Central Banking in Times of High Geopolitical Risk

by Alessandro Franconi

**Discussion by Sebastian Rast (DNB)**

Overview of paper

This paper:

Does **geopolitical risk** affect the **monetary policy** transmission?

1. **Nonlinear** Proxy VAR model with geopolitical risk index
   $\Rightarrow$ Monetary policy less powerful when geopolitical risk is high

2. Extended (quarterly) VAR with **fiscal variables**
   $\Rightarrow$ Response of defense spending varies with geopolitical risk

3. Counterfactual fiscal policy rule
   $\Rightarrow$ Defense spending channel **quantitatively** explains state-dependent effects of monetary policy
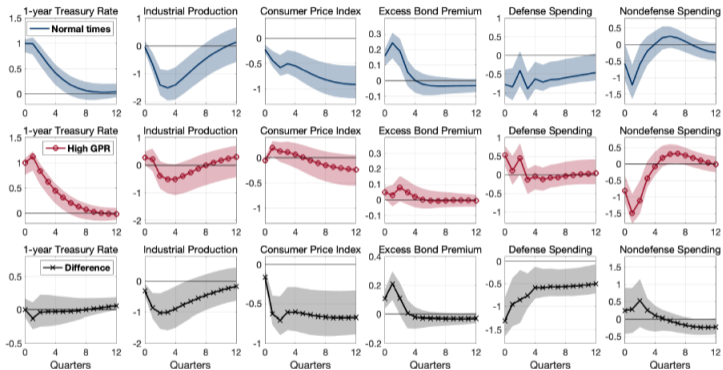
Figure 5: Monetary policy and geopolitical risk
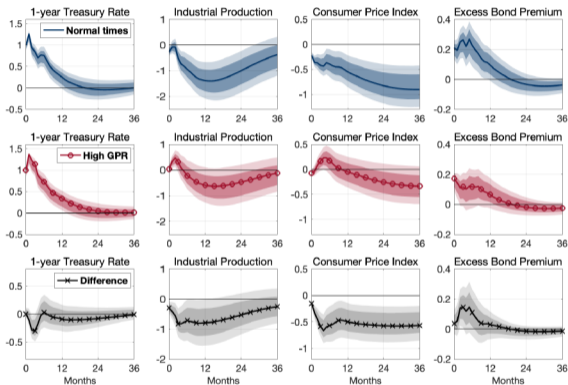
Notes: Nonlinear impulse responses from a monetary policy shock in normal times (50th percentile of the U.S. GPR index, blue solid lines), high GPR (95th percentile of the U.S. GPR index, red lines with circles) and the difference between the two impulse responses (black lines with cross markers). The shock is normalized to induce a 100 basis point increase in the 1-year treasury rate. The solid lines are the point estimates and the shaded areas are 68% and 90% confidence bands.

$\Rightarrow$ Monetary policy is less powerful when geopolitical risk is high

Figure 9: Monetary policy and geopolitical risk: the role of fiscal policy

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⇒ Response of defense spending varies with level of geopolitical risk

Figure 10: Monetary policy and geopolitical risk: Policy counterfactual

Notes: Nonlinear impulse responses from a monetary policy shock in normal times (50th percentile of the U.S. GPR index, blue solid lines) and high GPR (95th percentile of the U.S. GPR index, red lines with circles) under the prevailing rule and the counterfactual rule for the high-GPR regime (light blue lines with asterisks). Impulse responses under the counterfactual rule are also reported in the first row for comparison with those under the prevailing rule in normal times. The shock is normalized to induce a 100 basis point increase in the 1-year treasury rate. The solid lines are the point estimates and the shaded areas are 68% confidence bands.

⇒ Defense spending channel **quantitatively** explains state-dependent effects of monetary policy

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Overview of comments

Great paper!

- Relevant question and clear story
- Employs state-of-the-art methodologies

  Debortoli et al. (2023) and McKay and Wolf (2023)

My discussion:

1. The role of information effects/Fed response to news
2. The role of sign non-linearities
3. Counterfactual: identification of spending shocks
4. Policy implications: A policy rule with geopolitical risk?

Comment 1: The role of information effects/Fed response to news

Literature on predictability of monetary policy surprises

Miranda-Agrippino and Ricco (2021), Bauer and Swanson (2023)

$\rightarrow$ This paper: "Cleaned" surprises come from **linear** framework and are then used as proxy in nonlinear VAR

What does cleaning account for?

- Miranda-Agrippino and Ricco: Imperfect information about state of the economy
- Bauer and Swanson: Imperfect information about the Fed's monetary policy rule

Both information frictions might be larger during times of high geopolitical risk (see also Hoesch et al (2023) on time-variation)

Let's run predictive regressions from Bauer and Swanson (2023) allowing for state-dependence wrt geopolitical risk index (d_t)

$$mps_t = \alpha + \beta' X_{t-} + u_t$$

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- p-value of joint test of γ and ψ coefficients: 0.0003

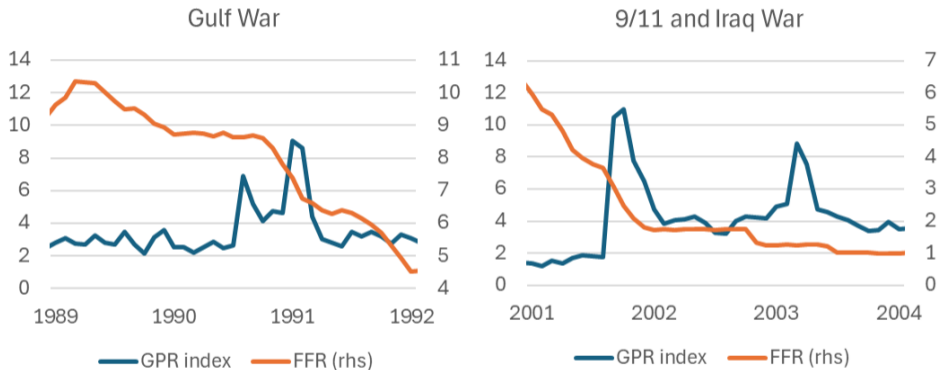Similar approach can be implemented for Miranda-Agrippino and Ricco setup.
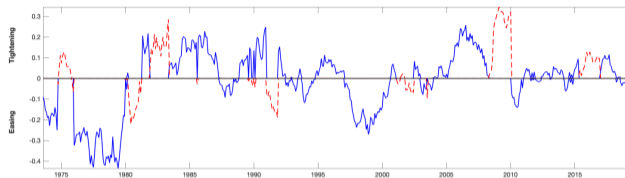
Figure 1: Monetary policy stance during episodes of high geopolitical risk

⇒ Predominantly monetary easing during times of high geopolitical risk?

Comment 2: The role of sign non-linearities

Figure 1: Identified Monetary Shocks

Notes: Time-series of identified monetary shocks, for monetary easing (negative values), tightening (positive values), during booms (blue solid line) and recessions (red dashed line).

Source: Debortoli et al. (2023)

Structural representation of nonlinear VAR:

$$x_t \;\; = \;\; \nu + \alpha(L)u_t + \beta(L)d_t u_t + \psi(L)d_t + \Gamma(L)\xi_t$$

- u_t: monetary policy shock
- ξ_t: other structural shocks
- d_t: geopolitical risk index from Caldara and Iacoviello (2022)

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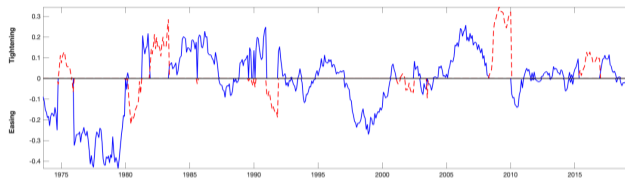
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Comment 3: Identification of spending shocks

Idea: Let's impose a counterfactual fiscal rule such that the response of defense spending is the same across regimes

$\rightarrow$ how do the other unrestricted variables respond under counterfactual rule?

Implementation: McKay and Wolf (2023) $\rightarrow$ find a set of distinct policy shocks to impose counterfactual policy path

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Why do you use general government spending shocks? IRFs to these general spending shocks can be different from those to shocks about defense spending?

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My suggestion:

- Blanchard-Perotti approach with defense spending
- Ben Zeev and Pappa (2017): anticipated defense spending shocks

Minor comment: show IRFs to spending shocks at least in appendix.

Comment 4: A policy rule with geopolitical risk?

Conclusion of paper: Contractionary monetary policy becomes less effective at higher levels of geopolitical risk. $\Rightarrow$ Policy implications?

Suggestion:

- Can you propose a policy rule that takes into account geopolitical risk?
- Can you implement a counterfactual assuming the Fed would have followed that rule? Would there have been an improvement in terms of inflation and growth outcomes?

Conclusion

- Very interesting and insightful paper about an important topic
- Nonlinear effects of information frictions on monetary policy surprises?
- Interaction of state-dependence with distribution of easing and tightening shocks?
- Use defense spending shocks for policy counterfactual
- Can you come up with a policy rule that incorporates geopolitical risk and would such a rule have improved historical outcomes?