Discussion of Inflation Expectations - a Policy Tool
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Survey inflation expectations

1. Are consistent with widespread inattention
Survey inflation expectations

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   - Many people are clueless, little to no attention.
   - Disagreement about present and future.
   - Slow diffusion of information, past experiences linger.
   - Update in response to news, faster in volatile environment.
   - Available data (shopping, media) affects expectations.
   - Last 20 years, many unaware of what ECB does, its targets.
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   • Update in response to news, faster in volatile environment.
   • Available data (shopping, media) affects expectations.
   • Last 30 years, many unaware of what ECB does, its targets.
   • Not just limited information, lack credibility, backward looking
Survey inflation expectations

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2. Can be properly measured, with effort
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   • Have done it for households for decades, firms only recently.
   • Use distributions for uncertainty (never disagreement).
   • Wording of “inflation” not relevant.
   • Design of questions matters, ranges matter, priming.
   • Sampling on characteristics matters.
   • Expectations of individual versus aggregate variables matters.
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   - Sampling on characteristics matters.
   - Expectations of individual versus aggregate variables matters.
   - Require ECB involvement and effort, but worthwhile
Survey inflation expectations

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3. Are correlated with actual economic decisions
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   - Higher expected spending, higher willingness to spend.
   - Sometimes, raise prices/wages.
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   - Higher expected spending, higher willingness to spend.
   - Sometimes, raise prices/wages.
   - Sometimes, lower hiring/investment.
   - Are not just noise, can be very informative
Survey inflation expectations

4. Policy announcements have little effect on them
Survey inflation expectations

4. Policy announcements have little effect on them
   • Given inattention, at best only some people.
   • Given sticky information, lower frequency.
   • Given correlation speeches and actions, must disentangle.
   • Given reverse causality, hard to identify.
To assess how such inattention to what should be large and visible economic announcements can occur, we consider responses to the following question in the MSC: “During the last few months, have you heard of any favorable or unfavorable changes in business conditions?” We use this question to evaluate how consumers are receiving information about different types of policies. Answers are separated by the type of news. We focus on monetary news to see if announcements are reaching households. To quantify the exposure of these announcements, we use a measure of how the media covered these events. This measure is constructed by counting all the news articles that have the phrase “Federal Reserve” in the New York Times (“Fed news”). We have monthly data for both measures. Figure 9 plots time series of monetary news and Fed news for a 13-month window around the announcements. We can see that these big announcements seem to have been covered by the media (or at least the New York Times), as we see a reaction of the amount of news related to the Federal Reserve. Despite this upsurge of news reports, we see little reaction in terms of households reporting receiving more information about monetary policy. The percentage of households who heard about monetary news changes little and in Figure 7.
Authors’ event study

Panel D: January 2012: 2% IT
Same frequency

5-Year Breakeven Inflation Rate
University of Michigan: Inflation Expectation

Percent

Survey inflation expectations

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   • Given reverse causality, hard to identify.
   • Very hard to know, maybe, I just don’t know at high frequencies
Volcker disinflation

Source: Mankiw, Reis, Wolfers, 2004
Inflation targeting and professionals

Figure 1. Box plots of Coefficients of Variation (1989:10 - 2006:11) ²/

Source: Capistran, Ramos-Francia, 2009
5. Results
As a first pass, this section shows some simple graphical results that illustrate the paper’s main finding. It then goes on to outline the baseline regression results and to summarize a number of robustness checks.

5.1. Graphical results
Fig. 1 plots the change in the mean absolute inflation forecast error ($D_{ij0}$) against the average prior error ($V_{ij0}$) for observations from IT adoption episodes (the ‘‘treated’’) and from the full pool of ‘‘control’’ episodes. The sample of controls includes, for each of the 11 IT adoption episodes, all available forecasters in non-IT adoption countries for the period in which IT was adopted (unlike in the matching exercise below, where each treated observation is matched with a specific control). The relationship appears to be negative for all forecasters, due to mean reversion. However, there is also strong evidence of an additional negative effect (conditional on the initial forecast error) due to IT adoption, as predicted by the model (the p-value for the test that the slopes are the same is 0.000).

5.2. Matching results
The results of estimating Eq. (9) are presented in Table 2. Column I presents results with the interaction effect suppressed, measuring only the levels (or unconditional) effect of IT adoption on forecast errors. Column II presents estimates for the full equation using OLS; column III presents results using the IV strategy (two-stage least squares, 2SLS). Since advanced as well as emerging market economies are included in the sample a dummy for advanced countries is included in each specification.

Fig. 1. Change in forecast performance around IT adoption. Change in average absolute forecast errors between the 12 months prior to IT adoption and the subsequent 12 months plotted against the average absolute forecast error in the 12 months prior to IT adoption. Sample includes 196 forecasters in IT adoption countries and 2,048 forecasters in non-IT adoption countries. Sample imposes a common support in terms of prior forecast error between the IT and non-IT adoption group. Sample is trimmed to exclude outliers (defined as an absolute change in the forecast error in excess of 10 percentage points).

Source: Crowe, 2010
Survey inflation expectations

4. Policy announcements have little effect on them
5. Better communication can break inattention
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5. Better communication can break inattention
   - Revealing past or target inflation changes expectations. Target message to scenario
   - FOMC statements add little, news adds little. Simple messages do better
   - Information revealed affects expectations for at best 6 months. Repeat the message
   - Take the message direct to the target evidence
Survey inflation expectations

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   - FOMC statements add little, news adds little. Simple messages do better
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   - Take the message direct to the target evidence
   - Sensible, but no evidence right now.
Survey inflation expectations

1. Are consistent with widespread inattention  Yes
2. Can be properly measured, with effort  Yes
3. Are correlated with actual economic decisions  Yes
4. Policy announcements have little effect on them  No
5. Better communication can break inattention  ?
Are household or firms’ survey inflation expectations a policy tool?
Tool and effect

- **Tool:** communication, speeches, $c$.
- **Effect:** survey expected inflation, $\pi^e$
- **Control:** independent of other policies $p$
- **Transmission:** from expected to actual inflation: $\pi$

- **Question:**

$$\frac{\partial \pi}{\partial c} = \frac{\partial \pi}{\partial \pi^e} \times \frac{\partial \pi^e}{\partial c} \bigg|_p$$
The three hypotheses

$$\frac{\partial \pi^e}{\partial c} \bigg|_p = f(p_+, \pi, c)$$

A. Is communication revealing future policy?
B. Is communication revealing fundamental information?
C. Is communication moving expectations independently?
The three hypotheses

\[
\left. \frac{\partial \pi^e}{\partial c} \right|_p = f(p_+, \pi, c)
\]

A. Is communication revealing future policy?
B. Is communication revealing fundamental information?
C. Is communication moving expectations independently?

• **Evidence** from forward guidance and policy dates, using financial markets, points to a lot of B, some A.

• **Spirits?** Hyperinflation evidence, propaganda danger.
Two more issues

How far away? fine tuning and anchoring

\[ \frac{\partial \pi^e_{t+T}}{\partial c_t} \bigg|_p \]

Which inflation component? as \( \pi_t = \pi^P_t + \pi^T_t \)

\[ \frac{\partial \pi^P_{t+T}}{\partial c_t} \bigg|_p \]
Although consumers’ inflation expectations appear to display excess sensitivity to price changes of products in their consumption baskets, consumer prices are not equal in influencing inflation expectations. For example, Harris et al. (2009), Coibion and Gorodnichenko (2015a), Wong (2015), and others find that U.S. consumers are sensitive to gasoline prices above and beyond what is justified by the share of expenditures on gasoline.

Panel A of Figure 2 illustrates this excess sensitivity of U.S. household inflation expectations relative to professional forecasters by plotting the two against the level of gasoline prices. There is a striking correlation between movements in the level of gasoline prices and the households’ inflation expectations. On the other hand, the relationship between gasoline prices and predictions of professional forecasters is much weaker. The same pattern holds in the euro area, as illustrated in Panel B of Figure 2.

Relatedly, food prices also appear to have a disproportionately significant effect on inflation expectations of households (e.g., Clark and Davig 2008). Coibion and Gorodnichenko (2015b) document that Ukrainian households’ and firms’ inflation expectations react strongly to changes in the exchange rate of the hryvnia (Ukrainian currency) and the U.S. dollar. Afrouzi et al. (2018) document a similar finding in Iran.

Central bankers are aware of this sensitivity. Yellen (2016): “[T]he longer-run measure of inflation expectations from the Michigan Survey has historically exhibited some sensitivity to fluctuations in current gasoline prices…” and “[A] monthly survey conducted by the Federal Reserve Bank of New York shows a noticeable decline over the past two years in households expectations for inflation three years ahead. However, these readings on shorter-term expectations may also be influenced by current gasoline prices.” Carney (2013) made a similar observation, “[W]e’ve seen a bit in the past when you have a coincident survey [of the general public’s inflation expectations] with something as obvious and important to people as energy prices move, you get these spikes.”

One would expect a weaker relationship between gas prices and household inflation expectations in the euro area than in the U.S. for at least two reasons. First, gasoline taxes are much higher in Europe, so a $1 increase in oil leads to a smaller percentage increase in gasoline prices in Europe than in the U.S. In addition, diesel is much more common in Europe than the U.S. (as is public transportation), making the price of basic gasoline less of a common price signal to households than in the U.S.
Anchoring: success of last 10 years

Source: Miles, Panizza, Reis, Ubide, 2017
Fine tuning: sticky information key

Figure 1: VAR Impulse Responses to a Monetary Shock and Conditional Forecast Errors.

Upper graphs: Impulse response functions to a monetary policy shock identified with sign restrictions.

Lower graphs: The implied one-quarter-ahead (left plot) and four-quarters-ahead (right plot) inflation forecast errors conditional on the monetary shock. Solid lines denote posterior median responses. Shaded areas denote the 70 percent posterior credible set. All numbers are annualized and in percent.

Three facts have to be emphasized. First, inflation forecast errors conditional on monetary shocks are fairly persistent. In the aftermath of a monetary tightening, the lower graphs of Figure 1 show that the posterior median (the solid line) of the one-quarter-ahead and four-quarters-ahead inflation forecast errors are larger than zero for almost five years. The 70 percent posterior upper bound for these forecast errors stays in negative territory for at least three years. Second, inflation expectations barely move immediately after a monetary shock. Third, the responses of both inflation and inflation expectations to monetary shocks exhibit a great deal of persistence, with half life exceeding 20 quarters. This last fact suggests that inflation expectations remain disanchored for a few years after a monetary contraction.

While, as we shall see, the DIM can explain large and persistent conditional forecast errors through signaling effects, perfect information models cannot. Indeed, the first fact is a conundrum.

Half life is defined as the number of quarters after the initial shock it takes for the largest effect of a shock to reduce to half.

Source: Melosi, 2018
Inattention says go beyond average

Figure 2.14 Dispersion of Inflation expectations in the US

A: Consumers, 12 months

Source: Miles, Panizza, Reis, Ubide, 2017
Coibion Gorocnichenko, 2012
My interpretation

1. Moving “animal spirits” is very hard, communicating fundamentals and policy is unavoidable,
2. Households/firms focus on transitory, must extract signal on permanent, so look at more moments.
3. Inattention makes anchoring easier but fine tuning harder. Compare with food labelling…

Monetary policy as a stable unit of account: success.
Monetary policy as stabilization policy: harder.
Conclusion
Conclusion

• Must take survey inflation expectations seriously as data.

• Shift focus, resources, and policy attention to impact of measures on surveys of inflation.

• Effects of policy: limited knowledge, but duty to inform about fundamentals and policies, better design communication.

• More evidence of success as an anchor.