How Markets Process Macro News: The Importance of Investor Attention

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The views expressed are those of the author and do not necessarily reflect those of the Federal Reserve Board or the Federal Reserve System.

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Scheduled macro news announcements (FOMC, NFP, CPI,...) widely studied

- Connection between asset prices & macroeconomy
- Transmission of monetary policy ("high-frequency shocks")
- Price discovery process of financial markets

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- Attention $\approx$ willingness to exert "costly effort" to acquire information
- Prior work: investor attention can matter for asset prices
- But: limited evidence on its importance for macro news

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This paper:

- **Investor attention crucial for how markets process macro news**

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Document importance of investor attention during recent inflation surge

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1. Intraday event-study analysis of 16 major macro releases (CPI, GDP,...)
    - Compare inflation surge (21–23) with prior low-inflation period (09–21)

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Discuss implications of findings

⇒ Importance of endogenous attention theories in macro-finance

⇒ Crucial role of investor attention for monetary policy

Related Literature

- Endogenous attention in macro-finance:
  - Frameworks: Peng & Xiong (2006); Mondria (2010); Bansal & Shaliastovich (2011); Andrei & Hasler (2015); Kacperczyk et al. (2016)
  - Direct evidence: Boguth et al. (2019); Benamar et al. (2021); Fisher et al. (2022)

- Financial markets and inflation:
  - Recent studies: Cieslak & Pflueger (2023); Cieslak et al. (2024); Andrei & Hasler (2024); Bauer et al. (2024a); Bocola et al. (2024); Bundick et al. (2024)

- Financial market effects of monetary policy:
  - High-frequency shocks: Gürkaynak et al. (2005); Nakamura & Steinsson (2018); ... ; Cieslak (2018); Bauer & Swanson (2023a,b)
  - Fed communications: Cieslak et al. (2019); Gómez-Cram & Grotteria (2022); Gorodnichenko et al. (2023)
  - Market perceptions: Caballero & Simsek (2022a,b); Bianchi et al. (2022); Bauer et al. (2024b)

Outline

1. Data
2. Evidence from the 2021–2023 Inflation Surge
3. Evidence from FOMC Announcements
4. Concluding Remarks

1. Data

Financial Markets

- Sample: 1996/1–2023/7
- Intraday data from *LSEG Tick History*
- 6 interest rates based on interest rate futures
  - Eurodollar/SOFR futures: 1st (*ED1*) & 4th contract (*ED4*)
  - Treasury futures: *2-*,*5-*,*10-*, and *30-year*
- 5 inflation swap rates: *1-*,*2-*,*5-*,*10-*, and *30-year*
  - Sample starts in 2009/1 due to market liquidity
- S&P 500 based on front-month E-mini futures
- Institutional investors essentially sole participants in examined markets

Macroeconomic News Announcements

Data Releases

- Sample: 1996/11–2023/7
- Data from *Bloomberg*
- Focus on CPI & 15 other macro series (NFP, Retail Sales,...)
- For each macro series k, construct surprise $s_t^k = \frac{k_t - \mathrm{E}\left[k_t | \mathcal{I}_{t-\Delta-}\right]}{\hat{\sigma}^k}$

FOMC Announcements

- Sample: 1996/1–2023/7
- Timestamps from *Bloomberg* and *Federal Reserve Website*
- Focus on statement release and press conference of scheduled meetings

Investor Attention

- Sample: 1996/1–2023/7
- Data from *Bloomberg Terminal* (BT)
  - Most widely used professional financial news service (Wigglesworth, 2022)
  - Majority of users institutional investors (Ben-Rephael et al., 2017)
- Provides daily number of relevant articles for specified keywords
- Investor attention IA_t^{k} based on BT coverage in 5 days prior to event

  $\Rightarrow \text{IA}_t^{\text{k}} = \frac{\Sigma_{j=1}^{5} N_{d_t-j}^{\text{k}}}{\Sigma_{j=1}^{5} \overline{N}_{d_t-j}}$ for $k \in \{\text{CPI, FOMC, NFP}\}$

2. Evidence from the 2021–2023 Inflation Surge

Motivation

Basic idea

- Inflation $\uparrow \rightarrow$ attention to inflation $\uparrow \rightarrow$ market reactions to CPI releases $\uparrow$
- Why CPI? $\rightarrow$ (1) most timely and cited; (2) used for financial securities

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More formally

Price reaction to CPI news: $x = \beta^{x|\text{CPI}} \, s^{\text{CPI}}$ for $x \in \{y, \pi\}$

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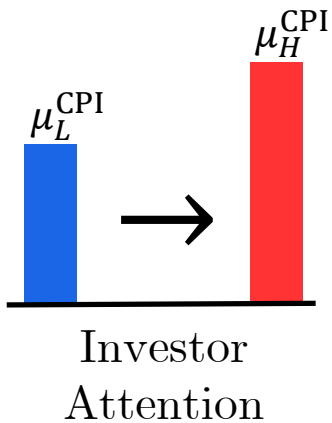

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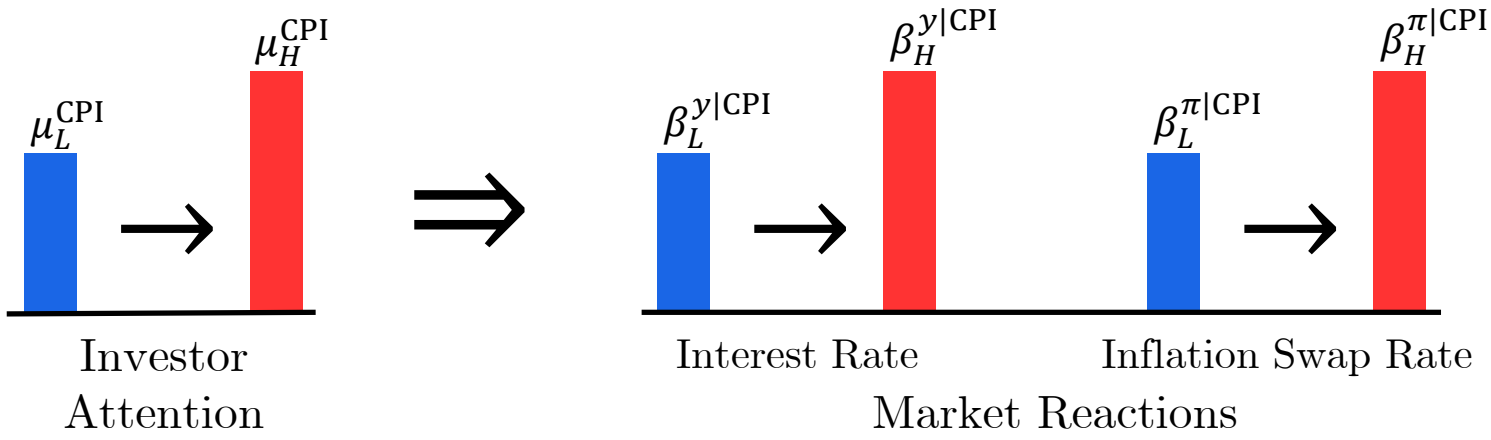

Step 1: Test for Stronger CPI Reactions During Inflation Surge

For each macro series k, I estimate:

$$x_t = \alpha_L^k + \alpha_H^k + \beta_L^{x|k} s_t^k \mathbb{1}_{t \in L} + \beta_H^{x|k} s_t^k \mathbb{1}_{t \in H} + \varepsilon_t^k$$

- x_t: 60-minute change (-5 to $+60$ min.) in interest or inflation swap rate

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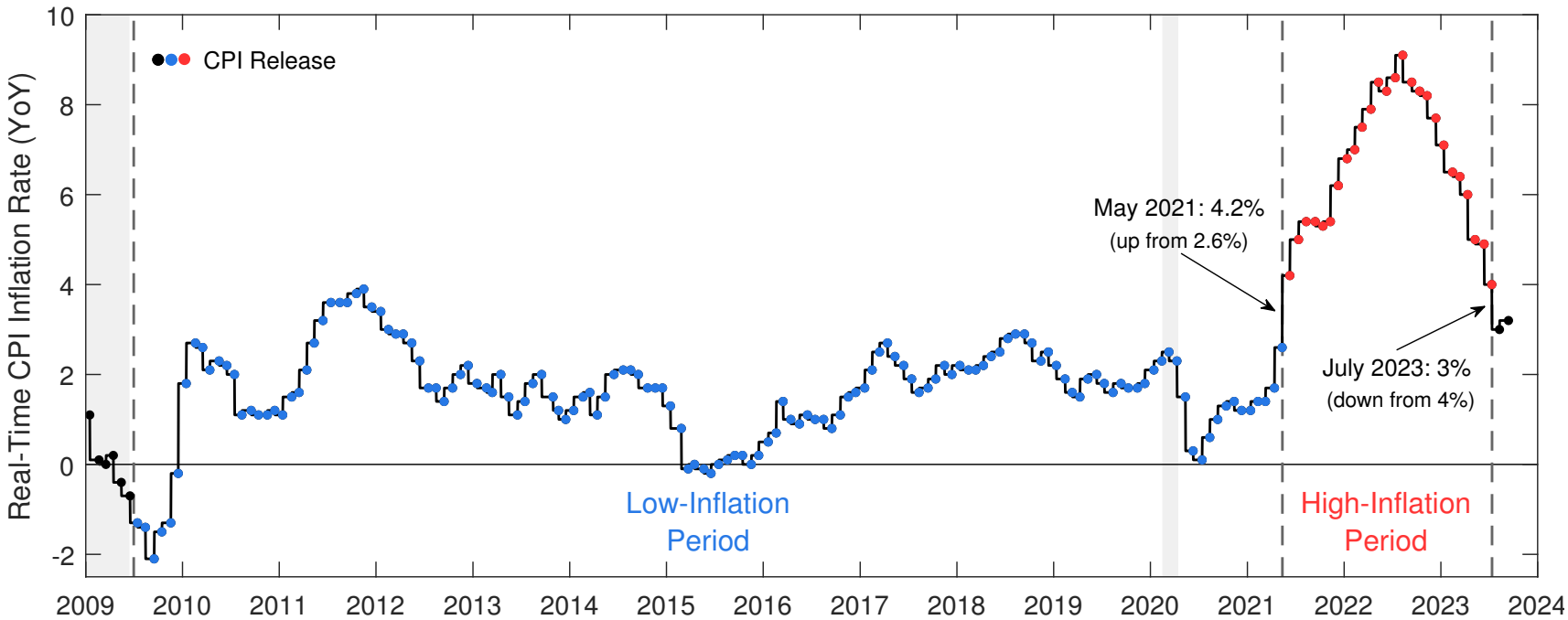
- Low-inflation: July, 2009–May, 2021 | High-inflation: May, 2021–July, 2023



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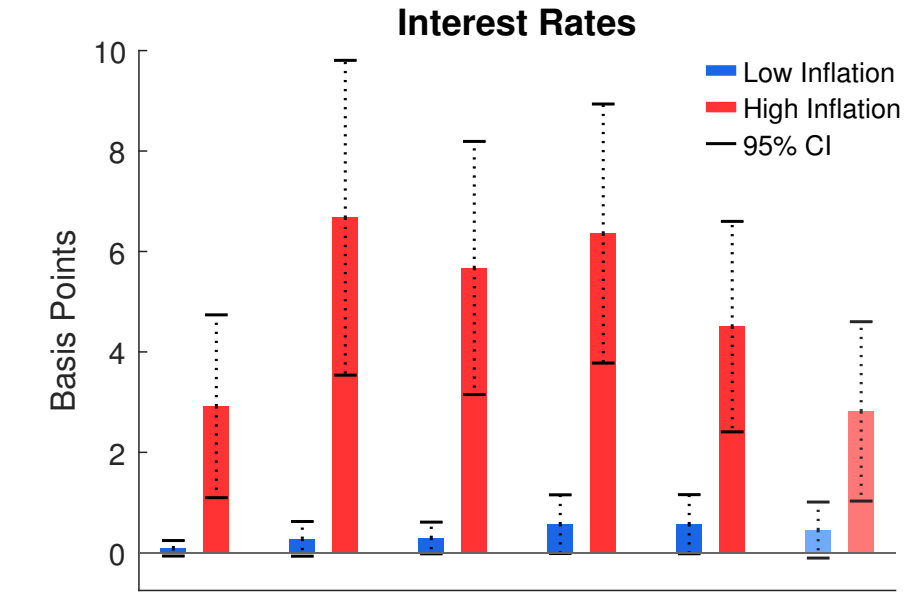

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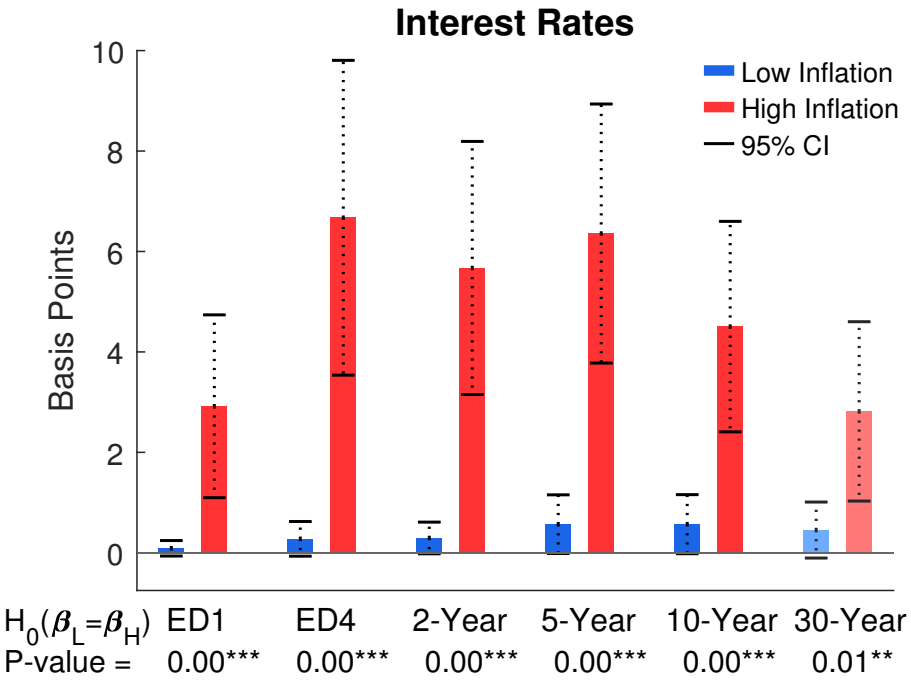

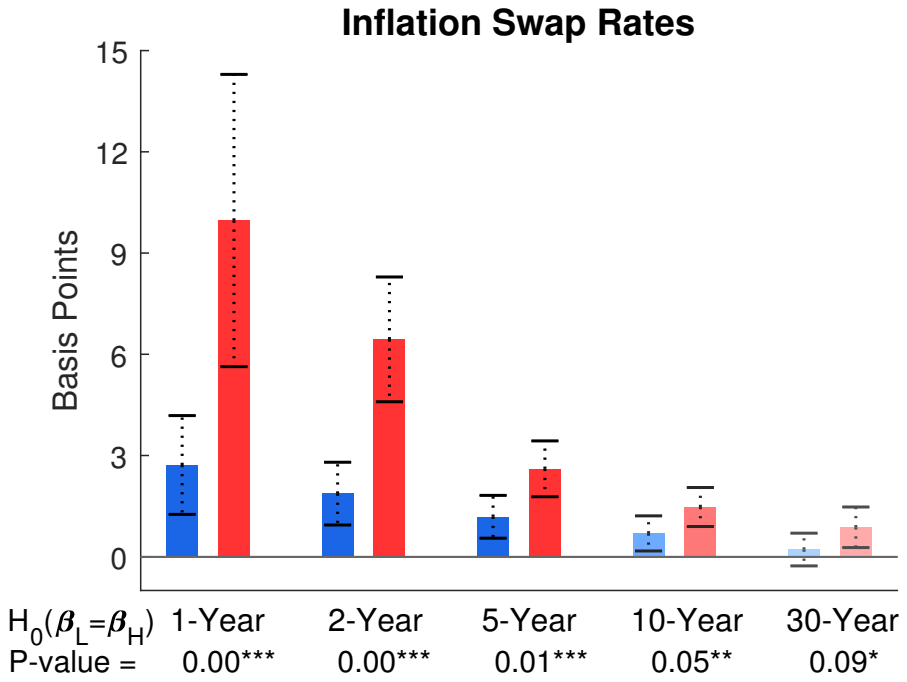

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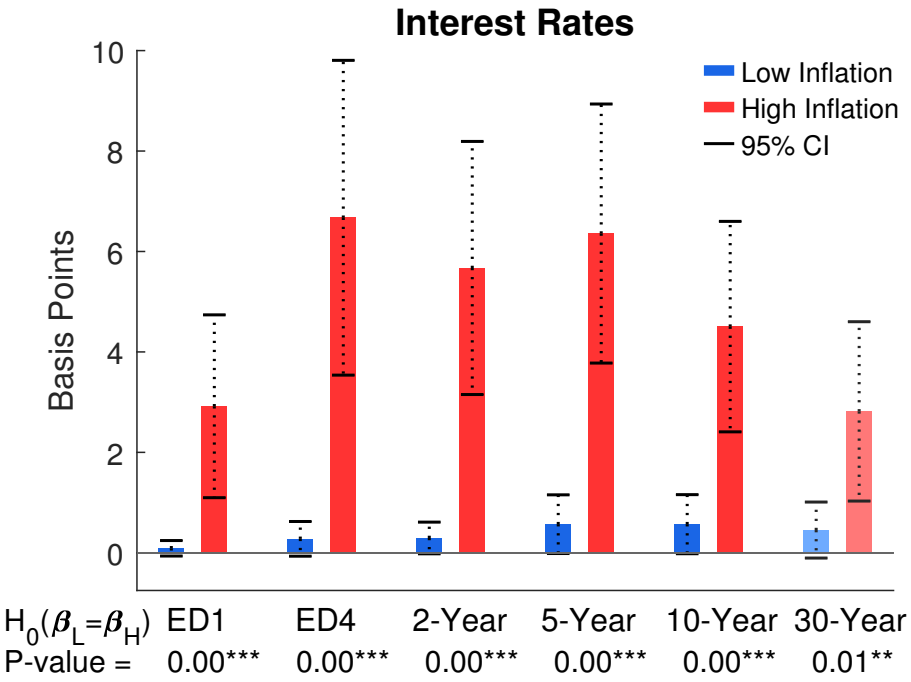
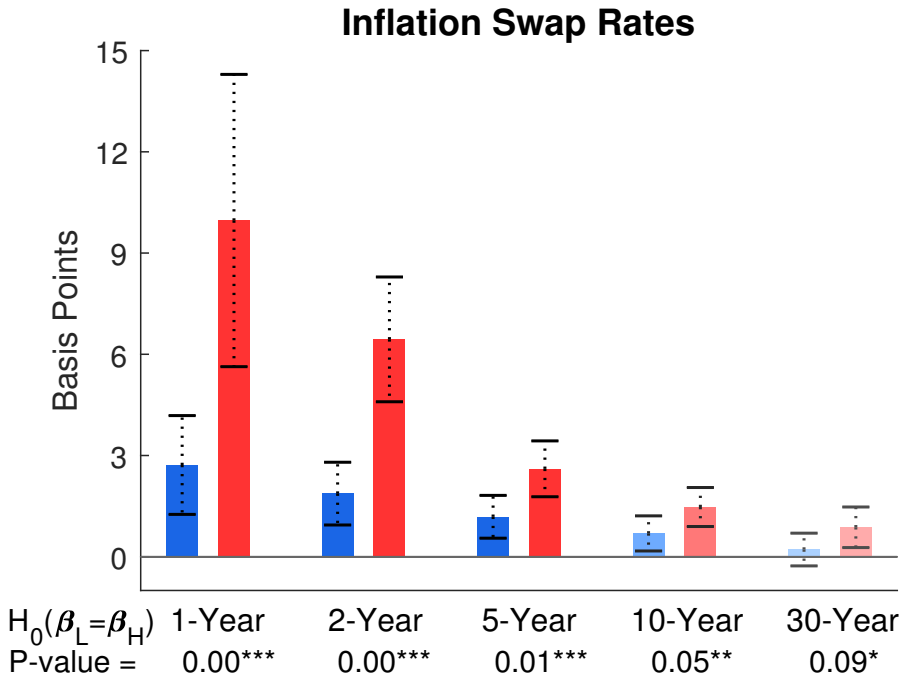
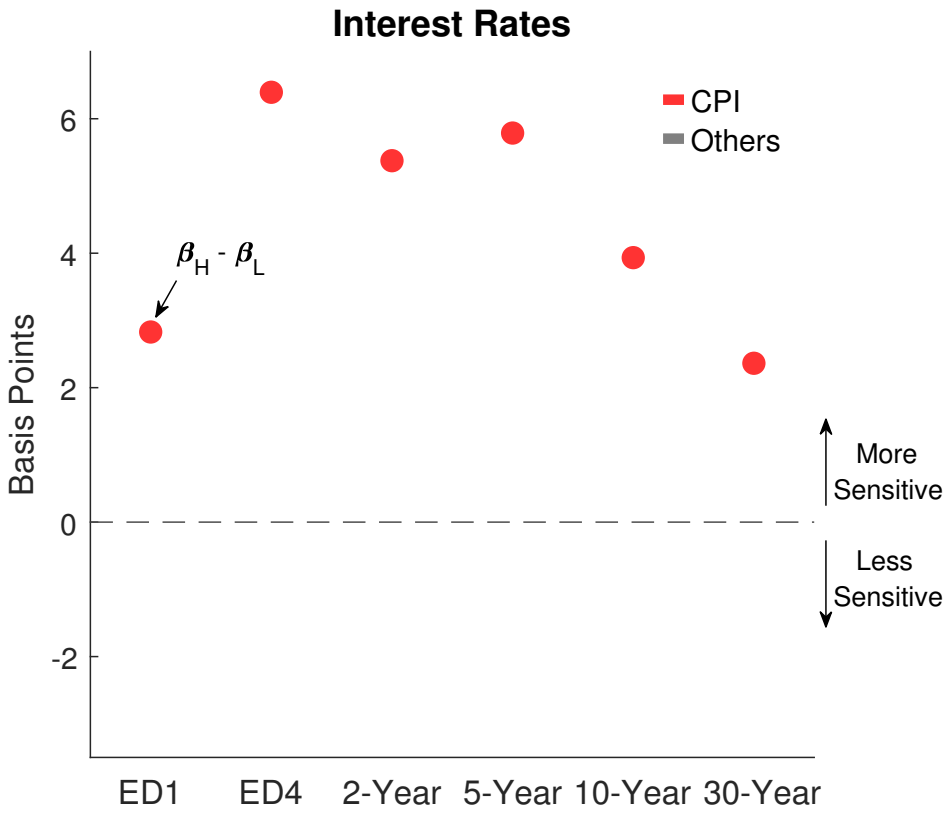
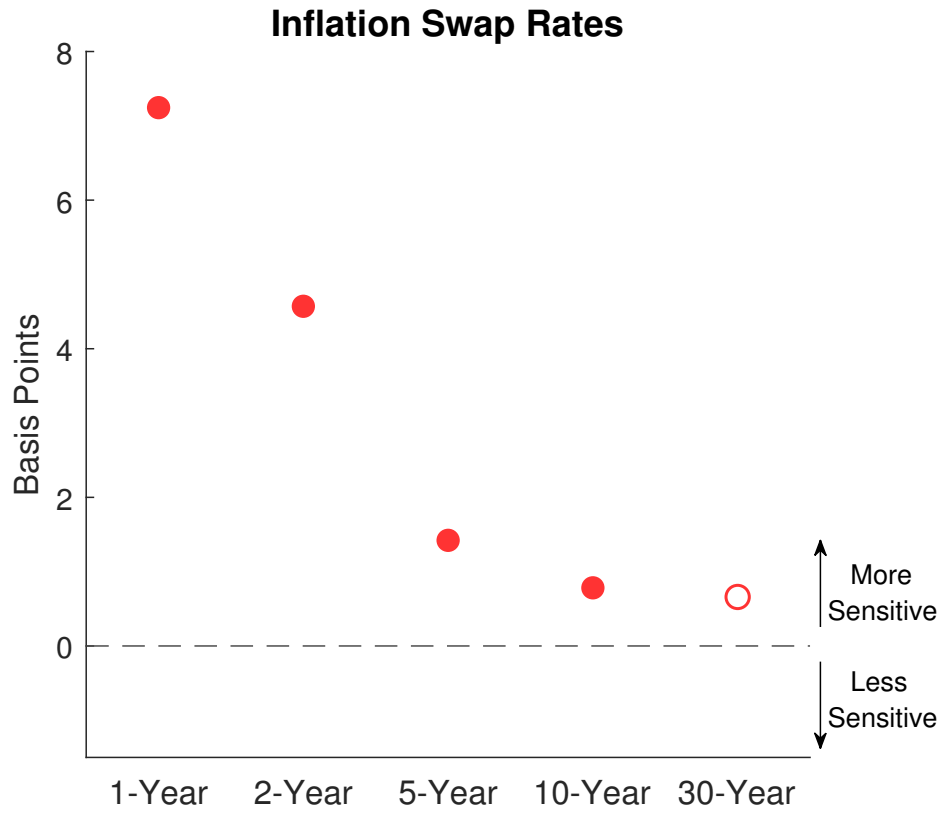




$\Rightarrow$ Market reactions to CPI news much stronger during inflation surge

Reactions to CPI versus Other Macro Releases





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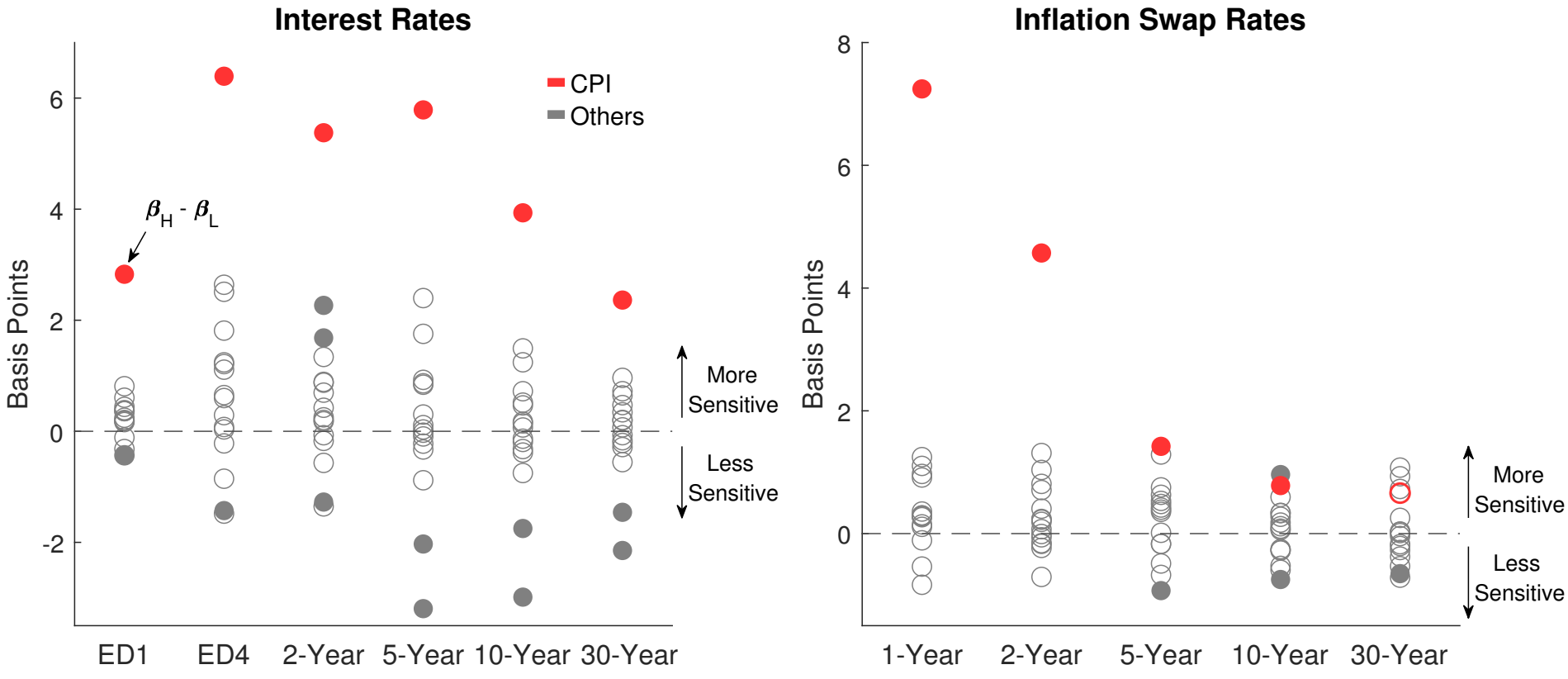

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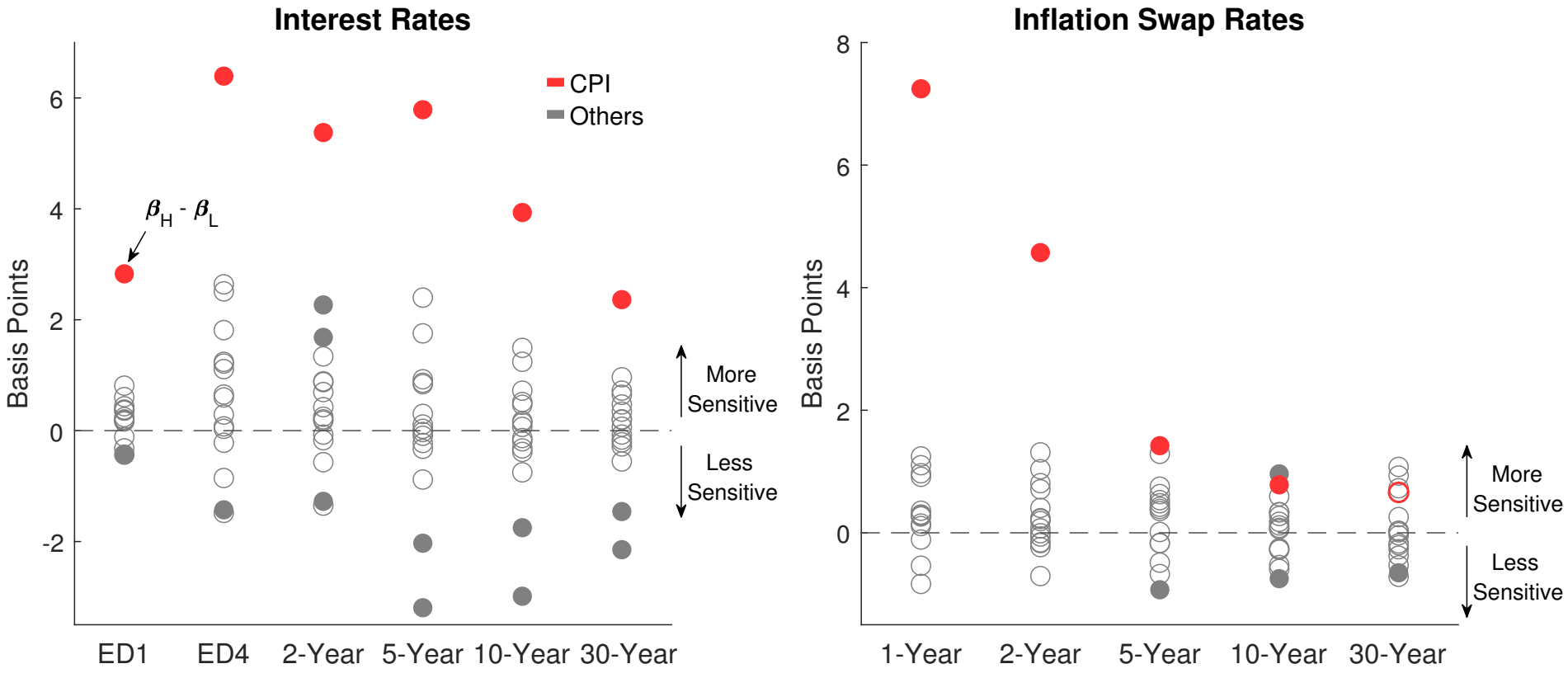

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$\Rightarrow$ Increased reactions to CPI news unique among macro releases

$\Rightarrow$ CPI emerges as most impactful macro release during inflation surge

Additional Results on Market Reactions

Sensitivity analysis

⇒ Increased reactions of yields and inflation swaps to CPI news robust feature

Other asset classes

⇒ Stronger reactions to CPI news across asset classes (S&P 500, VIX, forex,...)

Role of risk premia

⇒ Risk premia drive one-third of heightened sensitivity to CPI news

International spillovers

⇒ Increased reactions of international markets to CPI news

Time-varying coefficient approach

⇒ Effects of CPI news started to pick up in 2021

Trading volumes

⇒ Abnormal increase in trading volume around CPI releases

Step 2: Connect Stronger CPI Reactions to Investor Attention

a) Construct CPI investor attention measure

- Based on BT coverage in 5 days *prior* to CPI release: $IA_t^{CPI} = \frac{\Sigma_{j=1}^{5} N_{d_t-j}^{CPI}}{\Sigma_{j=1}^{5} \overline{N}_{d_t-j}}$

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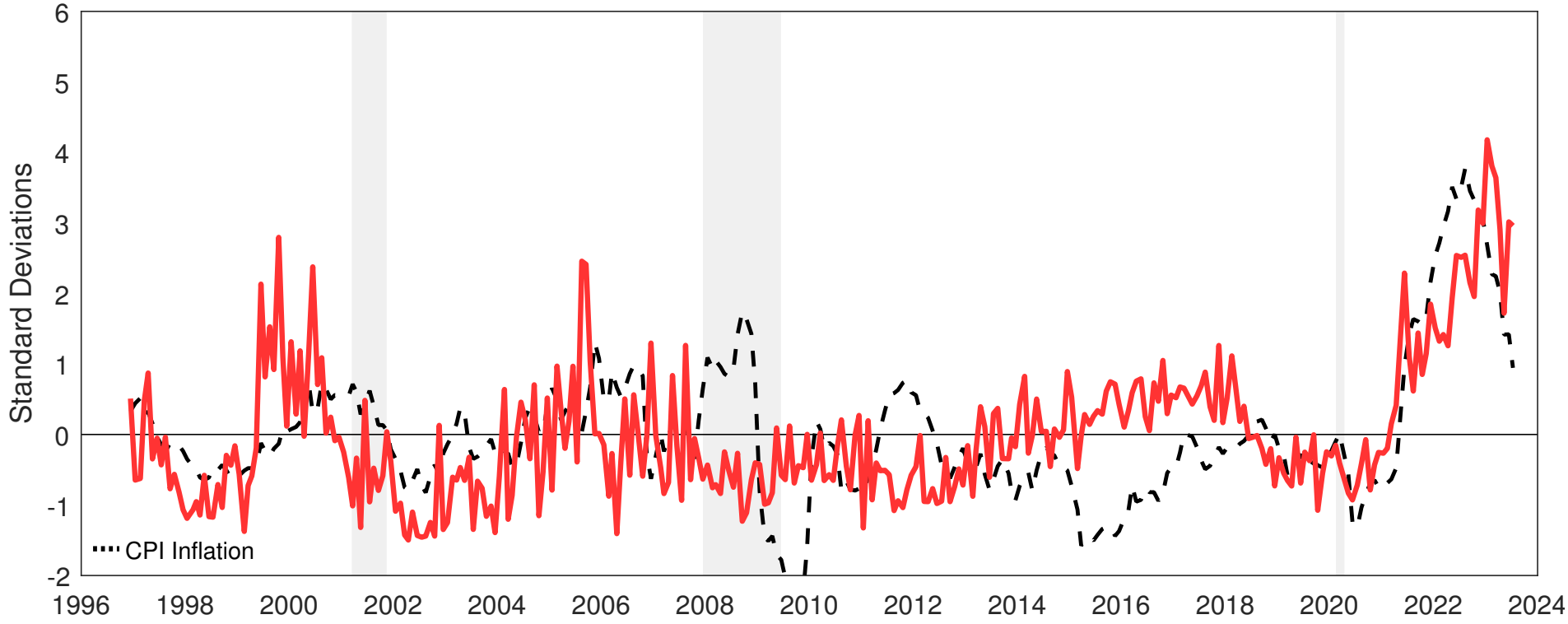

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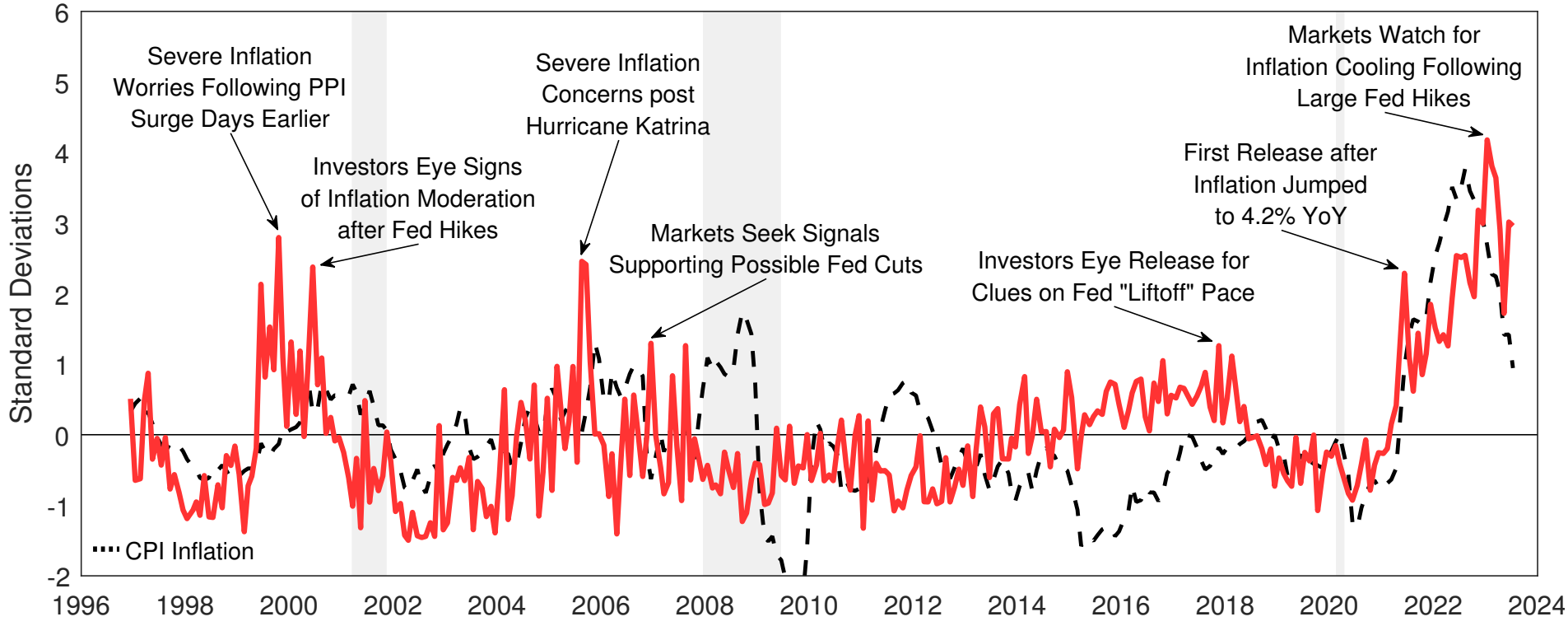

$\Rightarrow$ Linked to inflation environment and monetary policy

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b) Test for predictive power of CPI investor attention

$$x_{m,t} = \alpha_m + \beta^x s_t^{\mathsf{CPI}} + \gamma^x \left(s_t^{\mathsf{CPI}} \times \mathsf{IA}_t^{\mathsf{CPI}}\right) + \Gamma^x \left(s_t^{\mathsf{CPI}} \times Z_t\right) + \theta^x \mathsf{IA}_t^{\mathsf{CPI}} + \Theta^x Z_t + \varepsilon_{m,t}$$

- Pooled specification (one for interest rates and one for inflation swaps)

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- Pooled specification (one for interest rates and one for inflation swaps)
- Allow for interactions with variables Z_t
  - Recession and ZLB indicators
  - Inflation uncertainty:
    - Realized inflation volatility; Bloomberg inflation disagreement; VIX
  - Monetary policy:
    - KC Fed policy uncertainty; BPS (2024) inflation & output gap coefficient
  - Inflation drivers:
    - Stock-bond correlation

Predictive Power of CPI Investor Attention for Market Reactions

Dependent Variable (bp)	Interest Rates	Inflation Swap Rates
	2009–2023	2009–2023
News	1.31***	1.85***
	(0.28)	(0.27)
News × Investor Attention	1.75***	1.26***
	(0.29)	(0.34)
Recession & ZLB Interactions	✓	✓
R^2	0.48	0.25
Observations	996	830

Notes: ***, **, and * indicate significance at the 1, 5, and 10 percent level.

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⇒ Can account for 86% & 95% of increase in reactions during inflation surge

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News × Investor Attention	1.75***	1.52***	1.26***	1.01***
	(0.29)	(0.27)	(0.34)	(0.28)
Inflation Uncertainty				
News × Inflation Volatility		0.47		0.92*
		(0.35)		(0.53)
News × Inflation Disagreement		-0.15		-0.67**
		(0.25)		(0.29)
News × VIX		0.59**		-0.14
		(0.28)		(0.31)
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News × Investor Attention	1.75***	1.52***	0.96***	1.26***	1.01***	1.39***
	(0.29)	(0.27)	(0.30)	(0.34)	(0.28)	(0.39)
Inflation Uncertainty		✓			✓	
Monetary Policy						
News × Monetary Policy Uncertainty			1.08***			-0.00
			(0.28)			(0.22)
News × Perceived Inflation Coefficient			0.34			0.14
			(0.34)			(0.37)
News × Perceived Output Gap Coefficient			-0.74**			0.07
			(0.35)			(0.30)
Recession & ZLB Interactions	✓	✓	✓	✓	✓	✓
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	(0.29)	(0.27)	(0.30)	(0.47)	(0.34)	(0.28)	(0.39)	(0.48)
Inflation Uncertainty		✓				✓		
Monetary Policy			✓				✓	
Inflation Drivers								
News × Stock-Bond Correlation				0.57				0.58*
				(0.55)				(0.34)
Recession & ZLB Interactions	✓	✓	✓	✓	✓	✓	✓	✓
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	(0.29)	(0.27)	(0.30)	(0.47)	(0.26)	(0.34)	(0.28)	(0.39)	(0.48)
Inflation Uncertainty		✓			✓		✓		
Monetary Policy			✓		✓			✓	
Inflation Drivers				✓	✓				✓
Other Interactions (incl. Inflation Level)					✓				
Recession & ZLB Interactions	✓	✓	✓	✓	✓	✓	✓	✓	✓
R^2	0.48	0.52	0.55	0.49	0.35	0.25	0.28	0.26	0.26
Observations	996	996	996	996	1788	830	830	830	830

Notes: ***, **, and * indicate significance at the 1, 5, and 10 percent level.

Predictive Power of CPI Investor Attention for Market Reactions

Dependent Variable (bp)	Interest Rates					Inflation Swap Rates			
	2009–2023				1996–2023	2009–2023			
News	1.31***	1.21***	1.38***	1.23***	0.64***	1.85***	2.05***	1.87***	1.80***
	(0.28)	(0.22)	(0.23)	(0.24)	(0.21)	(0.27)	(0.25)	(0.27)	(0.29)
News × Investor Attention	1.75***	1.52***	0.96***	1.24***	1.04***	1.26***	1.01***	1.39***	0.75
	(0.29)	(0.27)	(0.30)	(0.47)	(0.26)	(0.34)	(0.28)	(0.39)	(0.48)
Inflation Uncertainty		✓			✓		✓		
Monetary Policy			✓		✓			✓	
Inflation Drivers				✓	✓				✓
Other Interactions (incl. Inflation Level)					✓				
Recession & ZLB Interactions	✓	✓	✓	✓	✓	✓	✓	✓	✓
R^2	0.48	0.52	0.55	0.49	0.35	0.25	0.28	0.26	0.26
Observations	996	996	996	996	1788	830	830	830	830

Notes: ***, **, and * indicate significance at the 1, 5, and 10 percent level.

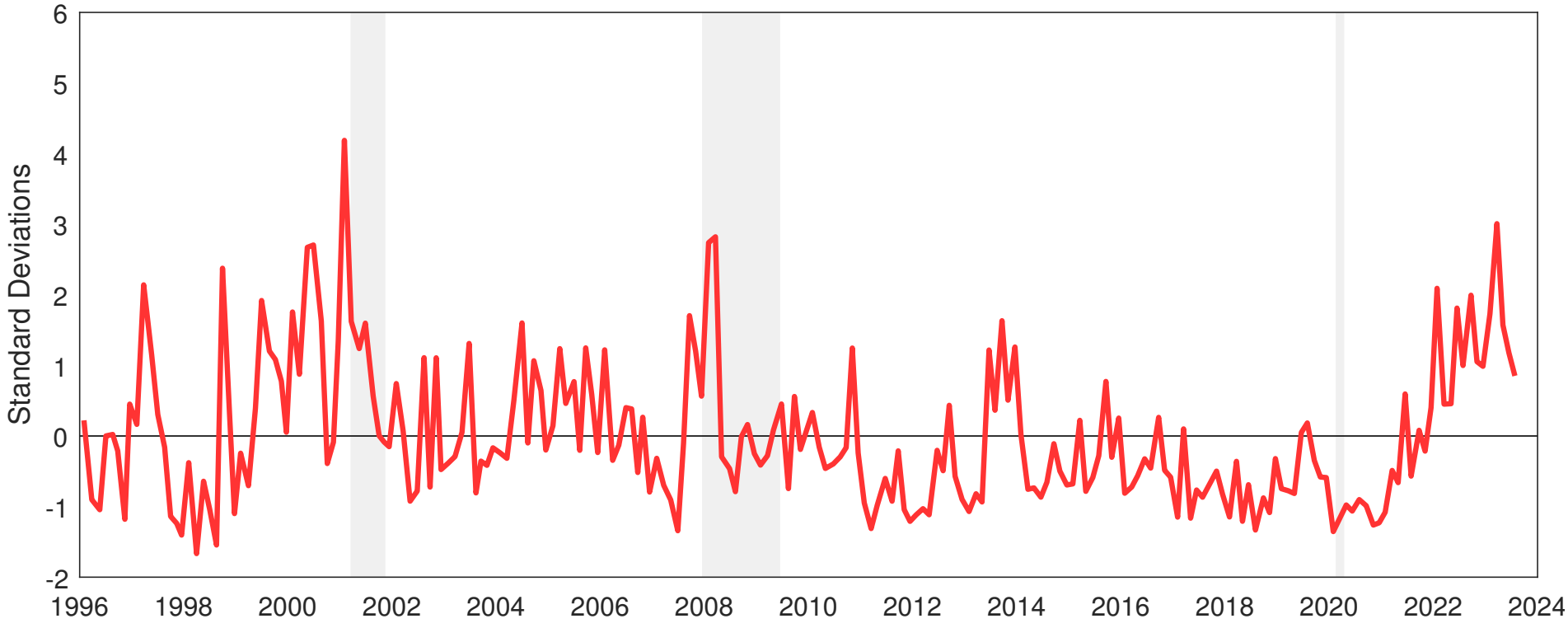
Investor attention

⇒ Most consistent interaction with news

⇒ Functions as sufficient statistic for "important" economic conditions

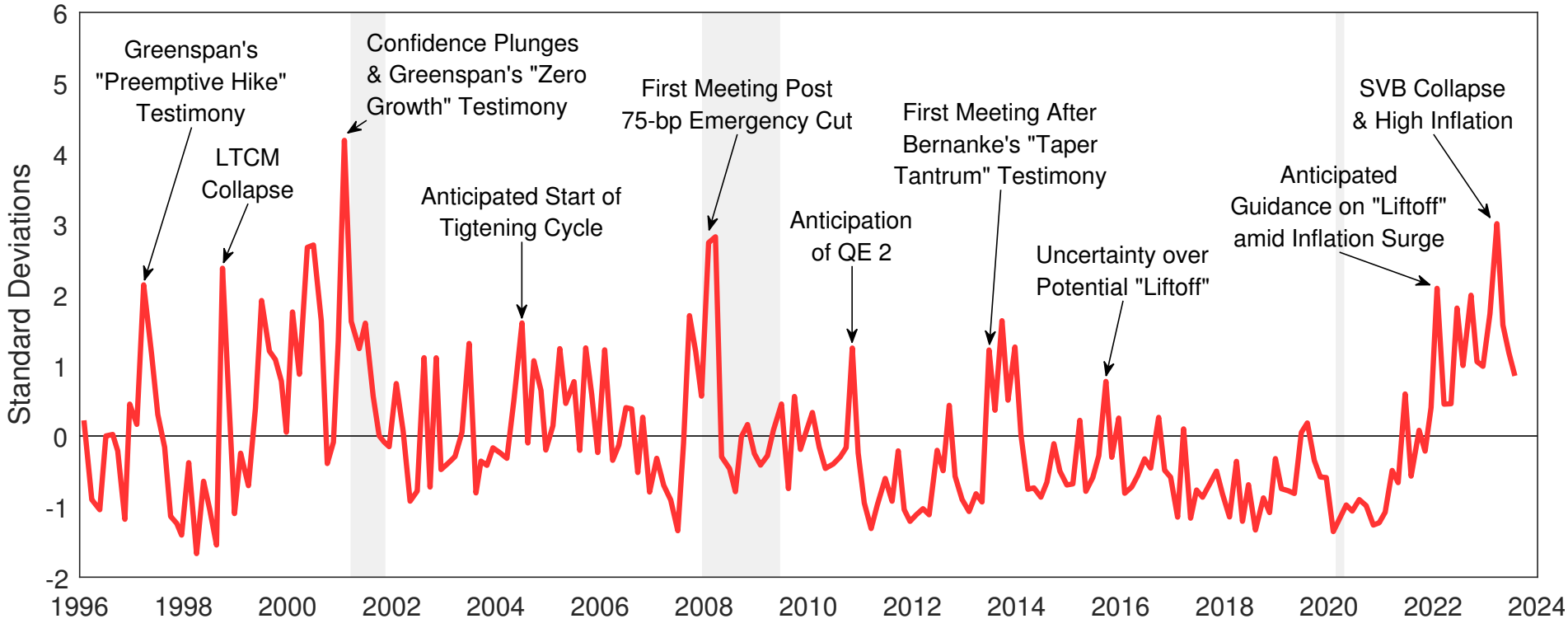
3. Evidence from FOMC Announcements

FOMC Investor Attention



- $\text{IA}_t^{\text{FOMC}}$: based on BT coverage in 5 days *prior* to FOMC announcements

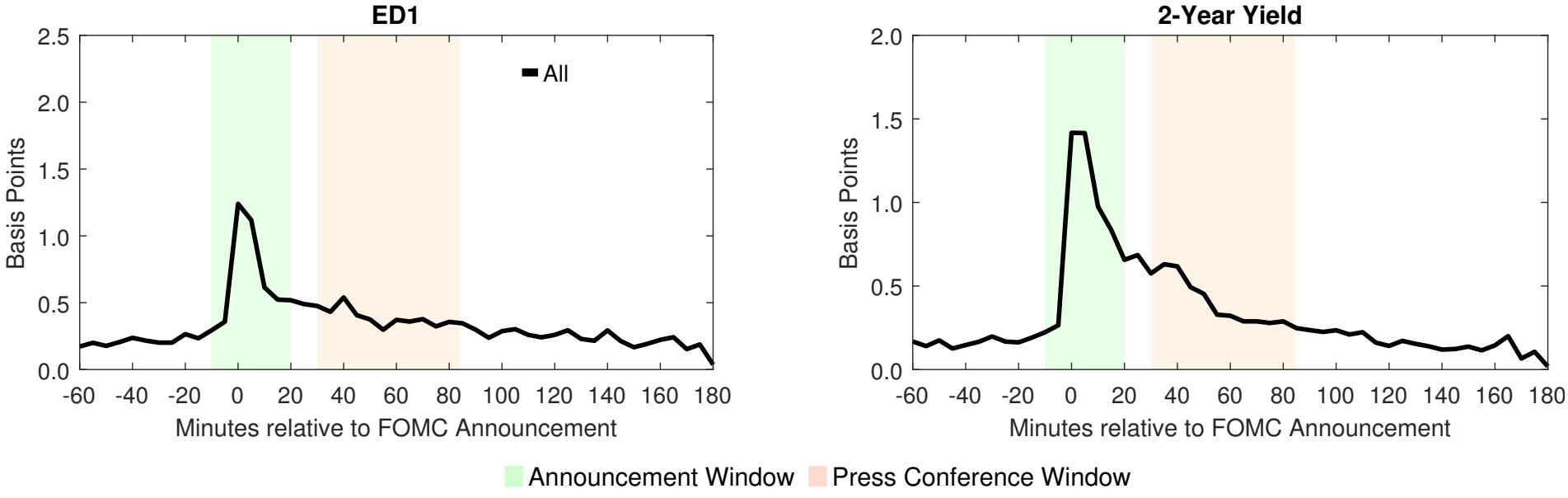
FOMC Investor Attention



- IA_t^{FOMC}: based on BT coverage in 5 days *prior* to FOMC announcements

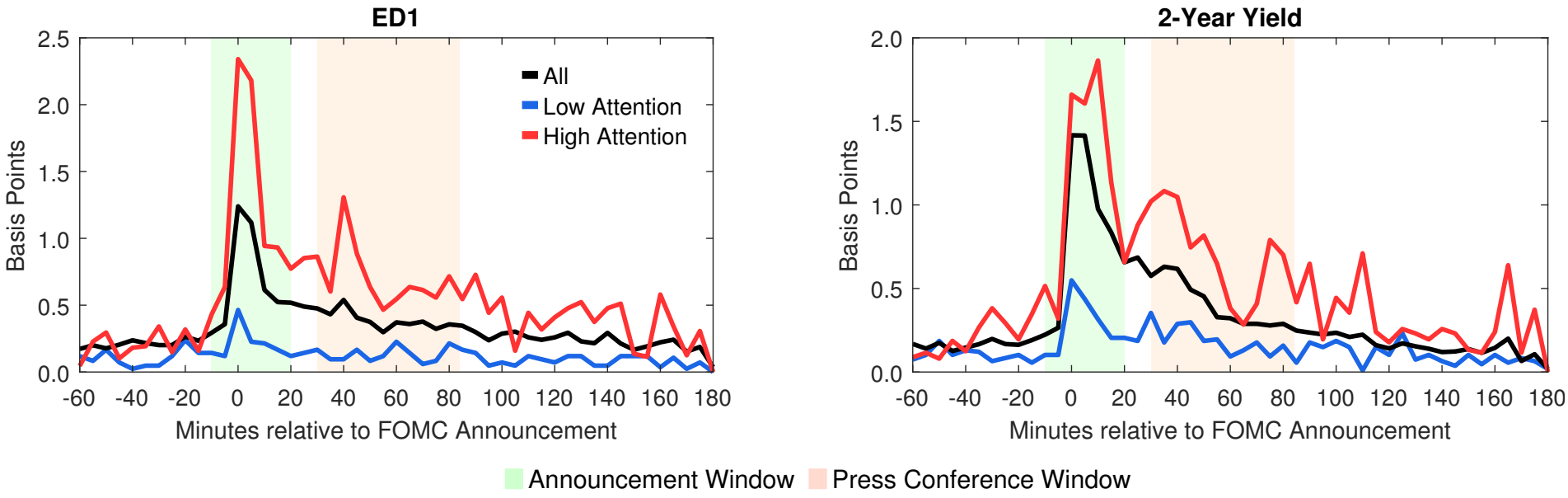
$\Rightarrow$ Linked to financial and economic conditions, but also Fed communications

Intraday Price Movements on FOMC Days



- Construct average magnitudes of 5-minute movements on FOMC days

Intraday Price Movements on FOMC Days



- Construct average magnitudes of 5-minute movements on FOMC days
- Compare low- vs. high-attention days ($<$10th vs. $>$90th pctile)

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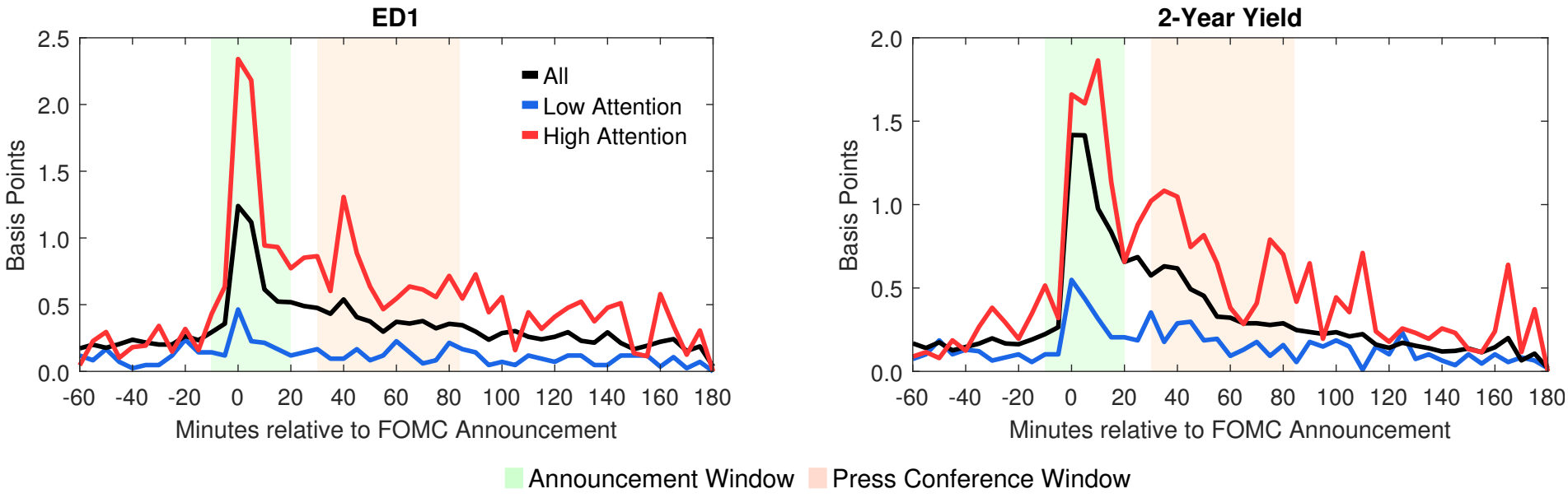
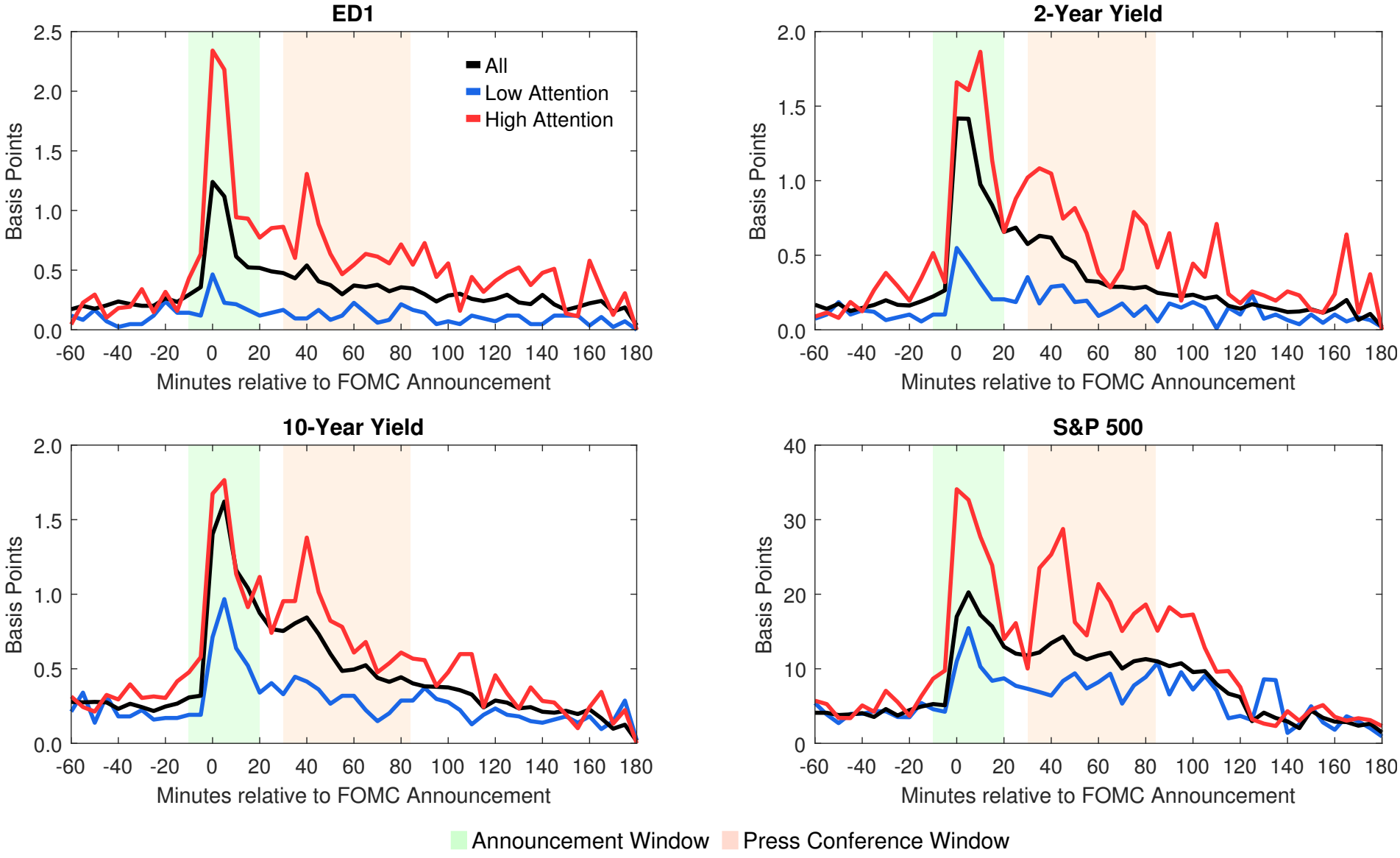


- Construct average magnitudes of 5-minute movements on FOMC days
- Compare low- vs. high-attention days ($<$10th vs. $>$90th pctile)

$\Rightarrow$ Investor attention predicts increased market fluctuations on FOMC days

Intraday Price Movements on FOMC Days



Implications for Analysis of FOMC Announcements

1. IA^{FOMC} predicts magnitudes of high-frequency MP shocks

- $|s_t^x| = \alpha + \beta^x \, \text{IA}_t^{\text{FOMC}} + \Gamma^x Z_t + \varepsilon_t$
- s_t^x: shocks by Nakamura & Steinsson (2018), Swanson (2021),...
- Z_t: uncertainty measures, recession & ZLB indicators, BS (2023) predictors,...

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$\Rightarrow$ **Consistent with stronger sensitivity to Fed news when attention elevated**

4. Concluding Remarks

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Investor attention crucial for how markets process macro news

- Evidence from the 2021–23 inflation surge & FOMC announcements

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- Can we say more?
  - Intraday reactions to CPI news appear efficient
  - No conclusive evidence of over- or underreaction in days after

$\Rightarrow$ Endogenous attention + discrete reactions (e.g., Bansal & Shaliastovich, 2011)

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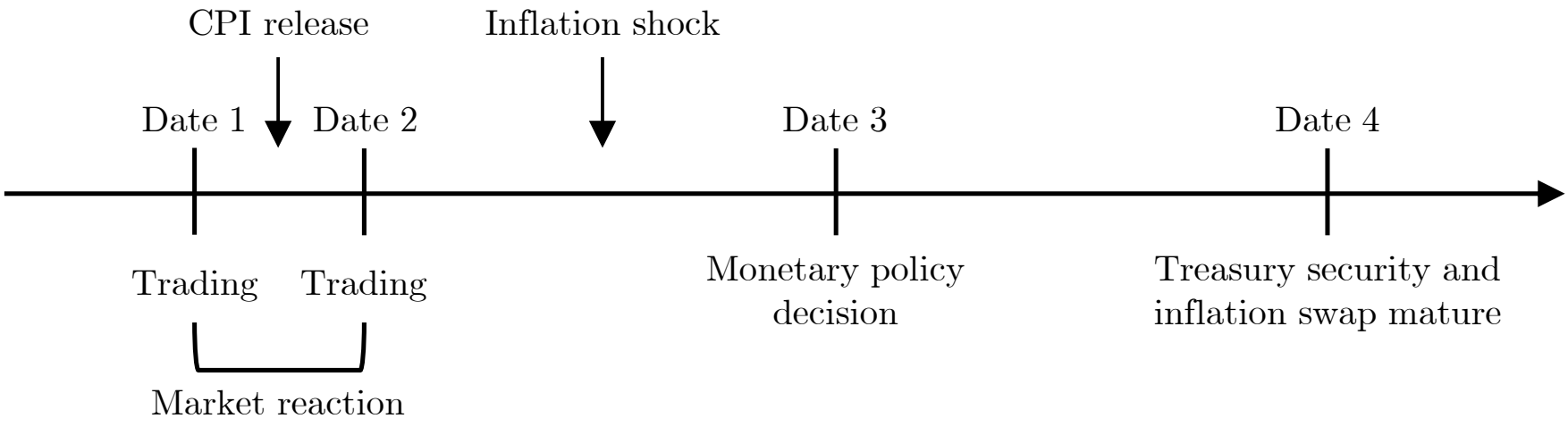
What are broader implications of the findings?

- Expectation formation of institutional investors crucial for macro-finance
- Important two-way link between Fed & investor attention

Thank you!

Appendix

Model Setup Return



Investors

- Continuum of investors solving mean-variance portfolio problem at 1 and 2

Assets

- Treasury security and inflation swap maturing at 4

Monetary policy

- Sets risk-free rate based on Taylor rule at 3

CPI release

- Noisy signal about future inflation shock

Investor attention

- Only share of investors attentive to CPI release (i.e., incorporate signal)

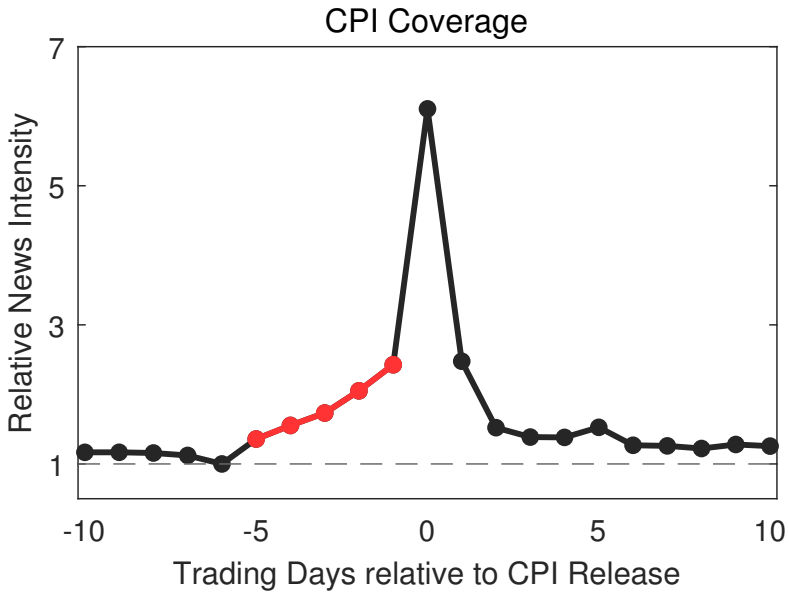
Model Solution Return

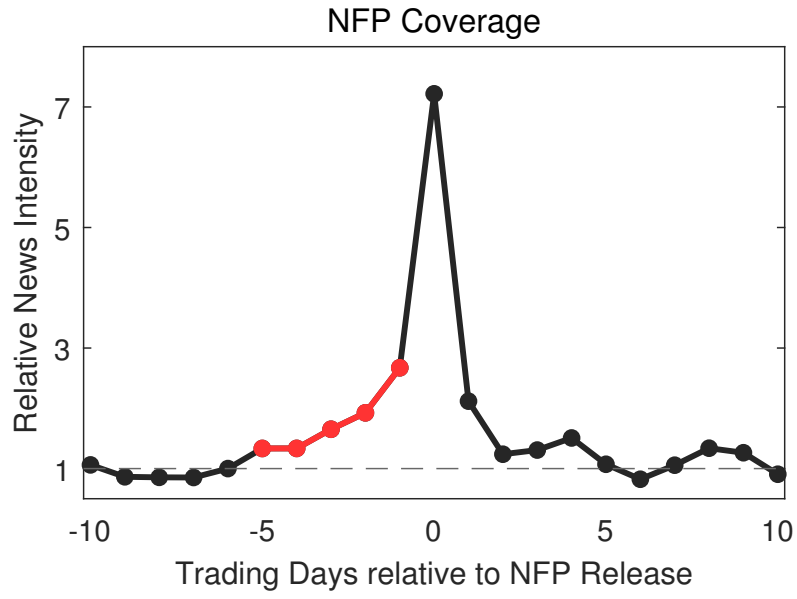
$$\pi = \underbrace{\Theta(\mu^{\text{CPI}})}_{\beta^{\pi|\text{CPI}}} s^{\text{CPI}} \quad \text{and} \quad y = \underbrace{\frac{1}{2}\phi\Theta(\mu^{\text{CPI}})}_{\beta^{y|\text{CPI}}} s^{\text{CPI}}$$

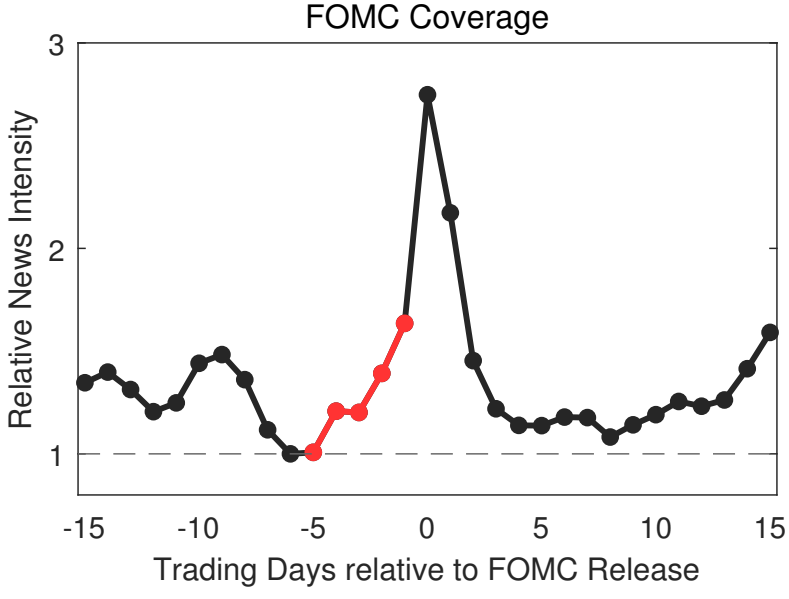
- π: reaction of inflation swap rate ($\pi = \pi_2 - \pi_1$)
- y: reaction of Treasury yield ($y = y_2 - y_1$)
- s^{CPI}: inflation signal from CPI release
- ϕ: inflation coefficient in monetary policy rule
- μ^{CPI}: share of attentive investors
- $\Theta(\mu^{\text{CPI}})$: average Kalman gain across investors ($\frac{\partial\Theta(\mu^{\text{CPI}})}{\partial\mu^{\text{CPI}}} > 0$)

Measuring Investor Attention

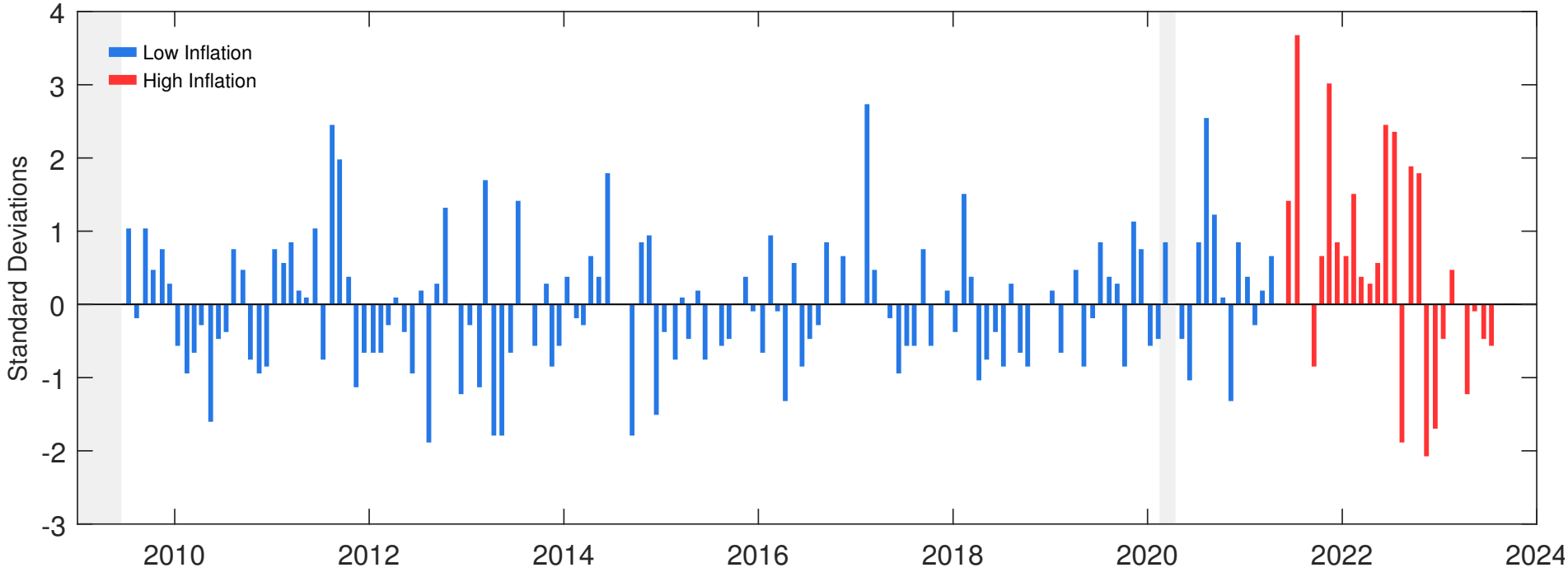
Return







Time Series of CPI Surprise



Observations: Total—166 | Low Inflation—142 | High Inflation—26

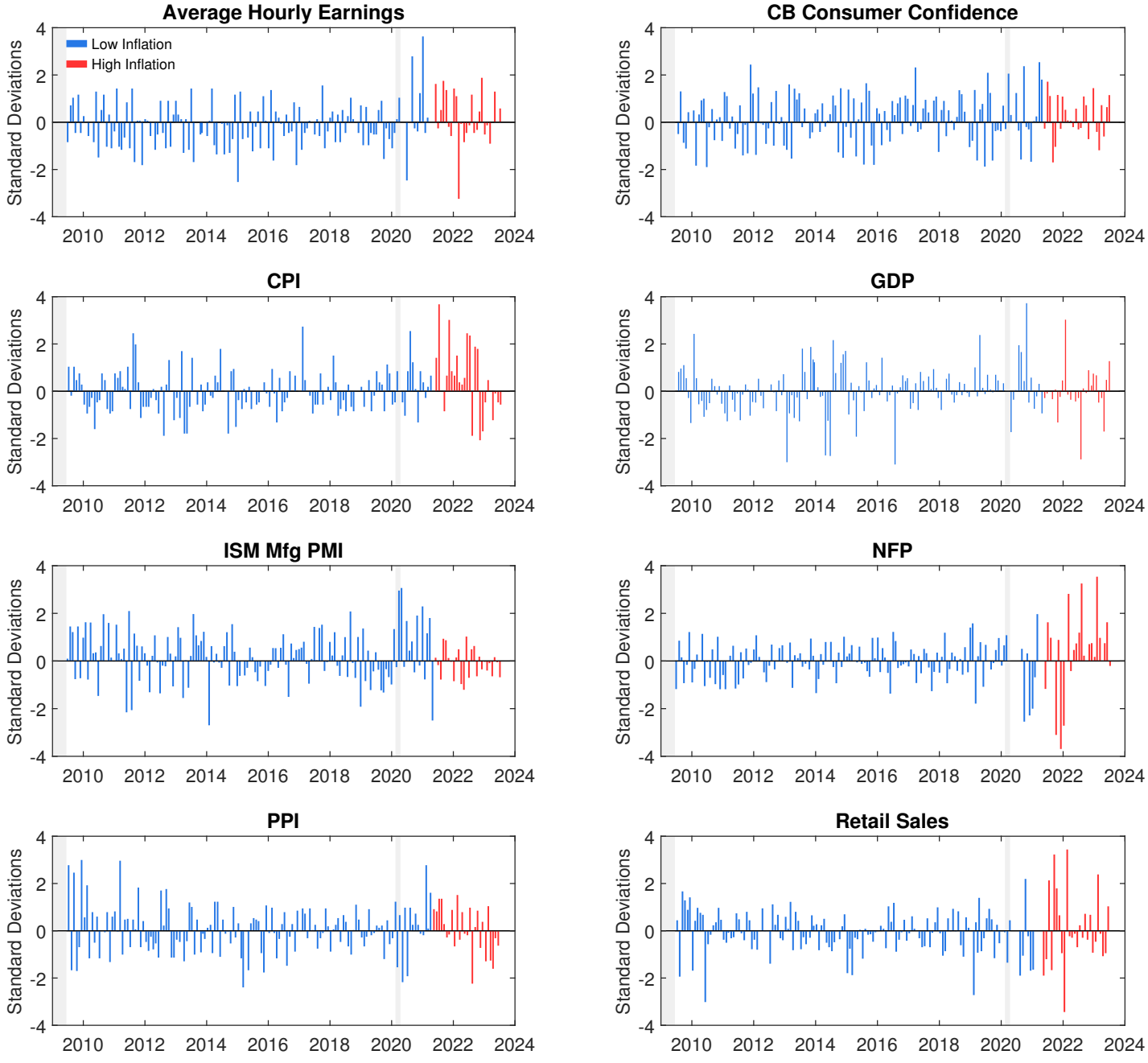
Macroeconomic News—Overview

Return

Announcement	Release Time	Frequency	Observations			Unit	Surprise (+1 SD)	Mean-Median Correlation
			Total	Low	High			
Average Hourly Earnings	8:30	Monthly	160	135	25	% MoM	0.15	0.99
Capacity Utilization	9:15	Monthly	165	140	25	%	0.38	0.99
CB Consumer Confidence	10:00	Monthly	168	142	26	Index	4.99	1.00
Durable Goods Orders	8:30	Monthly	166	140	26	% MoM	1.78	1.00
Consumer Price Index (CPI)								
Headline—Baseline	8:30	Monthly	166	140	26	% MoM	0.11	0.96
Core	8:30	Monthly	164	139	25	% MoM	0.09	0.97
Headline YoY	8:30	Monthly	166	140	26	% YoY	0.12	0.97
Gross Domestic Product (GDP)	8:30	Monthly	164	140	24	% QoQ ann.	0.42	0.98
Initial Jobless Claims	8:30	Weekly	708	595	113	Level	17.51k	0.97
ISM Manufacturing PMI (ISM Mfg PMI)	10:00	Monthly	169	143	26	Index	1.75	1.00
New Home Sales	10:00	Monthly	167	141	26	Level	52.30k	1.00
Nonfarm Payrolls (NFP)	8:30	Monthly	156	133	23	Change	90.15k	1.00
Personal Consumption Expenditures Price Index (PCE Price Index)	8:30	Monthly	162	137	25	% YoY	0.07	0.86
Philadelphia Fed Index	10:00	Monthly	167	141	26	Index	9.88	1.00
Producer Price Index (PPI)	8:30	Monthly	168	142	26	% MoM	0.32	0.99
Retail Sales	8:30	Monthly	161	135	26	% MoM	0.47	0.98
UM Consumer Sentiment P	10:00	Monthly	168	142	26	Index	3.57	1.00
Unemployment Rate	8:30	Monthly	159	134	25	%	0.16	0.98

News Surprises—Time Series

Return



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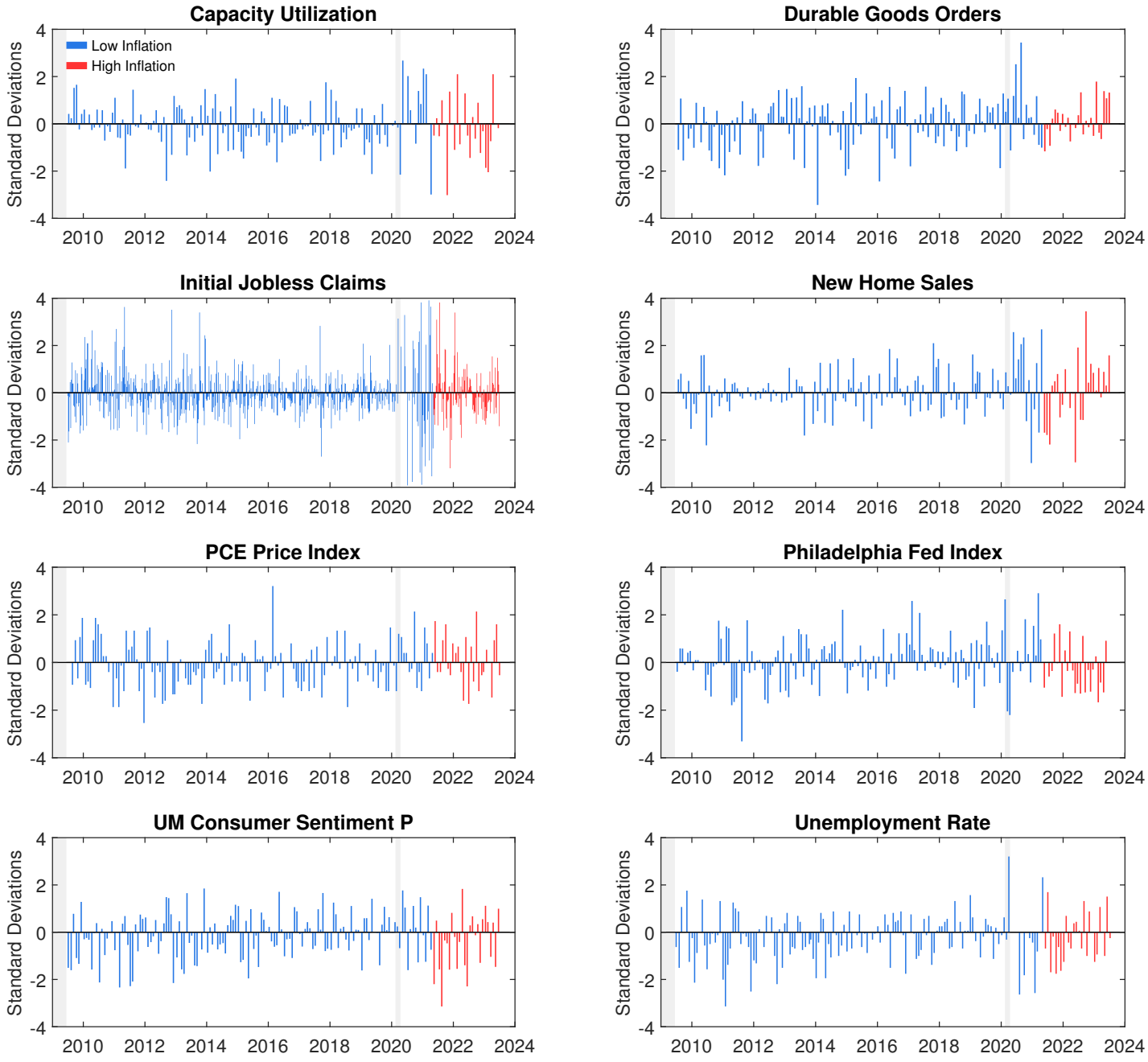
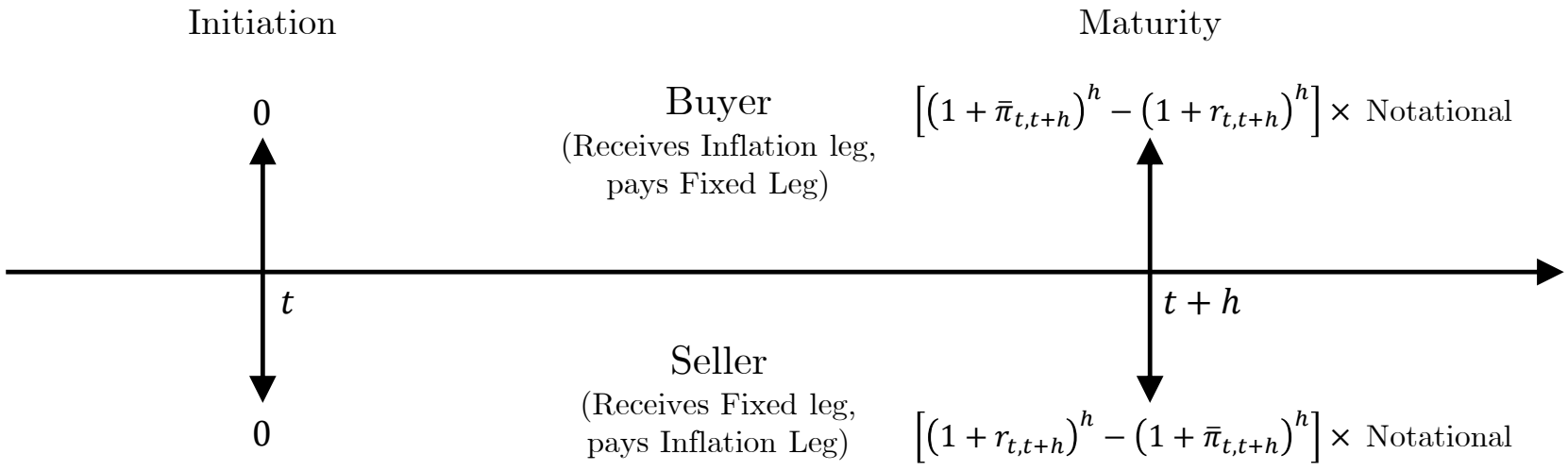


Primer on Inflation Swap Rates

Return

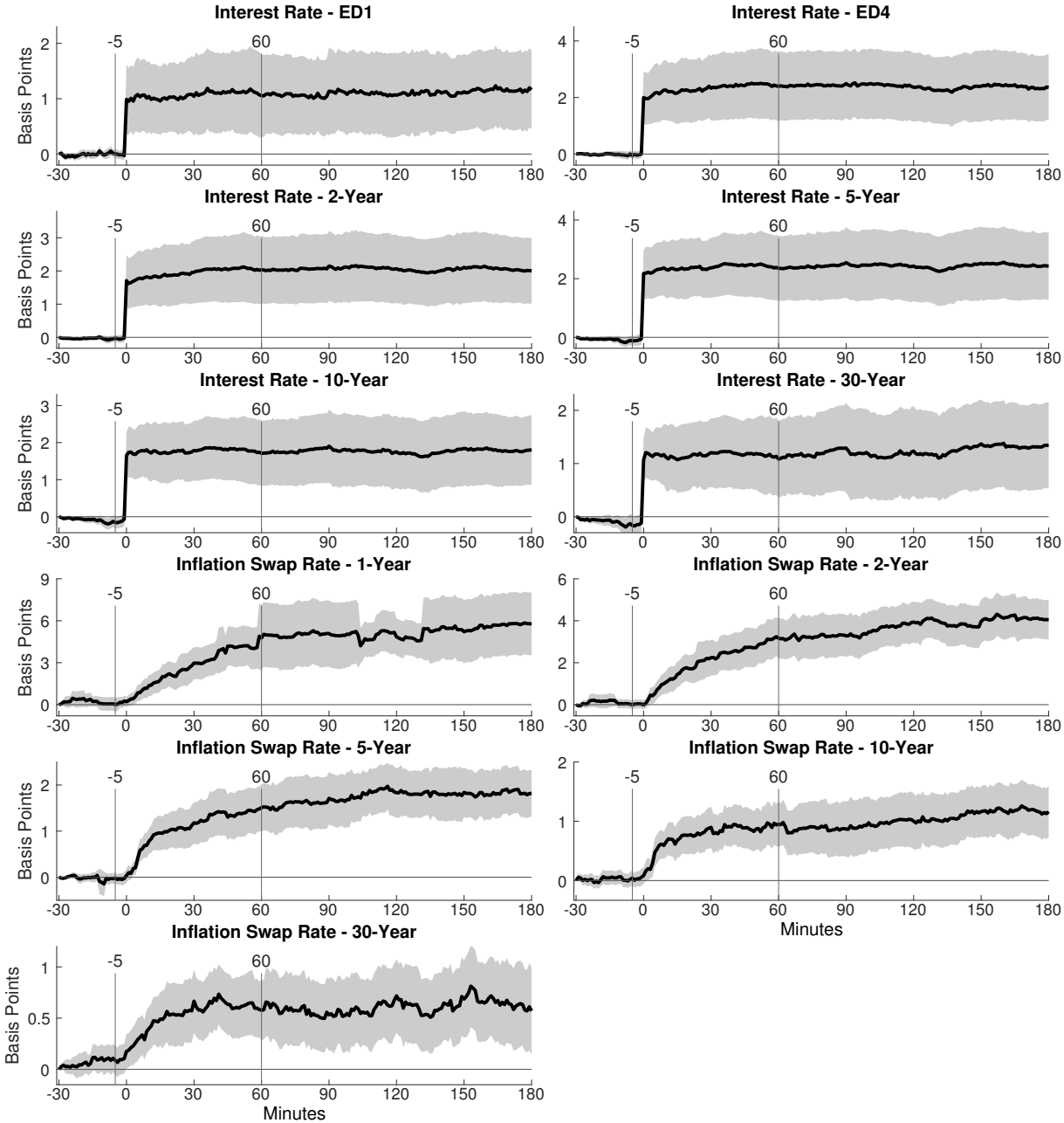


$r_{t,t+h}$: h-year inflation swap rate at t

$\bar{\pi}_{t,t+h}$: realized annual CPI inflation rate from t to $t+h$

Impulse Responses to CPI News

Return



Sensitivity Analysis Return

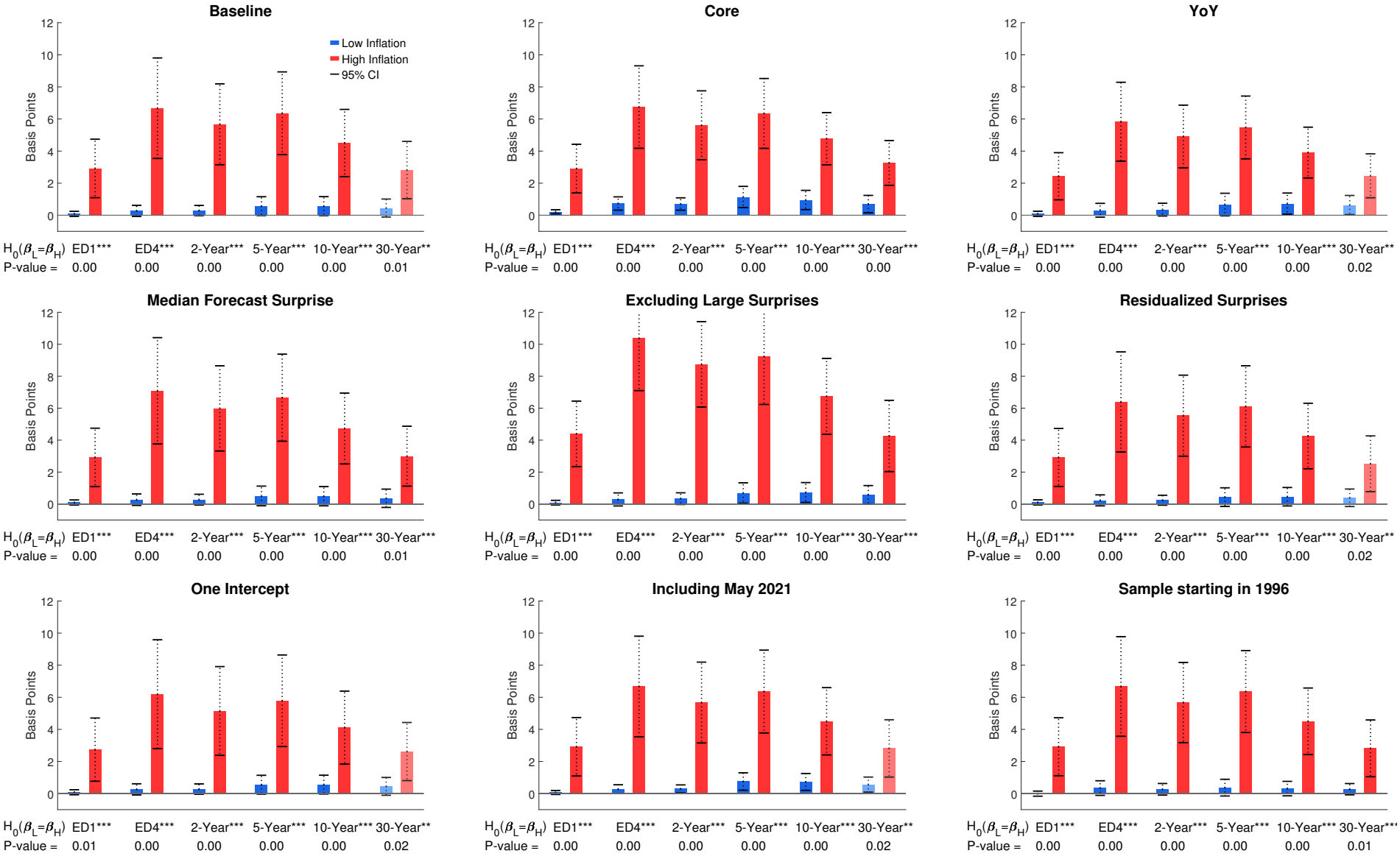
Increased market reactions to CPI releases robust to

- different surprise series (Core, YoY, Bloomberg Median Forecast)
- excluding large surprises (dropping surprises greater than 2 standard deviations)
- removing autocorrelation from surprises (residualizing w.r.t. last 12 obs.)
- extending low-inflation sample to 1996 instead of 2009
- using TIPS breakeven inflation rates
- shifting break point between low- and high-inflation period
- employing daily data
- having one intercept in regressions

▸ Rates ▸ Swaps ▸ Breaks

Effect of CPI News on Interest Rates—Robustness

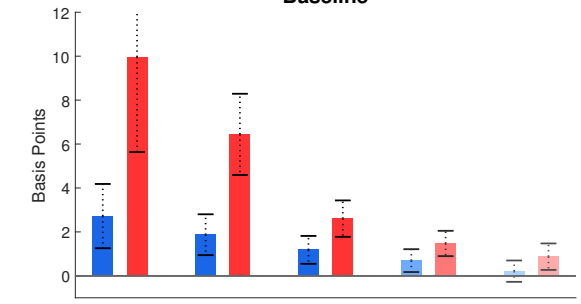
Return



Effect of CPI News on Inflation Swap Rates—Robustness

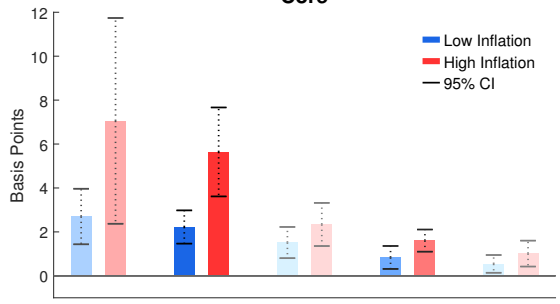
Return

Baseline



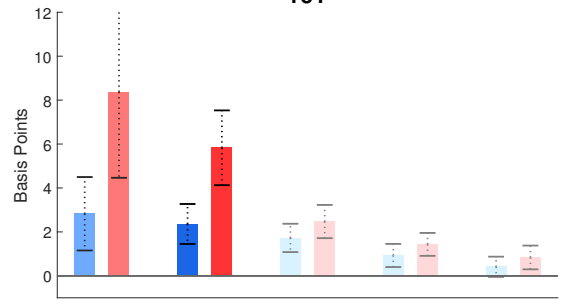
$H_0(\beta_L=\beta_H)$	1-Year***	2-Year***	5-Year***	10-Year**	30-Year*
P-value =	0.00	0.00	0.01	0.05	0.09

Core



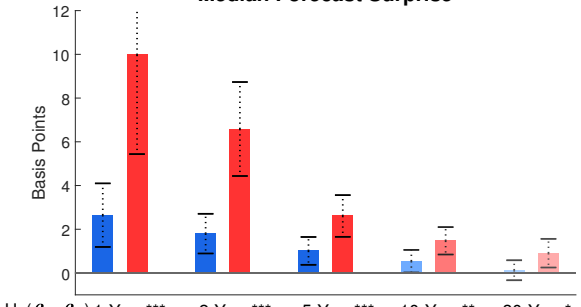
$H_0(\beta_L=\beta_H)$	1-Year*	2-Year***	5-Year	10-Year**	30-Year
P-value =	0.08	0.00	0.18	0.04	0.20

YoY



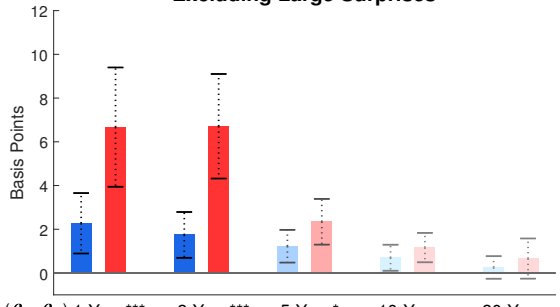
$H_0(\beta_L=\beta_H)$	1-Year**	2-Year***	5-Year	10-Year	30-Year
P-value =	0.01	0.00	0.14	0.18	0.24

Median Forecast Surprise



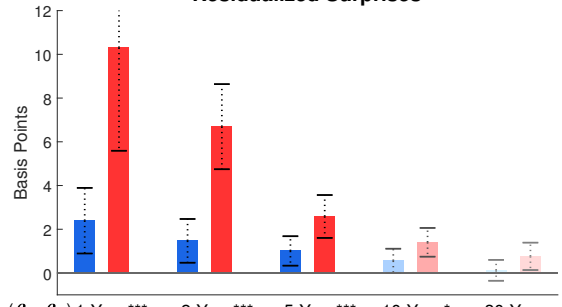
$H_0(\beta_L=\beta_H)$	1-Year***	2-Year***	5-Year***	10-Year**	30-Year*
P-value =	0.00	0.00	0.01	0.02	0.06

Excluding Large Surprises



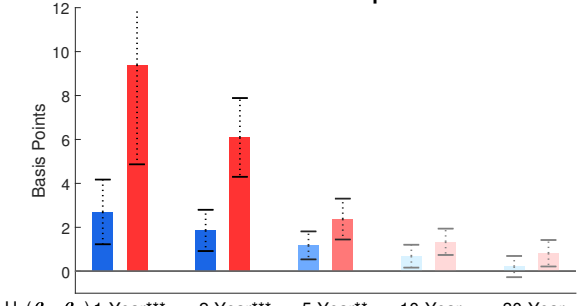
$H_0(\beta_L=\beta_H)$	1-Year***	2-Year***	5-Year*	10-Year	30-Year
P-value =	0.01	0.00	0.09	0.31	0.45

Residualized Surprises



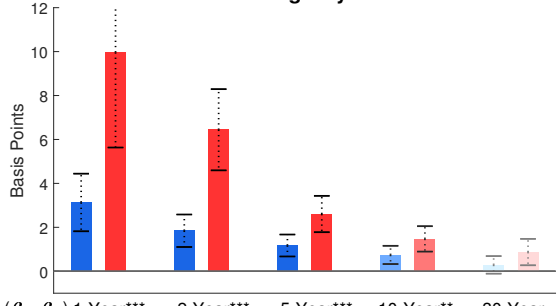
$H_0(\beta_L=\beta_H)$	1-Year***	2-Year***	5-Year***	10-Year*	30-Year
P-value =	0.00	0.00	0.01	0.05	0.11

One Intercept



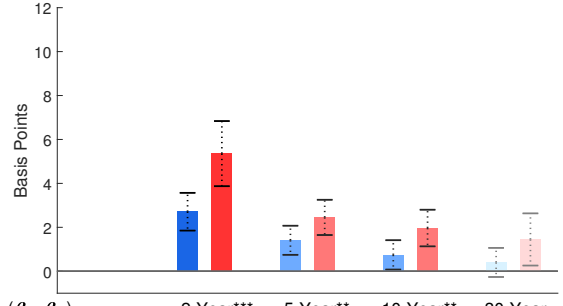
$H_0(\beta_L=\beta_H)$	1-Year***	2-Year***	5-Year**	10-Year	30-Year
P-value =	0.01	0.00	0.04	0.11	0.12

Including May 2021



$H_0(\beta_L=\beta_H)$	1-Year***	2-Year***	5-Year***	10-Year**	30-Year
P-value =	0.00	0.00	0.00	0.04	0.11

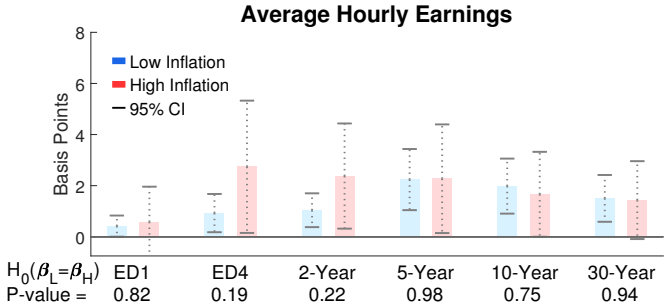
Breakeven Inflation

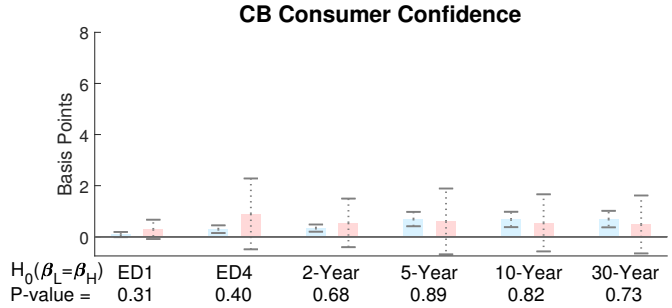


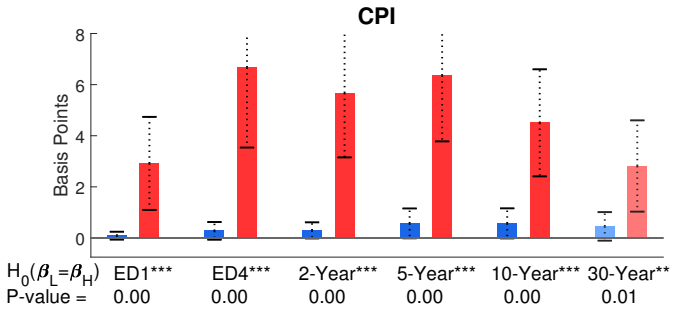
$H_0(\beta_L=\beta_H)$		2-Year***	5-Year**	10-Year**	30-Year
P-value =		0.00	0.05	0.03	0.13

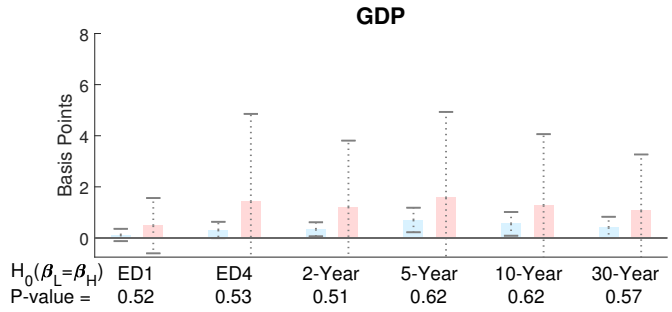
Effects of Macro News on Interest Rates

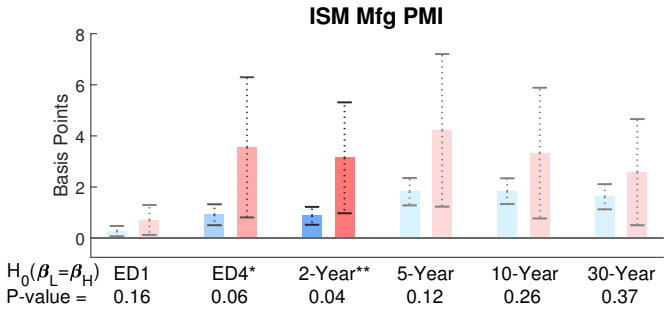
Return

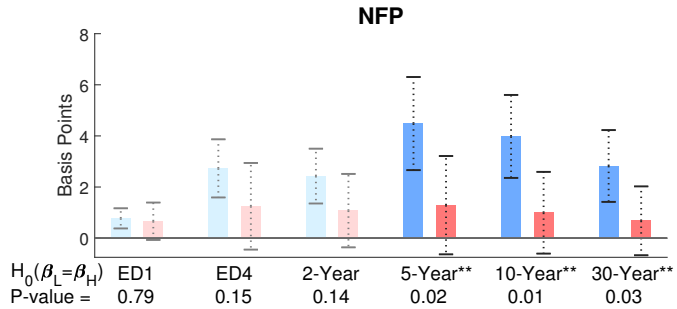


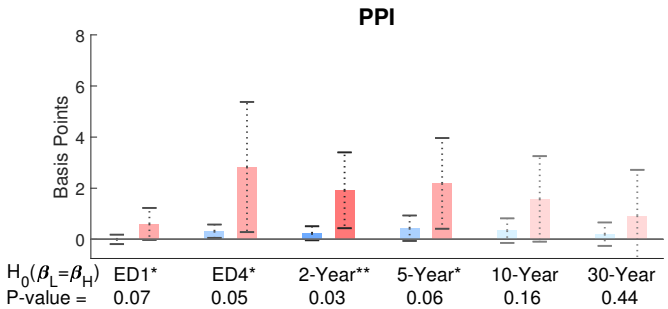


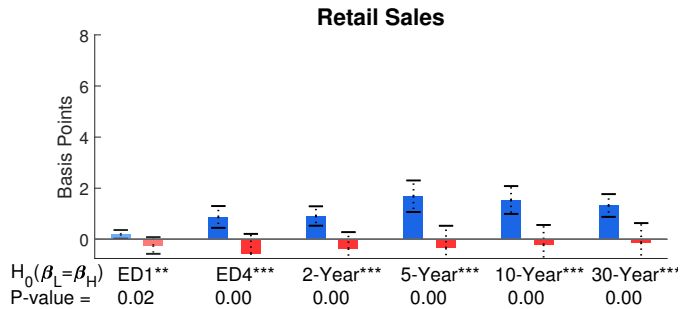






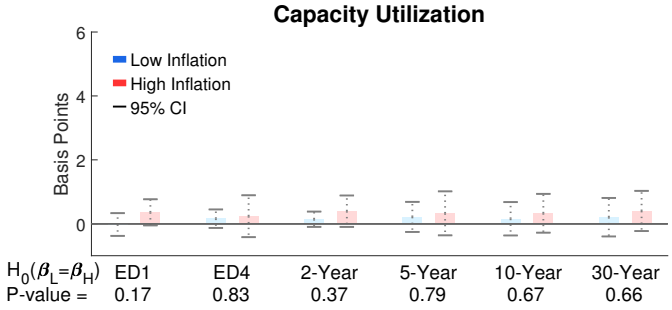




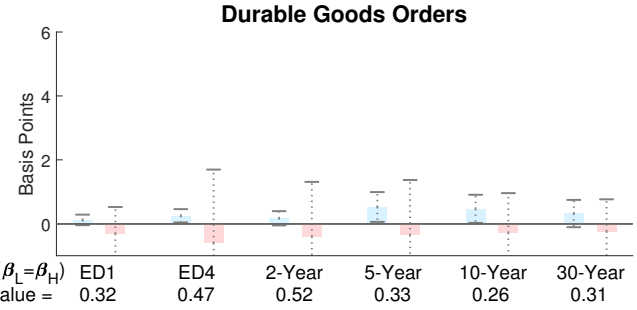


Effects of Macro News on Interest Rates

Return

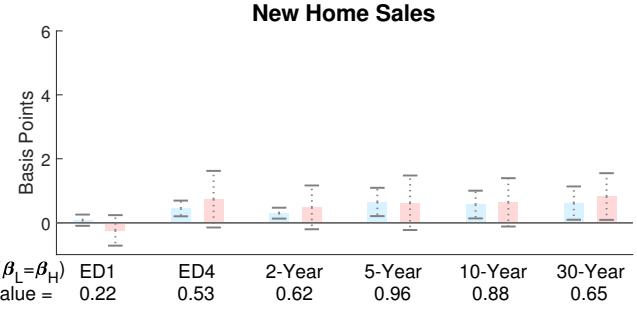


$H_0(\beta_L=\beta_H)$	ED1	ED4	2-Year	5-Year	10-Year	30-Year
P-value =	0.17	0.83	0.37	0.79	0.67	0.66

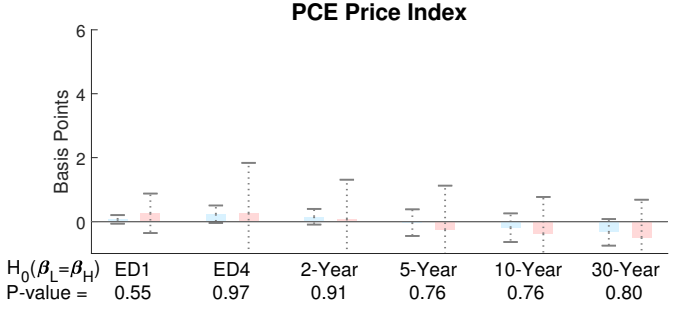


$H_0(\beta_L=\beta_H)$	ED1	ED4	2-Year	5-Year	10-Year	30-Year
P-value =	0.32	0.47	0.52	0.33	0.26	0.31

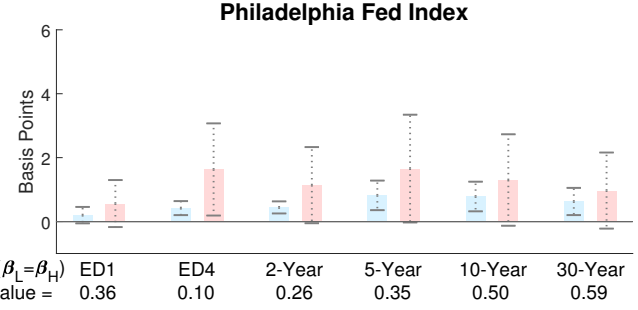
$H_0(\beta_L=\beta_H)$	ED1	ED4*	2-Year	5-Year	10-Year	30-Year
P-value =	0.18	0.07	0.14	0.36	0.61	0.79



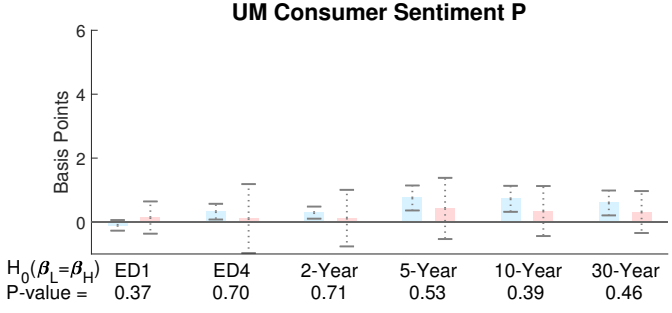
$H_0(\beta_L=\beta_H)$	ED1	ED4	2-Year	5-Year	10-Year	30-Year
P-value =	0.22	0.53	0.62	0.96	0.88	0.65



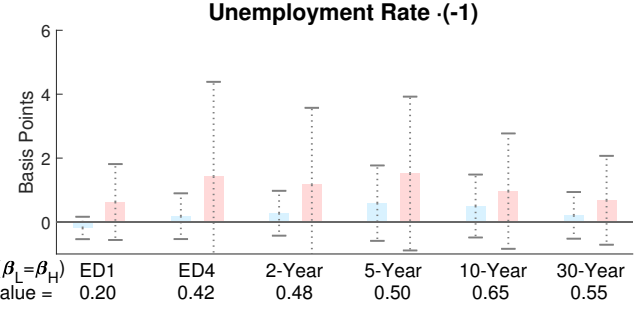
$H_0(\beta_L=\beta_H)$	ED1	ED4	2-Year	5-Year	10-Year	30-Year
P-value =	0.55	0.97	0.91	0.76	0.76	0.80



$H_0(\beta_L=\beta_H)$	ED1	ED4	2-Year	5-Year	10-Year	30-Year
P-value =	0.36	0.10	0.26	0.35	0.50	0.59



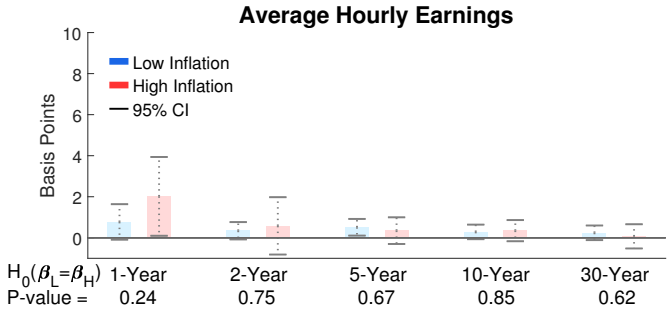
$H_0(\beta_L=\beta_H)$	ED1	ED4	2-Year	5-Year	10-Year	30-Year
P-value =	0.37	0.70	0.71	0.53	0.39	0.46



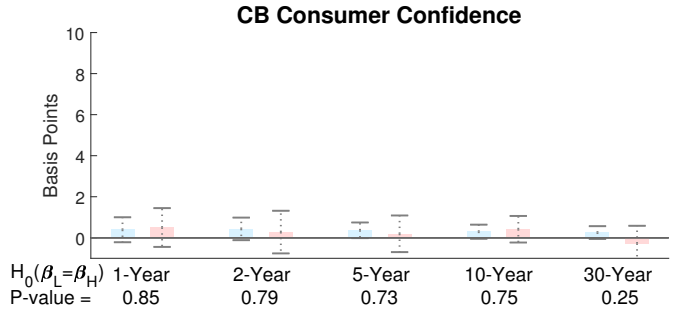
$H_0(\beta_L=\beta_H)$	ED1	ED4	2-Year	5-Year	10-Year	30-Year
P-value =	0.20	0.42	0.48	0.50	0.65	0.55

Effects of Macro News on Inflation Swap Rates

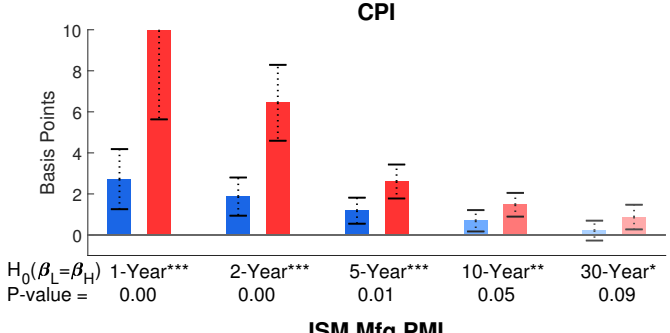
Return



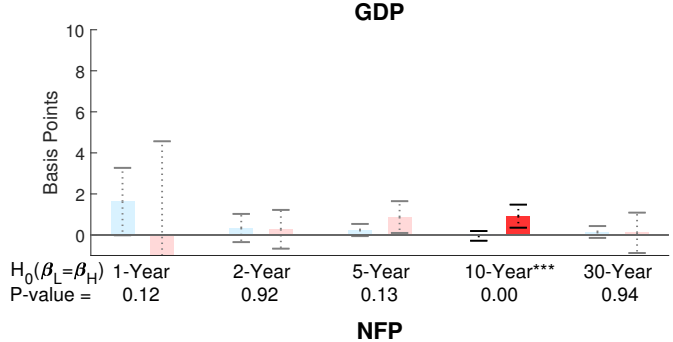
$H_0(\beta_L=\beta_H)$	1-Year	2-Year	5-Year	10-Year	30-Year
P-value =	0.24	0.75	0.67	0.85	0.62



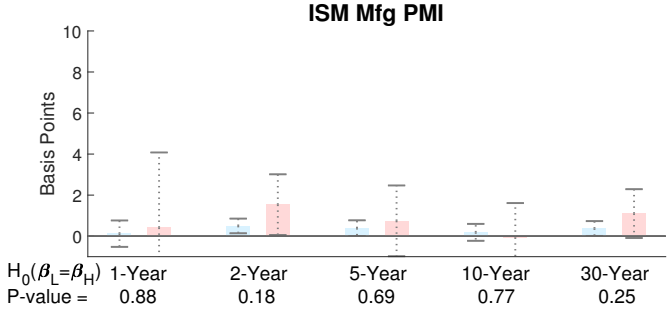
$H_0(\beta_L=\beta_H)$	1-Year	2-Year	5-Year	10-Year	30-Year
P-value =	0.85	0.79	0.73	0.75	0.25



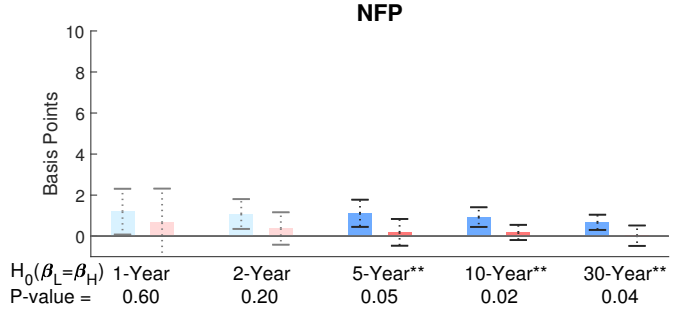
$H_0(\beta_L=\beta_H)$	1-Year***	2-Year***	5-Year***	10-Year**	30-Year*
P-value =	0.00	0.00	0.01	0.05	0.09



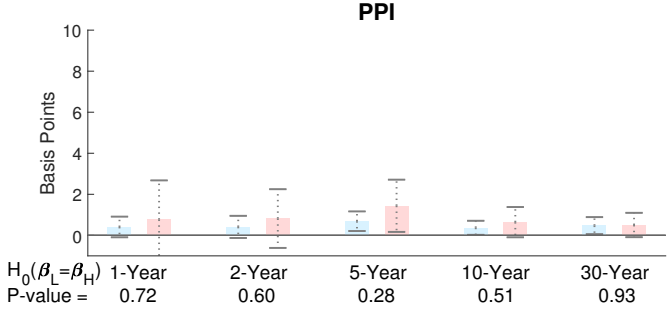
$H_0(\beta_L=\beta_H)$	1-Year	2-Year	5-Year	10-Year***	30-Year
P-value =	0.12	0.92	0.13	0.00	0.94



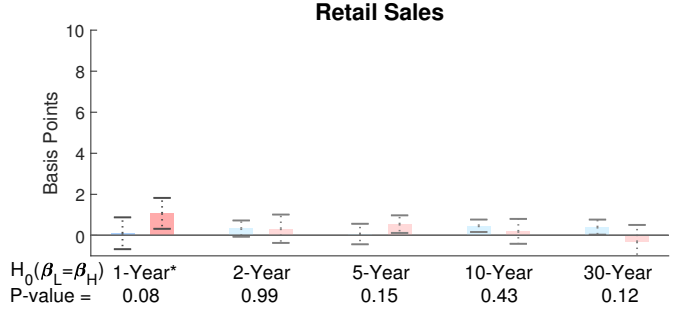
$H_0(\beta_L=\beta_H)$	1-Year	2-Year	5-Year	10-Year	30-Year
P-value =	0.88	0.18	0.69	0.77	0.25



$H_0(\beta_L=\beta_H)$	1-Year	2-Year	5-Year**	10-Year**	30-Year**
P-value =	0.60	0.20	0.05	0.02	0.04



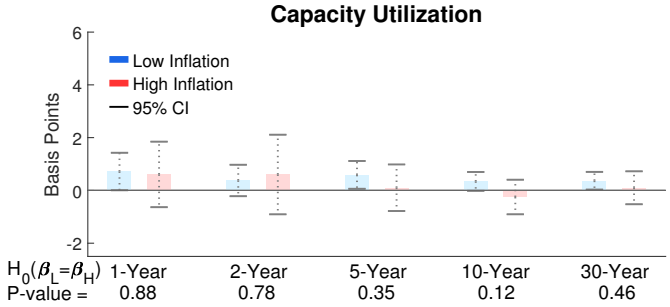
$H_0(\beta_L=\beta_H)$	1-Year	2-Year	5-Year	10-Year	30-Year
P-value =	0.72	0.60	0.28	0.51	0.93

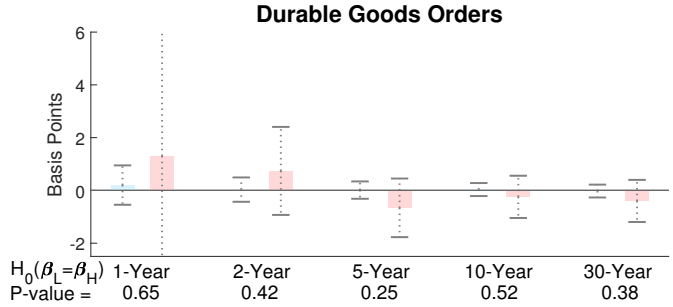


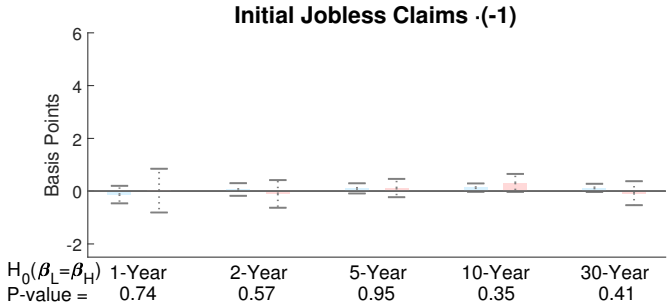
$H_0(\beta_L=\beta_H)$	1-Year*	2-Year	5-Year	10-Year	30-Year
P-value =	0.08	0.99	0.15	0.43	0.12

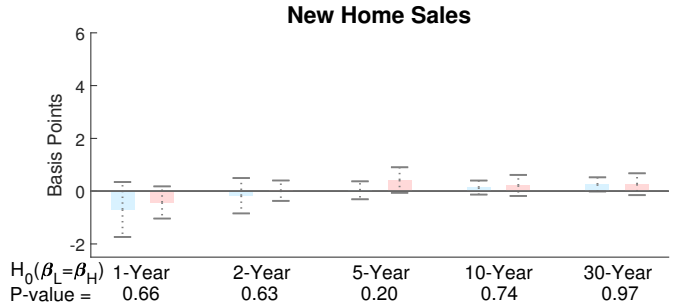
Effects of Macro News on Inflation Swap Rates

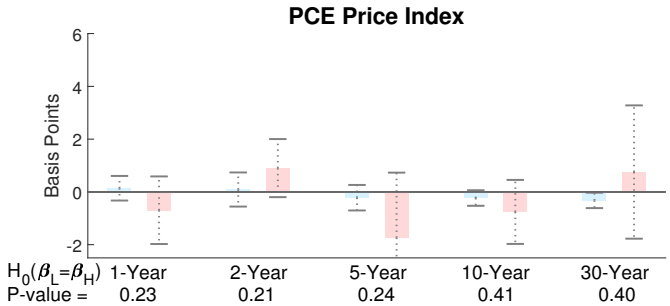
Return

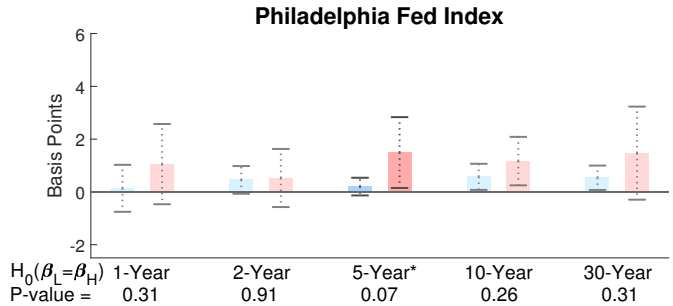


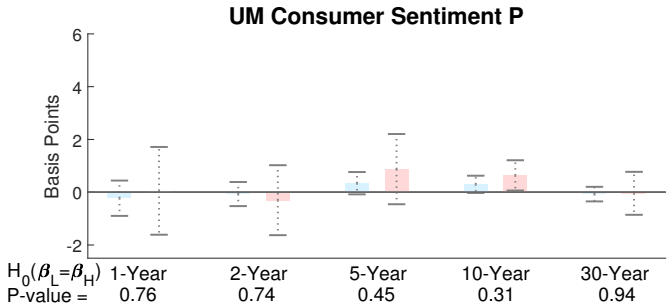


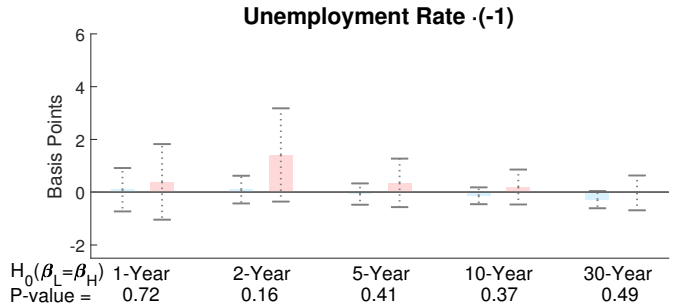






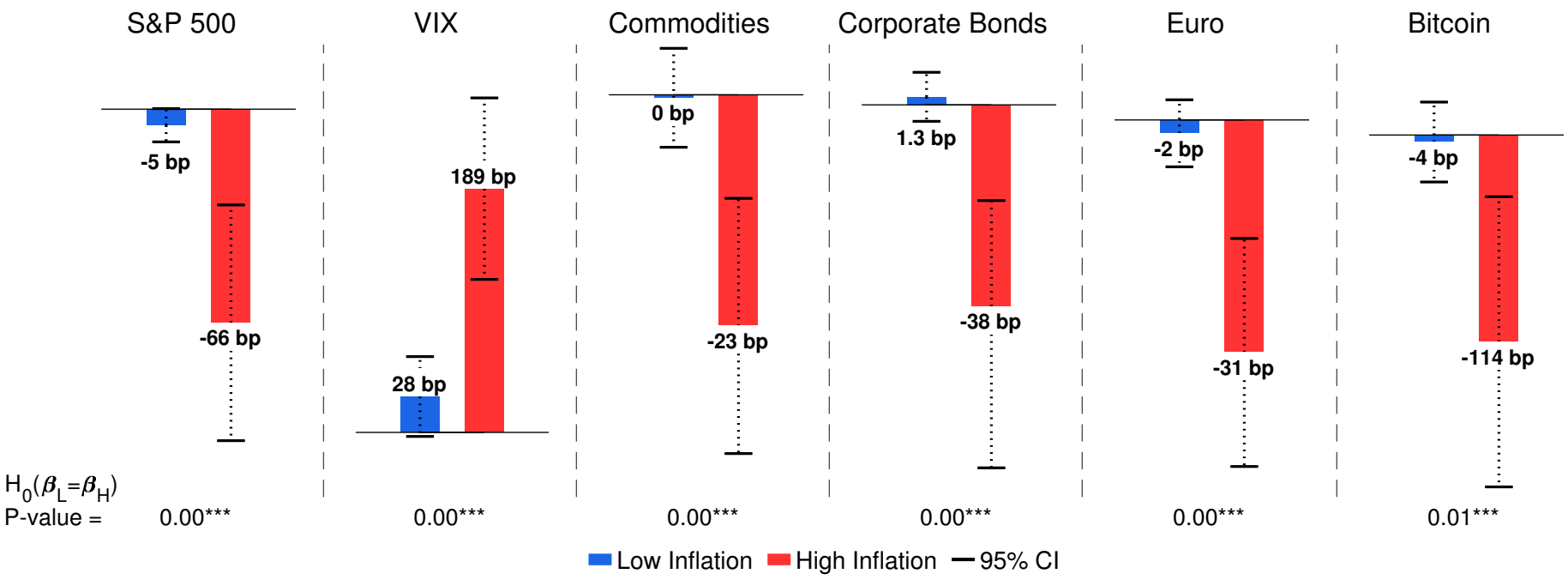






Effects of CPI News on Other Asset Classes

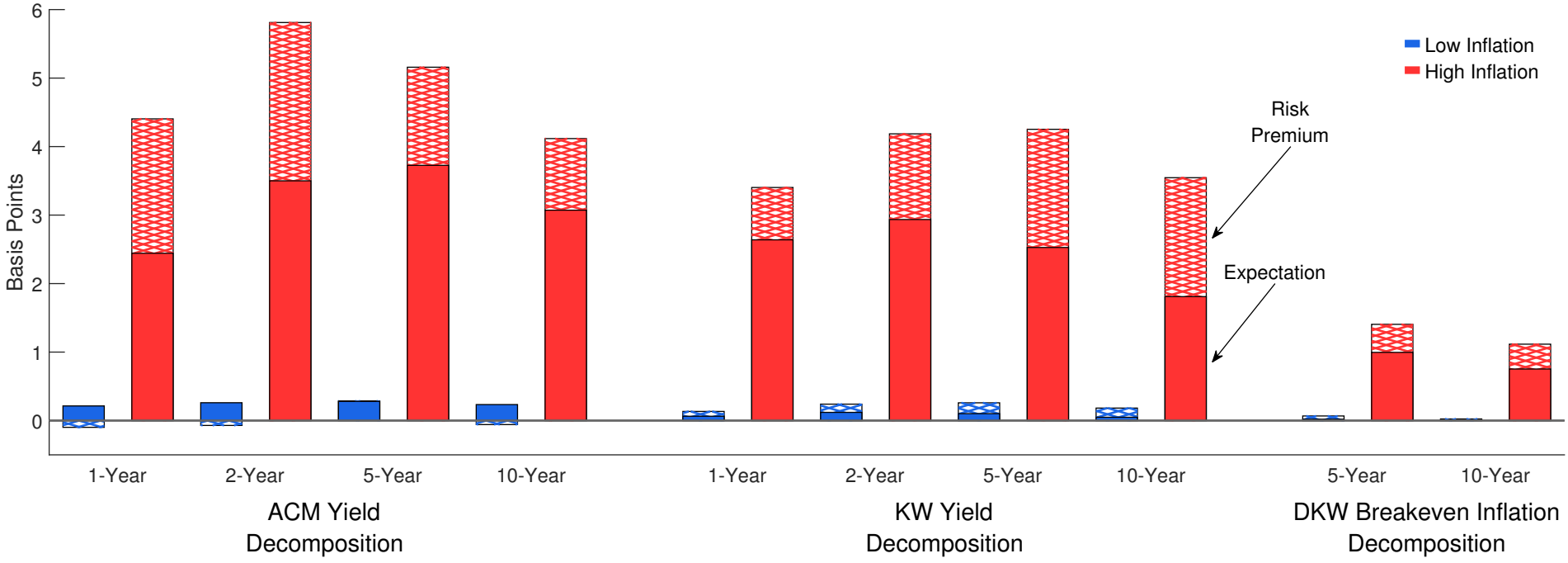
Return



Notes: ***, **, and * indicate significance at the 1, 5, and 10 percent level. *Euro* and *Bitcoin* refer to their respective spot rates against the U.S. Dollar. Values are denoted in U.S. dollars so that a decline reflects depreciation against the U.S. dollar.

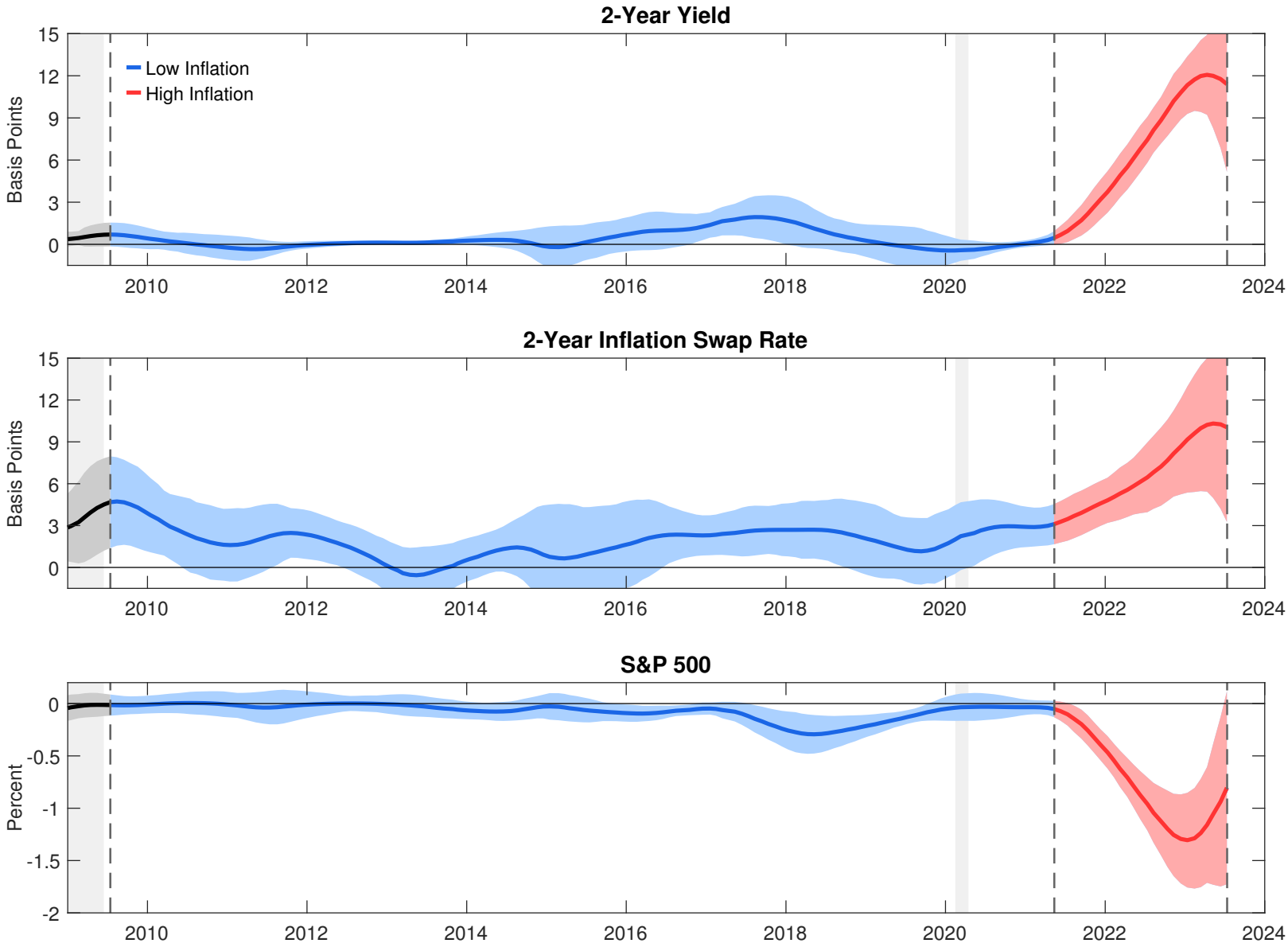
Daily Effects of CPI news on Expectations and Risk Premia

Return



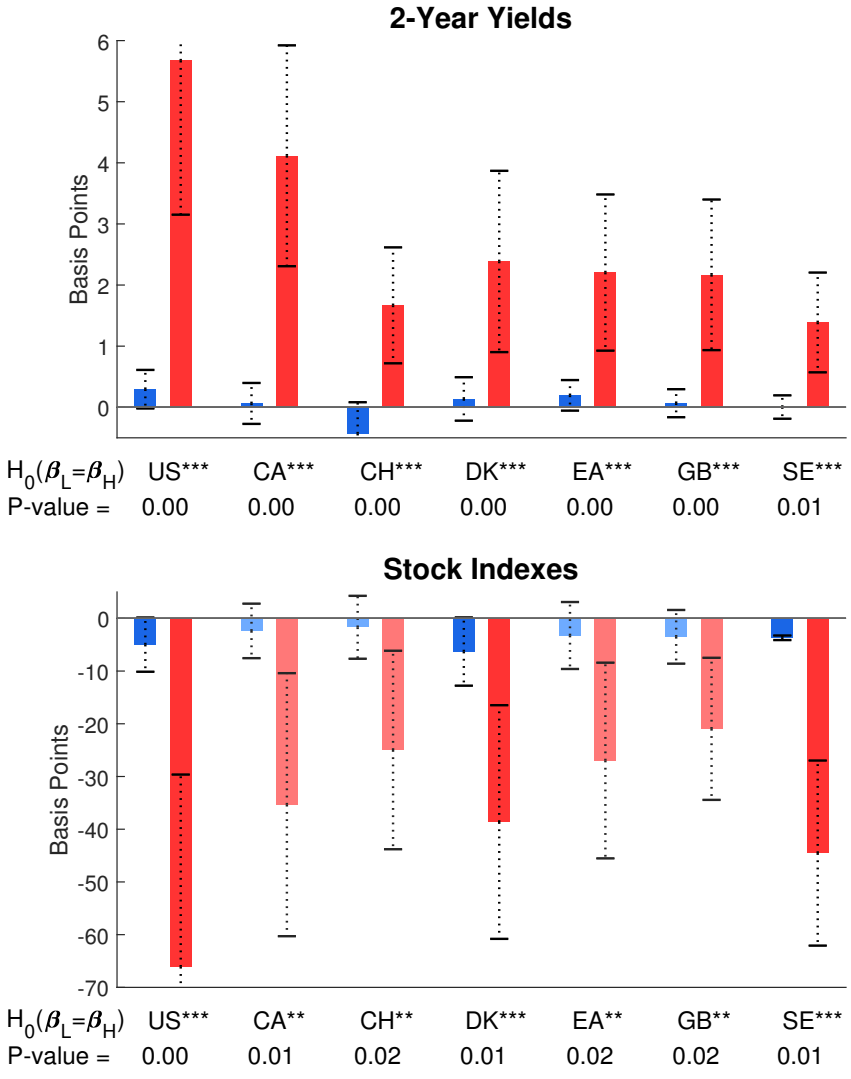
Time-Varying High-Frequency Effects of CPI News

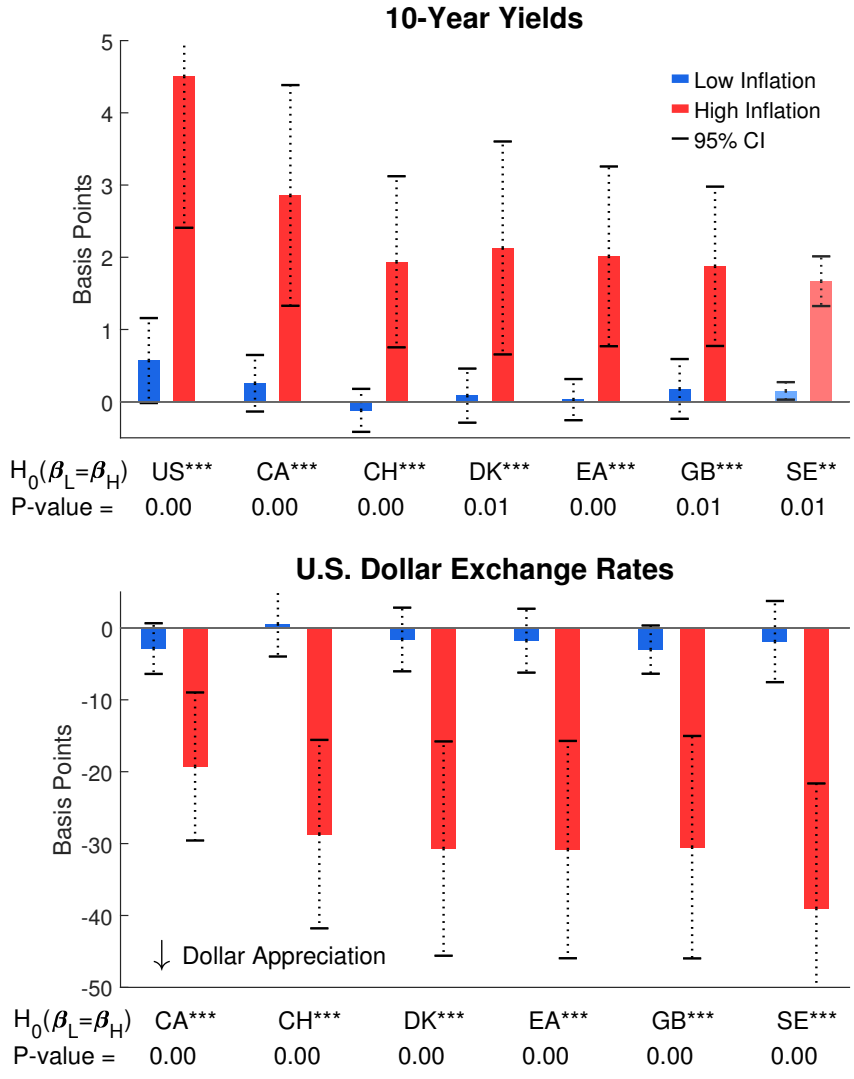
Return



Effects of CPI News on International Markets

Return



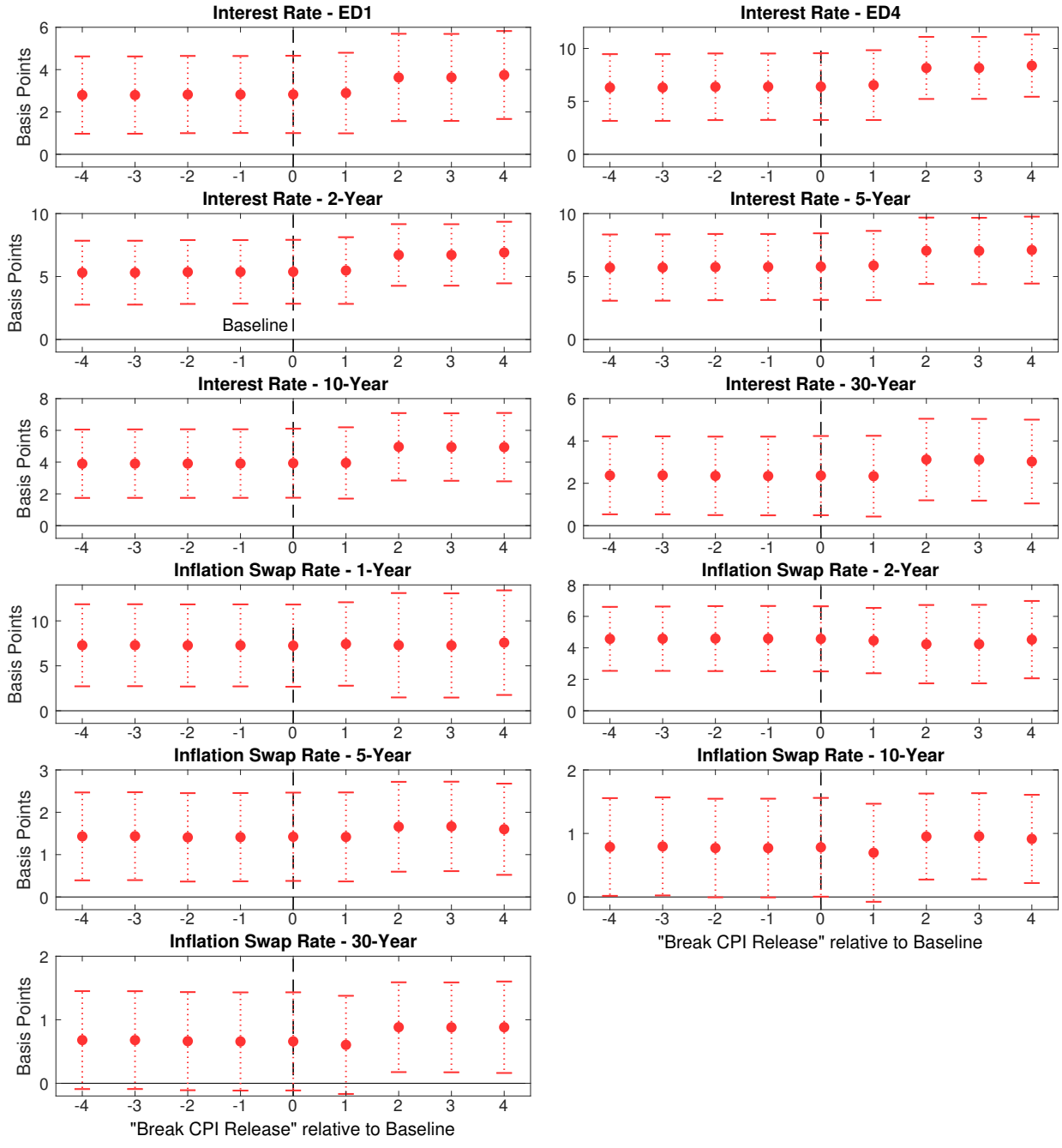


Country Abbreviations

US	United States	CH	Switzerland	EA	Euro Area	SE	Sweden
CA	Canada	DK	Denmark	GB	United Kingdom		

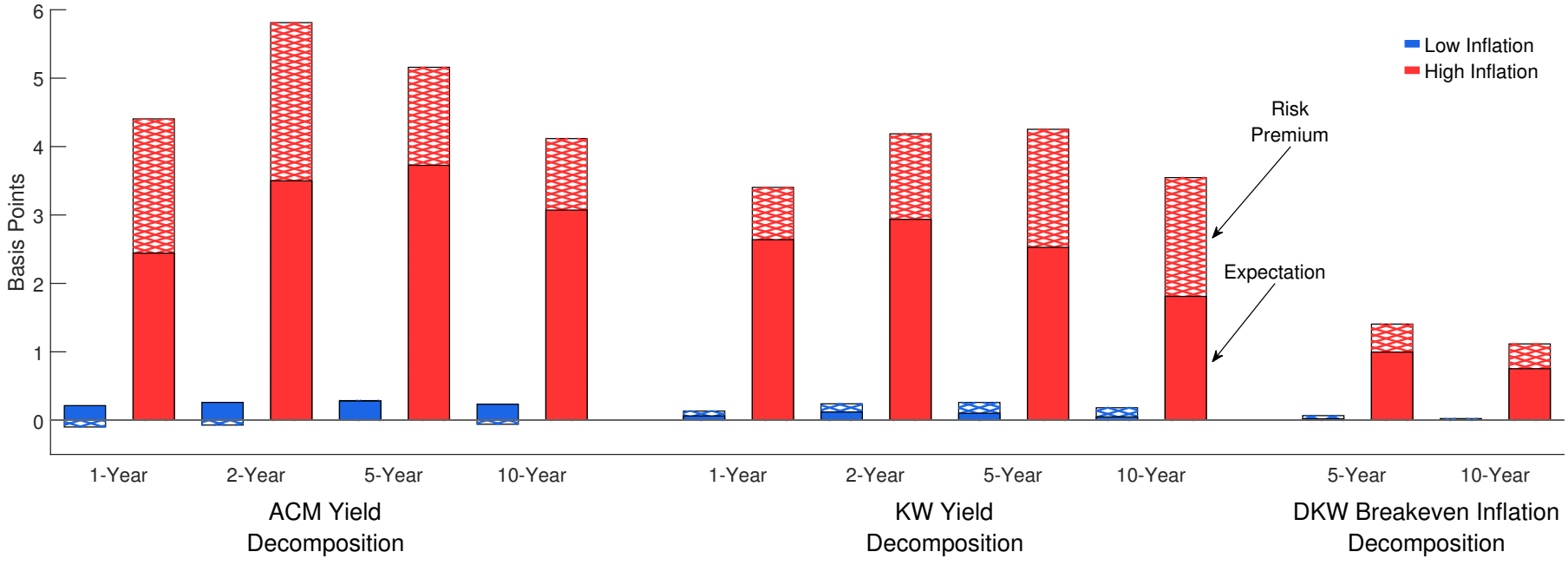
Changes in Sensitivity to CPI releases under High Inflation

Return



Effect of CPI News on Expectations vs. Risk Premia

Return



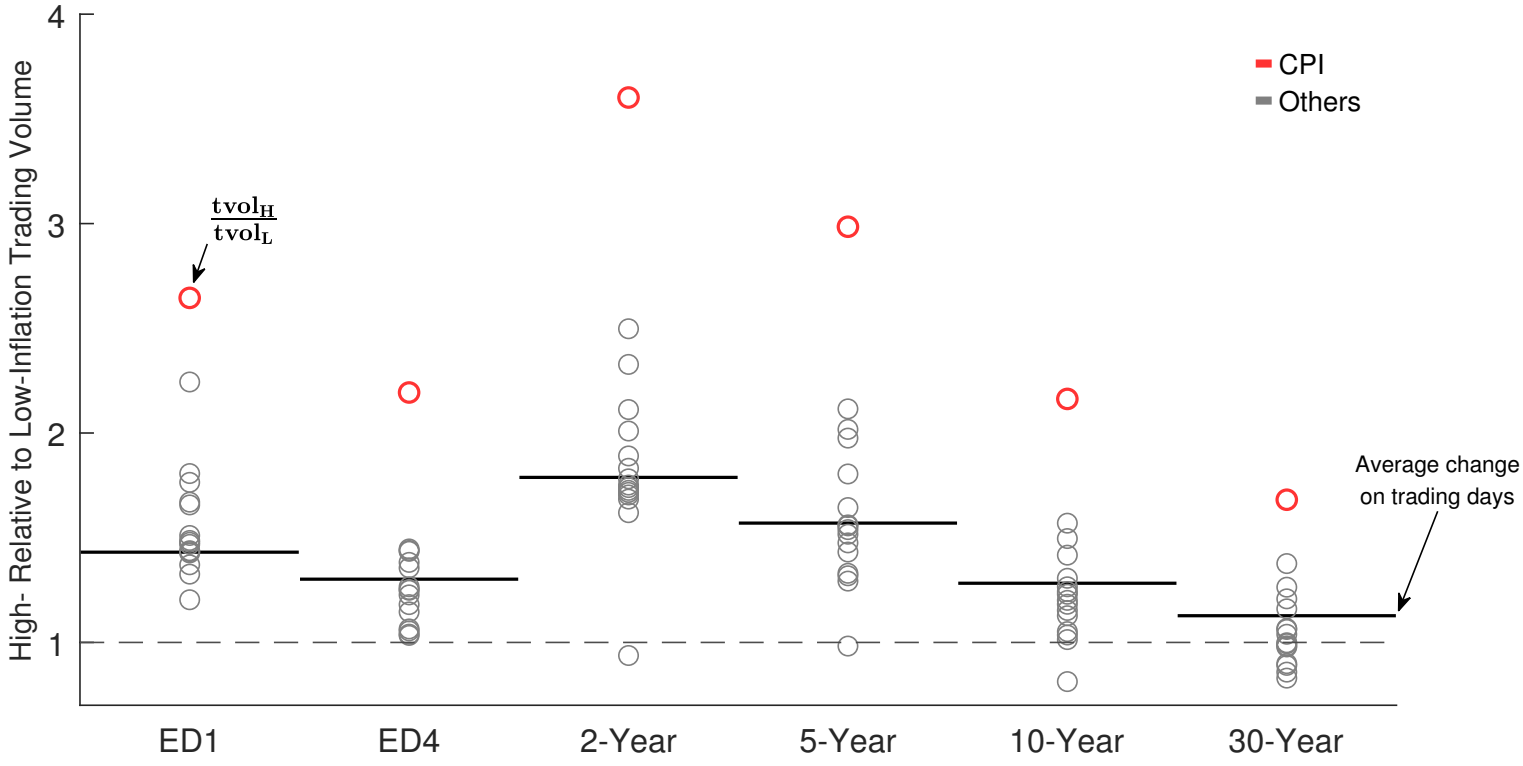
Evidence from Trading Volumes

Return

Approach

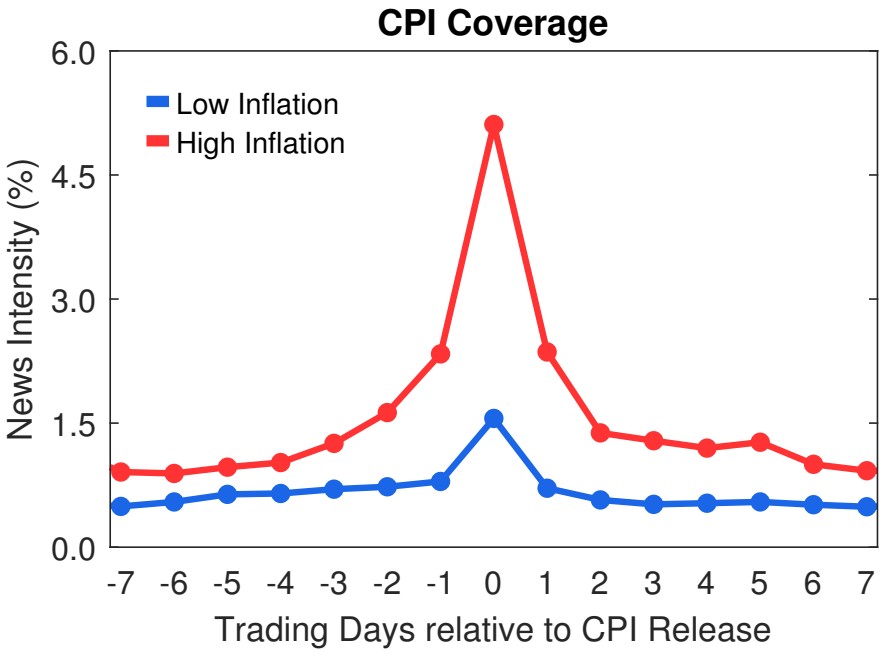
- Trading volume common proxy for investor attention (Barber & Odean, 2008)
- Compare average trading volume around each macro release during low-inflation period ($tvol_L$) and high-inflation period ($tvol_H$)

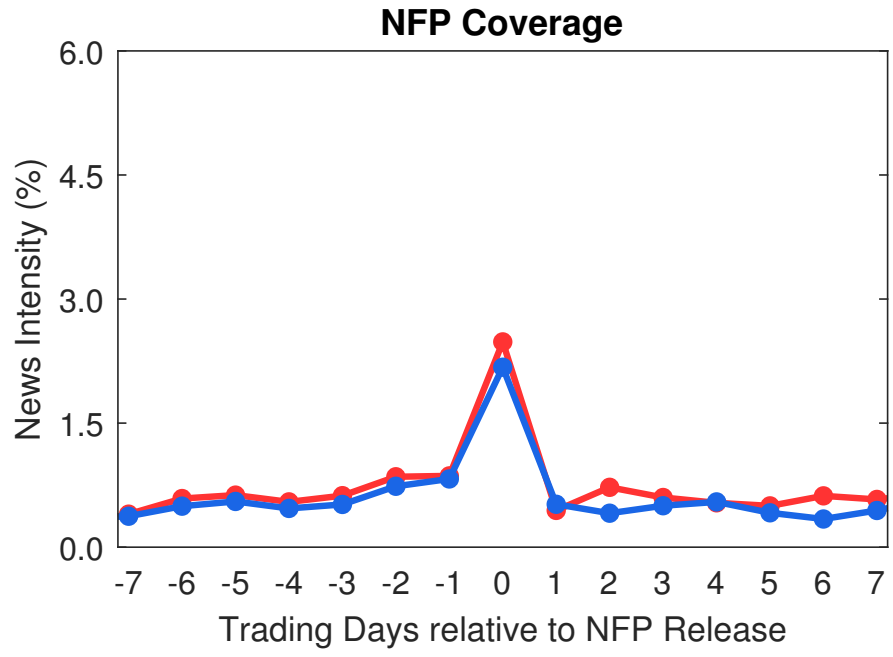
Results



Bloomberg Terminal Coverage around CPI and NFP Releases

Return

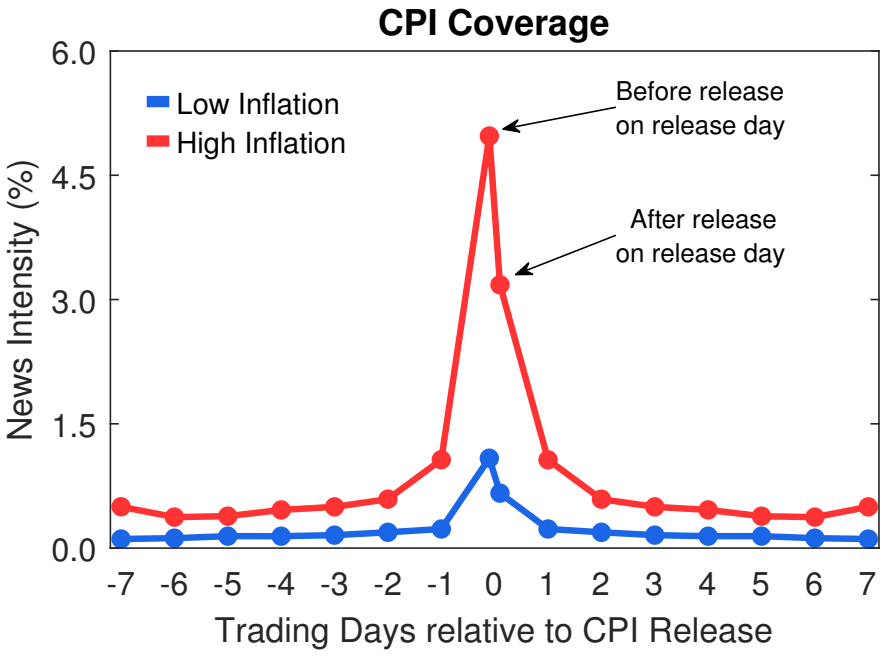


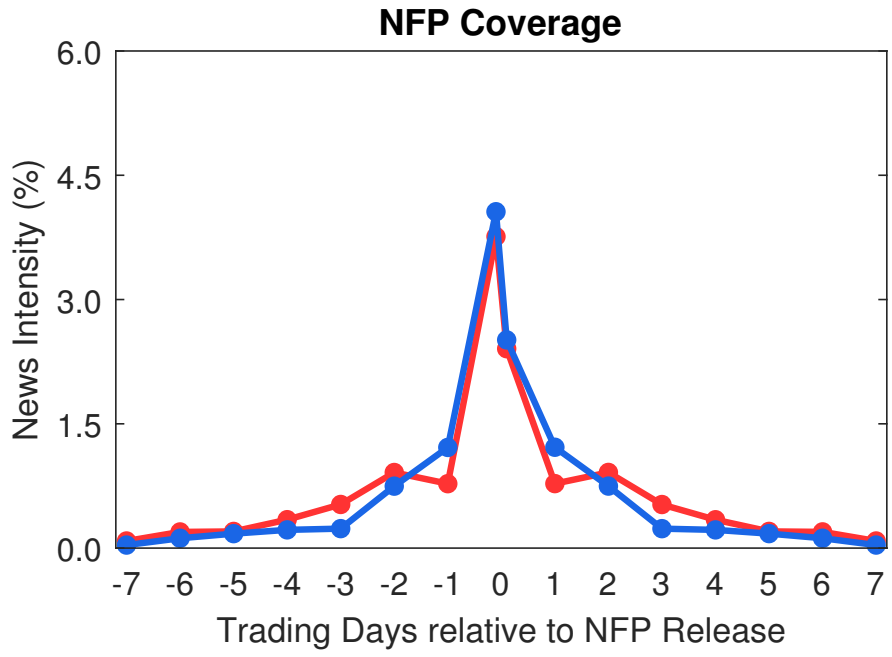


▸ DJNW ▸ GS&MM

Dow Jones Newswires Coverage around CPI and NFP Releases

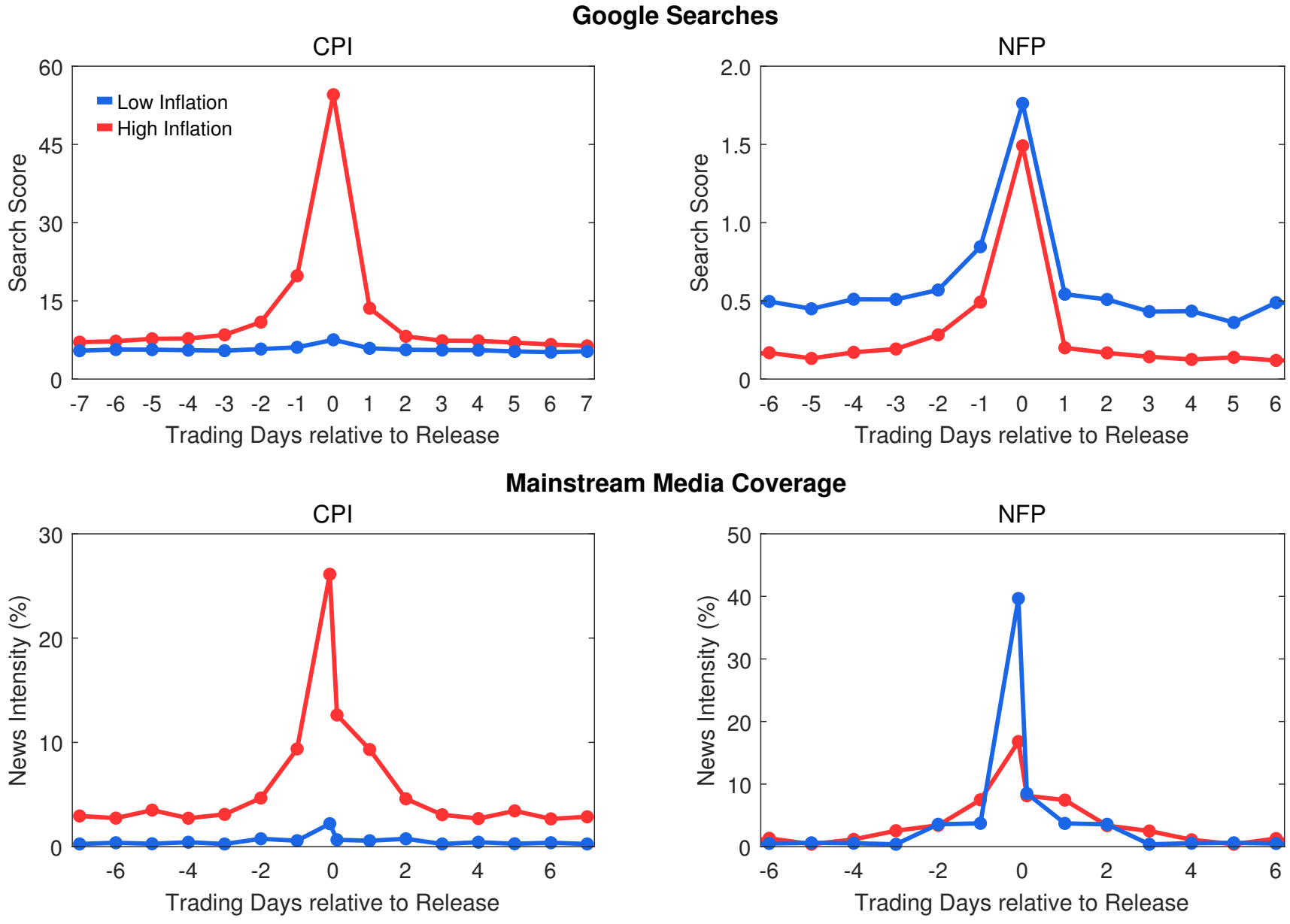
Return





Public Attention around CPI and NFP Releases

Return



Predictive Power of CPI Investor Attention

Return

Dependent Variable (bp)	Interest Rates					Inflation Swap Rates			
	2009–2023				1996–2023	2009–2023			
News	1.31***	1.21***	1.38***	1.23***	0.64***	1.85***	2.05***	1.87***	1.80***
	(0.28)	(0.22)	(0.23)	(0.24)	(0.21)	(0.27)	(0.25)	(0.27)	(0.29)
News × Investor Attention	1.75***	1.52***	0.96***	1.24***	1.04***	1.26***	1.01***	1.39***	0.75
	(0.29)	(0.27)	(0.30)	(0.47)	(0.26)	(0.34)	(0.28)	(0.39)	(0.48)
Inflation Uncertainty									
News × Inflation Volatility		0.47			0.41		0.92*		
		(0.35)			(0.26)		(0.53)		
News × Inflation Disagreement		-0.15			-0.25		-0.67**		
		(0.25)			(0.16)		(0.29)		
News × VIX		0.59**			-0.04		-0.14		
		(0.28)			(0.22)		(0.31)		
Monetary Policy									
News × Monetary Policy Uncertainty			1.08***		0.44			-0.00	
			(0.28)		(0.38)			(0.22)	
News × Perceived Inflation Coefficient			0.34		0.11			0.14	
			(0.34)		(0.21)			(0.37)	
News × Perceived Output Gap Coefficient			-0.74**		-0.07			0.07	
			(0.35)		(0.21)			(0.30)	
Inflation Drivers									
News × Stock-Bond Correlation				0.57	0.39				0.58*
				(0.55)	(0.32)				(0.34)
Other Interactions (incl. Inflation Level)	No	No	No	No	Yes	No	No	No	No
Recession & ZLB Interactions	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.48	0.52	0.55	0.49	0.35	0.25	0.28	0.26	0.26
Observations	996	996	996	996	1788	830	830	830	830

Notes: ***, **, and * indicate significance at the 1, 5, and 10 percent level.

Investor Attention and Magnitude of High-Frequency Shocks

Return

Dependent Variable (stdev)	Nakamura and		Swanson (2021)					
$\lvert Shock \rvert$	Steinnson (2018)		Funds Rate		Forward Guidance		Asset Purchases	
Investor Attention	0.20***	0.17***	0.35***	0.34***	0.11**	0.09*	0.20***	0.22***
	(0.06)	(0.07)	(0.06)	(0.07)	(0.05)	(0.05)	(0.06)	(0.06)
No. of Controls	2	12	2	12	2	12	2	12
Recession & ZLB Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bauer and Swanson	No	Yes	No	Yes	No	Yes	No	Yes
Others	No	Yes	No	Yes	No	Yes	No	Yes
R^2	0.23	0.30	0.33	0.42	0.03	0.10	0.18	0.22
Observations	212	212	188	188	188	188	188	188

Dependent variable (stdev)	Jarocinski and Karadi (2020)				Bauer and	
$\lvert Shock \rvert$	Policy Rate		CB Information		Swanson (2023)	
Investor Attention	0.28***	0.25***	0.13**	0.12*	0.18***	0.14**
	(0.06)	(0.06)	(0.06)	(0.07)	(0.05)	(0.06)
No. of Controls	2	12	2	12	2	12
Recession & ZLB Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Bauer and Swanson	No	Yes	No	Yes	No	Yes
Others	No	Yes	No	Yes	No	Yes
R^2	0.27	0.42	0.06	0.17	0.16	0.23
Observations	168	168	168	168	214	214

Notes: ***, **, and * indicate significance at the 1, 5, and 10 percent level.

Investor Attention and Market Impact of Press Conference

Return

Dependent Variable (bp)	ED1		2-Year		10-Year		S&P 500	
Investor Attention	0.36**	0.41**	0.13***	0.04**	0.11***	0.06***	2.18***	1.28***
	(0.15)	(0.18)	(0.02)	(0.01)	(0.01)	(0.02)	(0.35)	(0.29)
No. of Controls	2	12	2	12	2	12	2	12
Recession & ZLB Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bauer and Swanson	No	Yes	No	Yes	No	Yes	No	Yes
Others	No	Yes	No	Yes	No	Yes	No	Yes
Fed Chair & Minute FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.23	0.29	0.49	0.53	0.39	0.41	0.47	0.53
Observations	3536	3536	3536	3536	3536	3536	3536	3536

Notes: ***, **, and * indicate significance at the 1, 5, and 10 percent level.

Approach

- Use daily data starting in 1996 for yields and 2004 for inflation swaps
- Employ 1-,2-,5-,10- and 30-year maturities
- Estimate pooled specification:

$$x_{m,d}^{(h)} = \alpha_m^{(h)} + \beta^{(h)} s_d^{\text{CPI}} + \gamma^{(h)} \left(s_d^{\text{CPI}} \times \text{IA}_d^{\text{CPI}} \right) + \delta^{(h)} \text{IA}_d^{\text{CPI}} + \varepsilon_{m,d}^{(h)},$$

Results for CPI Release