LOSING THE INFLATION ANCHOR

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Is inflation out of control?

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Look underwater for the anchor. Is it anchored?
Most famous case: the Great Inflation

1965-68: signs or no signs?
Martin had no use for models, pressured to prioritize unemployment. Sensitive to investor expectations, measured with bond rates. As inflation kept rising, increasingly relied on “inflationary psychology”

1968-71: anchor drifting
As inflation accelerated, Martin, July 1969, “inflationary psychology remained the main economic problem”
Shocks temporary because fleeting beliefs. Models of shifts in Phillips curve, inflation bias.

1971-74: anchor adrift
Burns on wage and price controls “In this new psychological environment, our trade unions may not push quite so hard for a large increase in wage rates, since they would no longer be anticipating a higher inflation rate. And in this new psychological environment, our business people would not agree to large wage increases quite so quickly”
No measurement, expectations as an add-on factor
The data they looked at: professionals

Both Fed's staff and professional forecasters caught up sluggishly

(And the Fed's staff was particularly bullish on view that all was temporary)

Behind the curve
The data they rarely mentioned: households

Since 1946, Michigan Survey of Consumer Attitudes asked whether expected prices to rise or fall. MRW (2004) index.

But also, between 1966Q2 and 1976Q4, follow up question: “How large a price increase do you expect? Of course, nobody can know for sure, but would you say that a year from now prices will be about 1% or 2% higher, or 5% higher, or closer to 10% higher than now or what?”
Can look deeper: disagreement

1967-70: Thickening right tail, hollowing of left tail, standard deviation rising, positive skew falling.

1970-73: Median shifted slowly, right tail quickly, standard deviation rose, the skew first up then down.
New data from the Zurich market for gold forwards (alternative to London and Gold pool): very responsive, perhaps too much.

In media see some upticks
A model to combine them into fundamental RE

\[ v_t^h = \pi_t^* + c_t^h + \theta_t(e_t^h + \pi_t^e - \pi_t^*) \]
with \[ c_t^h \sim E(\lambda_t), \quad e_t^h | \pi_t^e \sim N(0, \sigma_t^2) \]
cross-sectional distribution \[ v_t^h \sim F_t(\pi_t^e) \]

\[ q_t = \frac{\int y_t(\pi_t^e)g_t(F_t^{-1}(\omega_t))f_t(F_t^{-1}(\omega_t))d\pi_t^e}{\int g_t(F_t^{-1}(\omega_t))f_t(F_t^{-1}(\omega_t))d\pi_t^e} \]
with: \[ \omega_t \sim B(\beta), \quad \pi_t^e | q_t \sim G(\pi_t^e) \]

\[ E_t^b = E_t(\pi_t | v_t^\text{median}, q_t) \]

Households: biased from experiences, sluggish average, over-react individually

Markets: more information, sensitive to news, filled with noise

Professionals: median is misleading, not marginal traders.

Data inputs: three moments from household survey distribution, one market price, median professional

Model outputs: reaction, dispersion and bias \((\theta, \sigma, \lambda)\), market noise \((\omega)\), fundamental expected inflation \((\pi^e)\)
Estimates of the expected inflation anchor

The drifting anchor

At first, markets seen as maybe reflecting noise

But, disagreement across households showed the fund expectation shifting

Later, sluggish response of medians of professionals confirms it
Beyond one episode: Brazil 2011-16?

Loose monetary, fiscal dominance, belief all transitory, rising inflation.

Price controls over administrative prices kept it pent-up 2011-15.

Markets, professionals weak signals

But again household disagreement revealed it
Even in real time, cross-sectional survey expectations distributions give signal

If anchor is not firm in the seabed, shifts are large and fast

Subject to all these caveats, already by the end of 2017, the standard deviation almost quadrupled, while the skewness went from being negative at -1% to positive at 0.25%. Panel (b) of Figure 12 shows the distributions in December of 2017, January of 2019 and June of 2021. In 2017, the uncertainty is evident, with a bimodal distribution and more than half of the respondents expecting inflation to exceed 17%. The events of 2018 removed some of the disagreement by consolidating a view that inflation would be well above the target. By 2021, more mass has moved rightwards, and the inflation anchor seems definitely lost.

Lessons. The Turkish experience of a lost anchor leads to two additional lessons. First, that even close to real time, and when inflation is bouncing up and down, like it did in Turkey in 2018 and 2019, the expectations data can paint a clear picture of a lost inflation anchor. Second, that in countries where arguably the anchor was not firm in the seabed to start with, the shifts in the cross-sectional distribution can be large and fast. The loss of the inflation anchor can come fast and need not be gradually building up like it did in the US in the late 1960s.
False positives: South Africa 2010-16?

(a) Actual inflation, markets and survey first-order moments

(b) Cross-sectional survey distributions

Survey data stayed steady in light of unlucky run of shocks, price controls temporary effect

No drifting anchor, no false positive
What about in other direction? US 1980s

(a) Actual and survey first-order moments

(b) Survey disagreement

Households ahead of professionals, again
Disagreement pattern showed the dropping and firming of the anchor
Looking ahead: US today?

(a) Actual inflation

(b) Markets and survey first-order moments

(c) Cross-sectional disagreement of households

(d) Cross-sectional distribution of households

Tough test for beliefs:
- salient prices
- recent data
- over-reaction

See in the data the increase in disagreement that points to an anchor that is drifting up.

But, jury is still out, and much depends on luck and policy over the next 12 months.
Conclusion

• Expected inflation is not…
  • …a mystical psychological variable for policymakers, an add-on factor, for data fitters, a perfect mirror of actual inflation that can be ignored, too sluggish and biased in surveys to be useful

• Can measure the expected inflation anchor…
  • …combine survey medians with markets and with disagreement in cross-sectional survey distributions

• The roots of the Great Inflation were in 1967-73, before oil shocks…
  • …bad theory (of expectations), bad measurement (expectations), bad luck (salience)

• Five episodes in which expectations measurement would have been useful
  • …and arguably useful now to see the anchor slightly drifting, but still in time to put it back in the seabed.