

Midterm elections, Resolution of political uncertainty, and U.S. equity market premiums

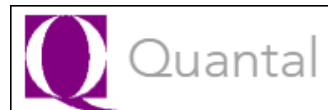
Q Group Fall 2018 Conference
Montage Laguna Beach
October 15, 2018: 10.45AM – Noon

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Background

- Reference: “*Equity premiums in the Presidential cycle: The midterm election resolution of uncertainty*”, available on SSRN:

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2903067

Outline

- Presidential cycle between 1815 and 2015

Two centuries of data, with 50 Presidential cycles

- Equity market premiums over the cycle

Midterm elections, winter effect/SAD, Sell-in-May etc.

- Mutual fund flows and macro indicators

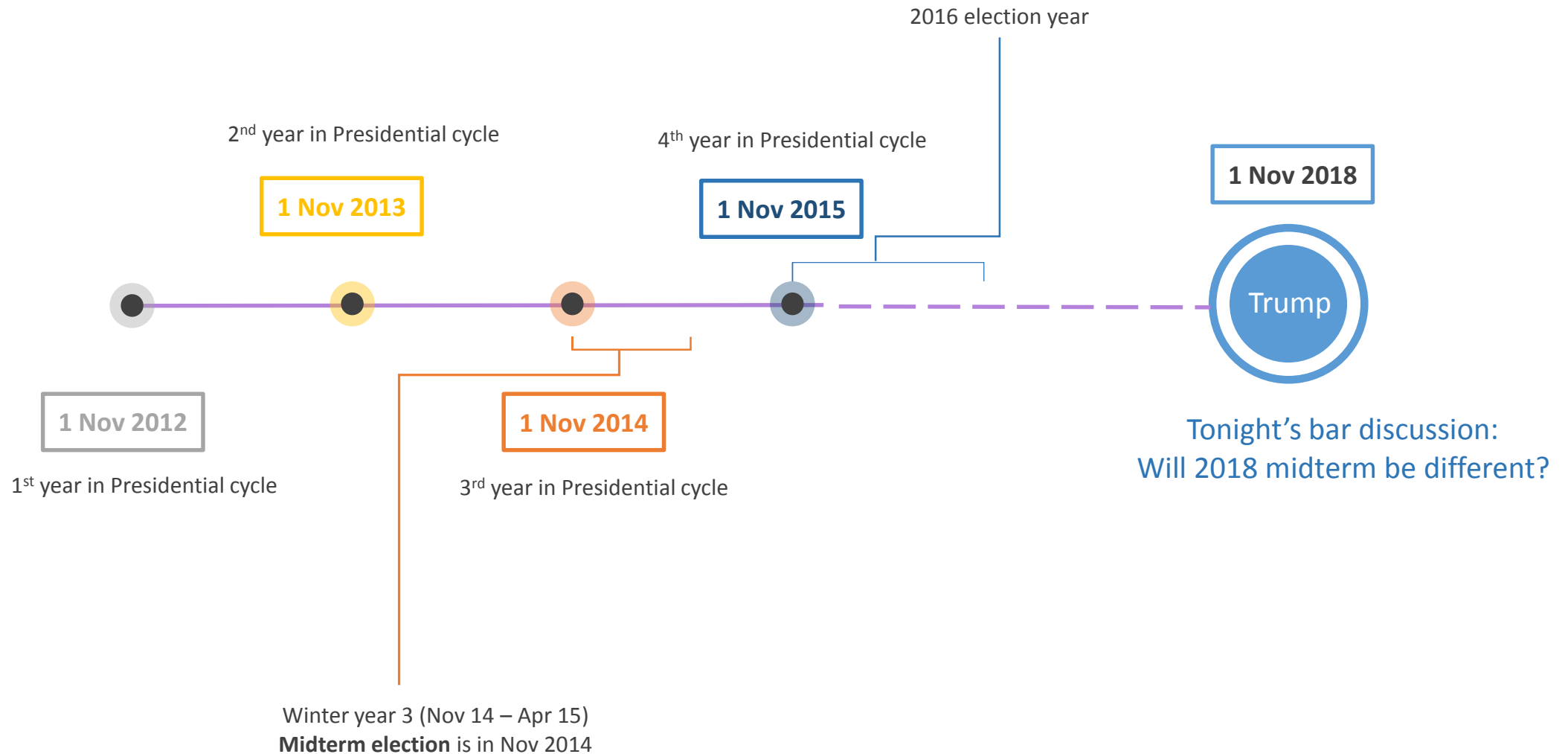
- EPU, tail risks?

- Lost CAPM, IVOL ...

- Pre-scheduled announcements in general?



Timeline for Presidential cycle: Obama 2nd term as example



Average cumulative wealth in each presidential year

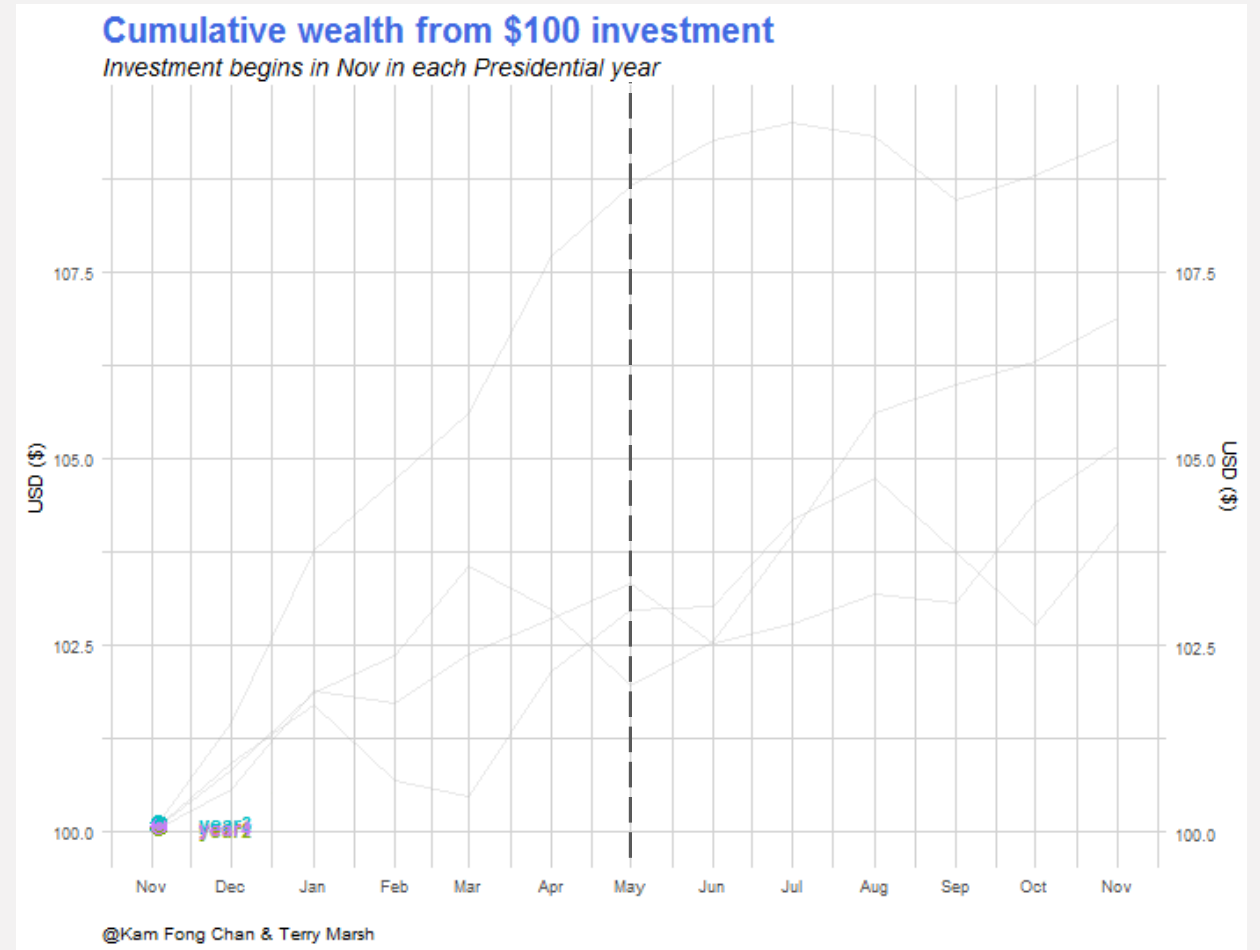
Sample period: 1815:01 to 2015:12

Year 1 Example: Invest from Nov 2012
(Presidential election) for 12 mths

Year 2 Example: Invest from Nov 2013 for 12
mths

Year 3 Example: Invest from Nov 2014
(midterm election) for 12 mths

Year 4 Example: Invest from Nov 2015 for 12
mths



Average monthly equity premium over the past 200 years

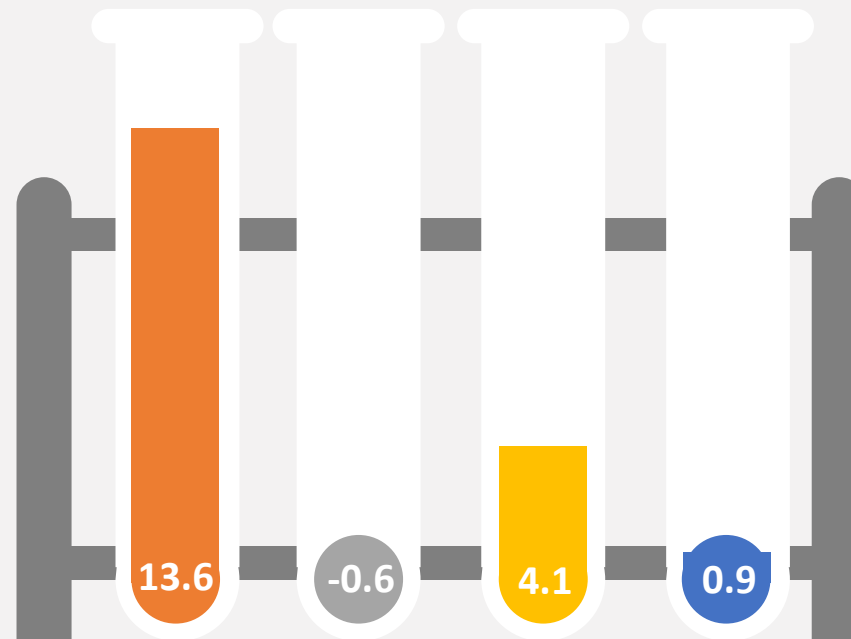
Average annualized equity premium from 1815:01 to 2015:12

13.6% Winter months in year 3
Example: Nov 2014 to April 2015

– **0.6%** Summer months in year 3
Example: May 2015 to Oct 2015

4.1% Winter months in other years
Examples: Nov 2012 to Apr 2013 +
Nov 2013 to Apr 2014 +
Nov 2015 to Apr 2016

0.9% Summer months in other years
Examples: May to Oct 2013 +
May to Oct 2014 +
May to Oct 2016



Regression analysis

$$r_t = \alpha + \beta_1 ME_{t-5:t-1} + \beta_2 ME_t + \beta_3 ME_{t+1:t+5} + \gamma_1 PE_{t-5:t-1} + \gamma_2 PE_t + \gamma_3 PE_{t+1:t+5} + e_t$$

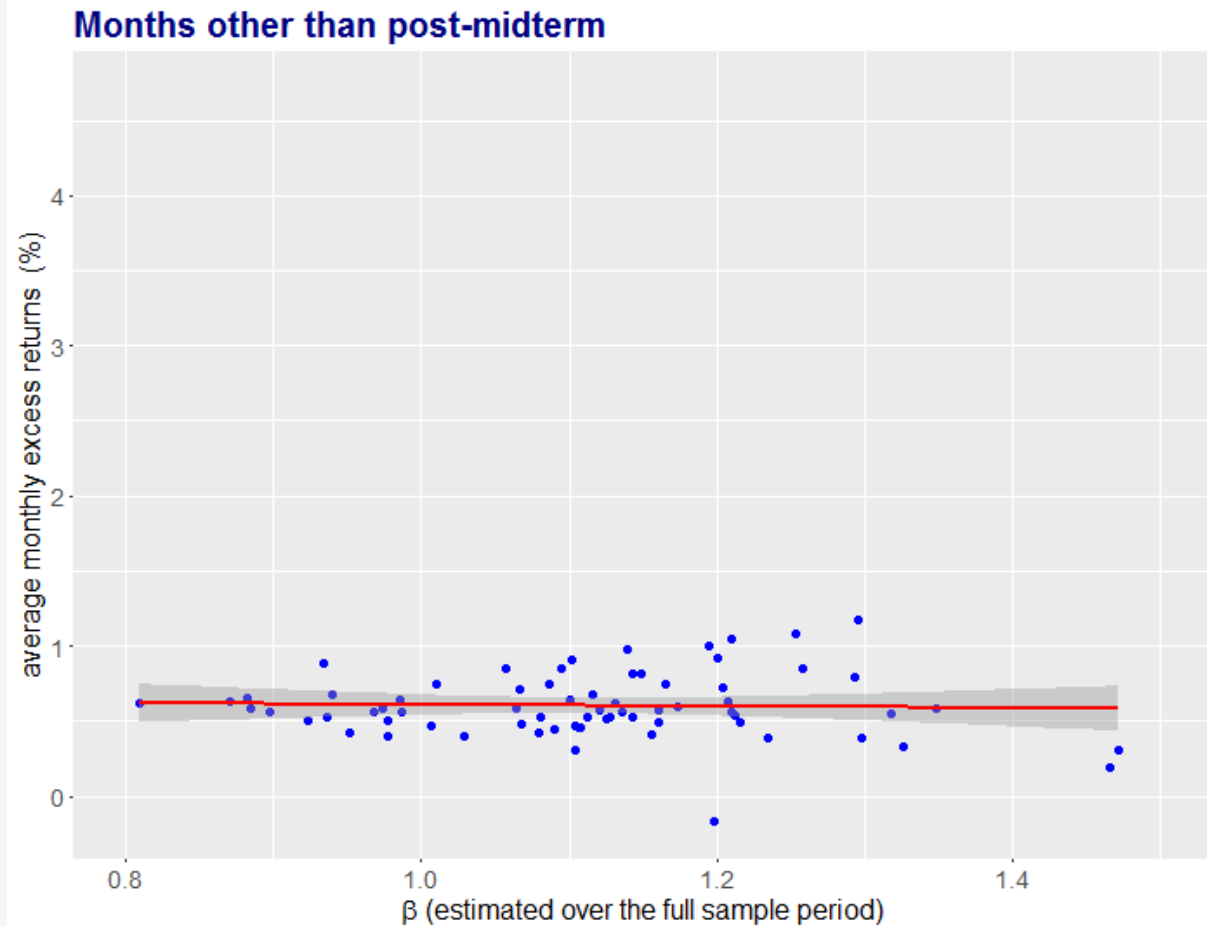
r_t = monthly equity premium (in annualized %)
 $ME_{t-5:t-1}$ = 1 for June through October prior to the midterm and 0 otherwise
 ME_t = 1 for the November midterm election and 0 otherwise
 $ME_{t+1:t+5}$ = 1 for December through April after the midterm and 0 otherwise
 $PE_{t-5:t-1}$, PE_t and $PE_{t+1:t+5}$ are analogous dummy variables for the Presidential election

Table 2: Equity premiums in the months around midterm and presidential elections

The table reports the impact of midterm and presidential elections. The numbers in parentheses are the t -statistics of the regression coefficients obtained using Newey-West (1987) heteroscedasticity and autocorrelation corrected standard errors. Columns (2) and (4) are for midterm and presidential elections held in years 2 and 4, respectively, and Columns (1) and (3) are for pseudo-elections held in years 1 and 3, respectively. Column (5) is for the full regression equation (1) and Column (6) is for the adjusted equation (2) to account for the January effect. Columns (7) and (8) extend on the regression by including $X=\{DY, TS, RREL\}$ as explanatory variables, with Column (7) regressing on equity returns in excess of the risk-free rate (annualized and expressed in percentages) and Column (8) repeats the regression for equity real returns. Finally, Column (9) reports the results for excess returns on CRSP TNA-weighted fund index, whereas Column (10) reports analogous results for excess returns on the 30-year Treasury security controlling for Ludvigsson and Ng (2009) five factors. For brevity, the coefficient estimates for the January dummy and explanatory variables are suppressed. Dictated by data availability, the variables have different starting sample dates but they all end in 2015. *, ** and *** denote statistical significance at the 10%, 5% and 1% levels, respectively.

	EQ-RF (1)	EQ-RF (2)	EQ-RF (3)	EQ-RF (4)	EQ-RF (5)	EQ-RF (6)	EQ-RF (7)	EQ-RF (8)	Treas-RF (9)	MF-RF (10)
$ME_{t-5:t-1}$	-7.42 (-1.58)	-2.26 (-0.55)	-6.36 (-1.70)*	4.37 (1.14)	-1.19 (-0.28)	-0.36 (-0.09)	-1.99 (-0.38)	-3.59 (-0.63)	6.10 (1.74)*	-10.17 (-1.46)
$ME_{t, \text{year 1}}$	8.31 (0.80)									
$ME_{t, \text{year 2}}$		3.81 (0.57)			4.87 (0.72)	5.70 (0.84)	14.12 (1.77)*	13.65 (1.55)	5.98 (0.73)	28.15 (2.50)**
$ME_{t, \text{year 3}}$			-2.36 (-0.40)							
$ME_{t, \text{year 4}}$				0.75 (0.09)						
$ME_{t+1:t+5}$	-0.03 (-0.01)	12.84 (3.91)***	0.19 (0.06)	-0.68 (-0.18)	13.91 (4.12)***					
$ME_{t+1:t+5}^{\text{adj}}$						12.46 (3.65)***	9.98 (2.60)***	10.15 (2.66)***	-8.42 (-1.96)**	15.41 (3.60)***
$PE_{t-5:t-1}$					6.24 (1.35)	7.06 (1.51)	8.01 (1.36)	8.76 (1.44)	6.62 (1.74)*	-3.47 (-0.45)
PE_t					2.61 (0.31)	3.44 (0.41)	10.47 (0.95)	10.83 (0.98)	11.97 (0.90)	5.07 (0.30)
$PE_{t+1:t+5}$					1.19 (0.33)					
$PE_{t+1:t+5}^{\text{adj}}$						1.06 (0.26)	2.37 (0.50)	3.54 (0.72)	1.69 (0.35)	-0.72 (-0.13)
Intercept	2.32 (1.67)*	0.52 (0.38)	2.41 (1.68)*	1.32 (1.00)	-0.55 (-0.33)	-1.37 (-0.79)	10.66 (0.69)	16.83 (1.08)	1.60 (0.93)	24.43 (1.40)
January dummy	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes
Explanatory vars	No	No	No	No	No	No	Yes	Yes	Yes	Yes
Adj. R^2 (%)	0.09	0.40	-0.00	-0.07	0.38	0.44	1.52	1.53	19.8	2.74
Obs.	2412	2412	2412	2412	2412	2412	1728	1728	670	648
Sample starts	1815	1815	1815	1815	1815	1815	1872	1872	1960	1962

CAPM is “lost” most of the time but re-appears post-midterms



Data:

FF25 size & B/M sorted portfolios + FF49 industry portfolios

Sample period:

1927–2015

Fama-MacBeth test results:

(t-stats are parenthesized)

$$r_{t+1}^{\text{post}} = 0.09 + 2.31 \beta_t$$

(0.15) (3.09)

$$r_{t+1}^{\text{other}} = 0.56 + 0.01 \beta_t$$

(3.01) (0.03)

So is IVOL, “lost” most of the time but re-appears post-midterms

The same goes with *idiosyncratic volatility*, which is (spuriously) negatively related to expected return most of the time but has the expected positive relationship in months after midterms

Data:

FF25 size & B/M sorted portfolios + FF49 industry portfolios

Sample period:

1927–2015

Fama-MacBeth test results:

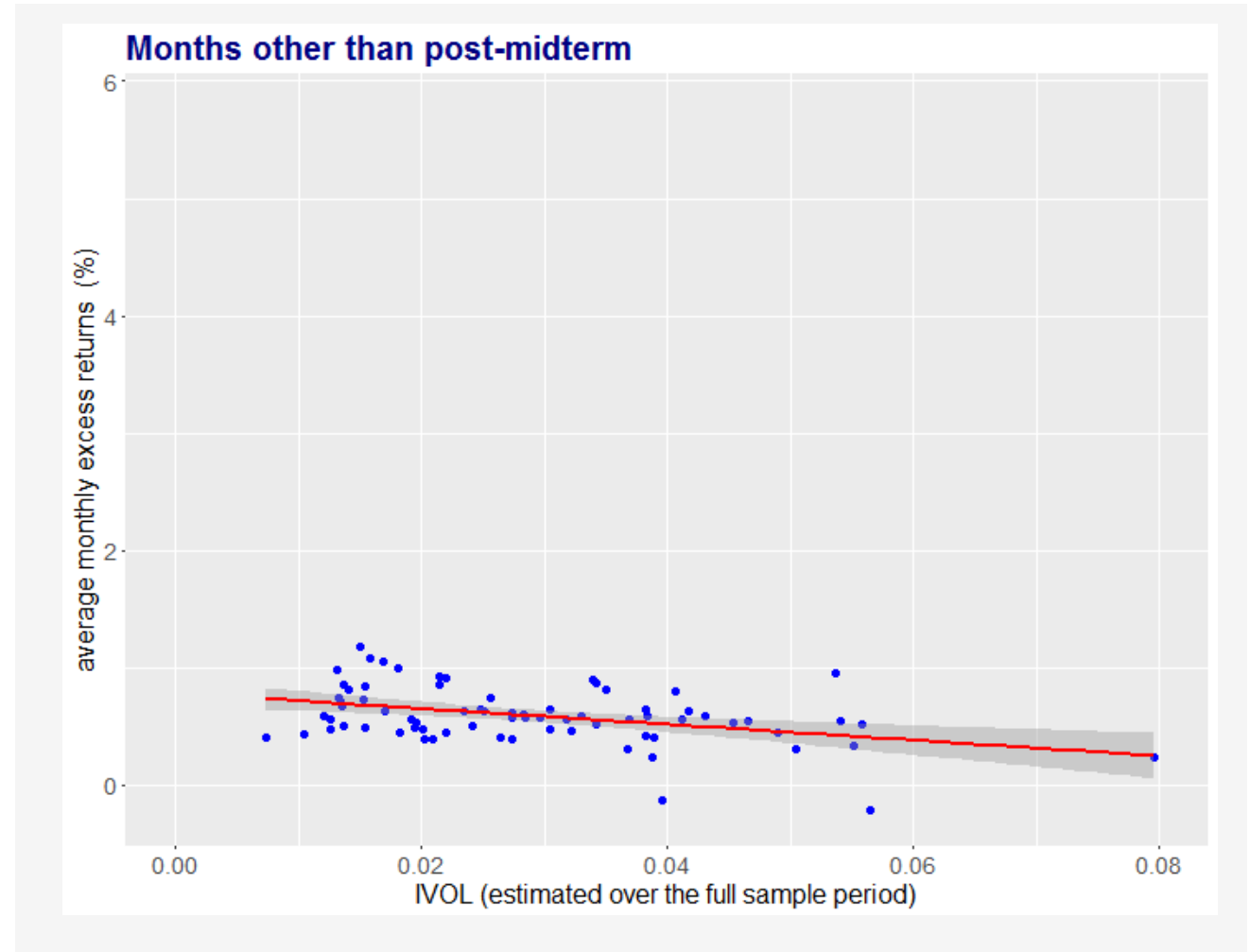
(t-stats are parenthesized)

$$r_{t+1}^{\text{post}} = 2.48 + 3.96 \text{ IVOL}_t$$

(5.55) (0.67)

$$r_{t+1}^{\text{other}} = 0.69 - 4.79 \text{ IVOL}_t$$

(3.51) (-2.62)



And also the lottery-like 'MAX' effect

... and also the *MAX* effect, which is (spuriously) flat most of the time but has the expected positive relationship with the stock expected return in months after midterms

Data:

FF25 size & B/M sorted portfolios + FF49 industry portfolios

Sample period:

1927–2015

Fama-MacBeth test results:

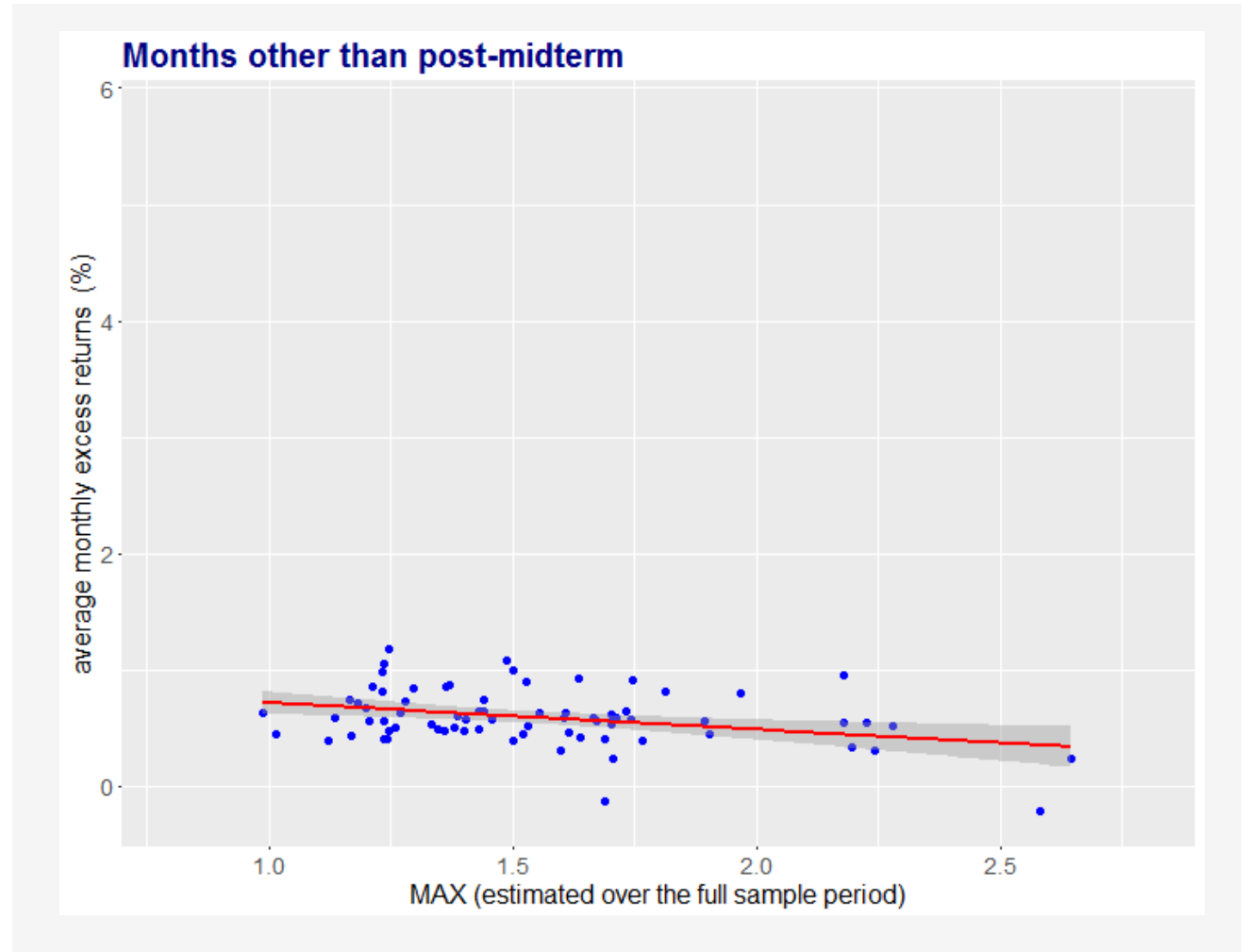
(t-stats are parenthesized)

$$r_{t+1}^{\text{post}} = 2.07 + 0.35 \text{MAX}_t$$

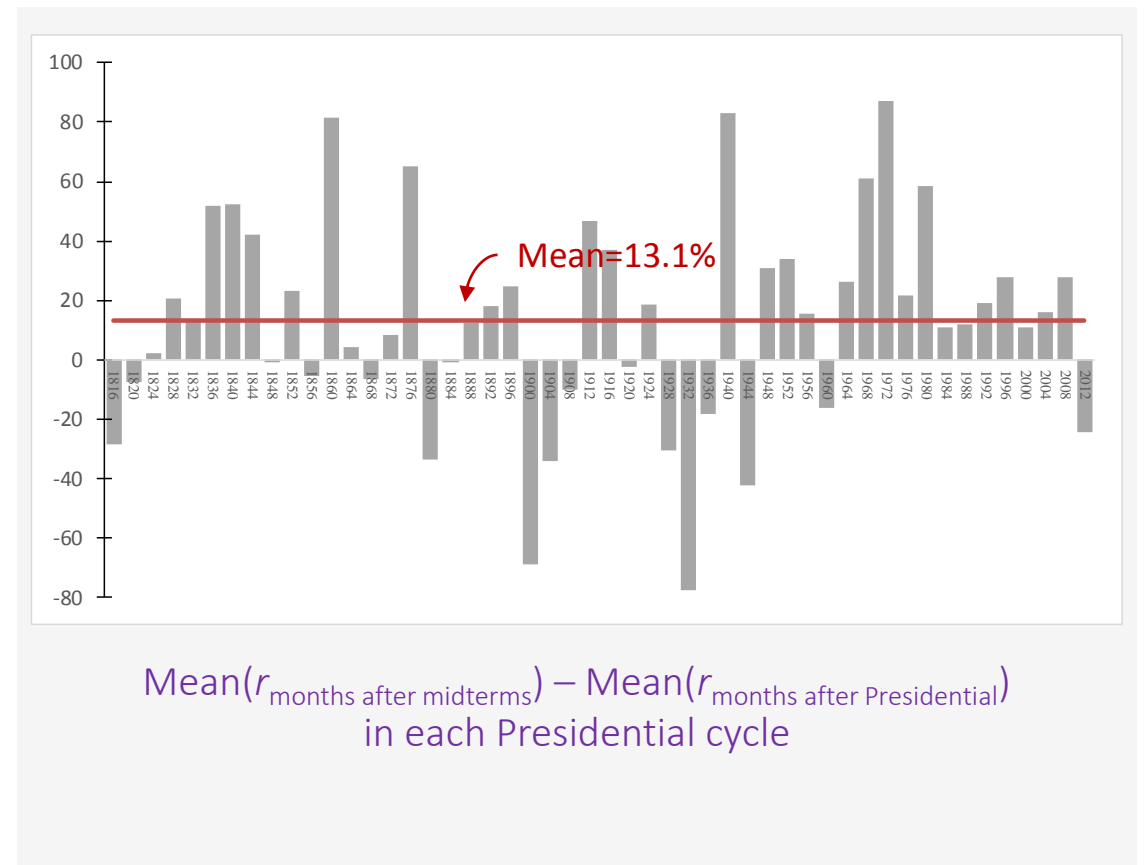
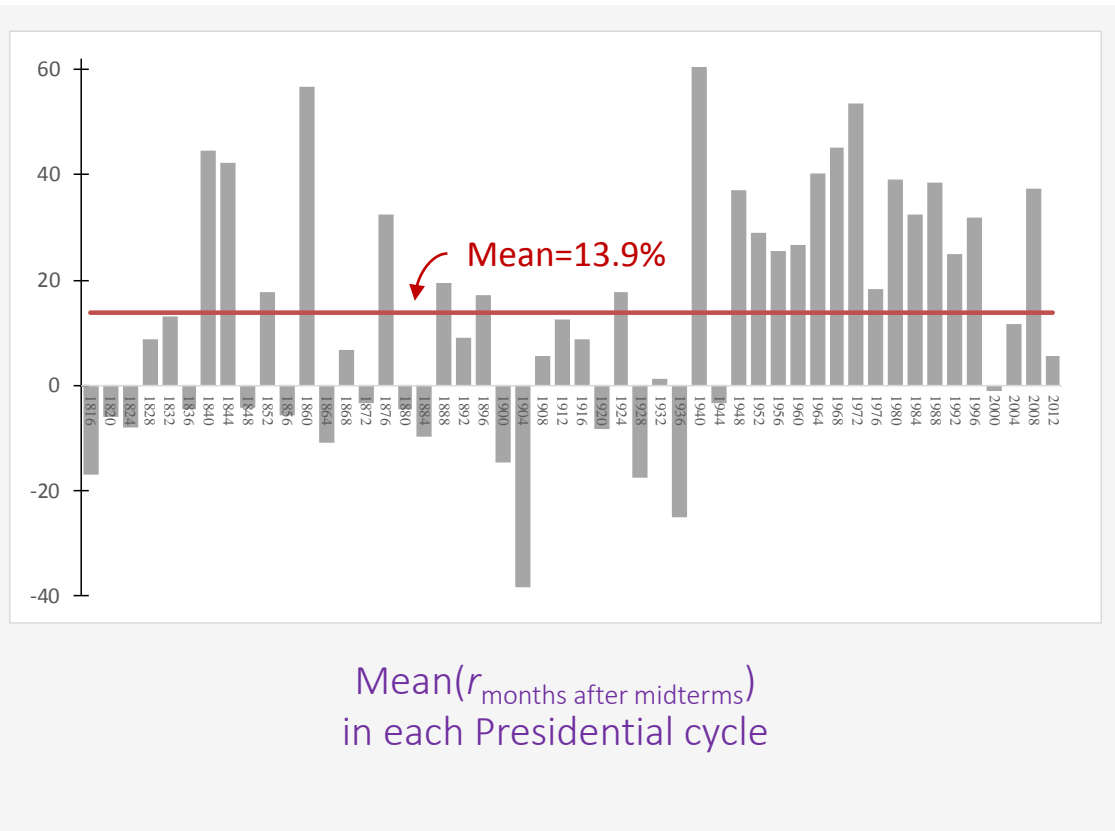
(4.83) (1.73)

$$r_{t+1}^{\text{other}} = 0.63 - 0.03 \text{MAX}_t$$

(3.54) (-0.39)



Post-midterms versus post-Presidential elections



We rule out obvious suspects ...

Time period: 1815 – 2015

- CRSP value-weighted index (1926 – 2015) + Goetzmann et al.'s (2001, Journal of Financial Markets) for pre-1926 data

Results are persistent in sub-periods, and stronger post-1970

Statistically significant

- Pass the 'p-hacking' thresholds of Harvey et al. (2015, RFS) and Ross (2017, J. of Portfolio Management)
- Pass bootstrapping test

Robust to outliers and to different proxies for the U.S. equity market index

- We tested on post-1890s DJIA, CRSP equal-weighted index, Schwert's pre-1927 data, S&P500 futures etc ...

January effect

- We show that it is not a manifestation of the January effect

We perform various robustness tests

Cross-section data from 1927 to 2015

- We tested on cross-section individual stock data using 1.16mil monthly observations for 8,165 firms

Mutual fund data

- We tested on Morningstar mutual (equity & money market) funds and CRSP U.S. mutual equity fund data

January effect

- It is not a manifestation of the January effect

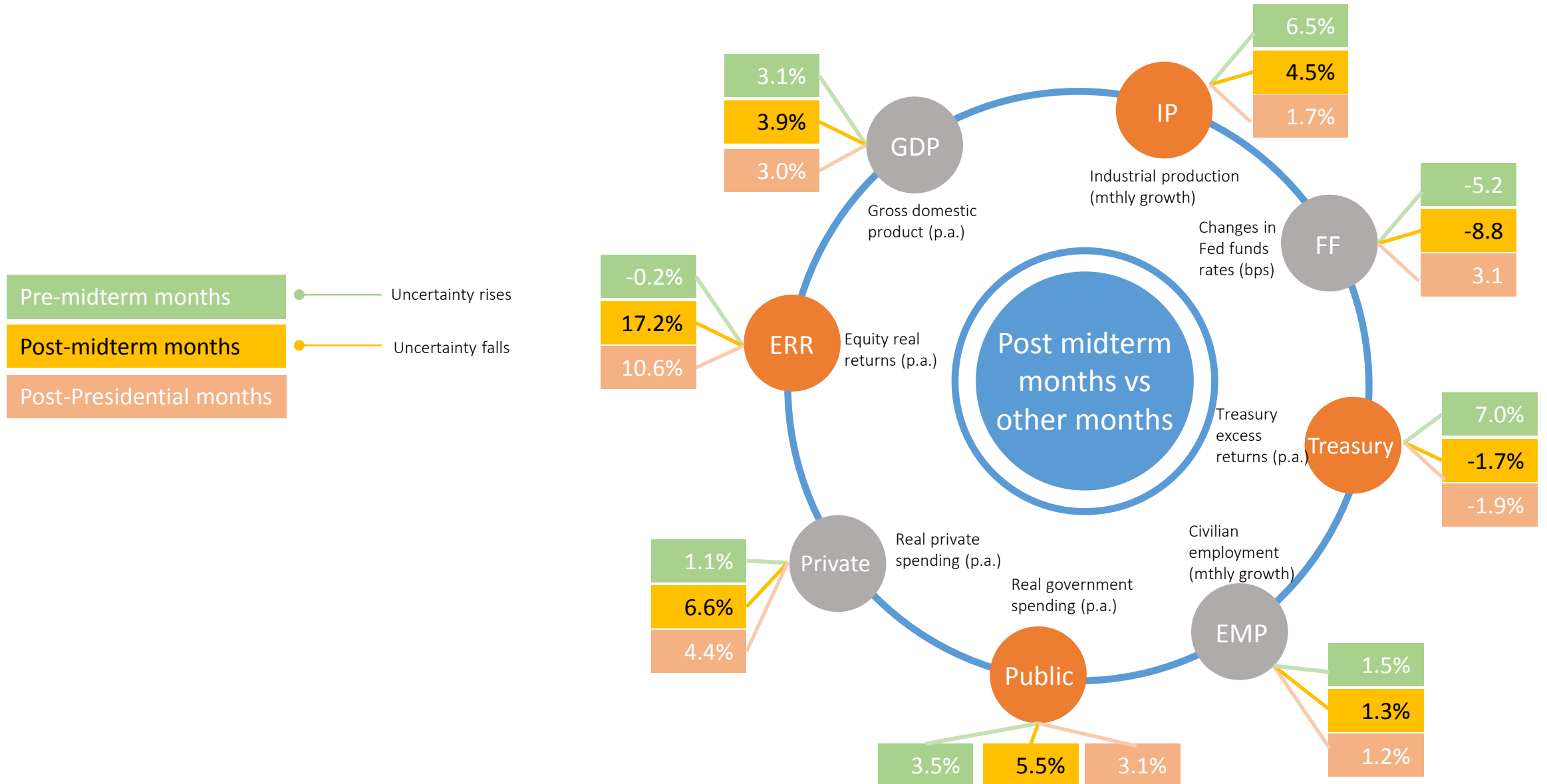
Macroeconomic news announcements

- No evidence that 'good' macroeconomic news is released disproportionately more in post-midterm winter months than in other periods

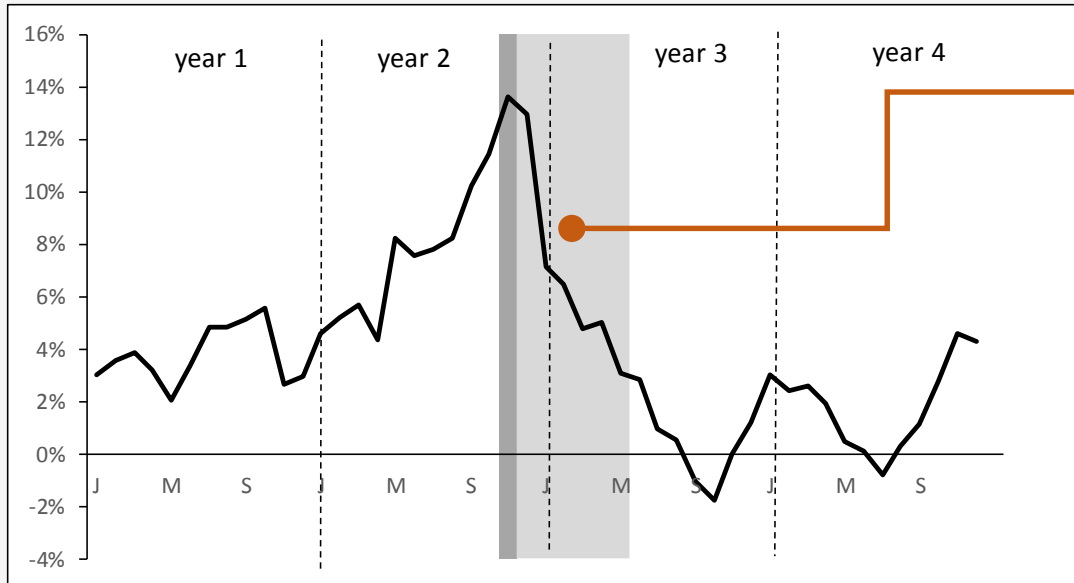
Macro indicators

- Next slide

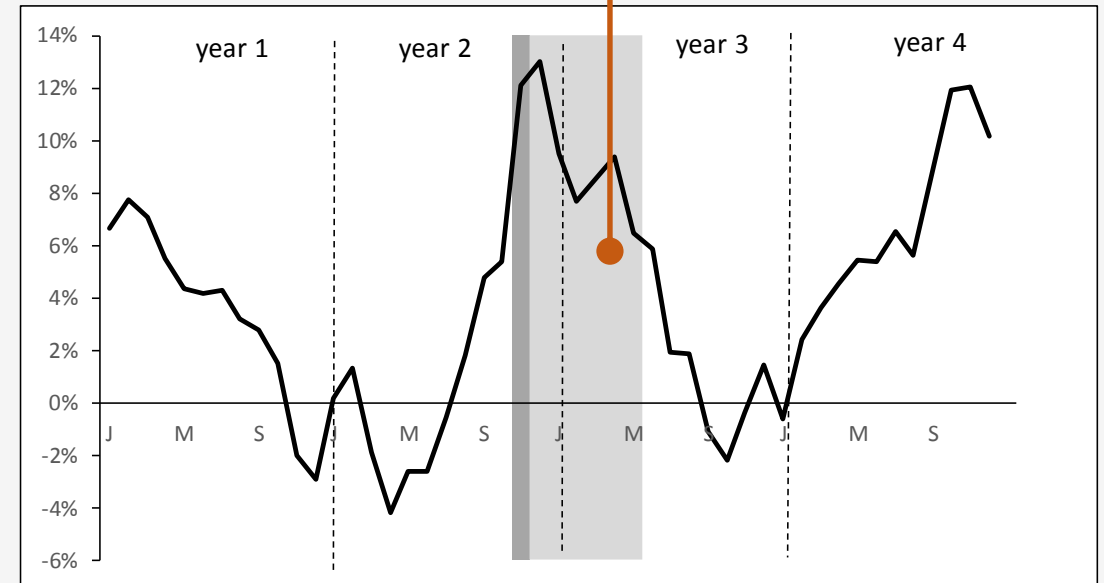
Macro, Treasury and other indicators



6-mth moving averages of year-to-year changes in Baker, Bloom and Davis' EPU



EPU drops i.e., reduced uncertainty post midterms

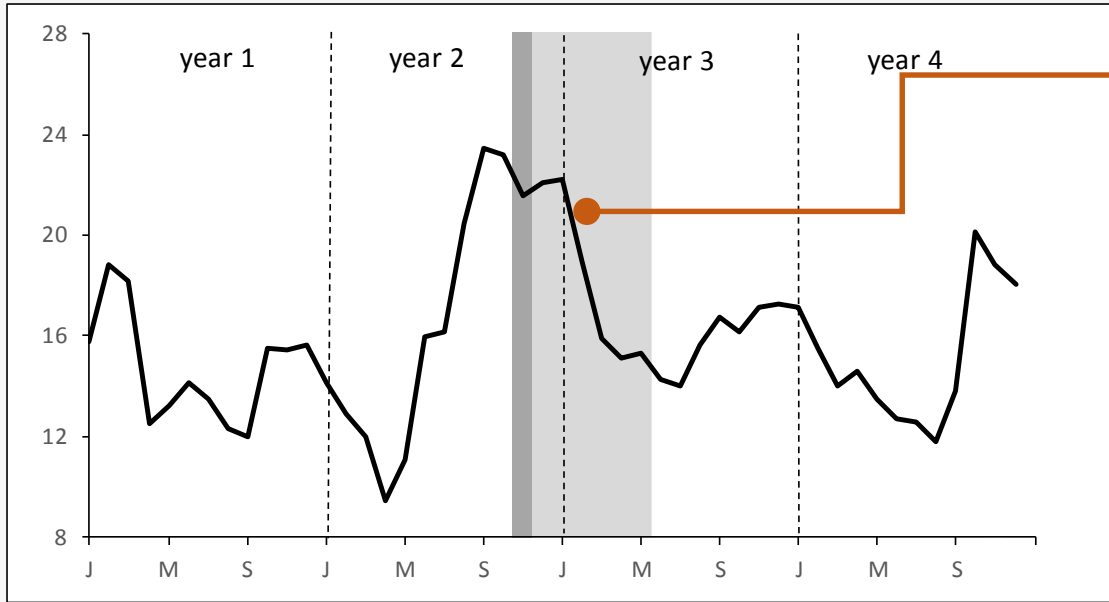


Notes:

Dark shade: Nov midterm

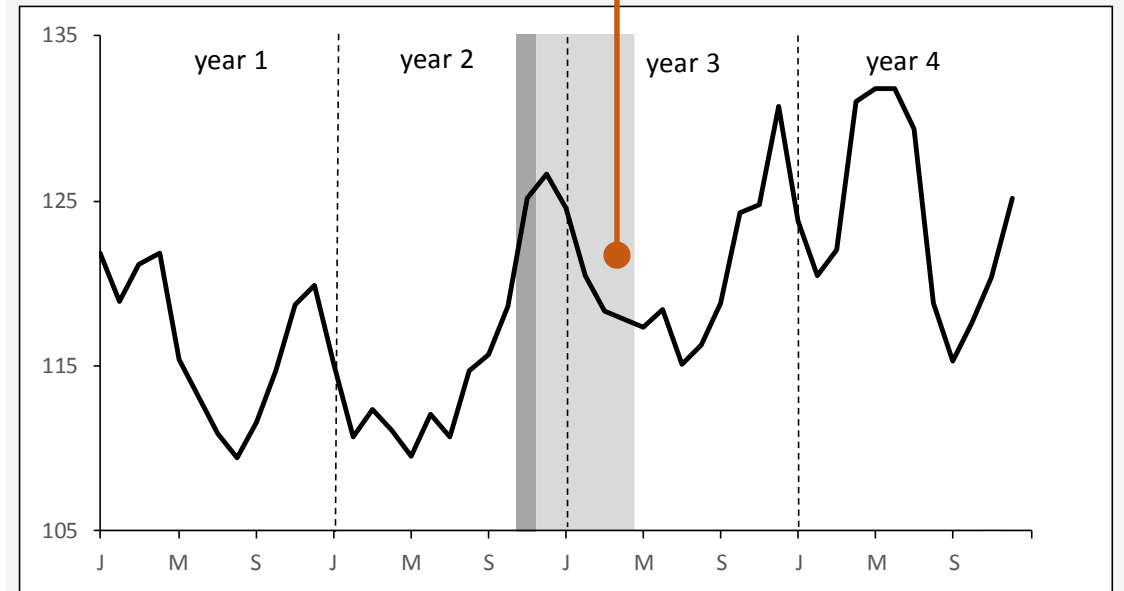
Light shade: Dec – April after midterm

Variance risk premium and bond spread



Variance risk premium, in %
(1990-2015)

VRP and bond spread drop i.e.,
reduced uncertainty post midterms



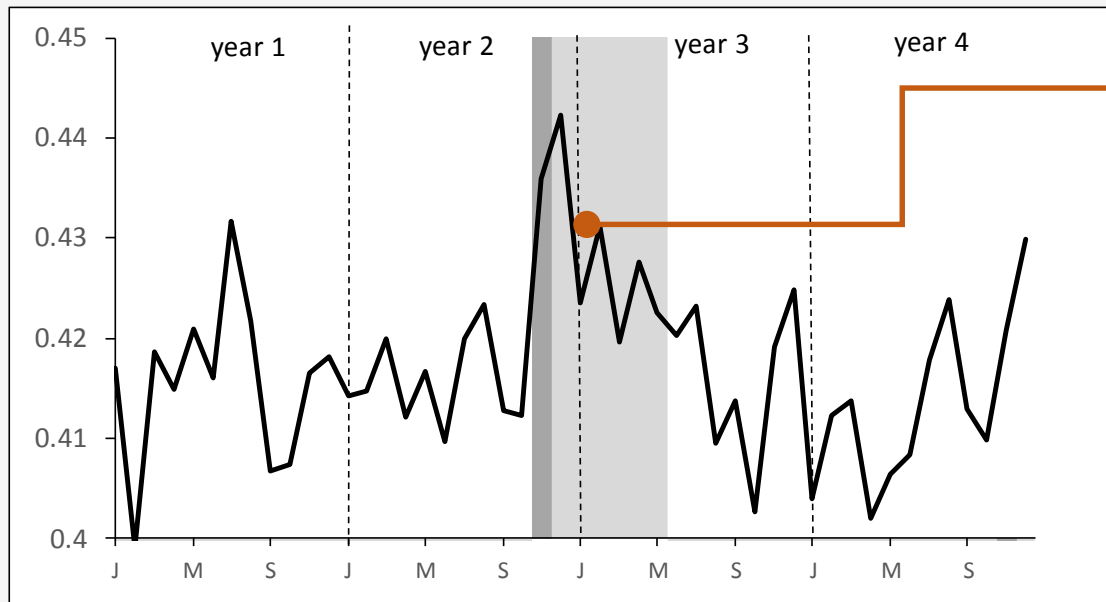
Moody's Baa - Aaa, in bps
(1919-2015)

Notes:

Dark shade: Nov midterm

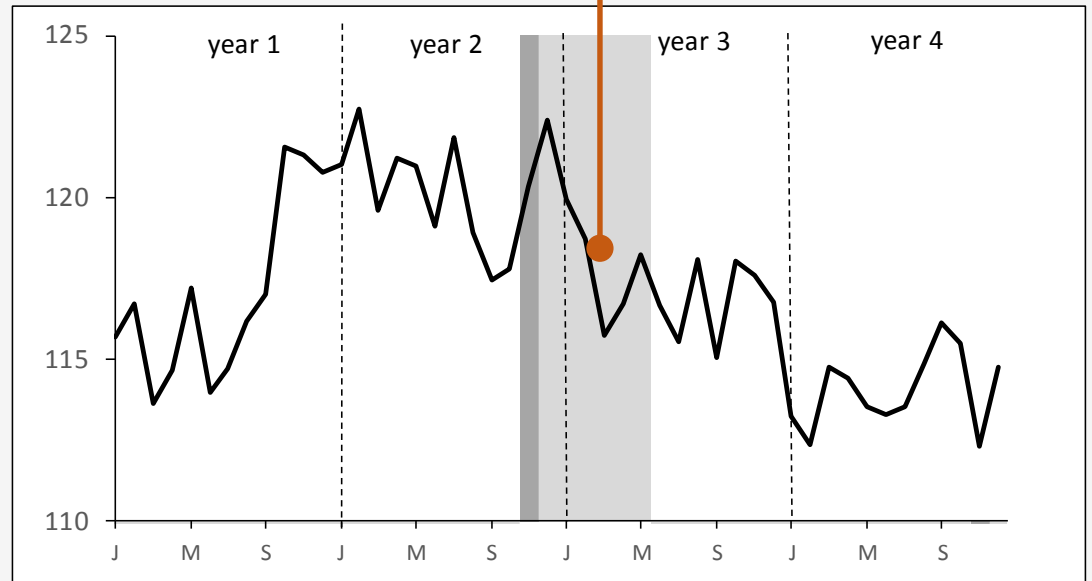
Light shade: Dec - April after midterm

CBOE SKEW and Kelly-Jiang tail risk measure



CBOE SKEW
(1990-2015)

Reduced uncertainty post midterms



Kelly-Jiang (2014, RFS) cross-section tail index
(1926-2015)

Notes:

Dark shade: Nov midterm

Light shade: Dec – April after midterm

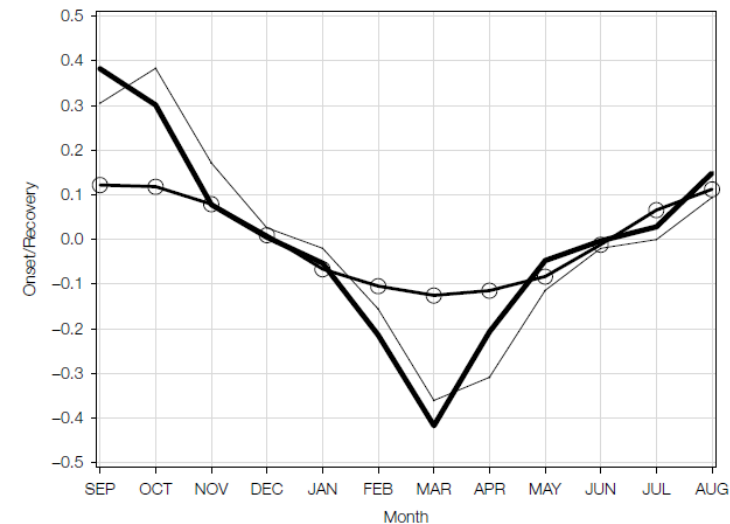
Evidence in portfolio flows: SAD or change in political uncertainty?

Kamstra et al. (2017, JFQA)

“Aggregate investor flow data reveal investor preference for safe mutual funds in autumn and risky funds in spring”

FIGURE 1
Onset/Recovery and Change in Length of Night

The onset/recovery variable reflects the change in the proportion of seasonal-depression-affected individuals actively suffering from depression. The monthly series, calibrated to the 15th day of each month, is based on the clinical incidence of symptoms among patients who suffer from the condition. The thick plain line plots the onset/recovery variable ($\bar{O}R_t$), the thin plain line plots observed onset/recovery, and the line with circles is the change in the number of hours of night, divided by 12 (where 12 is the annual average daily number of hours of night).



Kamstra et al. (2017)

A priori importance of midterms

Alesina and Rosenthal (1996, p. 1334, *Econometrica*) stress that this high uncertainty environment is typical in the period between the Presidential election and the subsequent midterm election: “...the Presidential election resolves only the uncertainty about the President's identity. In the two years between the presidential election and the midterm election, the voters acquire further information about Presidential competency, personality, and policies... This makes the midterm election a key event in the Presidential cycle, and empirical studies have confirmed its importance and the uncertainty attached to it.”

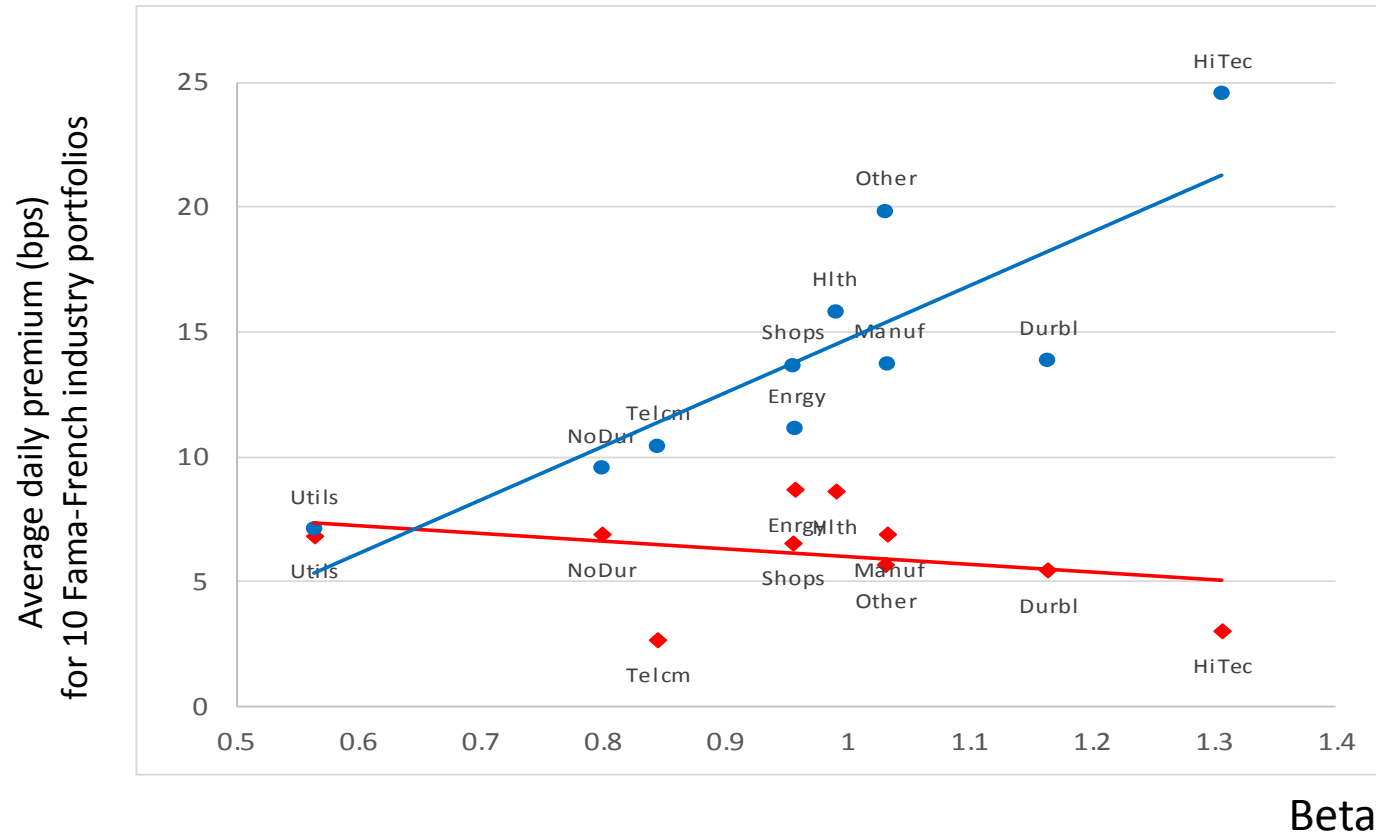


“During the pre-primary period—the year following the mid-term elections—the field of presidential candidates takes shape. The race for campaign talent and money, sometimes called ‘the invisible primary’ unfolds. The candidates make their pitches in a variety of venues and forums. Differences on issues between the candidates begin to crystallize. Ad campaigns start. Some candidates pull ahead, and a few make early exits.” (Pre-Primary Period: Race for the White House, *Democracy in Action*, 2016; available at <http://www.p2016.org/chrn/prep16.html>). As a specific case, a *Washington Post* headline on August 13 1978, some two-plus years prior to the November 4 1980 presidential election, proclaimed: “Reagan Described as Ready to Campaign Hard and Early for the Presidency” (Lou Cannon).

Pre-scheduled events

- Federal elections
 - *Equity premiums in the Presidential cycle: The midterm election resolution of uncertainty* (in SSRN depository)
- Macroeconomic announcements - FOMC, inflation and unemployment 0 in different political regimes
 - Work-in-progress
- Corporate earnings announcements
 - Preliminary work
 - Introducing news

By industries



Blue = Announcement days in Democratic Administrations

Red = Announcement days in Republican Administrations