Policy Uncertainty, Political Capital, and Firm Risk-Taking

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“We think the heightened uncertainty over economic policy associated with a potential Trump presidency could adversely affect both financial markets and the real economy.”
— Lew Alexander, Chief Economist, Nomura
Why do firms donate to politicians?

**Existing literature: “Direct” rent extraction**
- Government bailouts (Faccio, Masulis, and McConnell (2009); Duchin and Sosyura (2012))
- Government contracts (Brogaard, Denes, and Duchin (2015); Schoenherr (2015))
- Access to credit (Khwaja and Mian (2005); Claessens, Feijen, and Laeven (2008))

**Our paper: Policy uncertainty**
1. Firms that are highly sensitive to government policy uncertainty have a stronger incentive to become politically connected
2. These “policy-sensitive” firms should respond more strongly to the gain or loss of a political connection than “policy-neutral” firms
Motivation, continued

- Political elections resolve two types of uncertainty:
  - Uncertainty related to government policy (aggregate)
  - Uncertainty related to political connectedness (firm-specific)

- One literature has examined the effects of aggregate uncertainty resolution on firm outcomes around elections
  - Julio and Yook (2012); Kelly, Pastor, & Veronesi (2015); Jens (2016)

- Another literature has examined firm outcomes following shocks to political connectedness (“political capital”)
  - Firm value, sales, investment/R&D spending, leverage, etc.

- **Both types of uncertainty matter for firm outcomes**
  - Need to separate both types of shocks to correctly estimate marginal effects
Our setting: Close U.S. Congressional Elections

- We look within the set of firms that donate to candidates in “close” U.S. Congressional elections
  - Close election outcomes resemble coin flips

- Each election cycle, we classify firms as being “policy-sensitive” or “policy-neutral”

- We also classify firms as being “lucky” or “unlucky” based on whether they donated to more close-election winners than losers in a given election cycle
  1. Can compare outcomes for firms with same policy sensitivity but different luck in close elections
  2. Can also compare outcomes for firms with same election luck but different policy sensitivities
What we find

1. When a firm becomes policy-sensitive, it increases its campaign contributions relative to when the same firm was policy-neutral.

2. Close-election political capital shocks have a strong effect on subsequent firm risk-taking:
   - Implied volatility drops, CDS spreads decline, firm value increases.

3. These effects are significantly stronger for policy-sensitive firms:
   - Magnitudes are sizable – for example, 10% for investment.

4. Many results documented in the political connections literature appear to be driven by policy-sensitive firms.
Our focus: Close elections

- Our tests focus on the outcomes of “close” congressional elections (margin of victory \( \leq 5\% \))
  - Outcomes not predictable in advance / not known until election day

- Sample: 205 close elections between 1998-2010

- For each firm-election cycle pair, we define \textit{Net Close Wins} as:
  \[
  Net \ Close \ Wins = \# \ Close \ Election \ Wins - \# \ Close \ Election \ Losses
  \]

  - \textit{Net Close Wins} = 2 - 5 = -3.

- We also define \textit{Close Win Dummy} = 1 if \textit{Net Close Wins} > 0 (sample median) and zero otherwise
Density Function of Net Close Wins

![Density Function of Net Close Wins](image)
Measuring Firms’ Sensitivities to Policy Uncertainty

- U.S. Economic Policy Uncertainty index created by Baker, Bloom, and Davis (2016)

- Regress firm returns on the BBD index in each election cycle
- Classify firms as “policy-sensitive” in a cycle if $p$-value < 0.1
- Our measure captures **shocks to firms’ policy sensitivities**
  - Virtually no persistence
  - Policy-sensitive/policy-neutral firms very similar on observables
## Policy Sensitivity and Contributions

<table>
<thead>
<tr>
<th></th>
<th>(1) Ln(Total Contributions)</th>
<th>(2) Ln(Total Contributions)</th>
<th>(3) Ln(Close-election Contributions)</th>
<th>(4) Ln(Other Contributions)</th>
<th>(5) Net Close-Election Wins</th>
<th>(6) Net Close-Election Wins</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Policy Sensitive</strong></td>
<td>0.0792** (0.0328)</td>
<td>0.0749** (0.0352)</td>
<td>0.136** (0.0555)</td>
<td>0.0671* (0.0384)</td>
<td>0.0657 (0.124)</td>
<td>0.102 (0.136)</td>
</tr>
<tr>
<td><strong>Ln(Size)</strong></td>
<td></td>
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<tr>
<td></td>
<td>0.433*** (0.0438)</td>
<td>0.411*** (0.0510)</td>
<td>0.437*** (0.0470)</td>
<td></td>
<td>0.194* (0.104)</td>
<td></td>
</tr>
<tr>
<td><strong>Book Leverage</strong></td>
<td>-0.00583 (0.138)</td>
<td>-0.301 (0.193)</td>
<td>0.0936 (0.164)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Profit Margin</strong></td>
<td>0.0257 (0.0169)</td>
<td>0.0218 (0.0172)</td>
<td>0.0128 (0.0246)</td>
<td></td>
<td>-0.0611* (0.0367)</td>
<td></td>
</tr>
<tr>
<td><strong>M/B</strong></td>
<td>0.0619* (0.00362)</td>
<td>0.00713 (0.00444)</td>
<td>0.00522 (0.00391)</td>
<td></td>
<td>-0.0029 (0.0098)</td>
<td></td>
</tr>
<tr>
<td><strong>Cash/Assets</strong></td>
<td>0.0348 (0.160)</td>
<td>-0.145 (0.219)</td>
<td>0.172 (0.175)</td>
<td></td>
<td>-0.479 (0.483)</td>
<td></td>
</tr>
<tr>
<td><strong>Intercept</strong></td>
<td>12.03*** (0.490)</td>
<td>8.293*** (0.614)</td>
<td>4.124*** (0.874)</td>
<td>8.080*** (0.607)</td>
<td>-0.540 (2.635)</td>
<td>-2.222 (2.844)</td>
</tr>
</tbody>
</table>

R-squared: 0.905, 0.910, 0.813, 0.902, 0.515, 0.531.

Akey (Toronto) and Lewellen (LBS): Political Capital and Firm Risk-Taking.
Econometric Setting

Firms $\rightarrow$ Election $\rightarrow$ Diff-in-Diff

$\_+$

$\_-$

$\text{TE}$
Graphical Evidence — 5 Year CDS Spreads

Log CDS Spreads (Lucky Firms) vs. Log CDS Spreads (Unlucky Firms) over time. The graph shows two lines: one for Lucky Firms (red) and one for Unlucky Firms (blue). The Lucky Firms' line begins lower and climbs steadily, reaching a peak around month 10, after which it drops sharply. The Unlucky Firms' line starts higher and also peaks around month 10, but its peak is sharper and more pronounced. The two lines converge again by month 12. The x-axis represents the months from 5 to 12, and the y-axis represents the log CDS spreads from 4.4 to 4.9.
Econometric Setting

Election

PS

PN

Triple Difference = $TE_{II} - TE_{I}$
Empirical Specification

- Differences-in-differences — $\beta_2$ captures the connection effect in the post election period

$$Outcome_{i,t} = \alpha + \beta_1 Post\; Election_t + \beta_2 Close\; Win\; Dummy_{i,t} \times Post\; Election_t +$$
$$+ \Gamma' Controls_{i,t} + Firm \times Election\; Cycle\; FE + \epsilon_{i,t},$$

- Triple Differences — $\beta_4$ captures the differential effect of political capital shocks on Policy Sensitive/Neutral firms

$$Outcome_{i,t} = \alpha + \beta_1 Post\; Election_t + \beta_2 Close\; Win\; Dummy_{i,t} \times Post\; Election_t +$$
$$+ \beta_3 Post_{i,t} \times Policy\; Sensitive_{i,t} + \beta_4 Post_t \times Policy_{i,t} \times Win\; Dummy_{i,t} +$$
$$+ \Gamma' Controls_{i,t} + Firm \times Election\; Cycle\; FE + \epsilon_{i,t},$$
## Results — Market Outcomes

\[
Outcome_{i,t} = \alpha + \beta_1 Post\ Election_t + \beta_2 Close\ Win\ Dummy_{i,t} \times Post\ Election_t + \\
+ \beta_3 Post_{i,t} \times Policy\ Sensitive_{i,t} + \beta_4 Post_t \times Policy_{i,t} \times Win\ Dummy_{i,t} + \\
+ \Gamma' Controls_{i,t} + Firm \times Election\ Cycle\ FE + \epsilon_{i,t},
\]

<table>
<thead>
<tr>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Month Implied Volatility</td>
<td>5-Year Log CDS Spread</td>
<td>M/B</td>
<td>1-Month Implied Volatility</td>
<td>5-Year Log CDS Spread</td>
<td>M/B</td>
</tr>
</tbody>
</table>

\begin{align*}
Post\ Election & : 0.0354*** & 0.0917*** & -0.213*** & 0.00566** & -0.0822*** & -0.0953** \\
& (0.00308) & (0.0207) & (0.0387) & (0.00267) & (0.0173) & (0.0403) \\
Post \times Close\ Win\ Dummy & : -0.0495*** & -0.210*** & 0.169*** & -0.0298*** & -0.0585*** & 0.0692 \\
& (0.00403) & (0.0254) & (0.0557) & (0.00351) & (0.0211) & (0.0589) \\
Post \times Policy\ Sensitive & : 0.135*** & 0.539*** & -0.525*** \\
& (0.00894) & (0.0410) & (0.106) \\
Post \times Policy \times Win\ Dummy & : -0.0499*** & -0.307*** & 0.365** \\
& (0.0156) & (0.0811) & (0.159) \\
\end{align*}

<table>
<thead>
<tr>
<th>Firm Controls</th>
<th>Yes</th>
<th>Yes</th>
<th>Yes</th>
<th>Yes</th>
<th>Yes</th>
<th>Yes</th>
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</thead>
<tbody>
<tr>
<td>Fixed effects</td>
<td>Firm-Cycle</td>
<td>Firm-cycle</td>
<td>Firm-cycle</td>
<td>Firm-Cycle</td>
<td>Firm-Cycle</td>
<td>Firm-cycle</td>
</tr>
<tr>
<td>Clustered errors</td>
<td>Firm-Cycle</td>
<td>Firm-cycle</td>
<td>Firm-cycle</td>
<td>Firm-Cycle</td>
<td>Firm-Cycle</td>
<td>Firm-cycle</td>
</tr>
<tr>
<td>Observations</td>
<td>841,169</td>
<td>271,160</td>
<td>21,152</td>
<td>841,169</td>
<td>325,005</td>
<td>21,152</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.750</td>
<td>0.926</td>
<td>0.857</td>
<td>0.761</td>
<td>0.931</td>
<td>0.858</td>
</tr>
</tbody>
</table>
Results — Firm Decisions

\[ \text{Outcome}_{i,t} = \alpha + \beta_1 \text{Post Election}_t + \beta_2 \text{Close Win Dummy}_{i,t} \times \text{Post Election}_t + \]
\[ + \beta_3 \text{Post}_{i,t} \times \text{Policy Sensitive}_{i,t} + \beta_4 \text{Post}_t \times \text{Policy}_{i,t} \times \text{Win Dummy}_{i,t} + \]
\[ + \Gamma' \text{Controls}_{i,t} + \text{Firm} \times \text{Election Cycle FE} + \epsilon_{i,t}, \]

<table>
<thead>
<tr>
<th></th>
<th>(1) Investment</th>
<th>(2) Book Leverage</th>
<th>(3) R&amp;D</th>
<th>(4) Investment</th>
<th>(5) Book Leverage</th>
<th>(6) R&amp;D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post Election</td>
<td>0.00002</td>
<td>0.00114</td>
<td>0.000572*</td>
<td>0.00210***</td>
<td>-0.00246</td>
<td>0.000690*</td>
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<tr>
<td></td>
<td>(0.000591)</td>
<td>(0.00148)</td>
<td>(0.000318)</td>
<td>(0.000674)</td>
<td>(0.00167)</td>
<td>(0.000403)</td>
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<tr>
<td>Post \times Close Win Dummy</td>
<td>0.00103</td>
<td>-0.00162</td>
<td>-0.000192</td>
<td>-0.000622</td>
<td>0.00204</td>
<td>-0.000146</td>
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<tr>
<td></td>
<td>(0.000880)</td>
<td>(0.00235)</td>
<td>(0.000510)</td>
<td>(0.000972)</td>
<td>(0.00261)</td>
<td>(0.000578)</td>
</tr>
<tr>
<td>Post \times Policy Sensitive</td>
<td>-0.00844***</td>
<td>0.0151***</td>
<td>-0.000445</td>
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<tr>
<td></td>
<td>(0.00139)</td>
<td>(0.00375)</td>
<td>(0.000826)</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Post \times Policy \times Win Dummy</td>
<td>0.00538**</td>
<td>-0.0167***</td>
<td>-0.000794</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.00237)</td>
<td>(0.00556)</td>
<td>(0.00137)</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Controls: Yes
Fixed effects: Firm-cycle
Clustered errors: Firm-cycle
Observations: 18,368
R-Squared: 0.691

Akey (Toronto) and Lewellen (LBS) | Political Capital and Firm Risk-Taking | June 2017
Robustness — Industry vs. firm sensitivities

- Does our measure of sensitivity just pick up industry sensitivity?
  - Results hold with industry-election cycle FE
  - But we can go further...

- Match three industries with their Senate “regulator committees” and repeat analysis
  - Oil, gas, and mining firms matched to Senate Energy
  - Utilities and communications firms matched to Senate Commerce
  - Banks and insurance companies matched to Senate Finance

- PS firms benefit much more than PN firms in the same industry and even more than PS firms in other industries
Robustness — Uncertainty measure

- Does our measure of policy uncertainty capture general uncertainty?

Three approaches:

1. Orthogonalize policy uncertainty index w.r.t. Fama-French factors and VIX
   - Results if anything are larger

2. Construct an alternative measure of policy uncertainty using firm disclosures of “risk factors” in 10Ks
   - Number of times that firms say “government policy” and “uncertainty”
   - All results hold

3. Placebo test: sort firms into “policy-sensitive”/“policy-neutral” buckets using VIX
   - All results go away
Alternative Channels

- Results do not seem to be coming from the government contracting channel
  - Policy-sensitivity definition is not just picking up large government contractors

- Results seem inconsistent with firms donating to receive bailouts
  - Better-connected firms seem to be more efficient/profitable, in contrast with the bailout-related findings in other studies
  - Moreover, policy-sensitive firms *reduce* leverage — inconsistent with most bailout stories
Conclusions

We examine firms’ policy sensitivity, political connections, and risk-taking before and after (close) U.S. congressional elections

- Policy-sensitive vs. policy-neutral; Lucky vs. unlucky

Policy-sensitive firms donate more to candidates than policy-neutral firms

- Marginal value of connections is larger for policy-sensitive firms

Political capital shocks affect subsequent firm risk-taking

- Implied volatility drops, CDS spreads decline, firm value increases

These effects are significantly stronger for policy-sensitive firms

- Firm value, investment, leverage

Many results in the existing political connections literature appear to be driven by policy-sensitive firms
Margin of Victory Distribution

Mean | Median | Std. Dev. | N
---|---|---|---
37.762 | 33 | 25.94 | 3,314
Hedging Firms

- Firms may “hedge” in two ways
  - Hedging by party (supporting Democrats and Republicans)
    - Very common — Average firm contributes splits 30%/70% (1998) to 50%/50% (2010) to Democrats/Republicans
  - Hedging by race (supporting the Democrat and the Republican in the same race)
    - Rather uncommon — Firms only do this 10% of the time in close races, never in non-close races

- This seem unusual, but examining this question outside of the scope of the paper

- Firms maximize total political capital and candidates may be different
  - Differential costs of establishing a connection
  - Different candidates likely to sit on different committees — differential benefits of connection
Hedging by Party through Time

![Graph showing hedging by party through time across different cycles.](image-url)
Characteristics of Policy Sensitive Firms

\[
\text{Prob}(\text{Policy Sensitive} = 1) = f(\text{Firm Covariates})
\]

<table>
<thead>
<tr>
<th>Logit Analysis</th>
<th>(1) Policy-Sensitive</th>
<th>(2) Policy-Sensitive</th>
<th>(3) Policy-Sensitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(\ln(\text{Size}))</td>
<td>0.0595** (0.0282)</td>
<td>0.00672 (0.0373)</td>
<td>0.0284 (0.0484)</td>
</tr>
<tr>
<td>(\text{Book Leverage})</td>
<td>0.610** (0.276)</td>
<td>1.003*** (0.372)</td>
<td>1.112** (0.505)</td>
</tr>
<tr>
<td>(I_t/K_{t-1})</td>
<td>-0.546 (0.844)</td>
<td>-1.224 (1.084)</td>
<td>-1.195 (1.242)</td>
</tr>
<tr>
<td>(M/B)</td>
<td>-0.00658 (0.0114)</td>
<td>0.0115 (0.0133)</td>
<td>0.0170 (0.0178)</td>
</tr>
<tr>
<td>(\text{Profit Margin})</td>
<td>0.0187 (0.0495)</td>
<td>0.0529 (0.0723)</td>
<td>0.0781 (0.108)</td>
</tr>
<tr>
<td>(\text{Net PP&amp;E/Assets})</td>
<td>-0.207 (0.179)</td>
<td>-0.190 (0.230)</td>
<td>0.0368 (0.416)</td>
</tr>
<tr>
<td>(\text{ROA})</td>
<td>1.460 (2.191)</td>
<td>1.410 (2.963)</td>
<td>3.147 (3.518)</td>
</tr>
<tr>
<td>(\text{Intercept})</td>
<td>-2.324*** (0.299)</td>
<td>-2.766*** (0.424)</td>
<td>-16.59*** (3.832)</td>
</tr>
</tbody>
</table>

Fixed effects: None, Cycle, FF-Cycle
Clustering: Firm, Cycle, FF-Cycle
Observations: 21,570, 21,570, 14,808
Pseudo-R squared: 0.005, 0.236, 0.262
Policy sensitivity shocks vs. levels

- We measure policy sensitivity using the correlation between the EPU index and **firm stock returns**
  - This captures **shocks** to firms’ policy sensitivities

- Shocks are a natural way to capture perturbations within the **same firm**’s policy sensitivity
  - Policy sensitivity shocks line up with our political capital shocks, which are also perturbations in firms’ connectedness

- Why not look at policy sensitivity **levels**?
  - E.g. Lockheed Martin might normally be policy-sensitive
  - Expectations vs. surprises. If Lockheed expects to be policy-sensitive, this will be reflected in ex-ante decision-making.
  - Effectively a single cross-section
  - How to measure? Government contracts?