

The Origins of Disagreement inside the FOMC: Insights from Text Analysis

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Motivation

- Differences of opinion among FOMC members vary over time

The New York Times

Fed Divisions Led to a Compromise on Interest Rates



Three Federal Reserve officials disagreed with the Aug. 9 ruling on interest rates: Ileana Rosario Greené, Charles L. Evans and Neel Kashyap. (AP)

By Catherine Rampell
Aug. 16, 2011

Rising disagreement on rate-setting committee over economy as move boosts Asian stocks

Federal Reserve cuts rates as policymaker splits deepen



© AP

Brendan Greeley in Washington and Calby Smith in New York SEPTEMBER 19 2019

CENTRAL BANKING

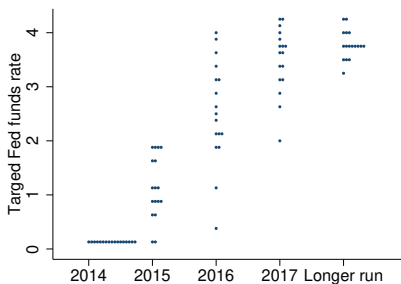
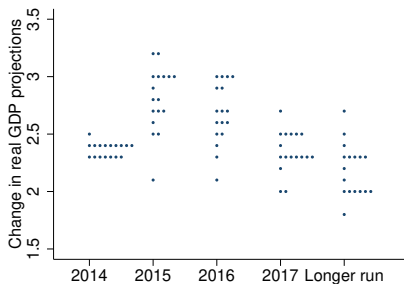
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MONETARY POLICY

FOMC minutes reveal disagreement on forward guidance

Central Banking Newsdesk
10 Apr 2014

Dot plot of FOMC members' projections (December 2014)



Motivation

- Differences among the FOMC members influences the effectiveness of monetary policy:
 - ▶ Information content of forward guidance (Detmers, 2016)
 - ▶ Monetary policy transmission (Falck et al., 2017)
 - ▶ US stock market reactions (Madeira and Madeira, 2019)
- Personal experiences influence the hawkish or dovish leanings of central bankers (Malmendier et al., 2020)

Contribution

We use sentiment analysis on the FOMC transcripts to provide further insights on the drivers of differences in tone for the period 1992-2009

What do we do

1. We use FOMC transcripts to build a new dataset capturing all remarks by FOMC members between 1992 and 2009
2. We extract the tone of each remark to proxy differences among FOMC members
3. We show that personal inflation projections, and less so personal characteristics, are the main drivers of differences in the tone among FOMC members

The structure of FOMC meetings

The core part of the FOMC meeting has a regular structure:

1. Discussion of financial market conditions (staff).
2. Discussion of economic conditions:
 - 2.1 Staff presentation on economic conditions.
 - 2.2 FOMC member presentations on economic conditions.
3. Discussion of appropriate monetary policy:
 - 3.1 Staff presentation on policy alternatives.
 - 3.2 FOMC members sequentially state and justify preferred alternative.

Label:

- Economics go-around
- Policy go-around

Data

- Period: February 5, 1992 to December 12, 2009
- Transcripts:
 - ▶ 144 transcripts by 51 FOMC Members
 - ★ **4,764** speaker × meeting × round observations

The tone of FOMC Members' remarks

- We measure the tone of the FOMC transcripts at the speaker-meeting-round level using a bag-of-words approach and the Loughran and McDonald (2011)'s dictionary.
 - ▶ This dictionary contains **354 words** that convey a positive tone and **2355** words that convey a negative tone.
- The tone is expressed as follows:

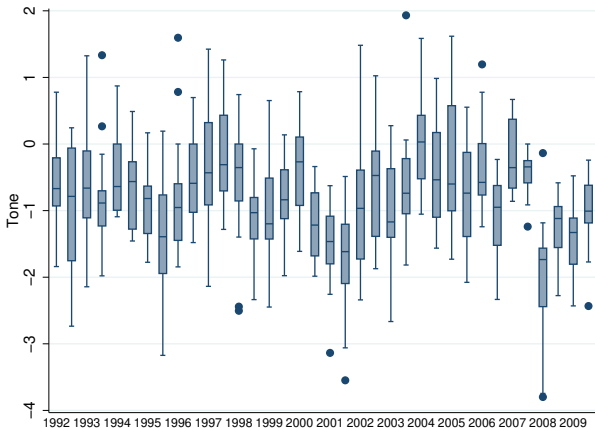
$$Tone_{i,m}^r = \frac{Positive_{i,m}^r - Negative_{i,m}^r}{Total_{i,m}^r}; \quad (1)$$

where *Positive* (*Negative*) is the number of positive (negative) words and *Total* is the total word count for each speaker-meeting-round.

Differences in tone among FOMC members

- We consider individual disagreement for each FOMC member i during meeting t as the deviation of his/her tone from the within-meeting mean of the tone.

Figure: Distribution of tone during FOMC meetings



What influences differences in tone within a meeting?

1. **Individual projections:** projections of the members of the Board of Governors and the Federal Reserve Bank presidents made prior to the Federal Reserve Chairman's semiannual monetary policy report to the Congress
 - ▶ Semiannual projections from February 1992 to July 2009
2. **Personal characteristics:** information on date of birth, education, gender and professional background of FOMC member obtained from the Fed's History Gateway and from the personal CVs of FOMC members

Methodology

- We test whether differences in FOMC members' economic projections and/or personal characteristics can explain the difference in the tone of their remarks
- The estimation takes the following form:

$$Tone_{i,m}^r = \alpha_m + \beta_1 \pi_{i,m}^{eh} + \beta_2 u_{i,m}^{eh} + \gamma' x_{i,m} + \epsilon_{i,m}; \quad (2)$$

where: α_m captures meeting fixed effects. $\pi_{i,m}^{eh}$ and $u_{i,m}^{eh}$ are the individual inflation and unemployment projections of speaker i at horizon h during the meeting m . $x_{i,m}$ is the vector of member characteristics (age, education, professional background and gender).

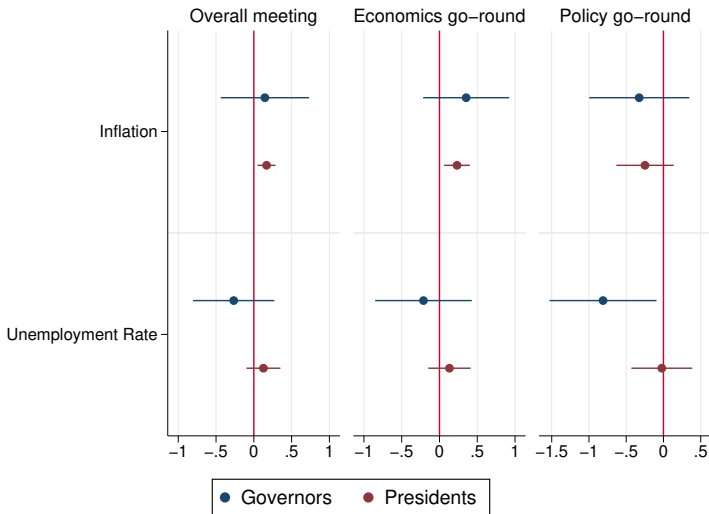
Baseline results

Table: Baseline regressions: Tone and economic projections

	Overall		Economics go-round		Policy go-round	
	(1)	(2)	(3)	(4)	(5)	(6)
Inflation	0.216*	0.167**	0.327**	0.259**	-0.283	-0.313*
	(0.112)	(0.080)	(0.138)	(0.100)	(0.193)	(0.183)
Unemployment Rate	-0.113	0.102	-0.223	0.095	-0.064	-0.104
	(0.185)	(0.143)	(0.222)	(0.163)	(0.157)	(0.157)
Prof Exp FE	✓		✓		✓	
Education FE	✓		✓		✓	
Age	✓		✓		✓	
Gender	✓		✓		✓	
Meeting FE	✓	✓	✓	✓	✓	✓
Member FE		✓		✓		✓
R^2	0.334	0.321	0.305	0.281	0.143	0.142
Observations	2,379	2,379	2,379	2,379	2,358	2,358
Number of members	51	51	51	51	51	51

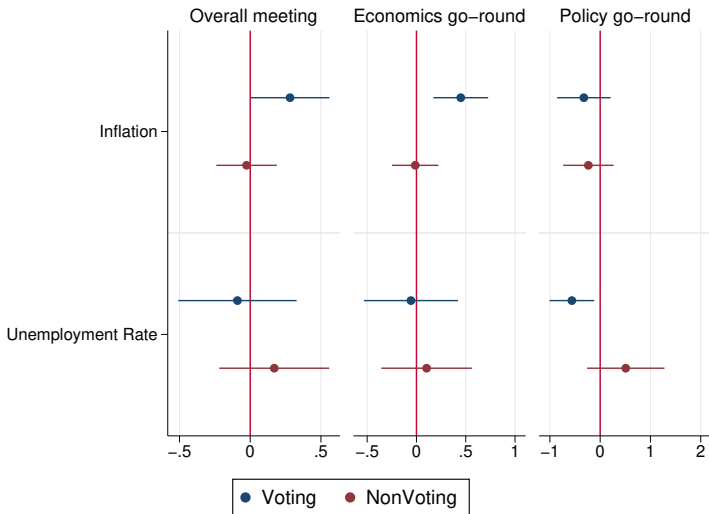
Governors vs Bank Presidents

Figure: Tone and economic projections: Governors Vs Bank presidents



Voting vs Non-voting members

Figure: Tone and economic projections: voting vs non-voting members



Additional sources of disagreement and Robustness

- Additional sources of disagreement:
 - ▶ Tenure inside the FOMC
 - ▶ Regional economic conditions
 - ▶ Personal experiences of both high inflation and recessions exert a **significant and negative** effect on the relationship between inflation projections and tone.
- Robustness tests:
 - ▶ Use of alternative dictionary (Apel et al., 2019)
 - ▶ Alternative measure of Tone, i.e. $\frac{Positive - Negative}{Positive + Negative}$
 - ▶ Focus on the post November 1993 period.

Conclusion

1. Analyse the tone of the speeches of FOMC members between 1992 and 2009
2. Highlight the importance of looking at the different rounds of FOMC meetings
3. Show that personal economic projections are important determinants of differences in tone, and less so personal characteristics