



# LABOR MARKETS IN *TRANSITION*:

Demographics, Productivity and Macroeconomic Policy

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AUG. 21-23, 2025

# BEYOND THE TAYLOR RULE

## A COMMENTARY

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# Key Findings and Insights: Empirics

- Good fit of the Taylor rule for the U.S. over 1987-2008 (and 1965-1979 when using real time data). **But not since 2008.**
  - Policy rate too high during ZLB episodes
  - **Less than one-for-one rate increases during the recent inflation surge**
- Generally poor fit for G7 countries (exception: UK)
- Post-Covid inflation surge:
  - Lower inflation in countries with historically low average inflation, despite smaller and delayed rises in the policy rate
  - Interpretation: gains from well-anchored inflation expectations

# Key Findings and Insights: Theory

- Taylor principle and indeterminacy:
  - relevant for off-equilibrium paths only
  - weakened in “less forward looking” economies (Dupraz and Marx)
- Optimal policy may imply less than one-for-one responses to *observed* inflation
  - Illustrated using an NK model with cost-push shocks under both discretion and commitment
  - More likely if: “correlated shocks” or “long and variable lags”
- **Overall conclusion:** the weak and delayed policy response to the recent inflation surge in the U.S. and other countries with well-anchored inflation expectations may be consistent with “good policy”.

# The Taylor Rule: Limitations of a Useful Tool

- The “generic” Taylor Rule:  $i_t = \alpha + \phi_\pi \pi_t + \phi_y y_t$

with  $\phi_\pi > 1$  and  $\phi_y \geq 0$ . Intuition.

- Positive interpretation: fits well the Great Moderation period
- Normative interpretation: deviations as “bad policy”
  - Recent inflation surge:  $\Delta i \simeq 4 pp \ll \Delta \pi \simeq 8 pp$

# Two Considerations

## 1. Optimal policies often do not have a TR representation and/or lead to outcomes that do not satisfy the TR

- NRS illustration (I): optimal discretionary policy in an NK model with cost-push shocks generates the relation  $i_t = \alpha + \phi_\pi \pi_t + \varepsilon_t$  with  $\phi_\pi$  possibly less than one.

**Comment:**  $i_t = \alpha + \phi_\pi E_t \{ \pi_{t+1} \} + \varepsilon_t$  with  $\phi_\pi > 1$  (CGG specification)

- NRS illustration (II): simulation of optimal policy with commitment often generates estimates of  $\phi_\pi$  less than one or even negative.

**Comment:** response to deviations of the *price level* from target

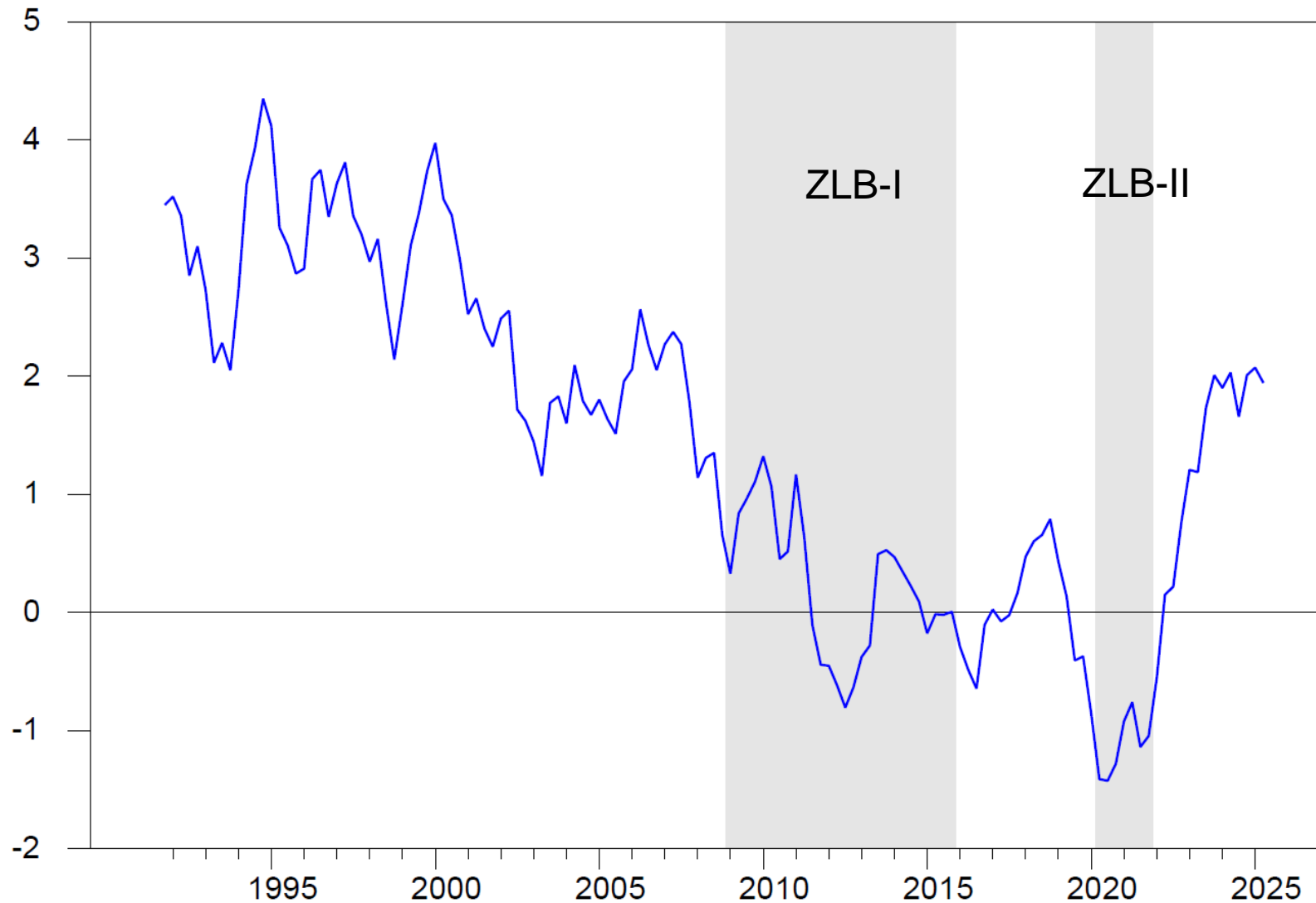
## 2. Simple rules known to have good properties often imply weak short run response of the policy rate (e.g. TR with partial adjustment)

# An Alternative Approach<sup>\*</sup>

- Focus on the relevant rate: the Long Real Rate
  - Long real rate rules, both in theory and empirics
- Robust feature of optimal policy in inflation targeting regimes: *positive* response of the LRR to inflation (“long Taylor principle”)
  - Required independently of degree of anchoring
  - Sufficient for determinacy in basic NK model
- Advantages
  - Captures forward guidance and QE
  - Simplifies model analysis and equilibrium solution

<sup>\*</sup> Galí (in progress): “Rethinking the New Keynesian Model”

# The U.S. Long Real Rate



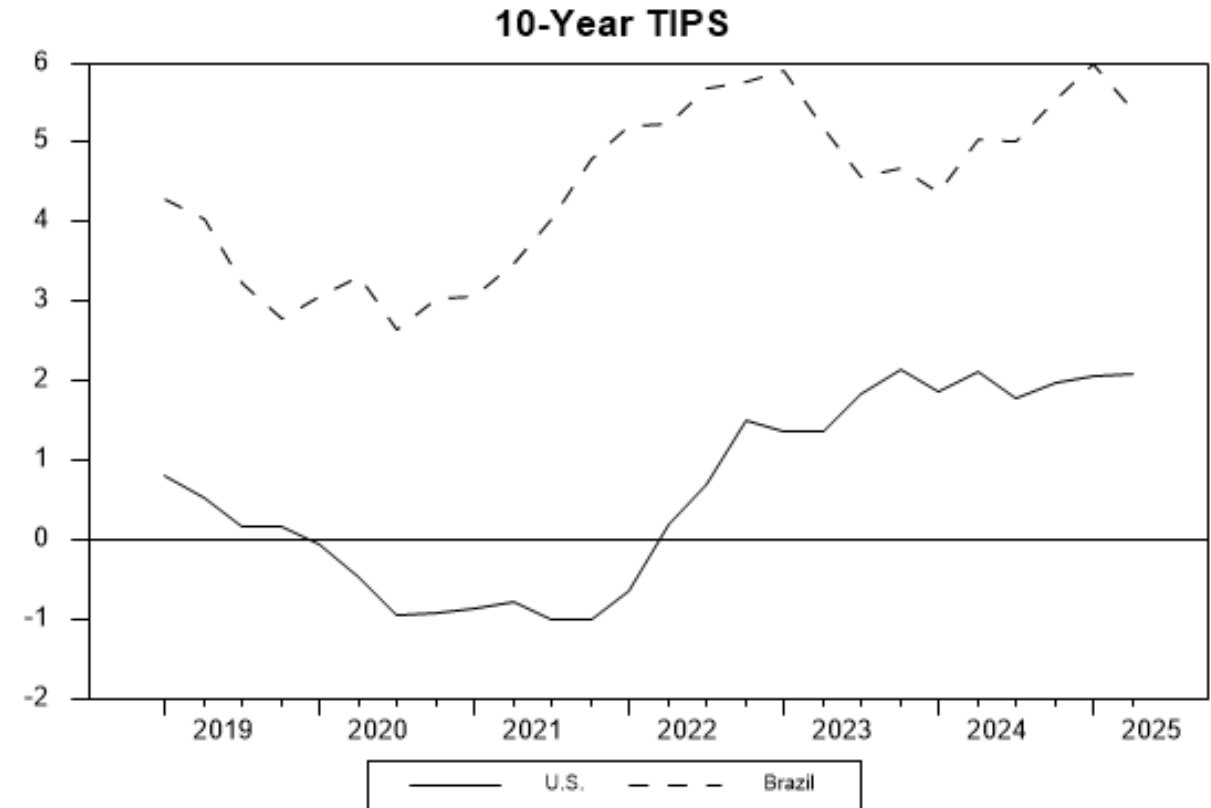
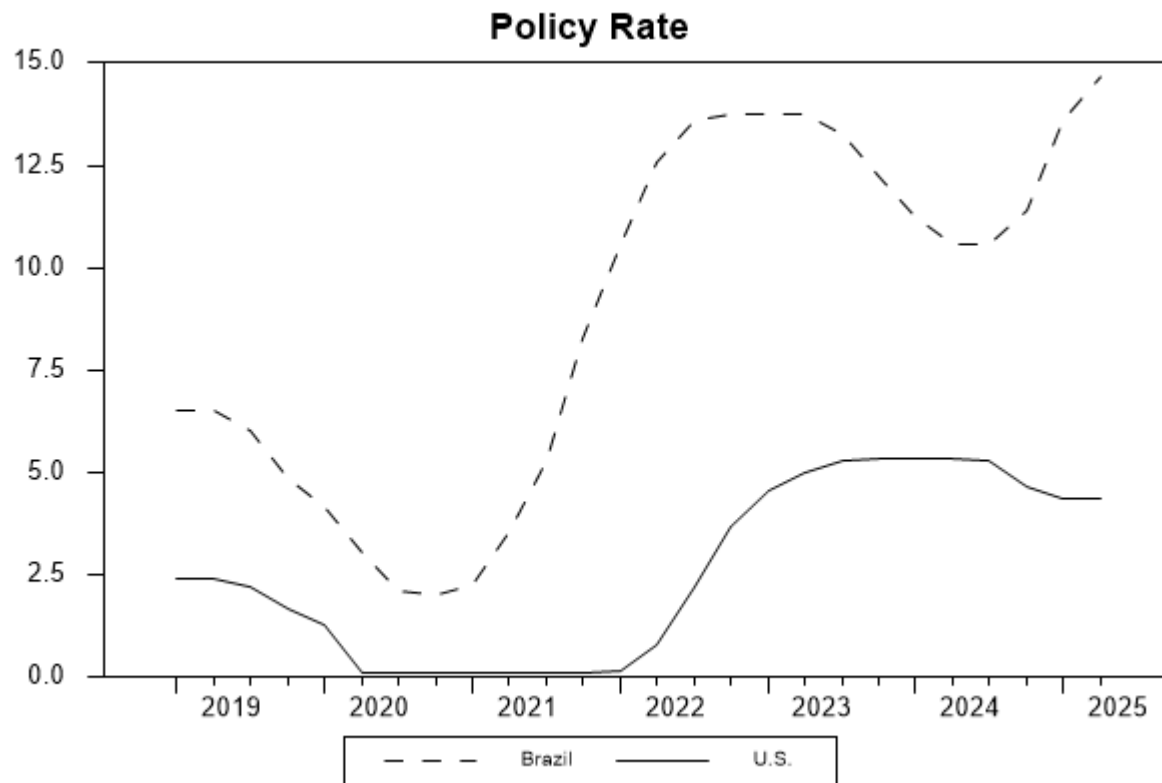
# An Estimated Long Real Rate Rule for the U.S.

$$r_t^L = \phi_0 + \phi_r r_{t-1}^L + \phi_\pi \pi_t + \phi_y y_t + \varepsilon_t$$

	(1)	(2)	(3)	(4)	(5)	(6)
Inflation	0.08***	0.06**	0.09***	0.09***	0.10**	0.10**
Output Gap		0.02		0.04*		0.02
Inflation x ZLB			-0.04	-0.05		
Inflation x Surge					-0.01	-0.05

Sample period: 1991:4-2024:4

# Monetary Policy Responses to the Inflation Surge: U.S. vs Brazil



# De-Anchoring Measures

- NRS: Long-run average inflation
  - may be distorted by long forgotten episodes
  - ignores de-anchoring on the downside
- Possible alternatives
  - Average absolute deviation from target
  - Response of long-run inflation expectations to short-run inflation changes
  - Volatility of long-run inflation expectations

