

Are survey-based rate expectations informative?

Evidence from less-liquid markets.

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Motivation

TWO EXPECTATION MEASURES FOR ONE SHORT RATE

- The NBP Survey of Professional Forecasters releases a quarterly implied-rate path with annual readings up to five years ahead: the closest object the Polish market has to a public consensus expected-rate forecast.
- The term structure supplies a competing measure: the expected-rate path $y_t^{rf}(\tau)$ from the ACM model with the BRW small-sample bias correction, fitted on the LW-NSS zero-coupon panel.
- The question: **does the survey carry information beyond what is already priced into the curve**, and does the answer depend on the horizon?

Data and design

THE HORSE RACE

- Sample: quarterly survey releases 2010Q1–2026Q1; forecast horizons $h \in \{12, 24, 36, 48, 60\}$ months.
- Realisation: the NBP reference rate observed at each horizon, r_{t+h} .
- Competing forecasts at each release date t : the survey path $f_{t,h}^S$ and the model path $f_{t,h}^M$ read off the ACM–BRW expected-rate leg at the matching horizon.
- Three standard comparisons, run per horizon: Diebold–Mariano on squared errors, Clark–West, and Mincer–Zarnowitz forecast encompassing.

Test equations

ESTIMATING EQUATIONS AND NULLS

With forecast errors $e_{t,h}^j = r_{t+h} - f_{t,h}^j$, $j \in \{S, M\}$:

$$d_{t,h} = (e_{t,h}^M)^2 - (e_{t,h}^S)^2, \quad DM_h = \frac{\bar{d}_h}{\sqrt{\widehat{V}_{NW}(\bar{d}_h)}}, \quad H_0: \mathbb{E}[d_{t,h}] = 0$$

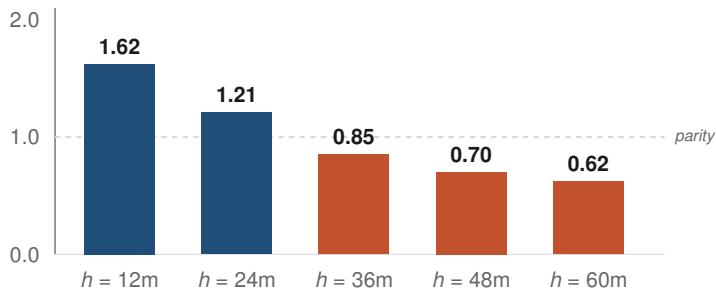
Clark–West adds the nested-model adjustment term to $d_{t,h}$ before the same construction.
Forecast encompassing (Mincer–Zarnowitz form):

$$r_{t+h} = c_h + \lambda_h^S f_{t,h}^S + \lambda_h^M f_{t,h}^M + \varepsilon_{t+h}, \quad H_0: \lambda_h^S = 0 \text{ (survey encompassed)}$$

- Overlapping h -month errors: HAC (Newey–West) variance throughout.

Headline: relative accuracy by horizon

$\text{MSE}(\text{MODEL}) / \text{MSE}(\text{SURVEY})$; ABOVE 1 THE SURVEY WINS



The survey is more accurate at 12 and 24 months; the model is more accurate from 36 months on, by a widening margin. The crossover sits near $h = 24$ months.

Full test results

DM, CW AND ENCOMPASSING, PER HORIZON

h	MSE^M	MSE^S	DM	p	CW	p	survey encompassed?
12m	1.42	0.88	+3.10	0.002	+1.85	0.032	no: survey adds information
24m	1.69	1.40	+1.21	0.226	+0.55	0.291	mixed
36m	1.55	1.83	-2.04	0.041	-1.32	0.094	yes: survey rejected
48m	1.30	1.85	-2.85	0.004	-2.11	0.018	yes
60m	1.02	1.65	-3.41	0.001	-2.78	0.003	yes

Positive statistics favour the survey, negative favour the model. Realisation: the NBP reference rate.
Sample 2010Q1–2026Q1.

Result 1: the survey dominates at one year

THE SHORT END OF THE HORIZON GRID

- At $h = 12$ months the model-to-survey MSE ratio is 1.62 (MSE 1.42 versus 0.88), with $DM = +3.10$ ($p = 0.002$) and $CW = +1.85$ ($p = 0.032$), both in the survey's favour.
- The encompassing regression retains the survey: λ^S is significant at 12 months, so the survey carries information beyond the model path.
- The information source is timing: respondents observe high-frequency news and policy guidance between the model's calibration dates.

Result 2: the model wins from three years on

THE LONG END OF THE HORIZON GRID

- At $h = 36\text{--}60$ months the model's MSE advantage widens (ratios 0.85, 0.70, 0.62) and is significant on both DM and CW.
- Encompassing delivers the strong form: at 36, 48 and 60 months λ^S is indistinguishable from zero while λ^M is not. The model contains the survey's information set and more.
- Mechanism: the survey's long-horizon readings are nearly flat, anchored on a long-run mean, while the no-arbitrage structure moves the model path with the cycle.

Interpretation

A HORIZON DIVISION OF LABOUR

- The two expectation measures exhibit a horizon-specific ordering: survey information dominates within one year, the no-arbitrage restriction dominates beyond two.
- For term-structure work on less-liquid markets, the encompassing result justifies using the model path as the expectations benchmark at the horizons where term premia are actually estimated, and treating long-horizon survey readings as uninformative anchoring.
- The one-year result cautions against reading short-run model-survey gaps as mispricing; at that horizon the survey is the better-informed measure.

| Data and econometrics

SPECIFICATION SUMMARY

- **Survey.** NBP Survey of Professional Forecasters, quarterly releases from 2010Q1, implied short-rate path constructed from the published annual readings.
- **Model.** ACM affine term-structure model with BRW small-sample bias correction on the LW-NSS-fitted Polish zero-coupon panel; the expected-rate leg evaluated at the survey's horizons on each release date.
- **Inference.** Diebold–Mariano and Clark–West statistics with Newey–West variance (overlapping h -month errors); encompassing regressions estimated per horizon with HAC standard errors.

Companion data and replication

YIELDCARTOGRAPHY.COM

- The survey-implied path and the ACM–BRW expected-rate path are plotted against each other, release by release, on yieldcartography.com/curves.
- The expected-rate leg updates daily on [/term-premia/](https://yieldcartography.com/term-premia/); the oracle gauge on [/oracle/](https://yieldcartography.com/oracle/) reads the same BRW path against the professional-forecaster benchmark.
- Underlying CSVs are downloadable from the dashboards.

Thank you.

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