INFLATION TARGETING AND COMMUNICATION: SHOULD THE PUBLIC READ INFLATION REPORTS OR TEA LEAVES?

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Motivation

"[…] major element of best-practice inflation targeting is the communications strategy."

Bernanke

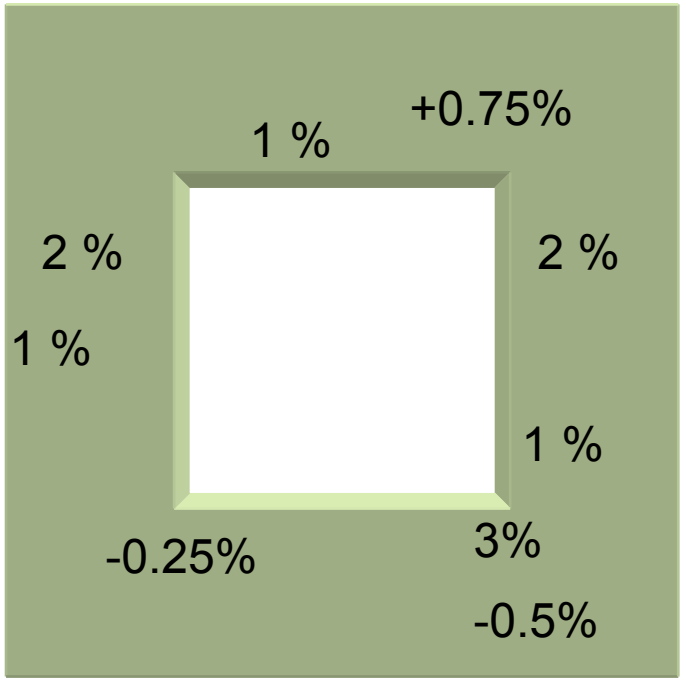
"Monetary policy that is easy to follow and understand […] is efficient"

The Riksbank

Motivation

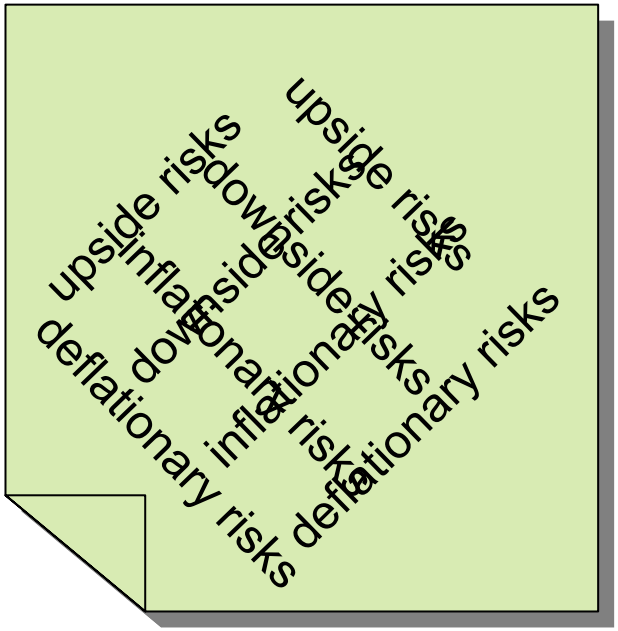
Communication tools 1

There is a frame around which the communication about monetary policy is built.
Inflation-targeting central banks announce their inflation targets, produce (and publish) their inflation forecasts and change policy interest rates.



Communication tools 2

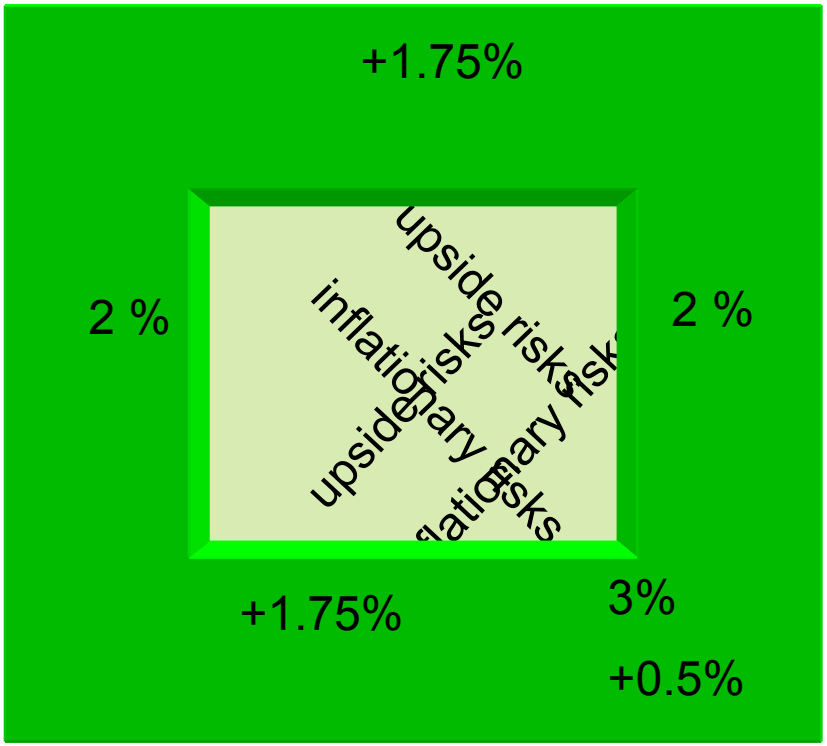
Inside this frame, a canvas is stretched.
Central banks provide verbal assessment of inflation risks and ex ante caveats in their quarterly inflation reports.
This information is too complex to be captured in the numerical forecast.



Motivation

Good communication

The frame and the canvas together create a painting. It is a nice one if the frame matches the canvas well. In other words, numerical (target, forecast, policy rates) and verbal (assessments of inflation factors in reports) communication tools are consistent.

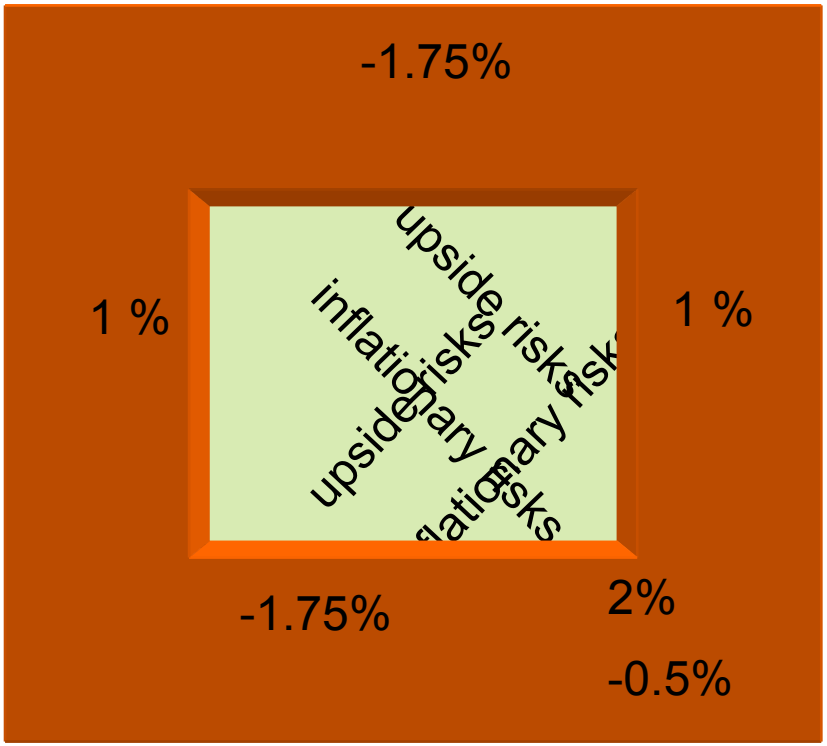


Motivation

Not so good communication

The frame and the canvas do not go together. One suggests inflation risks, the other deflation risks, or vice versa.

In other words, communication tools are not consistent. Inflation expectations are not anchored.



Motivation

Deficit in literature

- There is a deficit in literature, we need to measure better how well the frames match the canvas
- Frame described well by classics
  - Svensson (1997)and (1999)
- Few cross-country evaluations of canvas
  - Fracasso, Genberg, and Wyplosz (2003)
  - Blinder and others (2001)
- Very few (narrative) studies on how the frame matches the canvas
  - Svensson (2001) *Review of New Zealand monetary policy*
  - Giavazzi and Mishkin (2006) *An evaluation of Swedish monetary policy 1995-2005*

Tale of 2

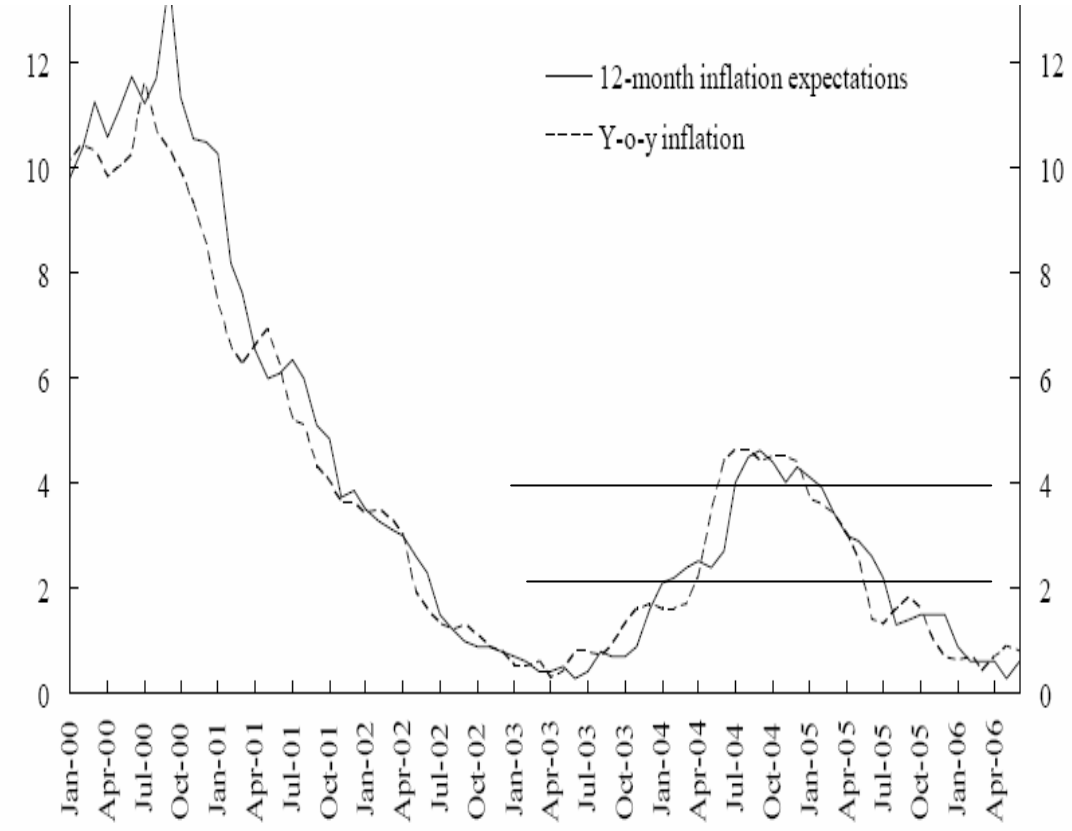
Communication matters: The Tale of Two Countries

- Why do we need to measure? …because communication matters (it affects expectations)
- Expectations do not automatically converge to the target
  - Tight policies are not enough
  - Good inflation track record is not enough
  - Bad inflation track record does not prevent convergence

Tale of 2

Strategy of country X

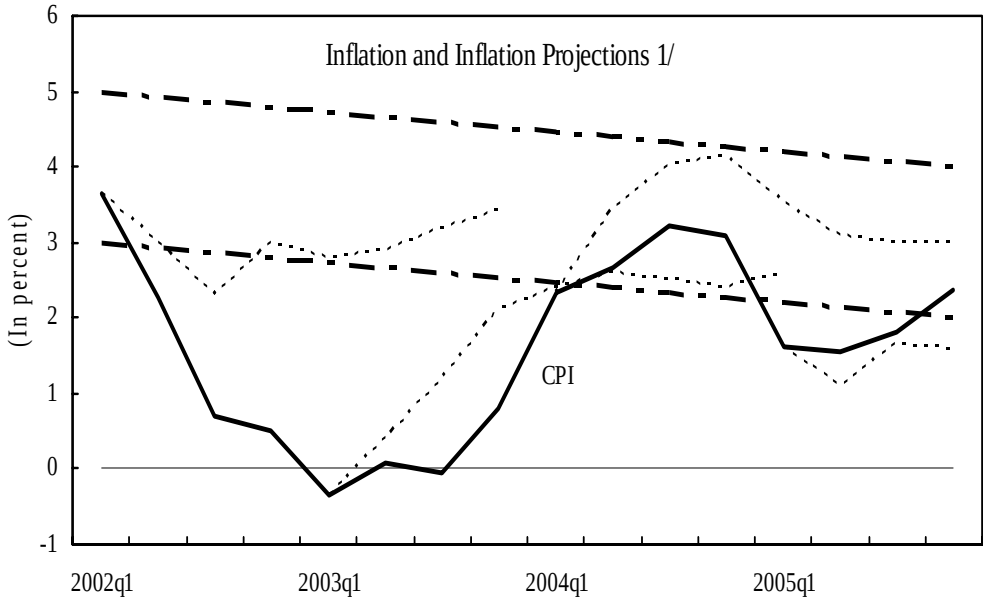
- Successful disinflation
- But inflation expectations volatile
- Target not credible



Tale of 2

Strategy of country Y

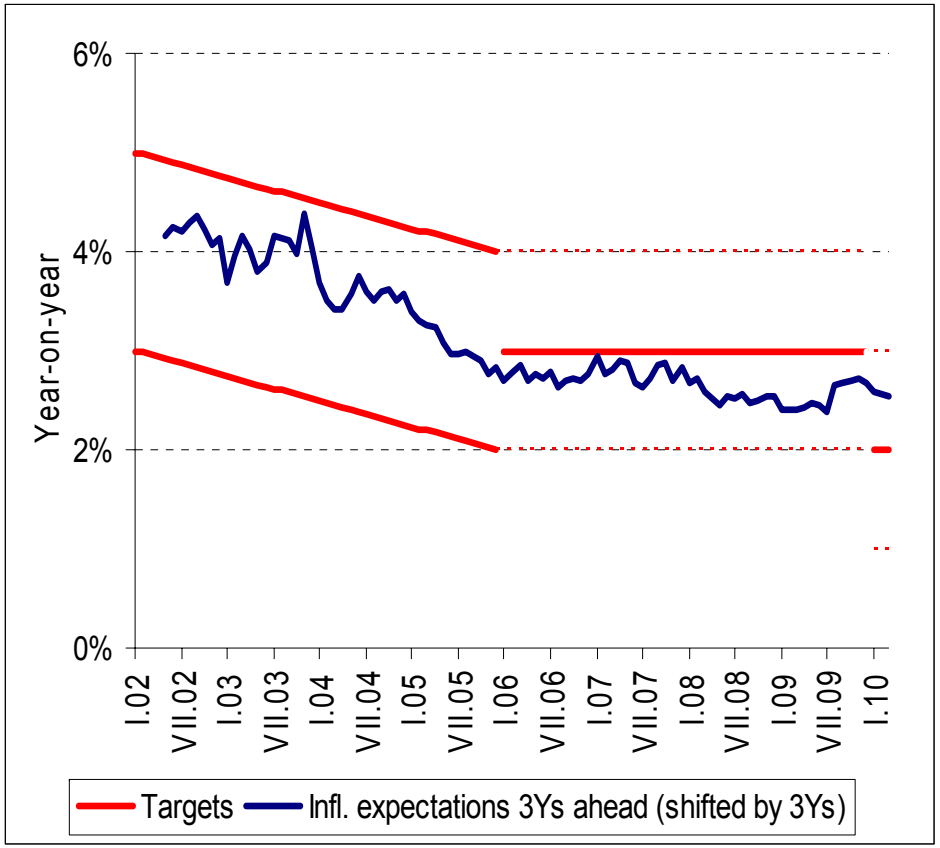
- Successful disinflation
- Targeted inflation mostly below the target band
- Inflation forecasts point to the target



Tale of 2

Expectations in country Y

- Long-run expectations dead on target
- Target is credible



Did Y communicate better than X?

Methodology

Our sample

Country	Targeter from	"Fully-fledged IT" or "IT lite"?	Frequency and availability of Inflation Reports	Type of inflation forecast	Average inflation[1] and type of price index	Openness (Exports and imports as a percentage of GDP)[1]	GDP per capita in constant US $[1]
Chile	1991	Fully-fledged	Three times a year; http://www.bcentral.cl	Conditional on unchanged policy rates	2.6 CPI	69.1	9,859
Czech Republic	1998	Fully-fledged	Four times a year; www.cnb.cz	Conditional on unchanged policy rates until mid-2002, unconditional thereafter	2.3 CPI	133.1	16,759
Hungary	2001	Lite	Four times a year; www.mnb.hu	Conditional on unchanged policy rates and exchange rates	5.9 CPI	131.9	14,597
Poland	1999	Lite	Four times a year; www.nbp.pl	No reference to quantitative forecasts	2.8 CPI	67.9	11,428
Sweden	1993	Fully-fledged	Four times a year; www.riksbank.com	Conditional on unchanged policy rates	1.5 CPI	84.2	27,630
Thailand	2000	Fully-fledged	Four times a year; www.bot.or.th	Conditional on unchanged policy rates	2.3 CPI and "core" inflation	131.4	7,065

Methodology

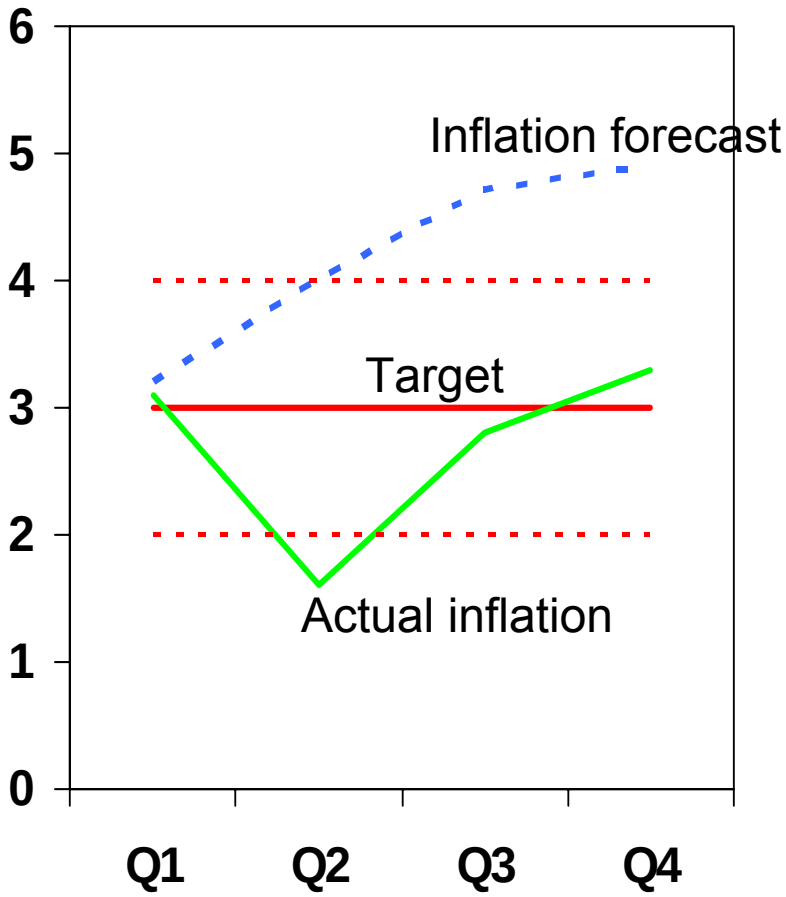
Measuring communication

We do it in steps:

1. Check *the deviation of inflation forecast from target* for the likely direction of monetary policy (plug in a policy rule)
2. Compare the likely direction of monetary policy with actual policy to get *implied inflation risk* (as seen by the public)
3. Scrutinize verbal assessments for inflation factors to get *comprehensive risk (*more than 140 ! inflation reports scrutinized)

Methodology

How does it work?



1. Forecast above target → the policy rule (estimated by public) suggests tightening
2. CB does not tighten → public suspects implicit downside risks
3. Public goes to the library and reads inflation report that lists (does not list) downside risks to inflation → no confusion (confusion) due to (in) consistent communication tools

Methodology

Implied inflation risk

Plug an observed policy rate change into estimated policy rule to get inflation forecast implied by policy makers:

$$\pi_{t+j}^{F,P} = \frac{\Delta i_t}{(1-\gamma)\delta} + \frac{i_{t-1} - i^n}{\delta} + \pi^*$$

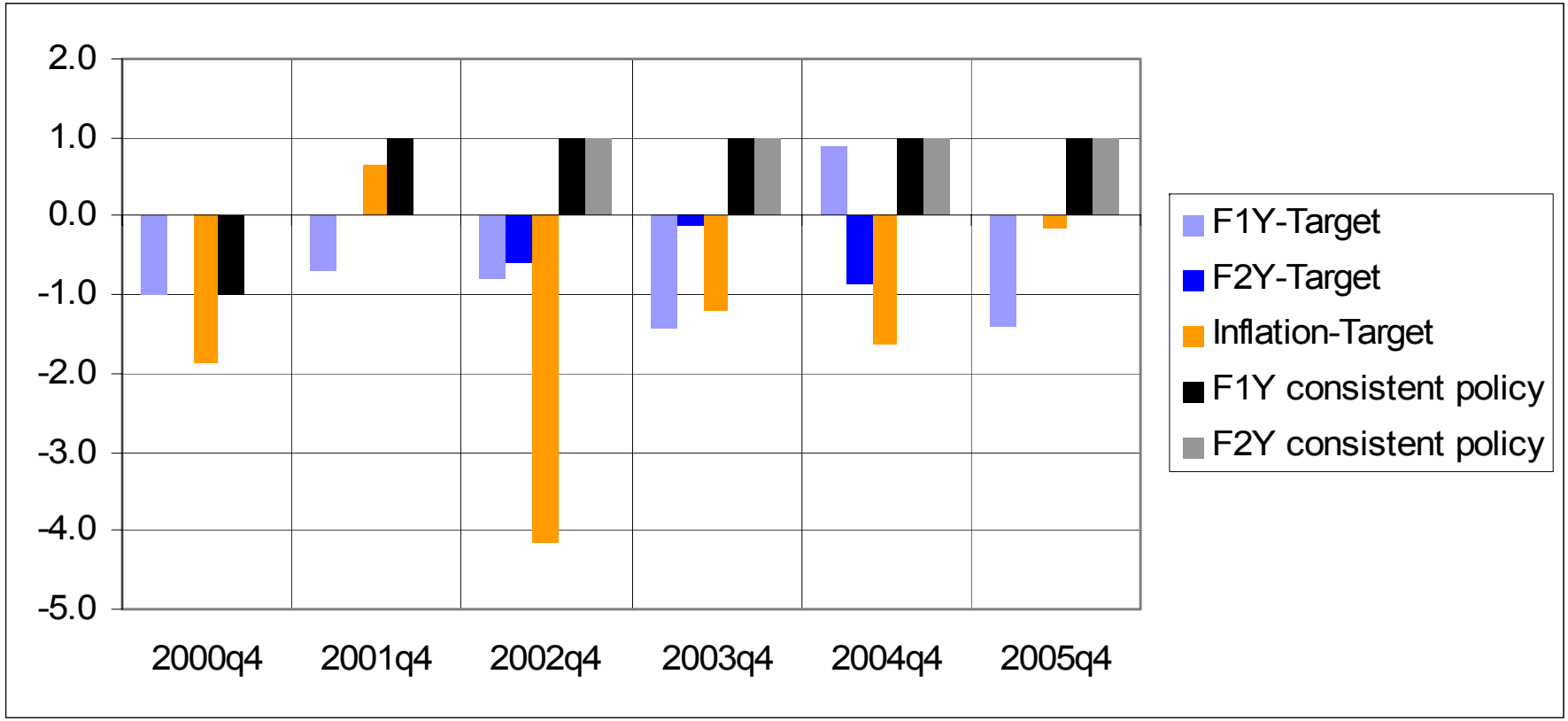
Compare with the inflation-report forecast (CB):

$$\pi_{t+j}^{F,P} - \pi_{t+j}^{F,CB} = \frac{\Delta i_t}{(1-\gamma)\delta} + \frac{i_{t-1} - i^n}{\delta} - \left(\pi_{t+j}^{F,CB} + \pi^*\right)$$

Negative (positive) number signals that policy makers worked with implied downside (upside) inflation risk.

Methodology

Czech Republic: Identifying implied risks



Implied risks not frequent (logical value for consistent policy rarely = -1

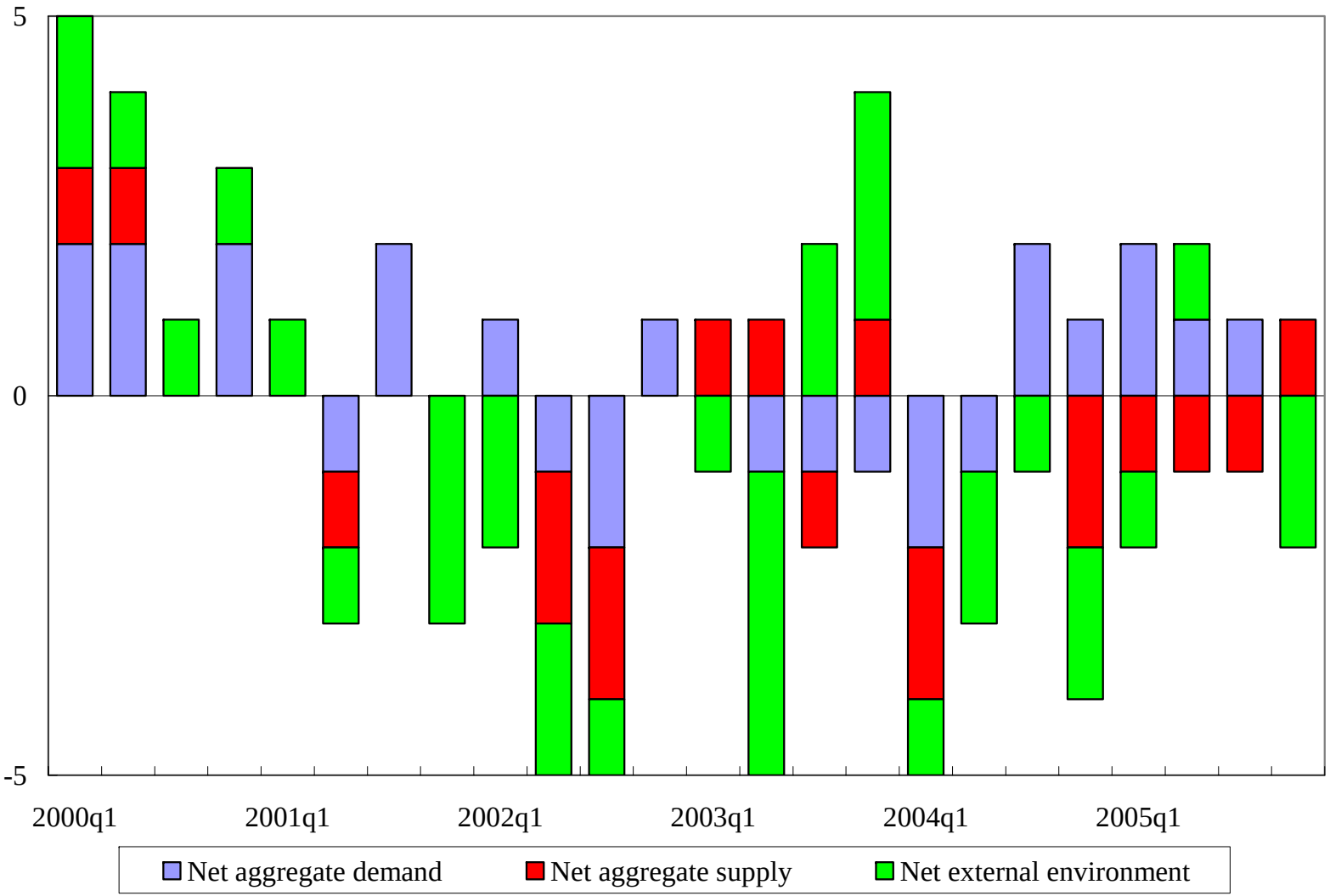
Methodology

Distilling verbal assessments

- Read inflation reports and transform all verbal assessments into an index like measure of inflation factors
- Comprehensive risk shows if there were demand/supply/external inflation/deflation factors mentioned frequently in the report
- Factors can cumulate or neutralize each other
- We work with the aggregate measurer to compare implied and comprehensive risks

Methodology

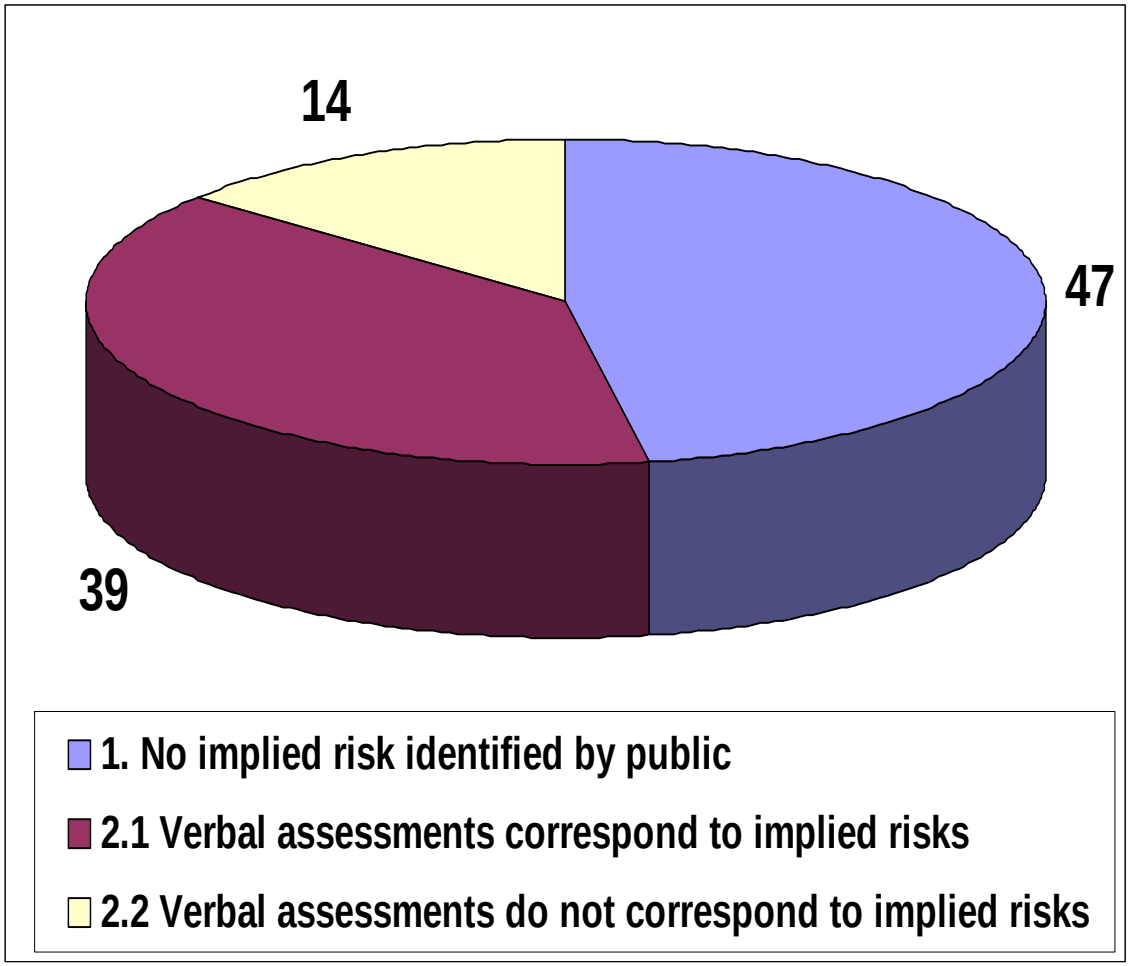
Czech Republic: Indexes of verbal assessments



Results

Our findings

- **In half of the cases, decisions explained solely by target and forecast**
- **In half of the cases, public needs to go to the library (and read inflation report)**
- **14% of the cases: decisions remain confusing with full information**



Results

Country cases differ

Description (% of cases)	Ch	CR	HU	PO	SW	TH
1. No implied risk identified by public	33	50	33	33	100	33
2. Implied risk identified by public	67	50	67	67	0	67
2.1 Verbal assessments correspond to implied risks	50	33	33	67	0	50
2.2 Verbal assessments do not correspond to implied risks	17	17	33	0	0	17
Memo: on-target inflation cases	*67*	*33*	*67*	*0*	*50*	*50*

Some reports are more confusing (HU) than others (SW)

Results

Surprises and confusions

- Confusions are relatively rare (14% of the cases)
- Surprises are more frequent than confusions (central banks failed to anticipate correctly 40% of all inflation outturns)
- No country stands out as either “great” or “horrible” communicator
- No country stands out as either „great“ or „horrible“ forecaster

Results

Robustness checks

Our results are little affected by

- Reasonable changes in the rule parameters
  - Unreasonably aggressive rule generates fewer surprises
- Using period average instead of end-period
- Sample exclusions
  - Sample results are not much different from individual-country results

Results

Tale of 2

If you still wonder about the Tale of two countries…

- Why does country Y (Czech republic) manage to stabilize inflation expectations while country X (Poland) does not ..despite similar inflation track records
- Country Y has more cases with zero implied risks (50% compared to 33%), and public has to go to the library much more often in the case of X (67% compared to 50%)