Overreaction and horizon: long-term expectations overreact, but short-term expectations drive fluctuations

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Data: professional forecasters

- 89 countries
- Average forecasts of GDP, inflation, consumption, investment
- 0-10 year forecasts

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Theory:

- Inconsistent with some popular models of overreaction
- Consistent with a model of costly recall and sticky info

Which horizon relates to economic and financial fluctuations?

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International evidence: movement in *short-term* expectations (≤ 2 year) expectations most strongly associated with stocks, investment, GDP fluctuations

- But *in US data* longer-horizon (5+ year) expectations have strongest association

Roadmap

1. Four facts: regressions of forecast errors on forecast revisions + lagged forecast

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1. Four facts: regressions of forecast errors on forecast revisions + lagged forecast
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3. Movements in *short-term* GDP expectations are associated with fluctuations in investment and GDP: via local projections
4. High *short-term* GDP expectations predict subsequent stock returns

Contribution and related literature

	Geography	Variables	Horizon
Coibion and Gorodnichenko (2015)	AE	macro	0-6 quarters
Angeletos, Huo, and Satry (2021)	US	macro	0-2 years
Kohlhas and Walther (2021)	AE	macro	1-year
d'Arienzo (2021)	US	macrofinancial	0-30 years
Beaudry and Willems (2022)	AE + EM	GDP	3-year and 5-year
Afrouzi et al. (2023)	lab	simulated	0-10 periods
de Silva and Thesmar (2023)	US	financial	0-4 years
Kohlhas and Broer (2023)	US	inflation	0-6 quarters
Bordalo et al. (2024)	US	financial	0-5 years
Bianchi, Ilut, and Saijo (2024)	US	macro	1-year
Sung (2025)	US	macro	3 quarters
Adam, Pfauti, and Reinelt (2025)	US	housing	0-2 years
Crump et al. (2025)	US	macro	0-11 years
Halperin and Mazlish (2025)	**AE + EM**	**macro**	**0-10 years**

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Implications for economic & financial fluctuations:

- Bianchi, Ilut, Saijo (2024)
- L'Hullier, Singh, Yoo (2023)
- Faccini and Melosi (2022)
- Bordalo et al. (2023)
- Beaudry and Portier (2004)
- Bianchi, Ludvigson, and Ma (2024)

Data

Evidence: Four facts on overreaction by horizon

Theory

Evidence: Expectations and fluctuations

Conclusion

Appendix

Data ▸ visualizations

Data source: Consensus Economics “long-term forecasts”

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- Mean forecasts at 0,1,2,3,4,5 year horizon + 6-10 year period
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- Total: $n \approx 4200$ for GDP and inflation; $n \approx 3200$ for consumption and investment

Regression specification: Two notions of overreaction ▸ noise ▸ two-var

- No platonic definition of "overreaction"

Regression specification: Two notions of overreaction ▸ noise ▸ two-var

Where x is {GDP, inflation, consumption, investment} and e_{t+h} is forecast error, $x_{t+h} - \mathbb{E}_t x_{t+h}$:

run at each horizon h,

$$\underbrace{e_{t+h}}_{\text{forecast error}} = \alpha + \beta_1 \cdot \underbrace{\Delta \mathbb{E}_t x_{t+h}}_{\text{forecast revision}} + \beta_2 \cdot \underbrace{\mathbb{E}_{t-1} x_{t+h}}_{\text{lagged forecast}}$$

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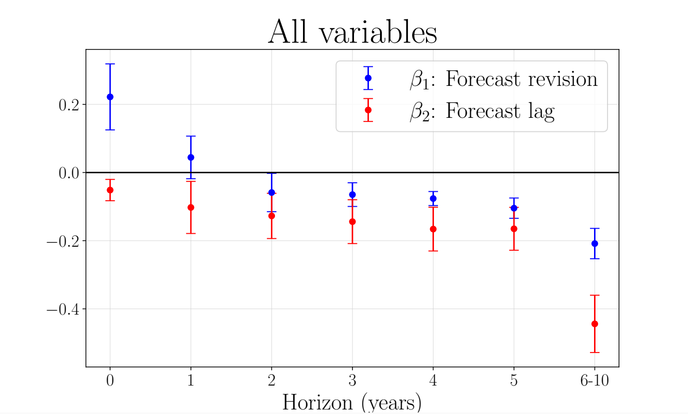
- FIRE: $\beta_1 = \beta_2 = 0$
- Main specification: panel regression, pooled over variables, c-x fixed effects

Main results: under/overreaction by horizon

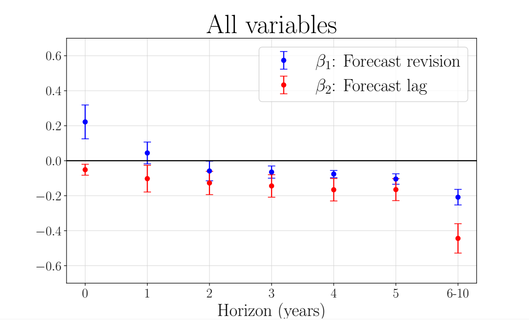
other FE | no FE | consistent sample | first rev

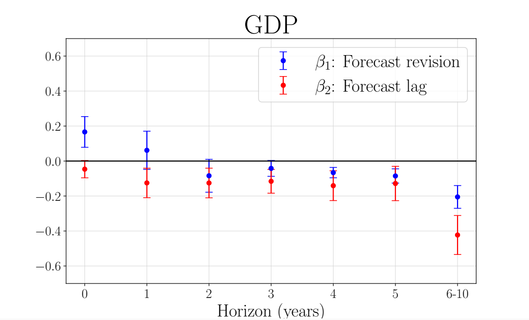


Four facts:

1. <1 year horizon forecast under-revises
2. ≥ 2 year horizon forecasts over-revise
3. At all horizons, expectations are too extreme ($\beta_2 < 0$)
4. Overreaction increases in horizon

Results by forecast variable





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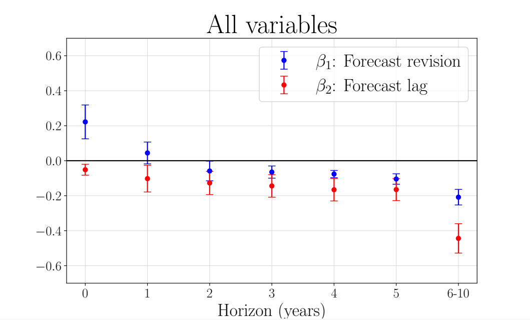

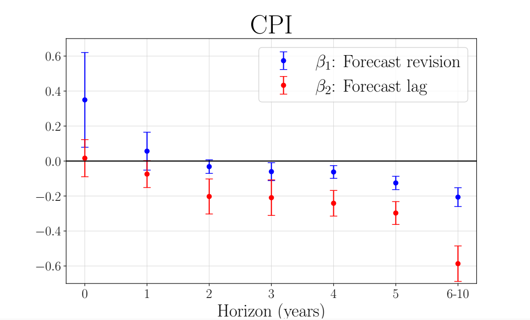

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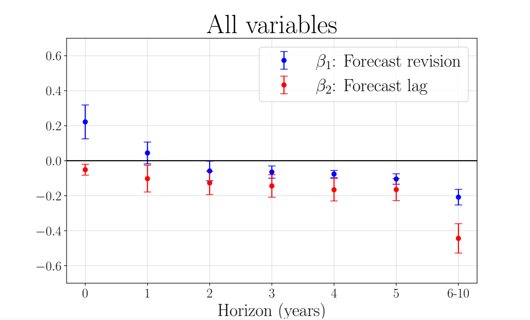

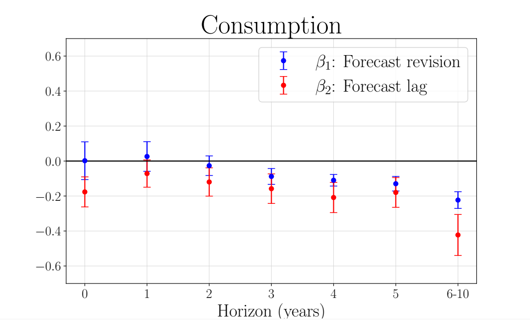

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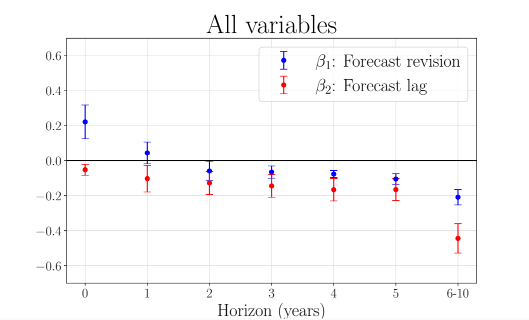
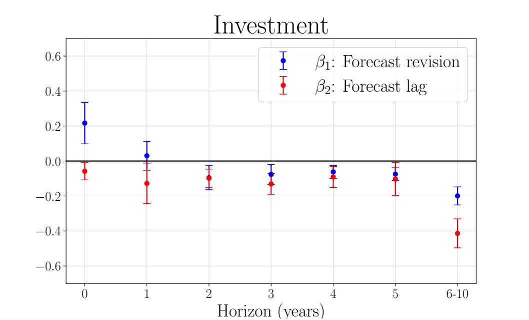
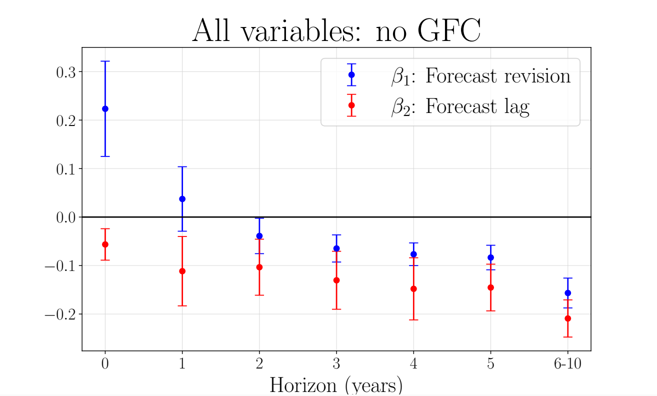




Dropping 2008

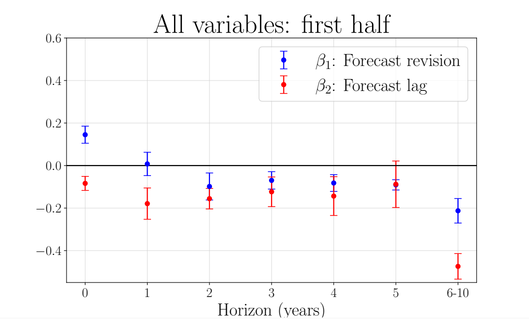
▸ distribution over years

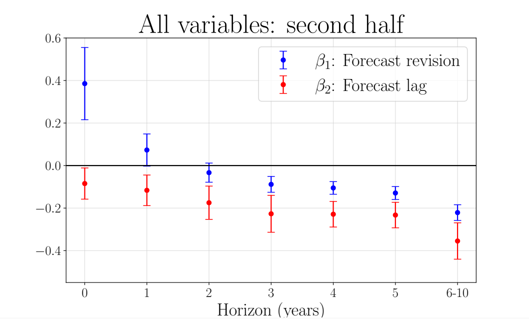


- Drop all observations where forecast date is before 2008 and horizon is 2007 or later
- The six-ten year out forecast sample goes from 3223 observations to 793

First half versus second half of sample

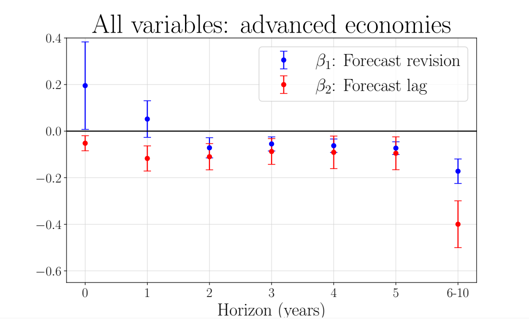
▸ by year ▸ split years ▸ consistent split

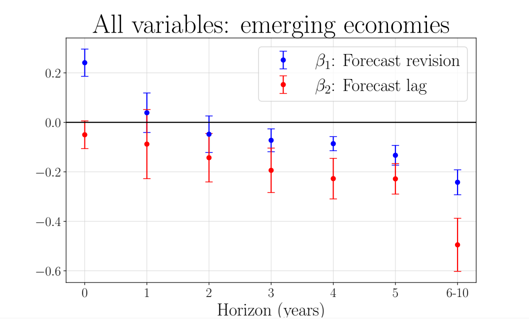




Overreaction in advanced vs. emerging economies

by country





Out-of-sample forecasts and bias instability

If forecast biases are stable, adjusting for them should help with OOS forecasting

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2. Compute "bias-adjusted" forecast $\mathbb{E}_t^* x_{t+h}$:

$$\mathbb{E}_t^* x_{t+h} \equiv \mathbb{E}_t x_{t+h} + \beta_{1,t} \Delta \mathbb{E}_t x_{t+h} + \beta_{2,t} \mathbb{E}_{t-1} x_{t+h}$$

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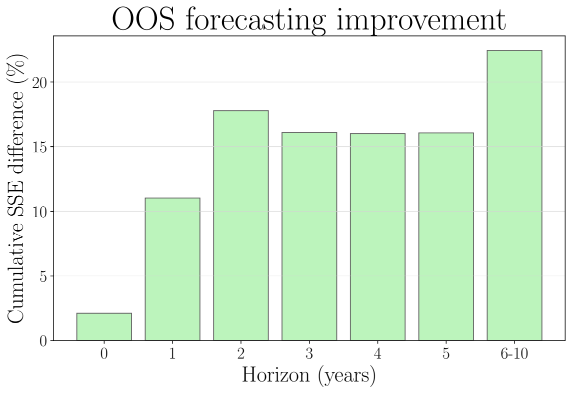
4. **Relative improvement** x**:** "unadjusted forecasts have x% larger SSE"

$$x = \frac{\text{SSE} - \text{SSE}^*}{\text{SSE}}$$

Improved out-of-sample forecasting at all horizons; especially at longer horizons



- Adjusting forecasts improves performance at all horizons
- 22.4% lower SSE at 6-10 year horizon

Which models fit the facts?

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    - Simple over-extrapolation (AHS 2021), baseline DE (Bordalo et al. 2020)

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2. **Costly recall** with uncertain long-run mean (Afrouzi et al. 2023) + **sticky information**
   - Emerging lit consistent with overreaction increasing in horizon: Bianchi et al. (2024), Farmer et al. (2024), Sung (2025) ▸ smooth DE

Afrouzi et al. (2023) costly recall

Agents forecast an AR(1) process:

$$x_t = (1-\rho)\mu + \rho x_{t-1} + \epsilon_t$$
$$\epsilon_t \sim (0, \sigma_\epsilon^2)$$

Agents are uncertain about long-run mean; and can process most recent observation (x_t) freely, but processing additional information S_t with a cost:

$$C_t(S_t) \equiv \omega \frac{\exp\left(\gamma \mathbb{I}(S_t, \mu | x_t)\right) - 1}{\gamma}$$

Afrouzi et al. (2023) costly recall: results

Afrouzi et al. proposition 1: Forecasts overreact relative to the rational benchmark:

$$F_t x_{t+h} = \underbrace{E_t x_{t+h}}_{\text{rational forecast}} + \underbrace{(1-\rho^h)\min\left\{1, \left(\frac{\omega \underline{\mathcal{T}}}{(1-\rho^h)^2}\right)^{\frac{1}{1+\gamma}}\right\} x_t}_{\text{overreaction}(\equiv\Delta)} + \underbrace{u_t}_{\text{noise}}$$

Where $\underline{\mathcal{T}}$ is the minimum precision of the agent's posterior belief about the long-run mean: $var(\mu|x_t)^{-1}$

Afrouzi et al. proposition 2: The degree of overreaction Δ is increasing in h, iff cost-curvature $\gamma \geq 1$

Costly recall: implications for over-revision and over-extremity ▸ proof sketch

Our proposition 1: Under costly recall,

1. Both over-revision and over-extremity, at all horizons
2. Over-revision = over-extremity
3. Both increase in horizon iff $\gamma \geq 1$

$$\beta_1^h = \beta_2^h = -\frac{\Delta_h}{\rho^h + \Delta_h} \leq 0$$

$$\frac{d\beta_1^h}{dh} = \frac{d\beta_2^h}{dh} < 0 \iff \gamma \geq 1$$

Problem: does not match (i) under-revision at short horizons, $\beta_1^0 > 0$, or (ii) $\beta_1^h > \beta_2^h$.

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Noisy and sticky info implications ▸ proof sketch

Noisy info: If agents observe noisy signal $s_t = x_t + e_t, \quad e_t \sim (0, \sigma_e^2)$, then:

$$\beta_1^h < \beta_2^h \;\; \forall h$$

Sticky info: If fraction λ of agents update their forecast each period, then:

$$\beta_1^h > \beta_2^h \;\; \forall h$$

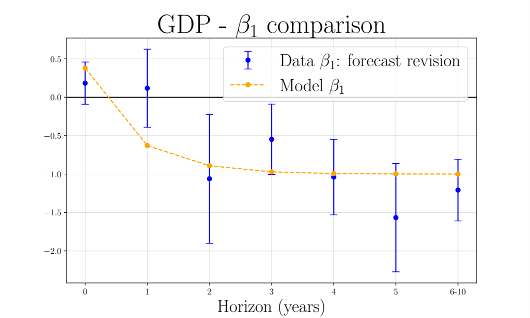
$\implies$ need sticky info, not noisy info, to match results

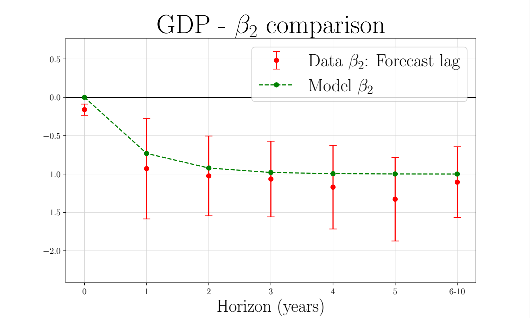
- NB: noisy-info can push both $\beta_1, \beta_2 > 0$; sticky info can only push $\beta_1 > 0$

Calibration

- Calibrate the model to match the non-z-scored results for just GDP
- Take γ, ω from Afrouzi et al.
- Set ρ based on regressing g_t on g_{t-1} across all countries, with country FE
- Calibrate $\lambda = 0.725$

Calibrated model vs. data ▸ zscored





Local projections framework ▸ details

How are **realized future outcomes** influenced by the **change today in GDP growth expectations**?

$$x_{t+h} = \alpha + \gamma^{h}_{6\to 10} \cdot \underbrace{\Delta_1 \mathbb{E}_t(g_{t+6\to t+10})}_{\text{one-year change in long-term expected GDP growth}} + \beta \cdot \text{controls}_t + \text{FE} + \epsilon_t$$

- Approach comparable to Bordalo et al. 2024, who find movements in long-term *earnings growth* forecasts cause US business cycle fluctuations

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How are **realized future outcomes** influenced by the **change today in GDP growth expectations**?

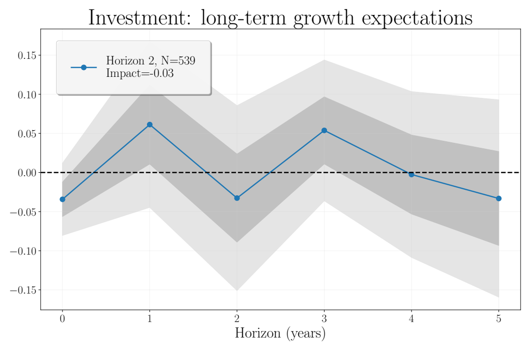
$$x_{t+h} = \alpha + \gamma^{h}_{0\to 2} \cdot \underbrace{\Delta_1 \mathbb{E}_t(g_{t\to t+2})}_{\substack{\text{one-year change in} \\ \text{short-term} \\ \text{expected GDP growth}}} + \beta \cdot \text{controls}_t + \text{FE} + \epsilon_t$$

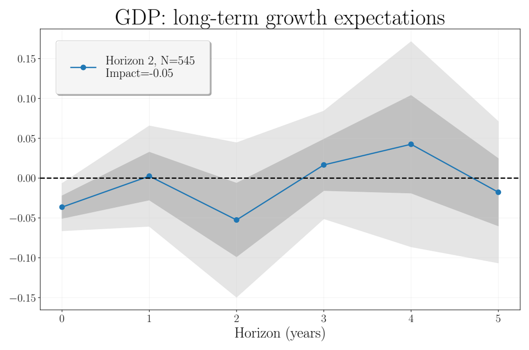
- Approach comparable to Bordalo et al. 2024, who find movements in long-term *earnings growth* forecasts cause US business cycle fluctuations
- **Question:** do movements in short-term or long-term GDP growth expectations better predict subsequent fluctuations?

Long-term GDP growth expectations are not associated with fluctuations

Using 6-10 year expectations:

$$x_{t+h} = \alpha + \gamma^{h}{}_{6\to10} \cdot \Delta_1 \mathbb{E}_t(g_{t+6\to t+10}) + \beta \cdot \text{controls}_t + \text{FE} + \epsilon_t$$

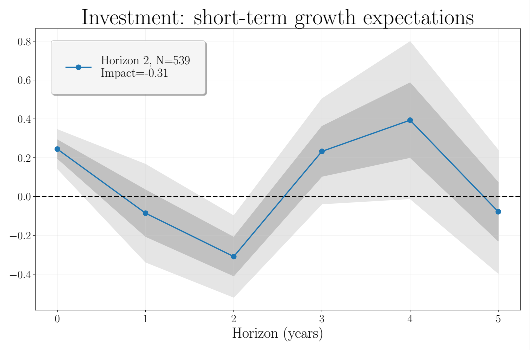


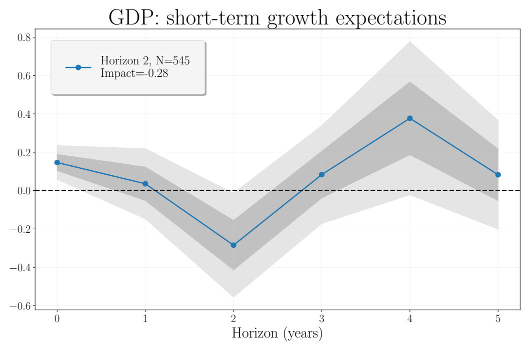


But short-term growth expectations are associated with fluctuations

Using cumulative 0-to-2 year expectations:

$$x_{t+h} = \alpha + {\gamma^h}_{0\to 2} \cdot \Delta_1 \mathbb{E}_t(g_{t\to t+2}) + \beta \cdot \text{controls}_t + \text{FE} + \epsilon_t$$

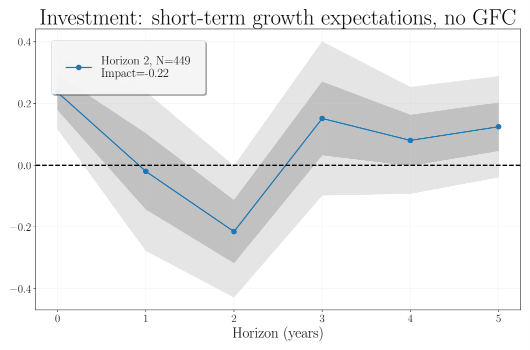


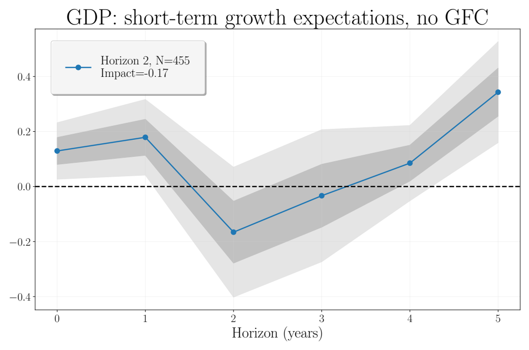


Even excluding the GFC

Using cumulative 0-to-2 year expectations:

$$x_{t+h} = \alpha + \gamma_{0\to 2} \cdot \Delta_1 \mathbb{E}_t(g_{t\to t+2}) + \beta \cdot \text{controls}_t + \text{FE} + \epsilon_t$$





Stock return predictability

Are **future stock market returns** predicted by **today's GDP growth expectations**?

$$r_{t+h} = \alpha + \gamma^h \cdot \underbrace{\mathbb{E}_t(g)}_{\text{either short-term or long-term expected GDP growth}} + \epsilon_t$$

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- **Question:** do short-term or long-term growth expectations better predict subsequent three-year and five-year returns?

Stock return predictability

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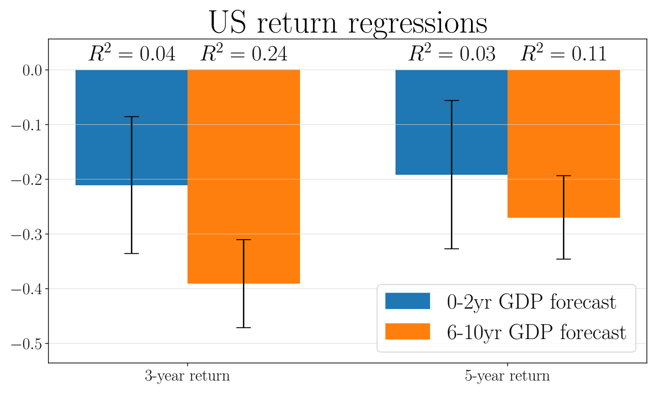
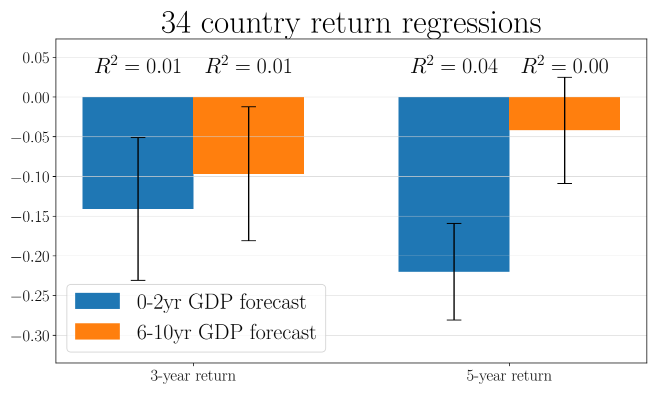
- **Question:** do short-term or long-term growth expectations better predict subsequent three-year and five-year returns?
- Bordalo et al. (2024) find long-term expectations are the stronger predictor

In the US, long-term expectations are the stronger predictor ▸ table



- In US, long-term GDP growth expectations are strongest predictor of returns
- Magnitude of results comparable to Bordalo et al. 2024

Across 34 countries, short-term expectations are the better predictor ▸ table



- *Short-term* GDP growth expectations most predictive of returns

Conclusion

- In a large cross-country sample, **four facts** about average macroeconomic forecasts emerge:

Conclusion

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  1. <1 year horizon forecasts under-revise
  2. ≥ 2 year horizon forecasts over-revise
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  4. Overreaction increases in horizon

Conclusion

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  1. <1 year horizon forecasts under-revise
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Conclusion

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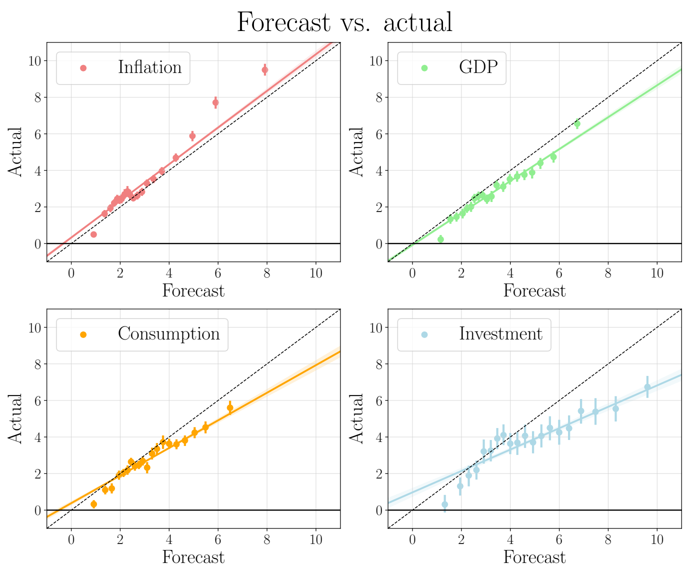
  1. < 1 year horizon forecasts under-revise
  2. ≥ 2 year horizon forecasts over-revise
  3. At all horizons, expectations are too extreme
  4. Overreaction increases in horizon
- A model of expectation formation under costly recall and sticky updating matches these features
- While long-horizon expectations overreact most, short-horizon expectations are most associated with subsequent business-cycle and stock-market fluctuations

Lit Review: Horizons ▸ back

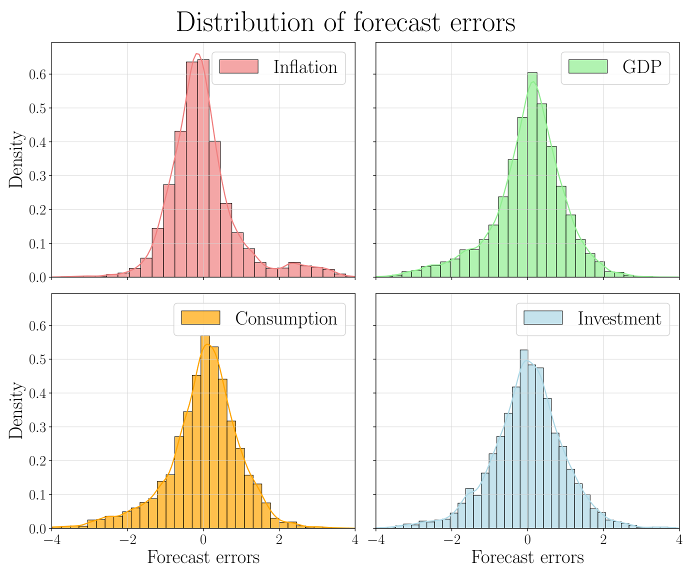
- Coibion and Gorodnichenko 2015: up to 6 quarter ahead
- AHS 2021: one-year expectation errors
- Bianchi, Ludvigson, Ma 2022 AER: $<=$ 1yr expectations
- Beaudry and Willems AEJM 2022: 3-year horizon forecasts, results robust to 5-year
- Bianchi, Ilut, Saijo Restud 2024: peak 2-3 years after shock, trough 5-6 years later, model only
- L'Hullier, Singh, Yoo Restud 2023: focus on "one-step-ahead" forecast
- Bianchi, Ilut, Saijo NBER 2024: one-year forecast errors
- Afrouzi et al. 2023 QJE: more overreaction with horizon, experimental set-up not directly translatable to time
- Patton and Timmermann 2010 JME: up to 2-year horizon
- Faccini and Melosi 2022 AEJM: up to 2-year horizon
- Bordalo et al. 2023 NBER Macro: 3-5 year expectations, document bust on 7-9 quarter horizon
- Bordalo et al. 2024 JPE: 3-5 year expectations
- Kohlhas and Walther 2021 AER: one-year ahead forecasts
- Kohlhas and Broer 2023 ReStat: one-year ahead forecasts
- de Silva and Thesmar 2023 ReFinSt: up to 4-year expectations
- d'Arienzo 2021: documents increasing overreaction with maturity in interest rates, out to 30 years!
- Sung 2025: a model that explains which of under or over-reaction will prevail depending on the information environment and forecast horizon
- Adam, Pfauti, and Reinelt (2025): Households' housing price expectations underreact at 1-year horizons and overreact at 2-year horizons

Forecasts and forecast errors: visual summary

back

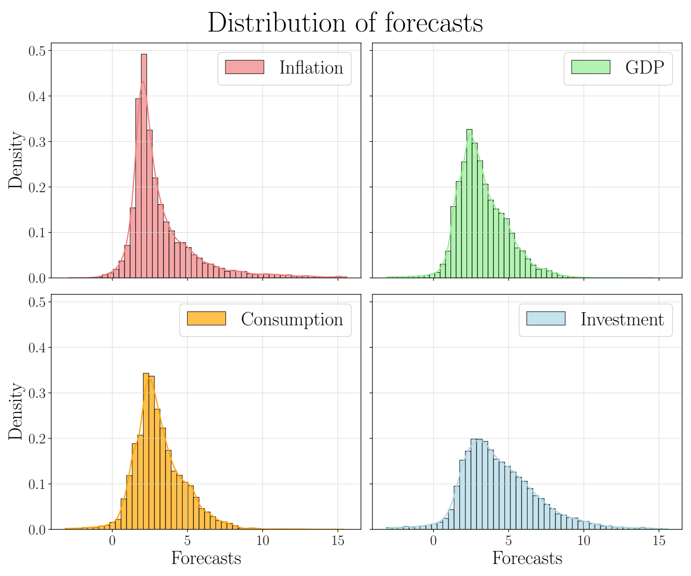


Forecasts and forecast errors: visual summary ▸ back



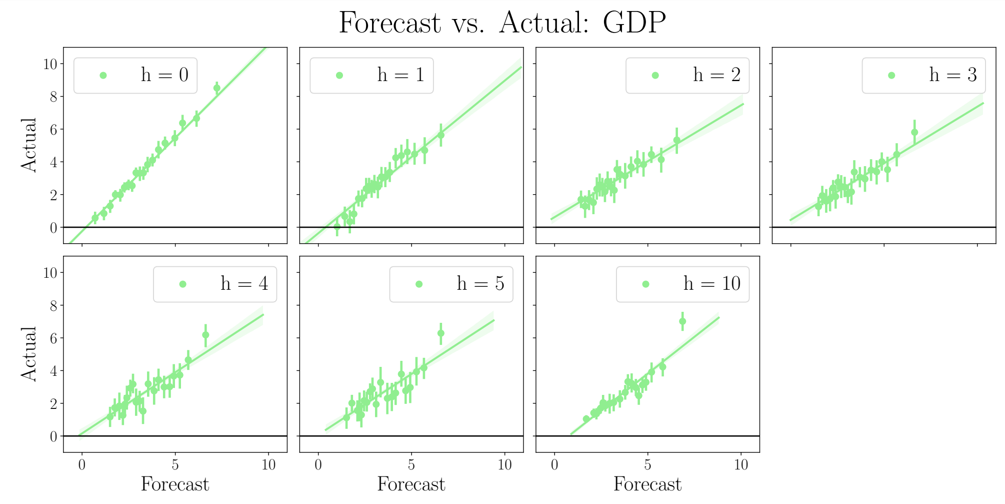
Forecasts and forecast errors: visual summary

▸ back

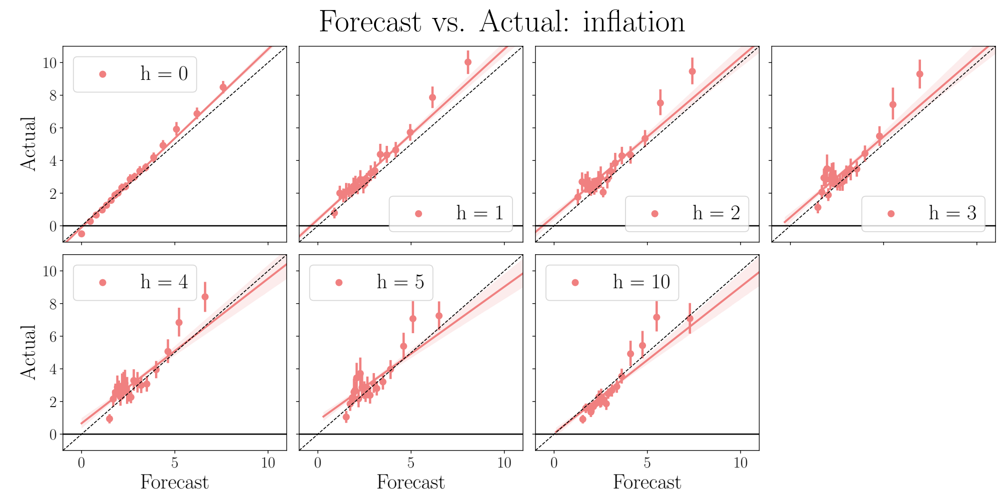


Forecasts and forecast errors: visual summary

back



Forecasts and forecast errors: visual summary ‣ back



Forecasts and forecast errors: visual summary

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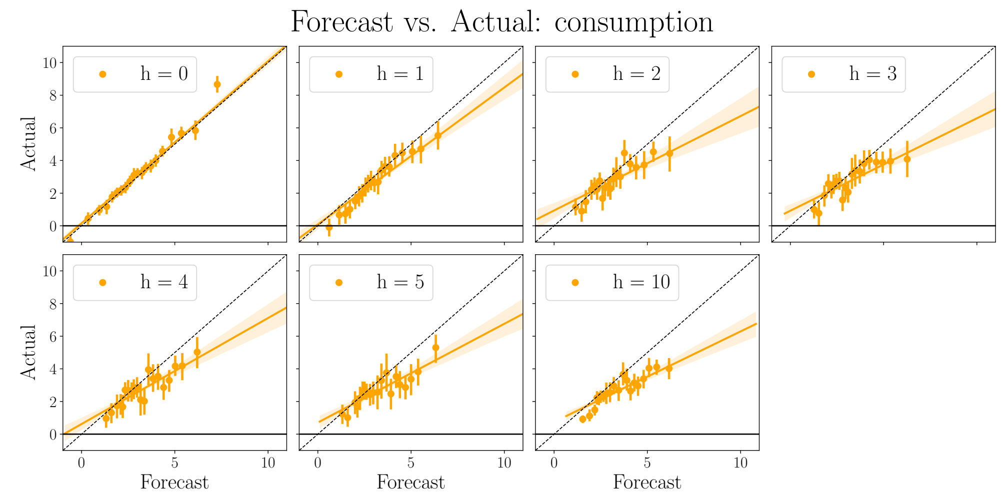

Forecasts and forecast errors: visual summary

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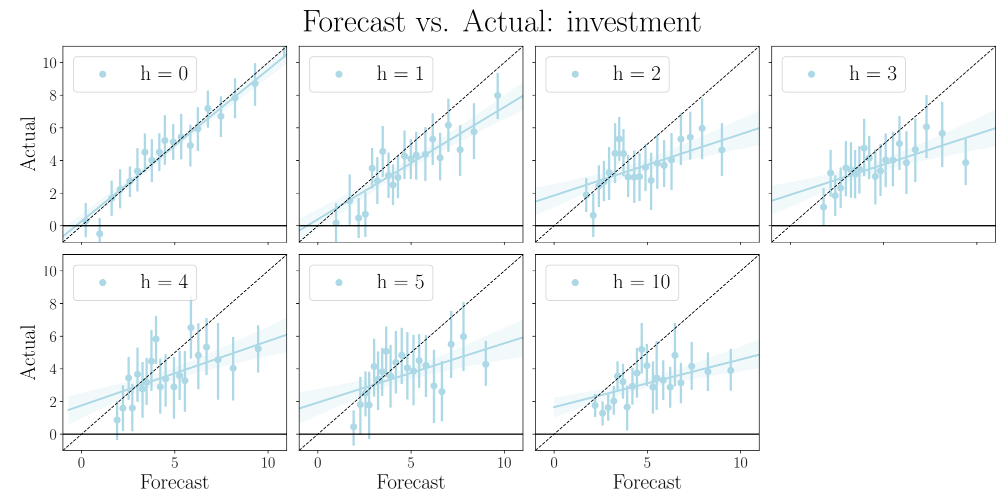
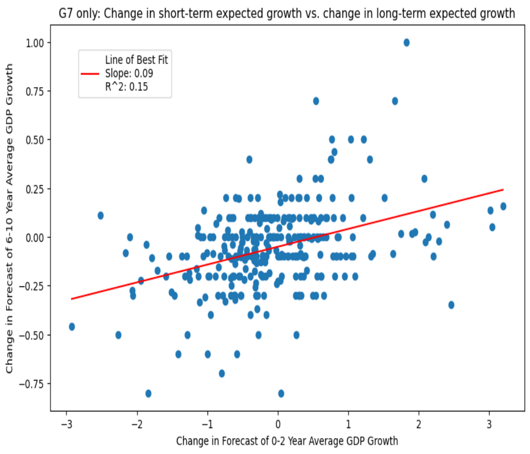
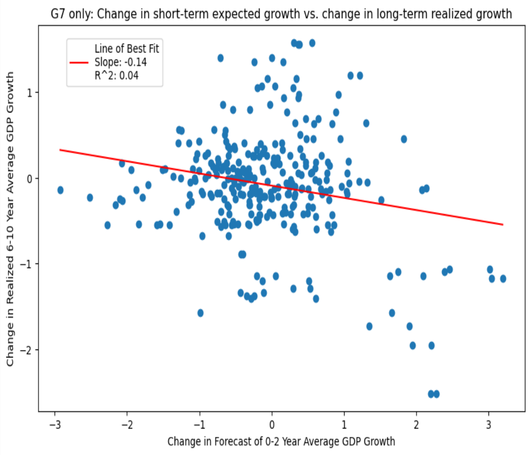


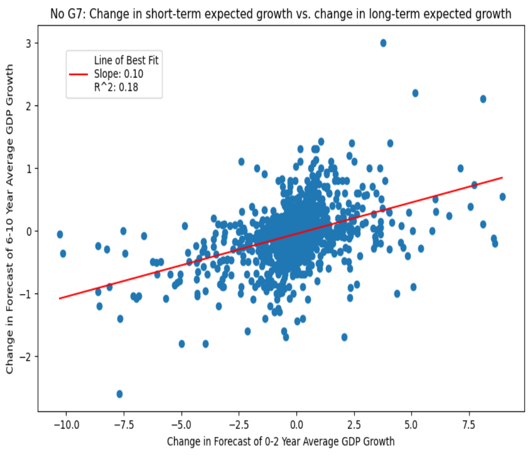
Visual Evidence: G7 Only

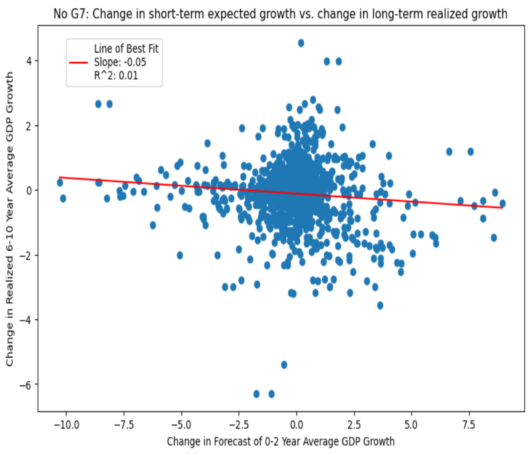
back





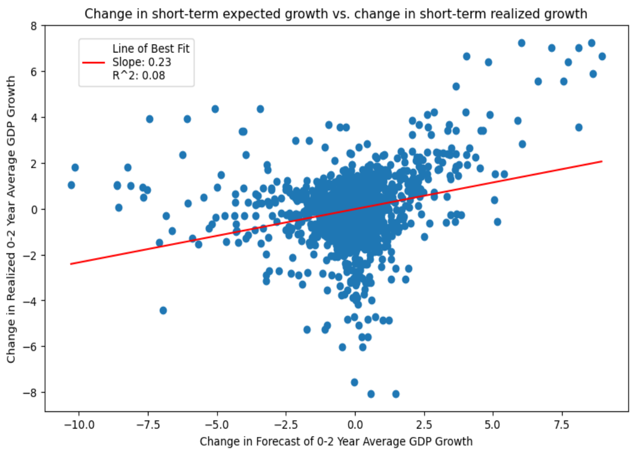
Visual Evidence: No G7 ▸ back



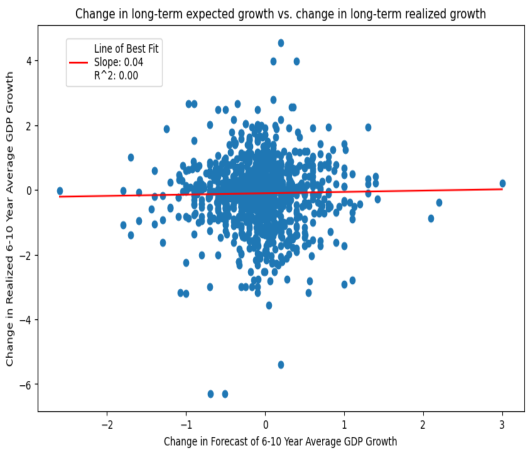


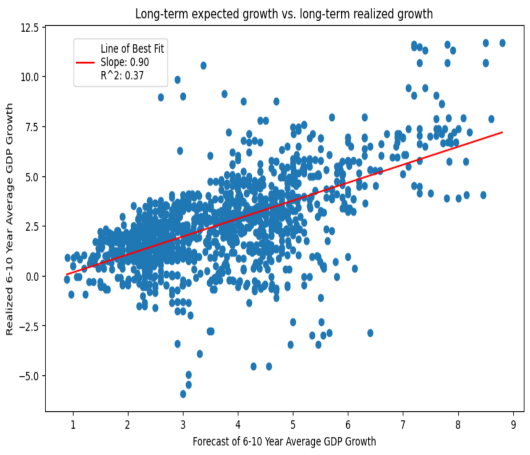
Visual Evidence: Short-term expectations on short-term outcomes

back



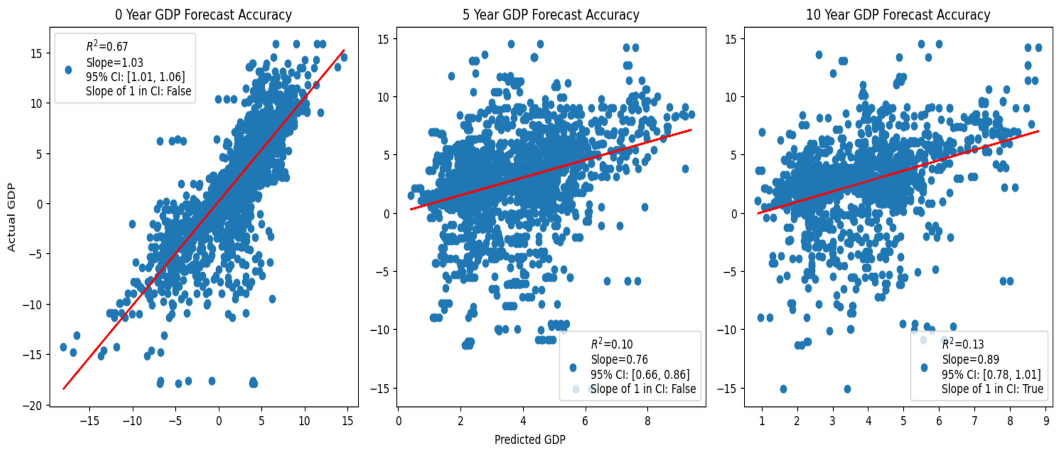
Visual Evidence: Long-term expectations accuracy ▸ back





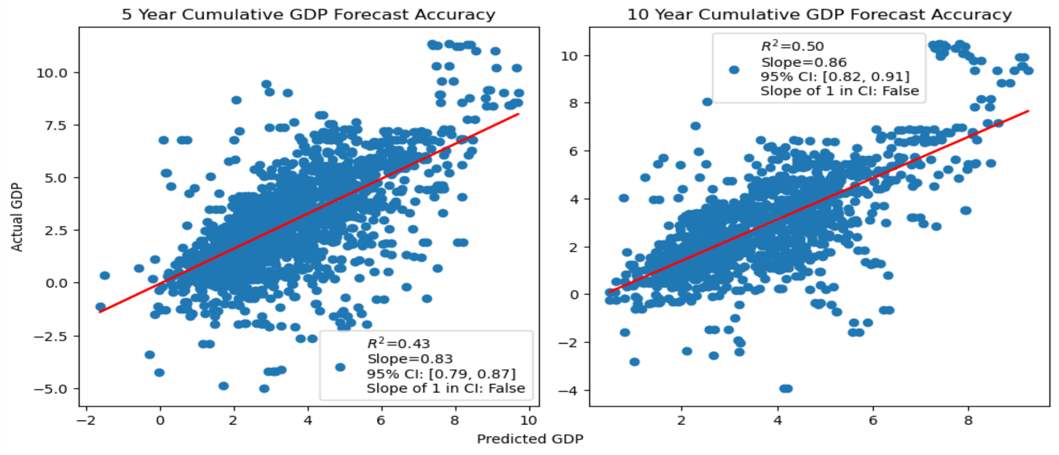
Visual Evidence: Individual Year Forecast Accuracy

back

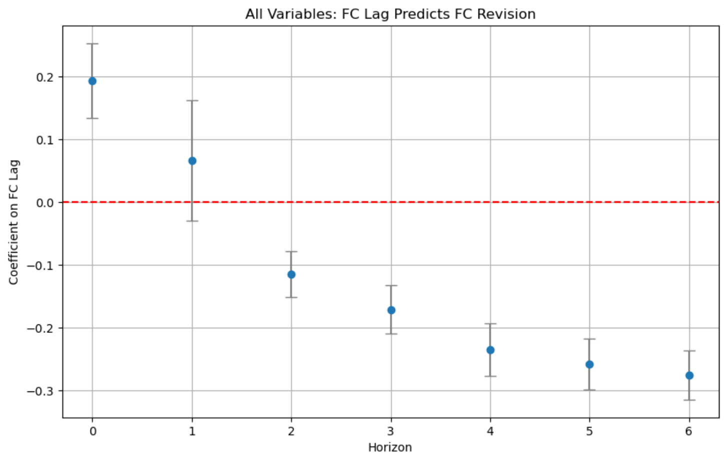


Visual Evidence: Cumulative Forecast Accuracy

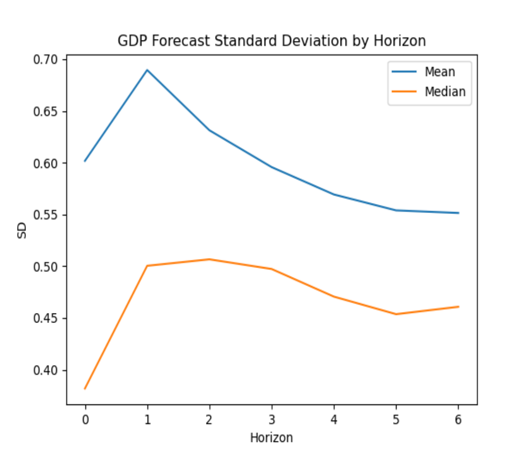
▸ back

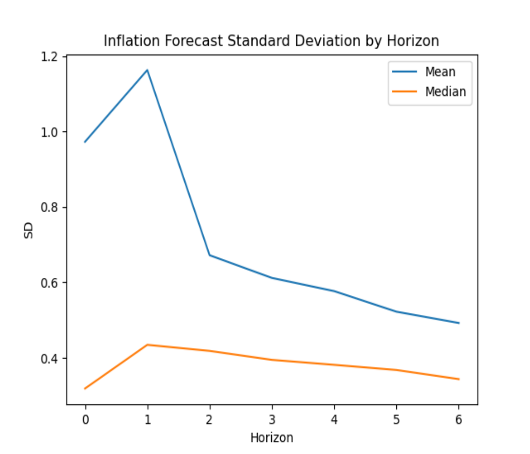


FC Lags Predict FC Revisions ▸ back

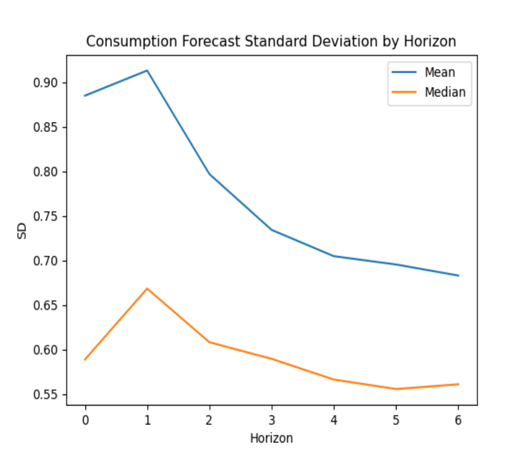


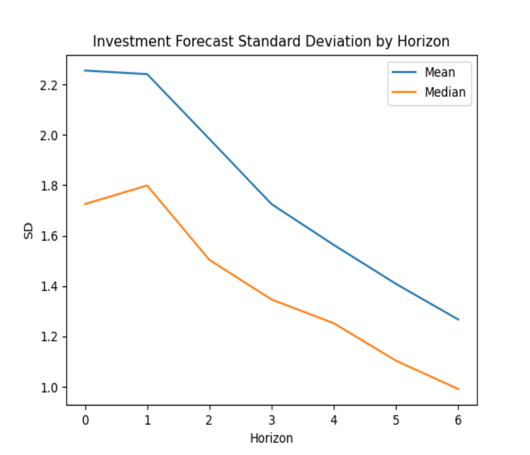
FC SD: GDP and Inflation ▸ back





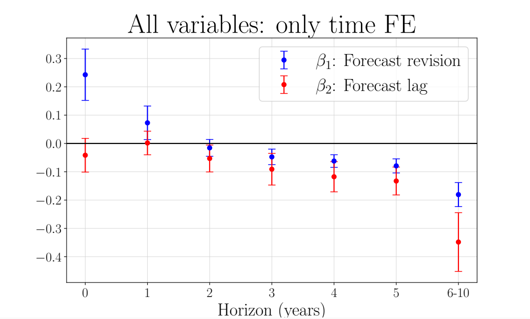
FC SD: Consumption and Investment ▸ back

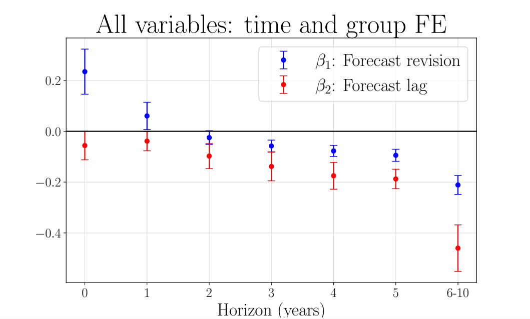




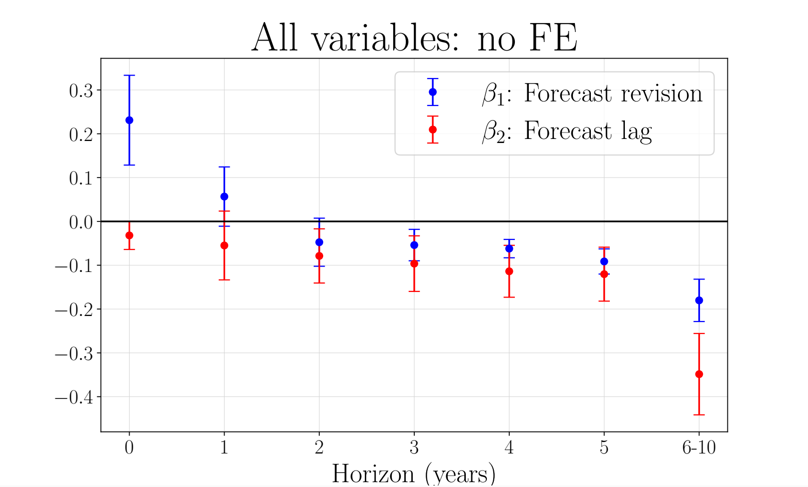
Robustness: Different FE

back

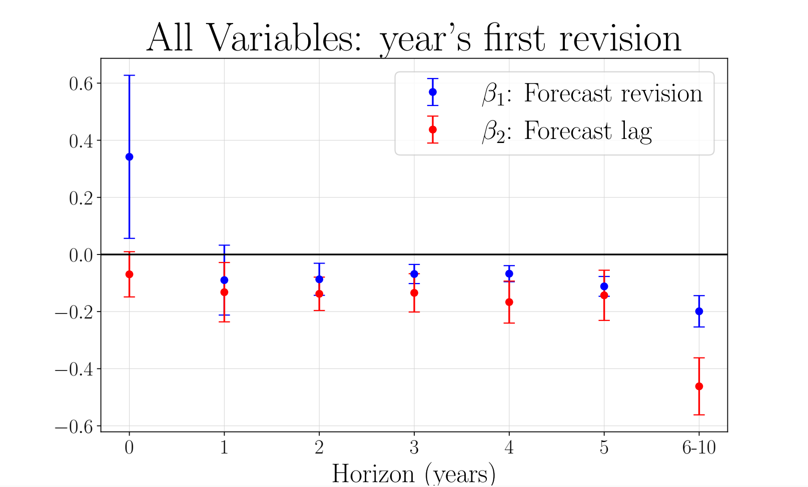




Robustness: No FE ▸ back



Robustness: first yearly revision only ▸ back



Proof sketch for Proposition 1 ▸ back

Setup

$$u_t = \rho u_{t-1} + \nu_t, \quad F_t(h) = (\rho^h + \Delta_h)\, u_t,$$

$$R_t(h) = (\rho^h + \Delta_h)(u_t - u_{t-1}), \quad L_{t-1}(h) = (\rho^h + \Delta_h) u_{t-1},$$

$$FE_{t+h} = -\Delta_h u_t + \sum_{j=0}^{h-1} \rho^{h-1-j} \nu_{t+1+j}.$$

OLS coefficients

Let $D \equiv \mathrm{Var}(R)\,\mathrm{Var}(L) - \mathrm{Cov}(R, L)^2 > 0$. Using standard variance–covariance algebra we obtain

$$\beta_1 = \frac{\mathrm{Cov}(FE, R)\ \mathrm{Var}(L) - \mathrm{Cov}(FE, L)\ \mathrm{Cov}(R, L)}{D}, \qquad \beta_2 = \frac{\mathrm{Cov}(FE, L)\ \mathrm{Var}(R) - \mathrm{Cov}(FE, R)\ \mathrm{Cov}(R, L)}{D},$$

$$\Longrightarrow \boxed{\beta_1^h = \beta_2^h = -\frac{\Delta_h}{\rho^h + \Delta_h} \le 0}$$

Monotonicity (if min-constraint slack)

$$\Delta_h = C\left(1 - \rho^h\right)^{\frac{\gamma-1}{\gamma+1}}, \ C > 0, \quad \Delta_h' > 0\ (\gamma \ge 1),$$

$$\beta'(h) = -\frac{\Delta_h'}{\rho^h + \Delta_h} + \frac{\Delta_h \rho^h \ln \rho}{(\rho^h + \Delta_h)^2} < 0 \iff \gamma \ge 1.$$

Proposition 2 (noisy information): $\beta_1^h < \beta_2^h \; \forall h$ ▸ back

Setup

$$\text{Signal}: \; s_t = x_t + \varepsilon_t, \quad \varepsilon_t \overset{iid}{\sim} (0, q) \; \text{Kalman gain}: \; \kappa_0 = \frac{\tau_\varepsilon}{\tau_0 + \tau_\varepsilon} \in (0,1)$$

$$F_t(h) = b_h \, u_t + W_\varepsilon \varepsilon_t, \quad b_h := \kappa_0 \big[\kappa_h (1 - \rho^h) + \rho^h\big]$$

$$R_t(h) = b_h (u_t - u_{t-1}) + W_\varepsilon (\varepsilon_t - \varepsilon_{t-1}),$$
$$L_{t-1}(h) = b_h u_{t-1} + W_\varepsilon \varepsilon_{t-1},$$

$$FE_{t+h} = \underbrace{(\rho^h - b_h)}_{\delta_h} u_t - W_\varepsilon \varepsilon_t + \sum_{j=1}^{h} \rho^{h-j} \nu_{t+j}.$$

OLS formulas

$$\beta_1 = \frac{\text{Cov}(FE, R)\,\text{Var}\,L - \text{Cov}(FE, L)\,\text{Cov}(R, L)}{D}, \qquad \beta_2 = \frac{\text{Cov}(FE, L)\,\text{Var}\,R - \text{Cov}(FE, R)\,\text{Cov}(R, L)}{D}.$$

Ordering (key step)

$$N_1 - N_2 = -\rho \, b_h \, W_\varepsilon^2 q A (b_h + \delta_h) < 0 \quad \Longrightarrow \quad \boxed{\beta_1^h < \beta_2^h \quad \forall h}.$$

Noise may lift β_1, β_2 above zero, but maintains the strict inequality.

Proposition 2 (sticky information): $\beta_1^h > \beta_2^h \; \forall h$ back

Setup

Only a fraction λ update each period; let $\pi := 1 - \lambda \in (0, 1)$.

$$F_t(h) = \lambda b_h u_t + \lambda d_t, \qquad d_t := \sum_{k=1}^{\infty} \pi^k b_{h+k} u_{t-k}, \quad b_h = \rho^h + \Delta_h.$$

$$R_t(h) = F_t(h) - F_{t-1}(h) = \lambda b_h u_t - \frac{\lambda^2}{\pi} \sum_{k=1}^{\infty} \pi^k b_{h+k} u_{t-k},$$

$$L_{t-1}(h) = \frac{\lambda}{\pi} d_t,$$

$$\mathrm{FE}^*_{t+h} = (\rho^h - \lambda b_h) u_t - \lambda d_t.$$

All three variables lie in $\mathrm{span}\{u_t, d_t\}$. Using 2×2 moment matrix algebra,

$$\boxed{\beta_1(h) = -1 + \frac{\rho^h}{\lambda b_h}, \qquad \beta_2(h) = -1 + \frac{\rho^h}{b_h}.}$$

$$\Longrightarrow \boxed{\beta_1^h > \beta_2^h \quad \forall h}$$

Does overreaction increase when uncertainty increases? back

Model of Bianchi et al. 2024 predicts that overreaction will be more severe when uncertainty increases

- Therefore, if longer-horizon forecasts exhibit less *reduction* in uncertainty across survey dates, overreaction will be increasing in horizon

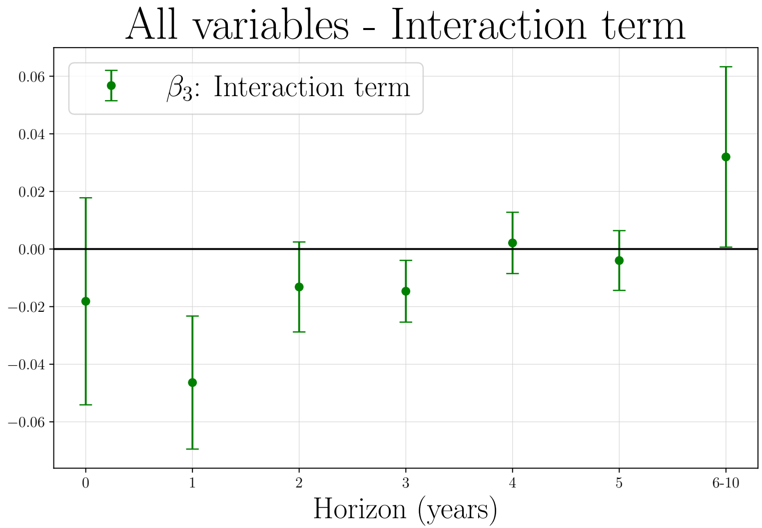
We test by running the following regression:

$$e_{t+h} = \alpha + \beta_1 \cdot \Delta\mathbb{E}_t x_{t+h} + \beta_2 \cdot \mathbb{E}_{t-1} x_{t+h} + \beta_3 \cdot \Delta\mathbb{E}_t x_{t+h} \cdot \frac{\sigma_{t,h}}{\sigma_{t-1,h}} \tag{1}$$

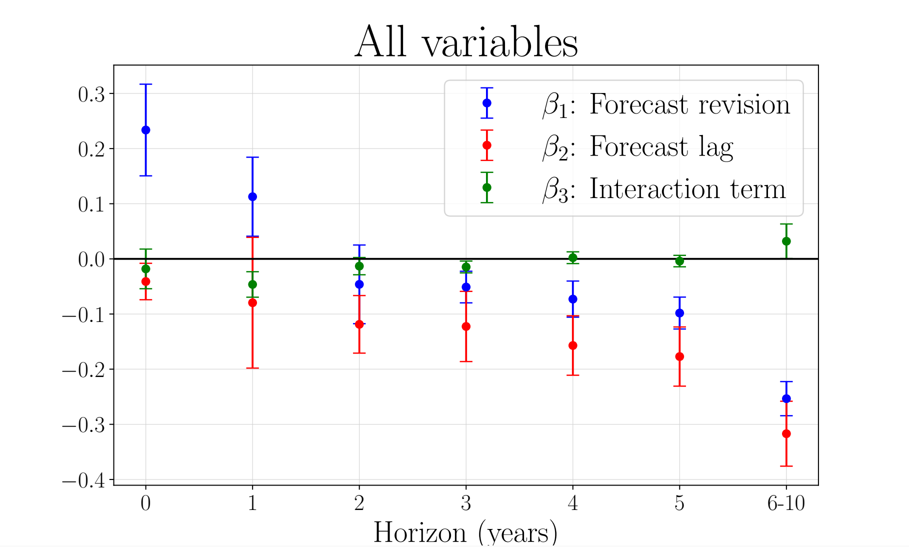
- Where $\sigma_{t,h}$ is the standard deviation of horizon h forecasts at time t
- Smooth DE predicts $\beta_3 < 0$: when uncertainty increases (or reduces less than typical), overreaction is more severe

Smooth DE: interaction term

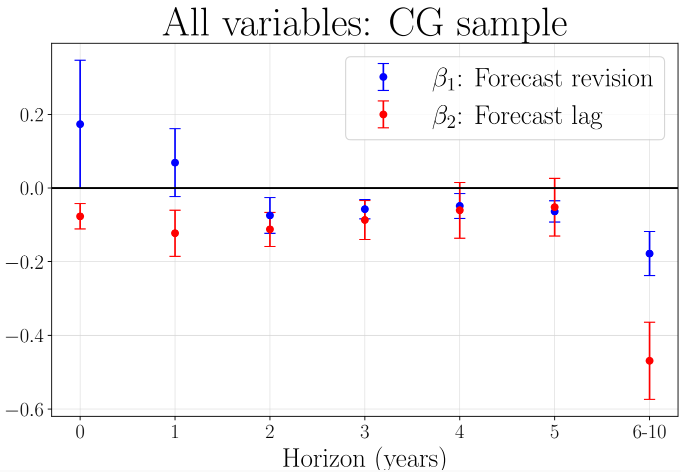
back



Smooth DE: full results ▸ back

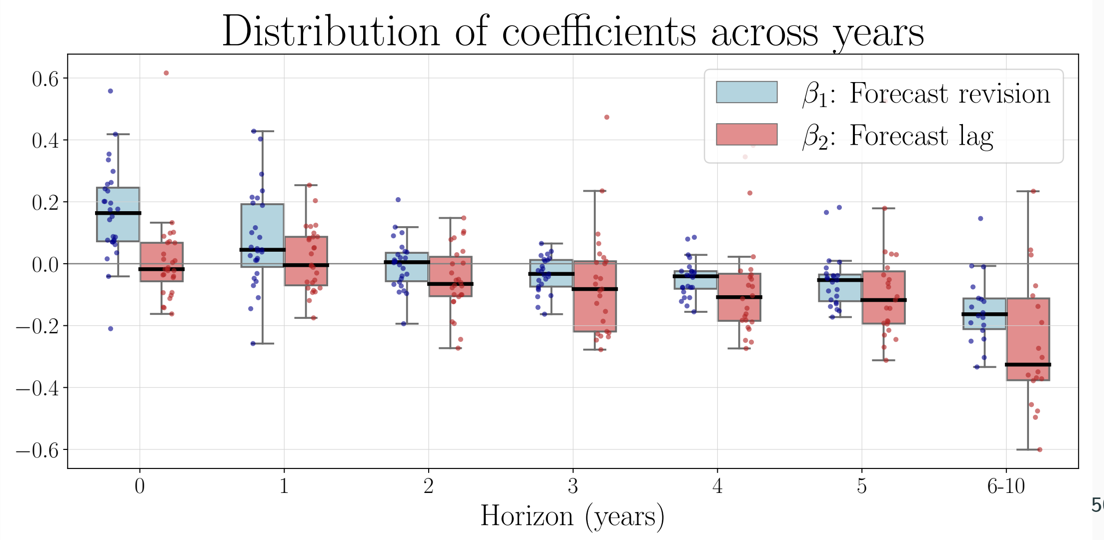


G7 (consistent sample since 1990) back



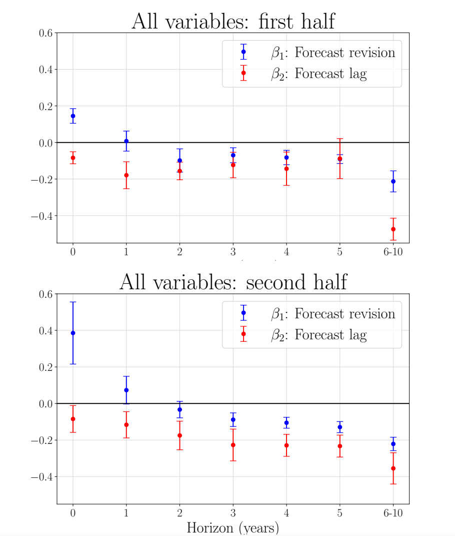
Distribution over years

▸ back



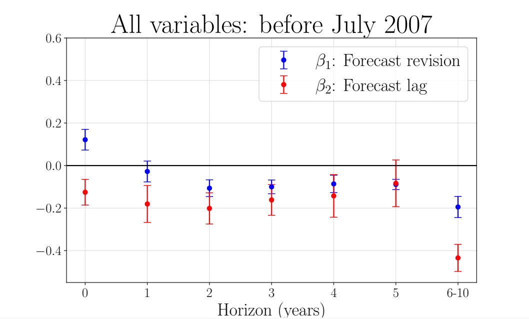
Time split: years

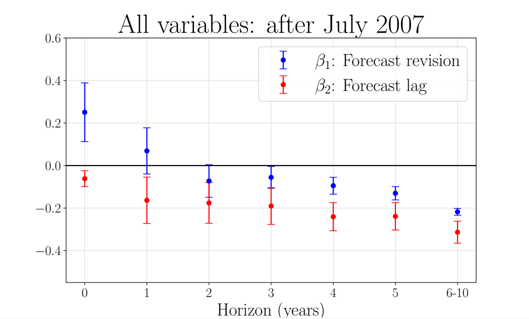
back



- Horizon 0: 2014-07 ($n = 4734$ per half)
- Horizon 1: 2011-10 ($n = 3888$ per half)
- Horizon 2: 2010-10 ($n = 3537$ per half)
- Horizon 3: 2009-10 ($n = 3200$ per half)
- Horizon 4: 2008-10 ($n = 2867$ per half)
- Horizon 5: 2007-09 ($n = 2533$ per half)
- Horizon 10: 2004-04 ($n = 1610$ per half)

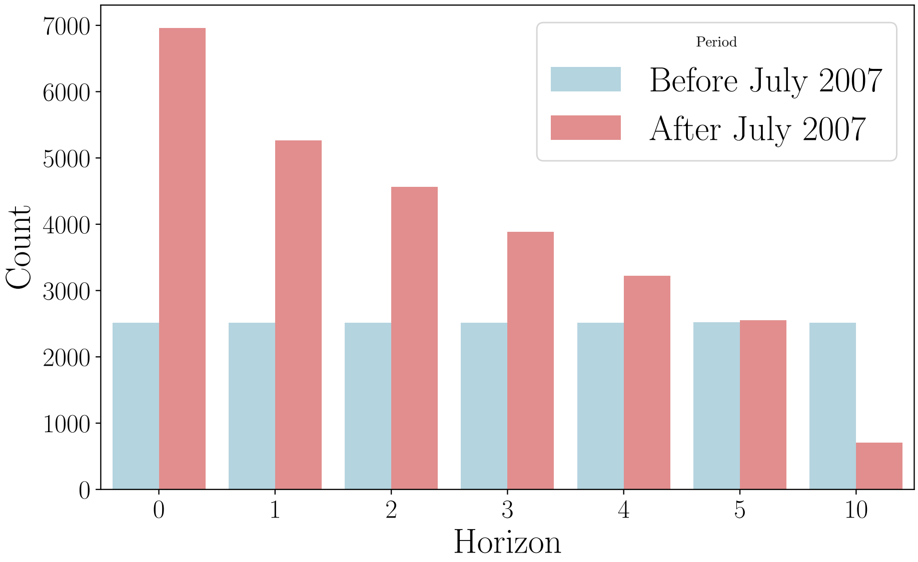
Time split: July 2007 ▸ back





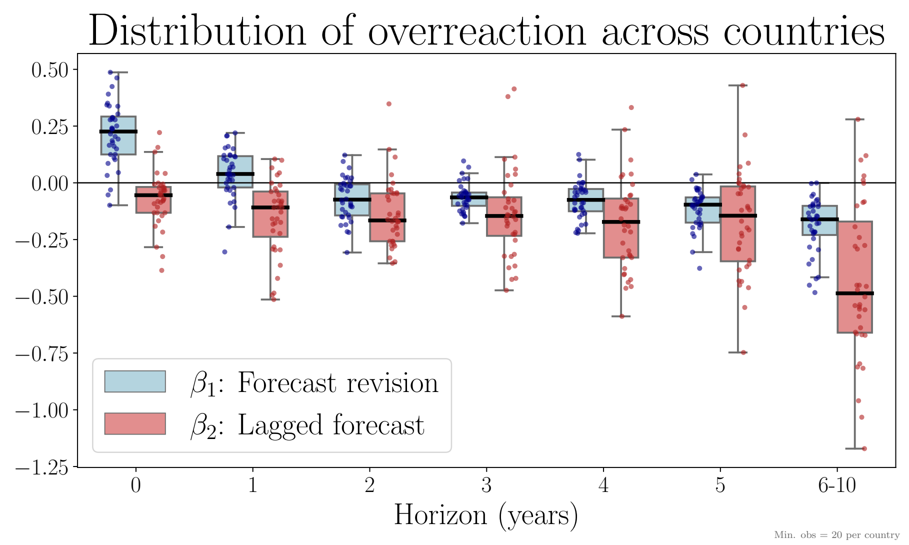
Time split: July 2007

back



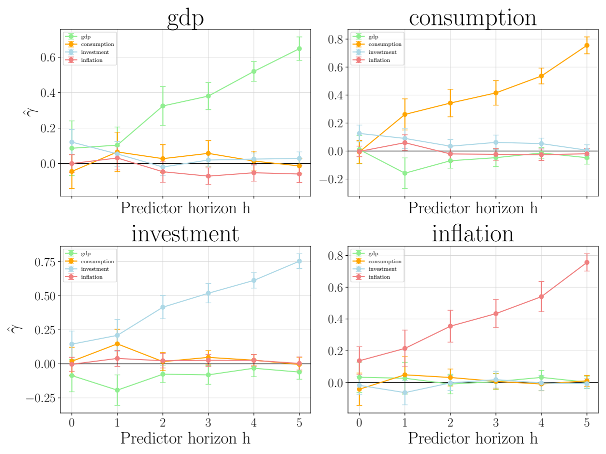
Underreaction and overreaction everywhere

back



Are long-run revisions correlated with short-run cross-revisions?

$$\Delta \mathbb{E}_t x_{i,c,t+10} = \alpha_c + \sum_j \Delta \mathbb{E}_t x_{j,c,t+h}$$

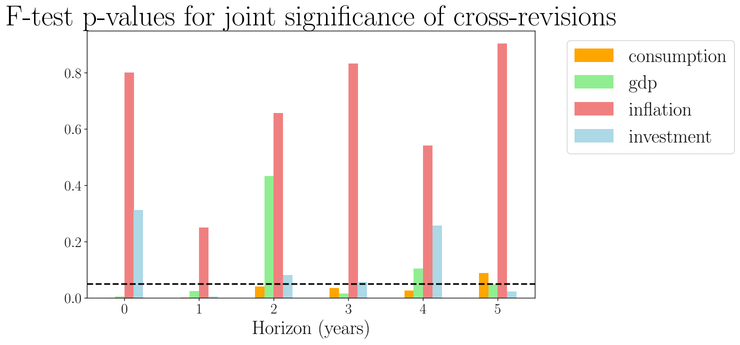


Inspired by Crump, Eusepi, Moench, and Preston (2025):

- Short-horizon cross revisions generally predict long-horizon GDP, consumption
- Short-horizon cross revisions never predict long-horizon inflation

Are long-run revisions correlated with short-run cross-revisions?

$$\Delta \mathbb{E}_t x_{i,c,t+10} = \alpha_c + \sum_j \Delta \mathbb{E}_t x_{j,c,t+h}$$



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LP: details ▸ back

$$x_{c,t+h} = \alpha + \gamma_j \Delta_1 \mathbb{E}_t(g_{c,t+j}) + \beta_2 \mathbb{E}_t(y_t) + \beta_3 \mathbf{X}^*_{c,t} + f_c + \epsilon_{i,t} \tag{2}$$

The control $\mathbf{X}^*_t$ is a vector of lagged and contemporary macroeconomic variables which allow us to control for standard business cycle dynamics

- The control $\mathbf{X}^*_t$ includes the contemporaneous 10-year real rate, the one-year change in the 10-year real rate and one-year stock market return up to the forecast date; the one-year lag of GDP growth, investment growth, inflation, and stock market return; the change in GDP growth and investment growth from $t-2$ to $t-1$ and $t-3$ to $t-2$; the two-year lag of inflation and the stock market return; and the $t-2$ to $t-1$ and $t-3$ to $t-2$ change in the country's 10-year real interest rate.
- The 10-year real rate comes from subtracting cumulative 10-year inflation expectations from the country's 10-year nominal rate in the OECD database
- The variable $\mathbb{E}_t(y_t)$ is the current-year forecast of the dependent variable $\mathbb{E}_t(y_t)$. Controlling for the current-year forecast is used to control for the fact that if the forecast revision is measured in the middle of the year, there is information about current-year economic conditions that is not controlled for by our other lagged controls.
- Sample with all controls available is 21 countries

In the US, long-term expectations are the stronger predictor ▸ back

	Return Horizon			
	1-year	3-year	5-year	1y4y
2-year avg GDP growth	-0.33^{***} [13.5%]	-0.21^{*} [3.7%]	-0.19 [3.2%]	-0.14 [1.7%]
10-year avg GDP growth	-0.33^{***} [14.2%]	-0.33^{***} [14.1%]	-0.23^{**} [6.6%]	-0.13 [2.1%]
6-10 year avg GDP growth	-0.26^{***} [10.5%]	-0.39^{***} [23.8%]	-0.27^{***} [11.3%]	-0.17^{**} [4.7%]

Notes: R^2 in square brackets. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Across 34 countries, short-term expectations are the better predictor ▸ back

	Return Horizon			
	1-year	3-year	5-year	1y4y
2-year avg GDP growth	-0.30^{***} [9.4%]	-0.14 [1.4%]	-0.22^{***} [3.8%]	-0.03 [0.1%]
10-year avg GDP growth	-0.31^{***} [6.9%]	-0.13 [1.1%]	-0.14^{**} [1.5%]	0.08 [0.5%]
6-10 year avg GDP growth	-0.15^{*} [1.5%]	-0.10 [0.7%]	-0.04 [0.1%]	0.12 [1.1%]