



FIRM LEVEL EXPECTATIONS AND MACRECONOMIC CONDITIONS: Underpinnings and Disagreement

MONIQUE REID AND PIERRE SIKLOS

Firm level data

The literature has focused on professional and household forecasts

- We know very little about forecast disagreement among firms' expectations

The BER firm level dataset is

- Underutilised
- Arguably, the richest available covering a single monetary policy regime (see Reid and Siklos, 2021a, and 2021b)

Disaggregated data allows us to study:

- Different levels of aggregation
 - Examine the need to tailor central bank communication
- Different types of aggregation
 - Central banks cannot tailor the stance of monetary policy to different groups

Aims of this paper

- ▶ Analyse different types and levels of disagreement
 - ▶ at different horizons and
 - ▶ for different groups
 - ▶ How are these related to forecast disagreement in the 8 other variables being forecast?
- ▶ Offer some early estimates of the impact of covid-19 on inflation disagreement

Measures of inflation forecast disagreement

- ▶ No universally agreed upon measure
 - ▶ Measures include an IQR and different measures of forecast dispersion
- ▶ The dispersion indicator we use retains all the available information

$$d_{th}^{zj} = \frac{1}{N_j - 1} \sum_{i=1}^{N_j} (F_{ith}^{zj} - \bar{F}_{gth}^{zj})^2$$

- ▶ Sharp changes in forecast disagreement emerge at the same time regardless of the disagreement measure employed
- ▶ Very small number of extreme forecasts (unlike household survey)

The BER Survey: Overview of the Number of Observations, 2000Q2-2020Q4

•Size

Full-Time Employees	Alternate Classification	Labor	Labor	Business	Business	Financial Analysts	Financial Analysts
< 21	Micro	620	620	8005	8005	184	184
21-50	Small	109	109	5655	5655	112	112
51-100	Medium	199	250	4010	7810	97	310
101-200		51		4179		213	
201-300	Large	25	254	1589	6897	140	794
301-400		0		1153		227	
401-500		86		939		57	
501-1000		53		1407		22	
> 1000		90		1433		348	
Undefined/No response		43		7		38	
Total		1276		28379		1438	

Note: Sample is 2000Q2-2020Q4. The columns in *italics* represent the number of observations for the aggregations based on the column identified as 'Alternate Classification'.

BER: Macro Financial Variables Surveyed

Current year inflation

Year ahead inflation

Two years ahead inflation

Five years ahead inflation

Current year Economic growth

Year ahead economic growth

Current year prime interest rate

Year ahead prime interest rate

Current year rand/USD exchange rate

Year ahead rand/USD exchange rate

Current year wage growth

Year ahead wage growth

Current year capacity utilization

Year ahead capacity utilization

Current year M3 growth

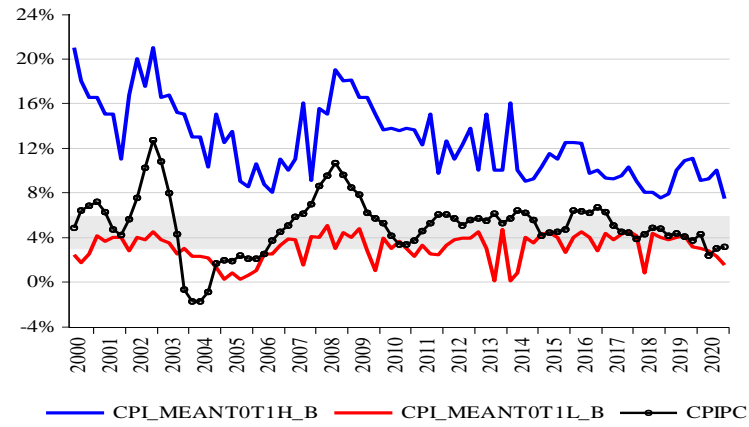
Year ahead M3 growth

Current year long-term government bond yield

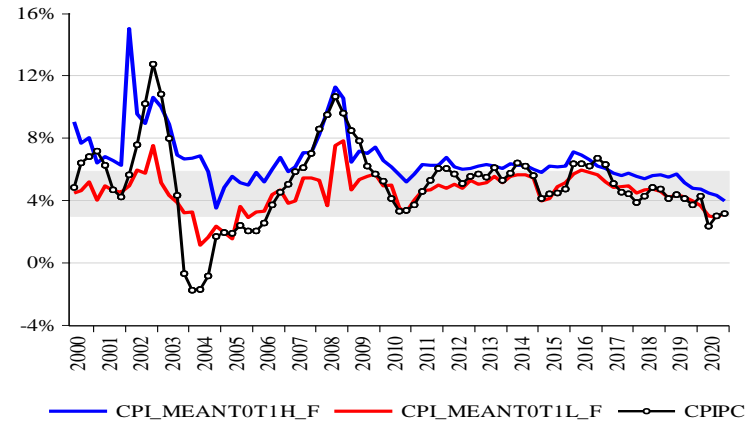
Year ahead long-term government bond yield

FIGURE 1

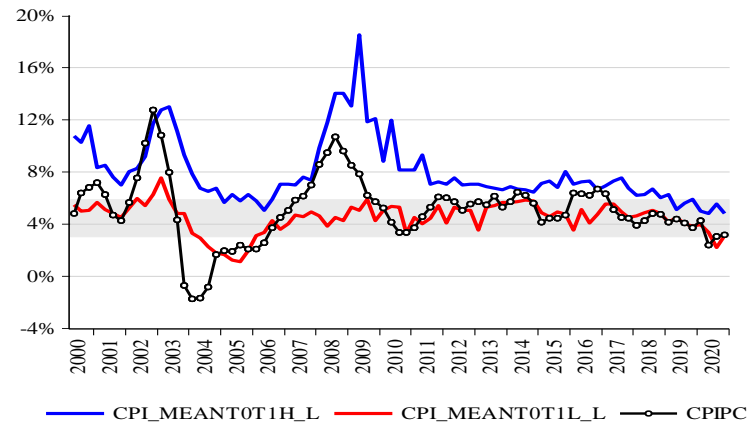
Business



Financial Analysts

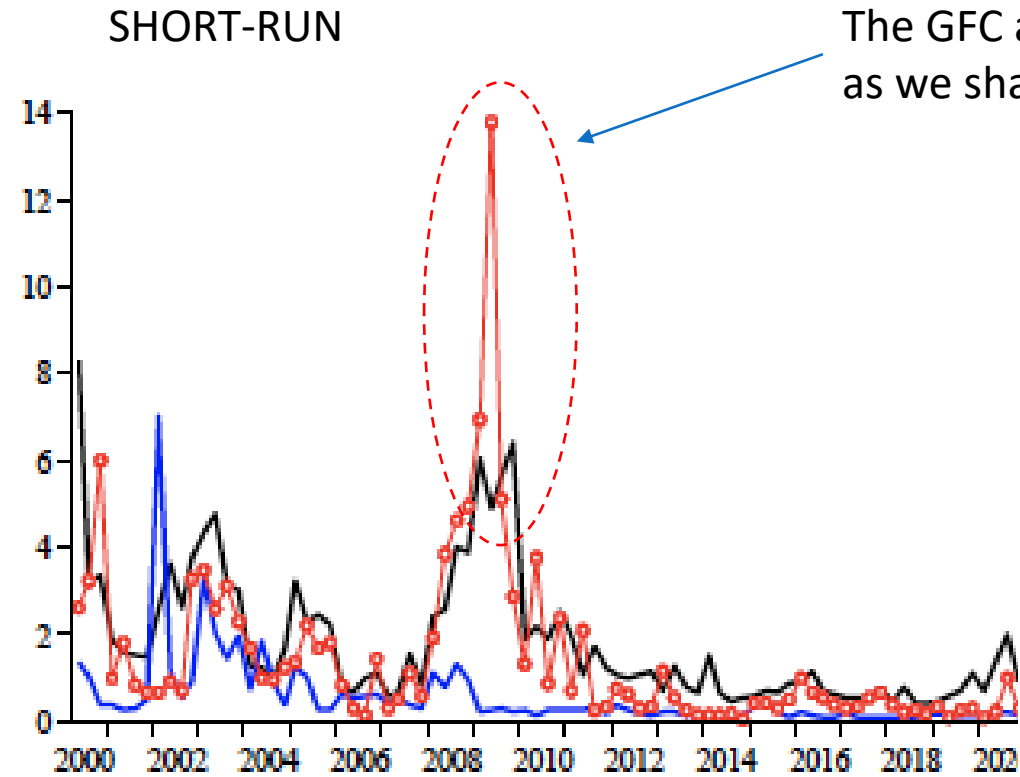


Labor

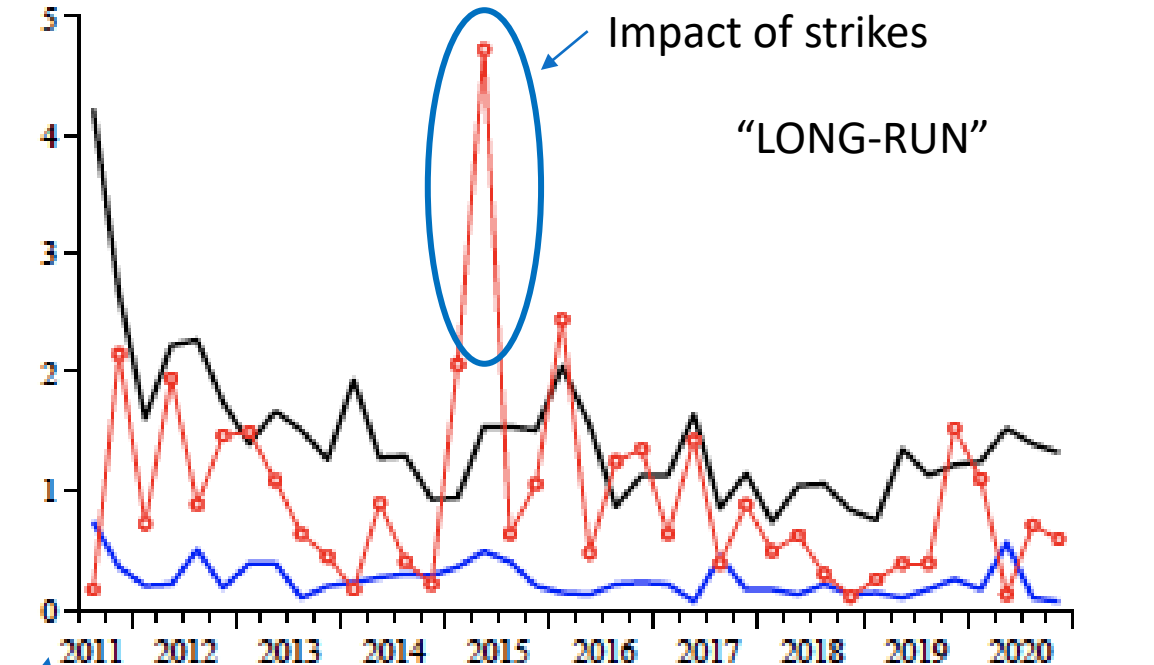


One Year Ahead Horizon

FIGURE 2 – Overall Disagreement By Major Groups Surveyed



The GFC appears to play a dominating role....but this may be misleading as we shall see



Impact of strikes

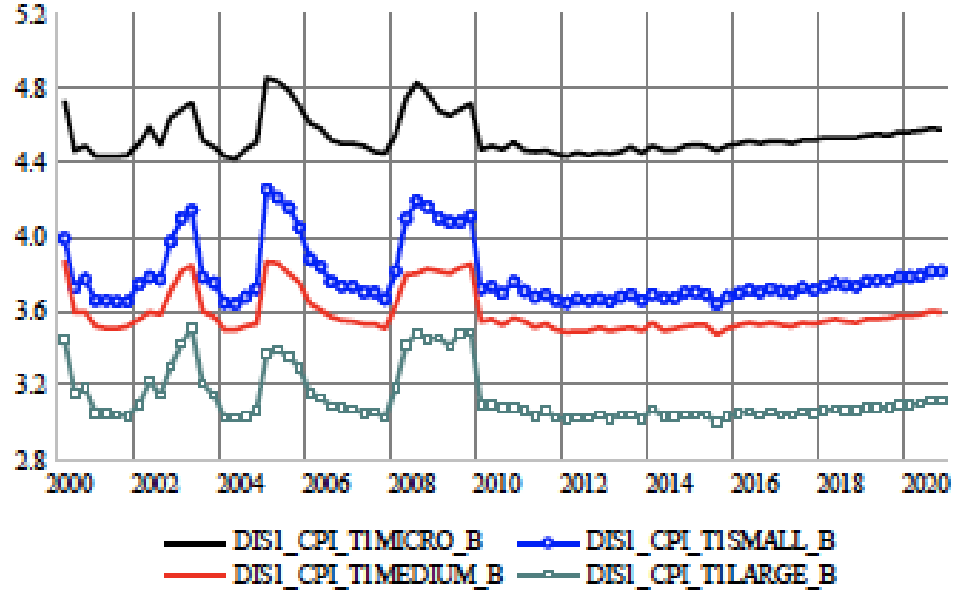
DIS1_CPI_TIFULL_B DIS1_CPI_TIFULL_F DIS1_CPI_TIFU

DIS1_CPI_5AFULL_B DIS1_CPI_5AFULL_F DIS1_CPI_5AFULL_L

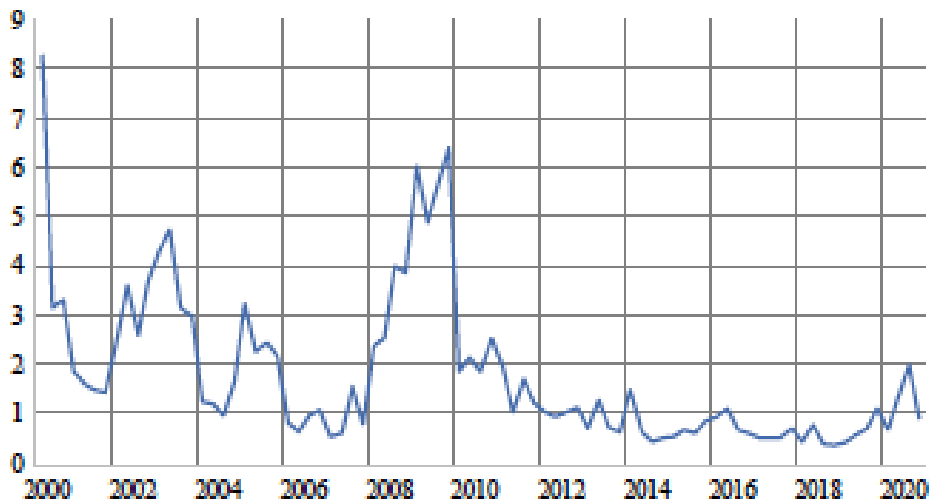
B=Businesses, F=Financial analysts, L=labour

There is no data for “long-run” expectations during the GFC

FIGURE 3 Inflation Forecast Disagreement – Business Survey

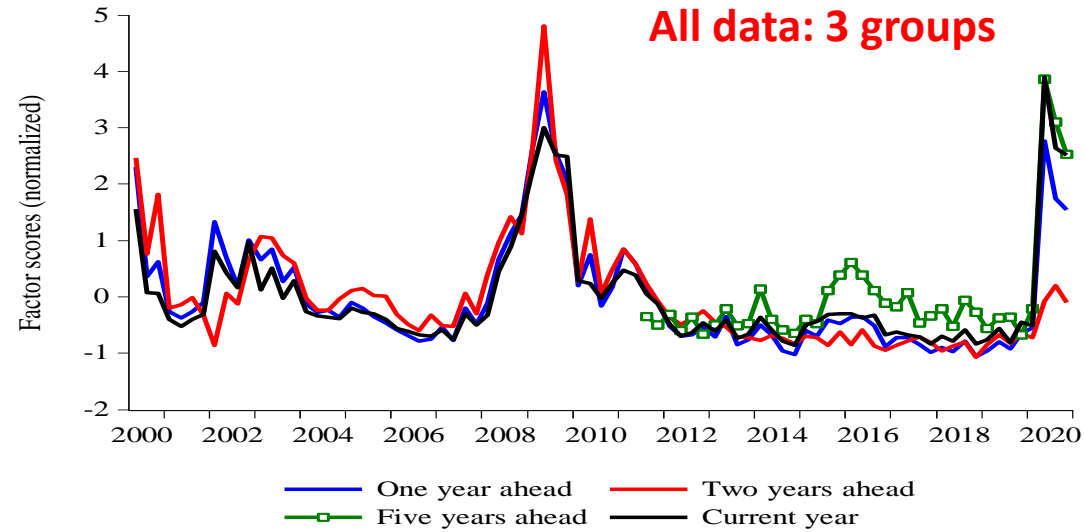


DIS1_CPI_TICEO_B



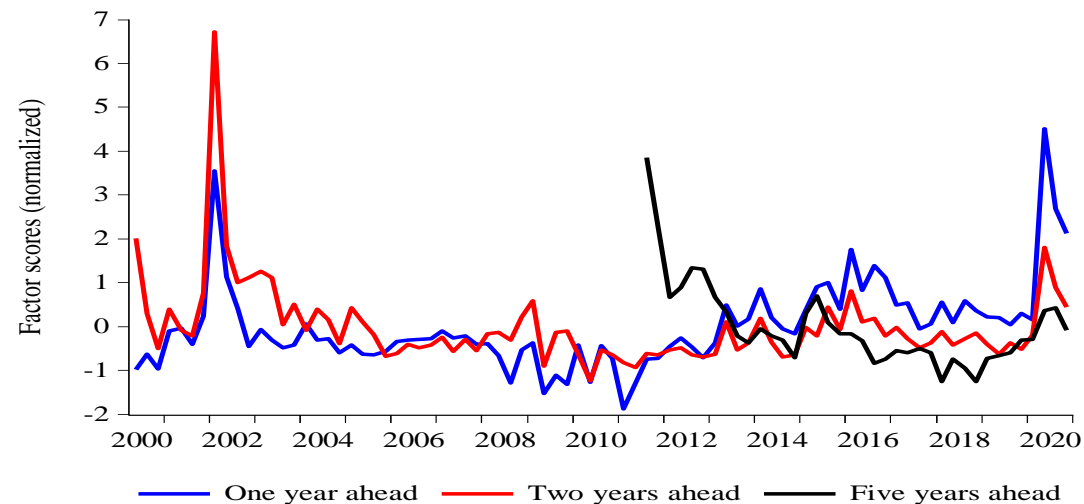
- (1) Levels of disagreement by smaller firms are HIGHER than for other groups;
- (2) Changes in disagreement parallel each other across Firm size and individual who fills out the form (here CEO);
- (3) There is a rising trend of disagreement since 2011: Is it uncertainty? What kind?
- (4) The GFC naturally increased disagreement but so did the early years of IT

FIGURE 4 Disagreement Based on Factor Models



Only the factor model approach is capable of detecting a sharp rise in disagreement at the onset of the Pandemic

The impact of the **GFC** is brought into sharper relief when the factor model approach is used.



Firms only: Small, medium, large

Econometric Specifications

$$\tilde{d}_{th}^{zj} = \alpha + \Theta_{\delta} \tilde{\mathbf{D}}_{th}^{\delta j} + \mathbf{B}\Gamma_{t-1} + \eta_t$$

$$\tilde{d}_{th}^{zj} = \alpha' + \Theta'_{\delta} \Gamma_{th}^{\delta j} + \mathbf{B}'\Gamma_{t-1} + \eta'_t$$

Findings

- ▶ Our findings reveal that when forecasters disagree about future inflation:
 - ▶ Because they also disagree about the future course of other key macro-financial variables.
- ▶ Sources of disagreement can be highly sensitive to the level of aggregation in the data.
- ▶ When we combine all the variables being forecast that we are able to see that forecasters responded sharply in early 2020 as the pandemic emerged.
 - ▶ Is it inattention to differences in what the past portends for the future; certain socio-economic characteristics, some type of bias ? We don't know yet.
- ▶ Most importantly, the results do point to differences in information sets that drive expectations (and disagreement). This needs to be taken into account in CBC.