



What type of forward guidance?

Michael Ehrmann, European Central Bank

Workshop “Towards the 2021 Inflation Targeting Renewal”

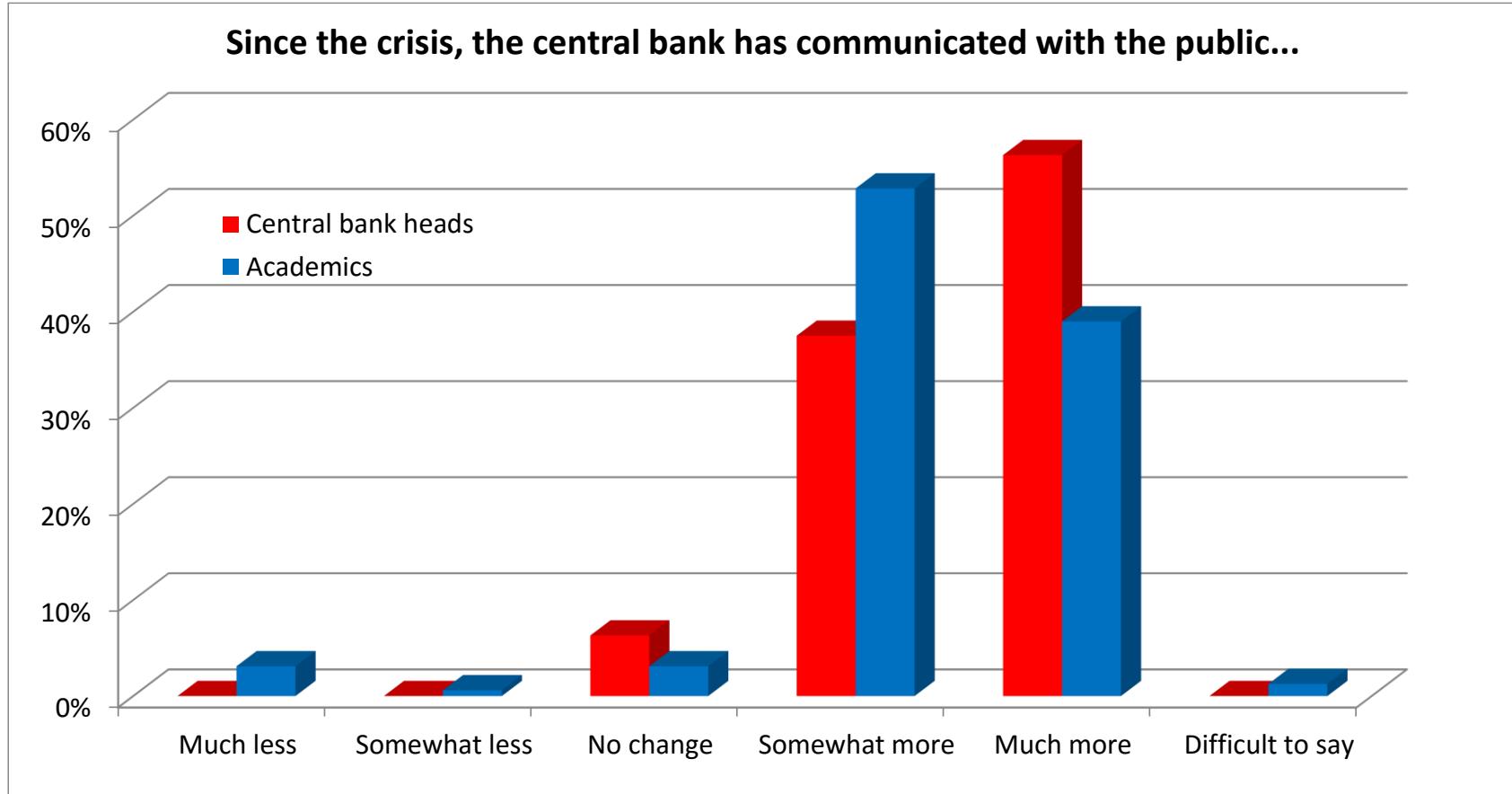
Session on “Monetary Policy Transparency and Communication”

Bank of Canada, 14 September 2017

The views expressed here are my own and do not necessarily reflect those of the ECB or the Eurosystem

- Forward guidance (FG) more widespread after the crisis
- Still, substantial discussion along several dimensions
 - FG puzzle (Del Negro, Giannoni, and Patterson, 2015) – how to shrink the effects in theoretical models?
 - Critical views by some central bankers (Poloz 2014)
 - How to exit from FG?
 - Many different forms (had to be) tried
 - Calendar-based (or time-dependent)
 - Data-based (or state-dependent)
 - Purely qualitative (or open-ended)

- Since the crisis, central bank communication has intensified



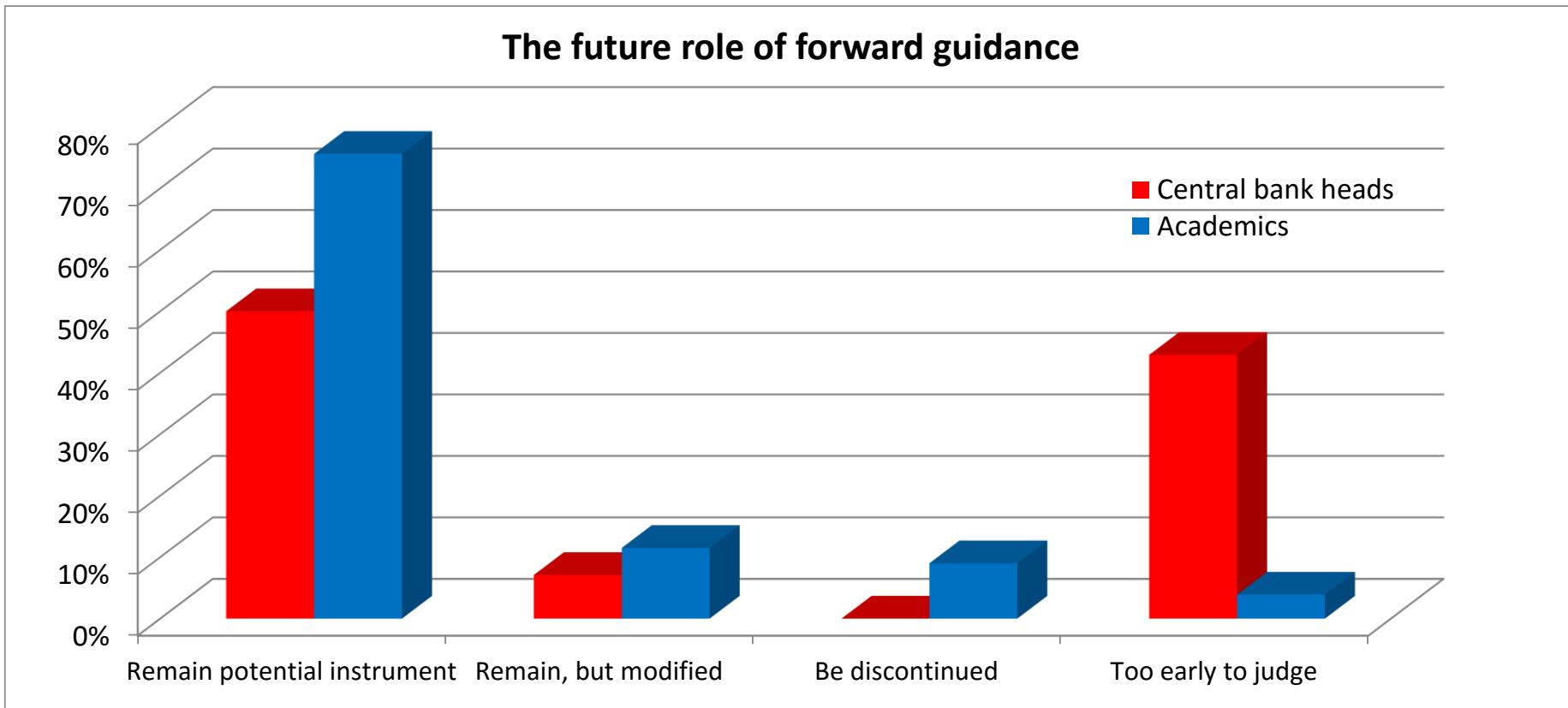
Source: Blinder et al. (2017) survey among central bank governors (55 responses) and academic economists (159 responses).

Governors: "In your view, did the crisis induce the central bank to communicate with the public more or less than it did prior to the crisis?"

Academics: "In your view, did your country's central bank communicate with the public more or less during and after the crisis than it had before?"

Central bank heads vs academics: different views on forward guidance

- FG to stay in the toolkit, yet many CB heads still skeptical

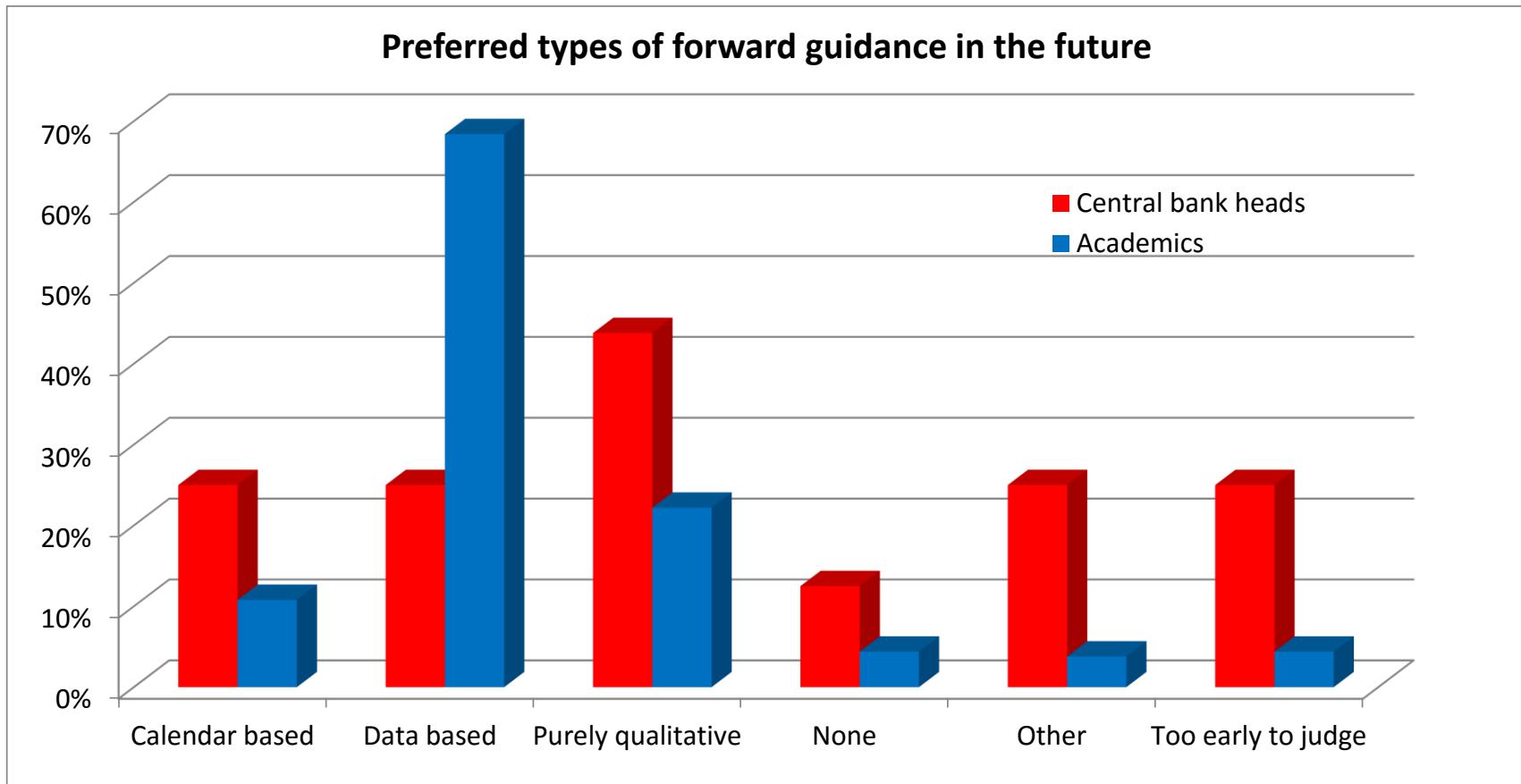


Source: Blinder et al. (2017) survey among central bank governors (55 responses) and academic economists (159 responses).

"Once conditions return to normal, do you think each of the following should remain a potential instrument of monetary policy, remain an instrument but in modified form, be discontinued, or that it is too early to judge?"

Central bank heads vs academics: different views on forward guidance

- Different views on the preferred type of FG



Source: Blinder et al. (2017) survey among central bank governors (55 responses) and academic economists (159 responses).

“In the future, which type(s) of forward guidance do you believe would be most effective for your central bank?”

- What leads to these different preferences?
- Need more evidence on the effectiveness of the different types
- We get at this (*inter alia*) in

Coenen, G., M. Ehrmann, G. Gaballo, P. Hoffmann, A. Nakov, S. Nardelli, E. Persson and G. Strasser (2017). "Communication of Monetary Policy in Unconventional Times", ECB Working Paper No. 2080

- Does the *type* of FG matter for *uncertainty*?
 - Distinguishing
 - State-dependent FG
 - Time-dependent FG, with short and long horizons (1.5 years)
 - Open-ended FG
 - Two tests
 - Responsiveness of bond yields to macroeconomic surprises; Swanson & Williams (2014a,b); Feroli et al. (2016)
 - Disagreement across 1-year ahead forecasts of 3-month rates; Andrade et al. (2015)
 - Sample of advanced economies, periods with policy rates at or below 1%

Assessing the effectiveness of different forward guidance types

- Responsiveness of bond yields to macroeconomic surprises
 - Lower under state-dependent FG and long-horizon FG
 - No change under open-ended FG
 - *Increased responsiveness under short-horizon FG arises in absence of APP*

	Overall	No APP	APP in place
Time-dependent FG, <1.5years	0.99***	1.91***	0.18
Open-ended FG	0.49**	0.33*	0.60*
No FG	0.41**	0.41	0.41**
State-dependent FG	0.22*	n.a.	0.22*
Time-dependent FG, ≥1.5years	0.03	0.19	0.00

Source: Coenen et al. (2017). Note: Responsiveness of 2-year government bond yields to macroeconomic surprises. Sample: Canada, Czech Republic, Germany, Italy, Japan, Norway, Sweden, UK and US. ***/**/* denote statistical significance at the 1%/5%/10% level. Surprises cover business confidence, consumer confidence, CPI inflation, GDP growth, industrial production, nonfarm payrolls, PMI, retail sales, unemployment. Bold numbers indicate that the coefficient estimate of a given FG regime is significant at a 10% level.

Assessing the effectiveness of different forward guidance types

- Disagreement across 1-year ahead forecasts of 3-month rates
 - Eliminated under long-horizon; halved under state-dependent FG
 - No effect from open-ended FG and short-horizon FG
 - Without APP: increased disagreement under short-horizon FG
 - With APP: reduced disagreement for all types of FG

	Overall	No APP	APP in place
State-dependent	-0.27***	n.a.	-0.39***
Open-ended	-0.12	0.14	-0.31**
Time-dependent, long horizon	-0.51***	0.07	-0.80***
Time-dependent, short horizon	0.03	0.19**	-0.20*
$\bar{\Omega}$		0.54	

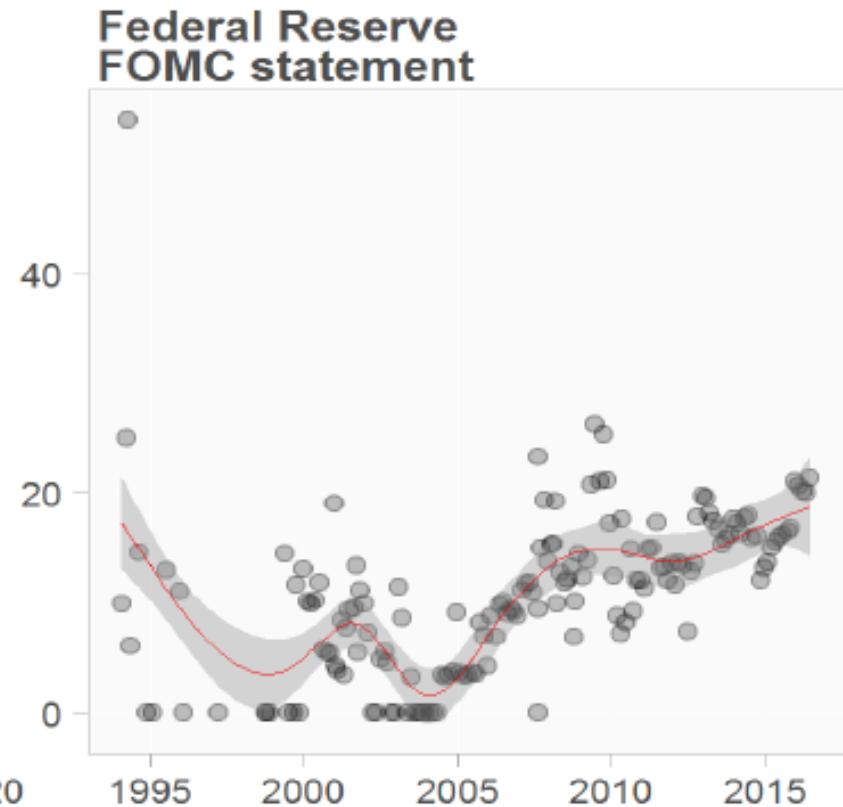
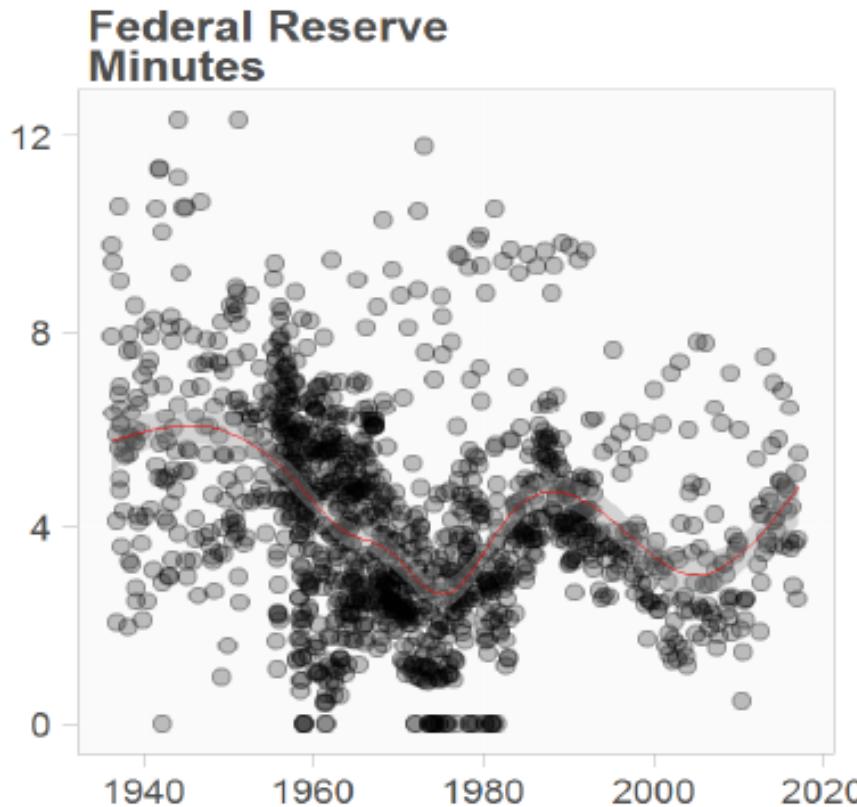
Source: Coenen et al. (2017). Note: Effects of FG on disagreement across Consensus Economics forecasters. Sample: Canada, Czech Republic, euro area, Japan, Norway, Sweden, UK and US. ***/**/* denote statistical significance at the 1%/5%/10% level. $\bar{\Omega}$ denotes the sample average of the interquartile range in the absence of FG.

- FG strengthened in the presence of an APP
- Short-horizon and open-ended FG have little (or perverse) effects
- Long-horizon FG seems more effective
- State-dependent FG
 - Preserves market responsiveness, lowers disagreement
 - Consistent with central bank's own uncertainty and provides more flexibility
- Caveats
 - Time inconsistency
 - Credibility required
 - Trade-off between simplicity and accuracy/robustness of state contingency

- Use state contingency that is
 - Consistent with the central bank's mandate
 - Reliable and available in real time
 - Independently verifiable
 - Robust
 - Easy to communicate
- For the Bank of Canada: tie FG to the set of measures for underlying inflation?

Thank you for your attention!

- Communication has become more forward-looking



Source: Coenen et al. (2017). Note: Share of forward-looking terms (expect, going to, may, might, shall, will) per 1,000 words . Red lines denote Loess curves, grey shaded areas the 95% confidence interval. Last observation: March 2017.

Central bank heads vs academics: different views on forward guidance

- Having adopted (a certain type of) FG makes a positive assessment much more likely

	Evaluation of				
	FG	Calendar-based FG	Data-based FG	Qualitative FG	Other FG
Adopted respective FG type	0.501*** (0.117)	0.456*** (0.163)	0.653*** (0.117)	0.721*** (0.102)	0.585*** (0.198)
Observations	55	55	55	55	55
Pseudo R ²	0.188	0.279	0.419	0.368	0.225

Source: Blinder et al. (2017)

Notes: The table reports marginal effects of a probit model that explains governors' responses as to whether or not they think (a certain type of) forward guidance is effective. Numbers in parentheses denote robust standard errors. */**/** identifies statistical significance at the 10%/5%/1% level.

- Responsiveness of bond yields to macroeconomic surprises
 - Reduced responsiveness: Swanson & Williams (2014a,b); Feroli et al. (2016)
 - Here: differentiate across types of FG
 - Surprises in several macroeconomic announcements based on Bloomberg survey
 - Effect of news on daily change of 2-year government bond yields
 - Sample of advanced economies, periods with policy rates at or below 1%
 - Identification via changes in FG
 - We expect (if FG is credible)
 - No responsiveness under open ended and long-horizon time dependent FG
 - Lower responsiveness under state-dependent FG, possibly under short-horizon time-dependent FG
 - Credibility strengthened in presence of an APP (Eggertsson & Woodford 2003)

- Disagreement across forecasters
 - Reduced disagreement shown by Andrade et al. (2015)
 - Here: differentiate across types of FG
 - Effect on interdecile range of one-year ahead forecasts in Consensus Economics
 - Sample of advanced economies, periods with policy rates at or below 1%
 - We expect (if FG is credible)
 - Lower disagreement, especially on short-term rates
 - Ideally also lower disagreement on other variables
 - Credibility strengthened in the presence of an APP