

Monetary-fiscal policy interaction and fiscal inflation: A tale of three countries

Discussion at Bundesbank Workshop: Central banks and crises
– historical perspectives

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- ① Summary
- ② Intuition of technique
- ③ Comments and suggestions

During which episodes were changes in fiscal policy associated with changes in inflation in Germany, Italy and the U.S.?

- (Long and variable) lags between the effects of fiscal policy on inflation
- Look at low-frequency relationship between fiscal policy and inflation (in the spirit of Lucas, 1980)

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TVP VAR to uncover changes over time in low-frequency relationship

- No need to specify subsamples or rolling windows
- Relationship can be expressed in terms of the VAR coefficients
- Structure allows to identify policy shocks driving the low-frequency relationship

Authors relate their estimates to a narrative

- Germany: no significant relationship during an episode with an independent central bank focusing on price stability (1970–1999)
- Italy: significant relationship during an episode with a highly dependent central bank gradually breaking down with Maastricht treaty (signed 1992)
- U.S.: significant relationship in second half of Bretton Woods until Volcker took over (1979) and stabilised inflation

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Conclusions:

- 1 Only for countries and periods with a dependent central bank without focus on stable inflation there is a relationship between deficits and inflation
- 2 A monetary-fiscal interaction may be a way out of a liquidity trap (by creating inflation expectations after a fiscal expansion)

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→ Long-run variance (can be estimated non-parametrically).

Suppose for a moment that there is no autocorrelation in the corresponding variables so that $E(Y_t Y'_{t-k}) = 0 \forall k \neq t$. Then this simplifies to

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If there is autocorrelation, the variance and covariance are replaced by the corresponding long-run counterparts.

The low-frequency relationship captures short-run factors

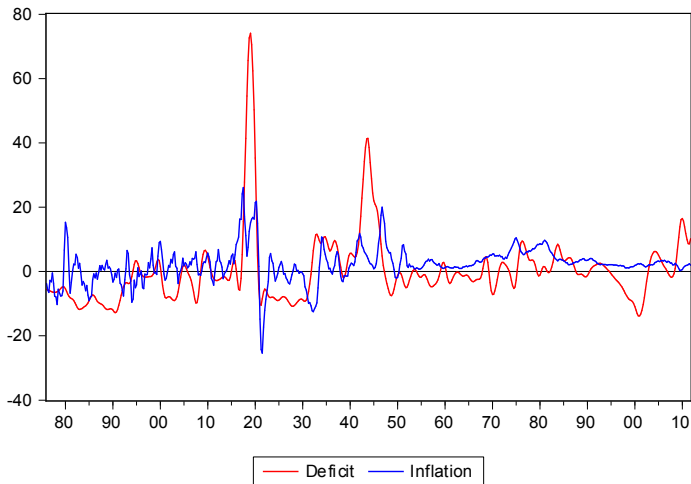
$$b_{short} \approx \frac{E(\pi_t d_t)}{E(d_t^2)}$$

as well as long-run factors

$$b_{long} \approx \frac{\sum_{k=-\infty}^{+\infty} E(\pi_t d_{t-k})}{\sum_{k=-\infty}^{+\infty} E(d_t d_{t-k})}$$

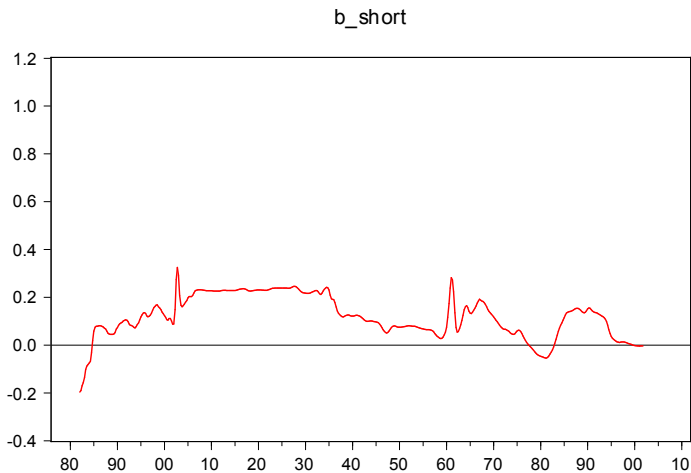
We can think of the low-frequency relationship in terms of the linear effect of all *leads and lags* of the independent variable on the dependent variable.

The data for the U.S.



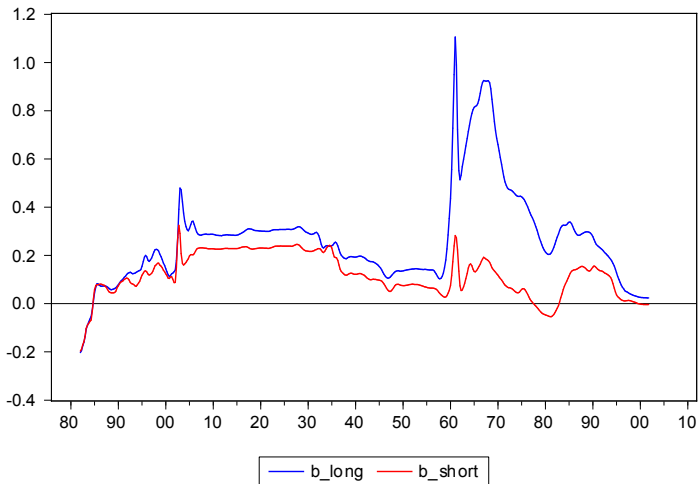
US data from Kliem et al. (JAE 2015)

Short-run factors: How has b_{short} evolved?



Rolling estimates using US data from Kliem et al. (JAE 2015)

Long-run factors: How has b_{long} evolved?



Rolling estimates using US data from Kliem et al. (JAE 2015) and Bartlett window

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Emphasise cross-country evidence in counterfactuals

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Analyse another regime shift (delegation of monetary policy to the ECB)

- Independent central bank
- However, targets weighted-average euro area inflation
- Repeat analysis for a range of small euro area countries
- Deficits should be inflationary because shocks have a negligible effect on euro area inflation and would hardly be offset by ECB

What questions are answered by the shock decompositions?

- If the question is “can fiscal policy be inflationary?”...
- show the contribution of fiscal policy shocks on the low-frequency movements of inflation ($S_{\pi}(0)$) over time
- If the question is “can monetary policy be effective under fiscal dominance?”...
- show the contribution of monetary policy shocks on the low-frequency movements of inflation over time

Is a coordinated monetary-fiscal interaction a good tool to escape a liquidity trap?

- Time-consistency issues of inflation targeting central banks hampers monetary policy conduct in a liquidity trap
- These issues may not be resolved by expansionary fiscal policy because an inflation targeting central bank has the incentive to offset the effect on inflation (and thus on real interest rates)
- This is why coordination may help
- Coordinating monetary with fiscal policy is what most inflation targeting central banks would like to avoid
- Japanese case shows that the government may have to curb central bank independence to get the central bank target higher inflation