm and different characteristics of political risk. *PRisk* represents political risks for each firm-quarter. *PSentiment* represents sentiment to political uncertainty captured by how much positive and negative words included in the conference call each firm-quarter observation. The dependent variable is insider trading frequency. Constant terms are included but not reported. In all regressions, insider, industry, quarter, and year fixed effects are included, and standard errors are robust and clustered at the industry level. The symbols \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Ln (Freq)	Ln (Freq)	Ln (Freq)	Ln (Freq)	Ln (Freq)	Ln (Freq)	Ln (Freq)	Ln (Freq)	Ln (Freq)
PRisk_econ	0.742*** (0.231)								0.670 (0.517)
PRisk_environ		0.215 (0.220)							-0.680* (0.356)
PRisk_trade			0.920*** (0.234)						0.988*** (0.322)
PRisk_instit				0.420* (0.226)					-0.255 (0.437)
PRisk_health					0.412* (0.248)				-0.205 (0.383)
PRisk_security						0.521** (0.227)			-0.0733 (0.465)
PRisk_tax							0.789*** (0.228)		0.653* (0.378)
PRisk_tech								0.449* (0.233)	-0.213 (0.402)
PSentiment	0.00755 (0.239)	-0.0572 (0.239)	-0.0392 (0.238)	-0.0250 (0.239)	-0.0478 (0.239)	-0.0219 (0.239)	-0.00248 (0.239)	-0.0259 (0.239)	-0.00889 (0.240)
NPRisk	-0.0259 (0.214)	0.0757 (0.213)	-0.0242 (0.213)	0.0578 (0.212)	0.0566 (0.213)	0.0320 (0.213)	-0.0373 (0.215)	0.0475 (0.213)	-0.0847 (0.216)
NPSentiment	-0.494** (0.234)	-0.496** (0.234)	-0.492** (0.234)	-0.499** (0.234)	-0.497** (0.234)	-0.495** (0.234)	-0.502** (0.234)	-0.497** (0.234)	-0.499** (0.234)
Total Assets	0.665 (0.585)	0.644 (0.585)	0.644 (0.585)	0.661 (0.586)	0.667 (0.586)	0.647 (0.585)	0.658 (0.585)	0.639 (0.585)	0.645 (0.586)
PPE	-2.437 (3.930)	-2.324 (3.931)	-2.602 (3.930)	-2.385 (3.930)	-2.419 (3.930)	-2.400 (3.930)	-2.291 (3.930)	-2.470 (3.930)	-2.773 (3.934)
Tobin's Q	0.850 (2.577)	0.864 (2.577)	0.798 (2.577)	0.866 (2.577)	0.882 (2.577)	0.804 (2.577)	0.770 (2.577)	0.840 (2.577)	0.789 (2.577)
ROA	2.501 (3.599)	2.491 (3.600)	2.507 (3.599)	2.516 (3.600)	2.516 (3.600)	2.484 (3.599)	2.566 (3.599)	2.507 (3.599)	2.424 (3.599)
Leverage	-6.058* (3.102)	-6.117** (3.103)	-6.029* (3.102)	-6.191** (3.102)	-6.186** (3.102)	-6.045* (3.102)	-6.010* (3.102)	-6.063* (3.103)	-6.027* (3.105)
Market Cap	0.00653 (0.0370)	0.00309 (0.0369)	0.00538 (0.0369)	0.00388 (0.0369)	0.00375 (0.0369)	0.00457 (0.0369)	0.00594 (0.0369)	0.00327 (0.0369)	0.00733 (0.0370)
R&D	11.40 (10.67)	11.23 (10.67)	11.86 (10.67)	11.14 (10.67)	11.11 (10.67)	11.13 (10.67)	11.49 (10.67)	11.39 (10.67)	12.29 (10.68)
Acquisitions	11.82** (5.343)	11.91** (5.344)	11.89** (5.342)	11.83** (5.343)	11.85** (5.343)	11.92** (5.343)	11.82** (5.343)	11.80** (5.343)	11.66** (5.344)
Capital Exp	-11.64 (19.07)	-11.81 (19.07)	-11.56 (19.06)	-11.98 (19.07)	-11.83 (19.07)	-12.03 (19.07)	-11.72 (19.06)	-12.10 (19.07)	-11.24 (19.07)
CEO	0.797 (0.590)	0.807 (0.590)	0.767 (0.590)	0.804 (0.590)	0.806 (0.590)	0.795 (0.590)	0.810 (0.590)	0.796 (0.590)	0.787 (0.590)
Constant	0.378 (11.19)	0.777 (11.19)	0.898 (11.19)	0.680 (11.19)	0.670 (11.19)	0.734 (11.19)	0.437 (11.19)	0.690 (11.19)	1.052 (11.19)
Observations	45,194	45,194	45,194	45,194	45,194	45,194	45,194	45,194	45,194
R-squared	0.260	0.260	0.260	0.260	0.260	0.260	0.260	0.260	0.260
Firm & Yr-Qtr FE	YES	YES	YES	YES	YES	YES	YES	YES	YES

### Appendix III –Firm Level Political Risk and Insider Trading

This tables analyses the baseline results with adjusting insider trading in log form. *PRisk* represents political risks for each firm-quarter. *PSentiment* represents sentiment to political uncertainty captured by how much positive and negative words included in the conference call each firm-quarter observation. *Leverage* is (Short-term debt + Long-term debt) divided by Assets. *ROA* is EBITDA divided by Assets. *PPE* is net Property, Plant, and Equipment. *Market cap* is manually figuring the market value of Common Stock. The dependent variable is insider trading frequency, total value, and total shares traded. Constant terms are included but not reported. In all regressions, insider, industry, quarter, and year fixed effects are included, and standard errors are robust and clustered at the industry level. The symbols \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively.

#### Panel A – Firm and Year Quarter Fixed Effects

	(1) Ln (frequency)	(2) Ln (frequency)	(3) Ln (value)	(4) Ln (value)	(5) Ln (volume)	(6) Ln (volume)
PRisk	0.00241 (0.00434)	0.00125 (0.00438)	-0.00514 (0.0120)	-0.00649 (0.0121)	0.0198 (0.0120)	0.0168 (0.0121)
PSentiment	-0.0182*** (0.00419)	-0.0145*** (0.00431)	-0.0363*** (0.0116)	-0.0314*** (0.0119)	-0.0705*** (0.0116)	-0.0509*** (0.0119)
NPRisk		0.00664* (0.00367)		0.00771 (0.0101)		0.0160 (0.0102)
NPSentiment		-0.0132*** (0.00390)		-0.0176 (0.0107)		-0.0731*** (0.0108)
Total Assets	-0.0176* (0.0103)	-0.0171* (0.0103)	0.311*** (0.0283)	0.311*** (0.0283)	-0.125*** (0.0285)	-0.123*** (0.0284)
PPE	-0.146** (0.0708)	-0.151** (0.0708)	-0.608*** (0.195)	-0.615*** (0.195)	0.360* (0.196)	0.331* (0.196)
Tobin's Q	0.0961** (0.0461)	0.0883* (0.0461)	0.177 (0.127)	0.167 (0.127)	0.594*** (0.128)	0.553*** (0.128)
ROA	0.0191 (0.0625)	0.0249 (0.0625)	0.482*** (0.172)	0.490*** (0.172)	-0.859*** (0.173)	-0.827*** (0.173)
Leverage	0.0185 (0.0561)	0.0211 (0.0561)	0.0283 (0.155)	0.0317 (0.155)	0.461*** (0.155)	0.474*** (0.155)
Market Cap	0.000807 (0.000663)	0.000824 (0.000663)	0.00547*** (0.00183)	0.00549*** (0.00183)	-0.00511*** (0.00184)	-0.00503*** (0.00184)
R&D	-0.0699 (0.185)	-0.0535 (0.185)	2.384*** (0.511)	2.405*** (0.511)	-0.304 (0.513)	-0.235 (0.513)
Acquisitions	0.0259 (0.0959)	0.0274 (0.0959)	0.262 (0.264)	0.264 (0.264)	-0.337 (0.265)	-0.325 (0.265)
Capital Exp	-0.00268 (0.332)	0.0116 (0.332)	2.565*** (0.916)	2.583*** (0.916)	-3.484*** (0.920)	-3.430*** (0.919)
CEO	0.0724*** (0.0104)	0.0722*** (0.0104)	0.365*** (0.0286)	0.365*** (0.0286)	0.409*** (0.0287)	0.408*** (0.0287)
Constant	1.164*** (0.188)	1.166*** (0.188)	8.307*** (0.528)	8.309*** (0.528)	7.763*** (0.521)	7.788*** (0.521)
Observations	38,169	38,169	38,166	38,166	38,169	38,169
R-squared	0.372	0.372	0.397	0.397	0.470	0.471
Firm FE	YES	YES	YES	YES	YES	YES
Year-Quarter FE	YES	YES	YES	YES	YES	YES

### Appendix III –Firm Level Political Risk and Insider Trading (Continued)

*Panel B – Insider and Year Quarter Fixed Effects*

	(1)	(2)	(3)	(4)	(5)	(6)
	Ln	Ln	Ln	Ln	Ln	Ln
	(frequency)	(frequency)	(value)	(value)	(volume)	(volume)
PRisk	0.00139 (0.00472)	0.000410 (0.00476)	-0.00811 (0.00983)	-0.00994 (0.00992)	0.00786 (0.0101)	0.00633 (0.0102)
PSentiment	-0.0246*** (0.00464)	-0.0225*** (0.00477)	-0.0508*** (0.00968)	-0.0465*** (0.00995)	-0.0820*** (0.00996)	-0.0629*** (0.0102)
NPRisk		0.00606 (0.00396)		0.0112 (0.00825)		0.00909 (0.00848)
NPSentiment		-0.00720* (0.00425)		-0.0149* (0.00885)		-0.0727*** (0.00910)
Total Assets	-0.0217*** (0.00682)	-0.0210*** (0.00683)	0.216*** (0.0142)	0.218*** (0.0142)	-0.167*** (0.0146)	-0.160*** (0.0146)
PPE	-0.205*** (0.0472)	-0.207*** (0.0472)	-0.322*** (0.0983)	-0.326*** (0.0984)	-0.0307 (0.101)	-0.0398 (0.101)
Tobin's Q	0.0813** (0.0414)	0.0790* (0.0414)	-0.0144 (0.0863)	-0.0189 (0.0863)	0.416*** (0.0888)	0.394*** (0.0887)
ROA	0.0629 (0.0697)	0.0647 (0.0697)	0.590*** (0.145)	0.594*** (0.145)	-0.796*** (0.149)	-0.771*** (0.149)
Leverage	0.0529 (0.0505)	0.0531 (0.0505)	0.199* (0.105)	0.199* (0.105)	0.648*** (0.108)	0.654*** (0.108)
Market Cap	0.000240 (0.000741)	0.000267 (0.000741)	0.00339** (0.00154)	0.00345** (0.00154)	-0.00651*** (0.00159)	-0.00628*** (0.00159)
R&D	-0.176 (0.189)	-0.179 (0.189)	1.784*** (0.393)	1.778*** (0.394)	0.399 (0.405)	0.330 (0.404)
Acquisitions	0.135 (0.105)	0.137 (0.105)	0.528** (0.219)	0.532** (0.219)	-0.115 (0.226)	-0.0948 (0.225)
Capital Exp	0.292 (0.358)	0.304 (0.358)	1.982*** (0.745)	2.006*** (0.745)	-3.710*** (0.767)	-3.606*** (0.766)
CEO	0.0395 (0.0255)	0.0379 (0.0255)	0.300*** (0.0532)	0.297*** (0.0532)	0.364*** (0.0547)	0.352*** (0.0547)
Constant	1.459*** (0.211)	1.454*** (0.211)	9.654*** (0.440)	9.645*** (0.440)	9.392*** (0.452)	9.401*** (0.452)
Observations	38,169	38,169	38,166	38,166	38,169	38,169
R-squared	0.693	0.693	0.831	0.831	0.845	0.845
Year-Quarter FE	YES	YES	YES	YES	YES	YES
Trader FE	YES	YES	YES	YES	YES	YES