

Political Capital:

Real-Time Electoral Probabilities & the Value of Corporate Political Alignment

Emrehan Aktuğ¹ **Orhan Torul**²

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¹*Sabancı University*

²*Boğaziçi University*

Motivation

Research Question:

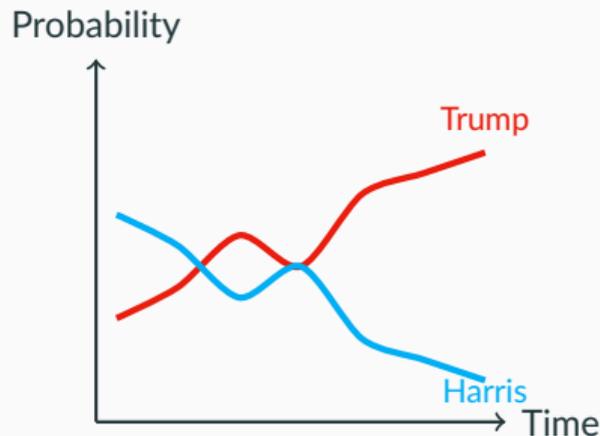
How do real-time shifts in presidential election probabilities differentially affect firm valuations based on partisan affiliations?

Context: 2024 U.S. Presidential Election

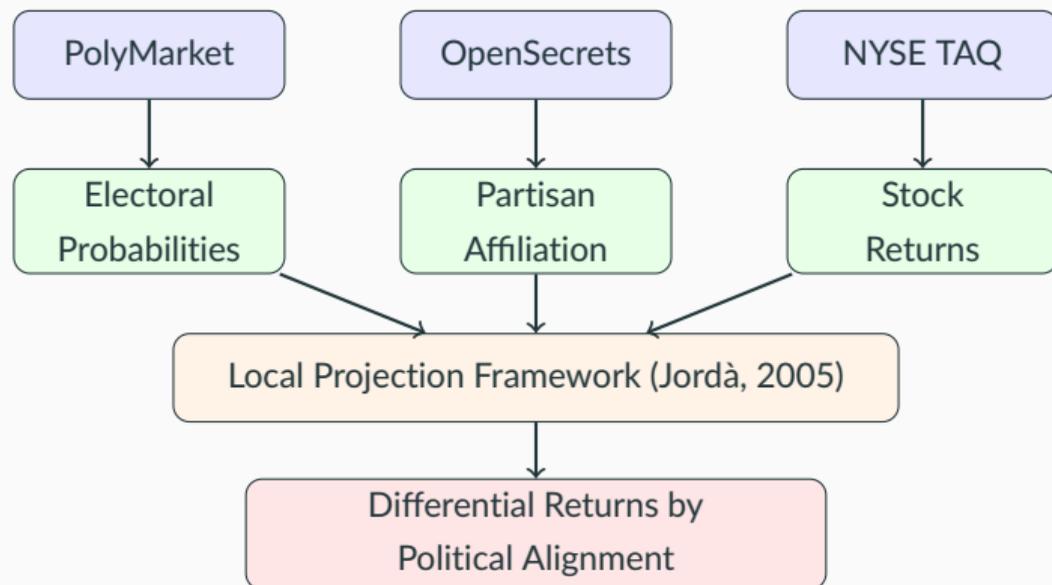
- Heightened partisan polarization
- \$3.6B traded on PolyMarket contracts
- Firms engaged in partisan activity

Literature Gap:

- Prior work: discrete outcomes
- Limited evidence on *continuous* updates
- Our innovation: High-frequency identification using *market-based* continuous probability updates



Research Design



Why this matters: Understanding these dynamics is crucial as *political polarization* reaches historic highs and *corporate political engagement* intensifies

1. Political Uncertainty & Asset Pricing

- Extends Pástor & Veronesi (2012, 2020), Kelly et al. (2016)
- Documents **micro-foundations** of political risk pricing
- Identifies precise transmission mechanism: partisan ties mediate risk
- *Novel*: Cross-sectional heterogeneity, not just aggregate effects

2. Corporate Political Connections

- Builds on Goldman et al. (2009), Akey (2015)
- Quantifies value of **intangible** partisan ties (0.3-0.6% valuation effects)
- Shows multi-month persistence beyond discrete events
- *Novel*: Contribution patterns matter, not just board connections

3. Prediction Markets & Information Efficiency

- Advances Snowberg et al. (2007, 2013)
- Demonstrates rapid incorporation: **hours to weeks**
- Validates blockchain-based markets for academic research
- *Novel*: Direct evidence of prediction market → equity market information flow

Data: Electoral Probabilities

PolyMarket (Blockchain-Based)

- \$3.6B total trading volume (2024 cycle)
- Minute-by-minute probability updates
- Decentralized structure: manipulation-resistant
- Continuous operation (24/7)

Advantages over Polls:

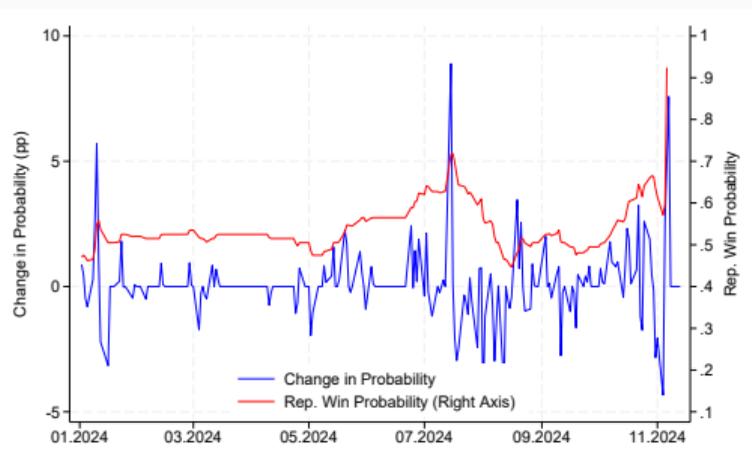
- Continuous 24/7 updates
- Market-aggregated beliefs
- Incentive-compatible revelation (i.e., *skin in the game*)

Political Shock Variable:

$$\Delta\text{Prob}_t = \text{Trump}_t - \text{Trump}_{t-1}$$

Summary Statistics: Mean: 0.06 pp (i.e., \sim zero drift); SD: 1.1 pp; Range: [-4.6, 32.7] pp

Figure: Trump winning prob. and daily changes



Understanding PolyMarket Contracts

What is PolyMarket?

- Blockchain-based prediction market
- Launched 2020; largest *crypto* prediction platform
- \$3.6B traded on 2024 US presidential contracts globally

How Contracts Work

- Binary outcome contracts: “Trump Wins” or “else”
- Each contract pays \$1 if event occurs, \$0 otherwise (i.e., *Arrow-Debreu securities*)
- Price = market’s probability estimate
 - E.g., contract at \$0.65 → 65% win probability

Key Advantages for Research

- **Continuous:** 24/7 trading, real-time updates
- **Incentive-compatible:** Real money at stake
- **Transparent:** All trades on blockchain
- **Manipulation-resistant:** Decentralized structure, global openness and high volume

Data Construction

- Extract minute-by-minute prices via API
- Convert to probabilities (Price = Prob)
- Aggregate to 5-minutes/hourly/daily frequency & compute ΔProb_t

Data: Corporate Political Affiliations

Sample Construction

- OpenSecrets records (2020–2024)
- 71 publicly traded firms
- Multiple sectors (see table)

Classification Measures

Binary:

- **Republican**: >50% to **Reps** (48%)
- **Democrat**: >50% to **Dems** (52%)

Continuous:

$$\text{RepAffil}_i = \frac{\text{Rep Donations}_i}{\text{Total Donations}_i}$$

Notable Examples: **Tesla (100% Rep)**, **Occidental (99%)** to **Netflix (0%)**, **Apple (5%)**

| Variable | Republicans | | Democrats | |
|--------------------------|-------------|------|-----------|------|
| | Mean | SD | Mean | SD |
| Δ Stock Price (%) | 0.06 | 1.96 | 0.06 | 1.92 |
| Log(Assets) | 10.81 | 1.24 | 11.25 | 1.52 |
| Log(Sales) | 10.21 | 1.34 | 10.77 | 1.49 |
| Employment (000s) | 153 | 256 | 150 | 362 |
| Log(Capital Stock) | 9.71 | 2.01 | 9.90 | 2.03 |
| Leverage (%) | 52.4 | 28.3 | 53.5 | 26.0 |
| Profitability (%) | 13.2 | 7.8 | 11.8 | 9.9 |
| Cash Holding (%) | 10.6 | 14.3 | 13.9 | 12.7 |
| Net Worth (%) | 33.9 | 22.8 | 33.6 | 19.6 |
| Credit Rating (A+) | 0.47 | 0.50 | 0.40 | 0.50 |
| No. of Firms | 36 | | 35 | |

| Sector | Firms |
|----------------|-------|
| Technology | 19 |
| Transportation | 13 |
| Defense | 11 |
| Other | 10 |
| Health | 8 |
| Energy | 7 |
| Finance | 3 |

Tracking Corporate Political Affiliations: OpenSecrets Methodology

What is OpenSecrets?

- Nonpartisan research organization (founded 1983)
- Tracks money in U.S. politics
- Data source: Federal Election Commission (FEC) filings
- Covers all federal campaign contributions

How Firms Are Classified

- Aggregates individual contributions by employees
- Links donors to employers via employer field
- Includes PAC (Political Action Committee) contributions
- Tracks contributions to candidates and parties
- Covers all federal election cycles

⇒ OpenSecrets data is considered **gold standard** for campaign finance research

Our Data Construction

- **Period:** 2020–2024 election cycles (5 years)
- **Aggregation:** Firm-level totals
 - Include subsidiaries
 - Sum employee + PAC donations
- **Classification:**
 - *Binary:* >50% to one party
 - *Continuous:* % to **Republicans**

Sample Characteristics

- 71 publicly traded firms with data
- 48% **Republican**, 52%
- Median total contributions: \$2.1M

Empirical Strategy: Local Projections

We employ **local projections** (Jordà, 2005), which offer flexibility and robustness advantages over traditional vector autoregressions (VARs)

Baseline Specification:

$$\begin{aligned}\log(\text{Price}_{i,t+h}) - \log(\text{Price}_{i,t}) = & \alpha^h + \sum_{k=1}^{14} \phi_k^h \Delta \log(\text{Price}_{i,t-k}) \\ & + \beta_1^h \Delta \text{Prob}_t + \beta_2^h \text{PartyID}_i \\ & + \beta_3^h (\Delta \text{Prob}_t \times \text{PartyID}_i) \\ & + \delta_t^h + \eta_i^h + \epsilon_{i,t+h}^h\end{aligned}$$

Coefficients of Interest:

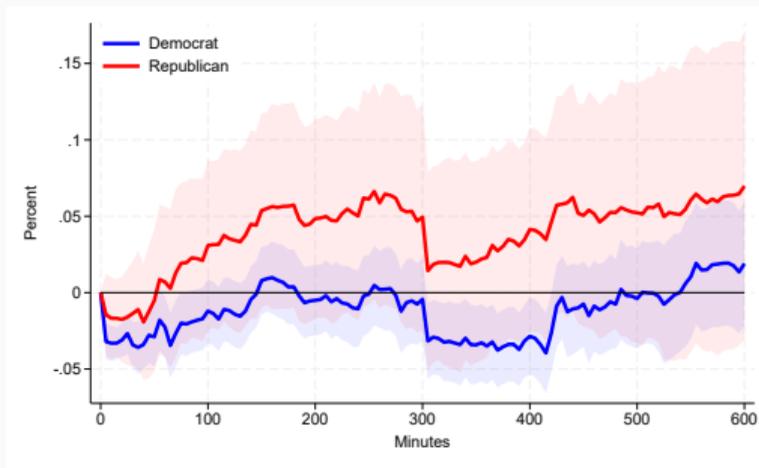
- β_1^h : Democrat response at h
- β_3^h : Differential Republican vs Democrat
- $\beta_1^h + \beta_3^h$: Total Republican response

Identification:

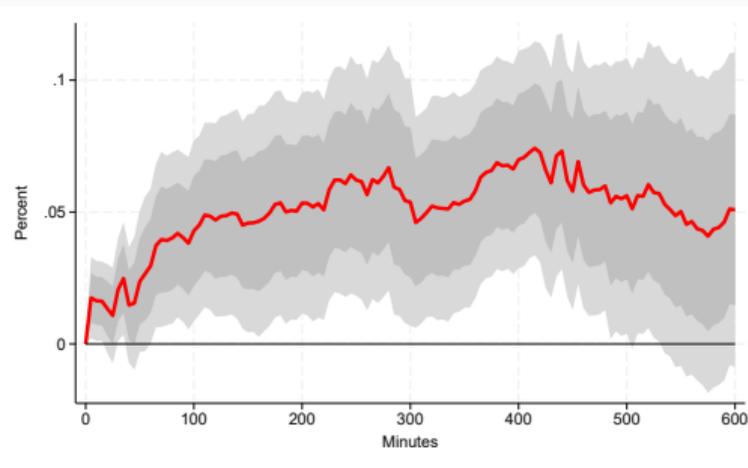
- Time FE (δ_t^h): market shocks
- Firm FE (η_i^h): time-invariant
- Driscoll-Kraay SE

Key assumption: Conditional on controls, ΔProb_t exogenous to firm returns

Results: 5-Minute Responses



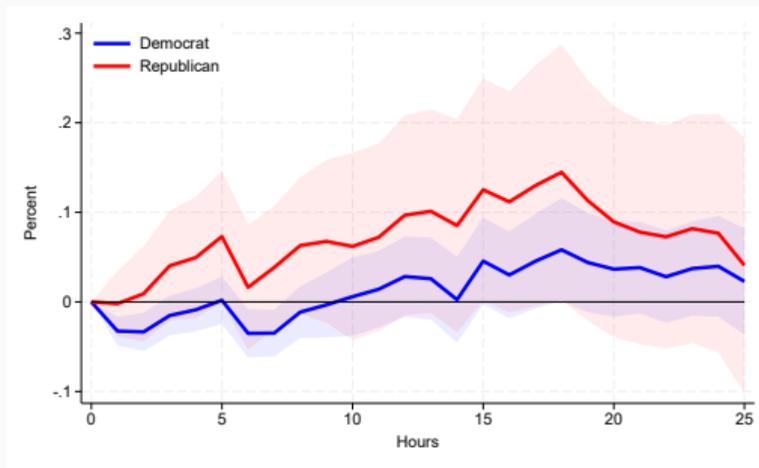
(a) Cumulative responses by affiliation



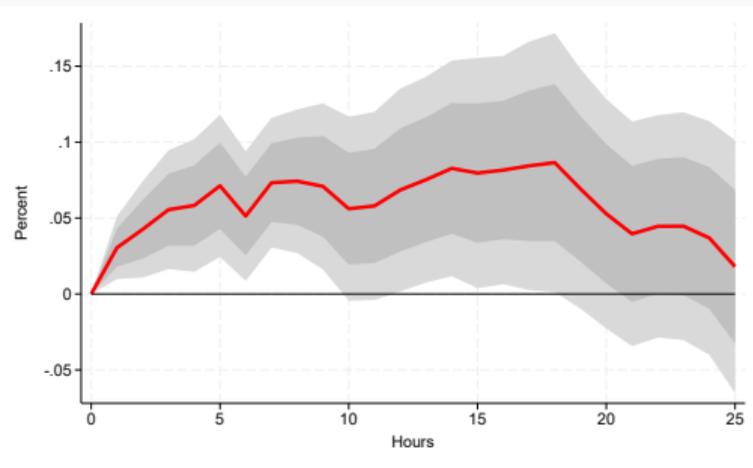
(b) Differential effect (β_3^h)

- **Republican** firms: gradual positive response emerging after ~ 100 minutes
- **Democrat** firms: initial negative response, then convergence to zero
- Differential (β_3^h) significant and positive for first 500 minutes
- *Ultra-high frequency*: Markets price within 1-2 hours of shock with an initial adjustment phase

Results: Hourly Responses



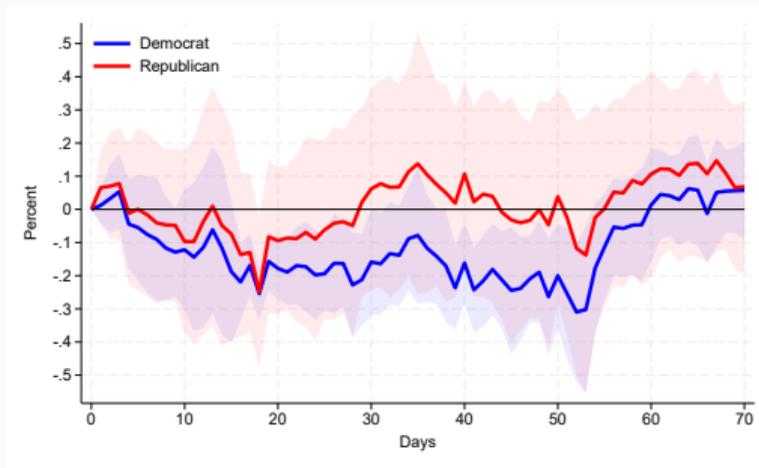
(a) Cumulative responses by affiliation



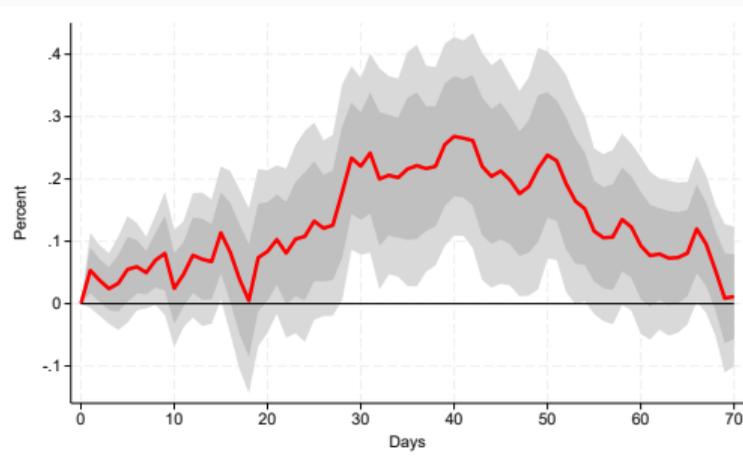
(b) Differential effect (β_3^h)

- **Republican** firms: +0.15% peak at hour 18 (significant)
- **Democrat** firms: no significant response
- Differential (β_3^h) significant for 20 hours
- *Rapid incorporation*: effects emerge within 1-2 hours (consistent with 5-minute results)
- *Market efficiency*: information incorporated within same trading day

Results: Daily Responses



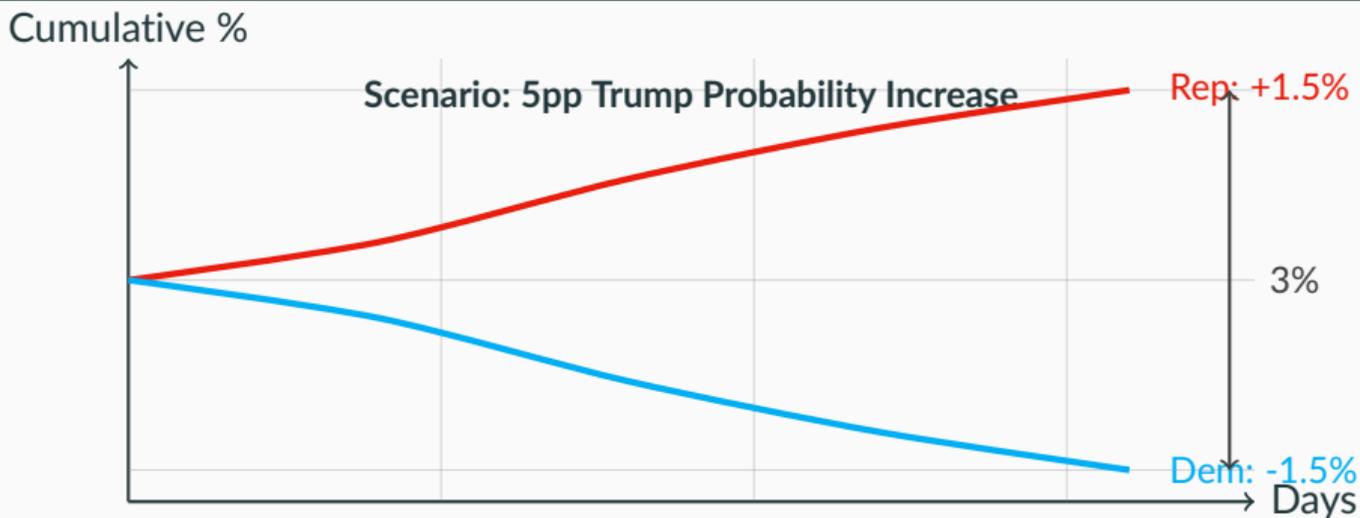
(a) Cumulative responses by affiliation



(b) Differential effect (β_3^h)

- Democrat firms: -0.3% persistent decline (significant days 15–60)
- Republican firms: resilient (no significant negative response)
- Asymmetric response: Democrats lose, Republicans maintain value
- Differential (β_3^h) peaks at 0.3% around day 45
- Persistence: effects last 60+ trading days (3 months)

Economic Magnitudes: An Example



Contextual Benchmarks:

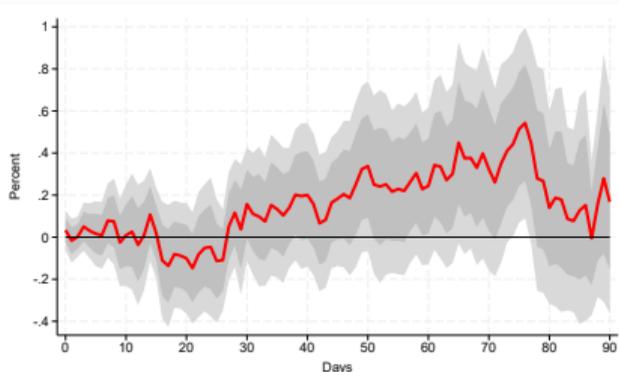
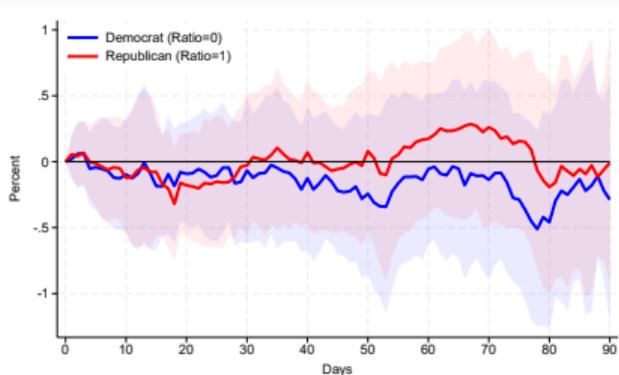
- 3% cumulative spread = 15% of daily volatility (SD: 1.94%)
- Exceeds analyst upgrades (~2%)
- Approaches M&A announcements (~5%)
- **This is economically first-order, not a curiosity**

When do we see 5–10pp Shocks?

- Presidential debates (Sept, Oct 2024)
- Major economic data releases (jobs reports)
- Campaign-defining moments (assassination attempt, July 2024)
- Unexpected candidate events (health scares, gaffes)

Dose-Response: Contribution Intensity

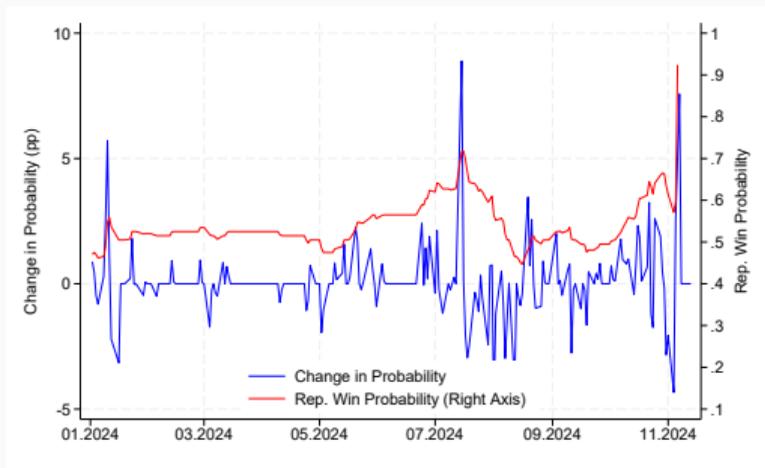
Figure: Continuous affiliation measure



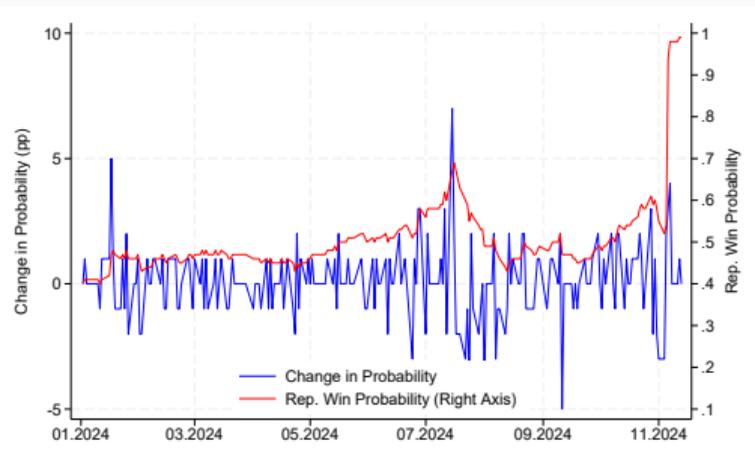
Key Takeaways:

- **Magnitude:** 100% Republican vs 100% Democrat shows 0.6% differential per 1pp shock
- **2× larger than binary:** Comparing extremes (0.3% → 0.6%)
- **Monotonic relationship:** Each 10pp increase in Republican contributions matters
- **Timing:** Peak at day 75 (vs day 45 for binary) – slower incorporation?
- **Strategic implication:** 50-50 hedging doesn't eliminate political risk

Robustness: Cross-Platform Validation



(a) PolyMarket Shocks

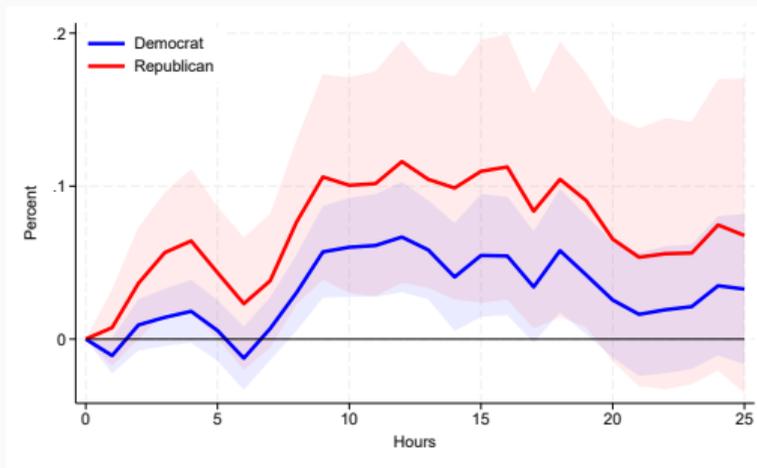


(b) PredictIt Shocks

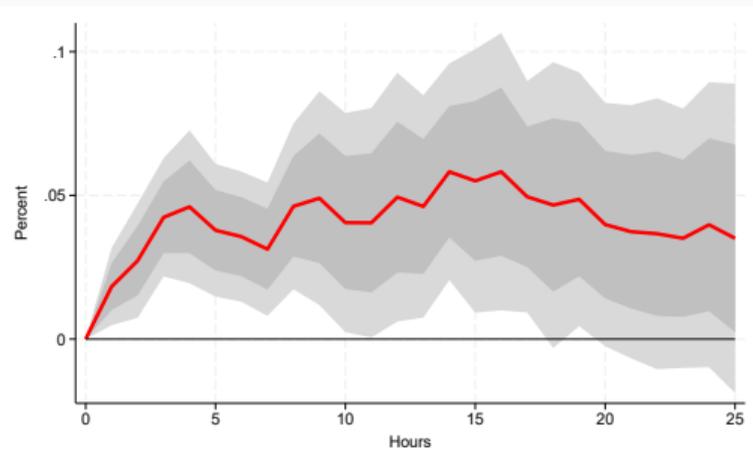
Cross-Platform Validation Strategy:

- **Two independent platforms:** PolyMarket (blockchain) vs PredictIt (CFTC-regulated)
- **High correlation:** 0.94 between daily probability levels
- **Different structures:** Decentralized crypto vs centralized with betting limits
- **Different user bases:** Global traders vs U.S.-focused political bettors
- **Why this matters:** Rules out platform-specific manipulation or artifacts

Robustness: Hourly Frequency with PredictIt



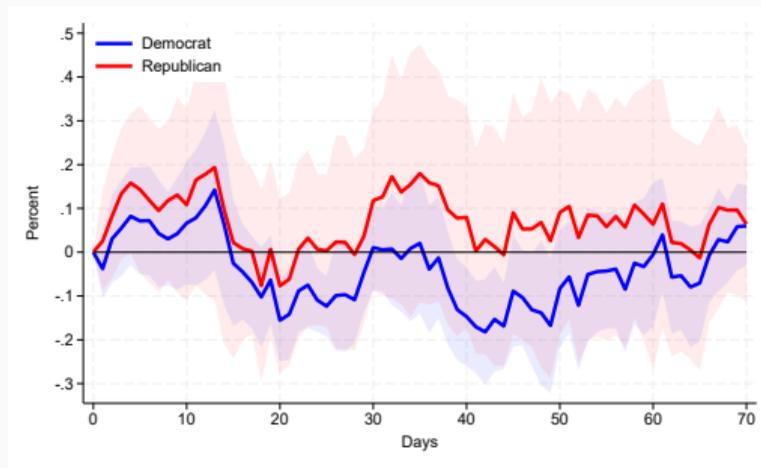
(a) Cumulative responses by affiliation



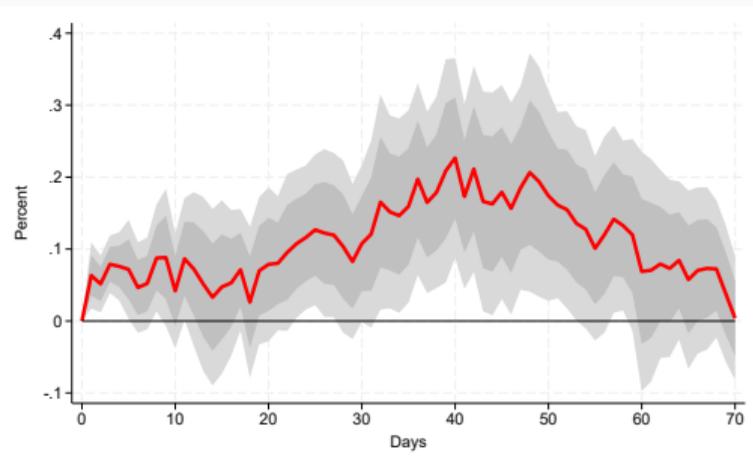
(b) Differential effect (β_3^h)

- **Magnitude:** Peak differential $\sim 0.05\text{-}0.08\%$ (similar order)
- **Timing:** Significant for 15-20 hours (consistent with PolyMarket)
- **Pattern:** **Republican** firms positive, **Democrat** firms near zero
- **Key validation:** Same-day incorporation confirmed across platforms
- **Implication:** Results not driven by PolyMarket's crypto user base

Robustness: Daily Frequency with PredictIt



(a) Cumulative responses by affiliation



(b) Differential effect (β_3^h)

- **Magnitude:** 0.2% differential vs 0.3% with PolyMarket (65% as large)
- **Timing:** Significant days 20-60 (matches PolyMarket exactly)
- **Persistence:** Same 2-month horizon across both platforms
- **Asymmetry:** Democrat decline + Republican resilience pattern holds
- **Conclusion:** Core findings robust to prediction market choice

Why Do Effects Persist for Months?

1. Policy Anticipation Channel

- Tax policy changes (corporate rates, depreciation, international taxation)
- Regulatory environment shifts (sector-specific regulations)
- Government contract allocation patterns (defense, infrastructure, health)
- *Preliminary Evidence:* Strongest effects in policy-sensitive sectors (Energy, Defense)

2. Network Effects & Political Access

- Enhanced access to policymakers and regulatory agencies
- Information advantages about policy direction and timing
- Increased lobbying effectiveness with aligned administration
- *Evidence:* Effects scale with contribution intensity (dose-response)

3. Gradual Information Diffusion

- Slow diffusion across heterogeneous investor base
- Uncertainty resolution about specific policy implementation
- Iterative updating as campaign progresses
- *Evidence:* Significance emerges around day 15-20, not immediately

Identification & Inference

| Concern | Issue | Addressed By |
|--------------------|-----------------------------------|-------------------------------------|
| Reverse Causality | Stock prices → prediction markets | High-frequency timing; markets lead |
| Omitted Variables | Correlated unobservables | Time FE + Firm FE; sector×time FE |
| Selection Bias | Contributing firms differ | Robustness: S&P 500 only; controls |
| Measurement Error | Prediction market noise | Two platforms; corr = 0.94 |
| Platform Artifacts | PolyMarket-specific features | Robustness: PredictIt replication |

Additional Robustness Checks:

- **Specifications:** Alternative lag structures (7, 14, 21 days); weighted by market cap
- **Standard errors:** Alternative clustering (industry, time); bootstrap inference
- **Sample:** Excluding election week; S&P 500 firms only; balanced by sector
- **Controls:** Firm characteristics (size, B/M, volume, volatility); sector×time FE
- **Result:** All specifications confirm main findings – differential effects robust

For Asset Pricing Theory

- Political risk is a **systematic factor with firm heterogeneity**
- Time-varying risk premia linked to electoral cycles (predictable variation)
- Cross-sectional return predictability from partisan alignment
- *Open question*: Can political beta explain cross-sectional returns?

For Corporate Strategy & Finance

- Political connections = valuable **intangible assets** (0.3-0.6% valuation effects)
- Strategic political investment decisions (not just ideology or charity)
- Political risk hedging via portfolio diversification across partisan ties
- *CFO takeaway*: Partisan alignment is a measurable, manageable risk factor

For Market Efficiency & Information Transmission

- Prediction markets → equity markets: **information flows in hours**
- Price discovery efficiency in decentralized political betting markets
- Validates blockchain-based markets as credible information sources
- *Implication*: Sophisticated investors monitor prediction markets actively

Main Findings:

1. Economically significant differential returns based on partisan affiliations

- 0.3% per 1pp probability change at peak (day 45)
- 0.6% for extreme partisans (100% Republican vs 100% Democrat)
- Comparable to momentum, value, and analyst upgrade effects

2. Rapid incorporation and long persistence

- Effects visible within 1-2 hours at high frequency
- Significance emerges by day 15-20 at daily frequency
- Persist for 60+ trading days (3 months)
- Asymmetric: Democrat losses, Republican resilience

3. Causal transmission mechanism identified

- Corporate partisan ties mediate political risk exposure
- Intangible connections (contributions) have material value
- Dose-response relationship: intensity matters
- Sector heterogeneity supports policy channel (Energy, Defense strongest)

Bottom Line: Political risk is a first-order, systematic factor in asset pricing with substantial cross-sectional heterogeneity based on firms' partisan positioning.

Limitations & Future Research

Current Limitations:

- **Sample selection:** 71 firms with identifiable contributions (contributing firms may differ)
- **Single cycle:** 2024 election in highly polarized period (external validity?)
- **U.S. context:** Presidential system, two-party competition, specific institutions
- **Mechanisms:** Cannot fully decompose policy vs sentiment vs network channels

Promising Research Directions:

1. **Cross-country:** Parliamentary systems, varying polarization, emerging markets
2. **Asset classes:** Corporate bonds, CDS spreads, options, international spillovers
3. **Mechanisms:** Text analysis, lobbying, contracts, real investment effects

Broader Question: As polarization intensifies globally, will political risk become a dominant factor in asset pricing & rival traditional factors like size, value, and momentum?

Thank You!
Questions?



orhantorul.com
orhan.torul@bogazici.edu.tr

Appendix: Data Construction

Stock Price Data (NYSE TAQ, Refinitiv):

- Millisecond trades → aggregated to 5-minutes/hourly/daily
- Missing data: linear interpolation for gaps <2 hours
- Final sample: 71 firms, 83,562 hourly observations, 15,754 daily observations

Political Affiliation (OpenSecrets):

- Source: OpenSecrets API + manual verification
- Coverage: 2020–2024 contribution cycles
- Aggregation: firm-level (subsidiaries included)
- Threshold: >50% to one party → affiliated

Prediction Markets:

- PolyMarket: blockchain transactions via API
- PredictIt: obtained via email interaction
- Aggregation: minute-level → 5-minutes/daily/hourly
- Cross-platform correlation: 0.94

Appendix: Variable Definitions

| Variable | Definition |
|----------------------------|--|
| ΔProb_t | Daily change in Trump winning probability (percentage points) |
| PartyID_i | Binary indicator: 1 if Republican-affiliated, 0 if Democrat |
| RepAffiliation_i | Continuous: $\frac{\text{Rep Contrib}_i}{\text{Total Contrib}_i} \in [0, 1]$ |
| $\log(\text{Price}_{i,t})$ | Natural log of closing price for firm i at time t |
| $r_{i,t,h}$ | Log return from t to $t + h$ for firm i |
| Market Controls | S&P 500 return, VIX, term spread, credit spread |
| Firm Controls | Market cap, book-to-market, turnover, bid-ask spread |

Appendix: List of Firms by Political Affiliation and Sector

| Contributor | Ticker | Affiliation | Intensity | Sector |
|-------------------------|--------|-------------|-----------|---------|
| Blackstone Group | BX | Republican | 0.89 | Finance |
| Ryan Specialty Group | RYAN | Republican | 0.98 | Finance |
| Charles Schwab Corp | SCHW | Republican | 1.00 | Finance |
| Coinbase | COIN | Democrat | 0.42 | Finance |
| Home Depot | HD | Republican | 0.66 | Misc |
| Walmart Inc | WMT | Republican | 0.55 | Misc |
| Honeywell International | HON | Democrat | 0.46 | Misc |
| Abbott Laboratories | ABT | Republican | 0.88 | Health |
| UnitedHealth Group | UNH | Democrat | 0.48 | Health |
| Pfizer Inc | PFE | Democrat | 0.37 | Health |
| Merck & Co | MRK | Democrat | 0.24 | Health |
| Centene Corp | CNC | Democrat | 0.34 | Health |
| Masimo Corp | MASI | Democrat | 0.00 | Health |
| AstraZeneca PLC | AZN | Democrat | 0.27 | Health |
| Amgen Inc | AMGN | Republican | 0.63 | Health |
| Asana | ASAN | Democrat | 0.00 | Tech |
| Netflix Inc | NFLX | Democrat | 0.00 | Tech |
| Google Inc | GOOG | Democrat | 0.09 | Tech |
| Microsoft Corp | MSFT | Democrat | 0.14 | Tech |
| Amazon.com | AMZN | Democrat | 0.16 | Tech |
| Twilio Inc | TWLO | Democrat | 0.00 | Tech |
| Meta | META | Democrat | 0.17 | Tech |
| Apple Inc | AAPL | Democrat | 0.05 | Tech |
| AT&T Inc | T | Democrat | 0.40 | Tech |
| Oracle Corp | ORCL | Democrat | 0.27 | Tech |

Appendix: List of Firms (continued)

| Contributor | Ticker | Affiliation | Intensity | Sector |
|--------------------------|--------|-------------|-----------|-----------|
| Comcast Corp | CMCSA | Democrat | 0.38 | Tech |
| Arista Networks | ANET | Democrat | 0.00 | Tech |
| Palantir Technologies | PLTR | Republican | 0.66 | Tech |
| Warner Bros Discovery | WBD | Democrat | 0.01 | Tech |
| Walt Disney Co | DIS | Democrat | 0.09 | Tech |
| IBM Corp | IBM | Democrat | 0.24 | Tech |
| Tesla Inc | TSLA | Republican | 1.00 | Tech |
| Boeing Co | BA | Democrat | 0.44 | Transport |
| United Parcel Service | UPS | Republican | 0.54 | Transport |
| Delta Air Lines | DAL | Republican | 0.54 | Transport |
| FedEx Corp | FDX | Republican | 0.69 | Transport |
| United Airlines Holdings | UAL | Democrat | 0.34 | Transport |
| American Airlines Group | AAL | Republican | 0.51 | Transport |
| General Motors | GM | Democrat | 0.38 | Transport |
| Union Pacific Corp | UNP | Republican | 0.71 | Transport |
| Southwest Airlines | LUV | Republican | 0.58 | Transport |
| Transdigm Group | TDG | Republican | 0.79 | Transport |
| Ford Motor Co | F | Democrat | 0.43 | Transport |
| Norfolk Southern | NSC | Democrat | 0.42 | Transport |
| Toyota Motor Corp | TM | Republican | 0.51 | Transport |
| WPP plc | WPP | Democrat | 0.38 | Law |
| Energy Transfer LP | ET | Republican | 1.00 | Energy |
| Chevron Corp | CVX | Republican | 0.93 | Energy |
| Occidental Petroleum | OXY | Republican | 0.99 | Energy |
| ConocoPhillips | COP | Republican | 0.93 | Energy |

Appendix: List of Firms (continued)

| Contributor | Ticker | Affiliation | Intensity | Sector |
|--------------------------|--------|-------------|-----------|--------------|
| Devon Energy | DVN | Republican | 0.99 | Energy |
| Chesapeake Energy | EXE | Republican | 0.99 | Energy |
| Nextera Energy | NEE | Democrat | 0.43 | Energy |
| MDC Holdings | MDC | Republican | 0.98 | Construction |
| AECOM Global | ACM | Democrat | 0.20 | Construction |
| British American Tobacco | BTI | Republican | 1.00 | Agribusiness |
| Altria Group | MO | Republican | 0.92 | Agribusiness |
| Tyson Foods | TSN | Republican | 0.75 | Agribusiness |
| Deere & Co | DE | Republican | 0.67 | Agribusiness |
| International Paper | IP | Republican | 0.58 | Agribusiness |
| Lockheed Martin | LMT | Democrat | 0.45 | Defense |
| Northrop Grumman | NOC | Democrat | 0.42 | Defense |
| RTX Corp | RTX | Democrat | 0.46 | Defense |
| L3Harris Technologies | LHX | Republican | 0.54 | Defense |
| General Dynamics | GD | Republican | 0.50 | Defense |
| Leidos Inc | LDOS | Democrat | 0.44 | Defense |
| Booz Allen Hamilton | BAH | Democrat | 0.42 | Defense |
| BAE Systems | BAESY | Republican | 0.53 | Defense |
| Huntington Ingalls | HII | Republican | 0.53 | Defense |
| CACI International | CACI | Republican | 0.71 | Defense |
| Parsons Corp | PSN | Republican | 0.57 | Defense |

Notes: This table lists the 71 firms in the sample, categorized by political affiliation (Republican or Democrat) based on campaign contributions from 2020 to 2024, and their primary industry sector. *Intensity* refers to our continuous affiliation measure $Intensity_i = \frac{Republican\ Donations_i}{Democrat\ Donations_i + Republican\ Donations_i}$.