

# Trade and financial ties with geopolitically distant countries

ESM - SUERF - Bruegel workshop

Is Europe Prepared for Extreme Events?

Risks - resilience - policy responses



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03/04/2025

# Agenda

## **Section 1: Perceptions of geopolitical threats. Risk of disorderly market corrections**

- Many sources indicate major concerns related to geopolitics...
- ...but key financial indicators show positive performance.

## **Section 2: Systemic impact of geopolitical risk**

- Measures of geopolitical risk.
- Illustrative analysis on how does geopolitical risk may affect systemic risk and economic outlook.

## **Section 3: Beyond aggregate effects: cross-country heterogeneity**

- There is significant cross-country heterogeneity in exposure to geopolitical risk.
- An aggregate country scoreboard of geopolitical risk, based on linkages with geopolitically distant countries.



## **Section 1**

Perceptions of geopolitical threats

Risk of disorderly market corrections

# Severe concerns about geopolitics...

- Attention to geopolitical risk among the general population has been growing remarkably.
- Aspects related to geopolitics rank as the main tail risk for financial markets.

## Worldwide search query data on “geopolitical risk”

(index, maximum value = 100)

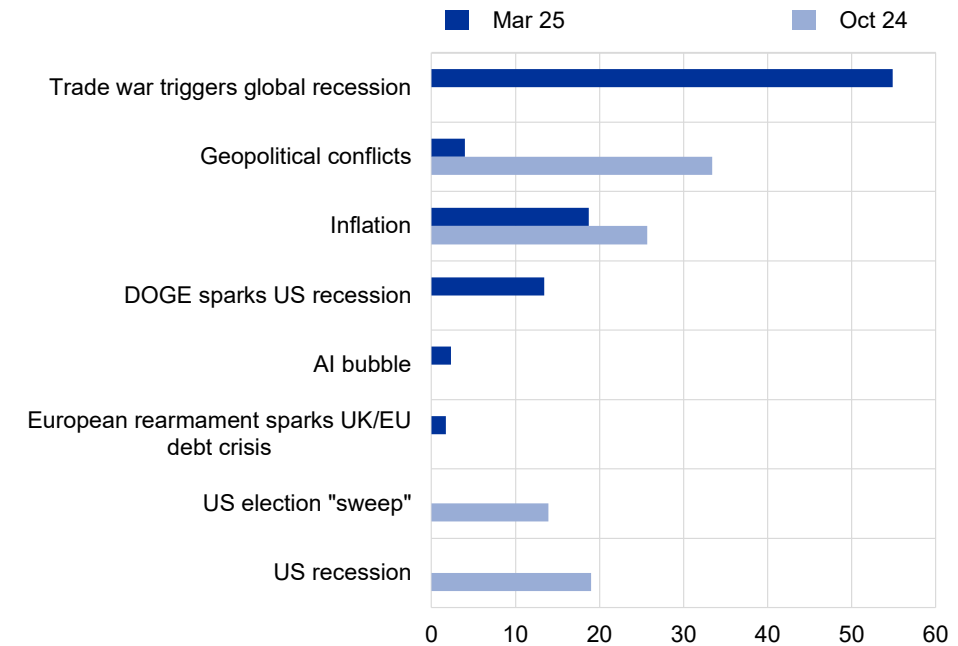


Source: Google Trends and ESRB calculations.

Notes: The left panel series are based on worldwide Google searches for the term “geopolitical risk”.

## Assessment of the main tail risks in Mar-25 and Oct-24

(Percent of respondents)



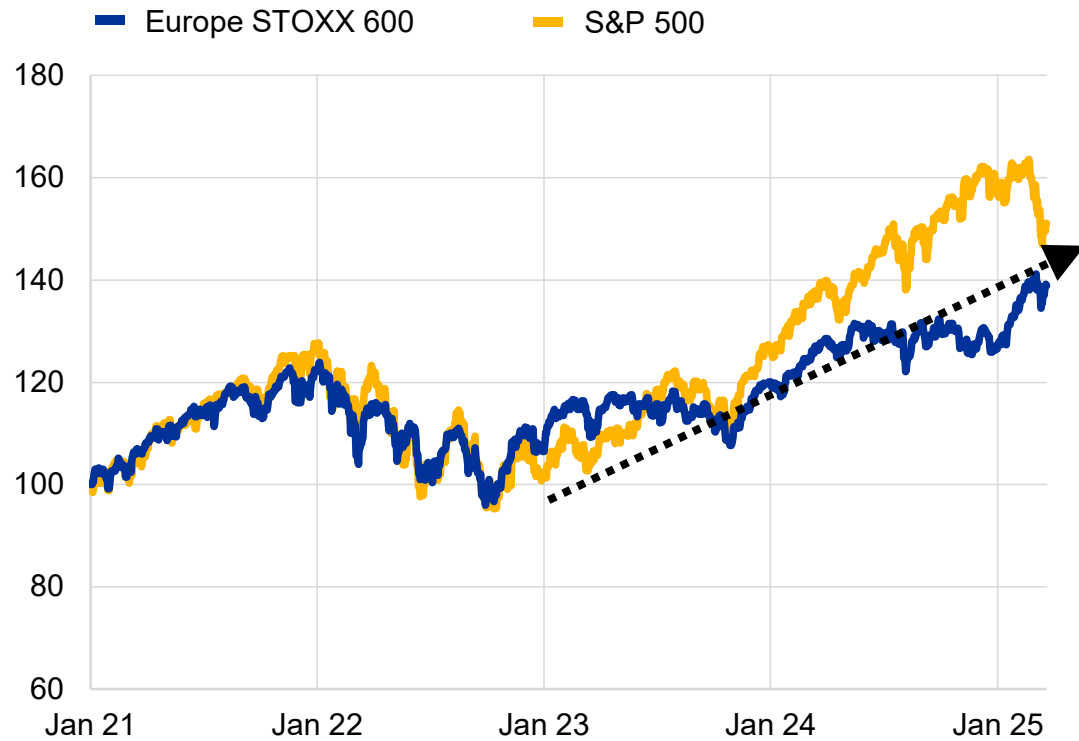
Source: BofA Global Fund Manager Survey March 2025 and October 2024.

## ...but financial markets show positive performance

- Stock prices have reached historical highs and corporate HY bond spreads are low.
- Risks of disorderly market corrections, due to the convergence of major economic concerns (e.g., military or tariff shocks, interest rates surge).

### Europe STOXX 600 and S&P 500 indices

(index, 2021-01-03 = 100)

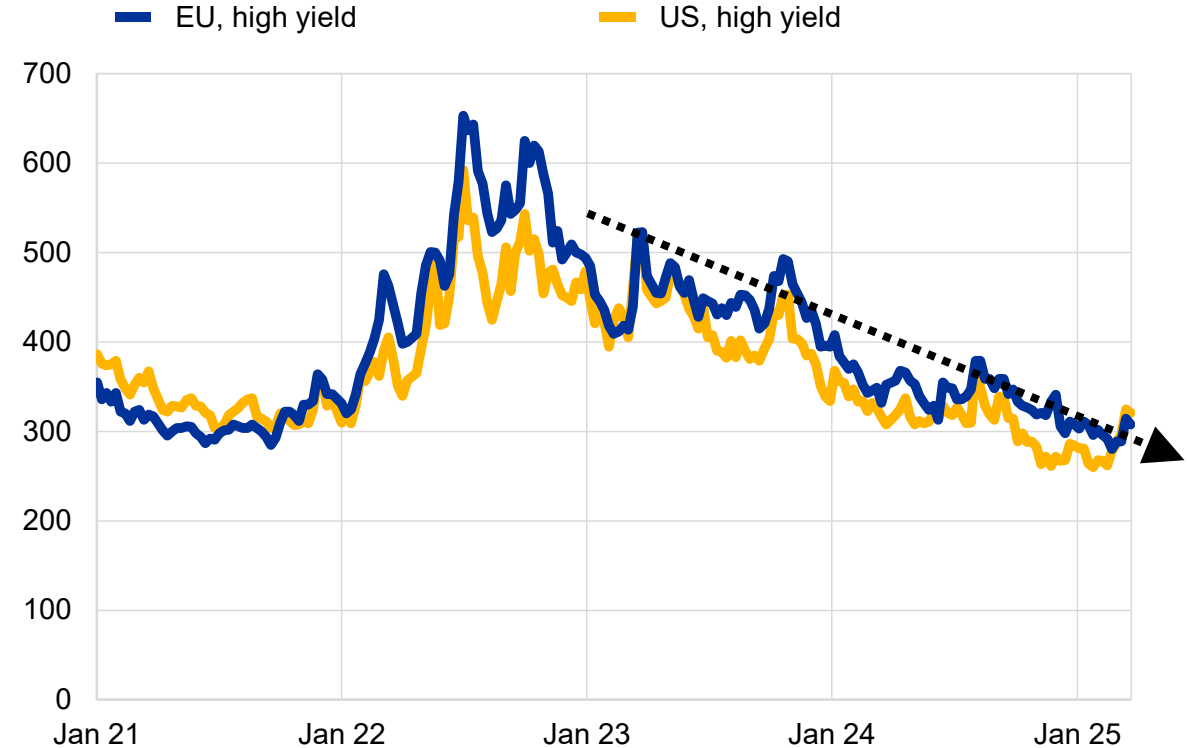


Source: Bloomberg

Last observation: 21 March 2025.

### EU and US corporate HY bond spreads to sovereign bonds

(Percentage points)



Source: Bloomberg

Note: ICE BofA indices. EU series refer to EUR-denominated bonds issued in domestic or Eurobond markets. Last observation: 21 March 2025.



## **Section 2**

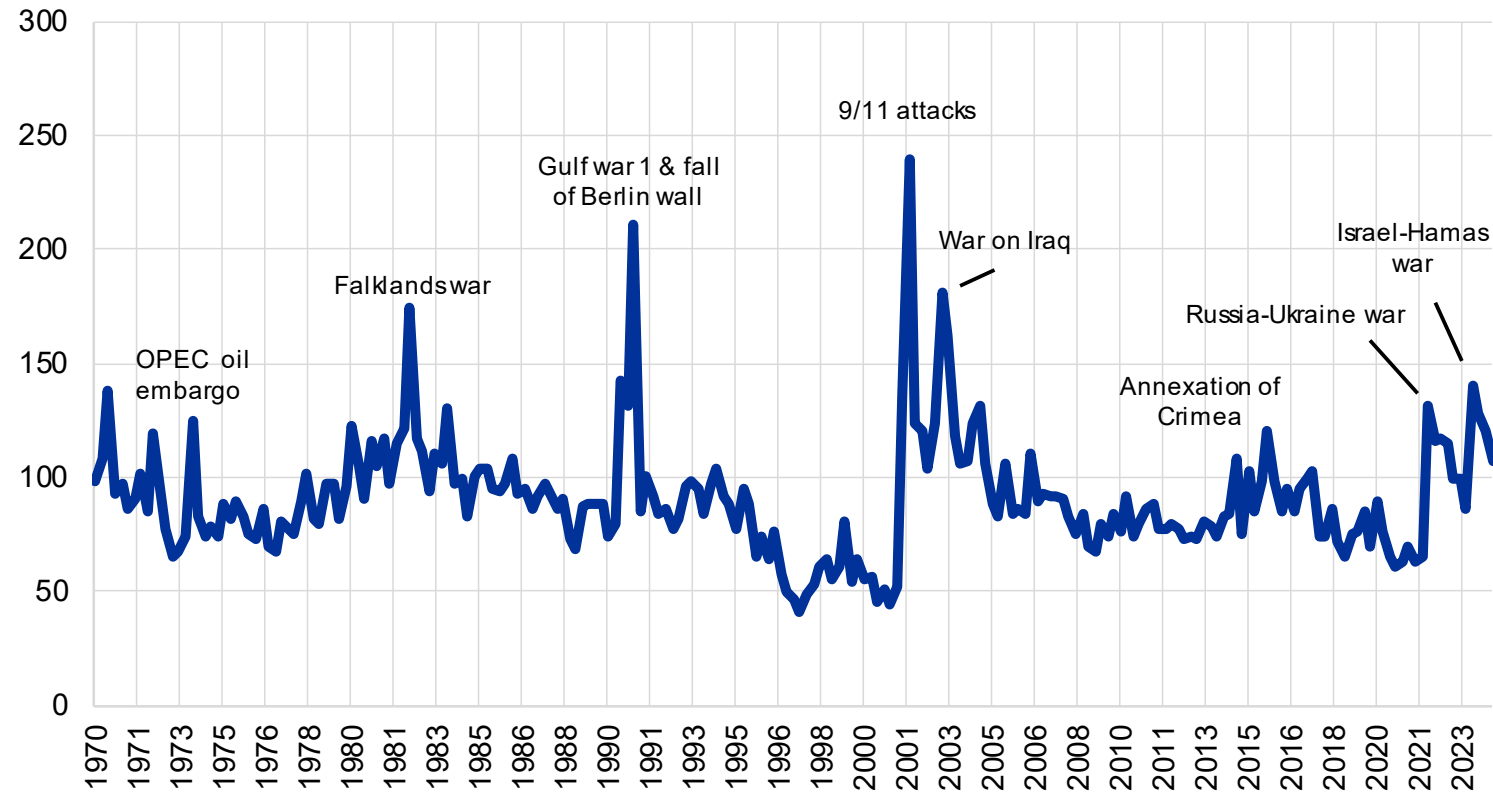
### **Systemic impact of geopolitical risk**

# Measures of geopolitical risk (GPR)

- It has often been measured using methods – e.g., Caldara-Iacoviello – proven to be effective in detecting spikes.
- But methods relying only on text analysis of standard newspapers may not represent the level of risk relevant for firms.

## Caldara and Iacoviello (2022) Geopolitical Risk Index

(index: 1970-01 = 100)



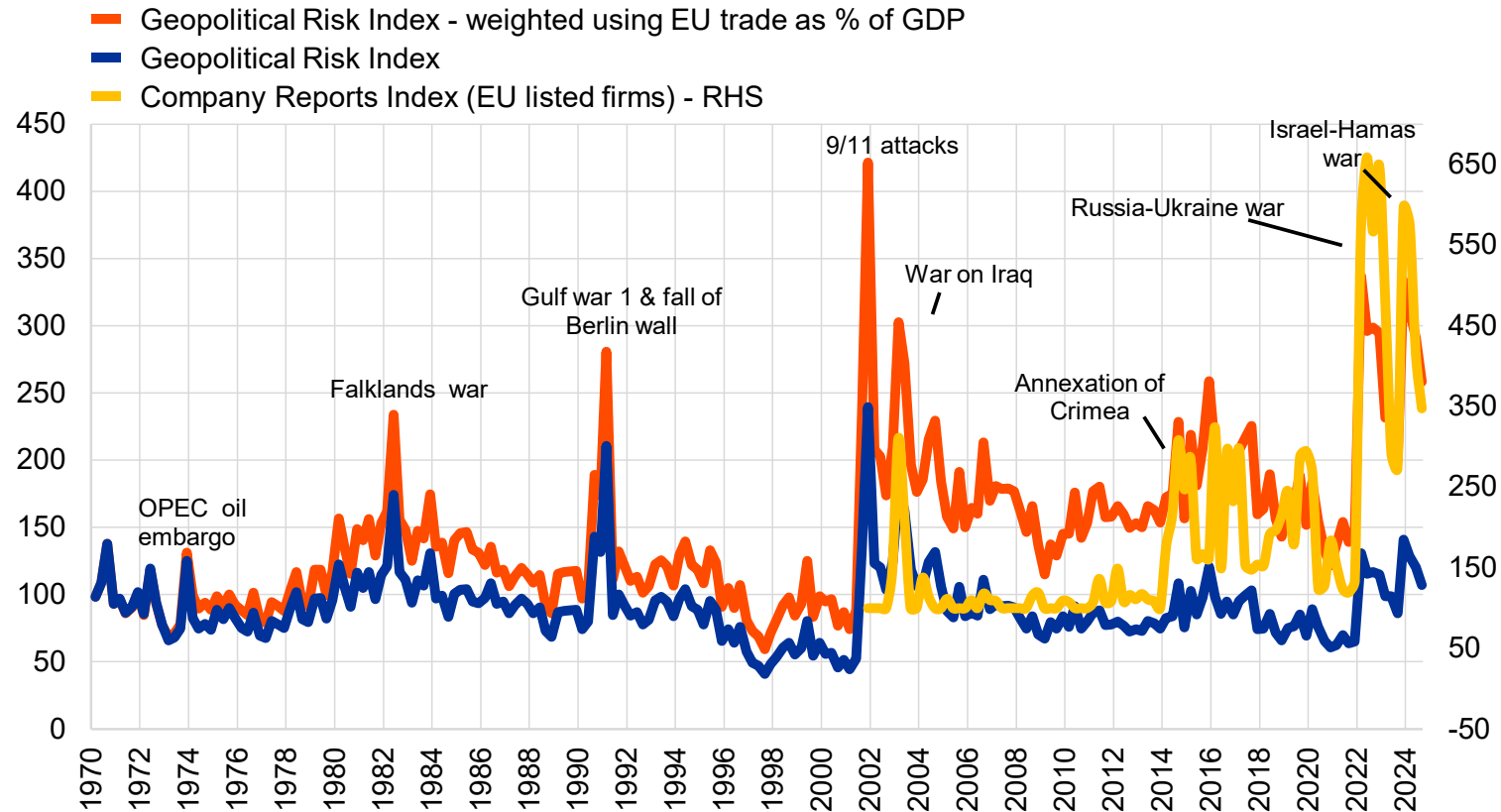
Source: Caldara and Iacoviello GPR index.

# Exploring alternative measures of geopolitical risk (GPR)

- Alternative measures consider factors such as the concern among listed companies and increase in trade openness.

## Trade-weighted geopolitical risk index and company reports index

(lhs: index: 1970-01 = 100; rhs: index: 2002-03 = 100)



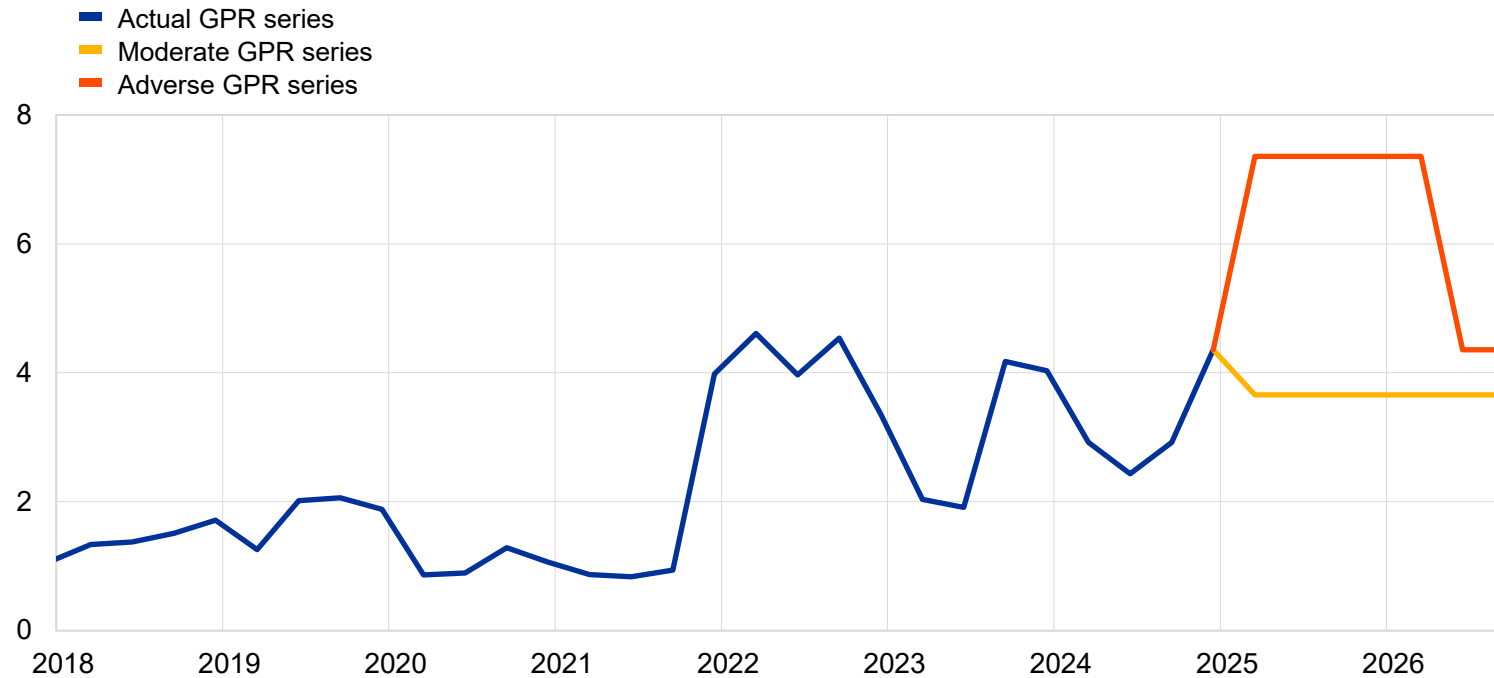
Source: World Bank, Caldara and Iacoviello GPR index, NL Analytics, and ESRB calculations. Note: Both Geopolitical Risk indices are set to 100 at Jan-1970, while the company reports index is set to 100 in Mar-2002. The red line is a weighted version of the global GPR index, where time-varying weights are based on the total value of trade between the EU and non-EU countries as a share of GDP (total imports and exports of goods and services). The increase in trade openness over time increases the weight of geopolitical risk over time. The company reports index is based on the share of sentences in earnings calls that not only mention any word from the list of keywords (geopolitical, geopolitics, geoeconomic, international trade, global trade, supply-chain, military, escalation, war, conflict, geo-political, geo-politics, geo-economic, supply chain) but also associate the word to the concept of risk.



# Analysis of a hypothetical extreme but realistic shock of geopolitical risk

- The hypothetical geopolitical shock is similar in magnitude to the Russian invasion of Ukraine.

## Actual and conditional paths of the underlying measure of geopolitical risk (Standard deviations)



Source: NL Analytics, and ESRB calculations.

Note: The company reports index is based on the share of sentences in earnings calls that not only mention any word from the list of keywords (geopolitical, geopolitics, geoeconomic, international trade, global trade, supply-chain, military, escalation, war, conflict, geo-political, geo-politics, geo-economic, supply chain) but also associate the word to the concept of risk.

# Illustrative analysis of the impact of geopolitical risk for the euro area

We opt for a Quantile VAR using the method of Chavleishvili, Kremer and Lund-Thomsen (2024, ECB-WP).

- We use our company reports index of geopolitical risk as **the only exogenous variable**.
- We use the following ordered list of **six endogenous variables**:
  1. CISS - 2. Economic Policy Uncertainty - 3. SRI - 4. Inflation - 5. Real GDP growth - 6. 3M-OIS.

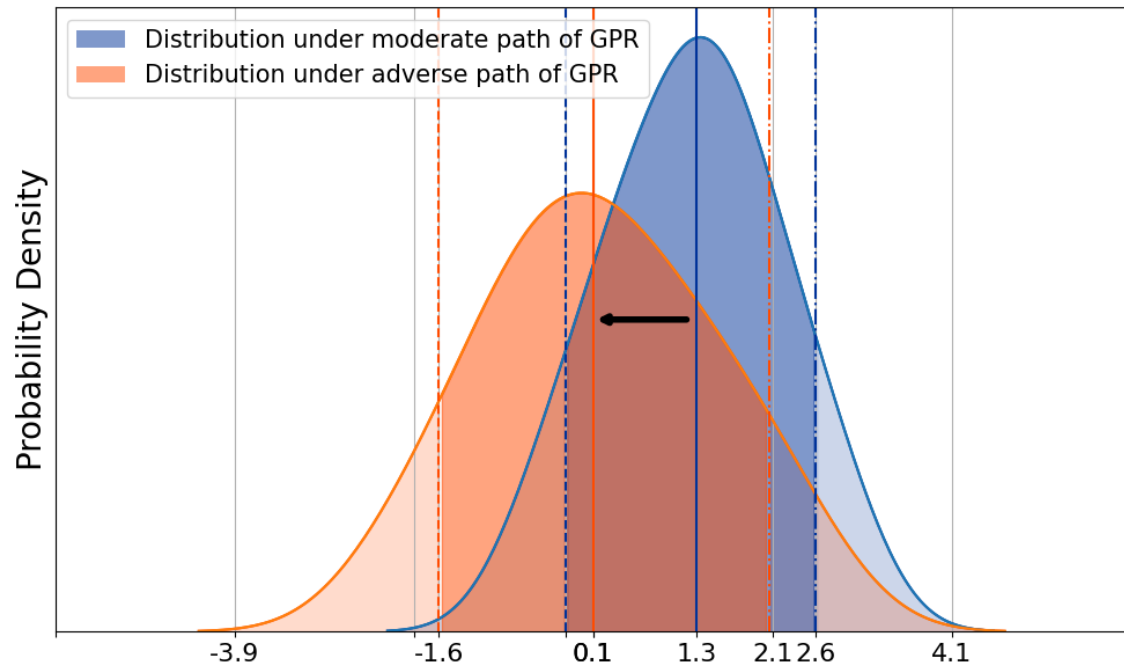
Why the Q-VAR?

- The Q-VAR extends the typical traditional VAR approach beyond linear responses, by modelling not just the conditional mean of the variables but their entire conditional distribution.
- **Capturing asymmetric impacts**: Q-VAR models can identify potential stronger impacts of geopolitical shocks on the lower tail of the distribution, highlighting worse-case scenarios crucial for policymakers.
- **Capturing impacts on uncertainty**: Q-VAR models can identify impacts on the dispersion around median estimates.

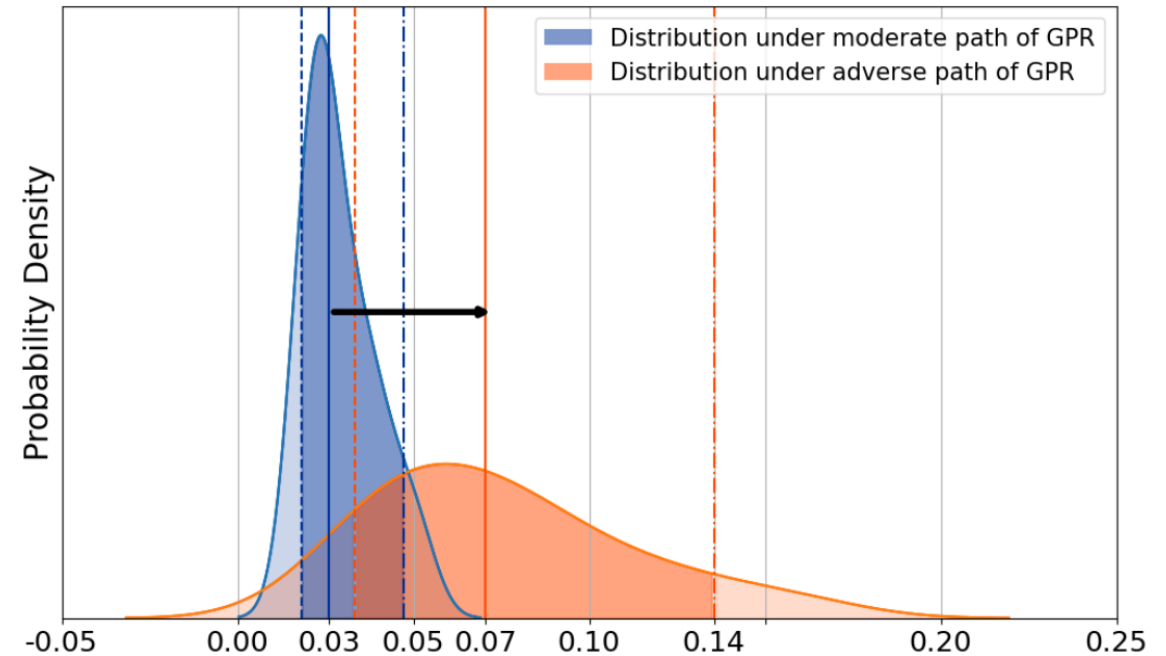
# Illustrative analysis of the impact of geopolitical risk for the euro area

- The impact on median GDP growth is -1.2 p.p., in line with projections related to the effects of the Russian invasion.
- Significant amplification of the level of ex-post systemic risk (CISS) and its dispersion around the median.

**Estimated 1-year ahead EA (y-o-y) real GDP growth under moderate and adverse paths of GPR, as of Q4-24**  
(x-axis: annual percentage growth)



**Estimated 1-year ahead EA CISS under moderate and adverse paths of GPR, as of Q4-24**  
(x-axis: index)



Source: NL Analytics, and ESRB calculations.

Note: The estimation is based on a Q-VAR model using the methodology of Chavleishvili, Kremer and Lund-Thomsen (2024, ECB-WP). Estimations use the 2002-2024 quarterly time-series and control for the COVID-19 quarters. For illustrative purposes, the distributions of the left chart have been shifted in order to center the medians of the distribution with moderate GPR to the projections calculated by the EU-COM in its Autumn 2024 Economic Forecast. In the right chart, to account for the fact that CISS is bounded between 0 and 1 we transformed the variable to be unbounded using a logit function for the QVAR estimation step. Following estimation, we transformed it back to the  $[0, 1]$  domain for conditional forecasting. We used the Kernel Density Estimation (KDE) to smoothen ex-post the distributions. KDE is a non-parametric method to estimate the probability density function (pdf) of our variables. In the right chart, the small negative values of the orange region are due to the KDE smoothing.



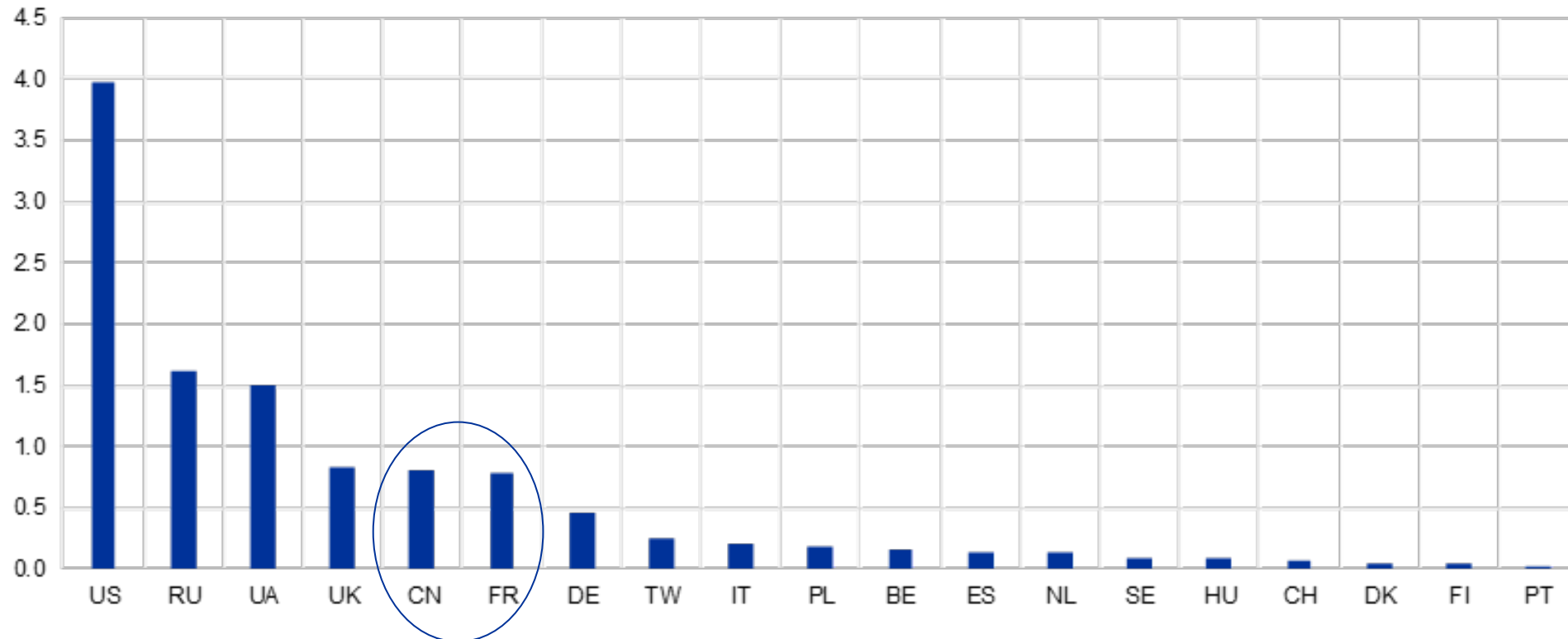
## **Section 3**

Beyond aggregate effects: country heterogeneity

# Geopolitical risk. How to measure cross-country heterogeneity?

- Cross-country comparisons of GPR indices may not be suitable depending on the use.

## Cross-country comparison of the Geopolitical Risk Index for EU countries, US, UK and other selected countries (percentage of articles)



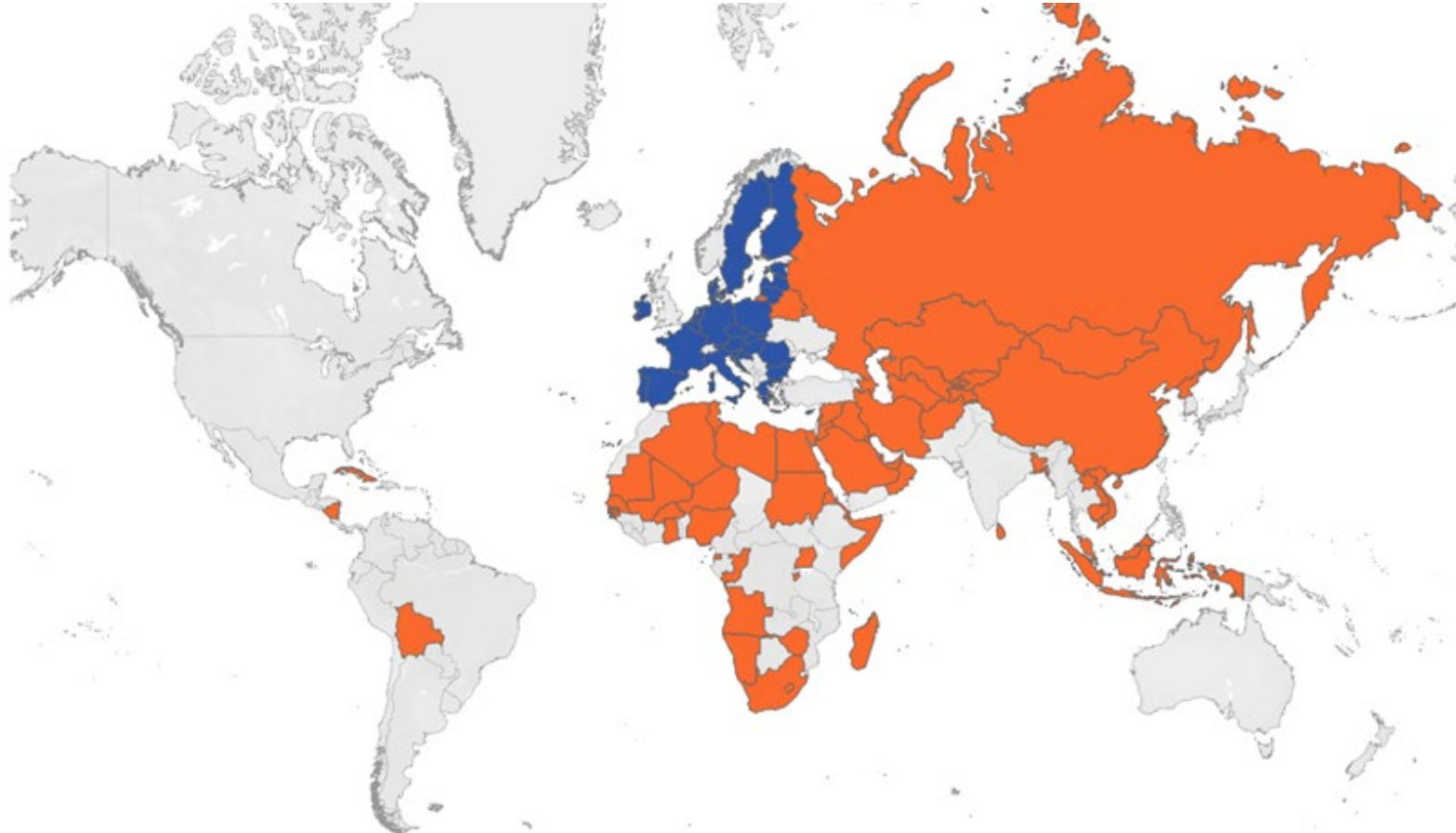
Source: Caldara and Iacoviello (2022) via Haver Analytics.

Notes: Values represent the 12-month averages of the country-specific series of the Caldara-Iacoviello index. Data as of September 2024.

# Defining geopolitically distant countries based on their UN voting patterns

- “Geopolitically distant countries” are defined as those with the highest (i.e., top tercile) geopolitical distance from the EU in terms of voting behaviour in the UN General Assembly.
- In a second step, trade and financial linkages to geopolitically distant countries are described.

World map indicating the countries identified as **geopolitically distant** to the **European Union**



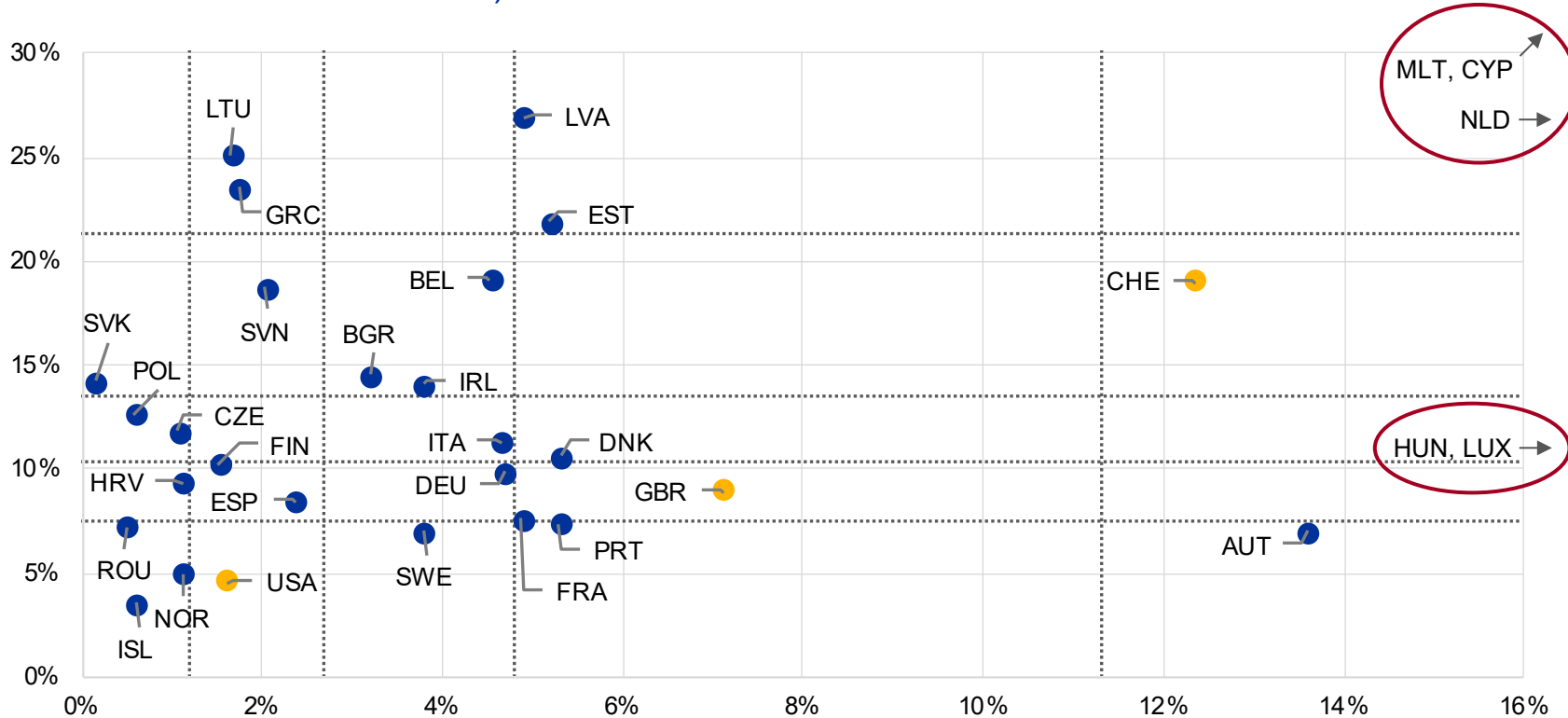
Notes: geopolitically distant countries are defined as the top tercile of geopolitical distance to the EU in 2023 (see Bailey et al (2017)).

# Several EU countries with links to geopolitically distant countries...

- Large financial and trade openness with geopolitically distant countries may amplify the effects of geopolitical shocks.
- High geopolitical risk appears to be concentrated within the Baltic countries and countries with high FDI to GDP ratio.

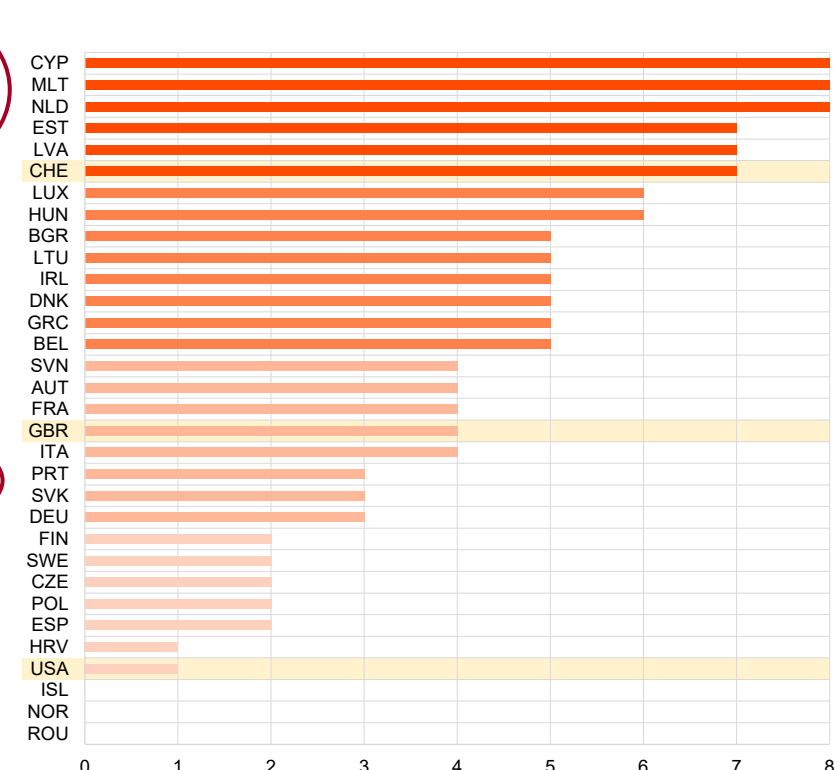
## Financial and trade linkages with geopolitically distant countries

(x-axis: FDI with geopolitically distant countries as % GDP; y-axis: trade with geopolitically distant countries as % GDP)



## Geopolitical risk scoreboard

(total points)



Sources: IMF, WTO-OECD and ESRB calculations.

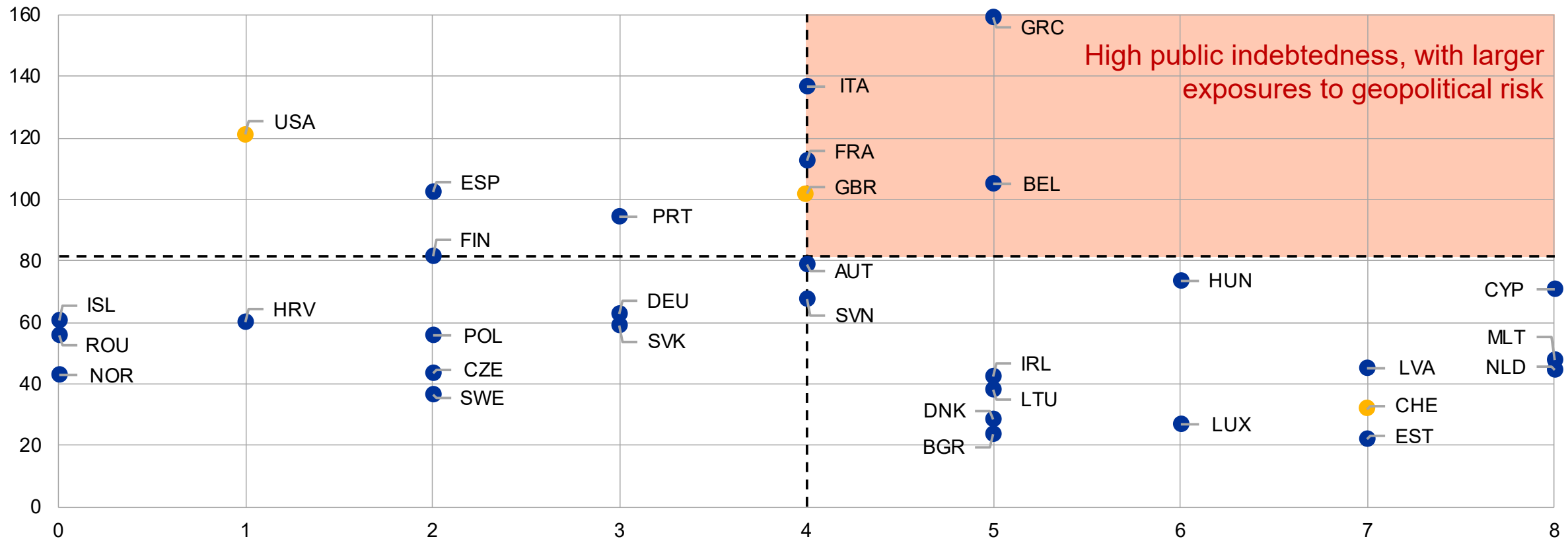
Notes: geopolitically distant countries are defined as the top tercile of geopolitical distance to the EU in 2023. FDI values are taken as the sum of inflows and outflows in 2022 from reference countries vis-à-vis geopolitically distant counterparties. Trade values are taken as the sum of imports and exports of merchandise and services in 2023. The geopolitical risk scoreboard is based on the quintiles for each variable (first quintile = no point, second = 1 point, ..., fifth = 4 points). Key third countries to the EEA are highlighted in yellow.

## ... but few EU countries also with high public indebtedness

- Geopolitical risk may demand ample fiscal space should risks materialise (e.g. via defence expenditures).
- Some countries received downgrades from credit rating agencies in 2023-2024 citing increased geopolitical risk.

### Geopolitical risk scoreboard and sovereign debt

(x-axis: geopolitical risk scoreboard; y-axis: debt-to-GDP)



Sources: Eurostat, IMF and ESRB calculations.

Notes: Dashed vertical line shows the unweighted EU geopolitical risk scoreboard average. Dashed horizontal line shows the weighted EU debt-to-GDP ratio for Q3 2024. Debt-to-GDP values are IMF 2024 projections. Key third countries to the EEA are shown in yellow.



# Conclusions

- Financial markets have been showing positive performance despite escalating geopolitical tensions, potentially indicating an underpricing of geopolitical risks.
- There is no single, universally applicable measure of geopolitical risk. Different analytical objectives may require distinct indicators.
- Quantile VAR analysis suggests that geopolitical shocks can significantly impact the euro area economy, both in terms of median outcomes and tail risks, increasing uncertainty.
- Exposure to geopolitical risk varies significantly across EU countries, largely reflecting differences in trade and financial linkages with geopolitically distant partners.
- Preserving fiscal space to meet the long-term fiscal challenges posed by geopolitical risks is key.