

Asymmetric Monetary Policy Transmission in Emerging Markets: A Local Projections Approach

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Abstract

We test whether contractionary and expansionary monetary policy shocks transmit to output with equal magnitude across emerging market economies, using a local projections framework applied to a compiled panel dataset of policy rate shocks and four-quarter-ahead GDP growth responses. Contractionary shocks are associated with a growth response roughly 2.4 times larger in magnitude than expansionary shocks of equal size, consistent with asymmetric transmission documented in advanced-economy studies. We discuss financial-friction and currency-channel explanations for the asymmetry and its implications for easing-cycle calibration.

Keywords: Monetary Policy, Emerging Markets, Local Projections, Asymmetric Transmission

1. Introduction

Monetary policy transmission is often modelled as symmetric: a rate hike of X basis points is assumed to produce a growth response of similar magnitude, in the opposite direction, to a rate cut of the same size. A growing body of evidence from advanced economies suggests this symmetry assumption does not hold in practice — contractionary shocks tend to transmit to output more forcefully and more quickly than expansionary shocks of equivalent size. This paper tests whether the same asymmetry is visible in a representative sample of emerging market economies, using a local projections framework applied to a compiled panel dataset of policy rate shocks and subsequent GDP growth responses.

The practical relevance of this question is direct: if contractionary shocks transmit more forcefully than expansionary ones, central banks easing into a slowdown may need larger cumulative rate cuts to achieve the same growth impact as the hikes that preceded them — a meaningfully different policy calculus than a symmetric-transmission model would imply.

2. Data and Methodology

The analysis uses a compiled panel of 10 representative emerging market economies over a 10-year window (100 country-year observations), each observation pairing a policy rate shock (the deviation of the annual policy rate change from the country's own trailing 3-year average, in percentage points) with the cumulative real GDP growth response over the following four quarters. **This is an illustrative, internally-generated panel calibrated to be directionally consistent with the asymmetric-transmission literature from advanced economies, not a dataset of actual central bank decisions and realised GDP prints for named countries.** It is intended to demonstrate the local projections methodology and produce genuinely computed (not assumed) regression output, in the same spirit as the compiled datasets used elsewhere in MacroSpark's Labs tools.

We estimate a local projection (Jordà, 2005) of the form $GDP_{t+4} = \alpha + \beta \cdot Shock_t + \varepsilon_t$, run separately on the subsample of contractionary shocks ($Shock > 0$) and the subsample of expansionary shocks ($Shock < 0$), and compare the estimated slopes. Local projections were chosen over a full structural VAR for transparency and ease of replication: each horizon is a single OLS regression, with coefficients directly interpretable as the average growth response to a one-point shock at that horizon.

3. Results

Sample	n	Slope (β)	Std. Error	t-stat	R ²
Full sample	100	-0.41	0.045	-9.18	0.46
Contractionary (Shock > 0)	47	-0.74	0.156	-4.74	0.33
Expansionary (Shock < 0)	53	-0.30	0.102	-2.96	0.15

Table 1. Local projection estimates, full sample and by shock direction.

The contractionary-shock slope (−0.74) is roughly 2.4× the magnitude of the expansionary-shock slope (−0.30), and both are statistically significant at conventional levels ($|t| > 2$). This is consistent with the asymmetric transmission hypothesis: a one-point tightening shock is associated with a larger four-quarter growth drag than the growth boost from a one-point easing shock of equal size.

4. Discussion

The asymmetry documented here is consistent with several standard explanations in the monetary transmission literature: financial frictions that bind more tightly in a tightening episode (credit constraints, collateral value declines) than they ease in a loosening episode, and precautionary behaviour by firms and households that responds faster to a negative shock than a positive one. For emerging market central banks specifically, currency-channel effects add a further asymmetry: a contractionary shock that also attracts capital inflows and currency appreciation can compound the growth drag through the trade channel, an effect with no direct mirror on the expansionary side if capital outflows are managed through reserves.

5. Limitations

- The dataset is an illustrative, internally-generated panel, not a dataset of named countries' actual policy decisions and GDP outturns — the coefficients should be read as a demonstration of the asymmetry-testing methodology, not a forecast for any specific economy.
- A 10-country, 10-year panel is small relative to the 18+ country panels typically used in published cross-country monetary transmission studies; standard errors would tighten with a larger sample.
- The local projections approach does not control for simultaneity between the policy shock and contemporaneous growth conditions as rigorously as a full structural VAR would.

References

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