Directions for future research: How to write a descriptive paper

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Different types of papers

- **Causal papers:** studying the causal effect of X on Y.
- **Descriptive papers:** establishing new stylized facts about expectations/attention
  - We're still **lacking some basic stylized facts** for behavioral macro.
  - My view: lowest hanging fruit out there concern basic stylized facts.

Examples of missing stylized facts

We know so little...

- How large is the **cognitive discounting parameter** from the Behavioral New Keynesian Model (Gabaix) in practice? How predictive is this parameter in shaping consmption responses to changes in (interest rate) long-run expectations?

- How **salient are different types of expectations** in people's economic decision-making in practice? e.g. do people really think about inflation expectations when making certain decision?

Stylized Facts Papers

- Today I will present two examples of "stylized facts" papers.
  1. Five Facts about Beliefs and Portfolios
  2. Information Frictions Among Firms and Households

Overview

Five Facts about Beliefs and Portfolios

Authors: Stefano Giglio, Matteo Maggiori, Johannes Stroebel, and Stephen Utkus

Five Facts about Beliefs and Portfolios

- **Tailored survey** administered to a large panel of wealthy retail investors.
- The survey elicits beliefs that are important for macroeconomics and finance, and **matches respondents with administrative data** on their...
  1. portfolio composition
  2. their trading activity
  3. and their log-in behavior.

Five Facts about Beliefs and Portfolios

1. The sensitivity of portfolios to beliefs is **small on average**, but varies with **investor wealth, attention, and confidence**.

2. Belief changes **do not predict when** investors trade, but conditional on trading, they affect both the direction and the magnitude of trades.

3. Beliefs are mostly characterized by **large and persistent individual heterogeneity**. Demographics less important.

4. **Expected cash flow growth and expected returns are positively related**, both within and across investors.

5. **Expected returns and the subjective probability of rare disasters are negatively related**, both within and across investors.

Implications for Theory I

- The first two facts are informative about a central element of both rational and behavioral macro-finance models: **The transmission channel from beliefs to portfolio choices**.
  - For the average investor, this passthrough is positive but weak.
    - This might dampen the effects of belief changes on equilibrium prices and quantities in theoretical models.
  - Passthrough is heterogeneous across investors.
    - Incorporating this heterogeneity into macro-finance models should help these models to jointly match data on beliefs, quantities, and asset prices.

Implications for Theory II

- Fact 3 provides a simple but powerful description of the panel variation of investor beliefs: **investors disagree strongly and persistently about expected cash flows and returns**.
    - Incorporating persistent belief heterogeneity into macro-finance models is a way to better match the survey evidence.
    - It might also allow for interesting model dynamics. for example coming from the redistribution of wealth between optimists and pessimists as shocks are realized.

Overview

Information Frictions Among Firms and Households

Authors: Sebastian Link, Andreas Peichl, Christopher and Johannes Wohlfart

Motivation

- **Information frictions** are at the core of models of expectation formation in macroeconomics (**??**).
- Such frictions can explain various empirical puzzles and stylized facts, and have important implications for the **transmission of monetary and fiscal policy** (**?**).
- The extent of information frictions likely **varies across groups of agents in the economy**, for instance, due to differences in stake size or processing costs (**??**).
- It is crucial for both modelling choices and policy making to understand **how the degree of these frictions differs across groups of decision makers** in the economy.

Research questions

- How does the extent of **information frictions** vary between firms and households?
  - How does **dispersion** of expectations vary within and between the samples of households and firms?
  - How do **learning rates** from information vary between households and firms?

What we do

- We leverage micro data from Germany, Italy and the US to document several novel stylized facts about the **extent of information frictions among firms and households**.
- We employ **identical** surveys of firms and households conducted at the same points in time.
- We study differences in expectations about **the policy rate, inflation and unemployment** between firms and households.
- We study how firms and household **learn from expert forecasts**.

What we find

- Firms' macroeconomic expectations about are **substantially less dispersed** than those of households, and **more closely aligned with expert forecasts**.
  - This stands in contrast to work on information rigidities in the context of inflation expectations in NZL (Coibion et al., 2018, AER).

- Consistent with **firms holding stronger priors**, they update their policy rate expectations less in response to expert forecasts compared to households.

Outline of talk

Descriptive evidence on dispersion of expectations and deviations from expert forecasts

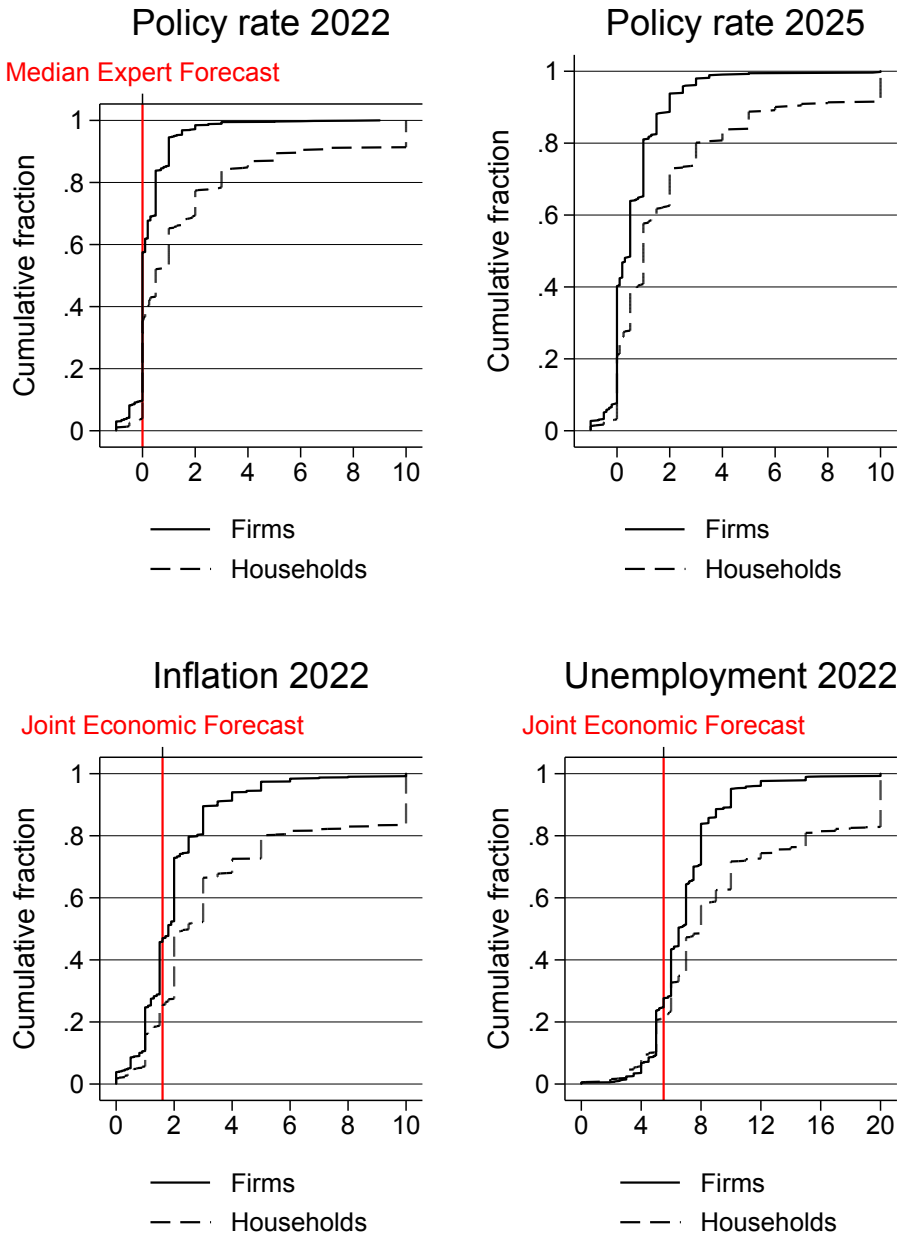
Differences in learning from experts

Setting and samples

- In surveys conducted in September 2020, we elicit households' and firms' expectations about **inflation** and **unemployment** in 2022, as well as the **policy rate of the ECB** in 2022 and 2025.

- We leverage 3,748 firms from the ifo Business Survey (IBS) and 960 households broadly representative of the German population.
  - A key aspect of the firm surveys is that they are answered by managers who are **responsible for high-stakes economic decisions in these firms**.

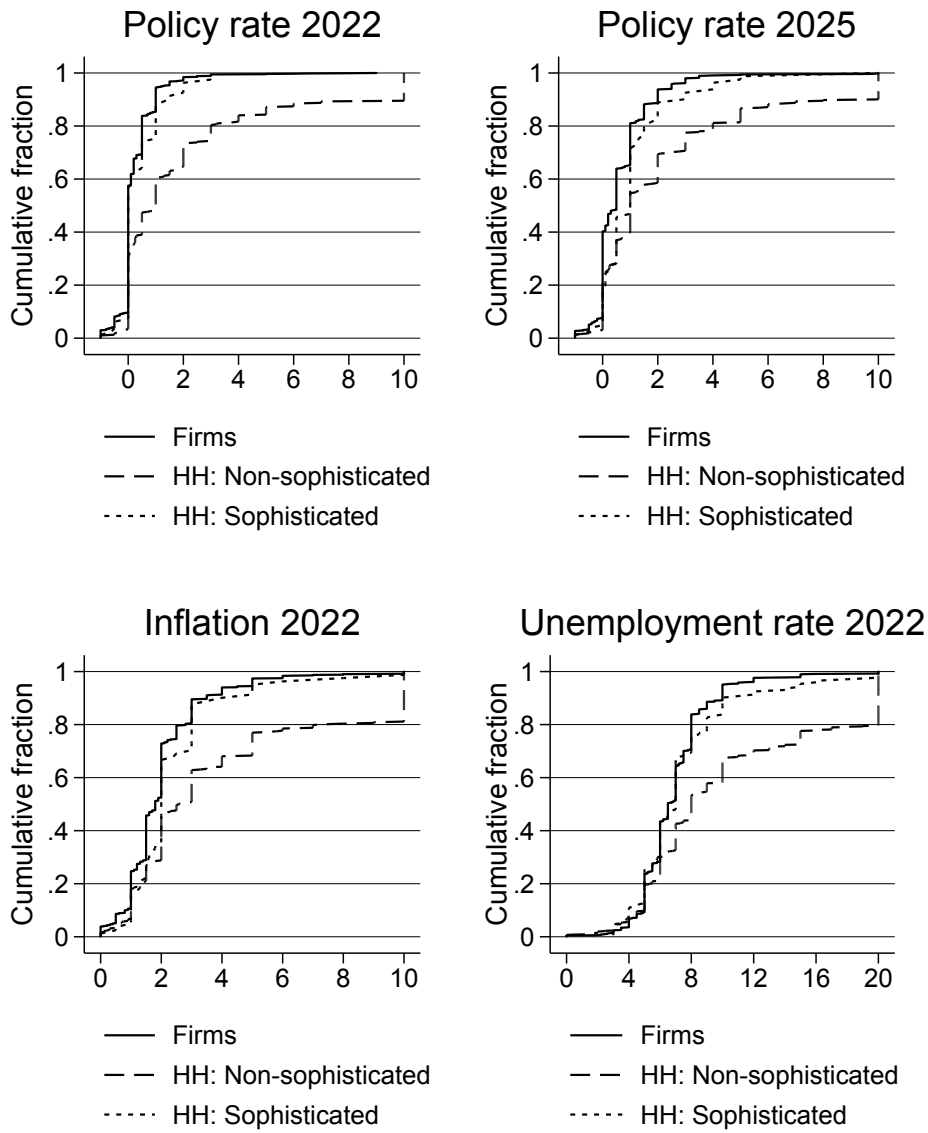
Dispersion of expectations among firms and households



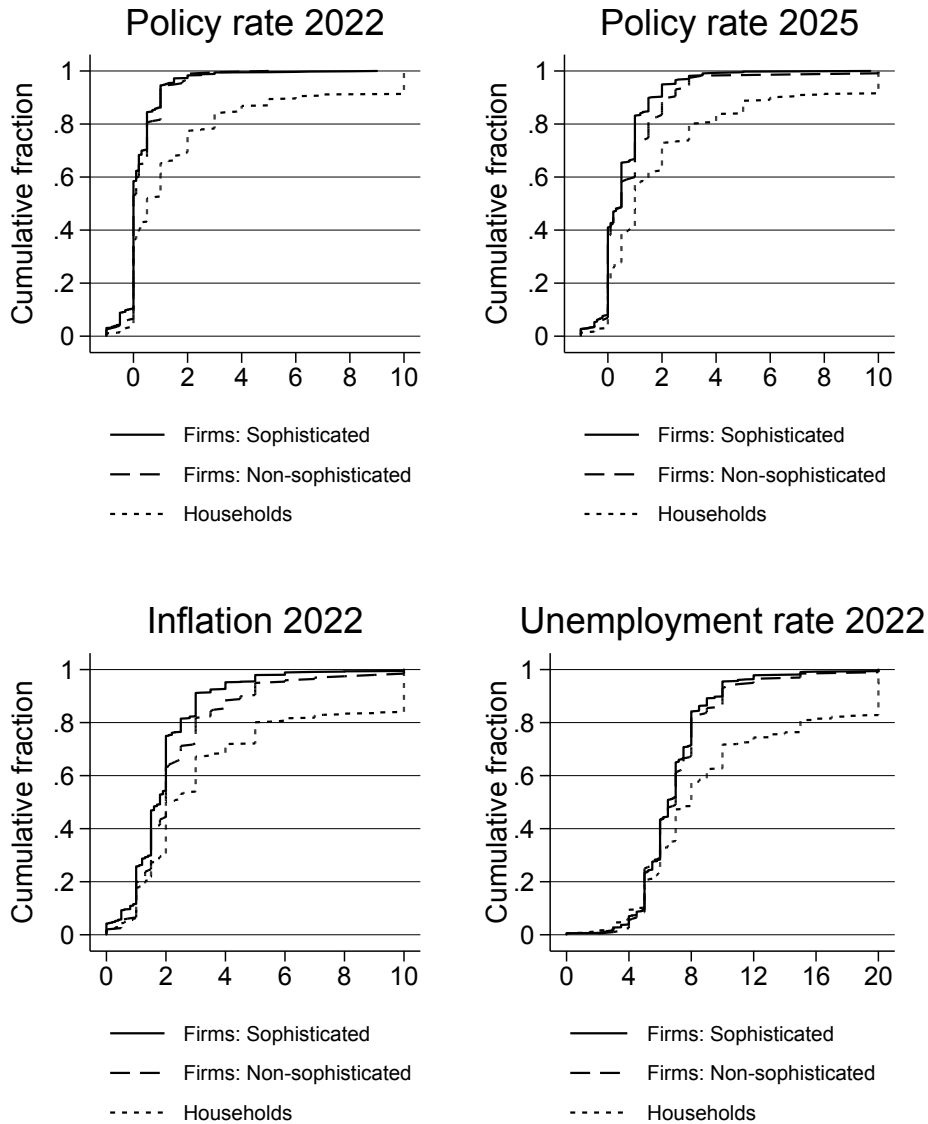
Heterogeneity within and across groups I

- How much heterogeneity is there **within** firms and households compared to the amount of heterogeneity across groups?
- We compare "sophisticated" households (hh aged 50 or higher with high numeracy and above-median financial assets) with "non-sophisticated" households and all firms.
- Similarly we compare "non-sophisticated" firms (below median number of employees and non-exporting) with "sophisticated" firms as well as households.

Heterogeneity within and across groups II



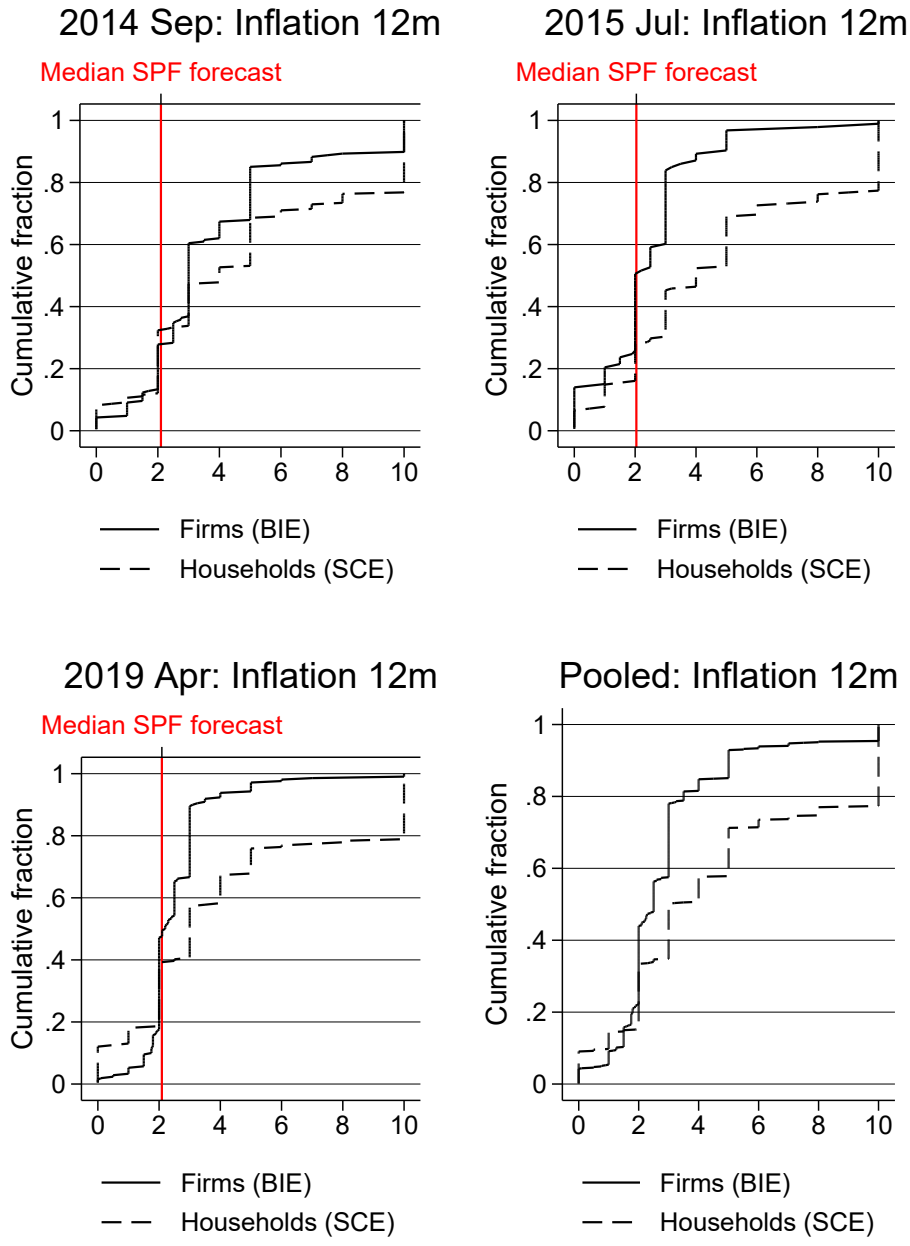
Heterogeneity within and across groups III



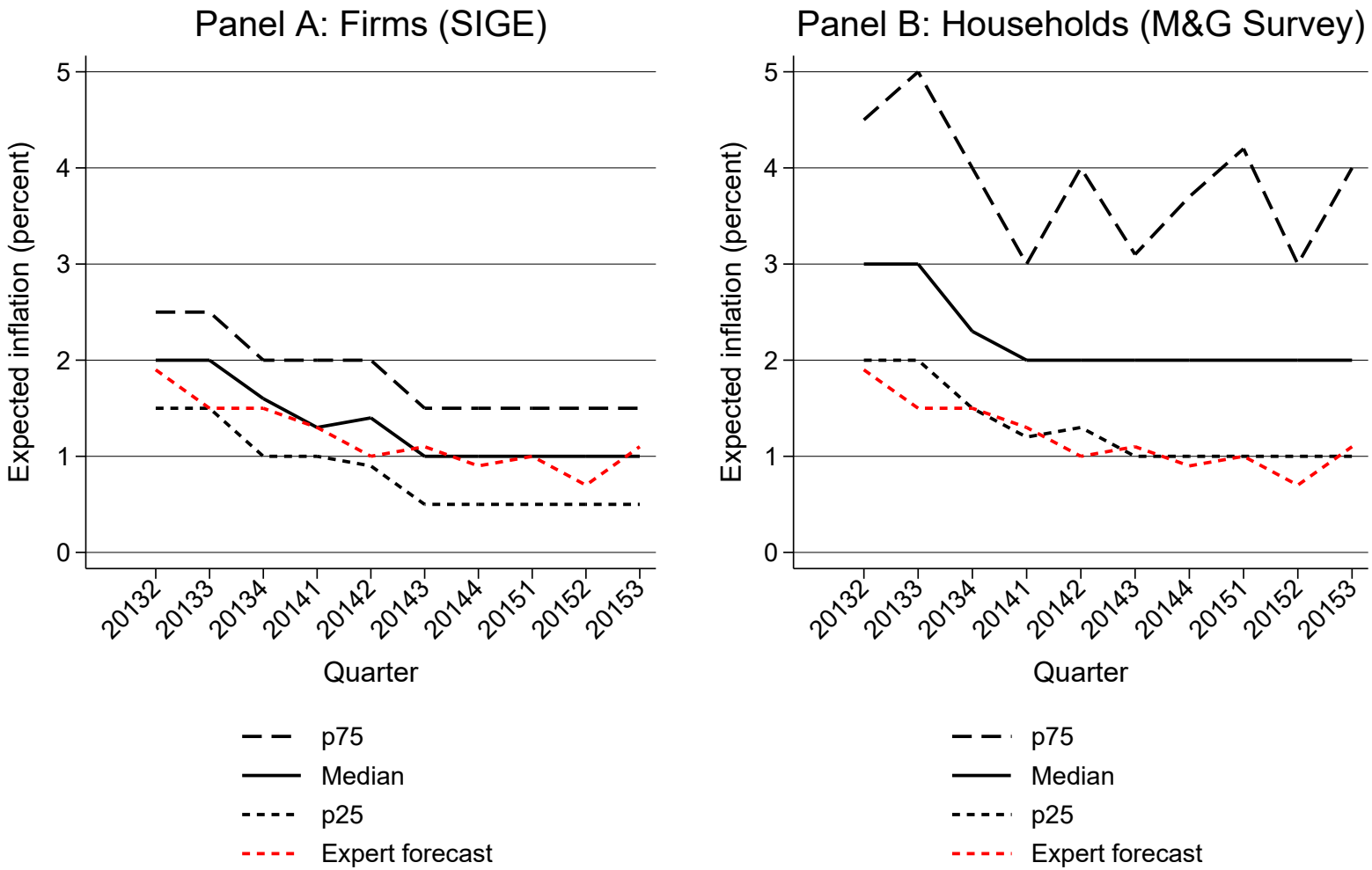
Summary Part 1

- These findings stand in stark contrast to the evidence by CGK from NZL (2018, AER).
- **Reweighting** the German dataset to make it similar in observables to the NZL sample removes approximately 12% of the difference in findings.
- How generalizable is our finding to other settings?

Replication I: United States



Replication II: Italy



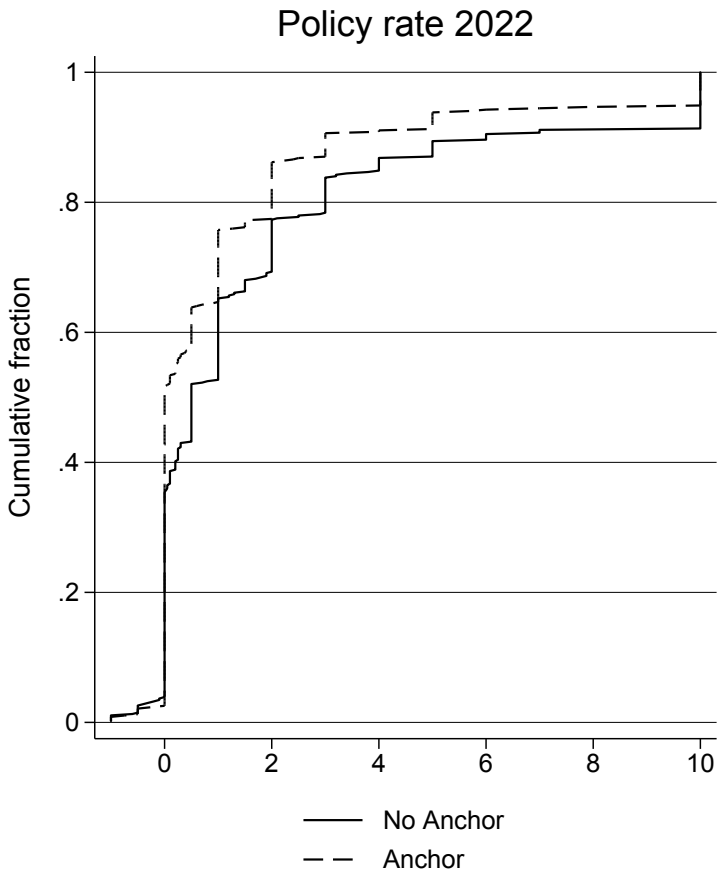
Dispersion of expectations: Summary

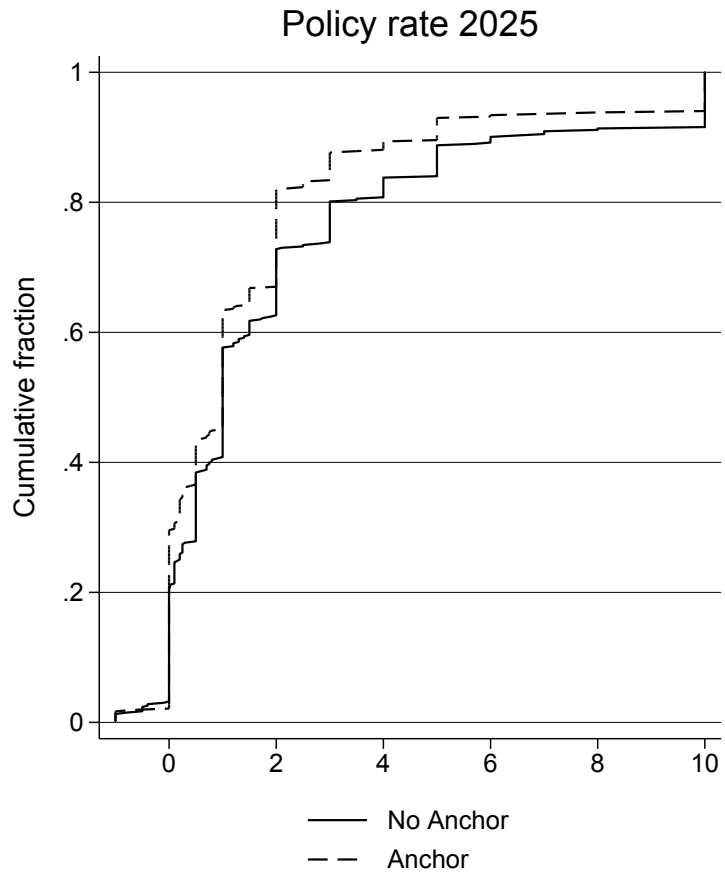
- Evidence from **three countries** highlights substantially lower dispersion of expectations and lower upward bias compared to experts among firms as compared to households.

Knowledge about current realizations

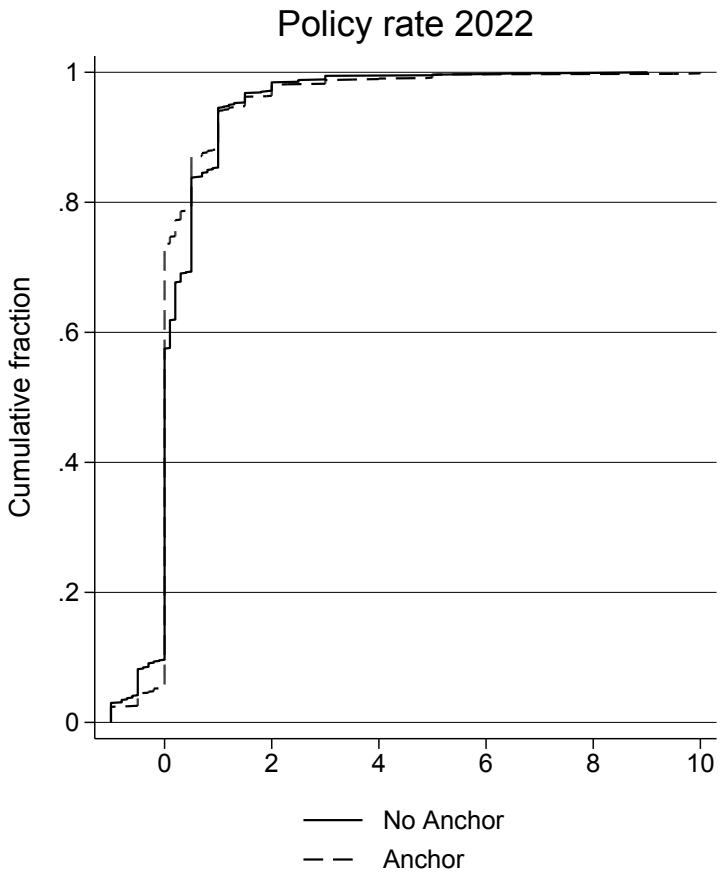
- What explains differences in expectations about the future between firms and households?
- We shed light on the role of **knowledge about current realizations of macroeconomic variables**.
- In our surveys with German households and firms we randomly inform a subset of respondents **about the current ECB policy rate** before eliciting their policy rate expectations.

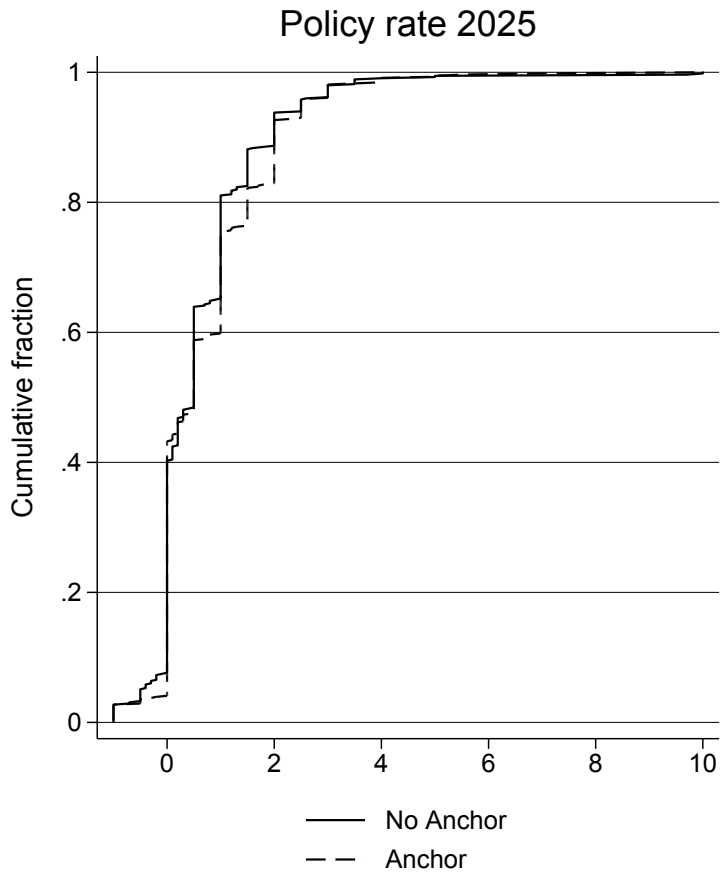
The effect of the anchor on household expectations





The effect of the anchor on firm expectations





The effect of the anchor on household expectations

- The anchor has a strong effect on household expectations, but **barely any effects on firm expectations**.
  - This implies that the anchor did not contain relevant new information for firms.

- Differences in knowledge about current realizations may explain up to **50%** of the gap in expectations about the future between households and firms.

- This is striking given that the policy rate had been at zero for **4.5 years** at the time of our survey.

Outline of talk

Descriptive evidence on dispersion of expectations and deviations from expert forecasts

Differences in learning from experts

Learning from expert forecasts: households vs firms

- The degree of information frictions should be reflected in the **strength of agents' priors** about macroeconomic variables.
- We next shed light on the strength of priors by studying the degree of learning from **expert forecasts** about future policy rates among households and firms.
- For this purpose, we fielded a survey with approximately 450 firms from the **ifo investment panel** and 3,992 households broadly representative of the German population in **December 2019**.

Simple information provision experiment

- Provision of information on current policy rate (0%) to all respondents.
- Random assignment to truthful expert forecast about the **time** the ECB interest rate will **increase back** to a higher level.
- **"Increase 2020 group"**: According to an expert who regularly participates in an expert survey of the ECB, the policy rate of the ECB will rise to a higher level in the **third quarter of 2020**.
- **"Increase 2025 group"**: According to an expert from a large German bank, the policy rate of the ECB will rise to a higher level **at the earliest in 2025**.

Learning from expert forecasts: households vs firms

- **Firms update their policy rate expectations less** in response to expert forecasts compared to households.
  - This is consistent with firms holding **stronger prior beliefs** and being more well-informed than households.

- Households significantly extrapolate from changes in beliefs about the timing of a policy rate hike to **expectations about their own interest rates**.

- **Firms do not adjust their expectations** about own rates.

What makes a good (stylized) facts paper?

- Sharp implications for theory.
- Policy relevance (e.g. paper is helpful understanding the effectiveness of forward guidance)