

Flight from the Front Line: Geopolitical Risk, Distance, and Capital Flow Dynamics

Martin Hodula, Jan Janků, Simona Malovaná

Czech National Bank

December 2025

*Second Czech National Bank Workshop on Financial Stability and
Macprudential Policy*

The views expressed are those of the authors and not necessarily those of the Czech National Bank.

Motivation

- **Geopolitical tensions** are rising, underlining the need to understand threats to economic growth and financial stability
 - ▶ **Exogeneous** to economic models, these shocks escape standard predictive models, leaving economies vulnerable to sudden and severe impacts
- **Capital flows** are a key channel through which such shocks may propagate
 - ▶ Cross-border investment reacts quickly to changes in perceived risk and safety (Forbes & Warnock, 2012; Broner *et al.*, 2013)
 - ▶ In times of elevated uncertainty, investors reallocate portfolios across countries, changing financing conditions almost instantly (Fratzscher, 2012)
- **Does proximity to conflict shape how capital flows respond to materializations of geopolitical risks (GPR)?**
- In short, yes
 - ▶ GPR leads to an immediate and pronounced reallocation of capital
 - ▶ Large outflows from countries near the conflict zone and commensurate inflows into distant economies
 - ▶ Differences between foreign/domestic investor flows
 - ▶ Exchange rate adjustments

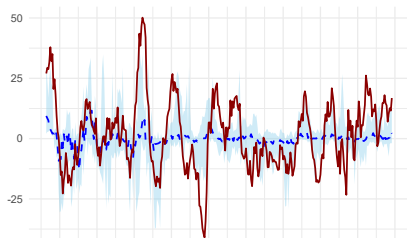
Data on Capital Flows

- OECD Monthly Capital Flow Dataset (Koepke & Paetzold, 2024)
 - ▶ Cross-border portfolio flows available at monthly frequency
 - ▶ Covers 48 advanced and emerging economies since 1995
 - ▶ Our sample: 17,500 country-month observations
- Information on **inflows** (foreign investors' purchases of domestic assets) and **outflows** (domestic investors' purchases of foreign assets)

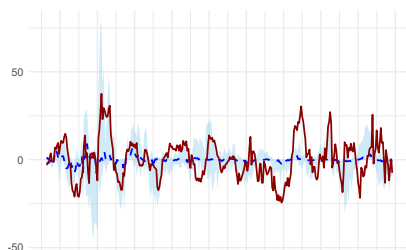
$$NetFlow_{it} = Inflow_{it} - Outflow_{it},$$

- We construct twelve-month rolling sums of the flows to mitigate high volatility and take first difference, following Forbes & Warnock (2012)

Net-Debt Flows



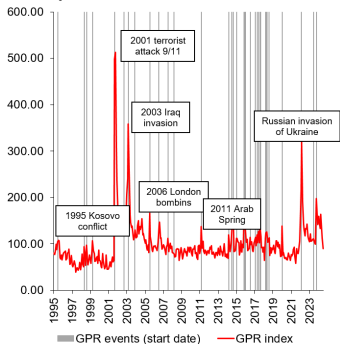
Net-Equity Flows



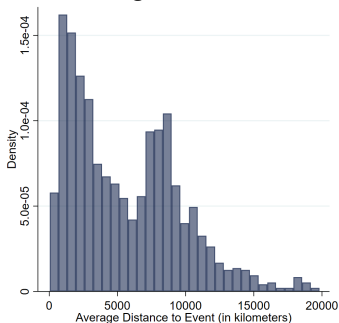
Geopolitical Events Classification

- We combine **quantitative threshold rules** with structured **narrative verification**
 - 1 We start with the GPR index of Caldara & Iacoviello (2022), flagging candidate high-risk periods $GPR_t > Q_{0.75}(GPR)$
 - 2 Each candidate observation is subjected to narrative cross-validation
 - 3 We also incorporate several episodes of regional importance, bearing in mind that the GPR index is constructed from the US perspective
- We identify **34 GPR events**, yielding 1,488 country-month observations with a recorded GPR event (8.7% of obs.)

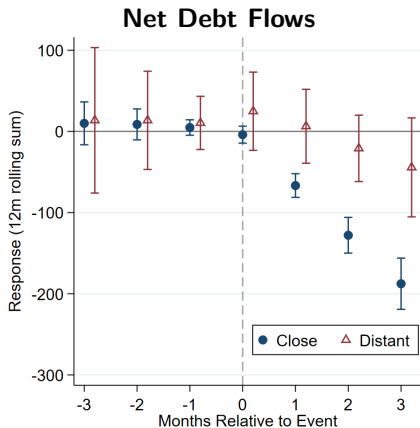
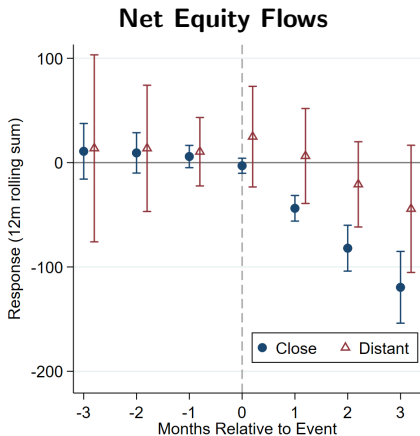
Global Geopolitical Risk Index and Event Timing



Distribution of Average Distance to Conflict Events



Capital Flows Around the Start of Geopolitical Tensions



- **Close/Distant** denotes countries with below/above median distance from the conflict epicenter
- Net flows drops significantly for proximate countries close to the conflict zone

Estimation Method

- Panel local projections of Jordà (2005)
 - ▶ Builds on stylized framework in which geographic proximity to conflict shapes investors' perceived risks and drives international portfolio allocation

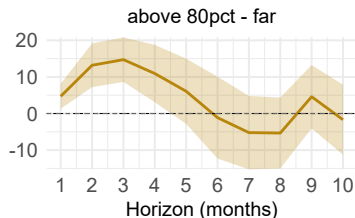
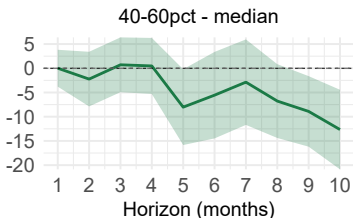
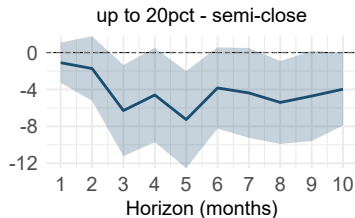
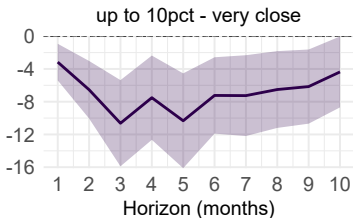
$$\Delta y_{i,t+h} = \alpha_i + \beta_h \text{Conflict}_t + \theta_h (\text{Conflict}_t \times \text{Proximity}_{i,t}) + \gamma_h \text{Proximity}_{i,t} + \Phi_h \mathbf{X}_{i,t} + \varepsilon_{i,t+h}$$

- *Conflict*_t — global event-month dummy equal to one in the first month of each recorded geopolitical risk episode
- *Proximity*_{i,t} — discrete proximity bins (baseline) or continuous measure in km (robustness)

Proximity calculation

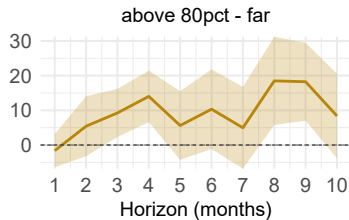
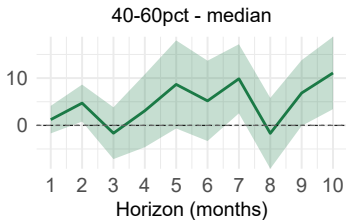
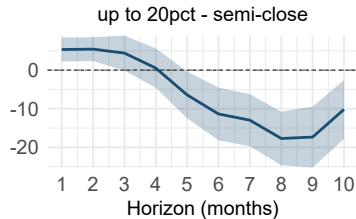
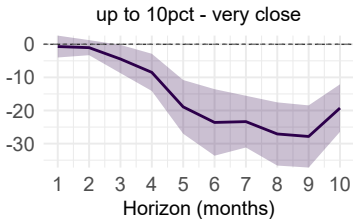
- 1 Compute the great-circle distance (*dist_km*_{i,t}) from each country's capital to the centroid of the conflict zone: $\text{Proximity}_{i,t} = \frac{\log(1+\text{dist_km}_{i,t})}{\log(1+d_{\max})}$
- 2 Center this measure at the mean distance of the belligerent countries: $\text{Proximity_Norm}_{i,t} = \text{Proximity}_{i,t} - \mathbb{E}[\text{Proximity}_{i,t} \mid \text{Conflict} = 1]$
- 3 Group countries into four mutually exclusive categories (very close; semi-close; median distance; far)

Response of Net Equity Flows to GPR Events



- Capital flight from close economies vs. flight-to-safety in distant markets
 - ▶ Flows of proximate countries fall by roughly USD 15–20 billion within the first few months after conflict
 - ▶ Distant economies record offsetting inflows of about USD 10–15 billion

Response of Net Debt Flows to GPR Events



- Debt flows response is delayed, signalling slower risk repricing, rollover dynamics, or delayed recognition of geopolitical-risk exposure

Domestic vs. Foreign Investor Flows

Foreign investors: adjust through both equity and debt

- Near conflict: sharp drops in equity inflows; debt inflows also fall
- Far from conflict: strong rise in equity inflows; debt inflows show mild response
- Treat proximity to conflict as a country-level risk shock

Domestic investors: adjust mainly through debt

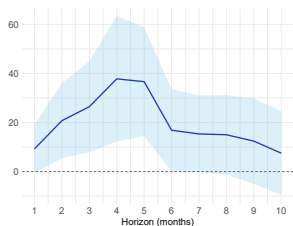
- Near conflict: residents cut debt outflows (retrenchment), equity barely moves
- Far from conflict: residents increase debt outflows (consistent with rebalancing toward safer and more liquid external assets)
- Precautionary liquidity needs and uncertainty about local conditions

Robustness, Extensions and Sensitivity Checks

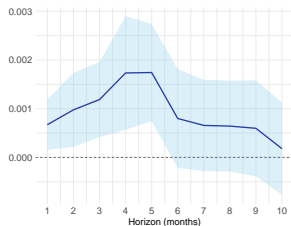
Continuous Distance Interaction

- We replace the categorical bins with a continuous measure of distance
 - 1 Normalized and log-scaled measure
 - 2 Measured directly in kilometers
- Results closely mirror the baseline

Net Equity Flows (Normalized Distance)



Net Equity Flows (Distance in km)



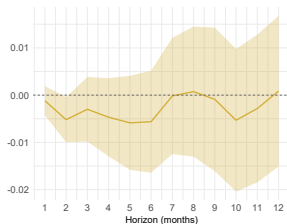
Advanced vs. Emerging Economies

- AEs appear to attract capital during conflict episodes (but proximity matters)
- Equity flows to EMEs drops irrespective of proximity

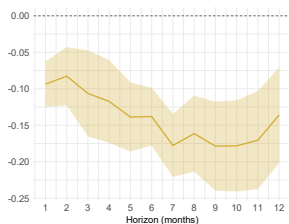
Exchange Rate Adjustment 1/2

- Capital flows and exchange rates represent complementary dimensions
 - ▶ Outflows/inflows put depreciation/appreciation pressure on local currencies
 - ▶ Estimates made using normalized log-distance measure

Panel A: Response to a Conflict Shock

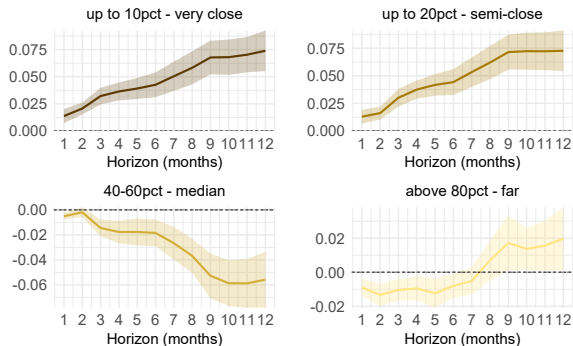


Panel B: Response to a Proximity Conflict Shock



- Panel A: bilateral USD rates display no systematic response to GPR events
- Panel B: Currencies of countries closer to the conflict tend to depreciate, while those farther away appreciate
 - ▶ Moving from close to distant country corresponds to an appreciation of about 10–15% over the first year

Exchange Rate Adjustment 2/2



- More granular look across proximity quartiles confirms the ER adjustment
- Currencies of countries very close to the conflict depreciate persistently by up to 7–8% within a year after the event
- Estimates hold even when using trade-weighted indices of REER

Conclusions

Key findings

- GPR events trigger capital reallocation away from proximate countries toward more distant economies
- Equity flows respond immediately and sharply to conflict shocks
 - ▶ Reflect rapid repricing of country risk and flight-to-safety dynamics
- Debt flows exhibit a more delayed and gradual pattern
 - ▶ Consistent with rollover frictions and slower risk reassessment
- Adjustment mechanisms for foreign/domestic investors differ
 - ▶ Risk repricing (foreign) vs. precautionary liquidity (domestic)
- Reallocation of capital is also reflected in exchange rate adjustment

More work ahead

- Is it just geographical proximity or is it more about trade/financial exposures or political distance?
- Do different types of geopolitical shocks (armed conflict vs. political tensions) produce different responses?

References I

- Broner, Fernando, Didier, Tatiana, Erce, Aitor, & Schmukler, Sergio L. 2013. Gross capital flows: Dynamics and crises. *Journal of monetary economics*, **60**(1), 113–133.
- Caldara, Dario, & Iacoviello, Matteo. 2022. Measuring geopolitical risk. *American Economic Review*, **112**(4), 1194–1225.
- Forbes, Kristin J, & Warnock, Francis E. 2012. Capital flow waves: Surges, stops, flight, and retrenchment. *Journal of international economics*, **88**(2), 235–251.
- Fratzscher, Marcel. 2012. Capital flows, push versus pull factors and the global financial crisis. *Journal of international Economics*, **88**(2), 341–356.
- Jordà, Òscar. 2005. Estimation and inference of impulse responses by local projections. *American Economic Review*, **95**(1), 161–182.
- Koepke, Robin, & Paetzold, Simon. 2024. Capital flow data—A guide for empirical analysis and real-time tracking. *International Journal of Finance & Economics*, **29**(1), 311–331.

Thank you for your attention!