Annette Vissing-Jorgensen, University of California Berkeley and NBER

Comments on Caballero and Simsek, NBER MEFM, 2020

Very elegant model!

Dogmatic disagreement between the Fed and the market about **growth**

- The Fed is **should care about market growth expectations** even if it thinks they are wrong because of the **consumption-wealth effect of the stock market**
- Growth disagreement translates into **disagreement about Fed funds target path**

And the result is more general than the model:

1. If you add houses, market growth expectations would drive **housing-wealth effects**
2. If you add labor income, market growth expectations would drive **labor income expectations** and thus consumption

The Fed clearly does care about wealth effects and household/firm expectations:

- The Fed carefully tracks consumer confidence and business confidence
- Cieslak and Vissing-Jorgensen (2020).
  - **Stock returns are a strong predictor** of target changes
  - **Textual analysis of Fed minutes** point to **consumption-wealth effect** from stocks and housing

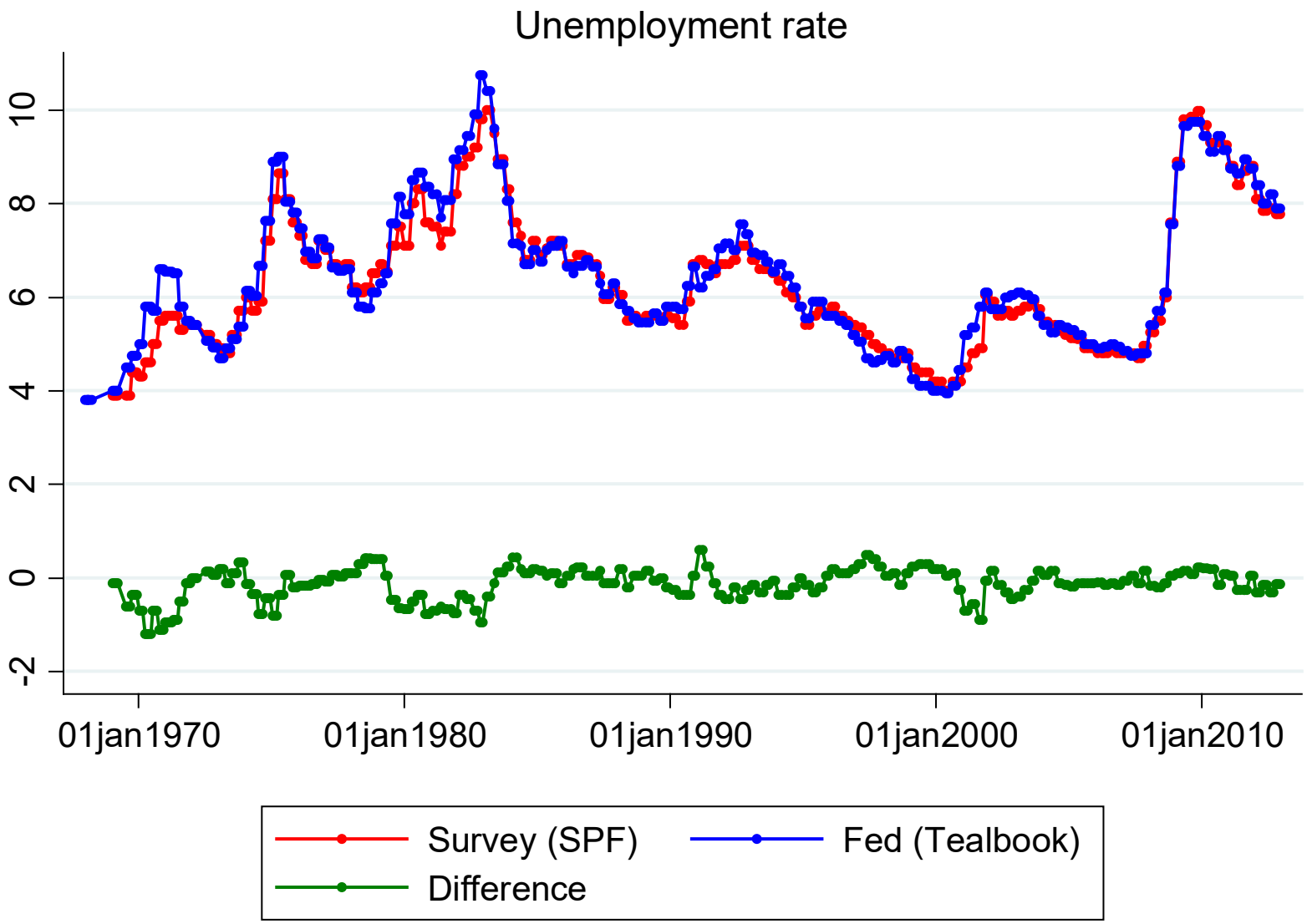
But what do the Fed and private sector disagree about in practice?

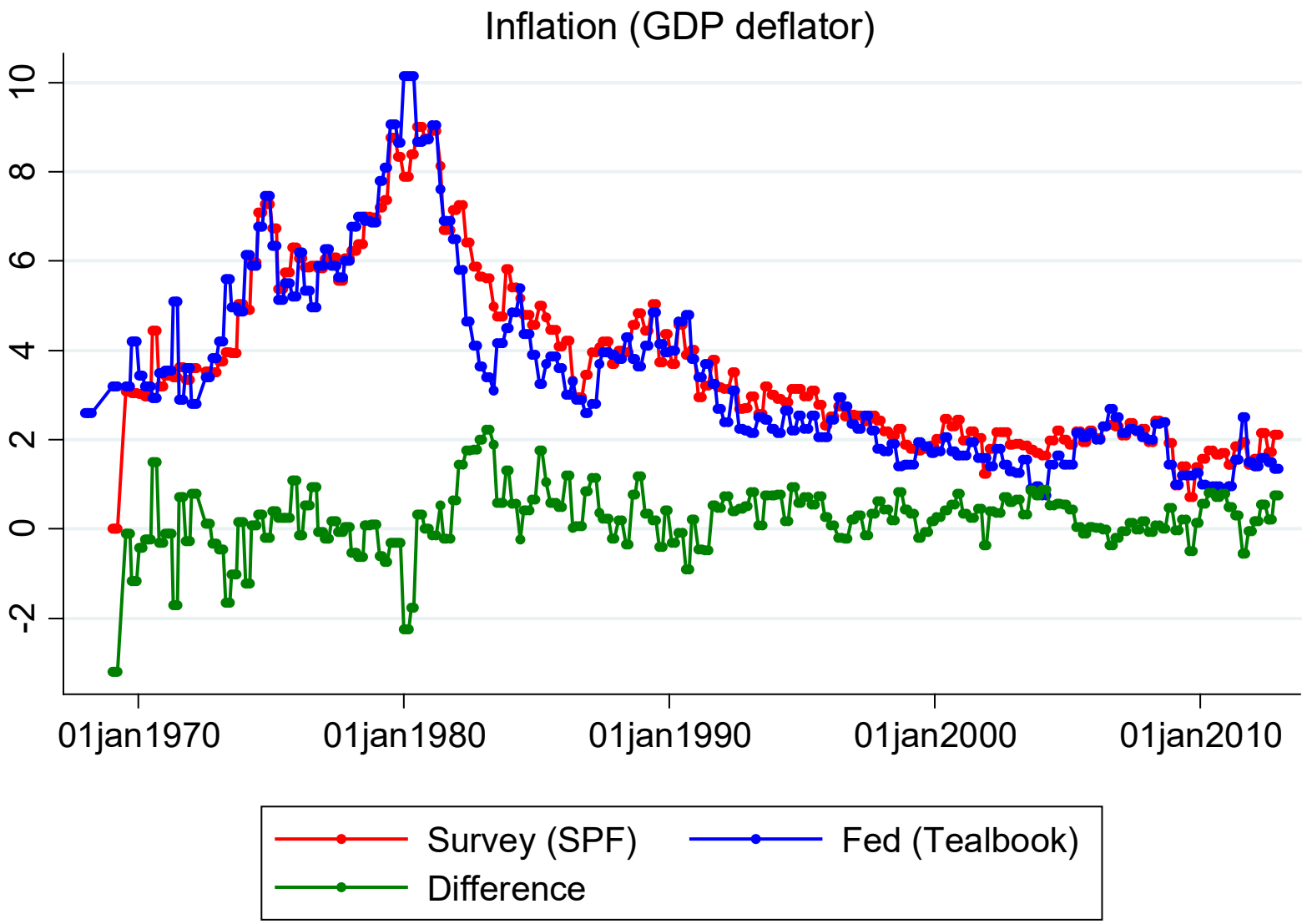
1. **Growth/unemployment/inflation disagreement?** There is some of that
2. **Likely Fed funds target** down the road**:** Much less than paper suggests
3. **Fed reaction function** (what the target will be if things don't turn out as expected)**:** Very important

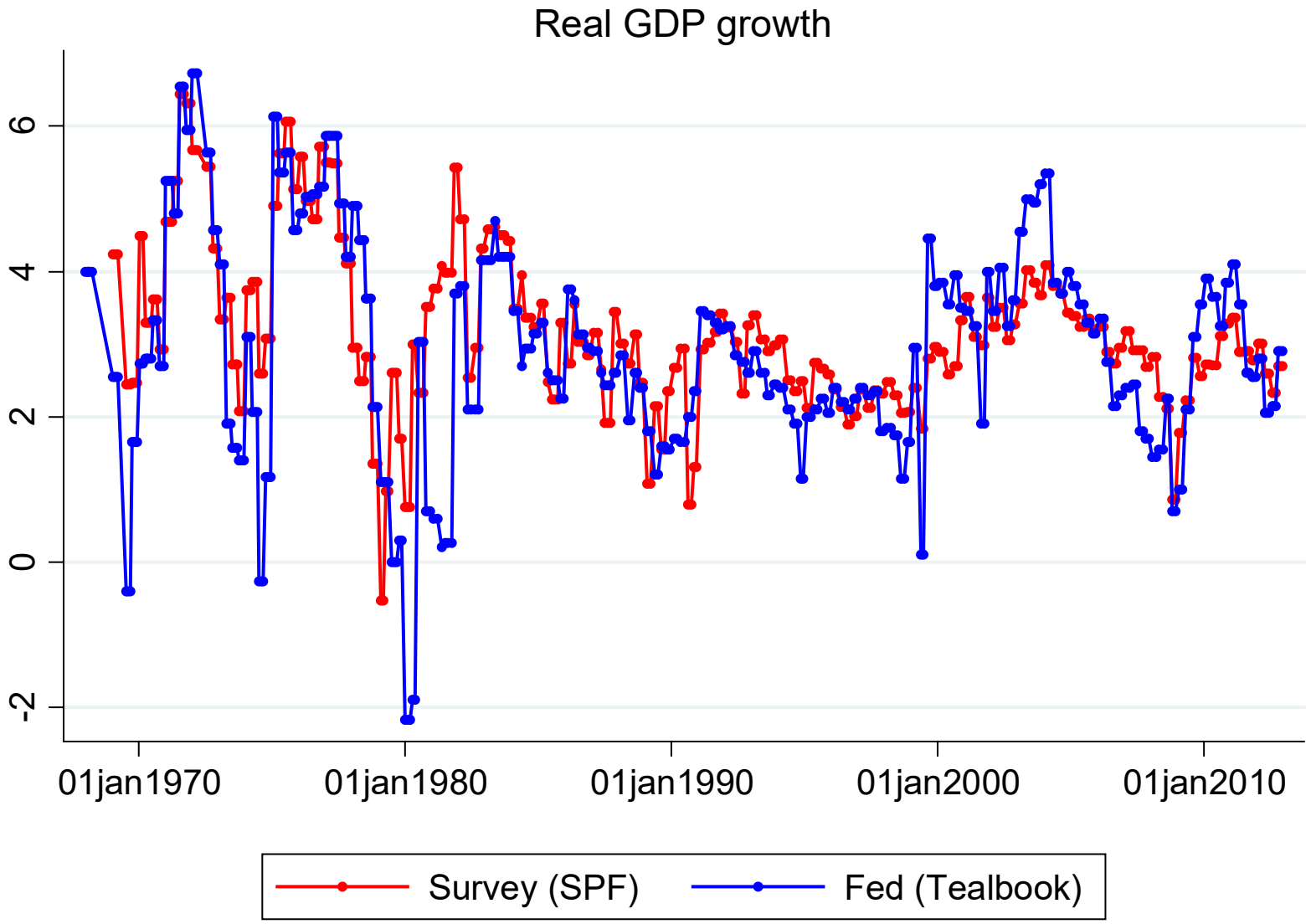
Model is about 1 and 2. We need a section/paper on 3.

1. GROWTH/UNEMPLOYMENT/INFLATION DISAGREEMENT: Some, not overwhelming

1968-2012: Tealbook for Fed, Survey of Prof Forecasters for market, quarter t+3




Inflation (GDP deflator)
10
8
6
4
2
0
-2
01jan1970
01jan1980
01jan1990
01jan2000
01jan2010
Survey (SPF)
Fed (Tealbook)
Difference


Real GDP growth
6
4
2
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-2
01jan1970
01jan1980
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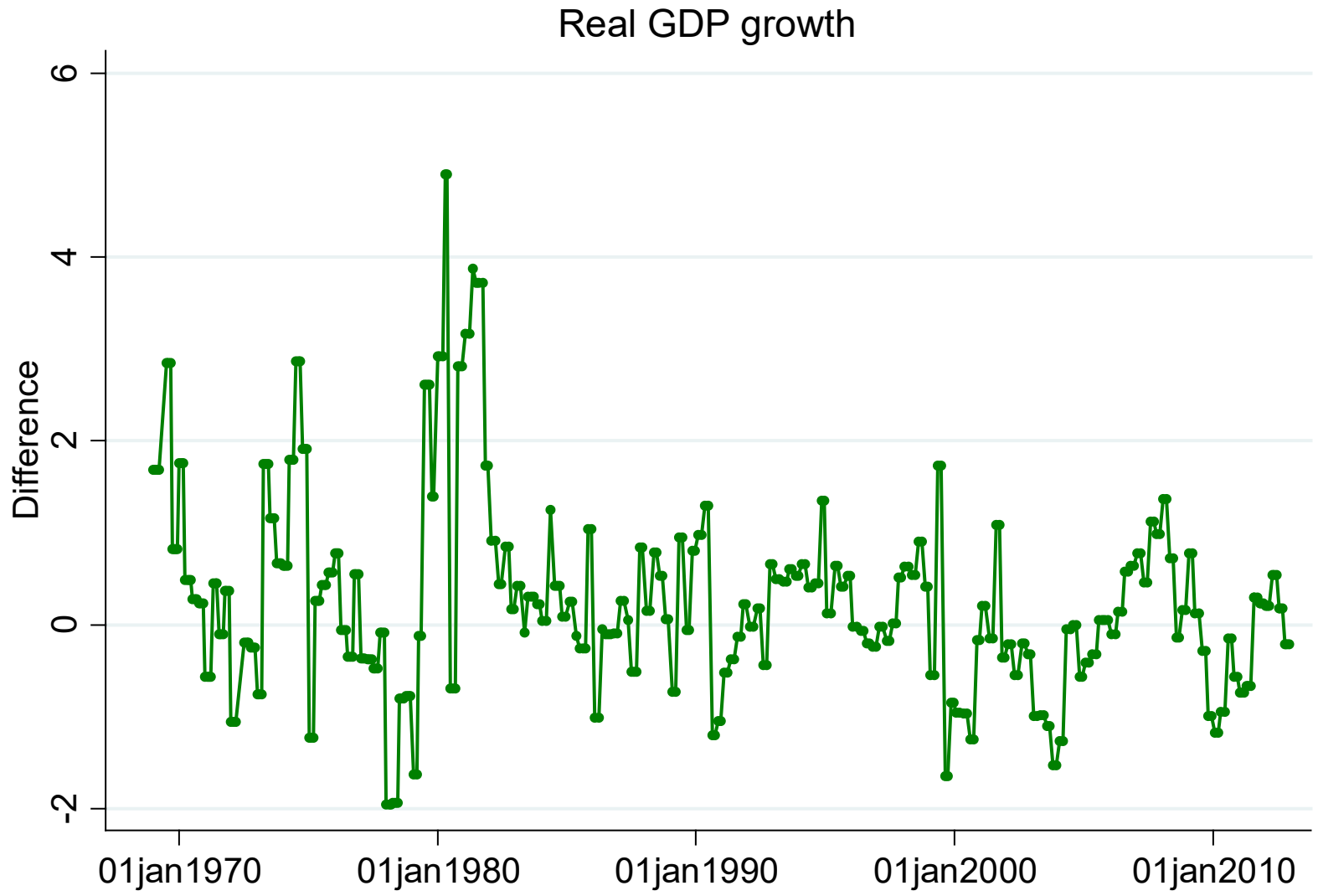
01jan2010
Survey (SPF)
Fed (Tealbook)


Real GDP growth
Difference
6
4
2
0
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01jan1970
01jan1980
01jan1990
01jan2000
01jan2010

2. DISAGREEMENT ABOUT LIKELY FED FUNDS TARGET: Much less than paper suggests

Paper's main evidence:

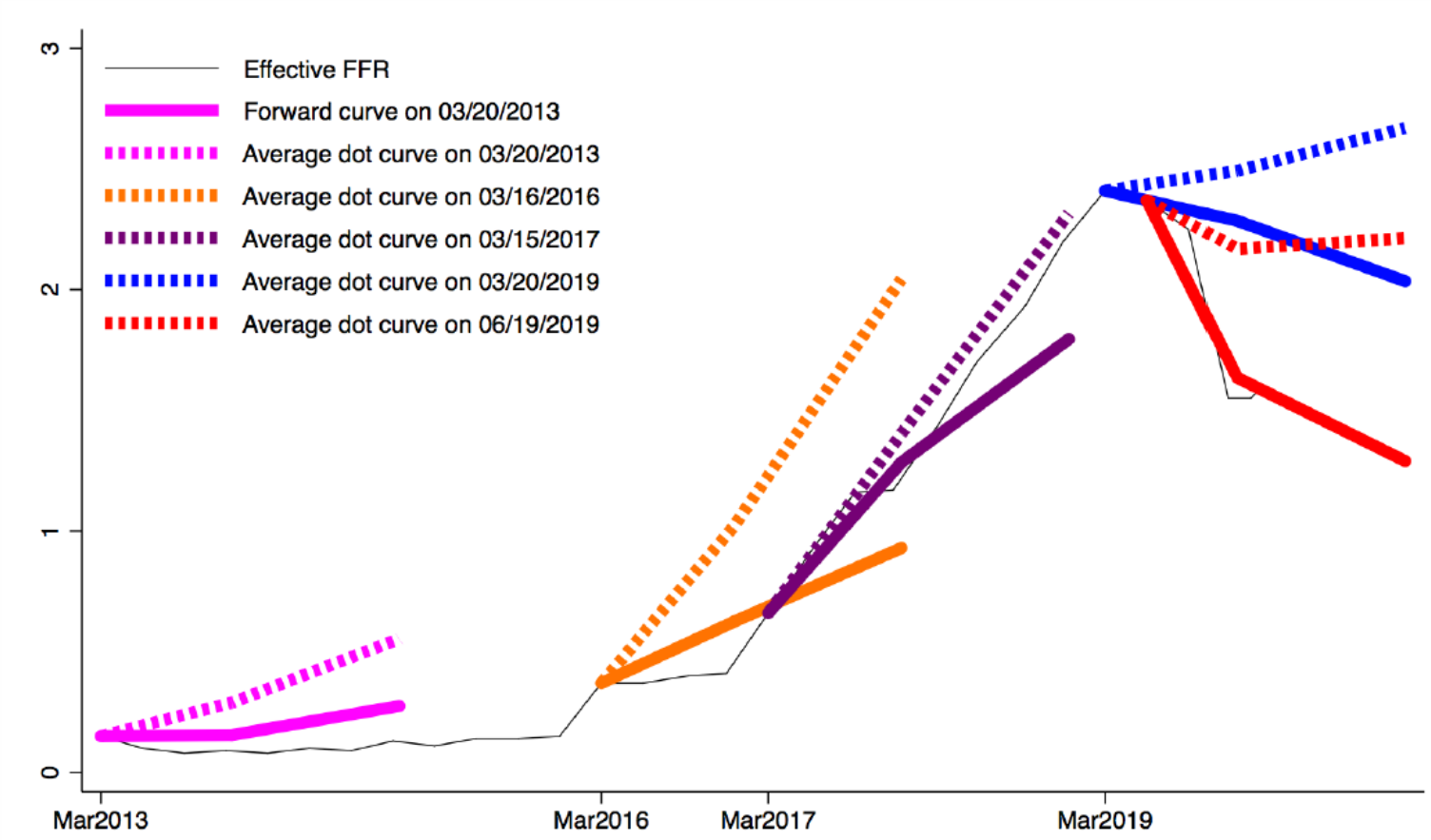
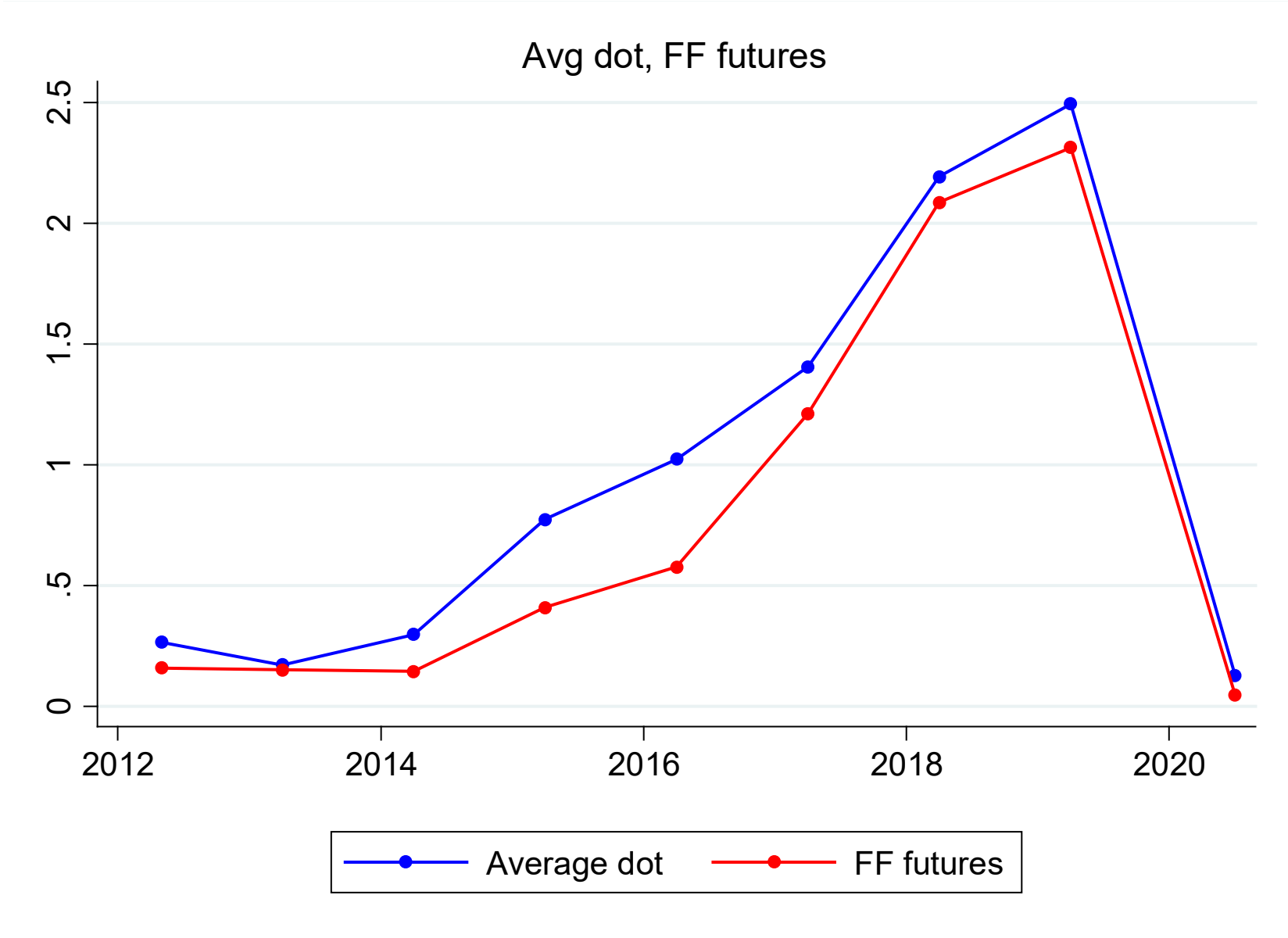


Figure 1: Each colored series plots, for select FOMC meetings, the FOMC average prediction for future fed funds rates (dotted line) and the forward fed funds rates—extracted from futures prices (solid line). The thin black line plots the effective fed funds rate.

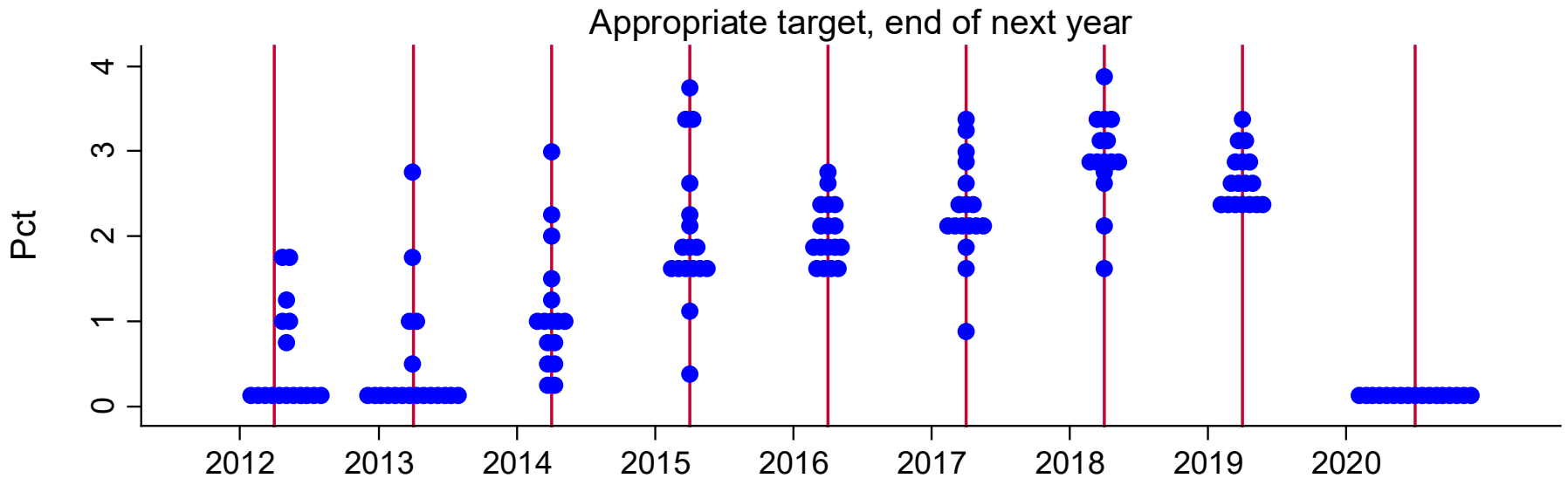
Using March data, 2012-2020, expectations for end of this year

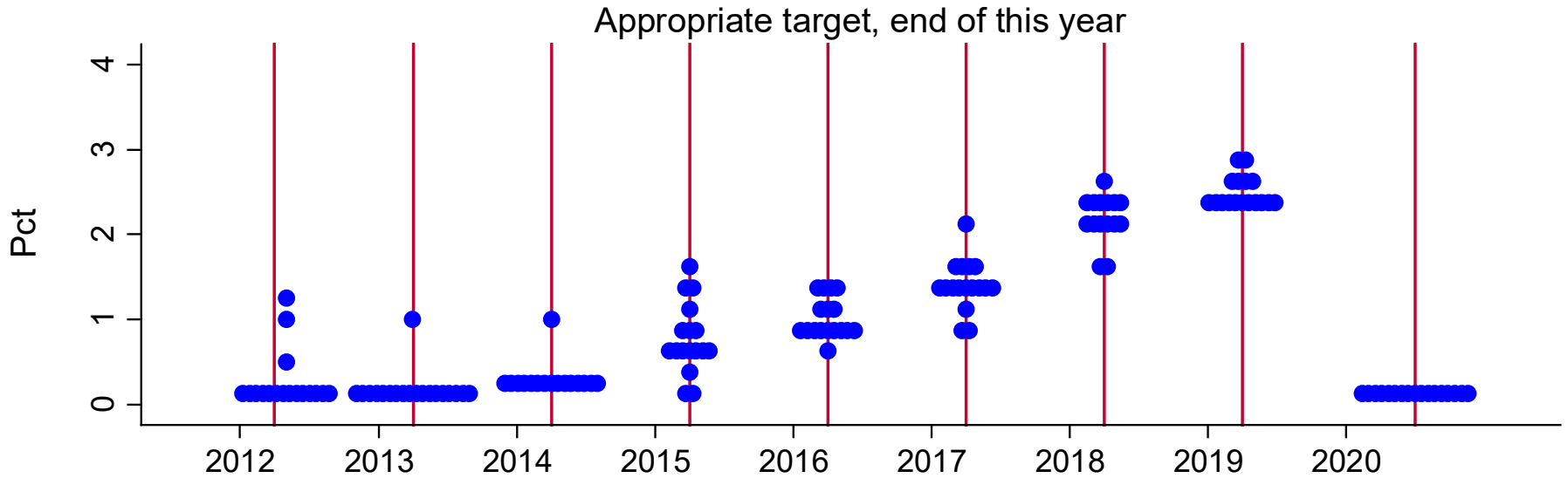


But: Which Fed expectation should we graph?

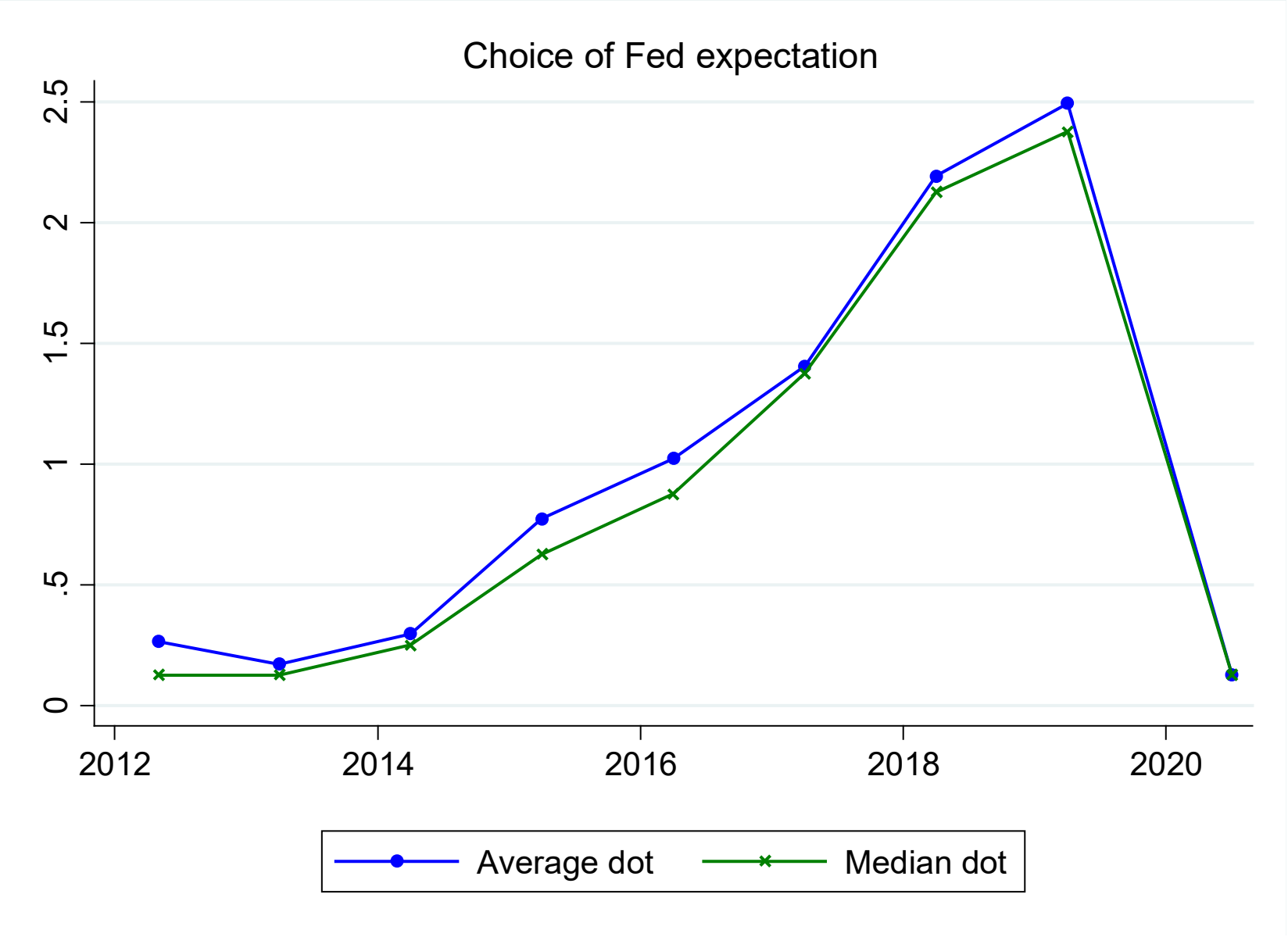
- Dot plot is not expectations but policy preferences: “Appropriate” rates
- **Average dot** is an **upward biased measure of most likely policy outcome**:
  - Only 5 of 12 Reserve Bank Presidents vote while all governors vote
  - Presidents tend to be more hawkish than governors

  Median dot more representative of what FOMC voters want and thus the likely outcome. But even that misses the **internal power dynamics** among voters.


Appropriate target, end of next year
Pct
0
1
2
3
4
2012
2013
2014
2015
2016
2017
2018
2019
2020


Appropriate target, end of this year
Pct
0
1
2
3
4
2012
2013
2014
2015
2016
2017
2018
2019
2020

Appropriate value as of end of this year:

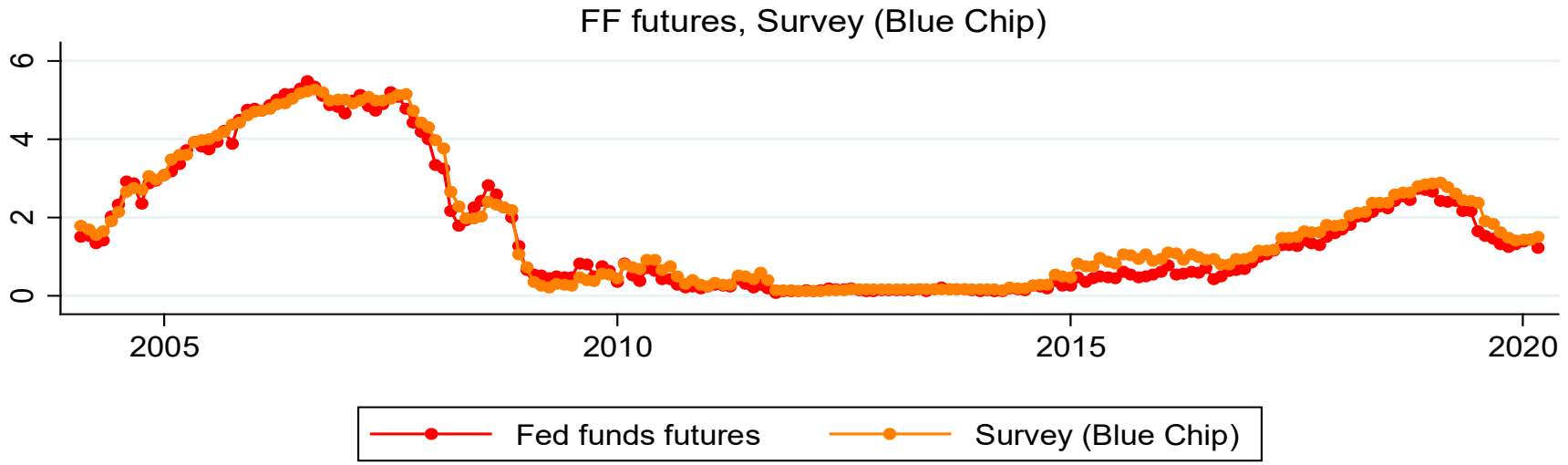


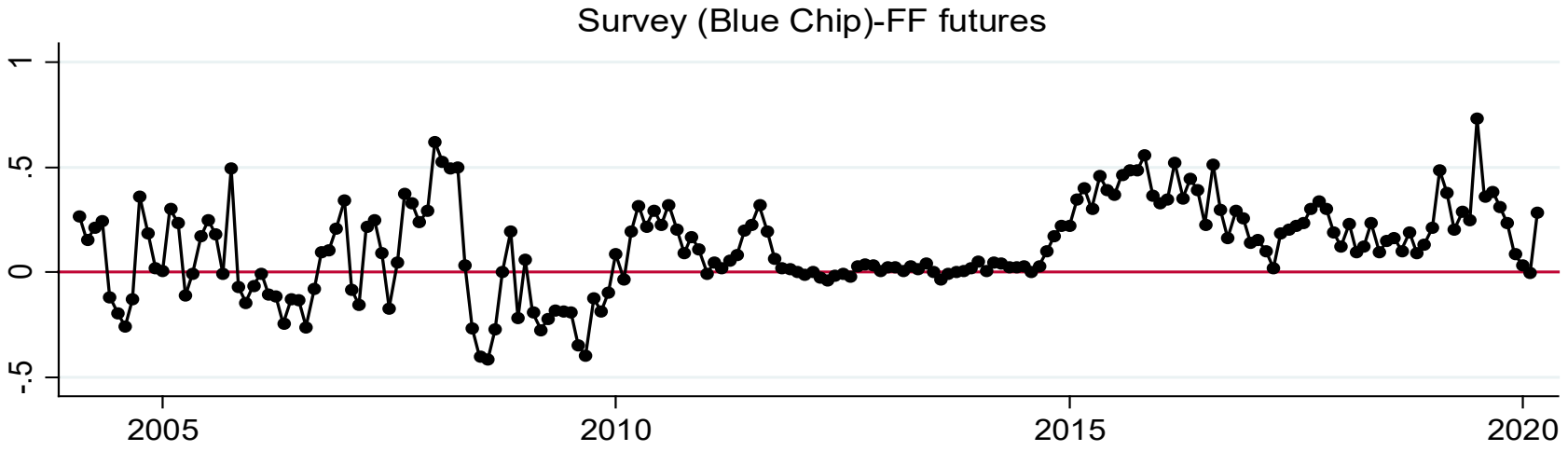
And which market expectation should we graph?

- **Federal funds futures** are problematic:
  - They are **probability-weighed market expectations:** Differs from the market's view of the most likely outcome if the PDF is asymmetric
  - They have a **risk premium** (positive/negative depending on supply/demand for hedging Fed funds rate risk)
- Market **survey expectations** avoid risk premium and perhaps probability issue (if respondents report their most likely outcome, mode)

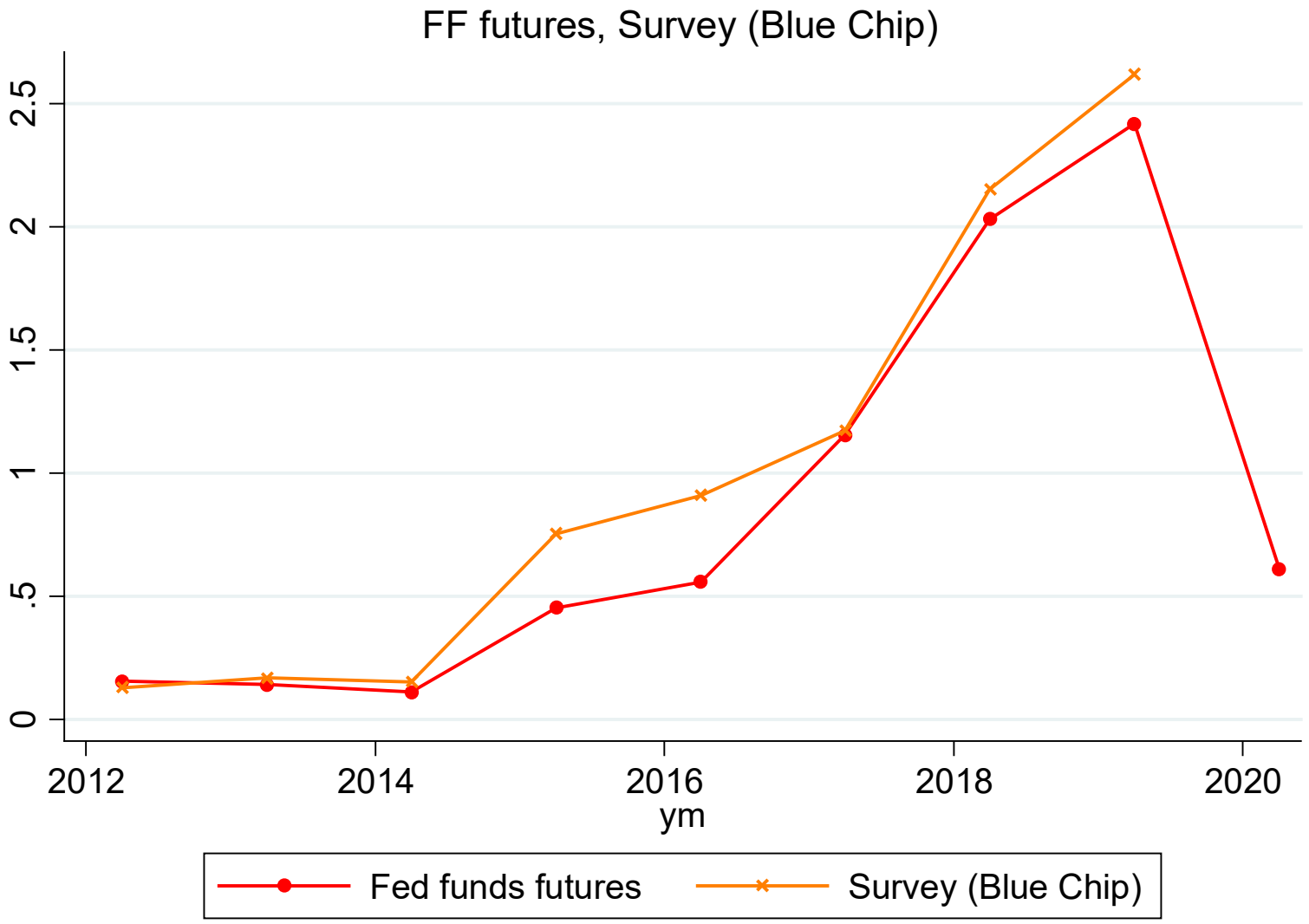
  - McNees (1994): "In response to a survey conducted by the authors, two-thirds of the Survey of Professional Forecasters participants did describe their point estimate forecast as the *mode* of their probability distribution."

Difference between market futures and market survey expectations an issue since 2014. Expectations for third quarter forward:

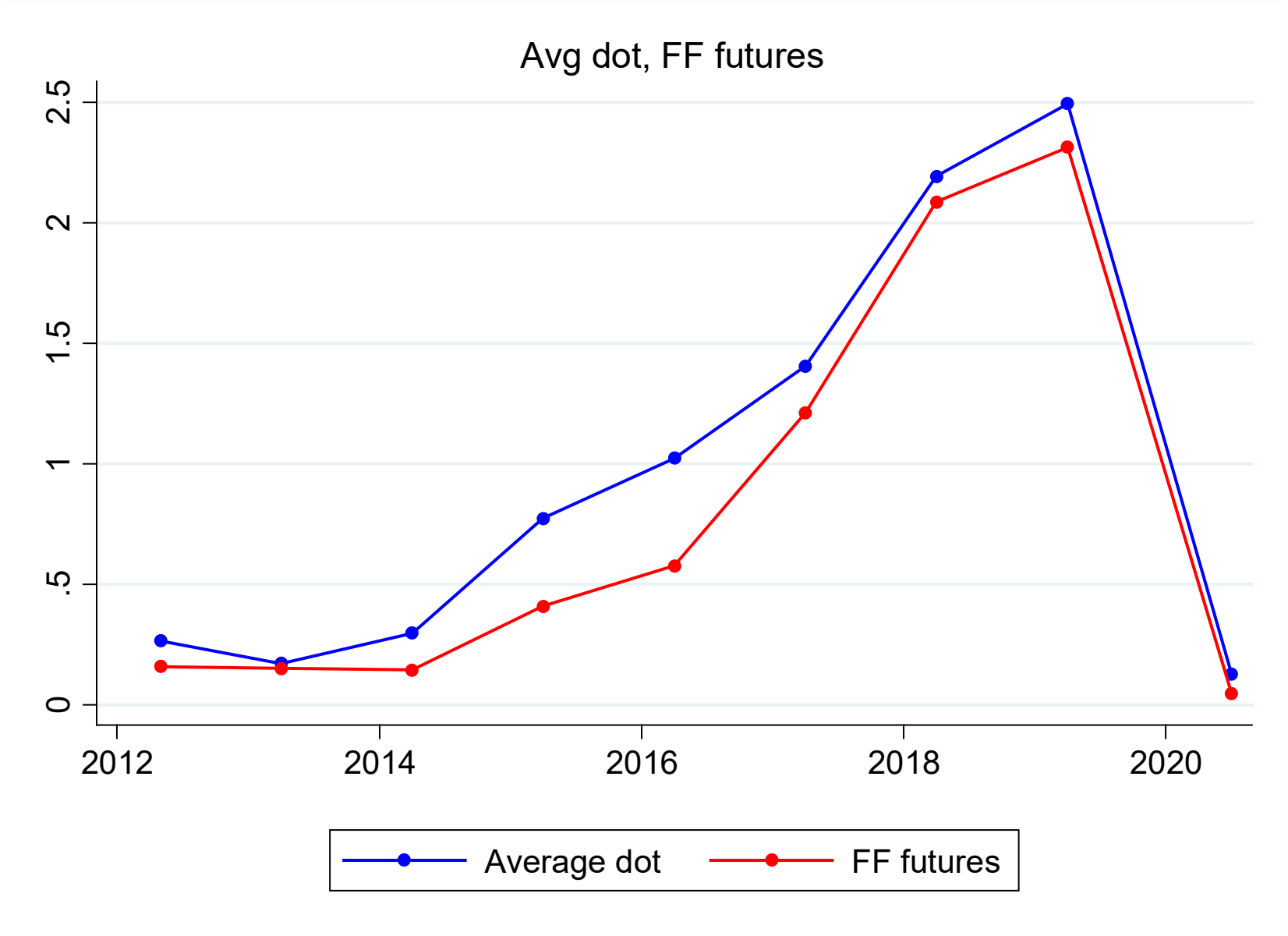




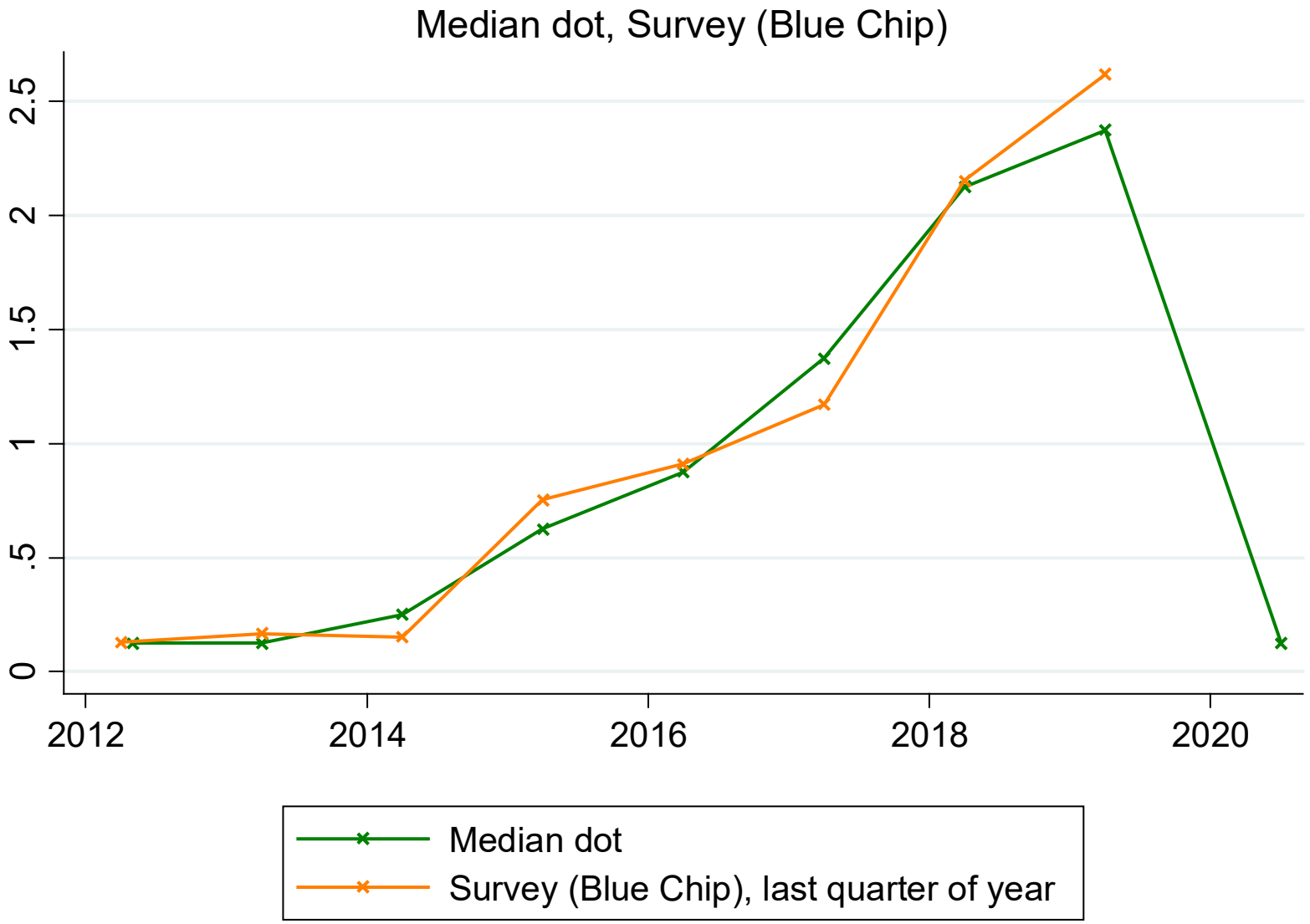
Using March values since 2012, for third quarter forward:



Using updated inputs, we go from the graph from before with lots of disagreement

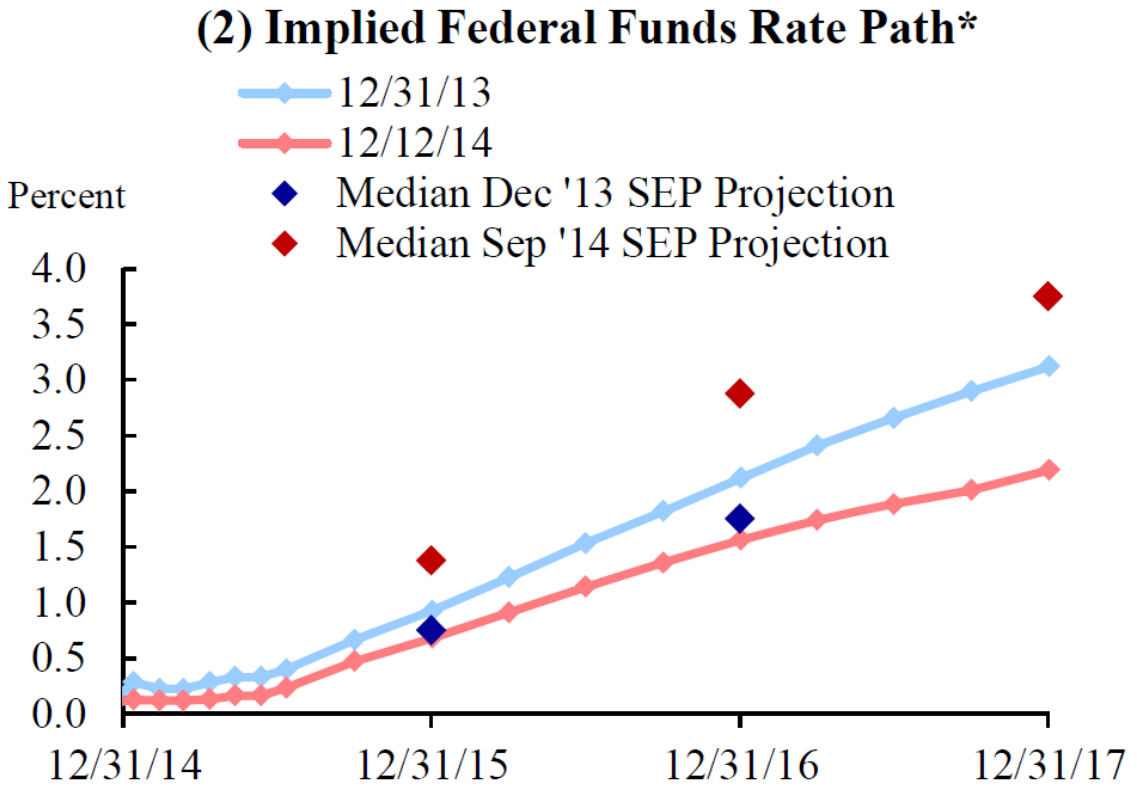


to one with little target disagreement:



The FOMC itself goes through this same exercise to assess any Fed-mkt disagreement!

Dec 2014 FOMC meeting, first page of meeting exhibits:



*Derived from federal funds futures and Eurodollar futures.
Source: Bloomberg, Federal Reserve Bank of New York, Federal Reserve Board of Governors

FOMC presentation decomposes difference:

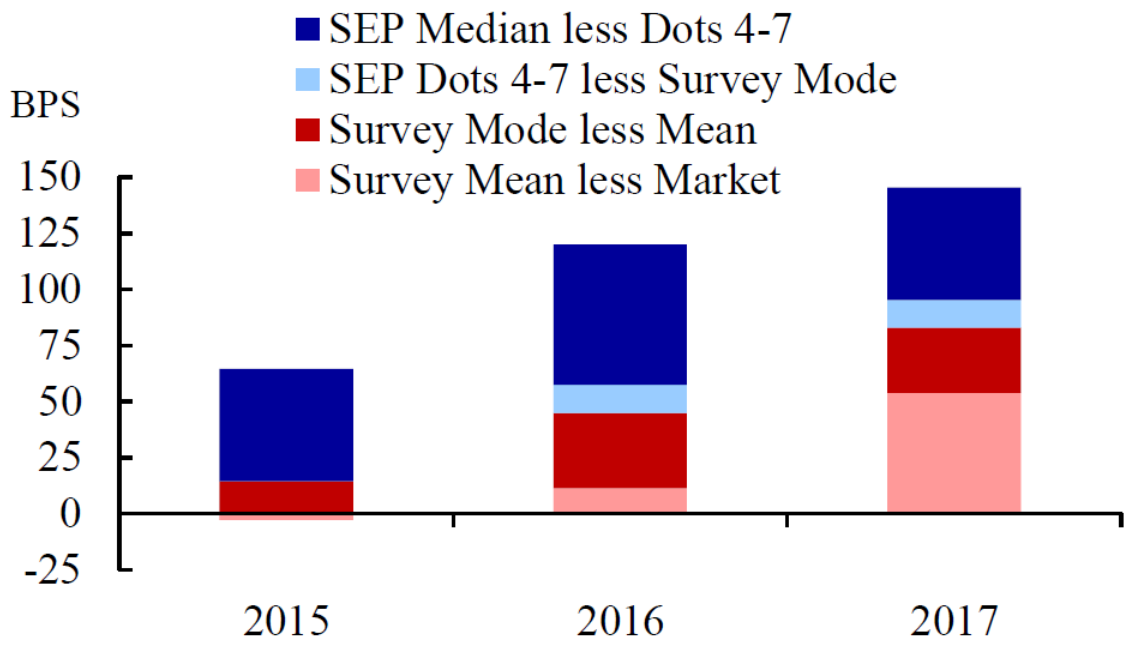
SEP median dot – Fed fund futures

= [SEP median dot – SEP most powerful dots (4-7)] **(the powerful were more dovish)**

+ [SEP most powerful dots – Market survey mode] **(these largely agree!)**

+ [Market survey mode – Market survey mean] **(skewed distribution)**

+ [Market survey mean- Fed funds futures] **(negative risk premium in futures)**



See also NY Fed post by Crump, Moench, O'Boyle, Raskin, Rosa, and Stowe (2014)

Why did dots 4-7 want lower policy rates?

- Disagreement about ***reaction function***, ***not growth/inflation/unemployment***
  Using Sep 2014 SEP, policymaker views about 2017:

	FFR	Core PCE inflation	Real GDP growth	Unemployment rate
			Median	
Dots 4-7	3.44	2	2.3	5
Others	3.75	2	2.3	5.1
			Mean	
Dots 4-7	3.30	1.98	2.28	5.05
Others	3.63	1.98	2.37	5.17

Suggestion for the Fed: Disclose more to reduce market confusion about likely policy

Currently:

- Discloses a **bombardment of unidentified dots** four times/year
- **No consensus** view about likely target
- **No reaction function** disclosure
- Tealbook (staff) forecast released with **5-year lag**

Instead:

- **Name the dots**
- **Even better, agree on one FOMC dot,** like the Bank of England's MPC
- Perhaps add **reaction function disclosure**
- Publish the **Tealbook (staff) forecasts in real time**, not with a 5-year lag

3. REACTION FUNCTION DISAGREEMENT: VERY IMPORTANT

The market needs to understand **19 economic frameworks** (7 governors, 12 presidents) plus the **internal Fed power dynamics.** This is hard.

- 2016 Brookings survey of private sector Fed watchers and academics:

  Only **34% state** that they have a **very clear or mostly clear understanding of the Fed's policy reaction function**

Asset pricing evidence suggests reaction function disagreement large

- **High stock returns in even weeks in FOMC cycle time, 1994-2016 (Cieslak, Morse and Vissing-Jorgensen, 2019)**

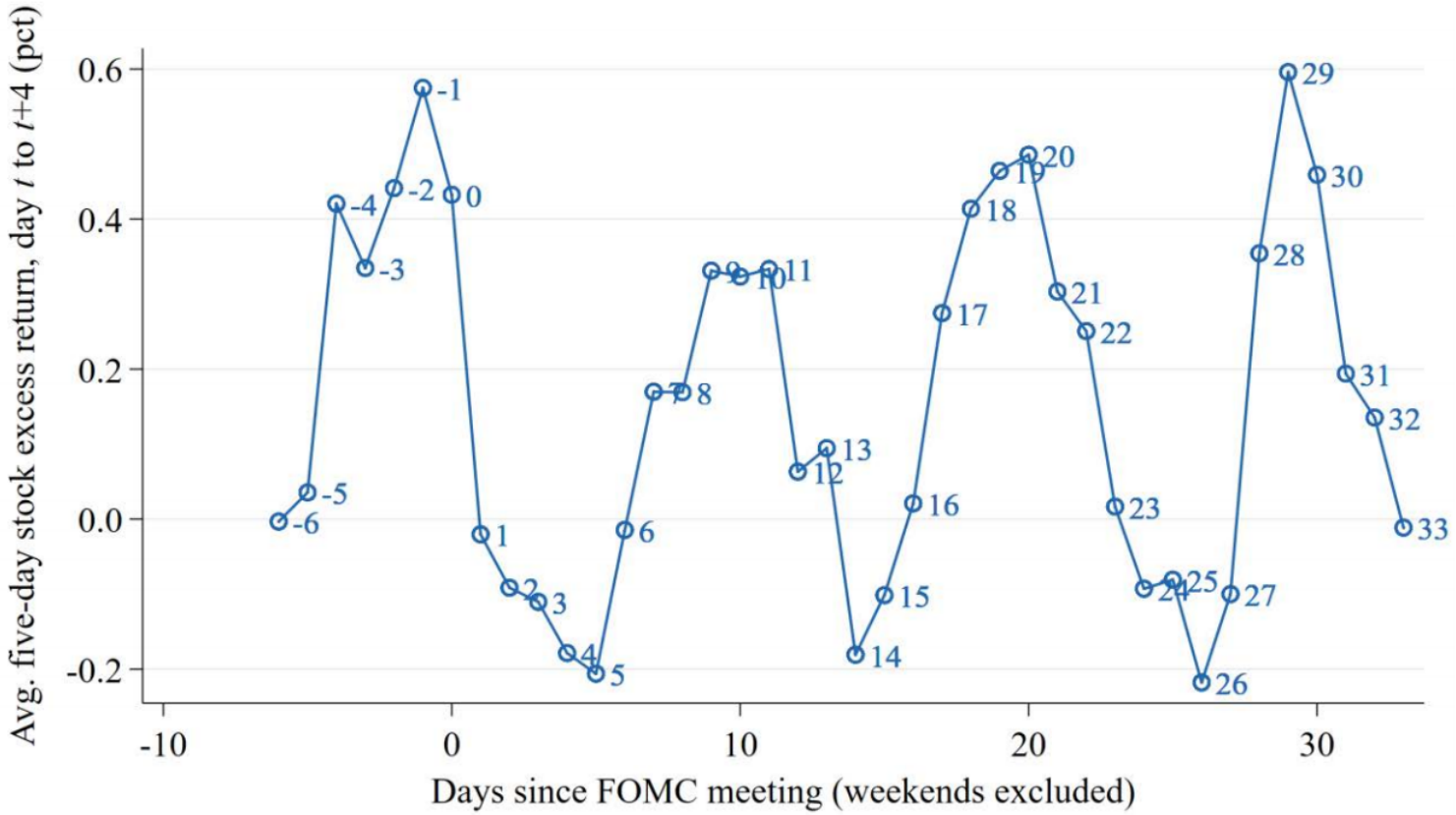
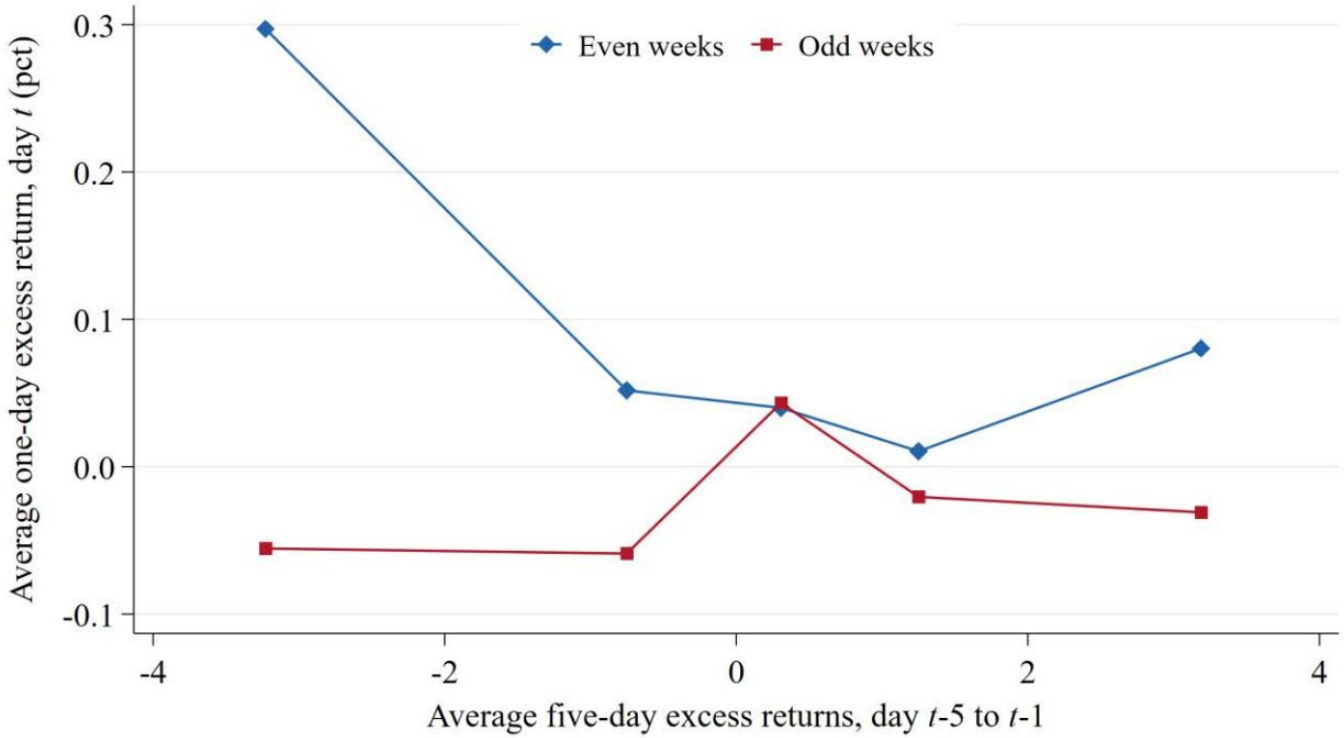


Figure 1. Stock returns over the FOMC cycle, 1994 to 2016. The plot is based on data covering 184 FOMC cycles (eight scheduled FOMC meetings per year). The numbers along the line indicate the value on the horizontal axis. The five-day (forward) returns computed for any of days -6 through -1 of the FOMC cycle are not used in the right part of the graph, so points to the right do not use any data for days -2 and later.

- **Cycle likely due to positive reaction function news:**
  Unexpectedly accommodating policy

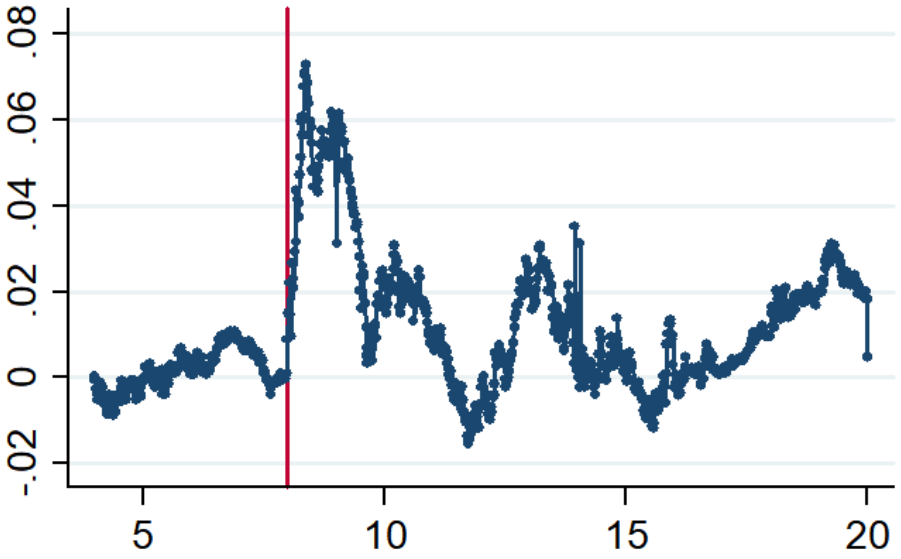
  For example, high even-week stock following low stock returns suggests that the **Fed put has been stronger than expected**



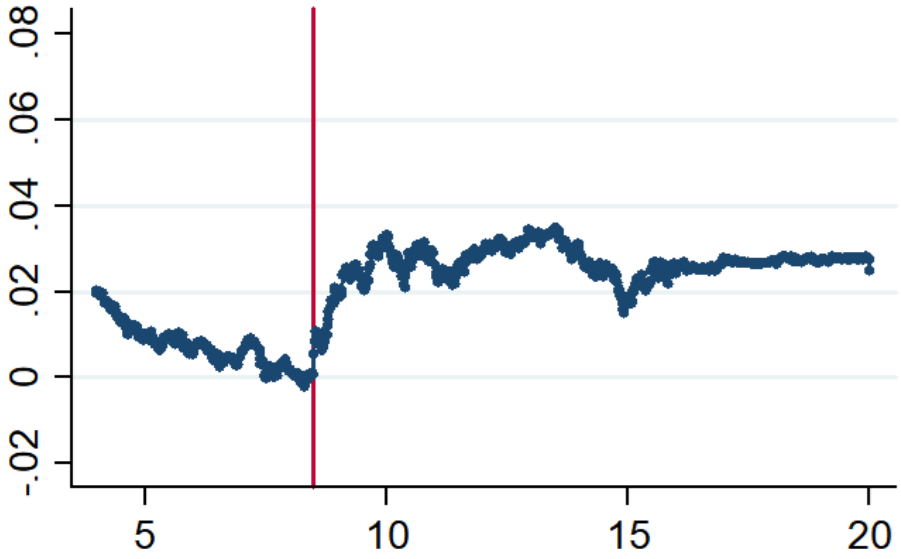
Even week cycle not likely to be a risk premium: A lot of even-week returns **earned on days with internal Fed interactions you can't follow** in real time (Morse and Vissing-Jorgensen (2020), presented tomorrow)

- Unexpectedly accommodating Fed surprises following bad news as relevant as ever:
  S&P500 reaction to recent announcements

March 23, 2020



April 9, 2020



Suggestion: Add section to theory to analyze reaction function disagreement

- Fed is **more activist (especially on the downside)** than market thinks

Expected results:

- Market's **perceived reaction function** drive asset values and consumption and thus should affect policy
- **Asset values react more** to negative shocks that they would with full reaction function understanding (but then mean-revert with policy news)

The Fed could add policy matrix to clarify it's reaction function (but moral hazard risk)

Powell, June 2019: "… the most important policy message may be about **how the central bank will respond to the unexpected** rather than what it will do if there are no surprises. Unfortunately, at times **the dot plot has distracted attention from the more important topic** of how the FOMC will react to unexpected economic developments."

Possible policy matrix: A way of giving such **"tail risk forward guidance"**

		Real growth		
		-2%	1%	4%
Inflation	0%			
	2%			
	4%			

A clear promise of a lower policy rate in the bad state **lowers probability of bad state**.

Or, if model uncertainty is important, say **"we stand ready to act as needed"** or we'll do **"whatever it takes"** or do QE **"in the amount needed"**.

Suggestion: Deemphasize analysis of Fed information advantage

Literature: The Fed is better informed than markets since **surprise tightening** of the Fed funds target is **positively related to private sector growth expectation updates**

Bauer and Swanson (2020): This is wrong, the **Fed is not better informed**.

Rate surprises have **3 possible explanations**:

1) Exogenous monetary policy shock
2) Fed information advantage
3) **Market misunderstood the Fed's reaction function:** Post-1994 **the Fed has reacted more strongly** to public news than the market expected

- **Controlling for publicly available news** arriving after prior Blue Chip survey but before FOMC announcement, **evidence for Fed information advantage disappears**
- Relation between monetary policy surprises and **stock returns** is consistently negative, consistent with monetary policy shocks (of type 1 or 3)
- Authors survey Blue Chip forecasters: Of 36, **none answer that they revise their GDP forecast upward following a hawkish surprise** to the fed funds rate.