European Stability Mechanism

EXPLORING THE EURO AREA EXPOSURE TO THE RISK OF GLOBAL FINANCIAL FRAGMENTATION

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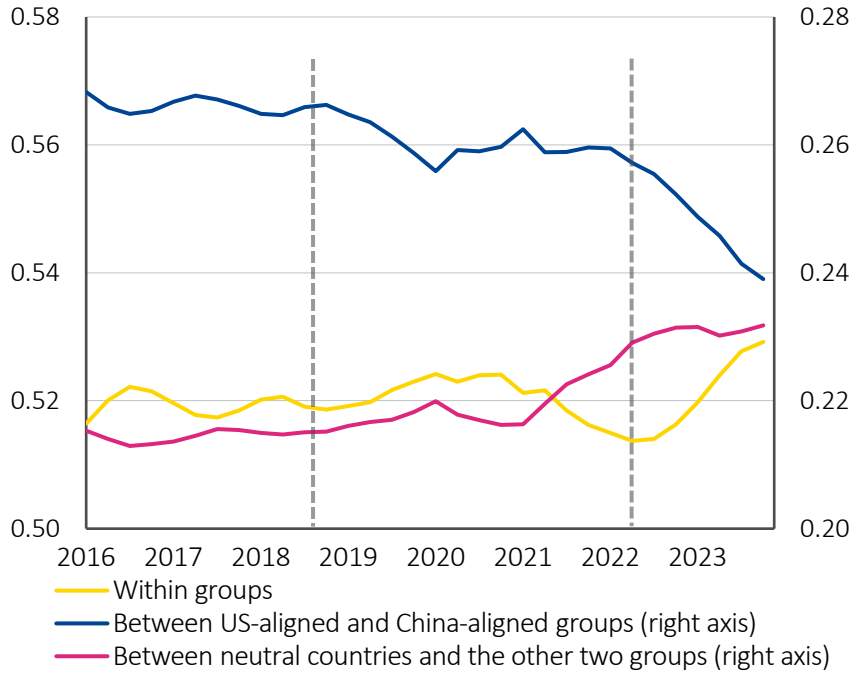
GLOBAL TRADE AND FINANCIAL INTEGRATION AT RISK

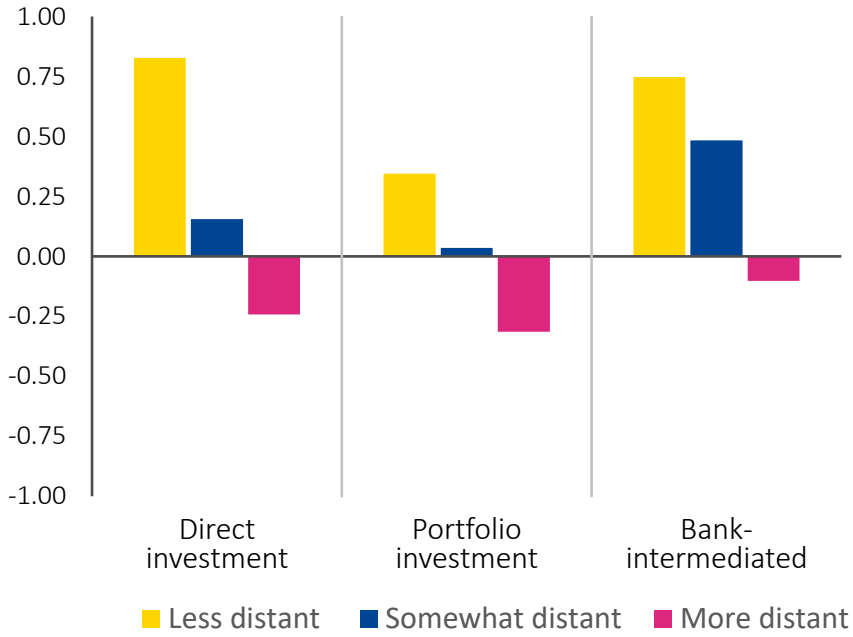
- Geoeconomic fragmentation leads to shifts in trade patterns
- Cross-border investments are also influenced by geopolitical factors

Trade between groups pulling apart

(share of global trade within/between geopolitical groups)



Financial linkages are differentiated according to geopolitical alignments (pp, relative to world portfolio)



Source: ESM's calculations based on External Wealth of Nations database, Milesi-Ferretti (2022), Lane and Milesi-Ferretti (2018).

Note: sample spans 2009-22. Source: ESM's calculations based on IMF's CPIS and CDIS, BIS's LBS, OECD, Eurostat, and EC's Finflows datasets.

FINANCIAL FRAGMENTATION: RELEVANT FOR THE EURO AREA?

- **Focus on the financial transmission channel of geoeconomic fragmentation**.

1 **Document euro area countries' cross-border financial exposures** to geopolitically aligned and distant countries. How much is at risk?

*Appears insulated, but non-negligible exposures.

cross-country focus: geopolitical distances

2 **Investigate the relevance of geopolitical divergences in bilateral financial linkages.**

*Gravity-type regressions; geopolitical factors matter, especially for portfolio investment involving EA countries.

Time-series focus: global risk aversion

3 **Assess the impact of a global geopolitical shock on euro area portfolio flows.**

* Bayesian VAR models; Euro area appears to have "safe-haven" characteristics when a shock hits. But this dynamic is not guaranteed.

BILATERAL CROSS-BORDER INVESTMENT DATA

- **FDI** [IMF's CDIS]
  - Large share of conduit FDI distorts ultimate investor-destination linkages
  - Estimate inward FDI data on an ultimate investor basis, relying on the probabilistic approach of Casella (2019, UNCTAD).

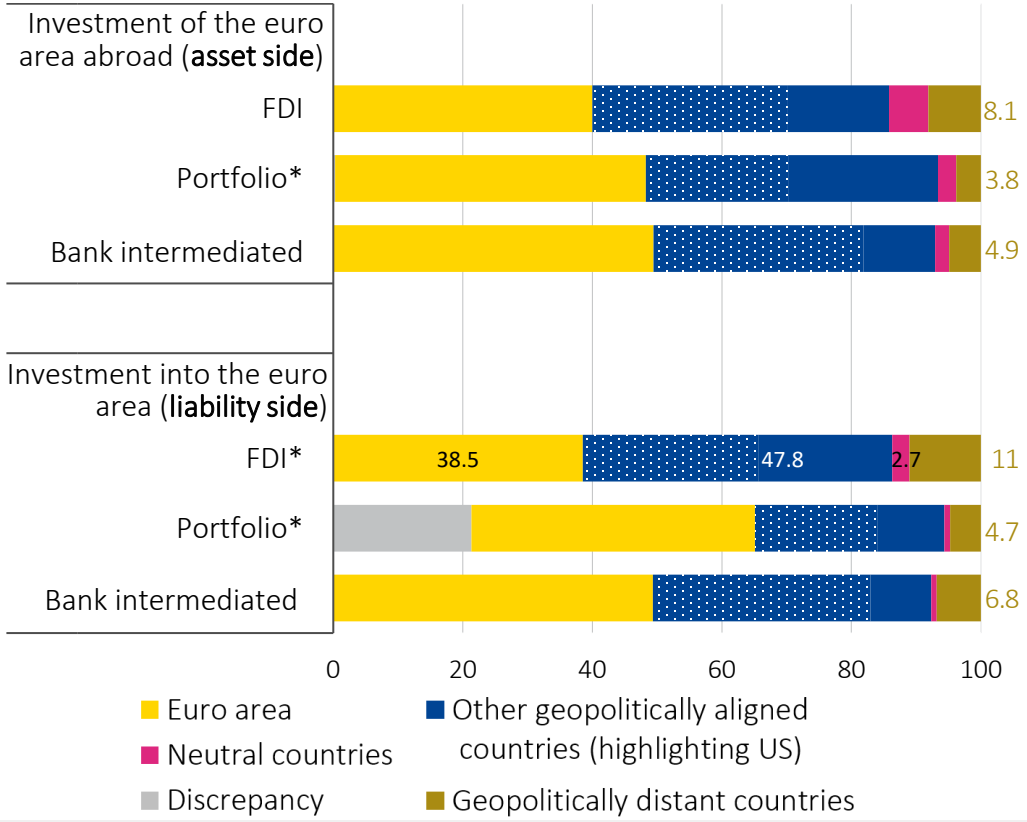
- **Portfolio equity/debt** [IMF's CPIS]
  - Positions are restated to their ultimate issuing country using Coppola et al. (2021)'s reallocation matrices
  - Portfolio liabilities held by CBs as FX reserves, reported as an aggregate, are distributed to specific partner countries (using reserves' currency composition datasets, e.g. Chinn et al. 2021, Arslanalp et al. 2022, IMF's IRFCL, CB's annual reports)

- **Bank-intermediated** (loans & deposits) [BIS's LBS]
  - When possible, restate the "bank-to-country" format into a "country-to-country" network

EURO AREA EXPOSURES ARE UNEVEN…

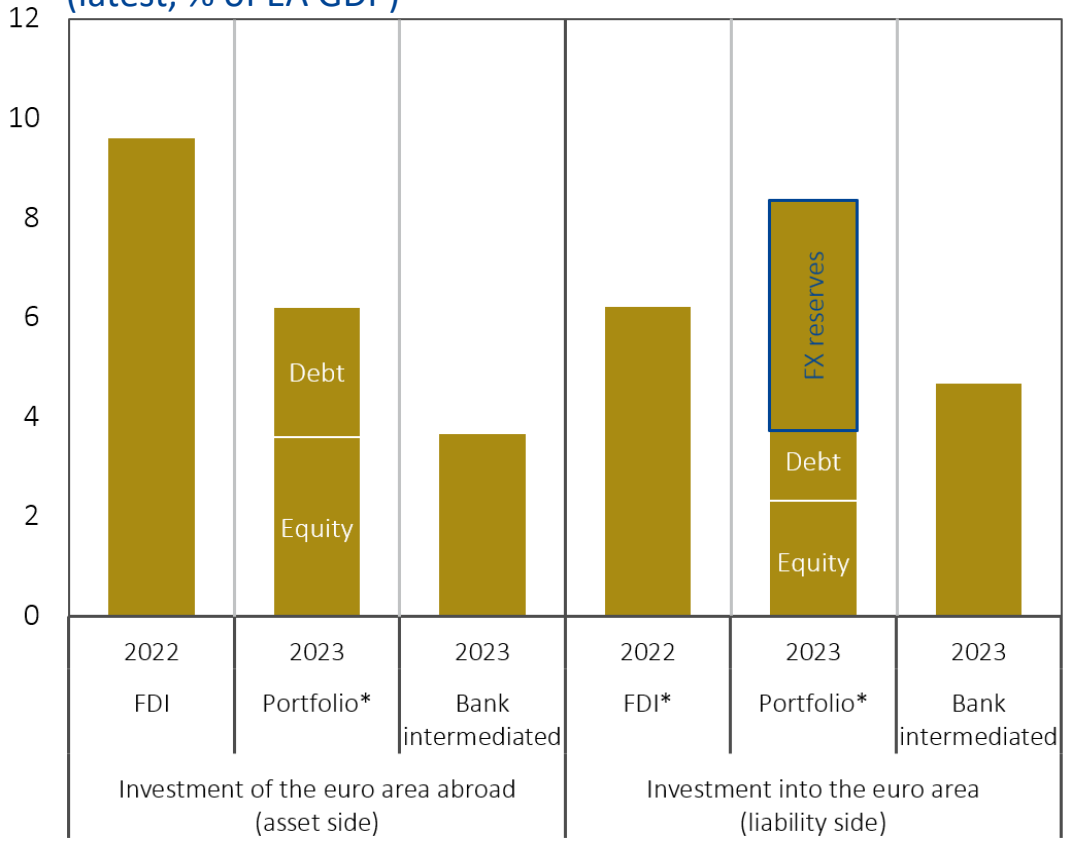
Euro area has strong cross-border investment ties with geopolitically aligned countries…

(latest, % of total)



…but has non-trivial exposures to more distant countries, mainly in FDI and portfolio liabilities held as reserves

(latest, % of EA GDP)

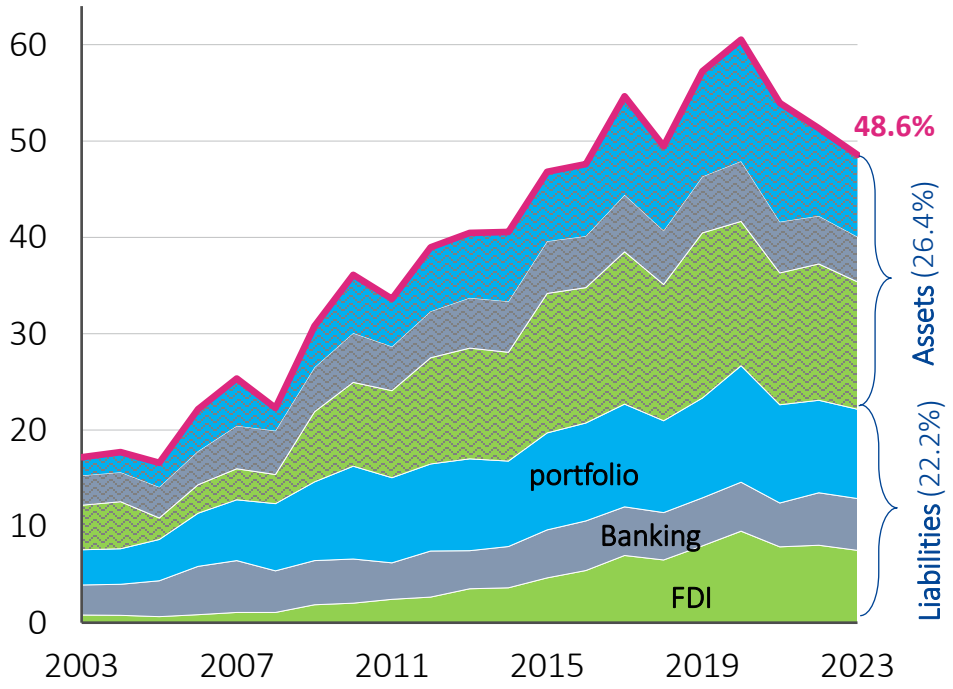


* restated: inward FDI estimated on an ultimate basis using the probabilistic approach of Casella (2019); Portfolio positions restated based on reallocation matrices from Coppola et al. (2021) and including securities liabilities held as reverse assets by foreign central banks.

...AND CHANGED OVER TIME

Despite recent reversal, exposures to more distant countries have increased sharply...

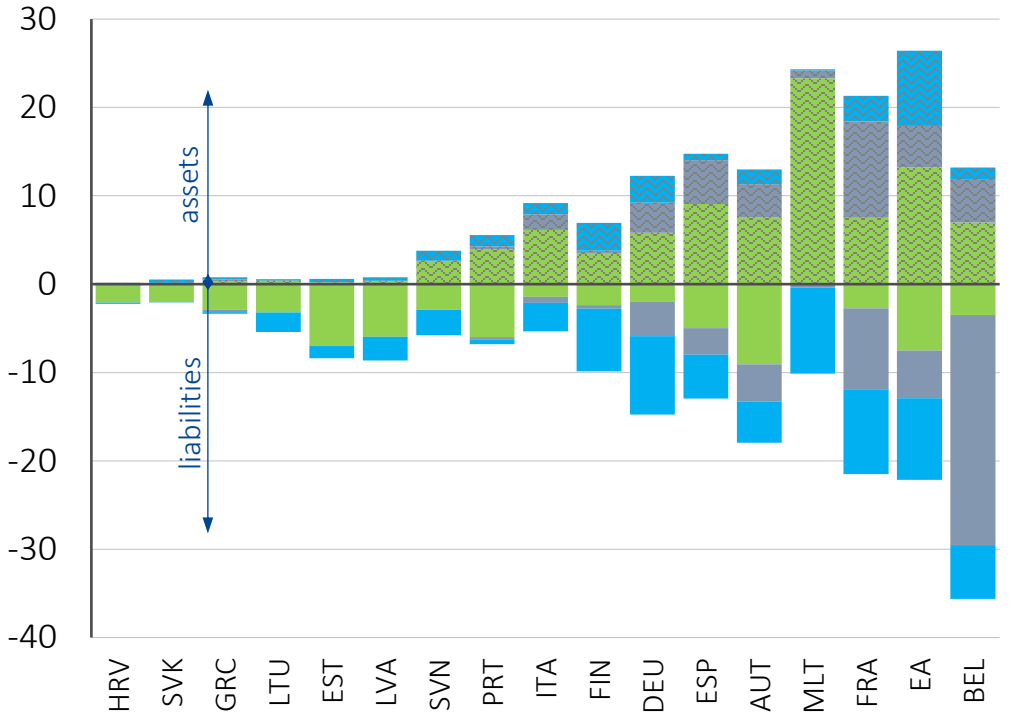
Aggregate gross exposures at risk, decomposed by direction & instruments (% of EA GDP)



Source: ESM's calculations.

...and vulnerabilities vary widely across euro area countries

decomposed by member states (% of country GDP, 2023Q2)



Source: ESM's calculations.

CROSS-SECTION SENSITIVITY TO GEOPOLITICAL DISTANCE

Gravity model for cross-border capital allocation

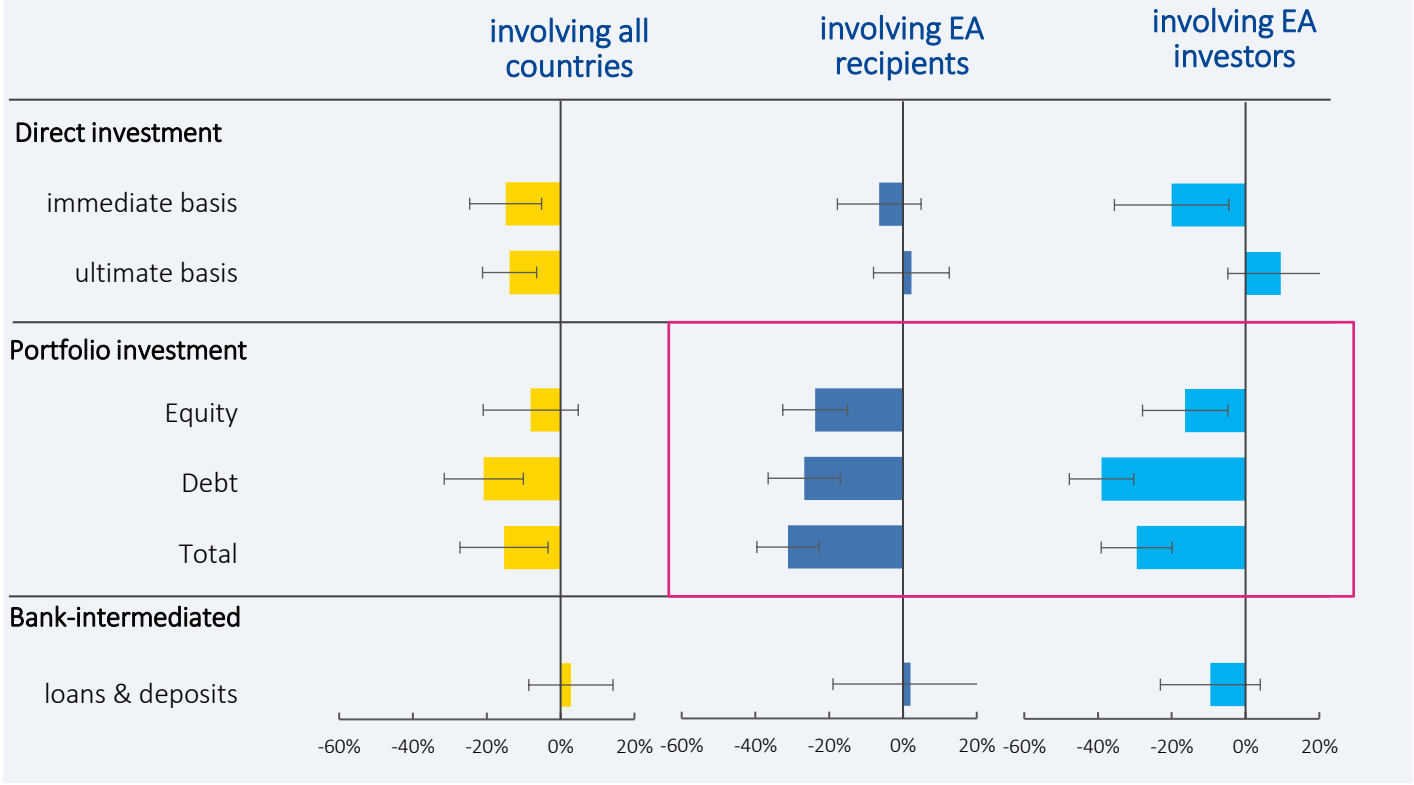
Share of recipient country *i* in the source country *j* overall cross-border investment

$Poldist_{ijt-1}$	**bilateral geopolitical distance** (interacted with EA dummy)
X_{ij}	bilateral controls (e.g. geographic distance)
$\alpha_{it} + \alpha_{jt}$	recipient-year, source-year FE

Regressions from 2005-2022, using PPML. Capture mostly cross-sectional differences in geopolitical distance (rather than within-country pair time variation)

Sensitivity to geopolitical distance is particularly pronounced for portfolio investments from and to euro area countries

(semi-elasticities to a one standard deviation in geopolitical distance, in %)



Source: ESM's calculations.

TIME-SERIES PERSPECTIVE: BAYESIAN VAR MODELS CONSTANT-PARAMETER AND REGIME-SWITCHING

Bayesian VAR models with monthly data from 2000 to 2023

Effect of a shock to the global geopolitical risk index on net and gross flows of portfolio equity and debt

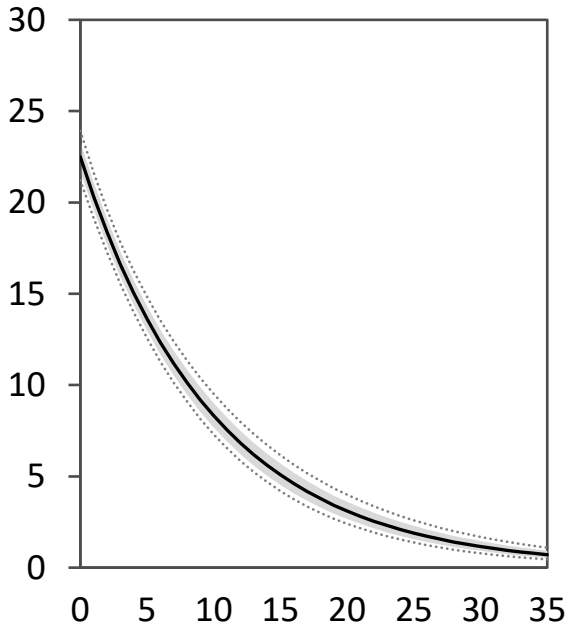
- Include different push and pull factors that could drive portfolio flows.
- **Global geopolitical risk (GPR) index (Caldara and Iacoviello, 2022):** adverse geopolitical events in major newspapers
- **Push factors:** to capture global risk appetite, financial market uncertainty and US/global financial conditions such as VIX and US National Financial Conditions Index (NFCI) *(Federal Funds rate, US sovereign and corp. bond spreads).*
- **Pull factors:** recipient country characteristics that affect investors' decisions based on local macro fundamentals such as 3-month money market rate and stock market index *(Industrial production, inflation rate, EA fin. conditions)*
- **Other factors:** Oil prices (*economic policy uncertainty index*).
- **Portfolio flows:** net and gross (asset and liability) flows between the EA and rest of the world as a share of GDP.
- **GPR shock** identified by Cholesky decomposition (ordering first the GPR index followed by VIX, oil prices, US NFCI, 3-month money market rate, stock market index and portfolio flow variable). ➡ 7-variable models with 6 lags

RISING GEOPOLITICAL TENSIONS REDUCE INVESTORS' RISK APPETITE

Constant-parameter BVAR models

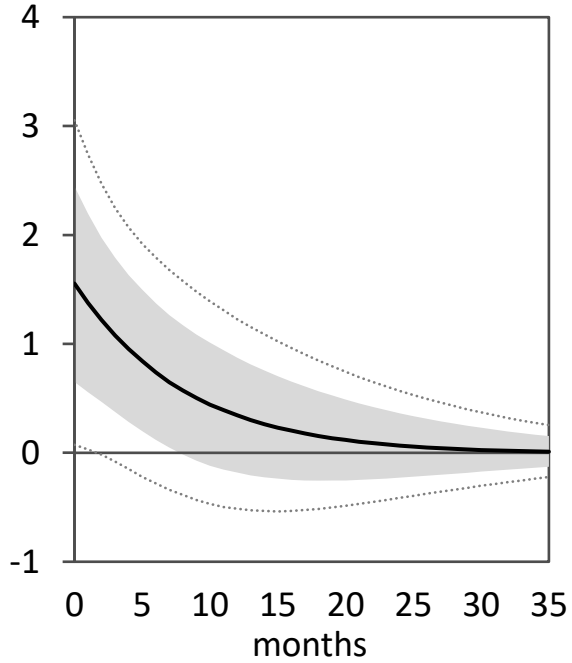
Heightened geopolitical risks leads to…

Geopolitical risk index (log)



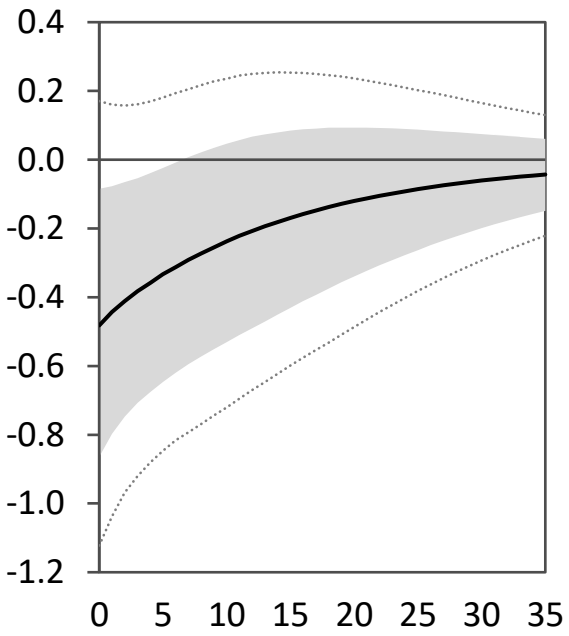
a rise in global financial uncertainty…

VIX (log)



a decline in euro area stock prices

STOXX 600 index (log)



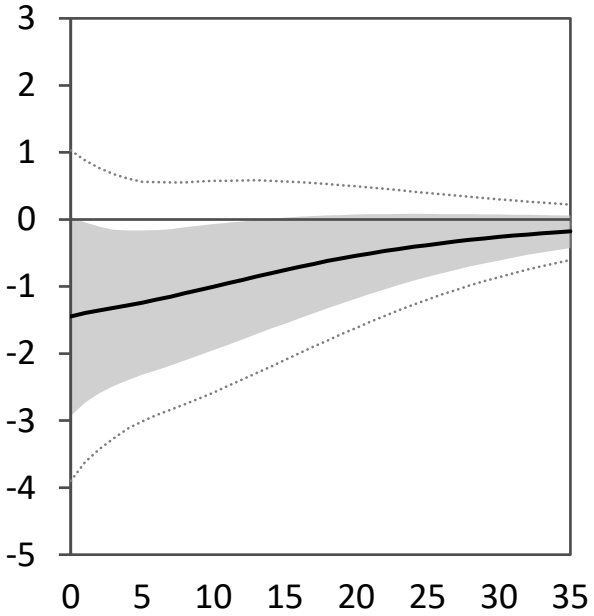
Sources: ESM 's calculations based on Eurostat and Haver Analytics. Geopolitical risk (GPR) index from Caldara and Iacoviello (2022).

EA INVESTORS RETRENCH FROM FOREIGN EQUITIES WHILE FOREIGN INVESTORS APPEAR TO BUY EURO AREA EQUITIES

Constant-parameter BVAR models

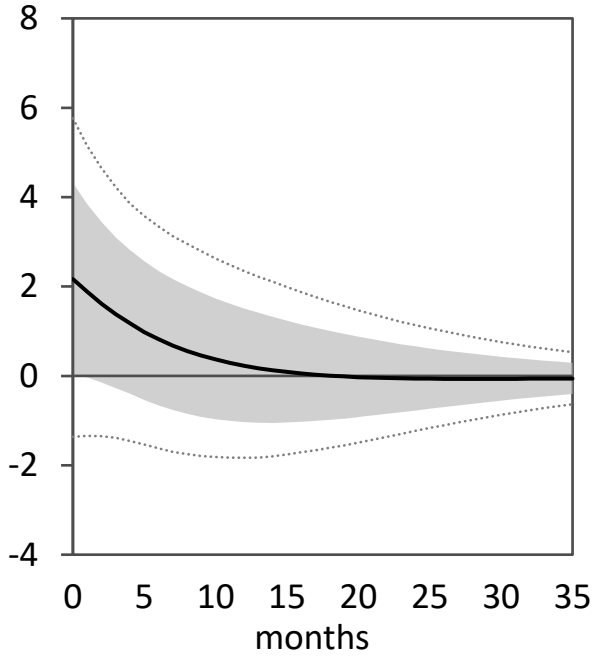
Euro area investors tend to sell foreign equities

Portfolio equity asset flows (% of EA GDP)



while foreign investors tend to purchase euro area equities

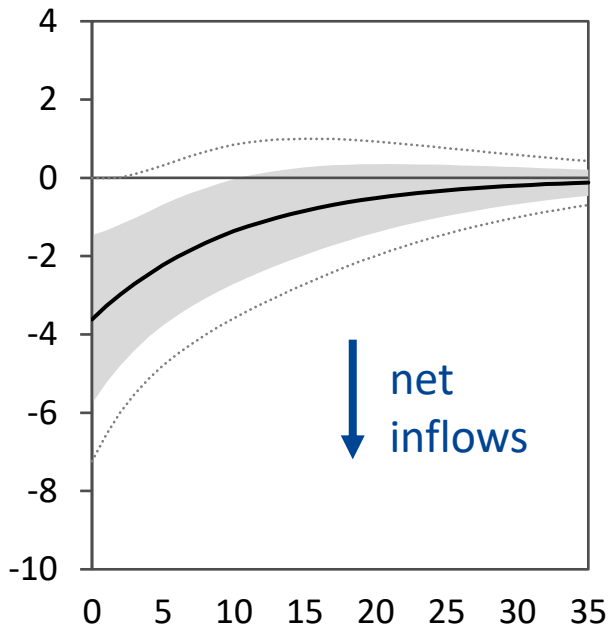
Portfolio equity liability flows (% of EA GDP)



leading to net equity inflows into the euro area

Portfolio equity net flows (% of EA GDP)

Net = assets - liabilities



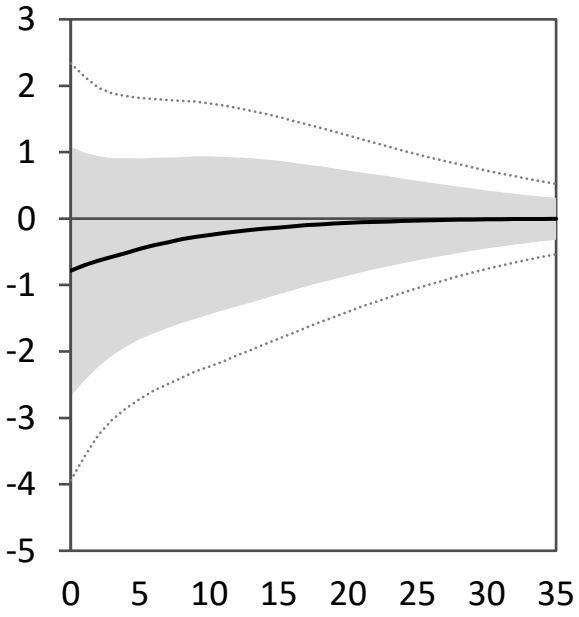
Sources: ESM 's calculations based on Eurostat and Haver Analytics. Geopolitical risk (GPR) index from Caldara and Iacoviello (2022).

EURO AREA APPEARS TO HAVE SAFE-HAVEN CHARACTERISTICS IN THE EVENT OF A GEOPOLITICAL RISK SHOCK

Constant-parameter BVAR models

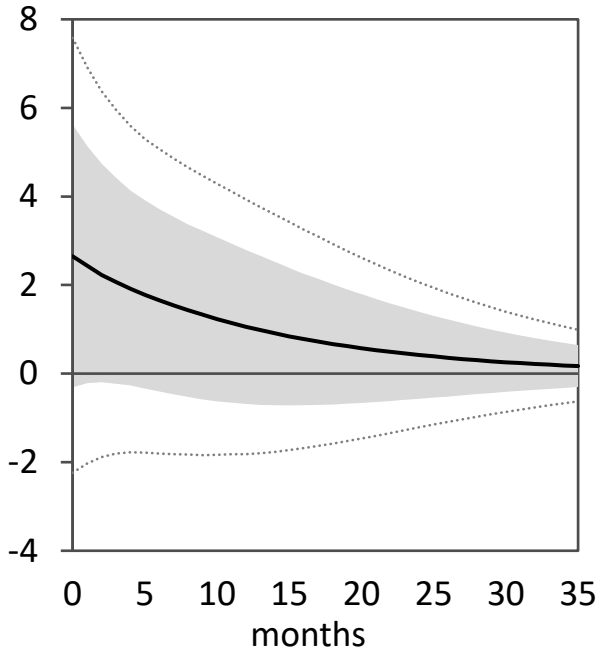
While the results for debt asset flows are less clear

Portfolio debt asset flows (% of EA GDP)



foreign investors tend to purchase euro area debt

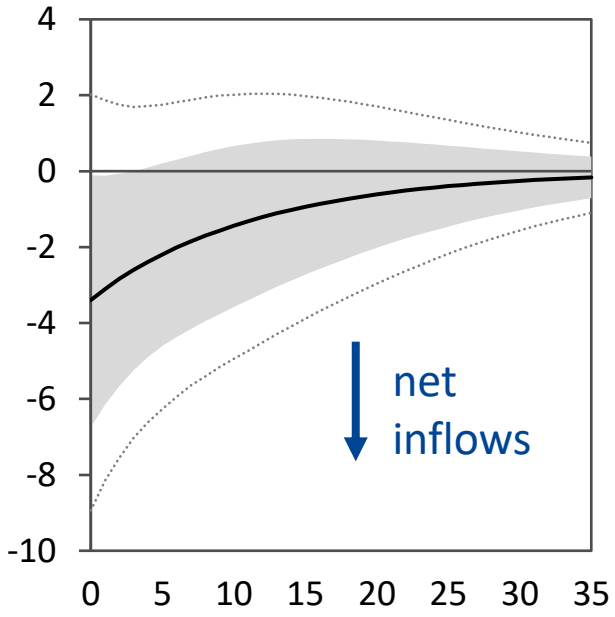
Portfolio debt liability flows (% of EA GDP)



leading to net debt inflows into the euro area

Portfolio debt net flows (% of EA GDP)

Net = assets - liabilities



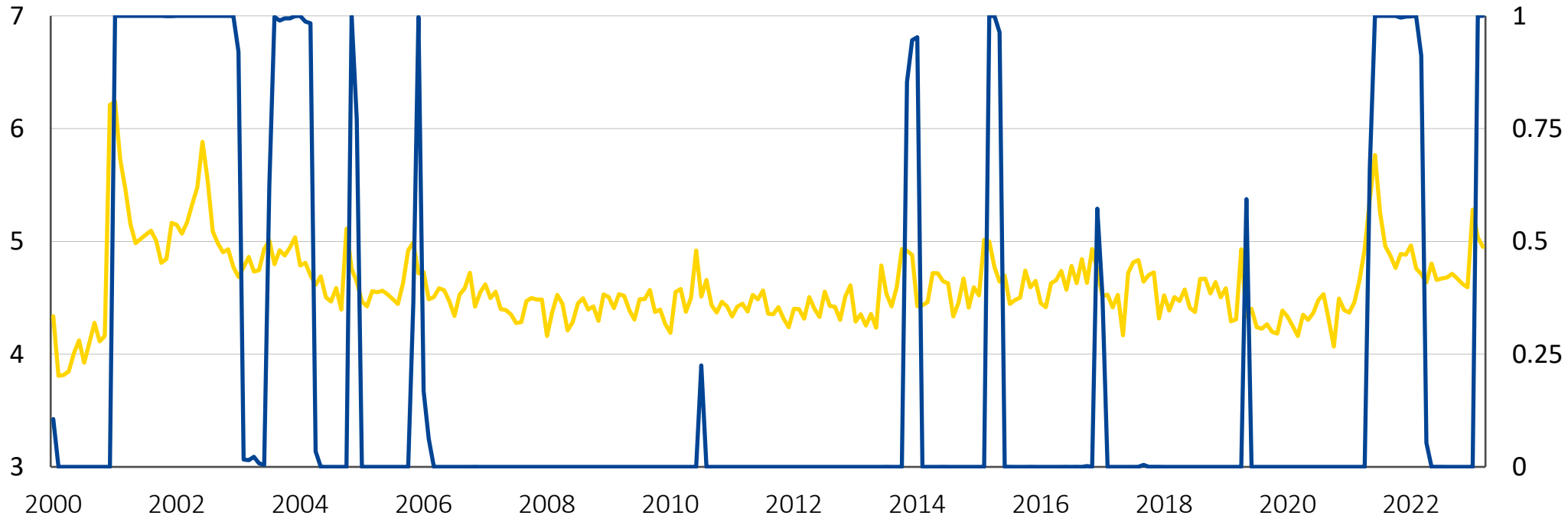
Sources: ESM 's calculations based on Eurostat and Haver Analytics. Geopolitical risk (GPR) index from Caldara and Iacoviello (2022).

INVESTORS' APPETITE MAY CHANGE IN A LOW VS. HIGH GEOPOLITICAL RISK

Regime-switching BVAR models

Long periods of low geopolitical tensions, interspersed with short periods of heightened risks

Geopolitical risk index (yellow, left-axis) and probability of high geopolitical risk regime (blue, right-axis)



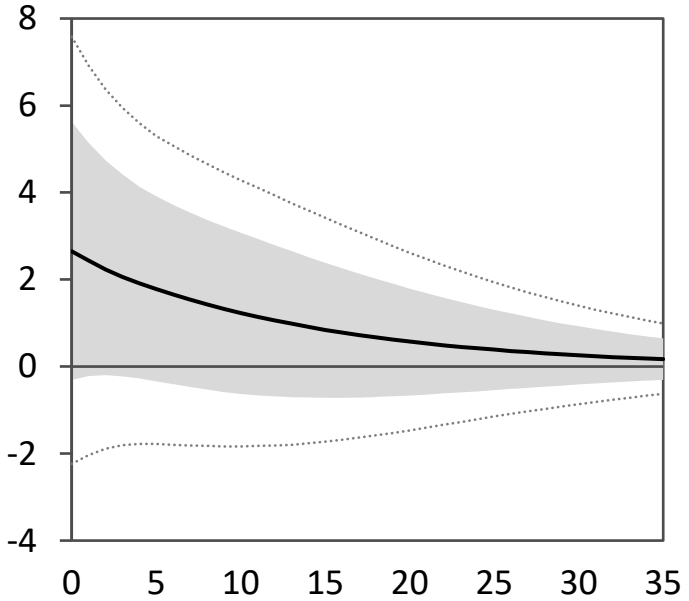
Sources: ESM 's calculations based on Eurostat and Haver Analytics. Geopolitical risk (GPR) index from Caldara and Iacoviello (2022). The probabilities of low and high geopolitical risk regimes are computed based on an endogenous Markov regime-switching BVAR model that detects different regimes based on the level of the GPR index.

A GEOPOLITICAL SHOCK CAN TRIGGER OUTFLOWS FROM EURO AREA DEBT, AND THEREBY INCREASE RISKS TO EXTERNAL FINANCING

Regime-switching BVAR models

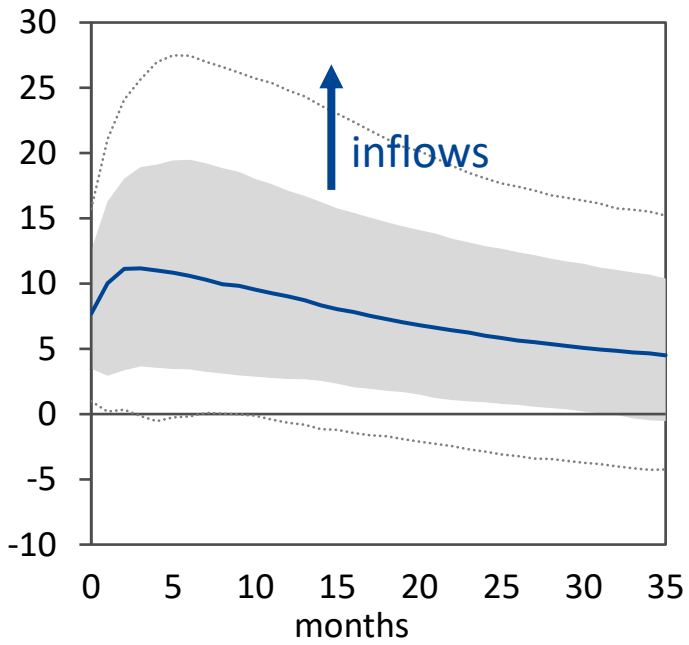
Although foreign investors usually tend to purchase EA debt

Portfolio debt liability flows (% of EA GDP)



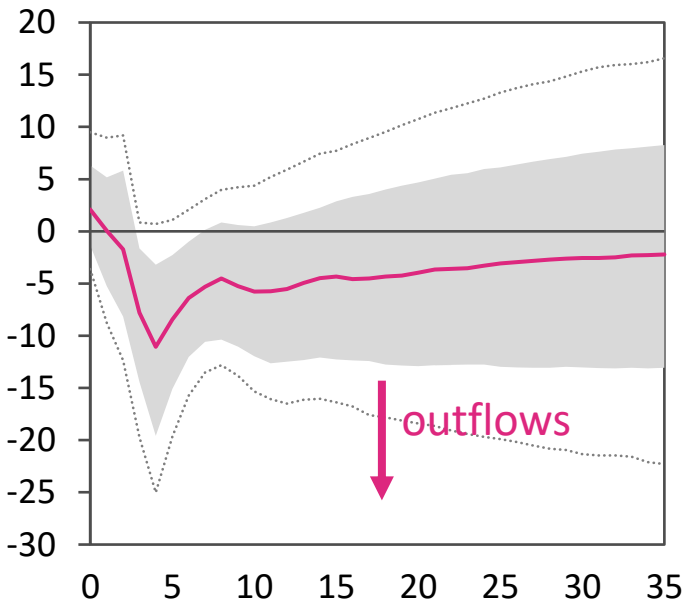
as in a low geopolitical risk regime,

Portfolio debt liability flows (% of EA GDP) in a low geopolitical risk regime



in a high-risk regime, they can liquidate their debt holdings

Portfolio debt liability flows (% of EA GDP) in a high geopolitical risk regime



Sources: ESM 's calculations based on Eurostat and Haver Analytics. Geopolitical risk (GPR) index from Caldara and Iacoviello (2022).

TAKEAWAYS

1 **The euro area appears overall resilient to financial fragmentation.**
Yet, exposures to more distant countries are non-negligible and increased over time.
Vulnerabilities vary widely across EA countries.

2 **Geopolitical distance shape bilateral financial linkages.**
Portfolio investments from and to the euro area are sensitive to geopolitical distance.
FX reserve holdings appear less sensitive but can still be affected.

3 **The euro area "safe-haven" characteristics may change with geopolitical shock.**
Portfolio debt outflows can occur in a state of high geopolitical risks.

Thank you for your attention!

For more details, see: ESM-AMRO Discussion Paper (2024)

Geoeconomic fragmentation: Implications for the euro area and ASEAN+3 regions

European Stability Mechanism

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