

Internet Appendix to:  
*“Macroeconomic Attention and Announcement Risk Premia”*

Adlai Fisher, Charles Martineau, Jinfei Sheng\*

December 19, 2021

This Internet Appendix includes additional results that are discussed but not reported in the main manuscript.

**Appendix A: Sample of News Articles**

- We provide examples of news articles from the Wall Street Journal and the New York Times related to macroeconomic fundamentals.

**Appendix B: Fundamental Regression Interpretation**

- We provide further explanation of the interpretation of the coefficients from the fundamental regression, see Equation (4).

**Appendix C: Additional Figures and Tables**

- Figure IA.1 shows the MAI and Fundamentals for the NYT, WSJ, demeaned, and demeaned and standardized MAI.
- Table IA.1 reports the  $AR(q)$  models for the monthly MAI.
- Table IA.2 reports the fundamentals and MAI regressions with squared terms.
- Table IA.3 reports the fundamentals and MAI regressions at the daily frequency.
- Table IA.4 reports the regression results of Employment Situation announcements returns on a four-day pre-announcement attention window for the unemployment MAI.
- Table IA.5 reports the regression results of FOMC announcements returns on a two-day pre-announcement attention window for the monetary MAI.
- Table IA.6 reports the regression results of Employment and FOMC announcements' returns on the Google Trend-based MAI.
- Table IA.7 reports the post-announcement attention following good and bad news conditioned on  $\Delta VIX$ .

---

\*Adlai Fisher is with University of British Columbia. Charles Martineau is with University of Toronto, Jinfei Sheng is with University of California Irvine. Emails: adlai.fisher@sauder.ubc.ca; charles.martineau@utoronto.ca; jinfei.sheng@uci.edu.

## A Sample of News Articles

### Monetary policy

- Greg Ip, Nicholas Kulish and Jacob M. Schlesinger, “New Model: This Economic Slump Is Shaping Up to Be A Different Downturn,” Wall Street Journal, January 5, 2001.  
“One reason is that investors may respond quickly to a cut in Fed interest rates – as they did with Wednesday’s huge rally in response to the surprise reduction of half a percentage point in short-term rates. That instantly eased some of the pain that had spread through the economy. The stock market ‘has become the most important transmission mechanism of monetary policy,’ says Jan Hatzius, senior economist at Goldman Sachs. And that’s one reason, adds Brad DeLong, an economist at the University of California at Berkeley, that ‘Fed moves have a bigger effect now.’”
- Michael Derby, “Yield Curve, Fresh Data Are Unsettling Factors—Back From Holiday Break, Investors Will Get a Look at FOMC’s Dec. 12 Minutes,” Wall Street Journal, January 3, 2006.  
“Not only will the market digest reports on manufacturing and employment data, but the publication of the minutes from the Federal Open Market Committee’s Dec. 13 meeting today also could help settle the debate over whether a yield-curve inversion makes sense... The Fed’s role has become more important to the market after central bankers rejiggered their policy statement at their last gathering to suggest at least one more rise in the federal-funds rate, bringing it to 4.50% from 4.25%, is likely.”

### Unemployment

- Jonathan Fuerbringer, “Greenspan Speaks: Recession’s Over,” New York Times, March 10, 2002.  
“The recovery, he told Congress, ”is already well under way.” His comments followed economic data showing a turnaround in manufacturing and a surge in the service sector. Then, on Friday, the Labor Department said the unemployment rate had slipped and that the number of lost jobs had shrunk to just 50,000. All this was uplifting for stocks and bad for bonds.”
- Harriet Torry, “Weak Hiring Pushes Back Fed’s Plans,” Wall Street Journal, 4 June, 2016.  
“The U.S. job market notched its weakest monthly gain in more than five years, knocking down expectations for a Federal Reserve rate increase and stirring worries about the seven-year-old economic expansion. Employers added 38,000 jobs in May, the weakest performance since September 2010, the Labor Department said Friday. The unemployment rate, obtained from a separate survey of households, fell to 4.7% from 5% in April largely due to a steep decline in labor-force participation.”

## Inflation

- Jonathan Fuerbringer, “Do Deficit Impede Recovery? New Analysis”, New York Times, January 21, 1983.  
“These levels give rise to the persistent fear of renewed inflation with the Federal Reserve being forced, in an effort to keep the economy going, to ease its tight hold on the money supply and push down interest rates so that the deficit is easier to finance and the recovery will not be tripped up.”
- Harriet Torry, “Confident Fed Raises Rates”, Wall Street Journal, 15 December, 2016.  
“The Federal Reserve showed increasing optimism about the U.S. economy and signaled interest rates would rise at a faster pace than previously projected, as it unanimously approved its second rate increase in a decade. At the central bank’s last policy meeting of the year on Wednesday, officials said they would nudge up the federal-funds target rate by a quarter percentage point, to between 0.50% and 0.75% . Fed officials pointed to a strengthening labor market nearing full employment and inflation moving more rapidly toward targeted levels.”

## B Fundamental Regression Interpretation

We provide further explanation of the interpretation of the coefficients from the fundamental regression reported in Table 5. The regressors in Table 5 are changes in fundamentals and absolute values of the same changes in fundamentals. We consider here for any variables  $Y_t$  and  $F_t$  the regressions:

$$Y_t = a_0 + \bar{\beta}|F_t| + \Delta\beta F_t + e_t, \quad (1)$$

$$Y_t = b_0 + \beta^+ F_t^+ + \beta^- F_t^- + u_t, \quad (2)$$

where  $F^+$  and  $F^-$  are respectively the absolute values of the censored positive and negative values of the variable  $F$ , i.e.,  $F_t^+ \equiv F_t \mathbb{1}_{\{F_t > 0\}}$  and  $F_t^- \equiv |F_t| \mathbb{1}_{\{F_t \leq 0\}}$ .

We first observe that regressions (1) and (2) are equivalent in the sense that they will have the same fitted values, estimated residuals ( $\hat{e}_t = \hat{u}_t$ ), and  $R^2$ . We know this because the regressors are linear transforms of one another:

$$F^+ = (|F| + F)/2 \quad (3)$$

$$F^- = (|F| - F)/2. \quad (4)$$

Because of these equalities, we can infer that

$$\bar{\beta} = (\beta^+ + \beta^-)/2 \quad (5)$$

$$\Delta\beta = (\beta^+ - \beta^-)/2, \quad (6)$$

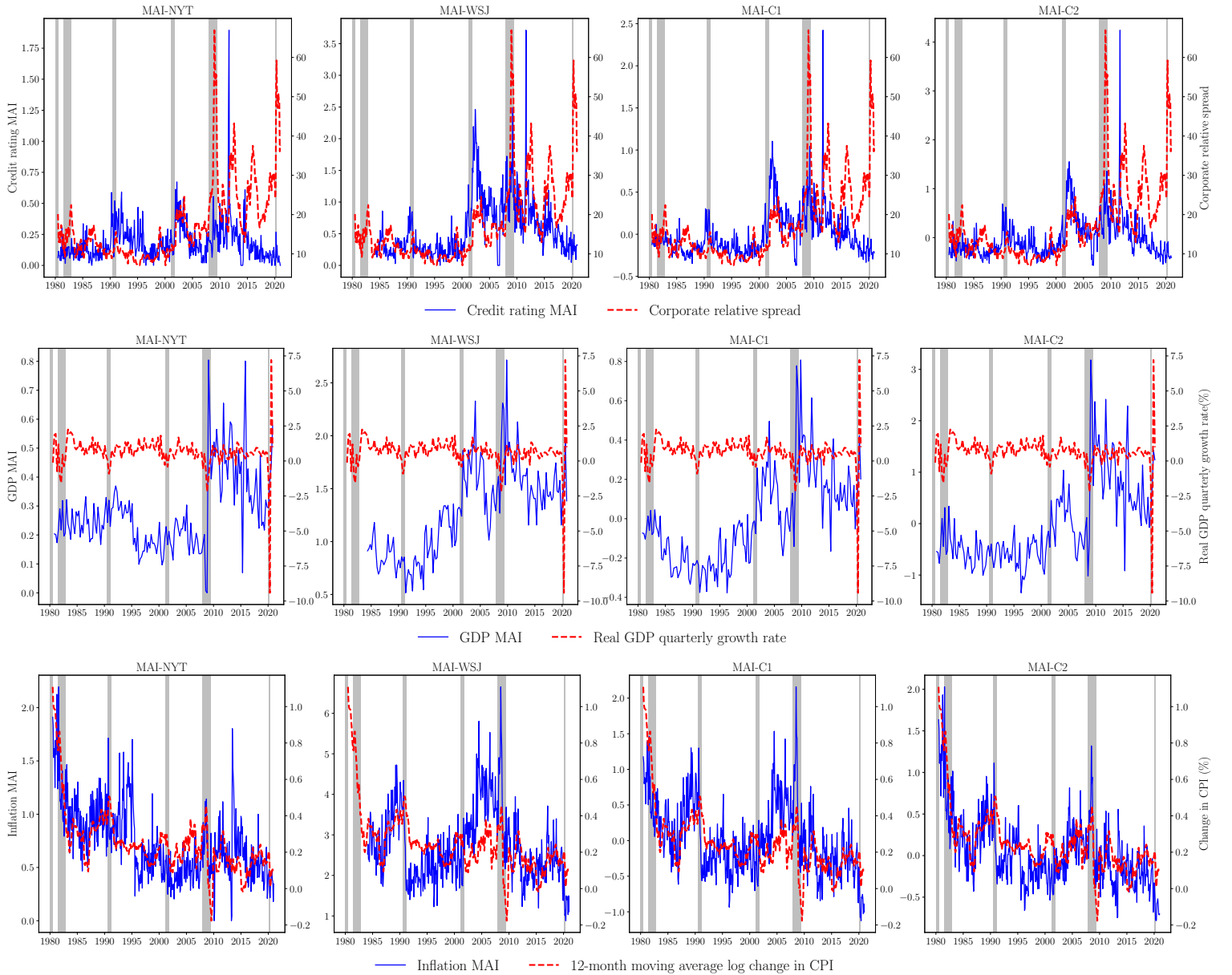
and  $\hat{a}_0 = \hat{b}_0$ . The two regressions are therefore equivalent, but one may prefer one over the other in order to aid interpretation or because the standard errors under one formulation or the other are more amenable to the theory of interest.

Equation (1) using the absolute value and level of  $F_t$  is akin to the functional forms used in our fundamental regressions in Table 5. We can now interpret  $\bar{\beta}$ , the coefficient on the absolute value of  $F_t$ , as the average of  $\beta^+$  and  $\beta^-$ , the coefficients on positive and negative values of  $F_t$ . The coefficient  $\Delta\beta$  on  $F_t$  itself has the interpretation of the difference between the coefficients on positive versus negative values of  $F_t$ , and therefore captures asymmetry. In our study, this formulation fits our interest in measuring the average response to changes in fundamentals of either sign, and the asymmetry in response to positive and negative changes in fundamentals. The regression directly gives standard errors for each of the coefficients, so standard t-tests allow inference about asymmetry in the response to positive and negative changes in fundamentals.

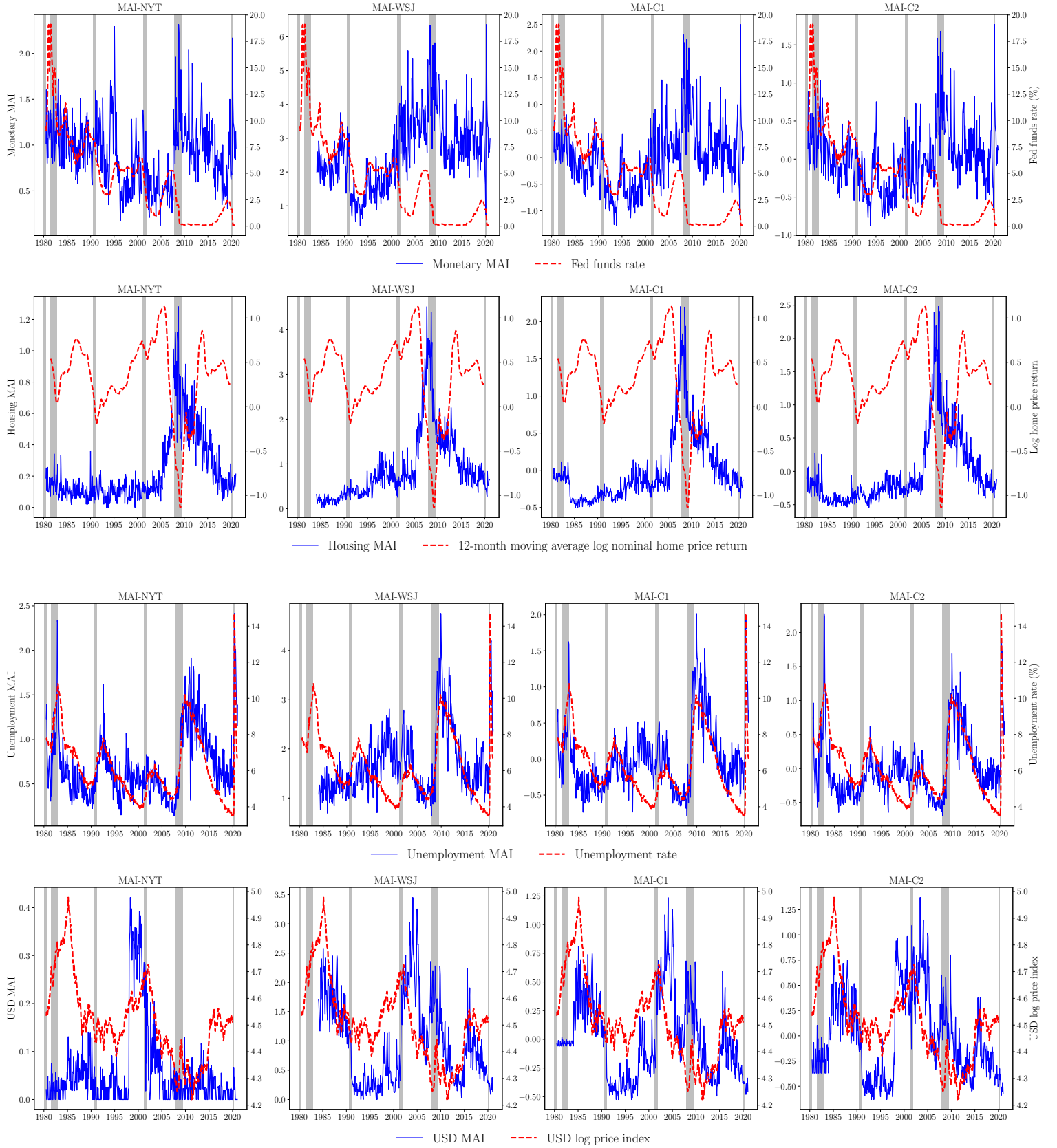
## C Additional Figures and Tables

**Figure IA.1:** Macroeconomic Attention and Macroeconomic Fundamentals

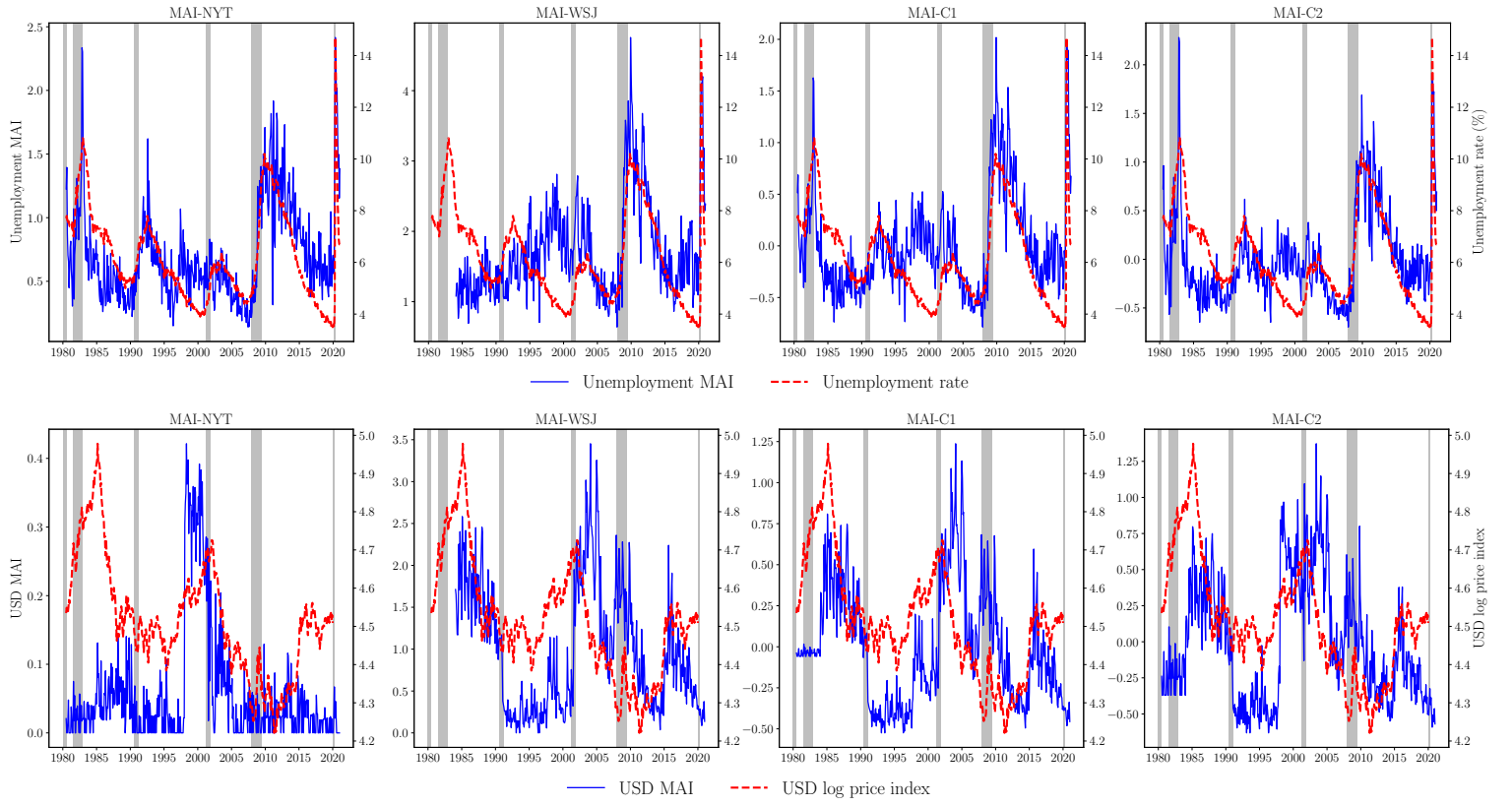
This figure shows the monthly macroeconomic attention indices for the New York Times (MAI-NYT) and the Wall Street Journal (MAI-WSJ), the demeaned composite index (MAI-C1), and the demeaned and standardized composite index (MAI-C2), and their related macroeconomic fundamentals. All figures are at the monthly frequency except for the GDP MAI- Real GDP, which is at the quarterly frequency. Blue lines are macroeconomic attention indices (left y-axis) and dotted red lines (right y-axis) are the related macroeconomic fundamentals (see Table 1 in the main text). MAI units are in percentage. The gray vertical bars are NBER recessions. The sample period for MAI-NYT, MAI-C1, and MAI-C2 is from June 1, 1980 to December 31, 2020 and MAI-WSJ is from January 1, 1984 to December 31, 2020.



**Figure IA.1: Macroeconomic Attention and Macroeconomic Fundamentals (cont.)**



**Figure IA.1:** Macroeconomic Attention and Macroeconomic Fundamentals (cont.)



**Table IA.1:** Monthly MAI AR( $q$ )

This table reports AR( $q$ ) models for the monthly composite macroeconomic attention indices (MAI), controlling for monthly time-fixed effects. We choose the number of lags  $q$  that minimizes the Bayesian Information Criteria (BIC). We report the results up to four lags. DF( $p$ -value) are  $p$ -values for the Dickey-Fuller statistics that test the null of a unit root in each time series. The standard errors are reported in parentheses and are calculated using Newey-West standard errors (12 lags). \*, \*\*, and \*\*\* denote the statistical significance at the 10%, 5%, 1% levels, respectively. The sample period is from June 1, 1980 to December 31, 2020.

	Credit rating (1)	GDP (2)	Housing (3)	Inflation (4)	Monetary (5)	Oil (6)	Unemployment (7)	U.S. dollar (8)
AR(1)	0.48*** (0.07)	0.35*** (0.06)	0.38*** (0.07)	0.55*** (0.04)	0.47*** (0.05)	0.68*** (0.05)	0.69*** (0.08)	0.60*** (0.05)
AR(2)	0.24*** (0.07)	0.27*** (0.07)	0.22*** (0.05)	0.17*** (0.04)	0.07 (0.06)	0.22*** (0.05)	0.20*** (0.07)	0.13** (0.05)
AR(3)	0.13*** (0.04)	0.21*** (0.05)	0.06 (0.07)	0.15*** (0.05)	0.11* (0.06)			-0.00 (0.05)
AR(4)			0.10* (0.06)		-0.06 (0.06)			0.10** (0.05)
	(0.02)	(0.03)	(0.02)	(0.04)	(0.05)	(0.07)	(0.04)	(0.02)
Obs.	484	484	482	484	480	485	485	482
Adj- $R^2$	0.61	0.53	0.89	0.65	0.53	0.77	0.75	0.82
DF ( $p$ -value)	0.00	0.00	0.56	0.00	0.04	0.00	0.00	0.25
$q$ min(BIC)	3	3	5	3	7	2	2	5



**Table IA.2:** Fundamentals and Macroeconomic Attention with Squared Terms

This table reports the results of the following OLS regressions:

$$MAI_{f,t} = \alpha + \beta_1 F_t^{M-Q} + \beta_2 F_t^{Q-Y} + \beta_3 F_t^{Y-4Y} + \beta_4 (F_t^{M-Q})^2 + \beta_5 (F_t^{Q-Y})^2 + \beta_6 (F_t^{Y-4Y})^2 + \varepsilon_t,$$

where  $MAI_{f,t}$  is average attention in month  $t$  for all fundamentals except GDP, where  $t$  indexes quarters.  $F_t^{M-Q}$ ,  $F_t^{Q-Y}$ ,  $F_t^{Y-4Y}$  are defined by equation (3) in the main manuscript. The model specification in column (8) includes both Fed Fund rates and the Federal Reserve balance sheet as independent variables. We control for monthly fixed effects. The standard errors are reported in parentheses and are calculated using Newey-West standard errors (12 lags). \*, \*\*, \*\*\* denote the statistical significance at the 10%, 5%, 1% levels, respectively. The sample period is from June 1, 1980 to December 31, 2020.

<b>MAI:</b>	Credit Rating	GDP	Housing	Inflation	Oil	Unemployment	U.S. Dollar	Monetary	
<b>Fund.:</b>	Credit Spreads	GDP growth rate	House price ret	Infl. rate	Oil price	Unemp. rate	USD index	Fed Fund	Balance sheet
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
$F^{M-Q}$	0.040** (0.018)		-0.526** (0.208)	-0.128 (0.098)	0.019 (0.028)	0.090 (0.148)	-0.008 (0.010)	-0.034 (0.102)	0.053** (0.023)
$F^{Q-Y}$	0.007 (0.005)	0.033 (0.031)	-0.221* (0.119)	0.030 (0.141)	0.027** (0.012)	0.171* (0.089)	-0.019** (0.009)	-0.017 (0.045)	0.006 (0.011)
$F^{Y-4Y}$	-0.001 (0.013)	-0.007 (0.077)	-0.119 (0.142)	2.258*** (0.545)	0.027*** (0.010)	0.120** (0.050)	-0.001 (0.005)	0.033 (0.036)	0.008 (0.005)
$(F^{M-Q})^2$	-0.003** (0.002)		2.043*** (0.257)	-0.051 (0.364)	0.005 (0.005)	0.022 (0.033)	0.021*** (0.008)	0.034 (0.069)	0.000 (0.001)
$(F^{Q-Y})^2$	0.000 (0.000)	0.003 (0.006)	0.242*** (0.085)	0.290** (0.131)	0.001** (0.000)	0.012 (0.011)	0.005*** (0.002)	0.028* (0.016)	-0.000 (0.000)
$(F^{Y-4Y})^2$	0.001 (0.001)	0.060 (0.093)	1.445*** (0.232)	7.382*** (1.267)	0.001*** (0.000)	0.082*** (0.022)	0.002*** (0.000)	0.005 (0.011)	-0.000 (0.000)
Obs.	487	161	472	487	487	487	475	487	
Adj- $R^2$	0.07	0.01	0.64	0.17	0.17	0.49	0.35	0.17	

**Table IA.3:** Fundamentals and Macroeconomic Attention at the Daily Frequency

This table reports the results of the following OLS regressions:

$$MAI_{f,t} = \alpha + \beta_1(F_t - \bar{F}_{t-60}) + \beta_2|F_t - \bar{F}_{t-60}| + \varepsilon_t.$$

where MAI corresponds to the macroeconomic attention index for topic  $f$  on day  $t$ ,  $F$  corresponds to the associated fundamental described in Table 1, and  $\bar{F}$  is the 60-day moving average. The standard errors are reported in parentheses and are calculated using Newey-West standard errors (60 lags). \*, \*\*, \*\*\* denote the statistical significance at the 10%, 5%, 1% levels, respectively. Based on the data availability, the sample period begins on January 1983 in column (1), January 1980 in column (2), January 1986 in column (3), and June 1980 in column (4). We retrieve the credit spreads and USD index data from the FRED website, the effective Fed fund rate from the Bloomberg terminal, and the daily oil price from the WTI website.

	Credit rating Spreads (1)	Monetary Fed fund (2)	Oil Oil price (3)	USD USD index (4)
$F_t - \bar{F}_{t-60}$	-0.099 (0.748)	-0.048 (0.035)	0.036*** (0.013)	-0.032*** (0.010)
$ F_t - \bar{F}_{t-60} $	2.341** (1.017)	0.110*** (0.036)	0.096*** (0.017)	0.098*** (0.013)
Intercept	-0.025 (0.024)	-0.275*** (0.042)	-0.442*** (0.087)	-0.130*** (0.031)
Obs.	9,071	10,392	8,761	10,327
Adj- $R^2$	0.02	0.02	0.09	0.07

**Table IA.4:** Employment Situation Announcements and Returns with Alternative Definition of  $\Delta MAI^{pre}$ 

This table reports the results of the following regressions

$$R_\tau = \alpha + \beta_1 \Delta MAI_\tau^{pre} + \beta_2 \Delta EPU_\tau^{pre} + \beta_3 Surp_\tau + \beta_4 Surp_\tau \times \mathbb{1}_\tau^{NBER} + \varepsilon_\tau \text{ and}$$

$$\Delta VIX_\tau = \alpha + \beta_1 \Delta MAI_\tau^{pre} + \beta_2 \Delta EPU_\tau^{pre} + \beta_3 Surp_\tau + \beta_4 Surp_\tau \times \mathbb{1}_\tau^{NBER} + \varepsilon_\tau.$$

The dependent variables  $R_\tau$  and  $\Delta VIX_\tau$  correspond to the S&P 500 excess returns and the change in VIX on Employment Situation announcement dates, respectively.  $\Delta MAI_\tau^{pre}$  and  $\Delta EPU_\tau^{pre}$  is the pre-announcement change in attention to unemployment and economic political uncertainty, respectively (see Equation (5) in the main text). For this analysis, the pre-announcement window average in MAI consist of the four days before the announcement in Panel A and the beginning of the calendar week to one day before the announcement in Panel B.  $Surp$  is the unemployment surprise based on Boyd, Hu, and Jagannathan (2005), and  $\mathbb{1}_{NBER}$  is dummy variable equal to one if the Employment Situation announcement occurs during a recession and zero otherwise.  $\Delta MAI_\tau^{pre}$ ,  $\Delta EPU_\tau^{pre}$ , and  $Surp$  are standardized. The asymptotic heteroscedasticity-robust standard errors are reported in parentheses. \*, \*\*, \*\*\* denote the statistical significance at the 10%, 5%, 1% levels, respectively.

Panel A. Pre-announcement window beginning four days before the announcement

Dep. var.:	1980-2020								1980-2019 (excl. COVID)	
	$R_\tau$				$\Delta VIX_t$				$R_\tau$	$\Delta VIX_t$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Intercept	0.05 (0.05)	0.01 (0.05)	-0.01 (0.06)	-0.00 (0.06)	-0.33*** (0.08)	-0.25*** (0.09)	-0.25*** (0.09)	-0.27*** (0.09)	0.01 (0.06)	-0.23** (0.10)
$\Delta MAI^{pre}$		0.11** (0.05)	0.13*** (0.05)	0.14*** (0.05)		-0.20** (0.08)	-0.21** (0.08)	-0.21*** (0.08)	0.13*** (0.05)	-0.23*** (0.08)
$\Delta EPU^{pre}$			-0.11* (0.05)	-0.12** (0.06)			0.05 (0.07)	0.09 (0.08)	-0.11** (0.05)	0.09 (0.07)
Surp				0.09*** (0.02)				-0.13** (0.05)	0.08 (0.06)	-0.02 (0.10)
$Surp \times \mathbb{1}^{NBER}$				-1.18* (0.69)				2.73** (1.31)	-0.51** (0.25)	1.02** (0.48)
Obs.	485	485	430	430	371	371	371	371	418	359
Adj- $R^2$	0.00	0.01	0.02	0.03	0.00	0.02	0.01	0.05	0.03	0.06

Panel B. Pre-announcement window at the beginning of the calendar week

Dep. var.:	1980-2020								1980-2019 (excl. COVID)	
	$R_\tau$				$\Delta VIX_t$				$R_\tau$	$\Delta VIX_t$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Intercept	0.05 (0.05)	0.01 (0.05)	-0.01 (0.06)	-0.01 (0.06)	-0.33*** (0.08)	-0.25*** (0.09)	-0.25*** (0.09)	-0.27*** (0.09)	0.01 (0.06)	-0.23** (0.10)
$\Delta MAI^{pre}$		0.12*** (0.05)	0.14*** (0.05)	0.14*** (0.05)		-0.21*** (0.08)	-0.21*** (0.08)	-0.21*** (0.08)	0.14*** (0.05)	-0.24*** (0.08)
$\Delta EPU^{pre}$			-0.10* (0.05)	-0.12** (0.05)			0.06 (0.07)	0.10 (0.08)	-0.10* (0.05)	0.09 (0.07)
Surp				0.09*** (0.02)				-0.13** (0.05)	0.08 (0.06)	-0.02 (0.10)
$Surp \times \mathbb{1}^{NBER}$				-1.18* (0.69)				2.73** (1.31)	-0.51** (0.25)	1.02** (0.48)
Obs.	485	485	430	430	371	371	371	371	418	359
Adj- $R^2$	0.00	0.01	0.02	0.03	0.00	0.02	0.01	0.06	0.03	0.06

**Table IA.5:** FOMC Announcements and Returns with Alternative Definition of  $\Delta MAI^{pre}$ 

This table reports the results of the following regressions

$$R_\tau = \alpha + \beta_1 \Delta MAI_\tau^{pre} + \beta_2 \Delta EPU_\tau^{pre} + \beta_3 Surp_\tau + \varepsilon_t, \text{ in Panel A and}$$

$$\Delta VIX_\tau = \alpha + \beta_1 \Delta MAI_\tau^{pre} + \beta_2 \Delta EPU_\tau^{pre} + \beta_3 Surp_\tau + \varepsilon_t \text{ in Panel B.}$$

The dependent variables  $R_\tau$  and  $\Delta VIX_\tau$  correspond to the S&P 500 excess returns and the change in VIX on Employment Situation announcement dates, respectively.  $\Delta MAI_\tau^{pre}$  and  $\Delta EPU_\tau^{pre}$  is the pre-announcement change in attention to monetary and economic policy uncertainty, respectively (see Equation (5)). For this analysis, the pre-announcement window average in MAI consist of the two days before the announcement in Panel A and the beginning of the calendar week to one day before the announcement in Panel B.  $Surp$  is the Fed Fund surprise based on Bernanke and Kuttner (2005).  $\Delta MAI_\tau^{pre}$ ,  $\Delta EPU_\tau^{pre}$ , and  $Surp$  are rescaled to have a standard deviation of one. The asymptotic heteroscedasticity-robust standard errors are reported in parentheses. \*, \*\*, \*\*\* denote the statistical significance at the 10%, 5%, 1% levels, respectively.

Panel A. Pre-announcement window beginning two days before the announcement

Panel A. Dependent variable - $R_\tau$									
	1994-2020			1994-2006			2007-2020		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Intercept	0.28*** (0.08)	0.17** (0.07)	0.14** (0.07)	0.20** (0.09)	0.19** (0.09)	0.08 (0.10)	0.36*** (0.12)	0.15 (0.11)	0.14 (0.11)
$\Delta MAI^{pre}$		0.30*** (0.11)	0.27** (0.11)		0.03 (0.09)	0.03 (0.09)		0.49*** (0.15)	0.49*** (0.17)
$\Delta EPU^{pre}$			0.08 (0.09)			0.20*** (0.07)			-0.04 (0.16)
Surp			-0.16 (0.10)			-0.15* (0.09)			-0.17 (0.20)
Obs.	214	214	214	103	103	103	111	111	111
Adj- $R^2$	0.00	0.07	0.08	0.00	-0.01	0.05	0.00	0.14	0.14

Panel B. Dependent variable - $\Delta VIX_\tau$									
	1994-2020			1994-2006			2007-2020		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Intercept	-0.55*** (0.11)	-0.35*** (0.09)	-0.32*** (0.09)	-0.49*** (0.09)	-0.48*** (0.09)	-0.39*** (0.09)	-0.60*** (0.19)	-0.22 (0.15)	-0.21 (0.15)
$\Delta MAI^{pre}$		-0.54** (0.22)	-0.51** (0.21)		-0.04 (0.09)	-0.04 (0.09)		-0.92*** (0.34)	-0.91*** (0.34)
$\Delta EPU^{pre}$			-0.10 (0.11)			-0.16*** (0.06)			0.05 (0.17)
Surp			0.16 (0.12)			0.09 (0.07)			0.21 (0.26)
Obs.	214	214	214	103	103	103	111	111	111
Adj- $R^2$	0.00	0.12	0.12	0.00	-0.01	0.02	0.00	0.21	0.21

**Table IA.5:** FOMC Announcements and Returns with Alternative Definition of  $\Delta MAI^{pre}$  (cont.)

Panel B. Pre-announcement window at the beginning of the calendar week

Panel A. Dependent variable - $R_\tau$									
	1994-2020			1994-2006			2007-2020		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Intercept	0.28*** (0.08)	0.20*** (0.07)	0.17** (0.07)	0.20** (0.09)	0.21** (0.09)	0.14 (0.09)	0.36*** (0.12)	0.16 (0.11)	0.15 (0.11)
$\Delta MAI^{pre}$		0.23** (0.10)	0.20** (0.10)		-0.03 (0.09)	0.00 (0.08)		0.46*** (0.16)	0.42*** (0.15)
$\Delta EPU^{pre}$			0.14 (0.10)			0.16** (0.08)			0.05 (0.17)
Surp			-0.16 (0.10)			-0.15* (0.09)			-0.14 (0.20)
Obs.	214	214	214	103	103	103	111	111	111
Adj- $R^2$	0.00	0.04	0.07	0.00	-0.01	0.03	0.00	0.12	0.12

Panel B. Dependent variable - $\Delta VIX_\tau$									
	1994-2020			1994-2006			2007-2020		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Intercept	-0.55*** (0.11)	-0.42*** (0.08)	-0.38*** (0.09)	-0.49*** (0.09)	-0.51*** (0.09)	-0.49*** (0.09)	-0.60*** (0.19)	-0.27* (0.14)	-0.26* (0.14)
$\Delta MAI^{pre}$		-0.36** (0.16)	-0.32** (0.13)		0.07 (0.10)	0.05 (0.09)		-0.76*** (0.27)	-0.66*** (0.21)
$\Delta EPU^{pre}$			-0.23 (0.19)			-0.03 (0.07)			-0.20 (0.29)
Surp			0.17 (0.13)			0.08 (0.07)			0.17 (0.28)
Obs.	214	214	214	103	103	103	111	111	111
Adj- $R^2$	0.00	0.05	0.08	0.00	-0.00	-0.02	0.00	0.14	0.14

**Table IA.6:** Macroeconomic Announcements and Google Trend

This table reports the results of the following regressions

$$R_\tau = \alpha + \beta_1 \Delta Trend_\tau^{pre} + \beta_2 \Delta EPU_\tau^{pre} + \beta_3 Surp_\tau + \varepsilon_t \text{ and}$$

$$\Delta VIX_\tau = \alpha + \beta_1 \Delta Trend_\tau^{pre} + \beta_2 \Delta EPU_\tau^{pre} + \beta_3 Surp_\tau + \varepsilon_t.$$

The dependent variables  $R_\tau$  and  $\Delta VIX_\tau$  correspond to the S&P 500 excess returns and the change in VIX, respectively, on Employment Situation (Panel A) and FOMC announcements dates (Panel B).  $\Delta Trend_\tau^{pre}$  and  $\Delta EPU_\tau^{pre}$  are the pre-announcement change in attention from Google Trend for unemployment (in Panel A) and monetary (in Panel B) and economic policy uncertainty, respectively (defined as  $\Delta MAI_\tau^{pre}$  in Equation (5)).  $Surp$  is the unemployment rate surprise as computed in Boyd et al. (2005) in Panel A and the Fed Fund surprise measure computed as in Bernanke and Kuttner (2005) in Panel B.  $\Delta Trend_\tau^{pre}$ ,  $\Delta EPU_\tau^{pre}$ , and  $Surp$  are rescaled to have a standard deviation of one. We construct daily attention measures about unemployment and FOMC by using the search word “unemployment” and “FOMC” from Google trend, respectively. The asymptotic heteroscedasticity-robust standard errors are reported in parentheses. \*, \*\*, \*\*\* denote the statistical significance at the 10%, 5%, 1% levels, respectively. The sample period is from January 2004 to December 2020.

Panel A. Employment Situation announcements

	$R_\tau$			$\Delta VIX_\tau$		
	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	0.07 (0.08)	0.07 (0.08)	0.08 (0.08)	-0.29** (0.12)	-0.29** (0.12)	-0.28** (0.13)
$\Delta Trend^{pre}$	-0.16* (0.09)	-0.15* (0.09)	-0.13 (0.09)	-0.03 (0.15)	-0.01 (0.15)	-0.05 (0.15)
$\Delta EPU^{pre}$		-0.06 (0.08)	-0.08 (0.08)		-0.11 (0.11)	-0.08 (0.11)
Surp			0.29 (0.35)			0.12 (0.64)
$Surp \times \mathbb{1}^{NBER}$			-0.23 (0.35)			-0.28 (0.66)
Obs.	203	203	203	203	203	203
Adj- $R^2$	0.02	0.01	0.01	-0.00	-0.01	-0.01

Panel B. FOMC announcements

	$R_\tau$		$\Delta VIX_\tau$	
	(1)	(2)	(3)	(4)
Intercept	0.32*** (0.10)	0.30*** (0.11)	-0.57*** (0.16)	-0.54*** (0.16)
$\Delta Trend^{pre}$	0.02 (0.10)	-0.01 (0.11)	-0.19 (0.12)	-0.14 (0.12)
Surp		-0.20 (0.23)		0.25 (0.30)
$\Delta EPU^{pre}$		0.10 (0.14)		-0.21 (0.20)
Obs.	134	134	134	134
Adj- $R^2$	-0.01	0.01	0.00	0.02

**Table IA.7:** Post-Announcement Attention Following Good and Bad News Conditioned on  $\Delta VIX$ 

This table reports the results of the following OLS regressions:

$$MAI^{post,N-pre} = \alpha + \beta_1 \mathbb{1}_{\Delta VIX_\tau > 0} + \varepsilon_\tau \text{ and}$$

$$MAI^{post,N-pre} = \alpha + \beta_1 \Delta VIX_\tau + \varepsilon_\tau.$$

$MAI^{post,N-pre}$  corresponds to the average post-announcement  $MAI$  from the next day after the announcement until  $N$  minus  $MAI^{pre}$ , where  $MAI^{pre}$  is the average 3-day  $MAI$  prior to the announcement. We present the results for  $N$  equal to 3, 10, and 20 days.  $\Delta VIX$  is the announcement date changes in VIX and  $\mathbb{1}_{\Delta VIX_\tau > 0}$  is a dummy equal to one if  $\Delta VIX_\tau > 0$  on the announcement date and zero otherwise. The results for employment and FOMC announcements are reported in Panels A and B, respectively. The asymptotic heteroscedasticity-robust standard errors are reported in parentheses. \*, \*\*, \*\*\* denote the statistical significance at the 10%, 5%, 1% levels, respectively. The sample period for Employment Situation announcements is from June 1, 1980 to December 31 2020 and from January 1 1994 to December 31 2020 for FOMC announcements.

Panel A. Employment announcement						
	$N = 3$		$N = 10$		$N = 20$	
	(1)	(2)	(3)	(4)	(5)	(6)
$\mathbb{1}_{\Delta VIX > 0}$	0.18** (0.08)		0.11* (0.06)		0.10* (0.06)	
$\Delta VIX$		0.07*** (0.03)		0.06*** (0.02)		0.05*** (0.02)
Intercept	0.12*** (0.05)	0.21*** (0.04)	-0.02 (0.03)	0.04 (0.03)	-0.02 (0.03)	0.02 (0.03)
Obs.	371	371	371	371	370	370
Adj- $R^2$	0.01	0.02	0.01	0.02	0.01	0.02

Panel B. FOMC announcement						
	$N = 3$		$N = 10$		$N = 20$	
	(1)	(2)	(3)	(4)	(5)	(6)
$\mathbb{1}_{\Delta VIX > 0}$	0.20* (0.11)		0.19** (0.09)		0.17* (0.09)	
$\Delta VIX$		0.01 (0.04)		0.05** (0.02)		0.07*** (0.02)
Intercept	0.70*** (0.07)	0.77*** (0.06)	-0.06 (0.06)	0.03 (0.05)	-0.16*** (0.06)	-0.07 (0.05)
Obs.	215	215	215	215	214	214
Adj- $R^2$	0.01	-0.00	0.01	0.01	0.01	0.02