Empirical Evidence of excess profits in european stock markets ex-ante monetary policy decisions by the ECB

SE Bachelor Thesis in Economics or Economic Psychology
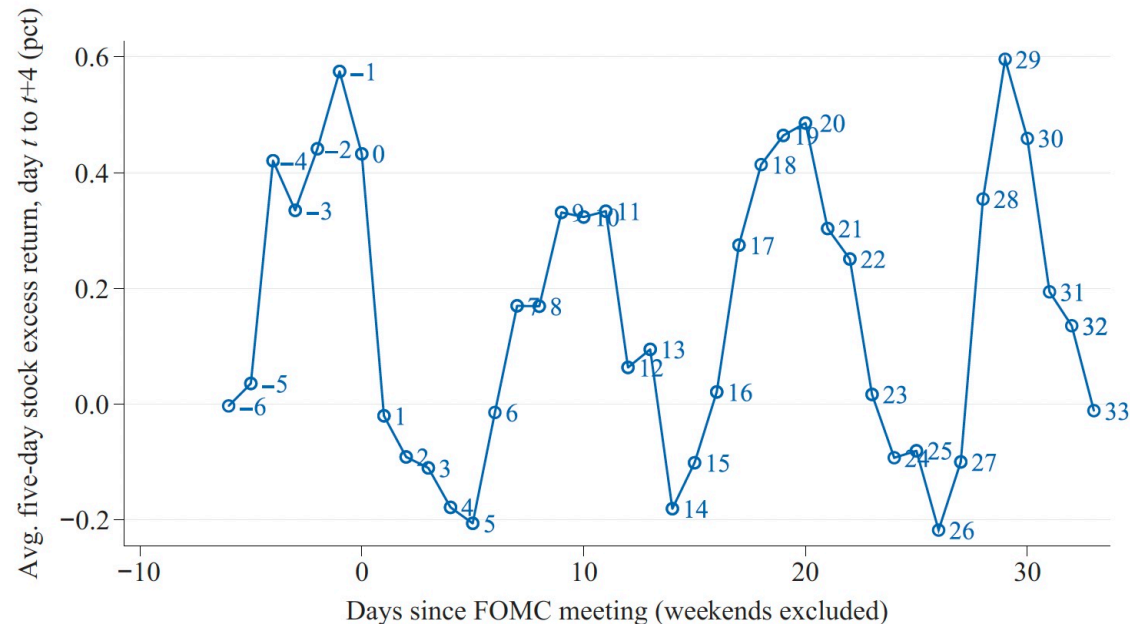
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Stock Returns over the FOMC cycle. Cieslak et al. (2019)

- The FOMC (= Federal Open Market Committee) meets approx. 8 times per annum (~ 6.5 weeks)

- Figure:
  - Y-Axis: Average 5-day stock excess return, from day t to t+4 in percent.
  - X- Axis:
    Days since FOMC meeting: usually -1 to 33.
    (7 weeks * 5 days = 35)

- Profitability of Various Trading Strategies, 1994 to 2016 (Cieslak et al.)
  - Portfolio A: Hold stocks throughout all weeks within FOMC cycles: 1$ -> 7.68$
  - Portfolio B: Hold stocks in even weeks (0, 2, 4, 6) only: 1$ -> 15.22$
  - Portfolio C: Hold stock in odd weeks (-1, 1, 3, 5) only: 1$ -> 0.51$

The Economics of the Fed Put. Cieslak et al. (2021)

- Fed Put
- Textual analysis of FOMC meeting transcripts
- Moral hazard effects

Seal of the Federal Reserve System

Jerome H. Powell, 16th Chair of the Federal Reserve

(Prelimary) Research Questions

- Does the effect that stock excess return are mainly achieved in FOMC even weeks (0,2,4,6) from 2016 onwards still persist? (occurance of many unscheduled FOMC meetings due to the corona-crisis in 2020)

- In the euro-zone the ECB makes policy interest rate decision. Is there empirical evidence for a similar effect when considering only the Euro-Zone and Euro-Zone stock returns.

- Does it imply an equivalent of the Fed Put in the Euro-Zone? Why/why not?

Used Data, Technology and Tools

- Dummie coding/generation using R (Statistical Programming Language)

- Fama/French US Research Data 3-Factors for calculation of stock market excess returns according to Cieslak et al.

  - Calculation:

    - "Risk free" market stock returns (Mkt.RF) over "risk free" (30 day-)treasury bill returns (RF):

    - Daily excess returns = 100 * ((Mkt.RF + RF)/100 + 1) − (RF/100 + 1))

- STATA for estimation of MLR model with binary dummy variables

- $\LaTeX$ as typesetting for writing the thesis

Partial replication results of Cieslak et al. (2019)

Replication with own coded dummies in R and excess return on stock over T-Bills using Fama/French Research Data Factors according to Cieslak et al. Table I PANEL B (1):

	(1) 2014 to 2016
Dummy = 1 in Week 0	0.174*
	(1.92)
Dummy = 1 in Week 2, 4, 6	0.176***
	(2.67)
Constant	−0.049
	(−1.15)
N (days)	783

ex1	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf. Interval]	
w_t0	0.174	0.091	1.92	0.055	−0.004	0.352
w_t2t4t6	0.176	0.066	2.67	0.008	0.047	0.305
_cons	−0.049	0.043	−1.14	0.254	−0.132	0.035
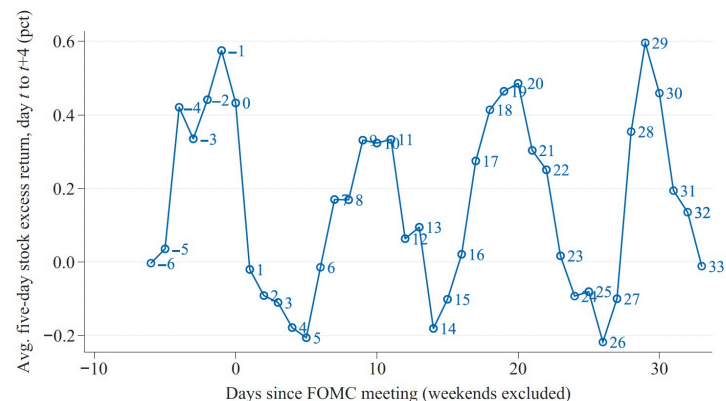
Avg. 5 day stock access returns, day t to t+4 (in percent) 1994 − 2016 (left) vs. 2014 − 2016 (right)
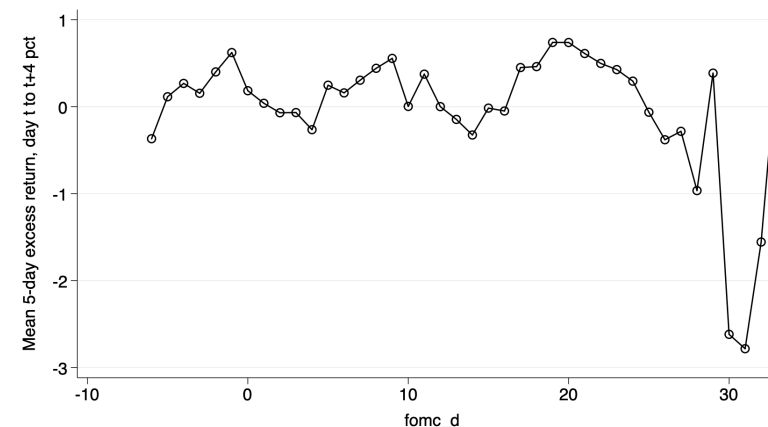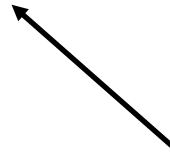
Approach (MLR model)

$$returns_i = \widehat{\beta_0} + \widehat{\delta_0} * fomcweek0 + \widehat{\delta_1} * fomcweek246 + \epsilon_i$$

Replace with excess returns in European Stock Markets using Fama/French European 3-Factors for Developed Market Factors and Returns

Replace with monetary policy meetings of the Governing Council of the ECB. (approx. every 6 weeks, similar to the FOMC meeting schedule)

(Re-)Estimate: $\widehat{\beta_0}, \widehat{\delta_0}, \widehat{\delta_1}$