EUROPEAN CENTRAL BANK

EUROSYSTEM

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Central bank communication and the role of forward guidance

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The views expressed in this presentation are those of the presenter and do not necessarily reflect those of the ECB or the Eurosystem.

Why central bank communication?

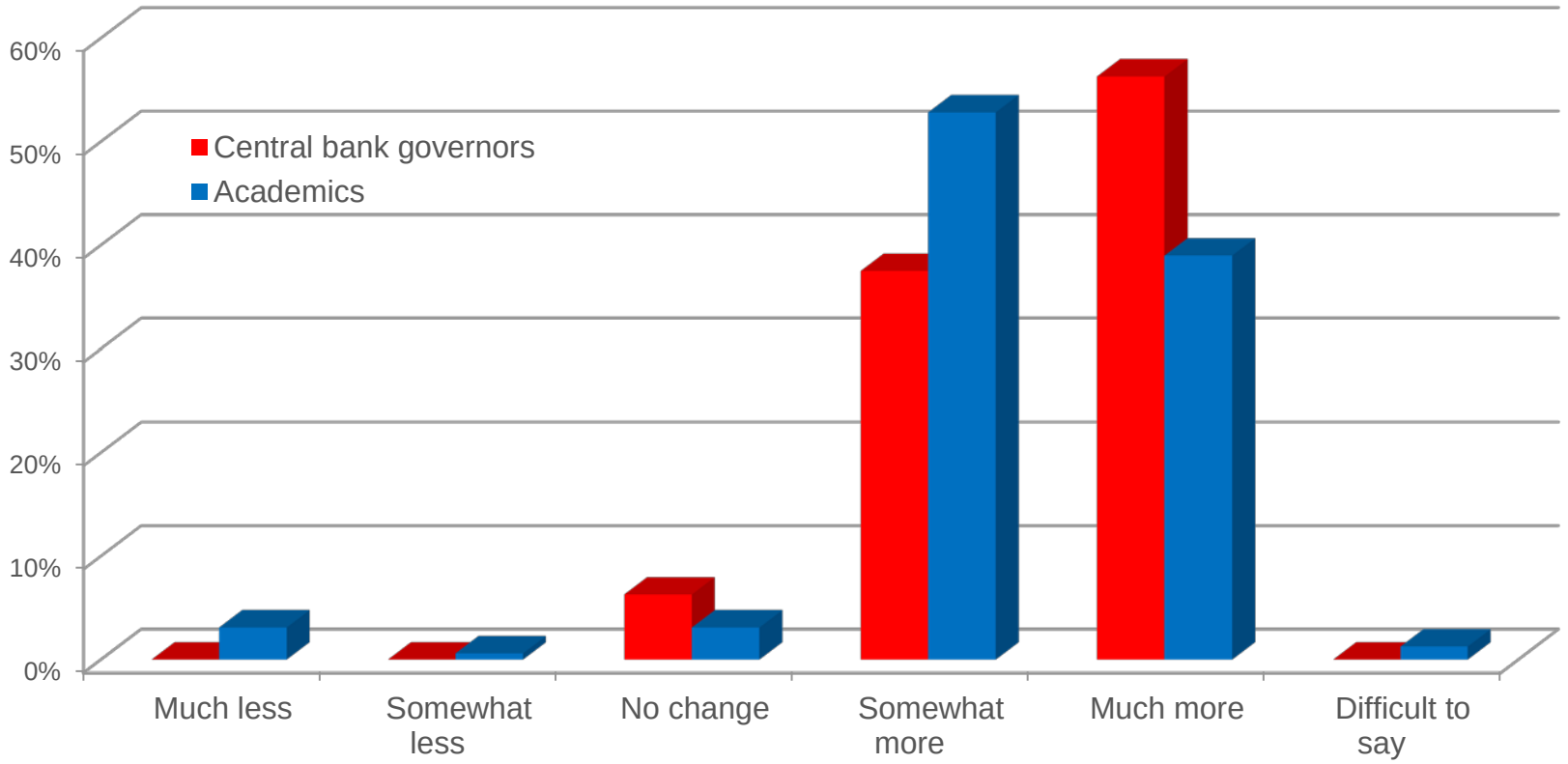
1 Communication ***about*** a given policy

- Accountability: especially relevant when the central bank resorts to unconventional (quasi-fiscal) measures
- Transparency: explaining the rationale and the workings of new policy tools
- Dependability: guiding expectations about the usage of new policy tools ("reaction function")

2 Communication *as a* ***policy tool*** itself

Outline

Since the crisis, the central bank has communicated with the public...

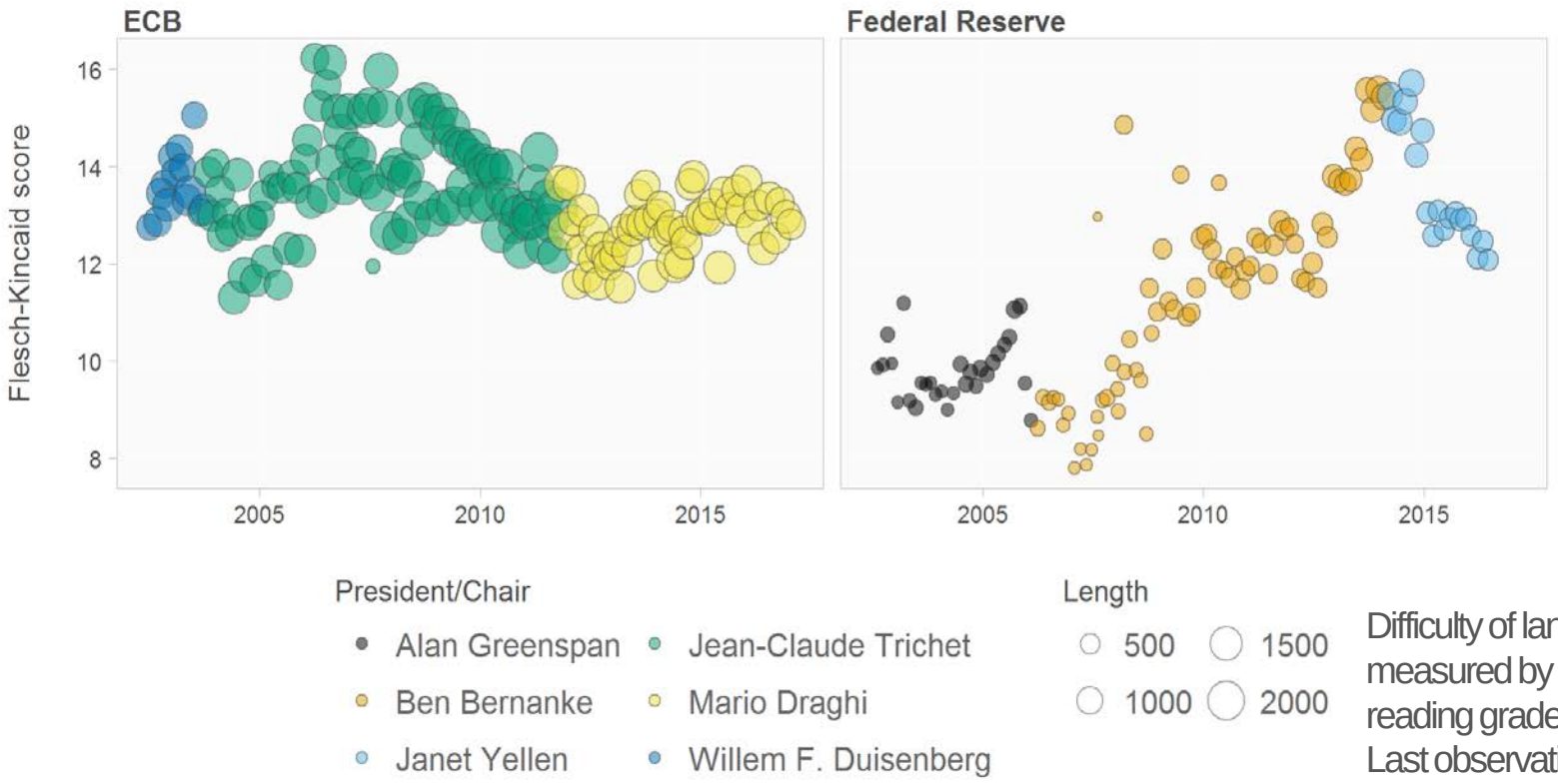


Source: Blinder et al. (2017) survey among central bank governors (55 responses) and academic economists (159 responses).

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?"

Length and difficulty of language of ECB / FOMC statements



Difficulty of language measured by Flesch-Kincaid reading grade level.
Last observation: March 2017.

- Longer FOMC statements, more difficult language
- Relatively stable ECB introductory statements (more standardised)

Outline

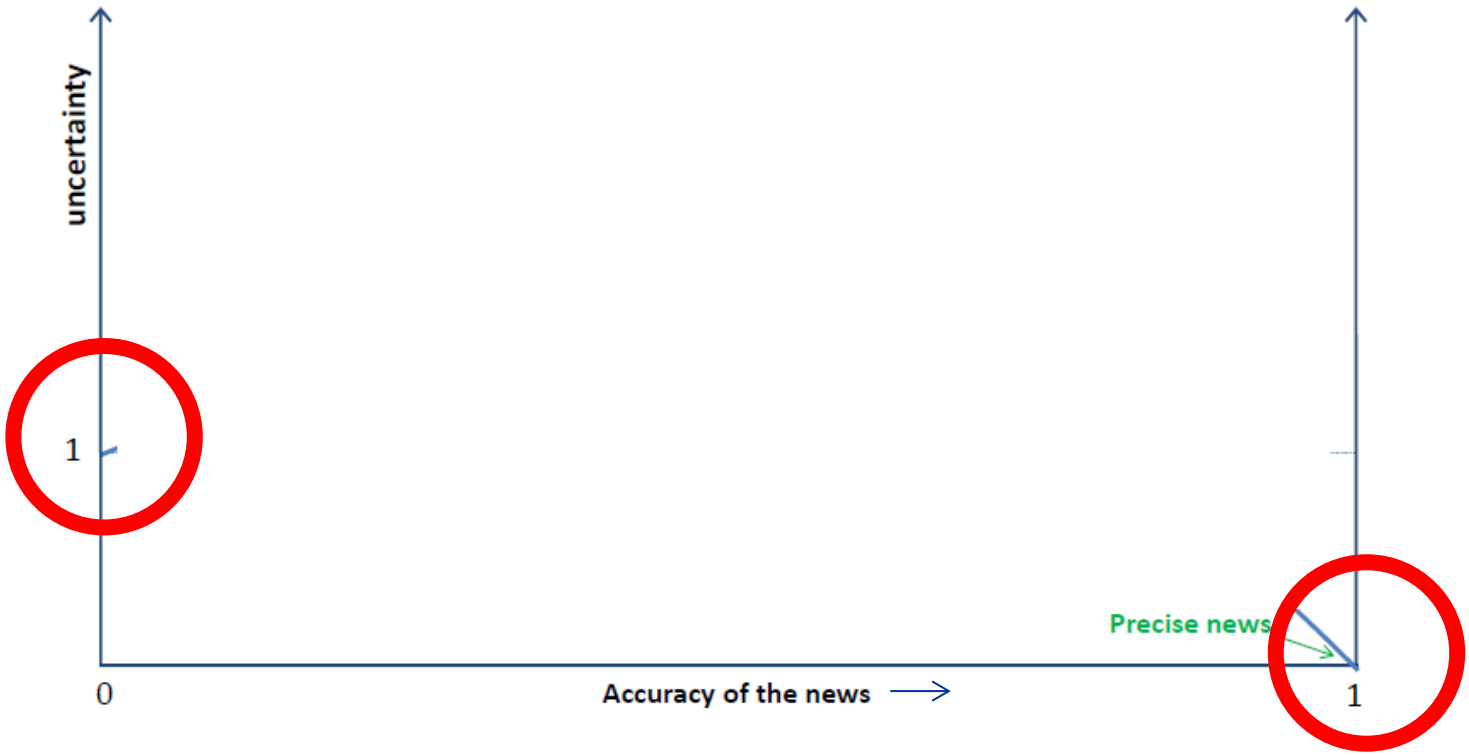
1. Recent trends in monetary policy communication
2. **Effect of central bank communication?**
3. Forward guidance about policy rates
4. Does the type of forward guidance matter?
5. How does forward guidance interact with other sources of information?

Why listen to central bank communication?

- (Policy decision)

- Central bank might have different information on the evolution of the economy
- Central bank has better information on its own thinking
- Central bank signals can act as coordination device

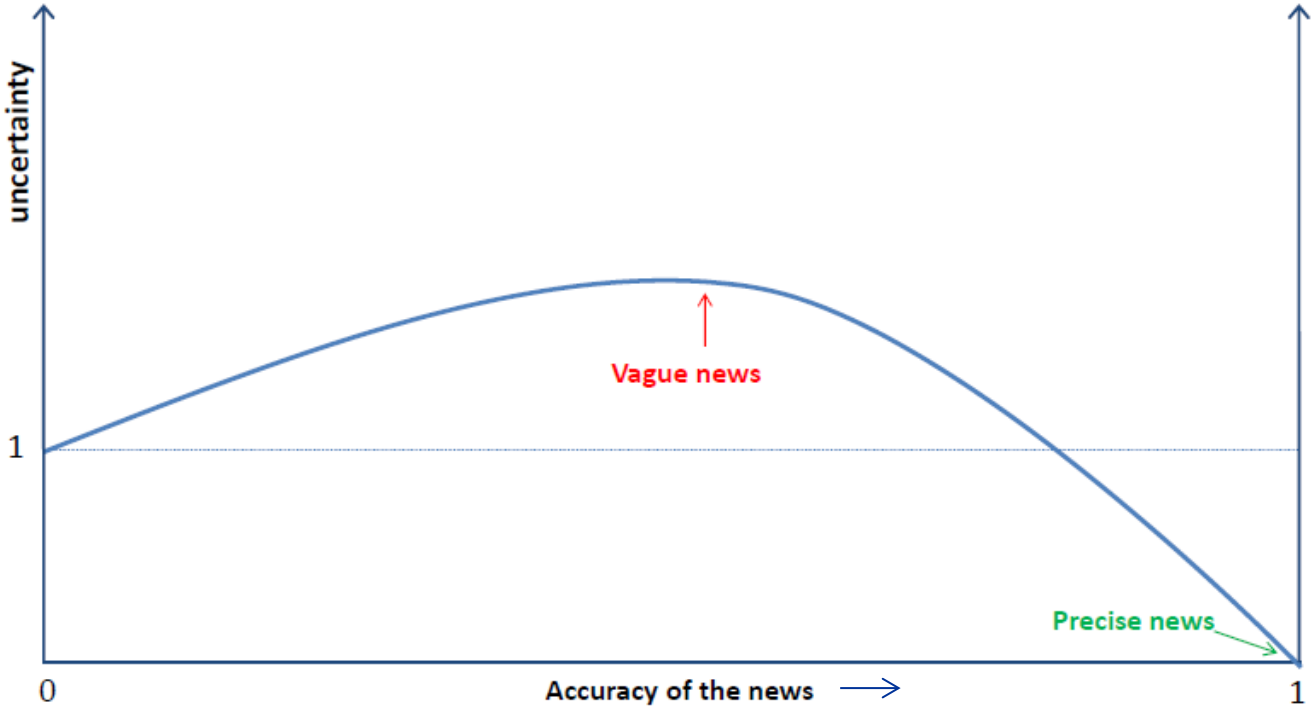
Precise news is better than no news … but what about vague news?



Channels:

1. Creating news
2. Reducing noise

Only sufficiently precise signals reduce uncertainty.



"Common" interpretation: (central bank) **signals** as coordination device (Morris and Shin AER 2002)

"Individual" interpretation: agents look for interpretation of others in **market prices** (Gaballo AEJM 2016)

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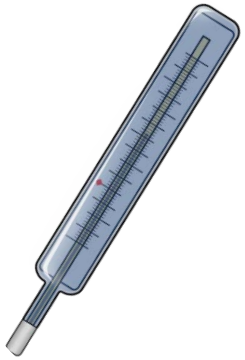
Common types of forward guidance (FG)

- Purely **qualitative** FG
  E.g. ECB until Jan 2016: "*we expect the key ECB interest rates to remain at present or lower levels for an extended period of time*"

- **Time**-contingent FG
  E.g. current ECB guidance: "… *expects the key ECB interest rates to remain at their present levels at least through the first half of 2020 …* "



- **State**-contingent FG
  E.g. FOMC Dec 2012: policy rates appropriate "*at least as long as the unemployment rate remains above 6-1/2 percent, inflation between one and two years ahead is projected to be no more than a half percentage point above the Committee's 2 percent longer-run goal, and longer-term inflation expectations continue to be well anchored*"

Odyssean and Delphic perceptions of forward guidance (FG)

"Odyssean" FG

Commitment about future conduct of monetary policy

- **Large effects** on private sector expectations (but: "forward guidance puzzle")
- Requires credibility
- State-contingent
- No sizable inflation overshoot

"Delphic" FG

Guidance about the ***likely*** future course of monetary policy

- **Smaller effects**; inflation undershoots target substantially and for extended period of time
- Can be counter-productive if taken as signal that economy is performing poorly (Campbell, Evans, Fisher and Justiniano BPEA 2012)

Forward guidance has been more widespread since the crisis.

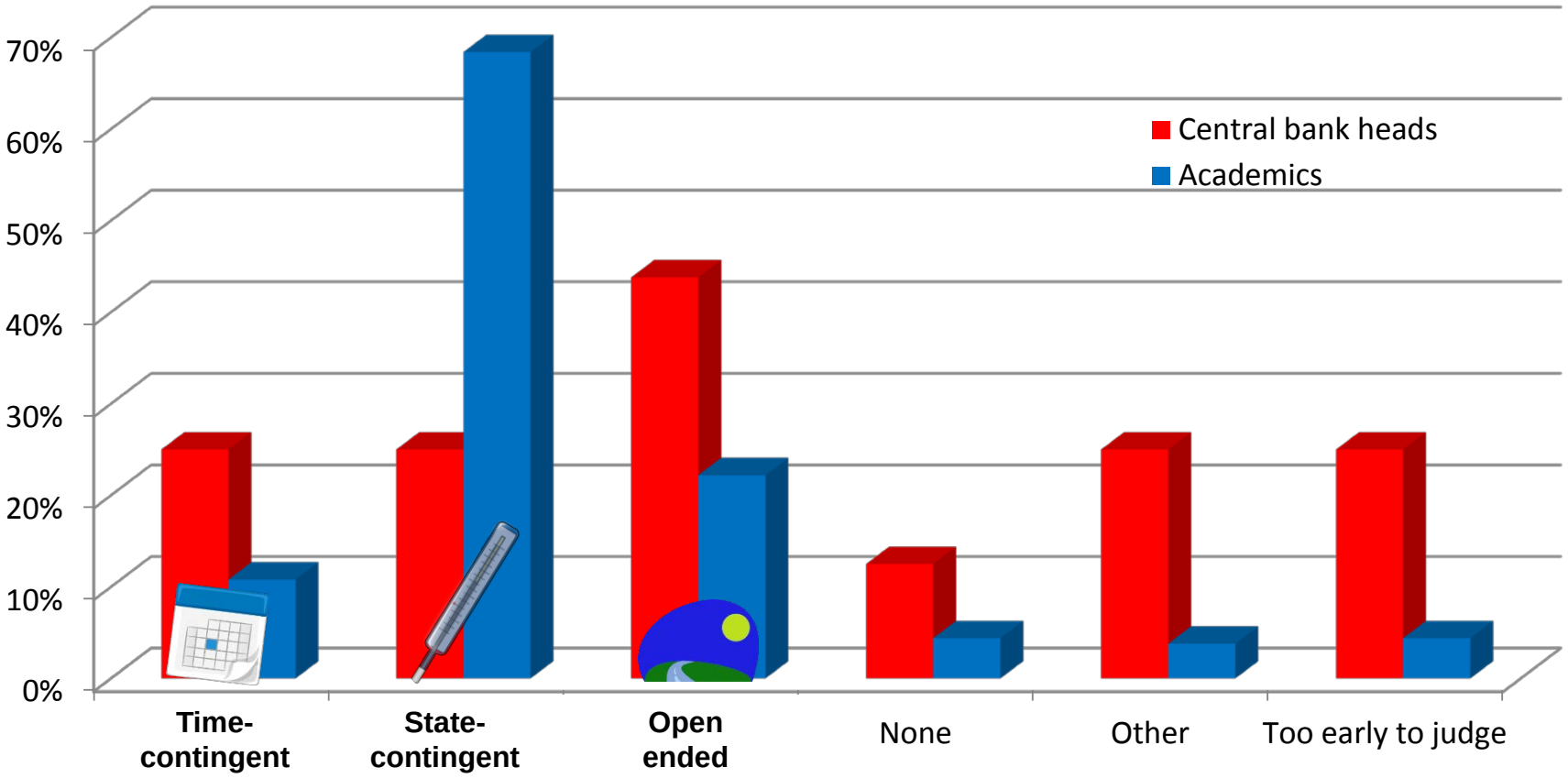
Forward guidance as policy tool to

- Provide additional accommodation (at the lower bound)
- Anchor **expectations**, e.g. about policy rates
- Reduce **uncertainty**, e.g. about policy rates

Ongoing discussions:

- Forward guidance puzzle
  (Del Negro, Giannoni, and Patterson, 2015)
- Critical views (Poloz 2014)
- **How to implement forward guidance?**
  - Does of form of FG matter, e.g. its strength (or horizon)?
  - Can more public information be detrimental
    (Amador and Weill, JEP 2010)?

Preferred types of forward guidance in the future



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?"

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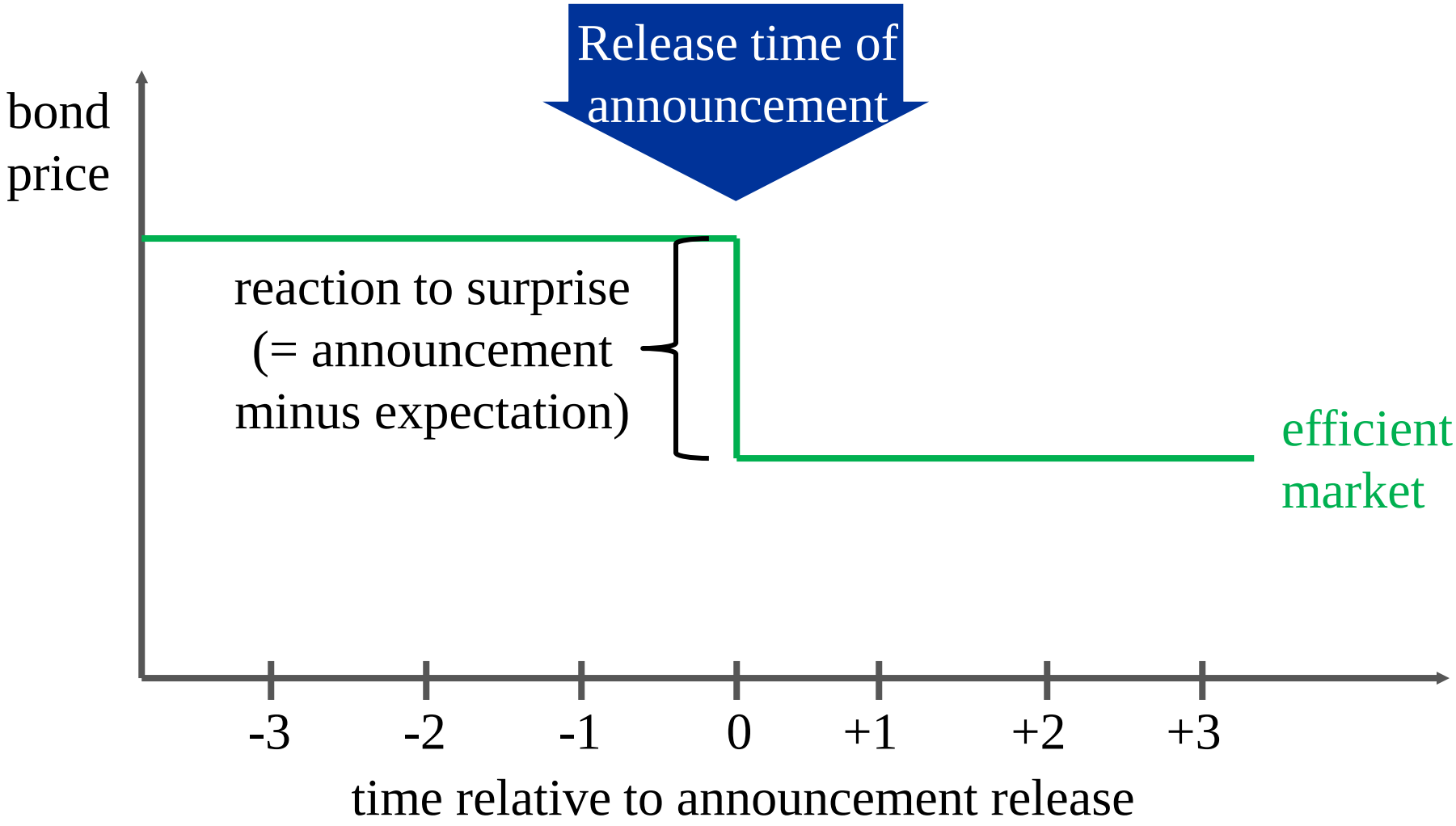
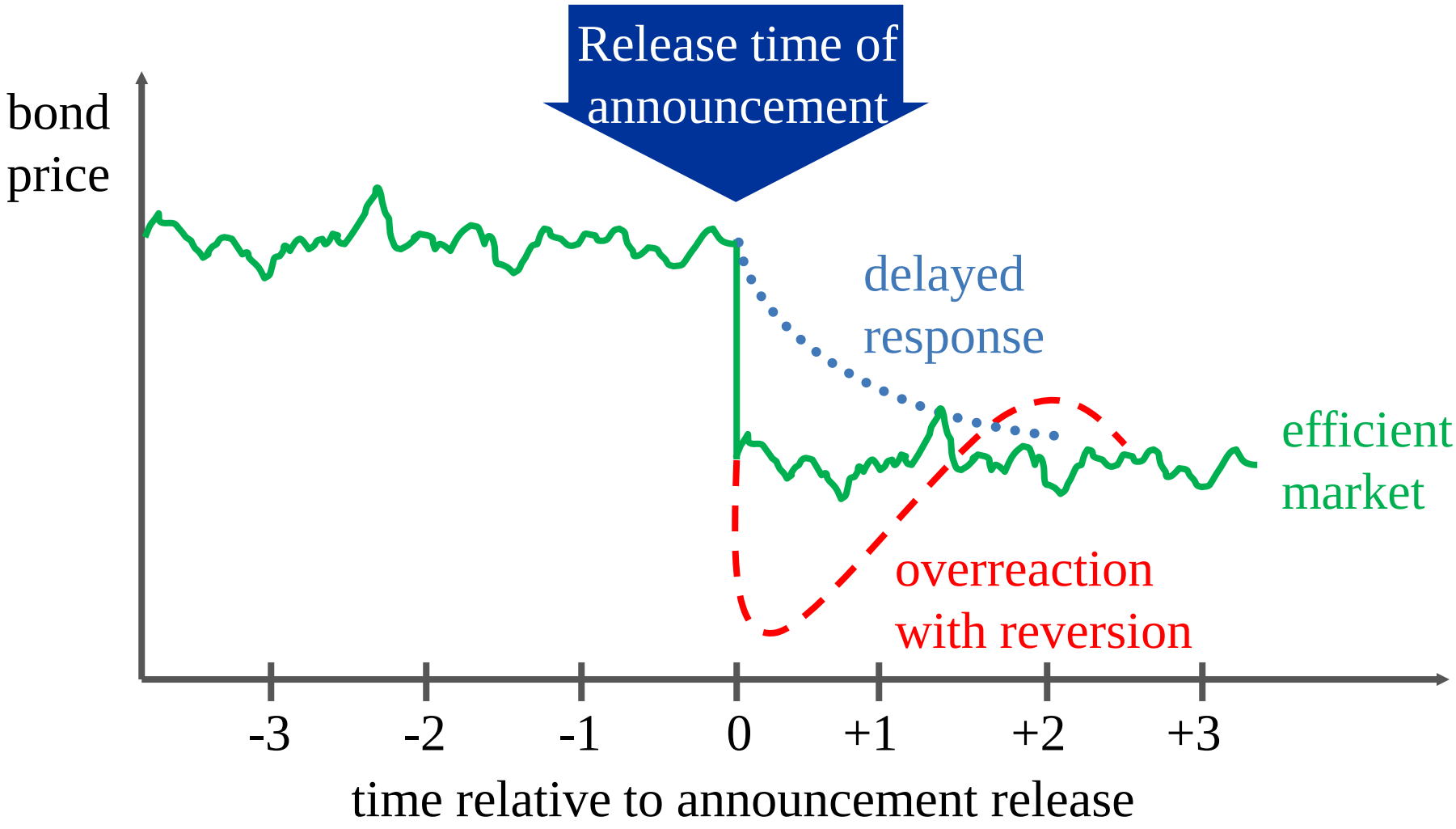
Does the type of forward guidance (FG) matter?

- FG affects expectations about future policy rates (Swanson and Williams 2014, Feroli et al. 2017)
- Test whether the **type of FG** matters for uncertainty.
  -  Open-ended FG (e.g. “for an extended period”)
  -  State-contingent FG
  -  Time-contingent FG: short vs. long horizon
- Cross-country FG experience allows studying how the FG effect varies with the type implemented
- Does the type of FG matter for the responsiveness of bond yields to surprises in macroeconomic indicators?

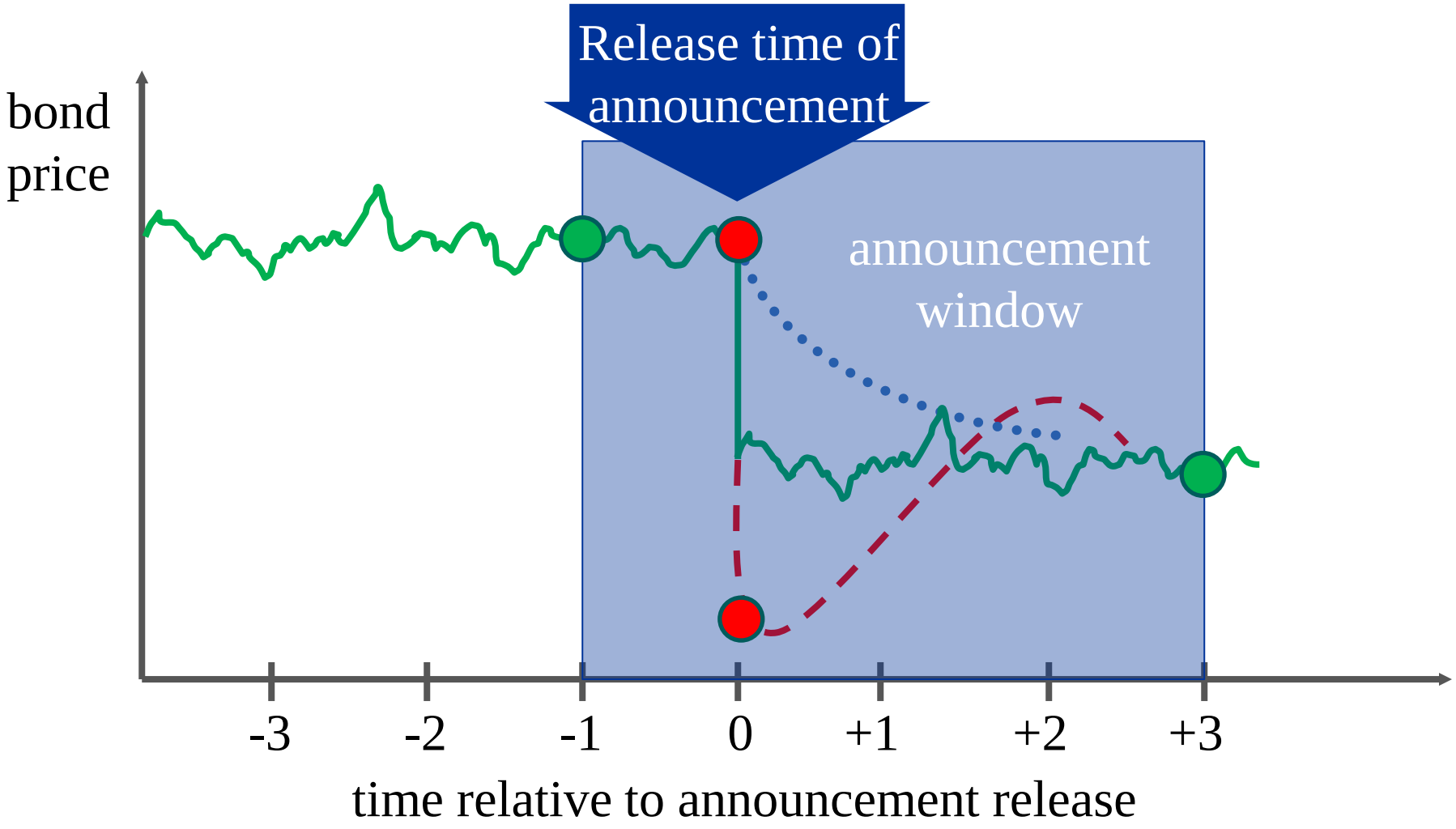
Asset Price Reaction to a News Announcement in an Efficient Market



But markets might be inefficient ...



The price reaction to a surprise is measured by the change during the announcement window.



Our approach: differentiate across types of FG

- Surprises in macroeconomic announcements from Bloomberg survey
- Effect of news on daily change of two-year government bond yields
- Advanced economies, periods with policy rates at or below 1%
- Identification via changes in FG

If FG credible, we expect:

- No responsiveness under open-ended and long-horizon time-contingent FG
- Lower responsiveness under state-contingent FG, possibly under short-horizon time-contingent FG
- Credibility strengthened in presence of an APP (Eggertsson & Woodford BREA 2003)

Response of bond yields varies by FG type.

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




(surprise impact)	Overall	*APP in place*
Time-contingent FG, <1.5years	**1.25*** **	0.25
Open-ended FG	0.44**	0.51*
No FG	0.41**	0.41**
State-contingent FG	0.22*	0.22*
Time-contingent FG, ≥1.5years	**0.08**	**0.05**

Bond yields respond to macroeconomic surprises …

- **less** under **state-contingent** FG and **long-horizon** FG.
- unchanged under open-ended FG.
- **more** under **short-horizon** FG **in absence of APP**.

Effect of FG on disagreement across forecasters

Earlier literature: Reduced disagreement across forecasters shown by Andrade et al. (2015)

Our approach: differentiate across types of FG

- Effect on interdecile range of one-year ahead forecasts of three-month rates in Consensus Economics
- Advanced economies, periods with policy rates at or below 1%

If FG credible, we expect:

- Lower disagreement across forecasters
- Credibility strengthened in the presence of an APP

Response of disagreement across forecasters varies by FG type.

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

	Overall	*APP in place*
$\bar{\Omega}$	0.54	
State-contingent	-0.27***	-0.39***
Open-ended	-0.10	-0.29***
Time-contingent, long horizon	-0.57***	-0.88***
Time-contingent, short horizon	0.01	-0.26**

Disagreement (one-year-ahead forecasts of three-month rates) is …

- eliminated under long-horizon FG; halved under state-contingent FG,
- not affected from open-ended FG and short-horizon FG,
- with APP reduced for all types of FG,
- without APP increased under short-horizon FG.

Summary I

- **Short-horizon** and **open-ended** FG seem to have little (or perverse) effects  
- **Long-horizon** FG seems more effective 
- All types of FG strengthened in the presence of an **APP**

- **State-contingent** FG 
  - Preserves market responsiveness, lowers disagreement
  - Consistent with central bank's own uncertainty and provides more flexibility
  - Caveats: time inconsistency, credibility requirement, trade-off between simplicity and accuracy/robustness of state contingency

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Empirical Observations:

- **Short-term** forward guidance can have **unintended effects**. It can increase
  - **response of bond yields** to macroeconomic news
  - forecaster **disagreement**
- Less likely in presence of an APP

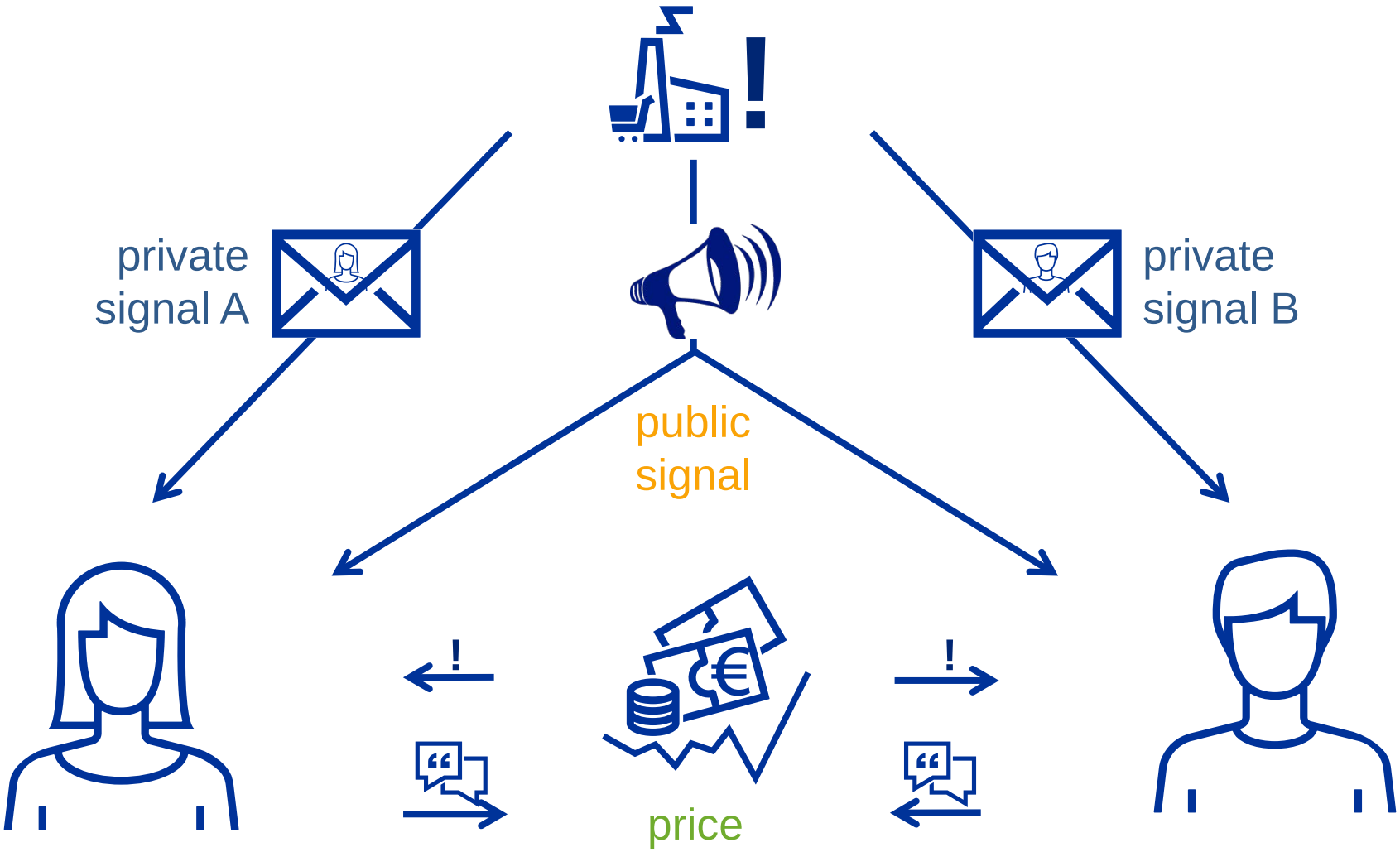
(ECB discussion paper #2080, 2017)

Possible Mechanism: Individuals combine information from public and private signals with information from market prices**.**

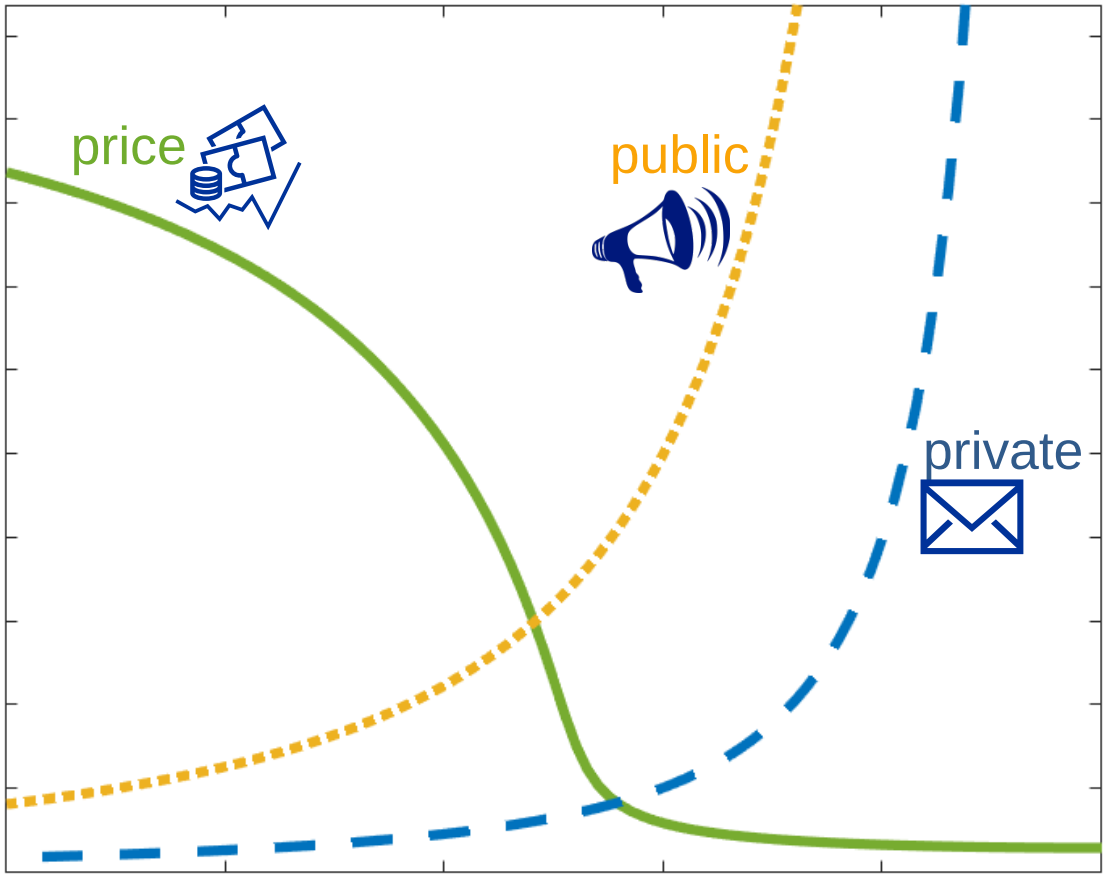
- **Opposing effects:**
  - Reduction of uncertainty by central bank
  - Crowding out of collective private information
- Short-term guidance can **inhibit learning from prices**.

(ECB working paper #2263, 2019)

Signals about the state of the economy

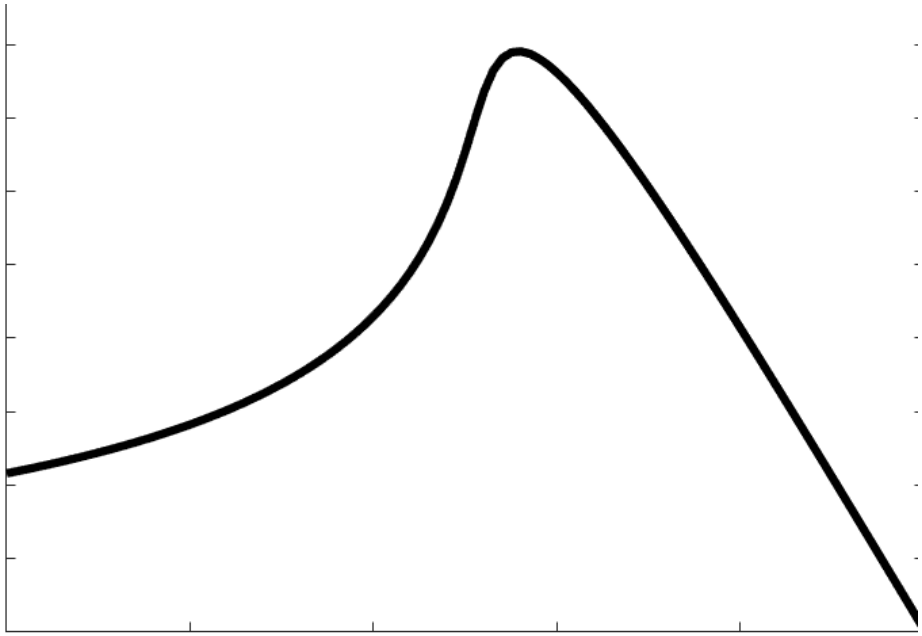


Precision of Signals



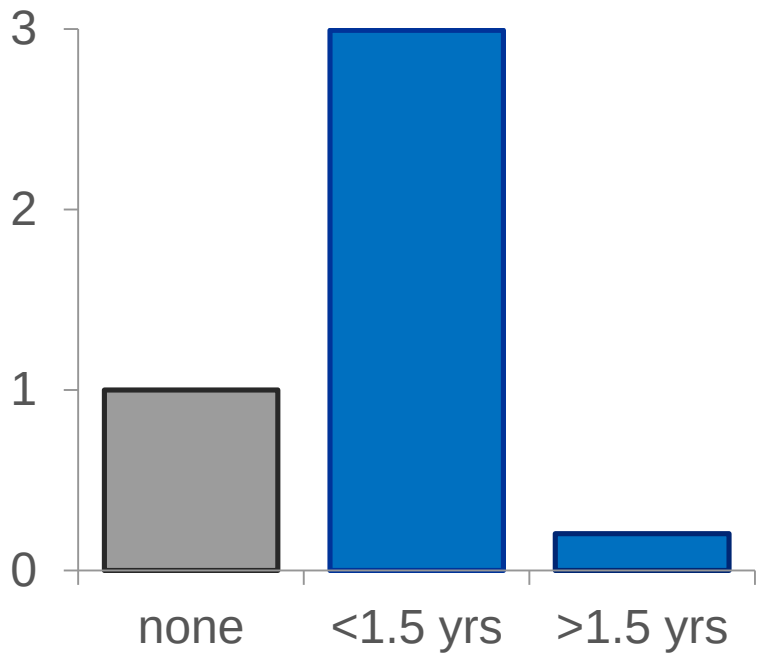
Responsiveness of bond yields to (public) news

Model Prediction



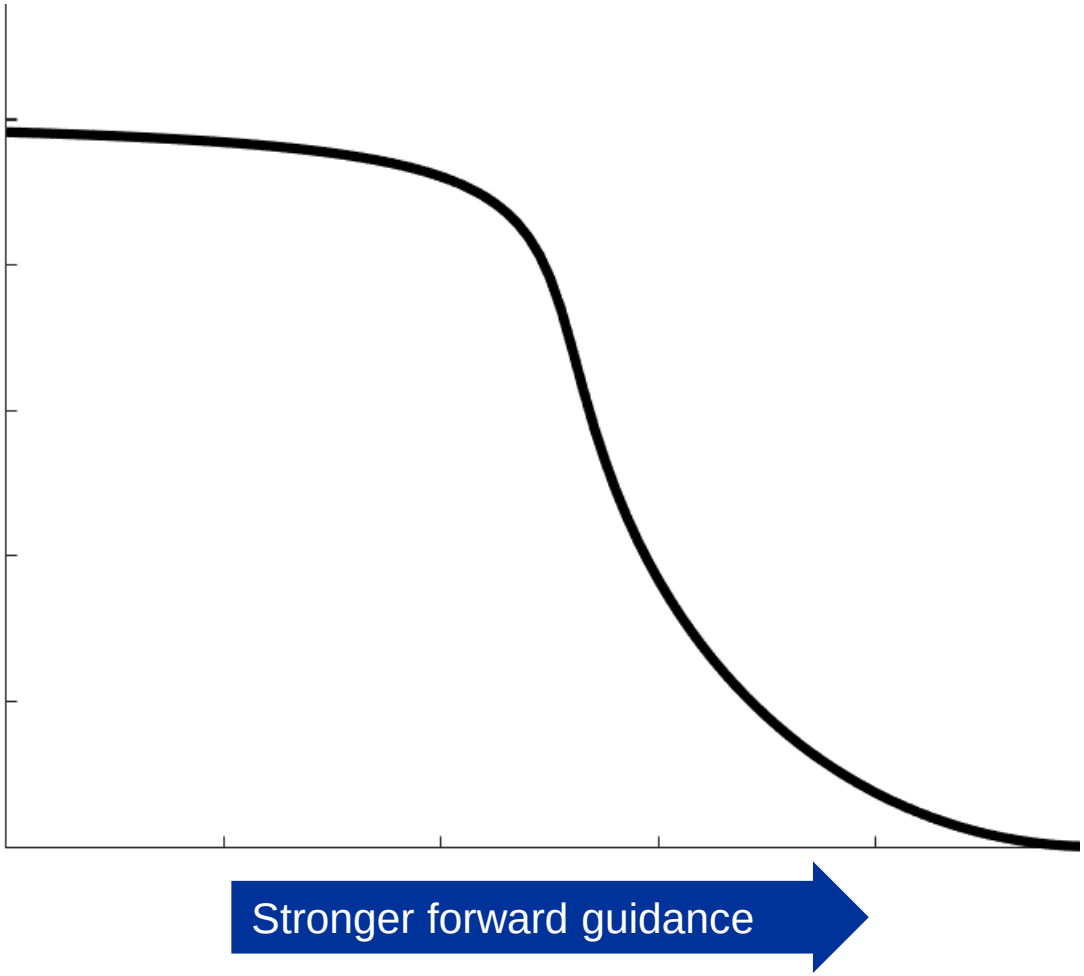
Stronger forward guidance

Empirical Observation



type of forward guidance

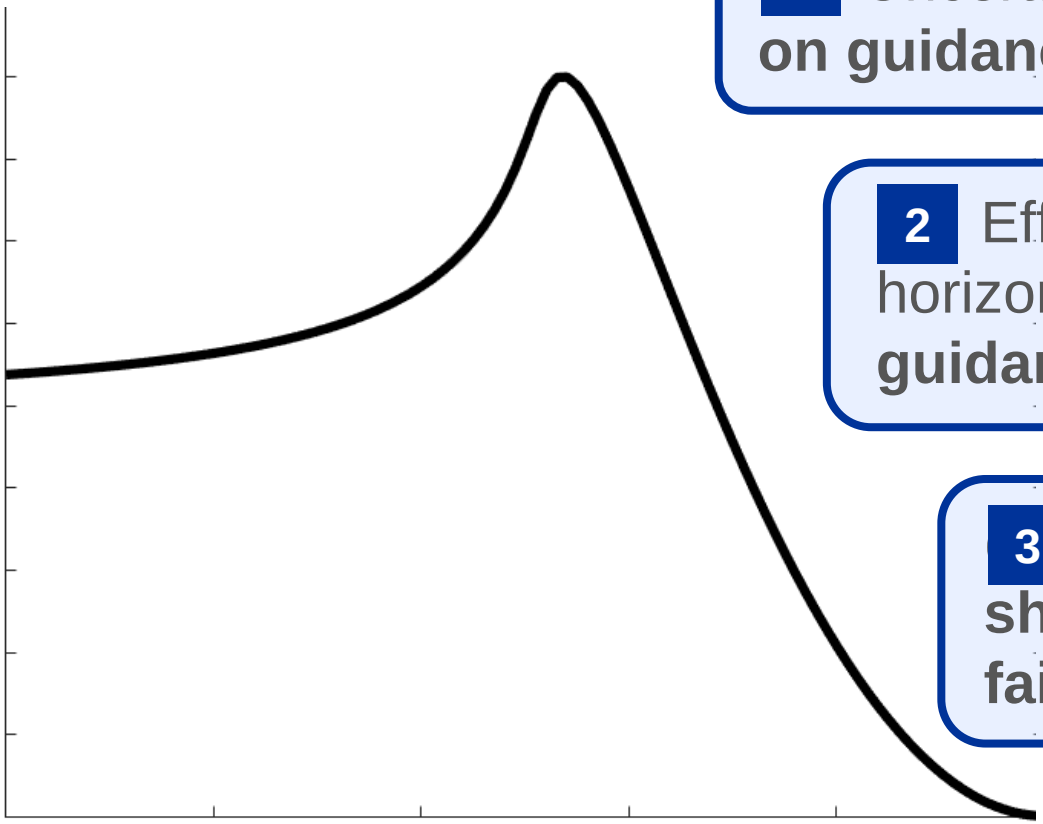
Overall Disagreement



Forward guidance has a strong effect on ex-post uncertainty..

Uncertainty

(variance of forecast error across individuals)



1 Uncertainty depends **nonlinearly on guidance horizon**.

2 Effect of a change in guidance horizon **depends on horizon of guidance already in place**.

3 Marginally extending a **short guidance horizon may fail** to reduce uncertainty.

Summary II

1) **Effect of FG is nonlinear in the strength** of guidance.
   - Short-horizon time-contingent FG can elevate uncertainty (relative to no FG),
   - But long-horizon time-contingent FG cements expectations

2) **Rational expectations in presence of noisy market information** explain how weak FG can raise responsiveness to news.
   - Public and private signals on fundamentals become relatively more informative
   - Agents react less to market prices

Key takeaways

- **Effect of forward guidance depends on its strength**
  - and therefore differs by FG-type
    (e.g. no effect of open-ended FG on news responsiveness)

- **Agents combine private, public, and price signals**
  - Effect of *change* in FG depends on strength of guidance already in place

- Role for **clear central bank communication**
  - Noisy central bank signals can exacerbate uncertainty

ECB Working Papers

#2080

Günter Coenen, Michael Ehrmann, Gaetano Gaballo, Peter Hoffmann, Anton Nakov, Stefano Nardelli, Eric Persson, Georg Strasser*:* "Communication of monetary policy in unconventional times", 2017

#2263

Michael Ehrmann, Gaetano Gaballo, Peter Hoffmann, Georg Strasser*:* "Can more public information raise uncertainty? The international evidence on forward guidance", 2019