

# Project 7 - Feedbacks

## Good Points

- ▶ **Econometric mastery:** Robust testing (ADF, cointegration, Mincer-Zarnowitz, Diebold–Mariano).
- ▶ **Structure:** Clear workflow(Data,Estimation,Forecasting,Evaluation).
- ▶ **Code quality:** Functions are well defined, readable, and documented.
- ▶ **Automation:** Good use of parallelization.
- ▶ **Visualization:** Excellent use of tidyverse and ggplot2 with high-quality plots.

## To Improve / Missing Points

- ▶ **Data consistency:** Avoid mixing feeder, Eurostat, and rdnomics without verifying they measure the same variable. Save final datasets as .csv or .RData.
- ▶ **Estimation details:** Clarify in the RMarkdown which dates correspond to each regime (e.g., start of ZLB at  $R = 54$ ).
- ▶ **Output:** Export all key tables and plots as .csv or .png in their respective folders.

# Further Analysis Missing

## Structural Breaks and Regimes

- ▶ Investigate structural breaks:
  - \* Pre-ZLB vs. ZLB vs. post-ZLB periods.
  - \* ECB policy framework revisions (2003, 2021).
  - \* Crisis interventions (2008, 2012, COVID QE).
- ▶ Apply:
  - \* **Chow tests** for known breakpoints (e.g., 2012Q3, 2020Q1).
  - \* **Bai–Perron** multiple breakpoint tests.
- ⇒ If there are structural breaks apply rolling scheme for the pseudo-out-sample evaluation.

## Additional Robustness (Optional)

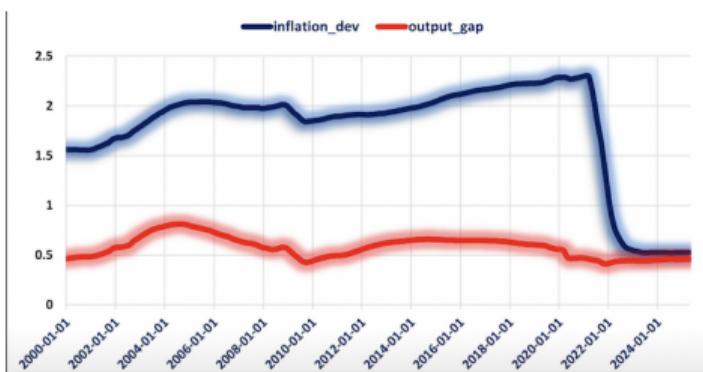
- ▶ Include **KPSS** and **Phillips–Perron (PP)** tests for stationarity.
- ▶ Include if possible tests for autocorrelation of residuals and heteroskedasticity
- ▶ Compare **HP filter** vs. **Hamilton filter** (avoid look-ahead bias, endpoint problems).
- ▶ (Explore **nonlinearity**: threshold Taylor rules)

# Expected : Rolling Taylor Rule Coefficients

**Objective:** Estimate how the response of monetary policy to inflation and the output gap evolves over time.

## Methodology:

- ▶ Estimate the Taylor rule using a **rolling window** regression:
- ▶ The coefficients  $\beta_{\pi,t}$  and  $\beta_{y,t}$  capture how policy reacts to inflation and output over time.



*Rolling window estimates of Taylor rule coefficients (2000–2024)*