The importance of Foreign shocks on Money Market Rates:
Event Study Magnitude Restrictions
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Discussion

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- Summary

- Methodology

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- Conclusion

Summary

- ▶ Propose a new approach to restrict parameter estimates of a structural VAR using confidence bounds on spill-over-parameters obtained from an event study regression.

- ▶ Apply this methodology to estimate spill-over effects between four main short-term rates (EONIA, FedFund, MUTAN, SONIA) in 67 500-day rolling window estimations of the SVAR and using approx 50 events (such as CB interest rate cuts and CB announcements) for identification.

- ▶ Overall results suggest that

(1) The method provides tighter error bands on the estimates of impulse responses than an alternative method based on $+1/-1$ bounds.

(2) Economic implications seem reasonable and meaningful:
    - ▶ Shocks originating from the US (and UK) have biggest spill-over effects.
    - ▶ Japan shocks do not have significant spill-over.
    - ▶ US (and Japan) rates are mostly ($> 80\%$) explained by their own shocks.
    - ▶ Euro area rates largely affected by US shocks prior to sovereign crisis.

The methodology

- ▶ Structural VAR: $\quad A_0 Y_t = A_1 Y_{t-1} + B\epsilon_t$

- ▶ Reduced-form VAR: $\quad Y_t = A_0^{-1} A_1 Y_{t-1} + A_0^{-1} B\epsilon_t$

- ▶ Identification restrictions required to estimate parameters of A_0, B from covariance matrix of reduced-form shocks $u_t = A_0^{-1} B\epsilon_t$. Why?

- ▶ Because Σ_u is symmetric (and fundamental shocks ϵ are not observed) cannot identify all the elements of impact matrix $S = A_0^{-1} B$, which encodes the potential asymmetric effects of ϵ shocks on the components of Y.

- ▶ What identification restrictions can one impose to recover admissible values of S?
    - ▶ In previous paper impose spillover coefficient from i to j less than 1.
    - ▶ In this paper, propose Event study methodology restrict admissible range.

- ▶ Event methodology consists in selecting a set of events seen as exogenous US, UK, EU, or JP monetary policy shocks (e.g., CB rate cuts, announcemts, LEH bkcy...)

- ▶ Estimate regression on event days: $\Delta R_i = A_0^{i,j} \Delta R_j + \epsilon_i(t)$ to get
    - $\rightarrow$ direct point estimate of $A_0^{i,j}$ used to identify parameters of impact matrix.
    - $\rightarrow$ confidence bounds used for identification in SVAR estimation.

Empirics

- ► The methodology assumes that same SVAR structure drives economy during high-frequency rare events and low frequency economic cycles.

- ► Can the methodology account for global factors driving joint dynamics of short rates (e.g., global risk-aversion, uncertainty)

- → what impact on estimated spill-overs?

- → can the method be extended to include such variables (VIX, variance, term-premium, credit spreads. . .) in the VAR and Event study.

- ► How different are the results on relative importance of country fundamental shocks relative to different identification approaches (say Cholesky based on importance of factor eigenvalue, or . . .)?

Conclusion

- ▶ Interesting and valuable methodology

- ▶ Sensible results

- ▶ Introduce global factors (VIX, Variance, Risk-aversion, Spreads. . .)?

- ▶ Assumption that SVAR also governs responses to specific rare events?

- ▶ Choice of events (e.g., LEH Bcy) as a monetary policy shocks?