Political Announcement Return

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Summary

- What is the economic nature of risk and return in financial markets?
- Announcement literature:
  - Much of market return is earned on a few pre-determined days of *macroeconomic* or *monetary* policy (FOMC) announcements
- Challenges:
  - Short and potentially non-representative post-1990s sample
  - Sample averaging to gauge population moments may be problematic
  - Puzzling dynamics before/at/after announcements
- This paper: *Political events:*
  - Elections and State of the Union (SOTU) address
  - Longer sample and different context to reexamine prior evidence
  - Early resolution of uncertainty and optimal choice of government policy help account for the evidence

Main Summary

- Returns on Macro and FOMC announcement days are about 10 times the average (Savor and Wilson 2013, Lucca and Moench 2015)
  - Risk premium/uncertainty resolution (Ai and Bansal 2018)
  - Systematically positive announcement surprises (Cieslak 2018, Cieslak, Morse, and Vissing-Jorgensen 2019, Ghaderi and Seo 2021)
  - Calendar effects, small sample issues (Ernst, Gilbert, Hrdlicka, 2020)

- Earned 24 hours prior the announcement (pre-announcement drift)
  - Information acquisition/ uncertainty resolution prior to announcements (Hu, Pan, Wang, and Zhu 2021, Ai, Bansal, Han 2021)
  - Leakage (Cieslak, Morse, and Vissing-Jorgensen 2019)

- Comparable evidence for political announcements
  - Supportive of risk premium/uncertainty resolution channel
  - Optimal government policy angle: dependence on economic conditions
  - Additional margins: cross-section, trading dynamics

General Elections

- Most important political event in U.S.
- Presidential elections
  - President, vice president, third of Senate, the House, governors in 12 states
- Midterm elections
  - Third of Senate, the House, governors in 36 states
- Every four years on Tuesday next after the first Monday in November

State of the Union Address

- One of the most important events in the US political calendar, occurring in beginning of the year (January-early February)
- U.S. Constitution (Article II, Section 3, Clause 1):
  - The President "shall from time to time give to the Congress Information of the State of the Union, and recommend to their Consideration such measures as he shall judge necessary and expedient"

- Defines government policy priorities for the upcoming legislative year
- Political science literature: presidential agenda-setting influence over Congress, the media, and public opinion
- Supplemented by the Budget Message and Economic Report of the President, delivered to Congress
- Outlines Administration's policy and funding priorities, and is a starting point for Congressional budget process

State of the Union Address: Messages

- Large attention by the media and public. Post 1994, the viewership is estimated at 30-60 million
- Recurring themes:
  - national security (30%), taxes (27%), health care (15%), entitlements (13%), government spending (6%), regulation (5%), monetary policy (2%)
- "Big Picture" agendas:
  - Franklin Roosevelt, 1942: outline "four freedoms" to make a case for more U.S. involvement in World War II
  - 1964, Lindon Johnson's declaration of "unconditional war on poverty" which set the stage for programs like Medicare and Medicaid
  - 1996, Bill Clinton declaration "the era of big government is over"

Data

- Election data:
  - 1926 - 2020 sample
  - early November every two years
  - 23 general elections
  - 24 midterm elections
- SOTU data:
  - 1934 - 2020 sample
  - 76 SOTU addresses occurring on different days of the first 7 weeks of the year
  - 14 Presidents
- Combine with daily return data
- Other data on volatility, macroeconomic and financial market variables

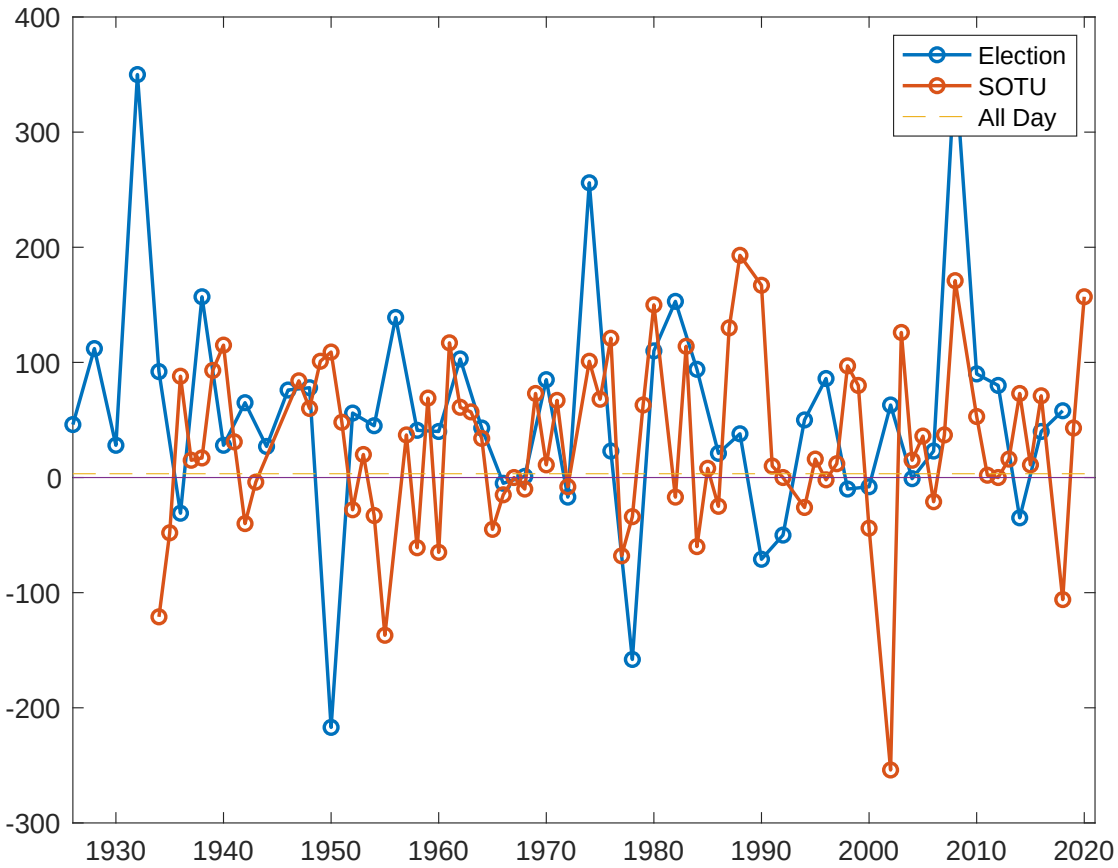
1. Magnitude of Policy Announcement Return

	Obs.	Mean	Std. Dev.	Skew	Kurt
		A. All days			
1926-2020	24683	2.9	106.0	-0.1	19.5
		B. Elections			
1926-2020	47	54.3	99.3	0.7	5.9
1926-1964	20	63.9	101.4	0.1	6.9
1965-1993	14	34.3	102.2	0.3	3.2
1994-2020	13	61.0	97.6	2.2	7.8
		C. SOTU address			
1926-2020	76	28.6	76.3	-0.5	4.4
1926-1964	27	22.9	70.0	-0.6	2.6
1965-1993	25	39.8	74.8	0.5	4.0
1994-2020	24	23.5	85.9	-1.2	3.3

Summary statistics for excess market returns. Basis points.

- Average return is 20X higher on election days, 10X higher on SOTU days
- Less "risky:" lower standard deviation and kurtosis
- Very stable over time

Policy Announcement Return



Daily return on Election and SOTU days. Basis points.

Election Return

	Election obs.	Return Election	Return Non-Election
Election:			
General election	23	69.3	2.9
Midterm election	24	39.8	2.9
Party:			
Republican before election	23	79.7	1.0
Democrat before election	24	29.9	4.4
Republican after election	23	57.0	1.5
Democrat after election	24	51.6	4.0
Government:			
Unified before election	15	18.3	4.5
Divided before election	32	71.2	2.1
Unified after election	15	26.6	3.3
Divided after election	32	67.3	2.6
Term:			
First term	29	57.6	3.2
Second term	18	48.9	2.2

Summary statistics for excess market returns. Basis points.

- Returns large in general elections, under Republican presidents before the election, and under a divided government

SOTU Return, across Presidents

	SOTU obs.	Return SOTU	Return Non-SOTU
Franklin D. Roosevelt	10	14.6	5.1
Harry S. Truman	6	62.3	4.4
Dwight D. Eisenhower	7	-24.3	5.3
John F. Kennedy	3	78.3	2.0
Lyndon B. Johnson	6	6.2	3.1
Richard M. Nixon	4	42.8	-3.4
Gerald R. Ford	3	40.3	4.2
Jimmy Carter	3	59.7	2.2
Ronald Reagan	7	49.0	2.2
George Bush	3	59.0	3.2
Bill Clinton	7	19.0	4.6
George W. Bush	7	15.7	-1.7
Barack Obama	7	32.3	6.3
Donald J. Trump	3	31.3	3.8

Summary statistics for excess market returns. Basis points.

- Positive SOTU vs. Non-SOTU average return for all except Dwight D. Eisenhower
- Similar evidence for week of the year, and day of the week

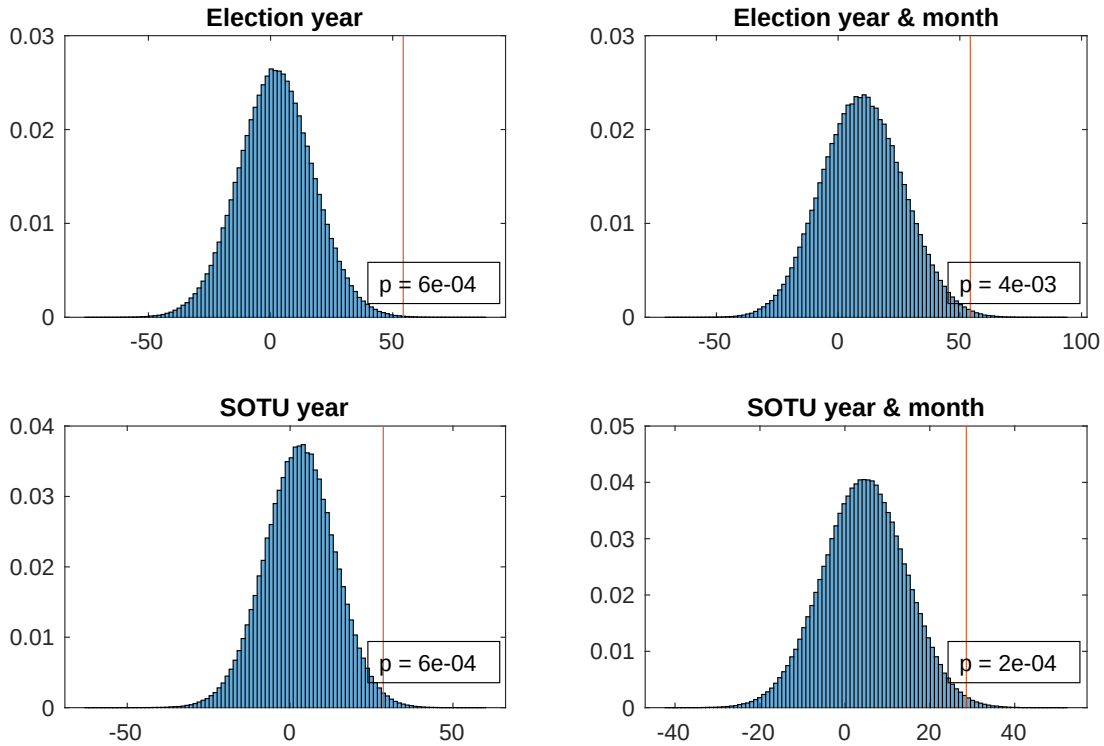
Statistical Significance

Political	(t-stat)	FOMC	(t-stat)	Macro	(t-stat)	Lag	Calendar
			Election:				
51.5	(3.59)						
52.0	(3.64)					Y	Y
52.0	(3.63)	19.5	(3.49)	5.0	(1.86)		
52.3	(3.66)	16.8	(2.94)	0.7	(0.26)	Y	Y
			SOTU:				
25.8	(2.96)						
23.8	(2.62)					Y	Y
25.5	(2.92)	19.3	(3.45)	4.9	(1.85)		
23.5	(2.58)	16.6	(2.90)	0.6	(0.24)	Y	Y

Coefficients on Election, SOTU, FOMC, and Macro indicators with calendar effects. Newey-West standard errors. 1960-2020 sample.

- Announcement effect is significant
- Comparable or larger than FOMC and Macro
- Robust controlling for calendar effects (Ernst, Gilbert, Hrdlicka, 2020)

Nonparametric Statistical Significance



- Bootstrap: randomly draw a date within the same time frame of each event
- p-values are well below 1%

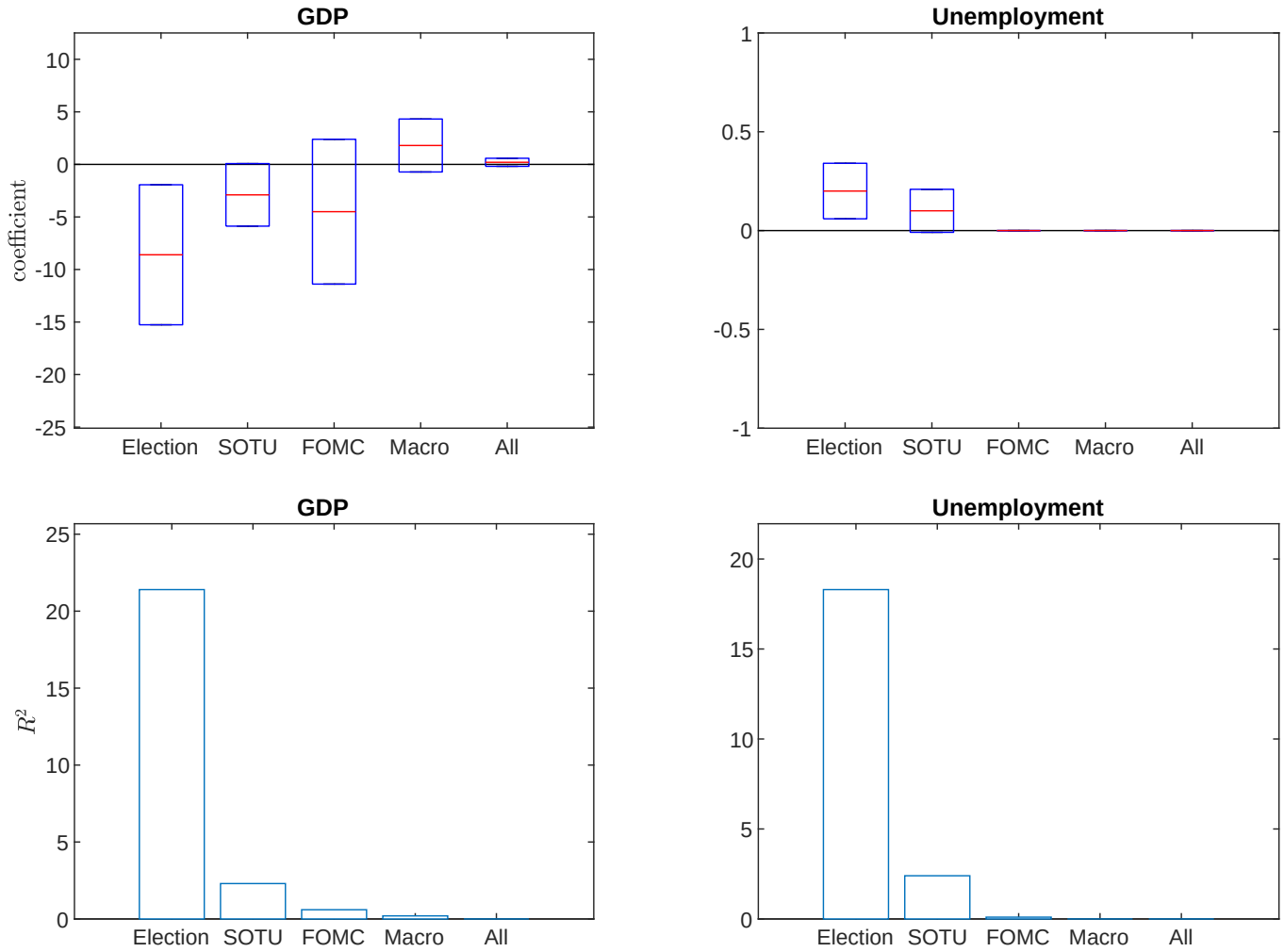
2. Determinants of Announcement Returns: Macro

	Election			SOTU		
	Effect	tstat	R^2	Effect	tstat	R^2
GDP	-8.6	(-2.53)	21.4	-2.9	(-1.91)	2.3
Unemployment	0.2	(2.79)	18.3	0.1	(1.80)	2.4

Regression of announcement returns on lagged economic factors

- Macro factors: announcement returns are higher at times of low economic growth and high unemployment

Macro Factor Across Announcements



- Stronger link on announcement days compared to other days and announcements

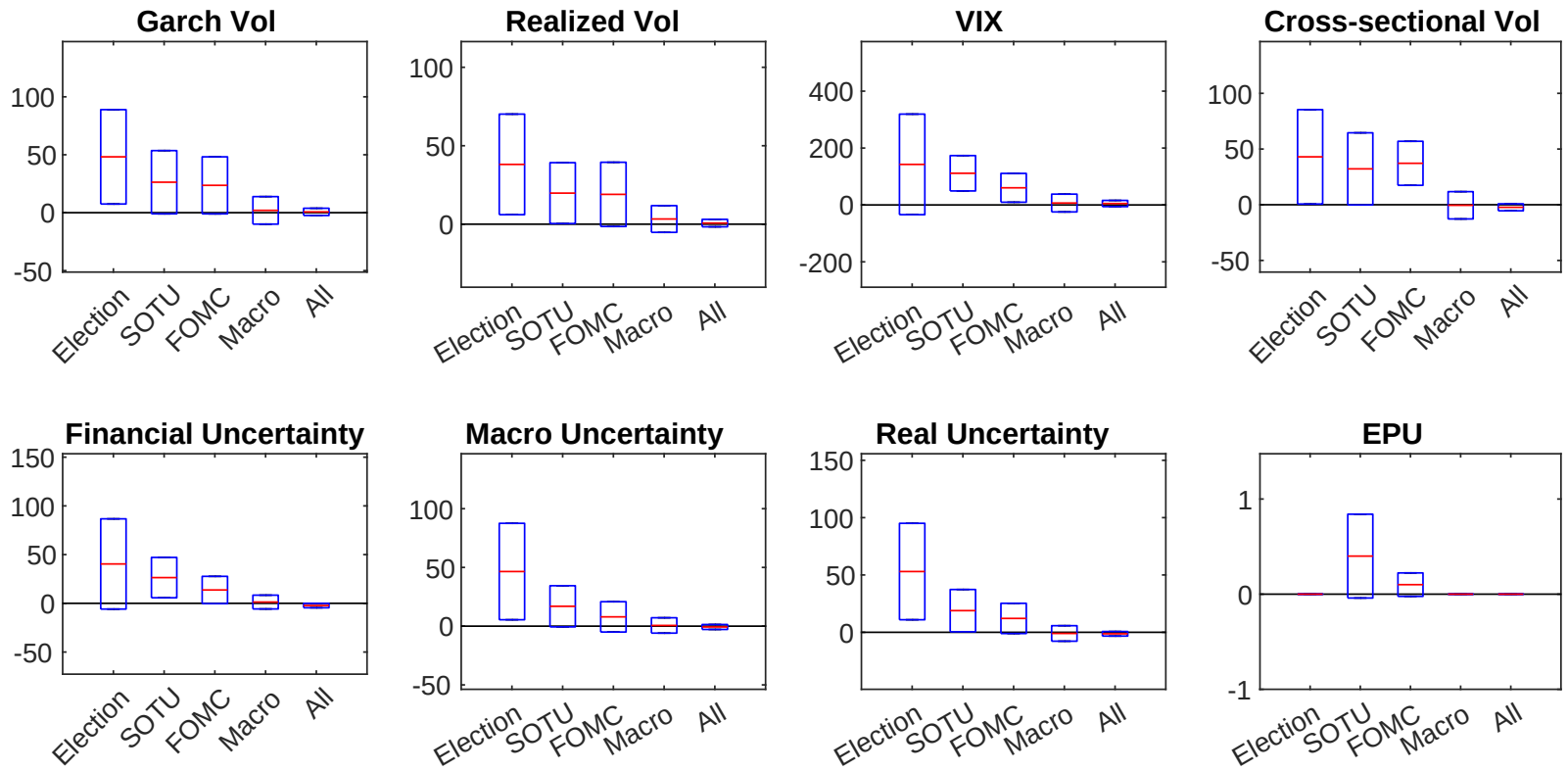
Determinants of Announcement Returns: Uncertainty

	Election			SOTU		
	Effect	tstat	R^2	Effect	tstat	R^2
Financial:						
GARCH Volatility	48.2	(2.32)	19.8	26.3	(1.89)	5.3
Realized Volatility	38.1	(2.33)	18.9	19.8	(2.00)	4.8
VIX	142.5	(1.58)	32.4	111.3	(3.51)	23.2
Cross-sectional Volatility	43.0	(1.99)	17.8	32.2	(1.95)	9.7
Financial Uncertainty	40.4	(1.71)	18.4	26.4	(2.50)	11.5
Macro:						
Macro Uncertainty	46.5	(2.22)	24.3	16.9	(1.89)	4.7
Real Uncertainty	53.0	(2.47)	31.5	18.9	(2.01)	5.9
Economic Policy Uncertainty	0.0	(0.16)	0.1	0.4	(1.78)	6.3

Regression of announcement returns on lagged uncertainty factors

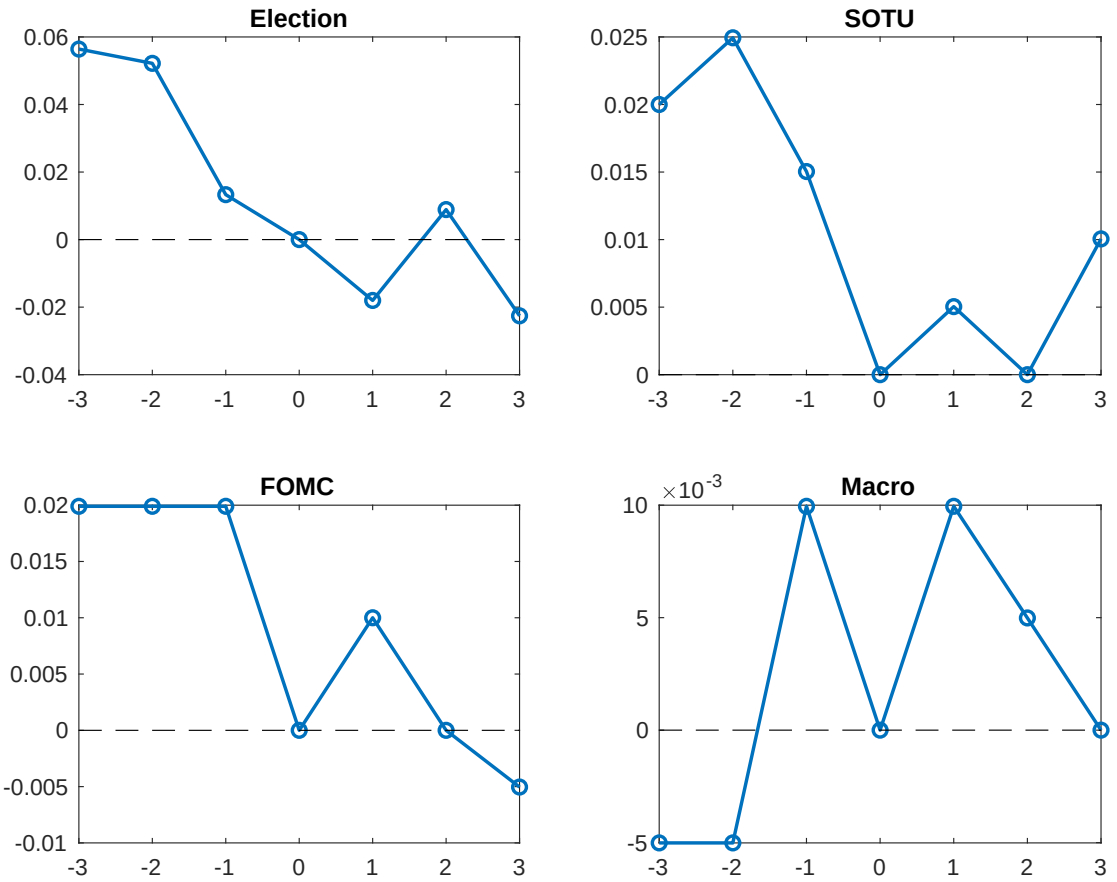
- Strong positive link of announcement returns to past uncertainty
- Supportive of risk premium channel

Uncertainty Across Announcements



- Stronger link on election and SOTU days compared to other days and announcements

Volatility around Announcements



- Volatility rises before announcement, drops at and after
- Supportive of uncertainty resolution effect

3. Timing of Announcement Returns: Across Days

	Election		SOTU	
	Mean	Std. Dev.	Effect	Std. Dev.
T-3	34.0	92.8	9.9	94.4
T-2	29.6	112.2	1.3	82.7
T-1	40.2	64.4	1.0	76.6
T	**54.3**	**99.3**	**28.6**	**76.3**
T+1	-7.3	181.4	13.0	88.9
T+2	29.8	158.6	-0.4	87.6
T+3	3.8	126.4	3.3	92.7

Returns three days before and after SOTU. Basis points.

- Return concentrated at announcement day, as for FOMC and Macro
- Election pre-announcement drift for several days

3. Timing of SOTU Returns: Intra Day

	Obs.	Mean	Std. Dev.
	Jan 1933 - Dec 1964		
T-1 close to T open	27	0.9	27.0
T open to SOTU	27	14.2	44.9
SOTU to T close	27	2.1	44.4
T close to T+1 open	27	7.4	35.0
	Jan 1965 - Feb 2020		
T-1 close to T open	49	7.7	36.8
T open to T noon	49	4.7	48.3
T noon to T close (SOTU)	49	16.8	59.5
T close to T+1 open	49	6.5	38.5

Returns before and after SOTU. Dow Jones index. Basis points.

- SOTU address moved from early afternoon (pre market close) to late evening (post market close) in 1964
- In both samples, most of return is realized before the announcement
- Pre-announcement drift, similar to FOMC

4. Other Evidence: Int'l Markets

	Mean	Std. Dev.	(t-stat)
		US Election	
US	50.8	112.6	(2.15)
G7 ex US	67.0	129.9	(2.51)
		SOTU	
US	34.7	94.2	(2.24)
G7 ex US	24.6	72.0	(2.07)

International returns. 1972-2020

- Similar return in international stock markets to U.S. political events

Other Evidence: Int'l Elections

	Domestic Election			Non-Election		
	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.
Canada	15	118.55	275.39	12587	1.79	114.20
France	36	19.82	146.00	12566	2.20	135.37
Germany	13	52.33	99.45	12589	2.28	135.44
Italy	15	43.63	140.44	12587	0.78	153.69
Japan	24	17.63	103.90	12578	2.48	129.64
UK	13	32.74	120.98	12589	1.49	130.12

International returns. 1972-2020

- Similar return in international stock markets on domestic election days

Cross-section of Equity Returns

	Election			SOTU		
	Mean	Std. Dev.	(t-stat)	Mean	Std. Dev.	(t-stat)
Beta 1	25.2	55.9	(2.13)	23.2	50.3	(2.78)
Beta 10	60.2	158.3	(2.12)	67.6	144.9	(3.52)
Beta 10-1	35.0	124.1	(1.75)	44.4	137.0	(2.70)
Size 1	35.7	109.3	(1.89)	53.3	86.0	(4.98)
Size 10	50.4	98.1	(3.20)	26.1	84.2	(2.40)
Size 10-1	14.8	110.4	(0.97)	-27.1	96.7	(-2.34)
BM 1	49.0	105.8	(2.89)	25.8	81.9	(2.44)
BM 10	45.1	106.9	(2.49)	36.8	112.8	(2.47)
BM 10-1	-3.9	77.9	(-0.50)	11.0	93.1	(0.85)

- Common market effect in the cross-section of equity portfolios

Bond Markets

	Election			Non-Election	
	Mean	Std. Dev.	(t-stat)	Mean	Std. Dev.
1y	1.8	6.2	(1.25)	0.3	6.9
10y	11.9	32.3	(1.88)	0.7	43.6
30y	30.5	64.1	(2.52)	1.0	72.5
10y-1y	10.1	31.3	(1.70)	0.4	40.6
	SOTU			Non-SOTU	
	Mean	Std. Dev.	(t-stat)	Mean	Std. Dev.
1y	1.0	6.7	(0.70)	0.3	6.9
10y	7.7	29.8	(1.67)	0.7	43.7
30y	13.3	54.7	(1.62)	1.0	72.6
10y-1y	6.7	27.7	(1.63)	0.4	40.7

Excess bond returns

- Positive gains in bond markets on announcement days

5. Trading Activity

	T			T+1		
	Mean	Std. Dev.	t-stat	Mean	Std. Dev.	t-stat
Election	-16.5	47.0	(-2.42)	26.9	43.9	(4.20)
SOTU	-4.5	25.4	(-1.55)	10.8	23.3	(4.07)
FOMC	-1.6	19.0	(-1.60)	7.4	17.4	(7.92)
Macro	-0.1	16.0	(-0.28)	-2.8	18.3	(-5.66)

Changes in daily volume

- Trading activity drops on announcement days, resumes the following day

6. Correlation of pre- and post-SOTU Returns

	corr(T,T+1)	
	Election	SOTU
US stock	-0.29	-0.03
Int'l stiocks	-0.16	0.08
Treasury	0.06	-0.39

- No significant positive correlation of returns on and after announcement days
- Inconsistent with leakage story
- Surprisingly, negative weak correlations

Economic Interpretation

- Potential explanations for announcement effect in the literature:
- Positive average announcement return
  - Risk Premium / Uncertainty Resolution (Ai and Bansal, 2018)
  - Small-sample / positive surprise (Cieslak 2018, Cieslak, Morse, and Vissing-Jorgensen 2019, Ghaderi and Seo 2021)
- Pre-announcement drift:
  - Leakage (Cieslak, Morse, and Vissing-Jorgensen 2019, Ai and Bansal 2018)
  - Information acquisition (Ai, Bansal, Han 2021)
  - Uncertainty resolution (Hu, Pan, Wang, and Zhu 2021)
- Other aspects of financial market data to differentiate the channels

Evidence Summary

	return		pre-announcement	
	risk premium	positive surprise	leakage	uncertainty resolution
large positive announcement return	✓	✓		
pre-announcement drift			✓	✓
long sample	✓			
macro condition predicts return	✓			
VIX rises before and drops after	✓			
volatility predicts return	✓			
"risky" portofolios have high return	✓			
lower riskiness of the return			×	
volume drops before and rises after			×	
returns uncorrelated before and after			×	

Model: Preferences

- Representative agents with recursive utility

$$U_t = \left[(1-\beta) C_t^{1-\frac{1}{\psi}} + \beta (E_t U_{t+1}^{1-\gamma})^{\frac{1-\frac{1}{\psi}}{1-\gamma}} \right]^{\frac{1}{1-\frac{1}{\psi}}}$$

  - γ is risk aversion
  - ψ is intertemporal elasticity of substitution

- Preference for early uncertainty resolution: $\gamma > 1/\psi$
- Satisfies generalized risk sensitivity condition of Ai and Bansal (2018) to generate announcement premium.

Model: Endowment

- Exogenous endowment y_t
- I.i.d. over time
- Sufficient statistics: log certainty equivalent of the endowment growth

$$\xi \equiv \frac{1}{1-\gamma} \ln E e^{(1-\gamma)\Delta y}$$

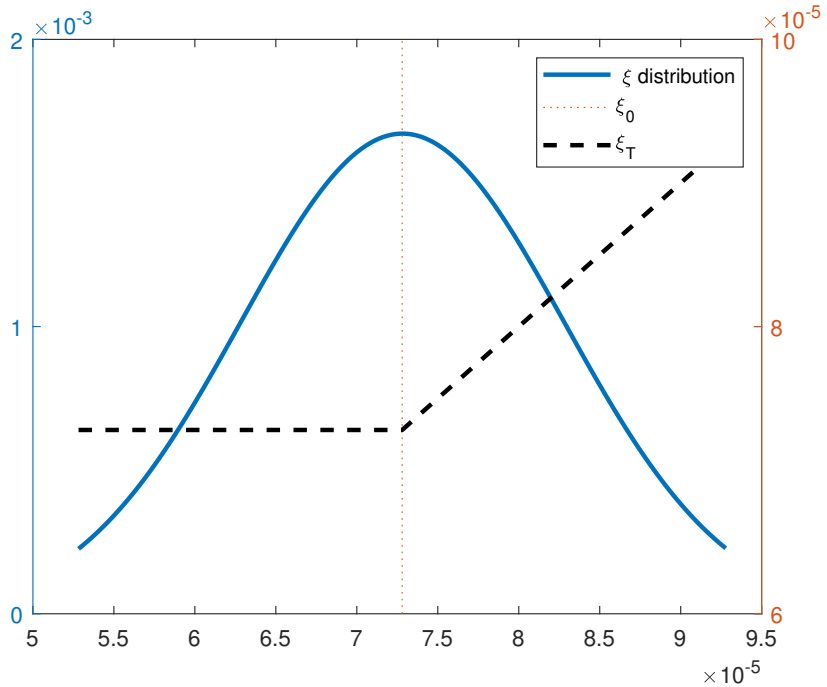
- High ξ equivalent to high welfare
  - High mean endowment growth, low volatility, high skewness, low kurtosis...

Model: Policy

- At time T (political event), the government implement a new policy $t \geq T$
- Can change endowment distribution from ξ_0 to $\tilde{\xi}$, unknown prior to T
- The optimal policy of benevolent government:

$$\xi_T = \max(\xi_0, \tilde{\xi})$$

- The endogenous policy choice by the government provides a call-option for the investors



Model: Announcement Premium

- Right after the policy change is revealed, the price of the consumption asset

$$PC_T = \frac{\delta e^{\xi_T\left(1-\frac{1}{\psi}\right)}}{1-\delta e^{\xi_T\left(1-\frac{1}{\psi}\right)}}$$

- Right before announcement agents integrate out policy uncertainty:

$$PC_{T-\Delta} = \left(E_{T-\Delta} PC_T^{\frac{1-\gamma}{1-\frac{1}{\psi}}}\right)^{\frac{1-\frac{1}{\psi}}{1-\gamma}}$$

- Preference for early resolution of uncertainty entails positive announcement premium

$$E_{T-\Delta}\left(PC_T - PC_{T-\Delta}\right) > 0 \qquad \text{if } \gamma > \frac{1}{\psi}$$

Model: Drift

- Possible arrival of the new information prior to the announcement
- For some $\delta < \Delta$,

$$PC_{T-\Delta+\delta} = \left(E_{T-\Delta+\delta} PC_T^{\frac{1-\gamma}{1-\frac{1}{\psi}}} \right)^{\frac{1-\frac{1}{\psi}}{1-\gamma}}$$

$$PC_{T-\Delta} \leq E_{T-\Delta} PC_{T-\Delta+\delta} \leq E_{T-\Delta} PC_T$$

- Continuous arrival of new information leads to pre-announcement drift

Model: Optimal Policy

- When pre-policy economy is weak and ξ_0 is low, there is a greater probability that the government will adopt the ex-ante unknown policy
- The greater uncertainty leads to a larger pre-announcement premium

$$\frac{\partial}{\partial \xi_0} E_{T-\Delta} \left(PC_T - PC_{T-\Delta} \right) < 0$$

Extended Model: Preferences

- Agents value non-consumption services Z_t

$$U_t = \left[(1-\beta) A(C_t, Z_t)^{1-\frac{1}{\psi}} + \beta (E_t U_{t+1}^{1-\gamma})^{\frac{1-\frac{1}{\psi}}{1-\gamma}} \right]^{\frac{1}{1-\frac{1}{\psi}}}, \tag{1}$$

- $A(C_t, Z_t) = C_t^{\alpha} Z_t^{1-\alpha}$
- Z_t is provided by the government and does not enter into the households' budget constraint

$$W_{t+1} = (W_t - C_t) R_{c,t+1}$$

- Utility only relies on the sufficient statistics

$$\xi \equiv \frac{1}{1-\gamma} \log E e^{(1-\gamma)\Delta a}$$

$$\log \frac{U_t}{A_t} = \frac{1}{1-\frac{1}{\psi}} \left(\log(1-\beta) - \log\left(1 - \beta e_t^{\xi(1-\gamma)}\right) \right)$$

Extended Model: Policy

- A new policy can change the exogenous distribution of the fundamentals from $F(C_t, Z_t), t \leq T$ to $\tilde{F}(C_t, Z_t), t > T$.
- Either adopts a new policy or stays with the status quo

$$\xi_T = \max \left[\int e^{(1-\gamma)\Delta a} F(C_t, Z_t), \int e^{(1-\gamma)\Delta a} \tilde{F}(C_t, Z_t) \right]$$

- Non-economic policy can have a significant stock market effect
  - even if policy only changes $F(Z_t)$

Extended Model: Announcement Premium

- Similar results on announcement premium
- Right after the policy change is revealed, the price of the consumption asset

$$PC_T = \frac{1}{\alpha} \frac{\delta e^{\xi_T \left(1-\frac{1}{\psi}\right)}}{1 - \delta e^{\xi_T \left(1-\frac{1}{\psi}\right)}}$$

- Right before announcement agents integrate out uncertainty around ξ_T:

$$PC_{T-\Delta} = \left(E_{T-\Delta} PC_T^{\theta}\right)^{\theta}$$

- Preference for early resolution of uncertainty entails positive announcement premium

$$E_{T-\Delta}\left(PC_T - PC_{T-\Delta}\right) > 0 \qquad \text{if } \gamma > \frac{1}{\psi}$$

- Preannouncement drift: arrival of new information about C and Z

$$PC_{T-\Delta} \leq E_{T-\Delta} PC_{T-\Delta+\delta} \leq E_{T-\Delta} PC_T$$

Conclusion

- Days with major political events: large abnormal stock market returns
  - Longer sample and different context to extend and refine prior evidence
- An illustrative model with risk premium/early resolution of uncertainty and optimal choice of government policy can account for the evidence