Discussion on "Forward Guidance under Disagreement" by G. Detmers

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- Evaluating the impact of Forward Guidance policies:

  - low-tech view: reduces level and volatility of yields

  - high-tech view: induces recovery in consumption and inflation

- The message of this paper: the disagreement of FOMC's dot projections diminishes the low-tech effectiveness of FG

  - it works against FG: it increases sensitivity of yields to news

  - especially for long maturities (?)

- Important topic: what are the benefits of more transparency?

  - well written paper, with clear messages, good job.

- The (?) part

- Put this work in relation with my work

  - Theory explanations

  - Complementary empirical evidence

- Coming back to FOMC disagreement

Table 5   The Sensitivity Shrinkage Effect of Forward Guidance under Disagreement

		6months	1year	2years	3years	5years	10years	20years
Date-based FG:	γ^d	-0.82***	-0.86***	-0.97***	-0.89***	-0.82***	-0.72***	-0.76***
		(0.13)	(0.05)	(0.02)	(0.04)	(0.08)	(0.18)	(0.16)
State-based FG:	γ^s	-1.63***	-0.79***	-0.64***	-0.24	0.19	0.53	0.56
		(0.37)	(0.12)	(0.21)	(0.34)	(0.43)	(0.47)	(0.44)
Date-FG*DA:	δ^d	1.21	0.06	0.40**	0.92**	2.14***	4.12***	4.61***
		(0.83)	(0.20)	(0.18)	(0.42)	(0.80)	(1.33)	(1.38)
State-FG*DA:	δ^s	0.99	0.51	1.02**	1.21*	0.64	0.17	-0.07
		(0.60)	(0.49)	(0.48)	(0.63)	(0.56)	(0.56)	(0.56)
$H_0: \beta = 0$ p-value		0.14	0.18	0.03	0.06	0.05	0.04	0.02
R^2		0.06	0.14	0.17	0.14	0.11	0.10	0.10

Notes: Estimations for Equation 2 for all announcement days between December 16, 2008 and March 30, 2015. i.e. 603 observations for each horizon. $\Delta r_t^j = \alpha^j + \sum_k \beta^{k,j} s_t^k (1 + \gamma^{d,j} D_t^{date} + \gamma^{s,j} D_t^{state} + \delta^{d,j} DA_t \cdot D_t^{date} + \delta^{s,j} DA_t \cdot D_t^{state}) + \varepsilon_t^j$; Newey-West standard errors in parentheses; *** (**) [*] denotes significance at the 1% (5%) [10%] level. $H_0: \beta = 0$ tests for all βs being jointly zero and states the respective p-value. The whole set of results is reported in Table 9 in the Appendix.

- Low-tech view: Morris and Shin (2002)?

  - MS is just an example where social and private incentives differ

  - reference to MS problematic: there more subjective interpretation reduces volatility!

  - Gaballo (AEJ:M,16): "Rational Inattention to News: the Perils of Forward Guidance"

    - subjective interpretations makes prices matter as a source of public info

    - amplification of price disturbances (externality of endogenous information)

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- From low-tech to high-tech: Andrade, Gaballo, Mengus, Mojon (2017)

  - Confusion on whether the policy is Delphic or Odyssean reduces the effectiveness of FG policies

  - In particular, it leads to disagreement on future accommodation:

    i.e. on the medium/long-run but not on short-run!

- Communication of Monetary policy in Unconventional Times

  – *ECB discussion paper, June 2017*

  – *written by Coenen, Ehrmann, Gaballo, Hoffmann, Nakov, Nardelli, Persson, Strasser.*

- We test whether the *type* of FG matters for *uncertainty/credibility*

  – We distinguish:

    - State-dependent FG (e.g. with reference to inflation thresholds)
    - Time-dependent FG, with short (<1.5 years) and long horizons (>1.5 years)
    - Open-ended FG (e.g. "for an extended period")

  Note: ECB: Open-ended, then time-dependent

- Two exercises using evidence from Canada, Czech Republic, Eurozone, Japan, Norway, Sweden, UK and US

  – Look to muted response of yields to macroeconomic news

    - if FG credible they should not move!

  – Look whether FG reduces disagreement about future rates

    - FG should reduce disagreement (for US evidence see Andrade et al., 2017)

  – What is the effect of joint APP announcements?

Regression:

$$\Delta R_t^{c,i} = \alpha^{c,i} + \alpha_{SG} SG_t^c + \alpha_{OG} OG_t^c + \alpha_{LTG} LTG_t^c + \alpha_{STG} STG_t^c +$$

$$\beta s_t^{c,i} + \beta_{SG} SG_t^c s_t^{c,i} + \beta_{OG} OG_t^c \varepsilon_t^{c,i} + \beta_{LTG} LTG_t^c s_t^{c,i} + \beta_{STG} STG_t^c s_t^{c,i} + \varepsilon_t^{c,i}, \tag{2}$$

where $\Delta R_t^{c,i}$ is the contemporaneous change in the two-year sovereign bond yield in country c around the release time t of indicator i.[33] The surprise $s_t^{c,i}$ is the difference between the expected and the released value of the macroeconomic indicator i for country c at time t. The dummy variables for the different FG regimes equal unity if the central bank of country c in period t follows state-dependent (SG_t^c), open-ended (OG_t^c) or time-dependent FG with a remaining horizon of more than 1.5 years (LTG_t^c) or less than 1.5 years (STG_t^c), respectively. We restrict the sample to ELB periods (which we define to be periods where the policy rate is at or below 1%), because the impact of macroeconomic surprises on bond yields is expected to be muted if interest rates are at the lower bound.[34]

- 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	*APP in place*	*No APP*
Time-dependent FG, <1.5years	**1.25*****	0.25	**1.91*****
Open-ended FG	0.44**	0.51*	0.33*
No FG	0.41**	0.41**	0.41
State-dependent FG	0.22*	0.22*	n.a.
Time-dependent FG, ≥1.5years	**0.08**	**0.05**	0.19

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.

Regression:

$$\Omega_t^{c,i} = \alpha^{c,i} + \alpha_t + \alpha_{SG} SG_t^c + \alpha_{OG} OG_t^c + \alpha_{LTG} LTG_t^c + \alpha_{STG} STG_t^c + + \varepsilon_t^{c,i} \qquad (3)$$

where $\Omega_t^{c,i}$ is the interdecile range of one-year ahead forecasts of macroeconomic variable i in country c, as provided in the Consensus Economics forecast conducted in month t. We cover forecasts for three month interest rates, 10 year government bond yields, consumer price inflation (percent change per annum) and real GDP growth (percent change per annum). $\alpha^{c,i}$ denotes country-variable fixed effects, and α_t time fixed effects.[36] All other variables denote FG dummies and are defined as in the previous section. We estimate separate regressions for the different macroeconomic variables i. As before, we restrict the sample to ELB periods (which we define to be periods where the policy rate is at or below 1%), because the disagreement and the impact of FG could well be different if interest rates are at the lower bound.

- 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	*APP in place*	*No APP*
State-dependent	-0.27***	-0.39***	n.a.
Open-ended	-0.12	-0.31**	0.14
Time-dependent, long horizon (>1.5 y.)	-0.51***	-0.80***	0.07
Time-dependent, short horizon (<1.5 y.)	0.03	-0.20*	0.19**
		0.54	

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.

Caveat: the identifying assumption is that announcements are uniformly understood.

- Summary

  - FG strengthened in the presence of an APP

  - Short-horizon (<1.5years) and open-ended FG seem to have little (or perverse) effects

  - Long-horizon (>1.5years) FG seems more effective

- Coming back to FOMC disagreement

  - how FOMC disagreement is correlated with the type of forward guidance?

  - or to the stance of QE programs?

  - does the distinction between short and long matters?

  - is the publication of FOMC's dot projections *as such* harmful?

Thanks for your attention

Table 2: Net market impact of macroeconomic news under different types of FG

| | Daily data | | | Intraday data | | |
	Overall (1)	No APP (2a)	With APP (2b)	Overall (3)	No APP (4a)	With APP (4b)
STG	1.25***	1.91***	0.25	1.08***	1.44***	0.51***
$(\beta + \beta_{STG})$	(0.26)	(0.29)	(0.30)	(0.14)	(0.16)	(0.18)
OG	0.44**	0.33*	0.51*	0.51***	0.38**	0.56***
$(\beta + \beta_{OG})$	(0.18)	(0.18)	(0.26)	(0.16)	(0.17)	(0.20)
No FG (β)	0.41**	0.41	0.41**	0.47***	0.45**	0.51**
	(0.18)	(0.25)	(0.18)	(0.14)	(0.18)	(0.21)
SG $(\beta + \beta_{SG})$	0.22*	n.a.	0.22*	0.11	n.a.	0.11
	(0.12)		(0.12)	(0.07)		(0.07)
LTG	0.08	0.19	0.05	0.13*	0.25	0.12*
$(\beta + \beta_{LTG})$	(0.09)	(0.21)	(0.09)	(0.07)	(0.24)	(0.07)
Observations	5120	5120		4739	4739	
R^2	0.01	0.02		0.03	0.03	

Note: This table shows net surprise impact based on the coefficient estimates of the fixed effects model. The dependent variable in columns 1 and 2a/2b is the daily change, in columns 3 and 4a/4b the intraday (symmetric 120 minute window around event) change in two year sovereign bond yields, in basis points. Sample covers Canada, Germany, Italy, Japan, Sweden, UK and US for intraday, and additionally Czech Republic and Norway for daily frequency. Surprises cover business confidence, consumer confidence, CPI inflation, GDP growth, industrial production, nonfarm payrolls, purchasing manager index, retail sales, unemployment. Only periods at or below the ELB of 1%. Therefore, observations for most countries are only at or after the year 2009, with two exceptions: Japan (earliest observation in the year 2000) and USA (earliest observation in the year 2003). State-contingent FG only observed during APP periods. Country-indicator fixed effects, FG and APP effects and their interactions, and constant not reported. Standard errors clustered at the country-indicator level in parentheses. Bold numbers indicate that the coefficient estimate of a given FG regime, β_X, is significant at a 10% level. Asterisks indicate the level of significance, (*) at the 10%, (**) at the 5%, and (***) at the 1% level.

Table 3: FG and forecaster disagreement

	3-month rates			10-year rates		
	Overall	*No APP*	*With APP*	*Overall*	*No APP*	*With APP*
SG (α_{SG})	-0.270***	n.a.	-0.389***	-0.097*	n.a.	-0.149**
	(0.093)		(0.088)	(0.051)		(0.061)
OG (α_{OG})	-0.099	0.133*	-0.290***	0.012	0.160***	-0.091
	(0.085)	(0.070)	(0.106)	(0.070)	(0.037)	(0.085)
LTG (α_{LTG})	-0.565***	0.070	-0.883***	0.034	-0.172*	0.023
	(0.138)	(0.123)	(0.151)	(0.097)	(0.092)	(0.099)
STG (α_{STG})	0.009	0.194**	-0.260**	-0.071	-0.087	-0.128
	(0.100)	(0.090)	(0.109)	(0.063)	(0.086)	(0.099)
Observations	755	755		755	755	
R^2	0.777	0.804		0.775	0.775	
$\bar{\Omega}$	0.541			0.650		

	Inflation			GDP growth		
	Overall	*No APP*	*With APP*	*Overall*	*No APP*	*With APP*
SG (α_{SG})	-0.180**	n.a.	-0.283***	-0.108**	n.a.	-0.084
	(0.086)		(0.083)	(0.042)		(0.053)
OG (α_{OG})	0.119***	0.029	0.234***	0.003	0.092	0.053
	(0.042)	(0.044)	(0.077)	(0.060)	(0.064)	(0.088)
LTG (α_{LTG})	-0.064*	-0.037	-0.199**	-0.067	0.013	-0.054
	(0.049)	(0.089)	(0.082)	(0.086)	(0.165)	(0.112)
STG (α_{STG})	-0.065	-0.058	-0.212***	-0.068	-0.075	-0.032
	(0.050)	(0.081)	(0.080)	(0.064)	(0.078)	(0.135)
Observations	755	755		755	755	
R^2	0.715	0.754		0.758	0.760	
$\bar{\Omega}$	0.652			0.910		

Note: The table shows the effect of different FG types on Consensus forecaster disagreement regarding one-year-ahead forecasts for the different variables reported in the column headers, as measured by the interdecile range. Country and time fixed effects not reported for brevity. SG denotes state-dependent FG, OG open-ended FG, LTG time-dependent FG with a remaining guidance horizon of more than 1.5 years, STG time-dependent FG with a remaining guidance horizon of less than 1.5 years. State-contingent FG only observed during APP periods. $\bar{\Omega}$ denotes the sample average of the interquartile range in the absence of FG. Driscoll and Kraay (1998) standard errors are given in parentheses. Asterisks indicate the level of significance, (*) at the 10%, (**) at the 5%, and (***) at the 1% level.