



European Equities Show a Drift After Monetary Policy Announcements by the ECB

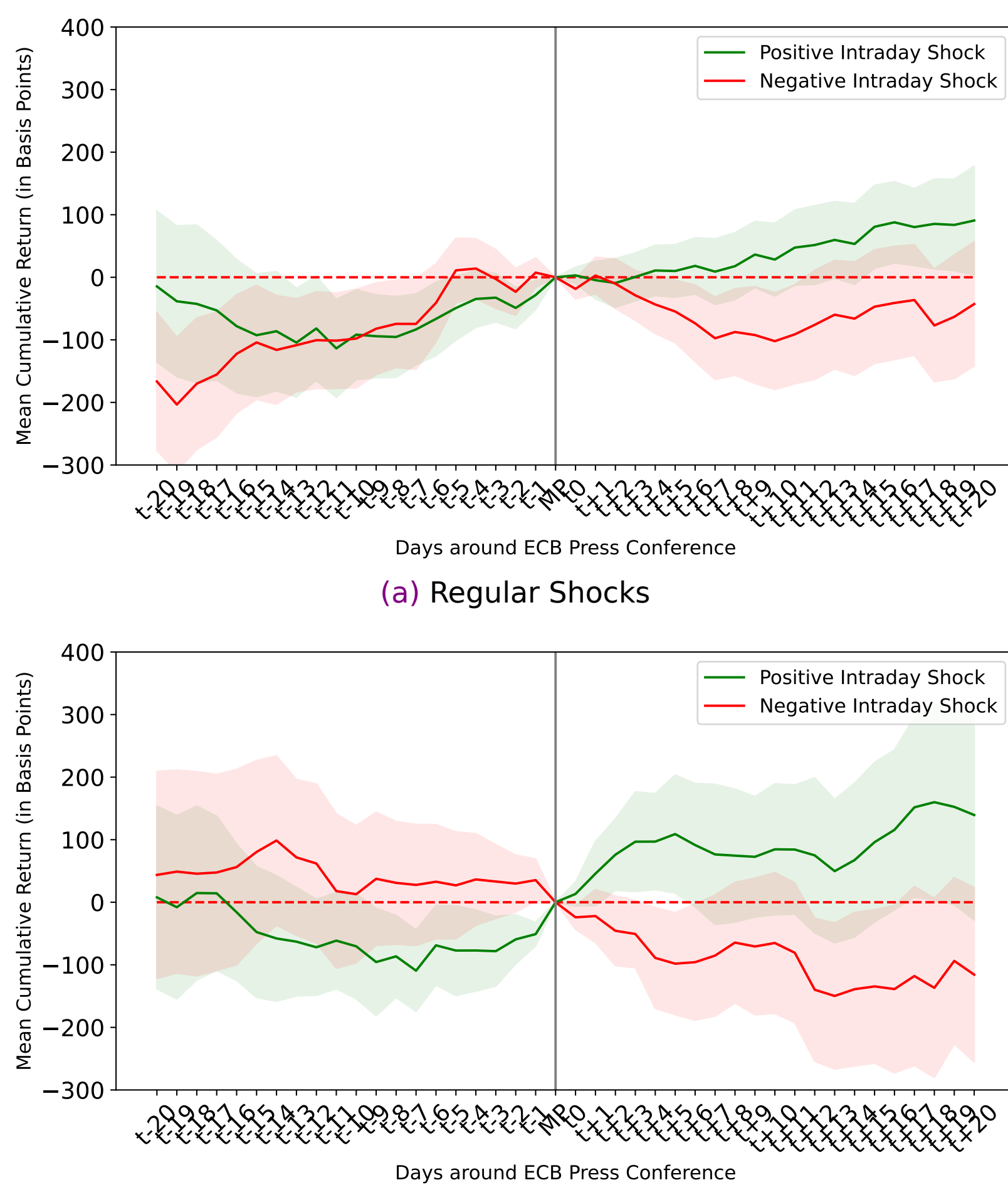


Figure 1. Cumulative Net Return after Press Conference Window

- Price drift after European Central Bank (ECB) announcements for up to 20 days.
- Direction of drift depends on intraday price reaction during **press conference**.
- Stronger drift in response to information about the **real economy**.
- Equity price drift after “information shocks”: **139 (-116) basis points for positive (negative) shocks**.
- Investor disagreement** amplifies drift as argued in [1] and [3].
- European **government bond** prices exhibit a similar drift.

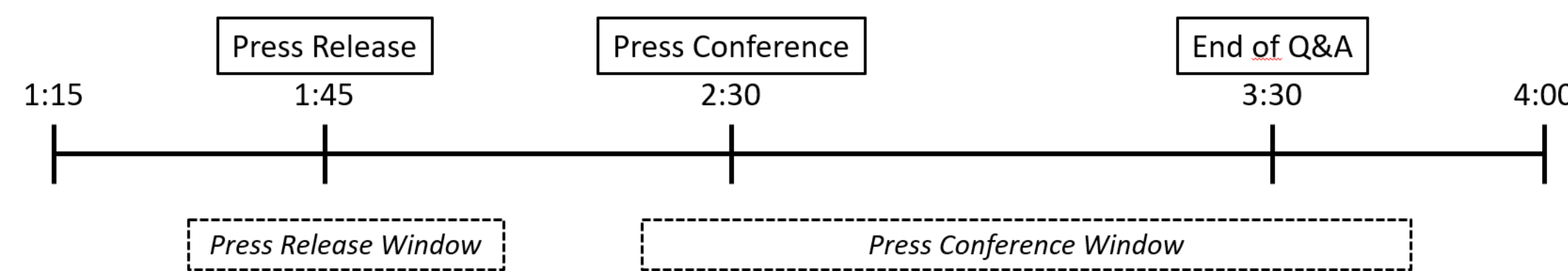


Figure 2. Timeline of ECB Announcement

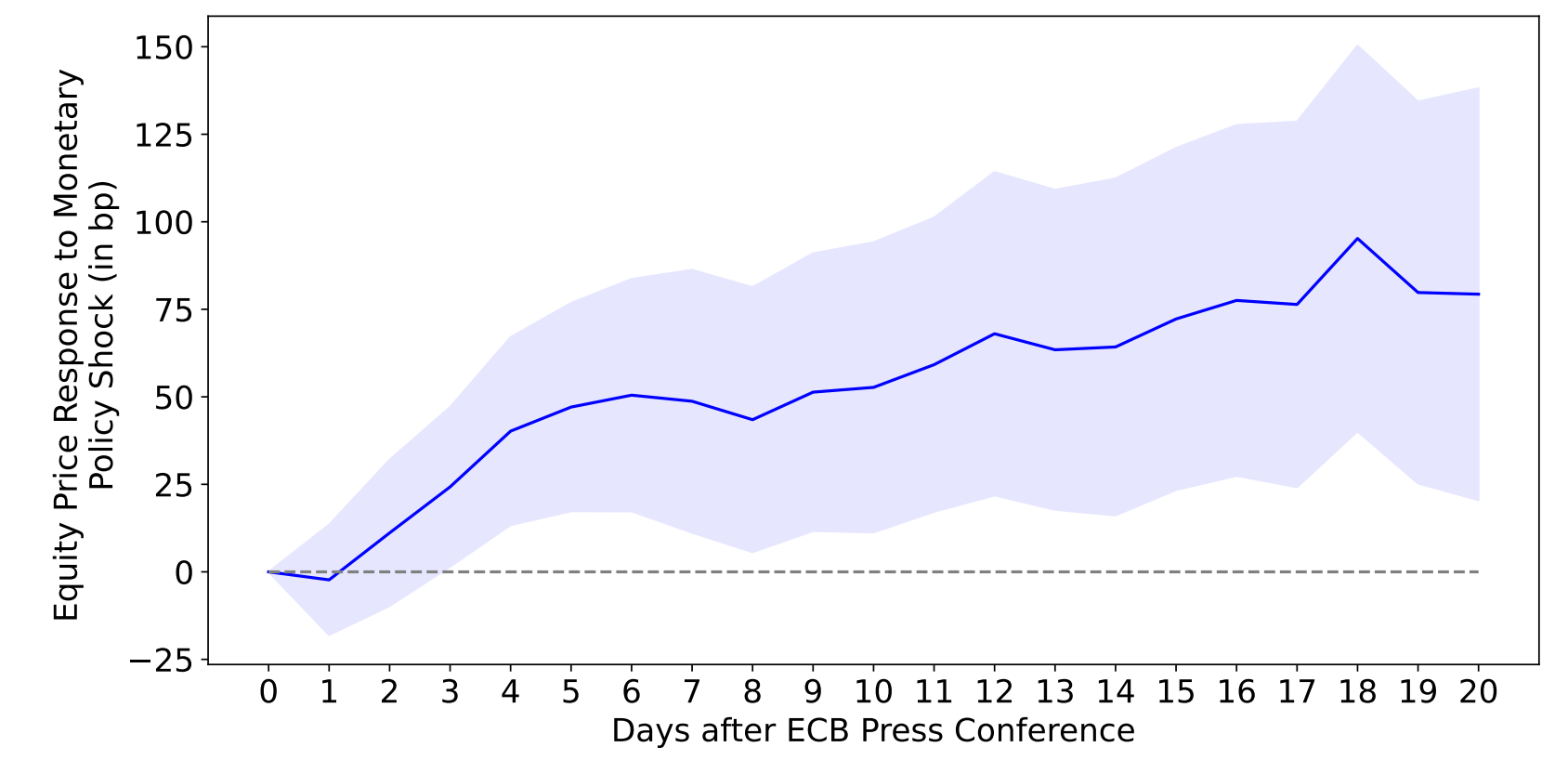


Figure 3. Equity Price Response after Monetary Policy Shock

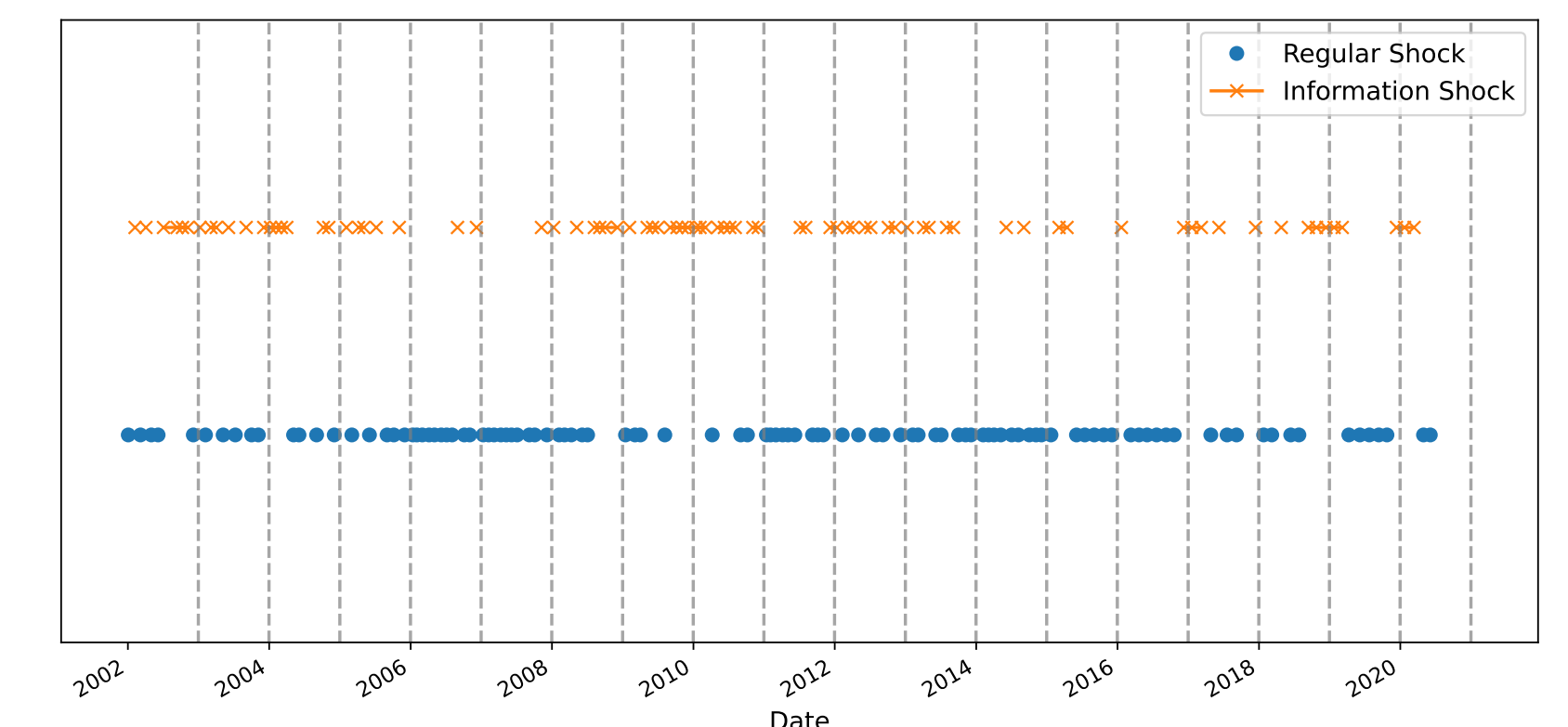


Figure 4. Types of ECB Meetings

Data

- High-frequency data of price and yield changes from “Euro Area Monetary Policy Event-Study Database” by [2] and Eikon.
- Press conference window of the ECB monetary policy announcement: changes are calculated as the median price (yield) change between 2:15 pm and 2:25 pm and 3:40 pm - 3:50 pm.
- Information shocks are categorized as those events where equities (*Eurostoxx*) and bond yields (*OIS 2Y*) move in the same direction (see [4]).
- For my analysis of investor disagreement I collect data on trading volume from Eikon, and point forecasts of the Survey of Professional Forecasters as well as texts of press conferences from the ECB’s website.

Investor Disagreement

As highlighted in [1] and [3], differences in higher-order beliefs can lead to price drifts. To rationalize my empirical findings, I investigate three proxies of investor disagreement:

1. Trading Volume

As argued in [3], disagreement can manifest itself in higher trading volume in response to news about fundamentals. Using trading volume of the *Euro Stoxx* on ECB announcement days I find that higher volume is associated with a higher drift for up to ten days.

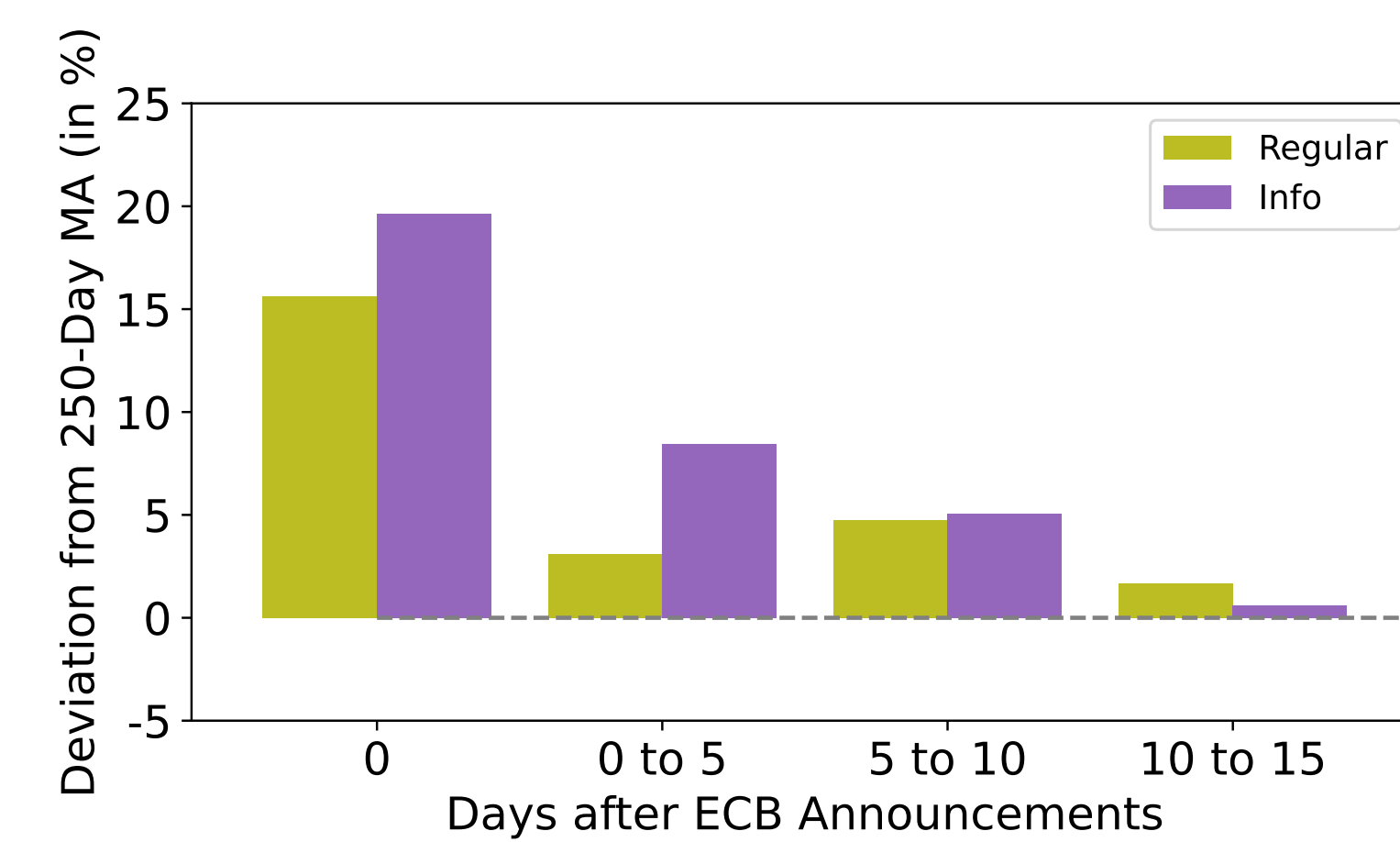


Figure 5. Trading Volume around ECB Announcements

2. Forecast Dispersion

Higher dispersion of beliefs among participants of the Survey of Professional Forecasters is associated with a stronger drift. For this analysis, I consider the difference between the 90th percentile of individual point forecasts for GDP Growth and the 10th percentile.

3. Sentiment Deviation during ECB Press Conferences

Measuring the standard deviation in negativity of the ECB president’s answers during the Q&A session of the press conference, I find that a higher standard deviation leads to a stronger drift for up to seven days.

Robustness

- Including **additional covariates** such as market volatility (VSTOXX), fixed effects for ECB presidents, and “experience” proxied by the number of meetings a president has held, does not alter results.
- Industry sectors** of the *Euro Stoxx* Index exhibit a stronger co-movement during information shock events with the drift being stronger for **cyclical stocks** which are more exposed to shocks to the real economy.
- Simple **trading strategy** going long after positive intraday shocks and exiting the market after negative shocks yields an annualized return of 4.8% (*Eurostoxx* only yields 0.7%) and a Sharpe ratio of 0.45.
- No relevant information for future returns in **press release window**.
- No effect of other **macro news** such as *Initial Jobless Claims*.
- No change of results when controlling for **subsequent speeches by ECB governing council members**.
- Results robust to excluding announcements preceded by **FOMC announcements**.
- Some evidence for drift in **S&P 500** in response to information shocks.

References

- Allen, F. et al. Beauty Contests and Iterated Expectations in Asset Markets. *The Review of Financial Studies* (2006).
- Altavilla, C. et al. Measuring euro area monetary policy. *Journal of Monetary Economics* (2019).
- Hong, H. & Stein, J. C. Disagreement and the Stock Market. *Journal of Economic Perspectives* (2007).
- Jarociński, M. & Karadi, P. Deconstructing Monetary Policy Surprises—The Role of Information Shocks. *American Economic Journal: Macroeconomics* (2020).

Empirical Analysis and Results

For the **benchmark results**, I regress the **cumulative net return** at $t+d$, for $d = 1, \dots, 20$ days, after the ECB announcement on the announcement day’s intraday equity and OIS 2Y rate change as well as my update of the monetary policy shocks from Altavilla et al. (2019):

$$y_{t+d} = \alpha + \beta \times \Delta_t + \gamma \times OIS_t + \nu' \xi_t + \epsilon_t \quad (1)$$

where y_{t+d} is the cumulative net return on d days after the ECB press conference on date t . The intraday equity shock is denoted as Δ_t , the intraday OIS 2Y change is OIS_t , and the vector ξ_t represents the monetary policy shocks. Intraday equity and yield changes refer to the **ECB press conference window**.

	(1) t+0	(2) t+5	(3) t+10	(4) t+15	(5) t+20
STOXXE	0.55*** (4.75)	1.72*** (3.02)	1.26* (1.95)	1.39** (2.00)	1.40* (1.91)
OIS 2Y	1.44 (0.12)	10.19 (0.22)	-25.45 (-0.41)	40.85 (0.51)	56.14 (0.56)
Target	1.10 (0.31)	16.29 (1.50)	33.58** (2.43)	52.29*** (3.43)	49.11*** (3.25)
Timing	4.46 (0.36)	3.80 (0.07)	28.35 (0.39)	-25.65 (-0.29)	-53.75 (-0.49)
FG	-0.76 (-0.06)	1.71 (0.04)	33.33 (0.52)	-39.84 (-0.48)	-53.58 (-0.53)
QE	-4.07 (-1.10)	-15.98 (-1.19)	-16.47 (-1.01)	-22.70 (-1.18)	-42.59* (-1.90)
Constant	-3.57 (-0.59)	-1.58 (-0.07)	-18.50 (-0.56)	13.53 (0.36)	38.27 (0.86)
Observations	190	190	190	190	190
R ²	0.19	0.14	0.08	0.10	0.08

The t-stats (in parentheses) are based on White heteroscedasticity-consistent standard errors.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 1. Simple Benchmark Regression

	(1) t+0	(2) t+5	(3) t+10	(4) t+15	(5) t+20
STOXXE	0.40*** (3.13)	0.07 (0.13)	0.54 (0.67)	0.42 (0.55)	0.79 (1.09)
OIS 2Y	-2.33 (-0.18)	-50.44 (-1.13)	-79.82 (-1.23)	-22.59 (-0.27)	1.99 (0.02)
Information Shock × STOXXE	0.39 (1.37)	3.12*** (3.22)	-0.56 (-0.40)	-0.06 (-0.04)	-0.98 (-0.60)
Information Shock × OIS 2Y	-0.27 (-0.08)	24.72* (1.69)	53.24*** (2.62)	56.57** (2.57)	56.94** (2.37)
MP Shocks	Yes	Yes	Yes	Yes	Yes
Constant	-4.00 (-0.66)	-6.52 (-0.29)	-20.74 (-0.63)	10.52 (0.28)	36.32 (0.82)
Observations	190	190	190	190	190
R ²	0.21	0.23	0.13	0.15	0.11

The t-stats (in parentheses) are based on White heteroscedasticity-consistent standard errors.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 2. Interaction with Information Shocks