

The Fed Information Effect: Is It Real?

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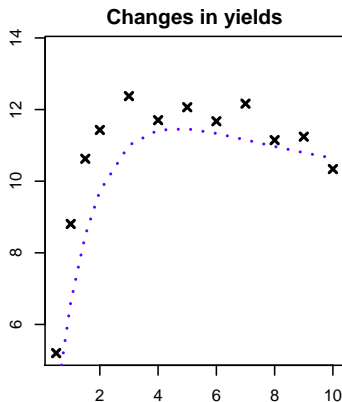
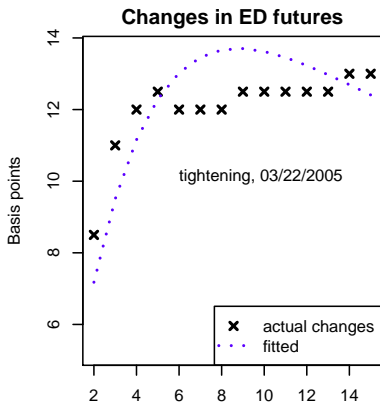
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Overview

- ▶ Monetary policy surprises
 - ▶ High-frequency changes in interest rates around central bank policy announcements
 - ▶ Useful to estimate *causal effects* of monetary policy
- ▶ Puzzle in macro-finance: macro surveys respond in the “wrong” direction to Fed surprises
 - ▶ Common explanation: “Fed information effect”
Campbell et al. (2012, BPEA), Nakamura & Steinsson (2018, QJE), ...
- ▶ We show evidence for an alternative explanation: “Response to macro news” channel
 - ▶ Omitted variable in widely used regressions
 - ▶ Evidence from the stock market
 - ▶ New survey of professional forecasters
 - ▶ Forecast accuracy of Fed and private sector
- ▶ Our evidence contradicts the Fed information effect story

Monetary policy surprises = changes in interest rates

FOMC announcement on March 22, 2005, caused large hawkish policy surprise:



Source: Bauer (2015, JMCB)

Monetary policy surprises and causal inference

Identification assumptions in high-frequency event studies

- ▶ Changes in interest rates around announcements caused by monetary policy decisions
- ▶ Full effects of policy announcements quickly incorporated into asset prices

Applications

- ▶ Effects on interest rates: Kuttner (2001), Bauer (2015)
- ▶ Effects on other asset prices: Gürkaynak, Sack, Swanson (2005), Bernanke & Kuttner (2005)
- ▶ Effects on macroeconomic variables
 - ▶ Use policy surprises as instruments for policy shocks in VARs or local projections
 - ▶ Gertler and Karadi (2015), Paul (2018)
 - ▶ Strong, plausible effects of monetary policy

Puzzle: response of macroeconomic surveys

$$BCrev_t = \alpha + \theta mps_t + \varepsilon_t$$

- ▶ mps_t : interest rate surprise due to FOMC announcement
- ▶ $BCrev_t$: monthly revision in Blue Chip GDP forecast
- ▶ Standard macro theory and evidence implies $\theta < 0$
- ▶ But Nakamura & Steinsson (2018) estimate:

TABLE III
RESPONSE OF EXPECTED OUTPUT GROWTH OVER THE NEXT YEAR

	1995–2014	2000–2014	2000–2007	1995–2000
Policy news shock	1.01 (0.32)	1.04 (0.35)	0.95 (0.32)	0.79 (0.63)
Observations	120	90	52	30

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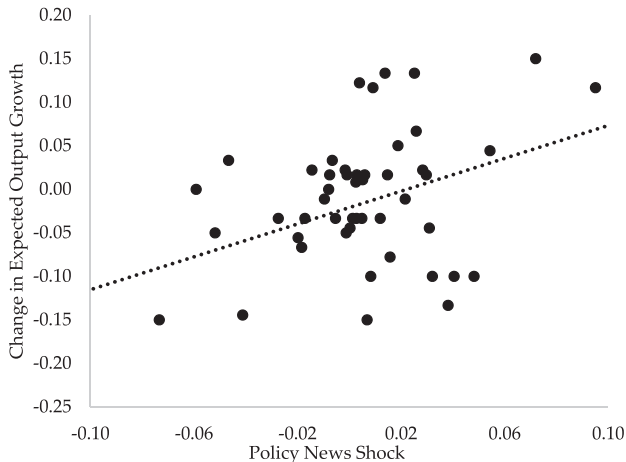


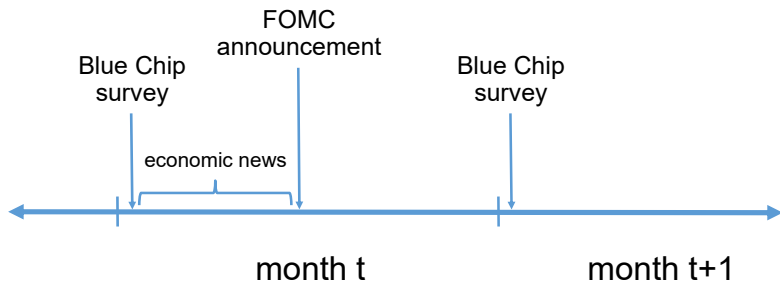
FIGURE II

Binned Scatter Plot for Expected Output Growth Regression

The “Fed Information Effect”

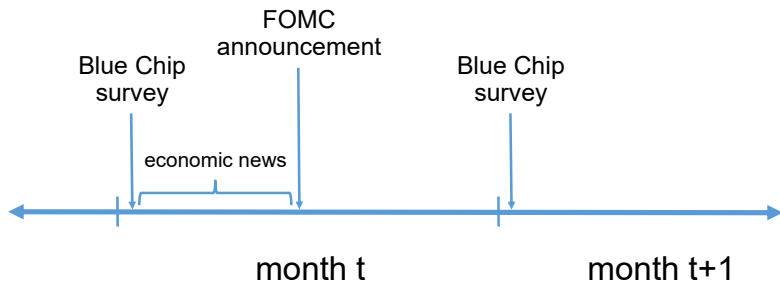
- ▶ The consensus explanation of puzzling survey responses:
Fed announcements directly affect beliefs about economic fundamentals.
- ▶ For example:
 1. *Tightening surprise* – higher policy rate/forward guidance than expected before the announcement
 2. Signals that Fed sees *more positive economic outlook*
 3. Forecasters *revise up* output/inflation/employment
- ▶ Information effects in policy announcements imply *positive* correlation of policy surprises with forecast revisions.
- ▶ Opposite of conventional monetary policy shocks
⇒ **monetary policy less/not effective**

Alternative: “Response to macro news” channel



- ▶ Publicly available macroeconomic news
 - ▶ Example: surprisingly positive BLS Employment Report
- ▶ Fed responds to economic news
 - ▶ Tightens stance of monetary policy *more than expected*
⇒ hawkish monetary policy surprise
- ▶ Blue Chip respondents revise their forecasts
 - ▶ Higher GDP growth, lower unemployment, higher inflation

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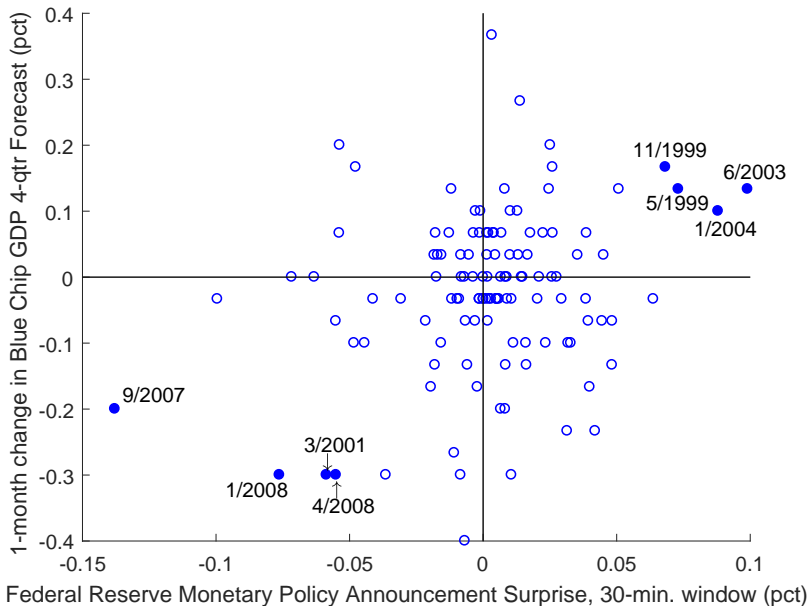


- ▶ Public macro news is an omitted variable:

$$BCrev_t = \alpha + \theta mps_t + \gamma news_t + \varepsilon_t$$

- ▶ Estimates of θ are biased upward
- ▶ Potential explanation of puzzling estimates in literature

Information effect regressions



Top 10 influential announcements

Date	Effect on t -statistic	MP surprise mps_t	$BCrev_t$, GDP	$\Delta \log$ S&P500 $_t$	bus. cycle indicator
9/2007	0.554	-0.138	-0.2	1.33	-0.29
1/2008	0.351	-0.076	-0.3	0.76	-0.81
6/2003	0.312	0.099	0.133	-0.27	-0.38
3/2001	0.291	-0.059	-0.3	-0.68	-1.45
4/2008	0.278	-0.055	-0.3	0.31	-1.52
11/1999	0.240	0.068	0.167	-0.42	0.86
1/2004	0.224	0.088	0.1	-0.97	0.38
5/1999	0.224	0.073	0.133	-1.44	0.19
12/1995	0.207	-0.036	-0.3	0.26	-0.08
3/1997	0.155	0.051	0.133	-0.67	0.80

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Paper shows detailed evidence that:

- ▶ Controlling for economic news resolves the puzzle
- ▶ Stock market response has conventional sign

New “high-frequency” macroeconomic forecasts

- ▶ High-frequency financial data can isolate effects of FOMC
- ▶ But Blue Chip surveys are monthly: no easy way to know what drives forecast revisions
- ▶ We have two new sources of “high-frequency” macro forecast data
- ▶ Macroeconomic Advisers (MA) daily GDP tracking
 - ▶ MA current-quarter and next-quarter GDP tracking estimates, 2002-2019
 - ▶ MA regularly revises GDP tracking estimates in response to macro data releases
 - ▶ MA has *never* revised GDP tracking estimates in response to an FOMC announcement
- ▶ Results from our own survey of Blue Chip forecasters . . .

Our survey of Blue Chip forecasters

- ▶ How do Blue Chip forecasters revise their forecasts in response to FOMC announcements?
- ▶ Tracked down 52 chief economists in the BC panel and sent them our questionnaire
- ▶ How do you revise your GDP/unemployment/inflation forecasts in response to:
 - ▶ FOMC interest rate decision
 - ▶ FOMC statement
 - ▶ FOMC interest rate projections – “dot plot”
 - ▶ FOMC forecasts for GDP, unemployment, inflation – Summary of Economic Projections (SEP)

Results from our survey

36 responses (so far) out of 52:

	Response to hawkish surprise in		
	Interest rate decision	FOMC statement	"dot plot"
Do not revise GDP forecast	13	16	14
Revise GDP forecast downward	18	15	18
Revise GDP forecast, but direction depends on other factors	5	5	4
Revise GDP forecast upward	0	0	0

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- ▶ If they do, it's generally not in “information effect” direction
 - ▶ Survey evidence is 32:5 *against* an information effect

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- ▶ If they do, it's generally not in “information effect” direction
 - ▶ Survey evidence is 32:5 *against* an information effect

“Fed information effect” interpretation of survey regression evidence is *not consistent* with what survey respondents say!

Conclusions

Extensive evidence consistent with “Response to macro news” channel and inconsistent with “Fed information effect”

- ▶ Economic news omitted variable in survey regressions
 - ▶ Including macro news proxies resolves survey puzzle
- ▶ Stock market response to FOMC announcements has negative sign (consistent with monetary policy shock)
- ▶ Blue Chip forecasters revise outlook in response to FOMC
 - ▶ Either not at all
 - ▶ Or in the conventional direction
- ▶ Additional evidence
 - ▶ Survey regressions not robust
 - ▶ Fed Greenbook not sig. better than Blue Chip forecasts

Our paper “rescues” monetary policy surprises as valid proxies for monetary policy shocks in empirical macro-finance research