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Retail Attention and the FOMC Equity Premium

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ABSTRACT

We build a new measure of investors' attention around FOMC announcements by employing the Google Search Volume Index. Our measure shows that investors' attention contributes and heightens the FOMC equity premium and reduces the volatility around the announcement. Although, we don't claim causality we find that active attention gathers around the announcement the day before, remains constant around the event and drops just afterwards, consistent with the resolution of uncertainty.

Keywords: FOMC Announcements; Equity Premium; Retail Investors Attention.

JEL: E44, E52, G12

Highlights:

- This paper develops a new measure of investors' active attention around macroeconomic announcements.
- Our measure of attention is built on the Google Search Volume Index around the Federal Open Market Committee (FOMC) announcements.
- We find that investors' attention contributes to the FOMC announcement premium.
- Contemporary our attention measure contributes to the reduction of the volatility around the FOMC announcements.

1. INTRODUCTION

Does investors attention (IA) contribute to the equity premium and resolution of uncertainty around Federal Open Market Committee (FOMC) announcement?

This paper proposes a new measure of active IA around FOMC announcements and investigates whether it contributes to the so called FOMC equity premium and the reduction of volatility. Since the seminal work of Lucca and Moench (2015)¹ a large portion of the literature has been investigating the motivation behind this almost 50 basis points excess return realised around U.S. pre-scheduled monetary policy announcement. Lucca and Moench (2015) attribute the existence of the premium to the compensation that investors expect to bear the financial markets risk when important macroeconomic information will be disclosed. Ai and Bansal (2018) develop a theoretical utility model to explain the premium compensation through investors future expected consumption.

Recently, Fisher et al. (2022) find evidence that macroeconomic attention, proxied by the volume of news articles, positively contributes to the equity premium. According to Da et al. (2011) the volume of news articles are defined as a passive measure of IA whereas the Google Search Volume Index (SVI) provides a measure of active IA that positively affects stocks returns and stocks co-movements.² Motivated by the work of Fisher et al. (2022) and the tool proposed by Da et al. (2011), we bridge the gap in the literature and construct the first measure of active IA around FOMC announcements.

¹ Savor and Wilson (2013) firstly reported the equity premium around macroeconomic announcements and Lucca & Moench (2015) focused on monetary policy announcements specifically. This stream of literature found that these days on average carry a high equity premium compared to normal trading days that on average only display a premium of about 2 basis points.

² The SVI index has been used in many financial contexts, however, to the best of our knowledge only Boguth, et al. (2019) partially included the SVI in the FOMC announcements analysis. Boguth et al. (2019), however, only employ the weekly raw data of the SVI.

We employ the active searches of investors around the pre-scheduled FOMC announcements for the 2004-2019 period. We construct the index by purging it from days fixed effects (Reyes, 2018), and potential noise created by searches that could be unrelated to the FOMC announcements and autocorrelation effects. Our findings are in line with the results of Fisher et al. (2022), although differ by a substantial incremental contribution to the premium. Our results, in fact, also suggest that active IA fosters and heightens the excess returns. Additionally, our index negatively affects the variation of volatility around the mentioned event and therefore contributes to the resolution of uncertainty.

We test the explanatory power of our measure of attention along with additional control variables commonly employed in the literature: the National Bureau of Economics research (NBER) variable and the Kuttner Surprise.³ When controlling for these variables we still find compelling evidence of the robustness of our active IA index. Additionally, we investigate whether the 8 yearly pre-scheduled meetings of the FOMC display differences in the level of attention (Cieslack et al., 2019) and find limited evidence of asymmetries due perhaps to financial markets calendar effects. We don't find evidence of a strong international effect (Brusa et al., 2020), probably because attention indexes should be constructed at a country level, instead of the "worldwide" searches that we employ.

The remainder of the paper is as follows: section 2 describes the data and the construction of our IA index. Section 3 reports the main results and additional robustness checks. Section 4 offers our conclusions.

2. DATA AND EMPIRICAL RESEARCH DESIGN

We consider 123 FOMC announcements that occurred between September 2004 and December 2019, and we only include pre-scheduled announcements that occur 8 times per year. The sample was chosen due to data availability⁴ of the Google Search Volume Index (SVI) that we employ to build our measure of attention. To analyse the impact on financial markets we employ the daily S&P500 Index for equity returns and volatility index (VIX), downloaded from CRSP Wharton Dataset, around the FOMC announcements (retrieved from the Federal Reserve website), for the same period.

³ The NBER variable is commonly employed to address whether the FOMC equity premium varies in recession (or non recession) periods given past findings that suggested that the stocks' response to monetary policy is state dependent (Barsista & Kurov, 2008; Kontonikas, et al., 2013). The Kuttner Surprise is based on the seminal work of Kuttner (2001) and Bernanke and Kuttner (2005) and controls for interest rate surprise, which are known to potential affect stock returns around monetary policy announcement days.

⁴ The sample period was chosen based on the availability of the SVI, which notoriously starts in 2004.

2.1. Google Search Volume Index (SVI) Data

The data for the SVI index were collected manually at a daily frequency from 2004 - 2019 using the “worldwide” search option, which includes the search of the entire world. The search term employed to retrieve the SVI data is “FOMC”, the acronym of the Federal Open Market Committee. This search term was chosen as it was also employed by Boguth, et al. (2019), to investigate IA surprises around FOMC announcements that are followed by a press conference. To check whether the SVI data correctly relates the FOMC announcements, we run the following regression:

$$SVI_{(FOMC_t)} = \alpha_t + \beta_t I_{FOMC_t} + \varepsilon_t \quad [1]$$

Where the dependent variable, $SVI_{(FOMC_t)}$, are the downloaded SVI data divided by 100 and the control variable is a dummy variable (I_{FOMC_t}) that takes value 1 on FOMC announcement dates and 0 elsewhere. The results of this regression are presented in Table 1.

| Table 1: SVI analysis | |
|--------------------------------------|---------------------|
| Dependent Variable: $SVI_{(FOMC_t)}$ | |
| | (1) |
| I_{FOMC_t} | 0.726*** (0.021) |
| <i>Const</i> | 0.087*** (0.001) |
| Obs. | 5,844 |
| R^2 | 0.512 |

Notes: The table presents the results of equation [1], to check whether the “FOMC” searches were representative of the searches around the FOMC announcements. The dependent variable $SVI_{(FOMC_t)}$ represents the daily searches of the term “FOMC” throughout the 2004 -2019. The control I_{FOMC_t} is a dummy variable that takes value 1 on the FOMC announcement days and 0 elsewhere. Robust Newey-West Standard Errors are reported in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Sample Period: M9:2004, M12:2019.

Sources: Federal Reserve website (www.federalreserve.gov), Google Trends.

The results show clearly that the $SVI_{(FOMC_t)}$ is strongly related to the FOMC announcement days, averaging about 73% and about 9% on the remaining, which leaves us confident on the search term employed.

Our data frequency is daily⁵, which allows us to fully capture the attention around the announcement day. Daily SVI data are notoriously very noisy, to avoid this issue we

⁵ Boguth et al. (2019) employed the same search term “FOMC” with weekly data.

purge our data series from days fixed effects (*Dw.fixed effect_t*) as in Reyes (2018). Additionally, we control for potential autocorrelation, due to repeated searches in the day prior to the announcement, with a lagged variable ($L.SVI_{(FOMC_t)}$). Finally, we isolate the excess effect of all the average searches across the year that might not be related to the FOMC itself ($Ay.SVI_{(FOMC_t)}$). This analysis is formalized in the following equation:

$$SVI_{(FOMC_t)} = \alpha + \beta_1 L.SVI_{(FOMC_t)} + \beta_2 Ay.SVI_{(FOMC_t)} + \beta_3 Dw.fixed\ effect_t + z_t \quad [2]$$

The residuals (z_t) of the equation are our new IA index, orthogonal to the aforementioned elements and we further match it with the FOMC announcement days sample.⁶

3. RESULTS

3.1. Main Results

We employ the newly created IA index in two different ways: first, we include the index level on the announcement day (t):

$$R_t = \alpha_t + \beta_t IA_t + \gamma_t \mathbf{X}_t + \varepsilon_t \quad [3]$$

Where the dependent variable R_t is represented by the equity premium calculated as the S&P500 1-day return in excess of the daily risk-free rate⁷. Second, we analyse the impact of the change in attention from two days before until the announcement day (ΔIA_t^{pre}).⁸ We employ the level of attention two days before instead of only one day, to fully capture the change in attention and include the day where notoriously attention might gather around the pre-announcement drift (Lucca and Moench, 2015).

Equation [4] formalizes this test.

$$R_t = \alpha_t + \beta_t \Delta IA_t^{pre} + \gamma_t \mathbf{X}_t + \varepsilon_t \quad [4]$$

Additionally, in both equations we include a vector of controls (\mathbf{X}_t) represented by the so called “Kuttner Surprise” (Kuttner, 2001; Bernanke and Kuttner, 2005) and the National Bureau of Economic Research (NBER) variable to control for the business cycle, as it is

⁶ The results of equation [2] are presented in Appendix A and report that the lagged variable, the daily fixed effect and the average yearly searches explain almost 30% of the variability of the SVI index by employing the residuals we should be able to capture the remaining, plausible related to the announcement itself.

⁷ The S&P500 returns are downloaded from CRSP Wharton Dataset. The daily risk-free rate is retrieved from Kenneth French’s webpage (mba.tuck.dartmouth.edu/pages/faculty/ken.french/).

⁸ The change in attention is computed as the difference between the level of attention two days before ($t - 2$) the announcement and the announcement day itself (t): $\Delta IA_t^{pre} = IA_t - IA_{t-2}$

common in the literature⁹. We estimate both equations [3] ad [4] as OLS regressions with robust White standard errors.¹⁰

Table 2 presents the results for equations [3] and [4] in columns 2 and 3. We find that the average daily premium around FOMC announcements (column 1) is about 30 basis points (bps) in line with the findings of Kurov et al. (2021). The impact of IA is strongly positive and statistically significant in both cases, particularly in the delta of the attention (ΔIA_t^{pre}). The change in attention contributes about 7.5 bps to the average equity premium.¹¹ Suggesting that the attention gathers on the previous days ($t - 2$) and fosters¹² the premium.

Our results are robust when controlling for the Kuttner Surprise and the NBER variable. The Kuttner Surprise is found to be statistically insignificant, in line with (Lucca and Moench, 2015; Fisher et al.,2022), whereas the NBER is positively and mildly statistically significant. These results suggest that IA is high regardless, whether there is an interest rate surprise and in different economic states.

Table 2: Main Results - Equity Premium

Dependent Variable: R_t

| | (1) | (2) | (3) | (4) | (5) |
|--------------|---------------------|---------------------|---------------------|---------------------|--------------------|
| <i>Const</i> | 0.291*** (0.110) | 0.292*** (0.108) | 0.367*** (0.122) | 0.402*** (0.180) | 0.236** (0.103) |
| IA_t | | 1.206*** (0.434) | | | |

⁹ Both Lucca & Moench (2015) and Fisher et al. (2022) included both the “Kuttner Surprise” and the NBER variable. The “Kuttner Surprise” is computed following Kuttner (2001) and Bernanke & Kuttner (2005) as the difference between the 30-days Federal Fund Futures price on the FOMC announcement day and the day before (see equation [1], Bernanke and Kuttner, 2005).

¹⁰ The OLS methodology approach was employed by Lucca & Moench (2015) to investigate possible explanations of the FOMC announcement premium (see Table IX, Lucca and Moench, 2015). Subsequently, Brusa et al. (2020) employed the same regression approach to investigate the international announcement premium, and Fisher et al. (2022) employed it specifically with their macroeconomic attention measure.

¹¹ The average ΔIA in our sample is -0.05% (statistically significant at 1%) that attention is high on the days prior to the FOMC announcement and the day itself represents the resolution of the uncertainty. The calculation of the impact is $-\beta \cdot \overline{\Delta IA} = -1.318 \cdot (-0.05\%) = 0.00715$. Moreover, the R^2 when including the IA level and change is more than double than what previously found in the literature (Bernanke & Kuttner, 2005; Lucca & Moench, 2015) and in line with the findings of the Fisher et al. (2022).

¹² As per Fisher et al. (2022) we don't claim causality between our IA index and the FOMC equity premium.

| | | | | | |
|---------------------|-------|-------|---------|---------|----------|
| ΔIA_t^{pre} | | | 1.318** | 1.305** | 1.178*** |
| | | | (0.508) | (0.509) | (0.459) |
| Surp | | | | -0.096 | |
| | | | | (0.286) | |
| NBER | | | | | 1.180* |
| | | | | | (0.598) |
| Obs. | 123 | 123 | 123 | 123 | 123 |
| R ² | 0.000 | 0.099 | 0.104 | 0.105 | 0.188 |

Notes: The table reports the results for equations [3] and [4] in columns 2 and 3. Column 1 presents the results that replicated the analysis of Lucca and Moench (2015), where the only control variable is the constant. The result represents the average equity premium on FOMC announcement days. The dependent variable is the 1-day equity premium of the S&P500 computed as the 1-day return on the index, minus the daily risk-free rate. Column 2 presents the analysis where the control variable IA_t is our IA index on the FOMC announcement day, computed as in equation [2]. Column 3 presents the analysis where the control variable ΔIA_t^{pre} is the delta in our IA index. Column 4 presents the results from equation [4] when controlling also for the Kuttner (2001) and the Bernanke and Kuttner (2005) surprise (“Surp”) as in Fisher et al. (2022). Column 5 presents equation [4] when controlling also for the business cycle with the NBER variable as in Lucca and Moench (2015). Robust White Standard Errors are reported in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Sample Period: M9:2004, M12:2019.

Sources: CRSP-Wharton Database, Kenneth French’s webpage (mba.tuck.dartmouth.edu/pages/faculty/ken.french/), Federal Reserve website (www.federalreserve.gov), Google Trends, FRED Economic Data website (fred.stlouisfed.org/series/USREC), Refinitiv Eikon.

Our results show essentially that the attention around the FOMC announcements is gathered immediately before the announcement and the announcement itself represents the resolution of uncertainty, consistent with the discussion on endogenous attention (Ai and Bansal, 2018; Ai et al., 2022). This last concept is easier to grasp when observing figure 1, which plots the cumulated IA index around FOMC announcements (from 3 days prior to 2 days after) for our entire sample. As it can be seen the attention reaches its peak the day before the announcement (t-1) and remains constant when the news is released, and the information asymmetry is resolved.

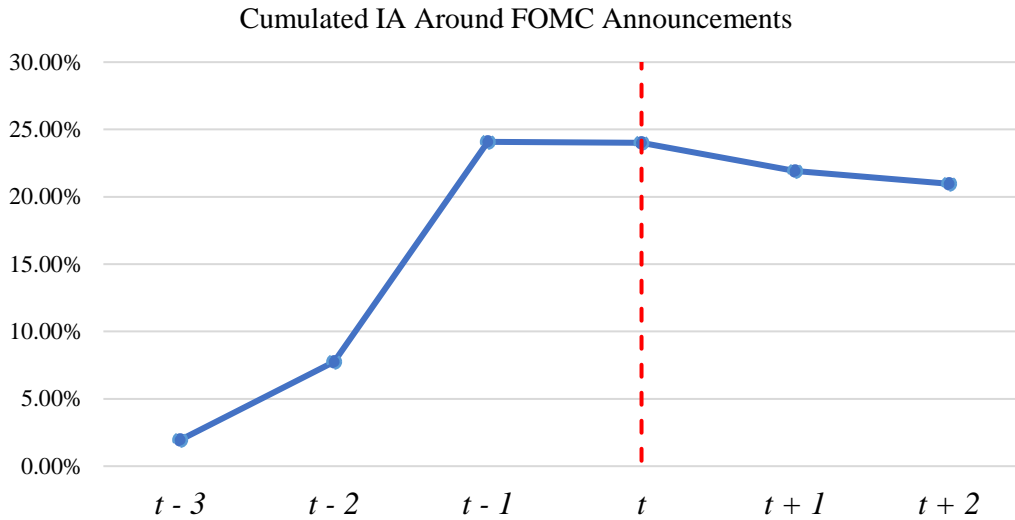


Figure 1: Average IA around FOMC Announcements

The figure presents the average attention, represented by our IA index around FOMC announcement days across our entire sample. The IA was computed as explained in section 2.1. Source: Federal Reserve website (www.federalreserve.gov), Google Trends.

To investigate this resolution of uncertainty, we replicate the analysis by substituting the dependent variable in equations [3] and [4] with the 1-day change of the VIX (ΔVIX_t)¹³. The results of this test are reported in Table 3 and are in line both with our expectations and the literature (Bollerslev et al., 2018; Fisher et al., 2022). We find that IA contributes to an additional reduction of about -0.14% in the VIX index. This suggests that a high level of attention around the announcements contributes to resolving uncertainty and the information asymmetry of retail investors.

¹³ The change in the VIX, which is the implied volatility of the options written on the S&P500, is computed as the difference between the level of the VIX on the FOMC announcement day (t) and the day before: $\Delta VIX_t = VIX_t - VIX_{t-1}$.

| Table 3: Main Results - Volatility Index | | | | | |
|--|----------------------|----------------------|----------------------|----------------------|----------------------|
| Dependent Variable: ΔVIX_t | | | | | |
| | (1) | (2) | (3) | (4) | (5) |
| <i>Const</i> | -0.539*** (0.170) | -0.540*** (0.164) | -0.690*** (0.191) | -0.807*** (0.289) | -0.620*** (0.195) |
| IA_t | | -2.379*** (0.705) | | | |
| ΔIA_t^{pre} | | | -2.634*** (0.827) | -2.589*** (0.821) | -2.560*** (0.838) |
| Surp | | | | 0.328 (0.436) | |
| NBER | | | | | -0.623 (0.729) |
| Obs. | 123 | 123 | 123 | 123 | 123 |
| R^2 | 0.000 | 0.147 | 0.157 | 0.163 | 0.166 |

Notes: The table presents the results related to equations [3] and [4] when the dependent variable is represented by the 1-day change in the VIX around the FOMC announcement. Column 1 replicates the analysis presented by Fisher et al. (2022) and investigates the average change on the VIX around the FOMC announcement. Column 2 presents the analysis where the control variable IA_t is our IA index on the FOMC announcement day, computed as in equation [2]. Column 3 presents the analysis where the control variable ΔIA_t^{pre} is the delta in our IA index. Column 4 presents the results from equation [4] when controlling also for the Kuttner (2001) and the Bernanke and Kuttner (2005) surprise (“Surp”) as in Fisher et al. (2022). Column 5 presents equation [4] when controlling also for the business cycle with the NBER variable as in Lucca and Moench (2015). Robust White Standard Errors are reported in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Sample Period: M9:2004, M12:2019.

Sources: CRSP-Wharton Federal Reserve website (www.federalreserve.gov), Google Trends. FRED Economic Data website (fred.stlouisfed.org/series/USREC), Refinitiv Eikon.

3.2. Additional Analysis and International Evidence

Our results are robust when controlling for each of the 8 FOMC pre-scheduled meetings that occur in different times of the year. Following the work of Cieslak et al. (2019) we investigate whether specific announcements display different levels of attention. The results of this test are reported in Appendix B. We find that the 2nd meeting, which normally occurs in March is associated with a higher level of attention. On the contrary, the 5th meeting is associated with a reduction in attention. This last result could be due to year calendar effects. Market participation and also likely attention are notoriously higher in the first half of the year (January effect) and lower in the second half of the year (August – Halloween effect).

Additionally, following the work of Brusa et al. (2020), we test whether IA contributes to the premium realised on international financial markets during FOMC announcements. We retrieve the Datastream Global Indexes and substitute them as dependent variable in equation [4]. We were able to partially replicate the analysis of Brusa et al. (2020), but to

a lesser magnitude. The FOMC international premia are smaller in magnitude and statistical significance, perhaps due to the higher predictability of the content of the announcements as reported by Kurov et al. (2021). All together, we don't find a substantial contribution of the "worldwide" IA to the FOMC international premia. This last result could be attributed to an excessive generalization of the attention index.¹⁴

4. CONCLUSIONS

We propose a new measure of retail investors' attention built on the Google Search Volume Index. We provide empirical evidence that the attention of investors contributes and heightens the FOMC premia. When attention is high the premium related to the announcement is on average 10 bps higher. Similarly, higher attention contributes to the reduction of the volatility as the uncertainty and information asymmetry on the FOMC announcement date resolves. Our results are robust when controlling for the state of the business cycle and interest rate surprises. Future research should develop country level attention indexes to fully predict and potential exploit announcements' premia.

¹⁴ Future research could explore a to build tailored attention measures for each country, which might lead to the identification of substantial premia and profitable trading strategies as in Cieslack et al. (2019).

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Appendix

APPENDIX A - RESULTS OF EQUATION [2] – PURGING THE SVI DATA

| Table A.1: Purging the SVI data | |
|--------------------------------------|---------------------|
| | (1) |
| L.SVI _(FOMC_t) | 0.380*** (0.019) |
| Ay.SVI _(FOMC_t) | 0.006*** (0.000) |
| Daily FE | YES |
| Obs. | 5,843 |
| R ² | 0.265 |

Note: The table presents the results for equation [2] employed to purge our SVI data series from autocorrelation effects, by including its first lag (L.SVI_(FOMC_t)), the average searches of the term “FOMC” per year (Ay.SVI_(FOMC_t)) and days-of-the-week fixed effect. The dependent variable is the daily raw searches of the term “FOMC”, divided by 100. The term was chosen following the work of Boguth et al. (2019) and Fisher et al. (2022). Robust Newey–West Standard Errors are reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Sample Period: M9:2004, M12:2019. Sources: Google Trends.

APPENDIX B - ADDITIONAL RESULTS – CONTROLLING FOR TIME

| Dependent Variable: R_t | | | | | | | | |
|------------------------------------|---------------------|--------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| <i>Const</i> | 0.383*** (0.132) | 0.303** (0.134) | 0.369*** (0.131) | 0.450*** (0.141) | 0.323** (0.124) | 0.368*** (0.132) | 0.382*** (0.134) | 0.363*** (0.119) |
| ΔIA_t^{pre} | 1.328** (0.555) | 0.999* (0.580) | 1.382*** (0.526) | 1.658*** (0.564) | 1.225** (0.535) | 1.316** (0.555) | 1.376** (0.588) | 1.261*** (0.476) |
| $I_{meeting1}$ | -0.125 (0.350) | | | | | | | |
| $I_{meeting1} * \Delta IA_t^{pre}$ | -0.066 (1.386) | | | | | | | |
| $I_{meeting2}$ | | 0.415 (0.342) | | | | | | |
| $I_{meeting2} * \Delta IA_t^{pre}$ | | 2.040** (0.819) | | | | | | |
| $I_{meeting3}$ | | | -0.095 (0.249) | | | | | |
| $I_{meeting3} * \Delta IA_t^{pre}$ | | | -0.597 (1.594) | | | | | |
| $I_{meeting4}$ | | | | -0.149 (0.356) | | | | |
| $I_{meeting4} * \Delta IA_t^{pre}$ | | | | -4.877* (2.521) | | | | |
| $I_{meeting5}$ | | | | | 0.383 (0.479) | | | |
| $I_{meeting5} * \Delta IA_t^{pre}$ | | | | | 0.786 (1.678) | | | |
| $I_{meeting6}$ | | | | | | -0.006 (0.353) | | |
| $I_{meeting6} * \Delta IA_t^{pre}$ | | | | | | 0.011 (1.408) | | |
| $I_{meeting7}$ | | | | | | | -0.156 (0.246) | |
| $I_{meeting7} * \Delta IA_t^{pre}$ | | | | | | | -0.520 (0.910) | |
| $I_{meeting8}$ | | | | | | | | 0.011 (0.444) |
| $I_{meeting8} * \Delta IA_t^{pre}$ | | | | | | | | 0.708 (2.847) |
| Obs. | 123 | 123 | 123 | 123 | 123 | 123 | 123 | 123 |
| R ² | 0.105 | 0.127 | 0.105 | 0.14 | 0.113 | 0.104 | 0.106 | 0.105 |

Notes: The table presents the results of equation [4], where control for the different eight FOMC announcements and our measure of change in attention ΔIA_t^{pre} . Eight dummy variables ($I_{meeting t}$) are created that take value 1 when the meeting is the first (column 2), the second (column 3), the third (column 4), the fourth (column 5), the fifth (column 6), the sixth (column 7), the seventh (column 8), the eight (column 9). We also include interaction between the dummies and our measure of change in attention. The dependent variable is the 1-day equity premium of the S&P500 computed as the 1-day return on the index, minus the daily risk-free rate. Robust White Standard Errors are reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Sample Period: M9:2004, M12:2019.

Sources: CRSP-Wharton Database, Kenneth French's webpage
(mba.tuck.dartmouth.edu/pages/faculty/ken.french/), Federal Reserve website
(www.federalreserve.gov), Google Trends. FRED website
(<https://fred.stlouisfed.org/series/USREC>)

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APPENDIX C - ADDITIONAL RESULTS – INTERNATIONAL EVIDENCE

Table C.1: International Evidence

| Panel A: Europe | | | | | | |
|-------------------------|-----------|-------------|--------------|-------------|-----------|----------|
| | Austria | Belgium | Denmark | Finland | France | Germany |
| Const | 0.352** | 0.267** | 0.247** | 0.328** | 0.232* | 0.206* |
| | [0.139] | [0.116] | [0.121] | [0.139] | [0.128] | [0.121] |
| ΔIA_t^{pre} | 0.486 | 0.481 | 0.268 | 0.334 | 0.292 | 0.627 |
| | [0.600] | [0.552] | [0.567] | [0.661] | [0.549] | [0.502] |
| R ² | 0.054 | 0.037 | 0.028 | 0.044 | 0.031 | 0.035 |
| | Greece | Ireland | Italy | Netherlands | Norway | Poland |
| Const | 0.420* | 0.294* | 0.280* | 0.180* | 0.355** | 0.248** |
| | [0.244] | [0.168] | [0.158] | [0.101] | [0.162] | [0.125] |
| ΔIA_t^{pre} | 1.327 | -0.625 | 0.555 | 0.436 | 0.543 | 0.237 |
| | [1.229] | [0.907] | [0.675] | [0.435] | [0.727] | [0.645] |
| R ² | 0.026 | 0.035 | 0.031 | 0.033 | 0.041 | 0.03 |
| | Portugal | Spain | Sweden | Switzerland | UK | |
| Const | 0.190* | -0.094 | 0.357** | 0.187 | -0.0421 | |
| | [0.114] | [0.083] | [0.172] | [0.114] | [0.059] | |
| ΔIA_t^{pre} | 0.553 | 0.229 | 0.558 | 0.49 | 0.205 | |
| | [0.502] | [0.344] | [0.698] | [0.507] | [0.241] | |
| R ² | 0.031 | 0.021 | 0.036 | 0.032 | 0.013 | |
| Panel B: North America | | | | | | |
| Canada | | | | | | |
| Const | 0.204 | | | | | |
| | [0.131] | | | | | |
| ΔIA_t^{pre} | 0.435 | | | | | |
| | [0.528] | | | | | |
| R ² | 0.017 | | | | | |
| Panel C: Asia - Pacific | | | | | | |
| | Australia | Hong Kong | Japan | New Zealand | Singapore | |
| Const | 0.267** | 0.126 | 0.137 | 0.195* | 0.196** | |
| | [0.116] | [0.091] | [0.144] | [0.108] | [0.076] | |
| ΔIA_t^{pre} | 0.481 | -0.012 | 1.327 | 0.842* | 0.278 | |
| | [0.552] | [0.539] | [1.349] | [0.482] | [0.514] | |
| R ² | 0.037 | 0.016 | 0.017 | 0.049 | 0.044 | |
| Panel D: Emerging | | | | | | |
| | Argentina | Brazil | Chile | Korea | Indonesia | Malaysia |
| Const | 0.096 | 0.323 | -0.016 | 0.269 | 0.315*** | 0.210*** |
| | [0.125] | [0.196] | [0.060] | [0.197] | [0.107] | [0.062] |
| ΔIA_t^{pre} | 0.386 | 0.838 | 0.643*** | -0.110 | 0.547 | 0.629* |
| | [0.588] | [0.678] | [0.214] | [1.035] | [0.736] | [0.319] |
| R ² | 0.006 | 0.022 | 0.049 | 0.012 | 0.058 | 0.099 |
| | Mexico | Philippines | South Africa | Taiwan | Thailand | Turkey |
| Const | 0.319** | 0.264** | 0.525*** | 0.201** | 0.201** | 0.537*** |
| | [0.146] | [0.105] | [0.164] | [0.083] | [0.098] | [0.167] |
| ΔIA_t^{pre} | 0.957 | -0.037 | 1.292* | 0.231 | 0.833* | 0.921 |
| | [0.603] | [0.453] | [0.659] | [0.563] | [0.425] | [0.901] |
| R ² | 0.047 | 0.052 | 0.08 | 0.034 | 0.051 | 0.075 |

Note: The table presents the results for equation [4] where the dependent variable is represented by the

1-day return of international equity indexes. Panel A includes the results for international equity indexes related to Europe, Panel B related to North America, Panel C related to the Asia – Pacific region and Panel D related to the Emerging countries equity indexes. The control variable is represented by our measure of change in attention ΔIA_t^{pre} . Robust White Standard Errors are reported in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Sample Period: M9:2004, M12:2019.

Sources: Thomson Reuters – Eikon Global Indexes. Federal Reserve website (www.federalreserve.gov), Google Trends.

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