



Fiscal News and the Macroeconomy: *Evidence from UK Budget Announcements*

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Truss-Kwarteng Mini Budget meltdown in Sept 2022:

- tax cuts and large, uncertain energy subsidy exposure
- strong and persistent repricing of British assets: gilts, stocks, GBP
- less consistent with Mundell-Flemming open economy model(s)
- more like markets move on expected BOE tightening / monetisation fears

Clear financial impact of news shocks, what about the macroeconomy?

- gilt yields, stocks, exchange rate, expected inflation, (...)
- $\Rightarrow$ spending and activity?

How does fiscal news affect the macroeconomy? ... and through which channels?

Preview of results for a positive fiscal news shock:

- a market-assessed deterioration in fiscal sustainability is **stagflationary**
- **output** and **investment** contract persistently
- Sterling **depreciates** on impact
- consumer price inflation rises in the near term.
- worryingly, action looks **sunspotty/self-fulfilling**
 - exogenous shock → yields up → D/Y sustainability worse → yields up (...)

Measuring Fiscal News

Gilt Yields

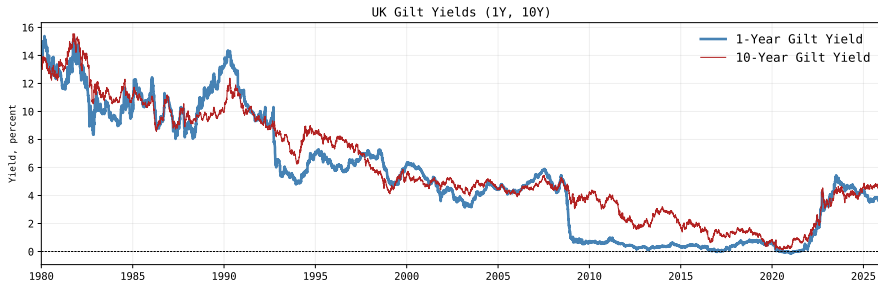


Figure 1: Daily Gilt Yields (y1y and y10y) 1980-2026

Identifying Fiscal News: The High Frequency Approach

We use the **high frequency surprises** approach of the MP lit:

- gilt market jumps on Budget days, d , at maturity m :

$$surprise := s_d^m = \begin{cases} (\text{Yield}_{d,\tau+\Delta}^m - \text{Yield}_{d,\tau}^m) & \text{on Budget days} \\ 0 & \text{otherwise} \end{cases} \quad (1)$$

- jump in yields, in window $[0, +\Delta]$ around time τ on day d
- **Tradeoff**: A small window rules out confounding macro news, but might miss slow market learning
- Baseline uses **daily changes** (EOP) /
- **drop** any Fed,BOE(97) monopol days moves IRF by pixels

Which Maturity?

- Our baseline estimation using the 3Y gilt yield,
- robustness checks: 1Y, or First PC of (1,3,5,10)

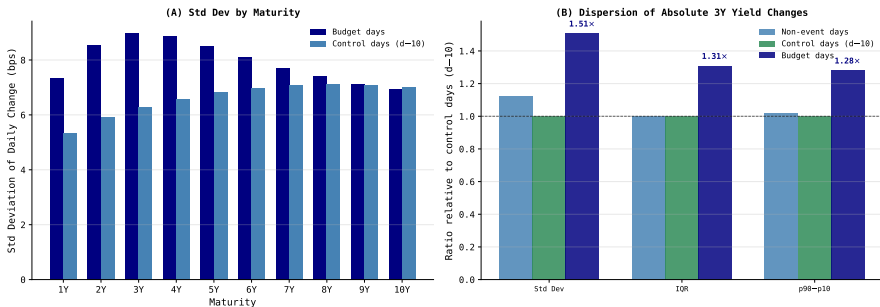


Figure 2: Variation on Event days versus Control or Other days

The Fiscal Surprises on Budget days

Dates identified from: OBR, Library of Parliament, Hansard

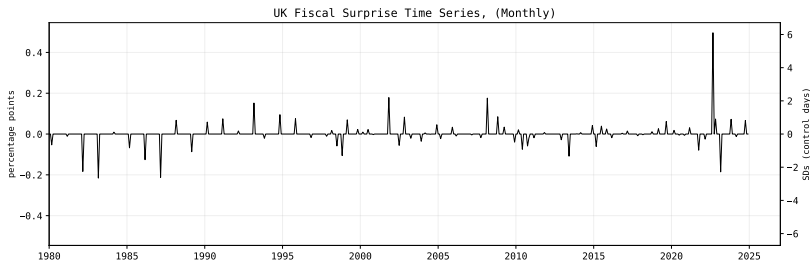


Figure 3: Fiscal Surprises (3y Gilt yields)

- **Surprises to Shocks:** need to filter any predictable component in surprises
- FWL/partial regression: can run 2-stages in 1 regression
- Shocks are pinned down by inclusion of macro controls
- Aggregation across frequencies: summed

Identifying Assumption and Validation

Identification assumes

- yield surprises due to growth-news are so small or infrequent to be immaterial
 - Validation: Sign-restrictions on event days filters out pure sustainability-news
- sustainability news: $(\Delta yield \times \Delta asset \text{ price}) < 0$
- growth news: $(\Delta yield \times \Delta asset \text{ price}) > 0$

Validation

- PMSR identification doesn't change IRFs substantially
- Treat Sign-Restricted IRFs as validation of baseline
- OBR growth forecast revisions not correlated with surprises on event days

Macroeconomic Transmission: Local Projections

Empirical Framework: Local Projections

daily regressions: $\forall h = 0, 1, 2, \dots, H = 100$

$$\underbrace{Y_{d+h} - Y_{d-1}}_{\text{dynamic path after shock}} = \underbrace{\alpha_h \cdot s_d}_{\text{impact of news}} + \underbrace{\mathbf{W}'_{d-1} \Omega_h}_{\text{controls}} + \underbrace{\mu_{dw(t)} + \mu_{wy(t)}}_{\text{seasonality}} + e_{t+h};$$

- controls: (1Y, 10Y yields, FX rate, seasonality fixed effects)
- interpretation:

$$\text{IRF}(h) \equiv \frac{\partial}{\partial s_t} \mathbb{E}[Y_{t+h} - Y_{t-1} \mid s_t, \mathbf{W}_{t-1}] = \alpha_h$$

- linear-in-parameters: k-times-larger shock just rescales IRF by k
- all nonlinear adventures at the end / companion paper

Baseline Sample Period

We use the sample from **1980-2019** for several reasons:

1. *Start*: earliest starting date with good data coverage
2. *End*: avoid pandemic complications 2020/21
3. *Scale*: special treatment of Truss-Kwarteng shock, extreme outlier (6SD)
4. *Ragged-Edge Problem*: 2022 doesn't have a full sequence so IRF is jumpy

Can decompose the OLS IRF into weighted average of sub-sequences:

$$\hat{\beta}^h = \frac{\sum_{t \in \mathcal{E}} s_t \cdot (Y_{t+h} - Y_{t-1})}{\sum_{t \in \mathcal{E}} s_t^2} = \frac{\sum_{t \in \mathcal{E}} s_t^2 \cdot (\beta_t^h)}{\text{constant}} = \sum_{t \in \mathcal{E}} w_t \cdot \beta_t^h \quad (2)$$

- Truss shock puts *massive weight on a single run of incomplete data*
- Robustness (a): *better aggregation 1980-2026 with excluded windows*
- Robustness (b): build *alternative weights* for extreme shocks

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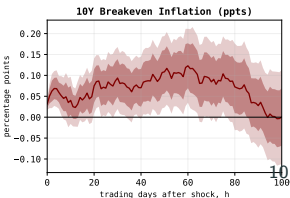
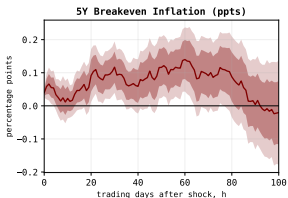
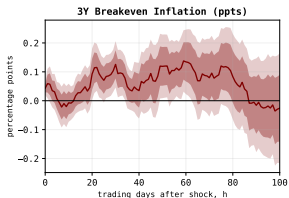
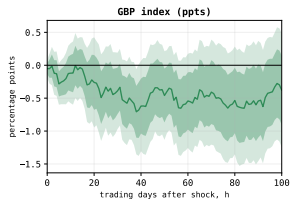
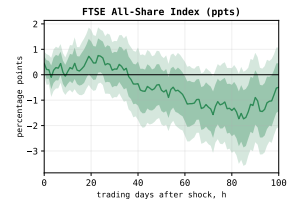
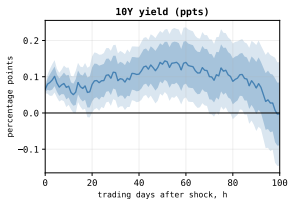
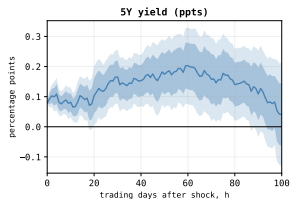
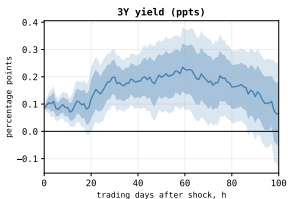
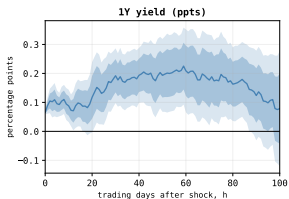
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Financial Market Response: Daily Local Projections

Daily Responses to a 1SD Fiscal Surprise



monthly/quarterly:

$$Y_{t+h} - Y_{t-1} = \beta_h \cdot s_t + \mathbf{X}'_{t-1} \Omega_h + \mu_{m(t)} + u_{t+h}; \quad (3)$$

controls, 1 year lags: {outcome, output growth, inflation, unemployment, y1y}

- try to replicate standard VAR controls

Macroeconomic Transmission: Monthly Local Projections

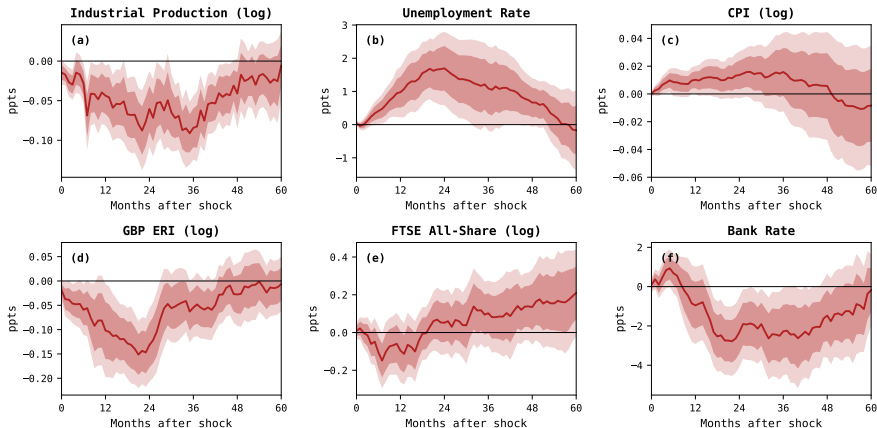


Figure 5: Monthly IRFs to a Fiscal News Shock, scale: 25 bpts in y1y yield in first month. Shaded bands = 90% CI. Tightening is much larger due to endogenous Bank Rate reaction in first 12 months

Macroeconomic Transmission: Quarterly Local Projections

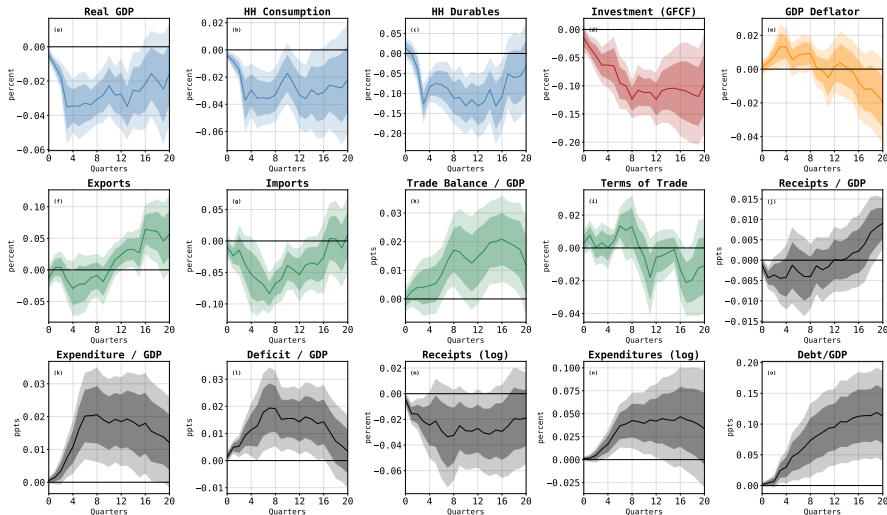


Figure 6: Quarterly IRFs

Smoothed LPs (curvature penalty in joint optimisation)

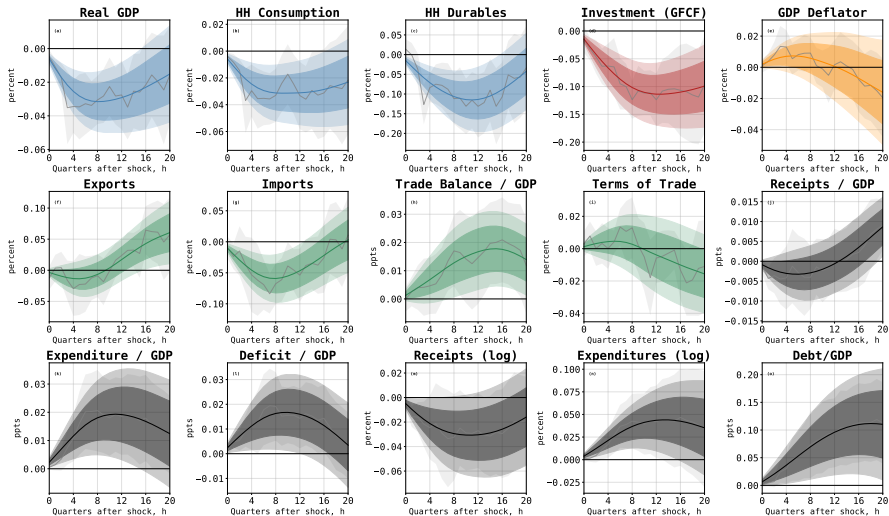


Figure 7: Q-IRFs with curvature penalty in joint minimisation problem

Transmission Channels

1) Financial conditions (IS-curve/User Cost/Lumpy K and Durables):

- higher yields $\Rightarrow$ borrowing rates for HH and firms, depress activity
- no evidence of an *offsetting* stimulus through $i_t B_t$ to bondholders

2) FX rates and imported inflation

- CPI response is driven entirely by goods (typically imported) versus services (mc driven by wages)

3) Fiscal Risk / Monetisation Fears

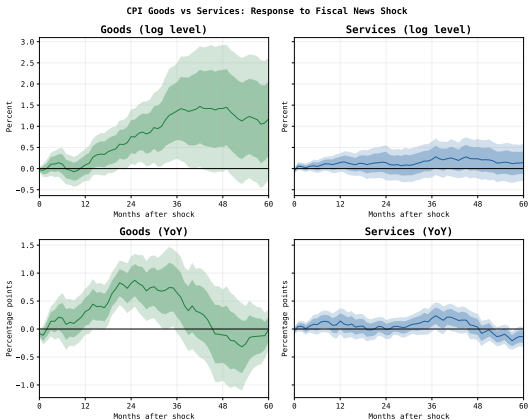
- breakeven inflation increases along inflation curve, not just the short-end.

4) OBR Growth News / Government Information Channel

- OBR revisions NOT consistent with information effects

Imported Inflation Channel

Figure 8: IRFs of CPI goods (L,green) and services (R,blue) to a Fiscal News Shock



All CPI action is in Goods (green) not Services (blue)

Do OBR revisions of GDP growth forecasts (t , $t+1$, $t+2$) affect surprises?

Gilt Surprise vs OBR Growth Forecast Revision | 2010--2025

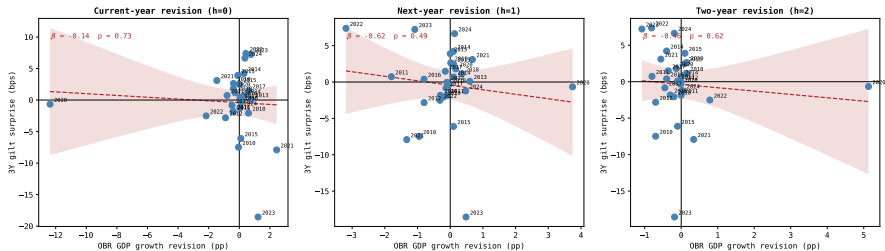


Figure 9: Scatterplots of OBR GDP growth revision vs Fiscal Surprise

Robustness and Round Up

Robustness Checks

Qualitative results don't change much no matter how you slice and dice the data, measure the shocks etc.

1. Extend Sample Period (1980-2026)
2. Down-Weighting Extremes (80-26)
3. Pre V Post BOE independence
4. Excluding ERM
5. Alt surprise - y1y
6. Alt surprise - PC1
7. Sign restricting surprises (e.g. yields up/stocks down)
8. (MAR-style event sequence filtering)
9. (Excluding Mini Budget)
10. Tentative time-varying parameter bayesian estimation: bad news for 2020s

Spin-offs and Future Agenda

Extra results moved to second paper (in progress)

- **Non linear transmission** bundled into separate paper
 - sign dependence,
 - state dependence,
 - time-varying-parameters,
 - monetary activism / Taylor principle etc
- mapping between **market reactions and Budget Texts**
- High-frequency outcomes: **credit card data, job posting**

Future:

- **Parties, Politicians**, learning effects (first time etc)
- **Bayesian aggregation** in world of many instruments and maturities,
 $S \times M$ researcher degrees of freedom

Conclusions

In the paper we show our baseline results are robust to various sample windows, alternative estimators, shock definitions, and identification schemes

Takeaways. Over the period 1980-2019, on average:

1. **Fiscal announcements move the macroeconomy.** GDP contracts to a large FN shock (4–8 quarters); investment responds $\sim 2\times$ more than GDP.
2. **Evidence of interest rate, FX rate and fiscal risk channels**
3. **Government information channel NOT at play**, at least through OBR revisions, 2012 onwards

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First and Second Moments:

- Policy U-turns and goosing yields/OBR with promised tax rises are news
- NOT in this paper (yet) also affects uncertainty (higher moments)
- we know credibility matters and is easily lost

Fiscal news and sustainability:

- Debt/GDP path – stability requires: $\Delta d = 0 \rightarrow pb^* = (r - g)d$
- Fiscal surprises may move both terms ($r(s) - g(s)$)
- $\Delta pb^* \approx IRF_{yields} - IRF_{gdp}$, second term especially persistent

Robustness Checks

Quarterly IRFs – Baseline vs BoE Independence | 90% CI (baseline only)

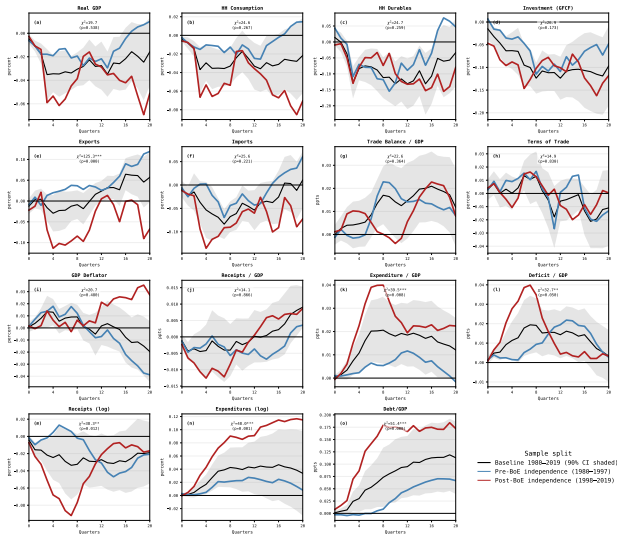


Figure 10: Heterogeneous Effects by BOE independence [back]

Difference in IRFs: Post – Pre BoE Independence | 90% and 68% CI

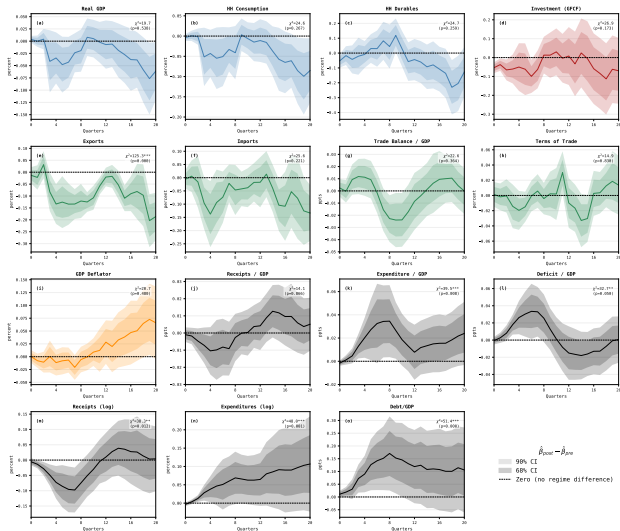


Figure 11: Difference of Coefficients / Test of Structural Break '97 [\[back\]](#)

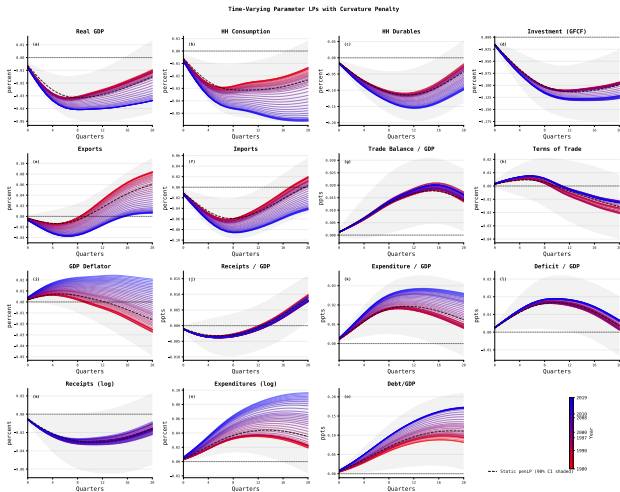


Figure 12: Time-varying Parameter LPs [\[back\]](#)

Objective fn penalises sharp jumps in (i) **horizon h** and (ii) **calendar time t** .
 Prior set to allow up to 66% drift over time

Quarterly DIFs – Baseline (1980–2019, shaded) vs Extended (1980–2026, dashed)

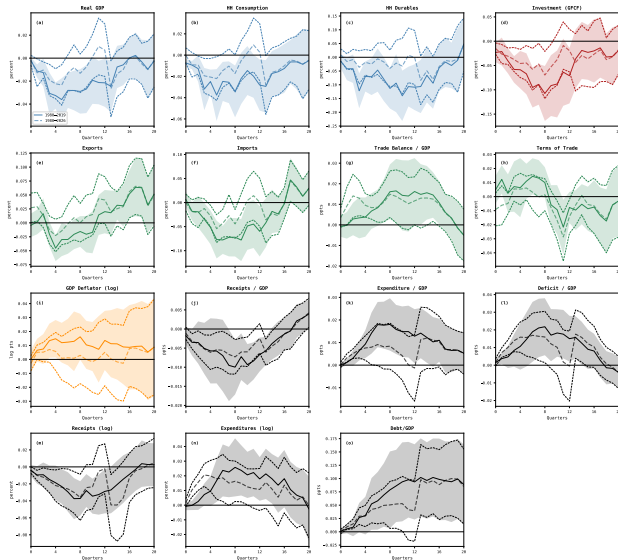


Figure 13: Extended Sample: 1980–2026 [\[back\]](#)

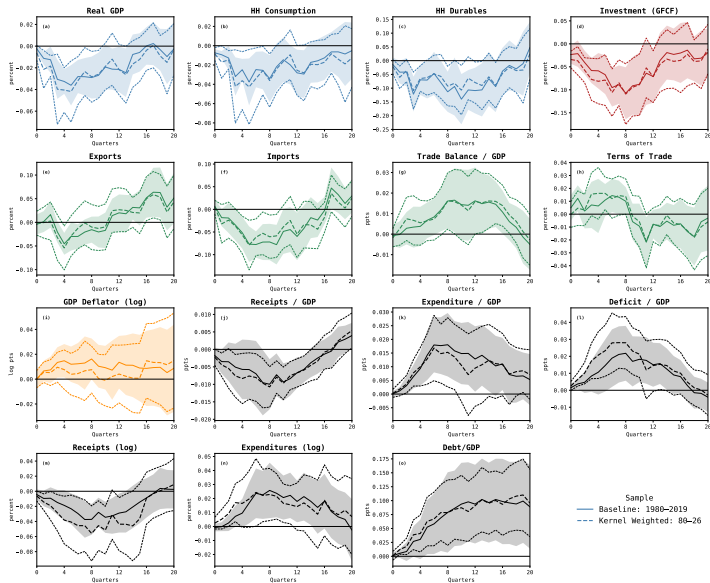


Figure 14: Gaussian Kernel: 1980-2026 [back]

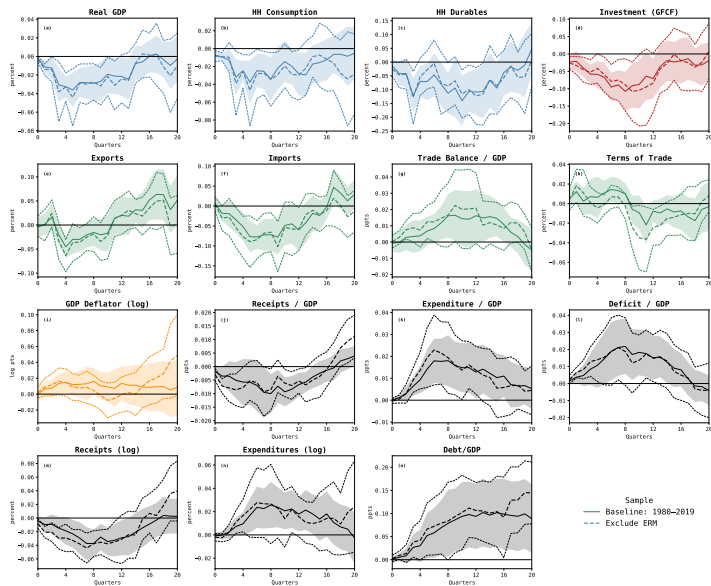
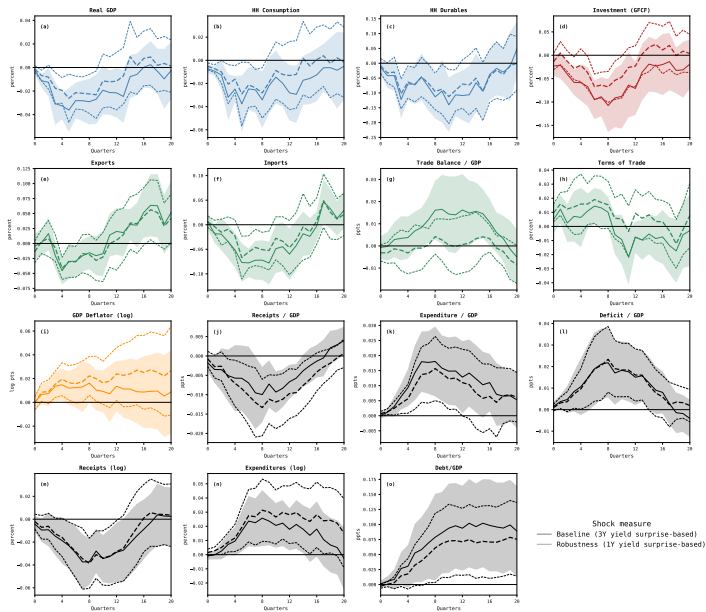


Figure 15: 1980-2026 ex ERM [\[back\]](#)

Figure 16: y1y surprises [\[back\]](#)

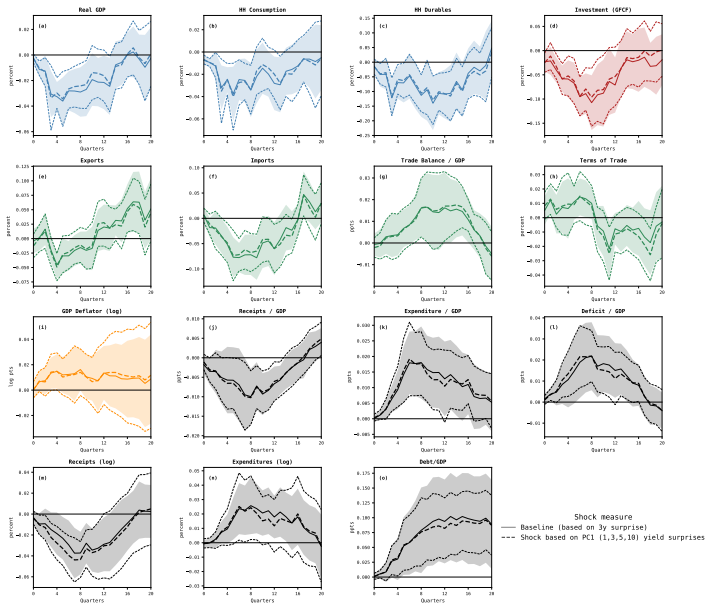


Figure 17: First Principal Component surprises [\[back\]](#)

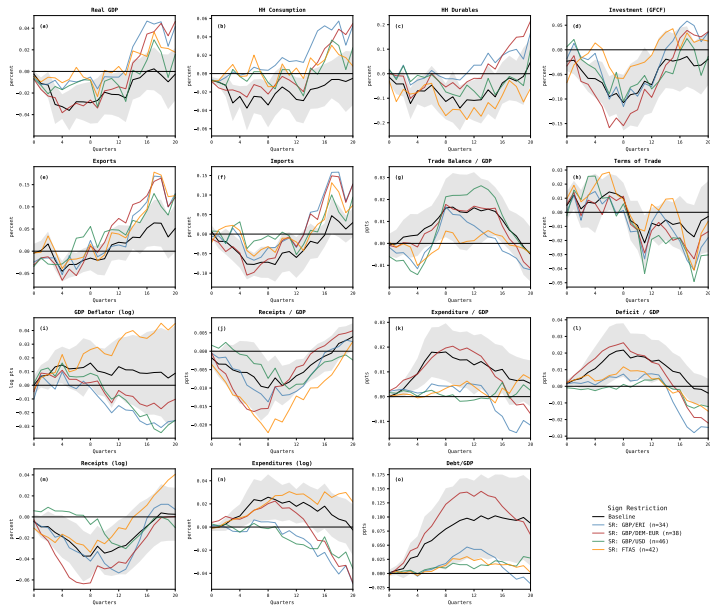


Figure 18: sign-restricted surprises: $(\Delta y_{3y} \times \Delta z) < 0$; $z = (\text{ERI}, \text{EUR}, \text{USD}, \text{FTAS})$ [\[back\]](#)