

Geopolitical Risk: When it Matters; Where it Matters. Evidence from International Portfolio Allocations

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Geopolitical Risk May Lead to Economic Fragmentation

The world has become a dangerous place:

- ▶ Russia invasion of Ukraine and tensions in the Middle East have sent geopolitical risk indexes to the roof
- ▶ Even NATO is showing cracks

Geopolitical risk may lead to:

- ▶ Economic fragmentation ('nearshoring', 'onshoring', 'friendshoring')
- ▶ Financial fragmentation (sanctions, expropriations and an uncertain investment environment)

Our work

Focusing on bond mutual funds, we provide evidence of the impact of geopolitical risk on international investors:

- ▶ How do fund managers modify a country's portfolio weight when geopolitical risk affects that country?
- ▶ How do fund managers modify their overall portfolio composition? Are there signs of financial fragmentation?
- ▶ How do end investors modify fund flows?

Data

We create a panel merging data on:

1. Geopolitical risk (from Caldara and Iacoviello 2020)

▶ Geopolitical Risk

2. The portfolios of international bond mutual funds (from EPFR Global)

▶ Portfolios

We focus on **actively-managed international bond funds** that are **domiciled in Anglophone countries and Luxembourg**

Geopolitical Risk and Portfolio Weights

Methodology

Baseline specification is derived from the LOM of portfolio weights

$$\omega_{ijt} = \beta\omega_{ijt-1} + \zeta(r_{ijt} - r_{it}) + \gamma GPRC_{jt} + \psi_{ij} + \psi_t + \nu_{ijt}.$$

- ▶ ω_{ijt} : Portfolio weight of country j at time t in fund i
- ▶ $(r_{ijt} - r_{it})$: Excess returns of country j
- ▶ $GPRC_{jt}$: Country j exposure to geopolitical risk
- ▶ ψ_{ij} : Fund-country of destination fixed effects (mandate)
- ▶ ψ_t : Time fixed effects
- ▶ To control for factors varying at the country level and over time we use data from Consensus

▶ Econometric Model

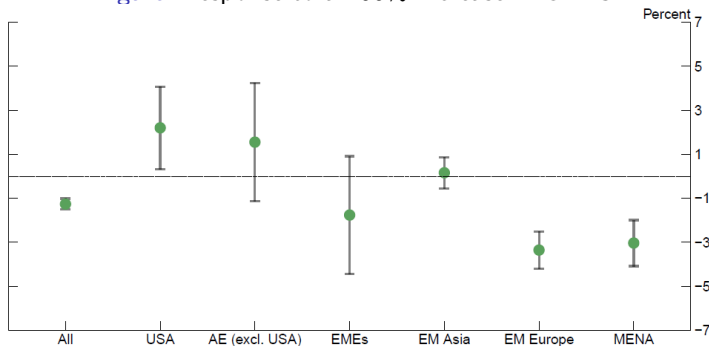
GPR Has A Modest Negative Impact Portfolio Weights

	ω_{ijt}
ω_{ijt-1}	0.873*** (0.00458)
$r_{jt} - r_{it}$	0.754*** (0.0372)
GPRC	-0.00631*** (0.000763)
N	584102
Fund-Country FE	Yes
Time Fixed Effects	Yes
Asset	Bonds

- ▶ 200% increase of GPR \rightarrow 1.3% (5% of $\sigma_{\omega_{ijt}}$) decline of portfolio weight on the impact

Impact Is Stronger in EMEs

Figure: Response to a 200% Increase in GPRC

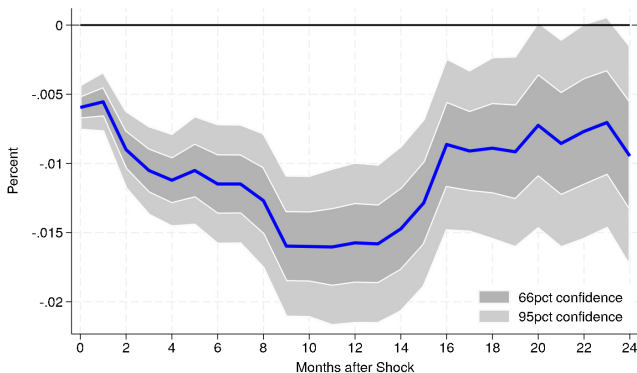


Extreme Manifestations of GPR Drive the Results

	ω_{ijt}	ω_{ijt}	ω_{ijt}
ω_{ijt-1}	0.913*** (0.00475)	0.913*** (0.00471)	0.913*** (0.00475)
$r_{jt} - r_{it}$	0.953*** (0.0475)	0.970*** (0.0482)	0.949*** (0.0474)
ln GPRC	-0.00117 (0.00107)	-0.00249** (0.00106)	0.000188 (0.00109)
ln GPRC × High GPRC	-0.0445*** (0.00383)		-0.0384*** (0.00384)
ln GPRC × High GPRW		-0.0117*** (0.00103)	-0.00634*** (0.000964)
N	280982	280982	280982
Fund-Country FE	Yes	Yes	Yes
Time Fixed Effects	Yes	Yes	Yes

Impact of GPR Is Persistent

Figure: Response of ω_{ijt} to Geopolitical Risk



- Peak impact is reached after 10-12 months: 200% increase in GPRC → 3.8% decline of portfolio weight

Portfolio Composition

Financial Fragmentation

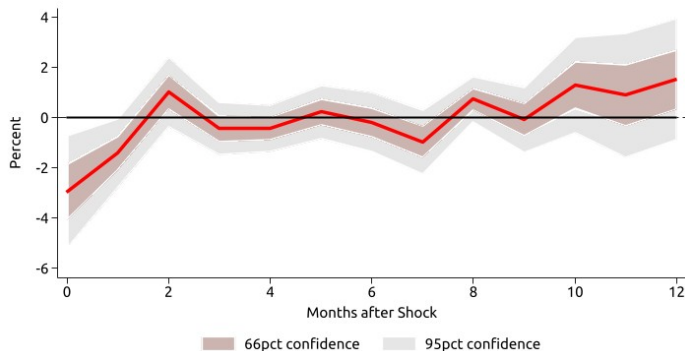
	n° Countries	HHI	Cash	Ave. Dist vs US
Dep var $_{t-1}$	0.919*** (0.00849)	0.897*** (0.00800)	0.474*** (0.0183)	0.814*** (0.0690)
GPR Exp $_{t-1}$	-0.000230 (0.00215)	-0.000654 (0.00376)	-0.0711*** (0.0254)	-0.000212 (0.00345)
GPRW	-0.00838*** (0.00233)	0.0111*** (0.00370)	0.0819*** (0.0297)	-0.00976*** (0.00345)
GPRW * GPR Exp $_{t-1}$	-0.00371*** (0.00128)	0.00315* (0.00187)	0.0156 (0.0156)	-0.00801*** (0.00225)
N	25384	25384	20790	25384
Fund and TS Controls	Yes	Yes	Yes	Yes
Fund FE	Yes	Yes	Yes	Yes
Time Fixed Effects	No	No	No	No
Control Variables	Yes	Yes	Yes	Yes

- N° of destination countries and political distance decline. Concentration and holdings of cash increase

End Investors

Flows Decline

Figure: Response of f_{it} to a Geopolitical Risk Shock



- Fund flows decline on the impact, but recover quickly

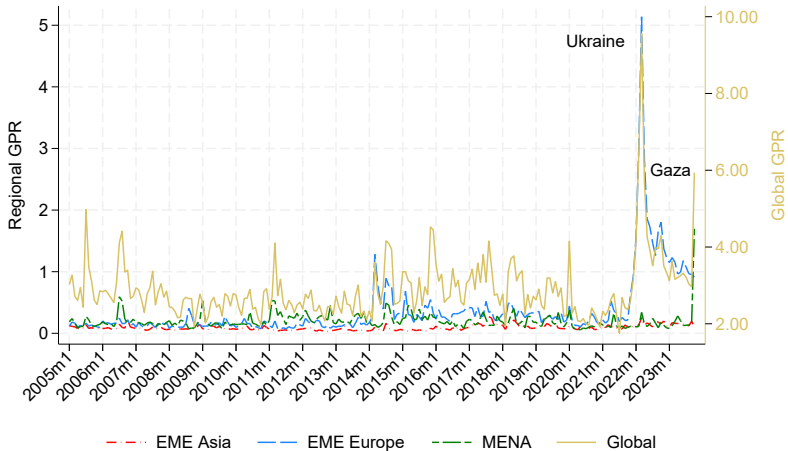
Recap of the Main Findings

- ▶ The impact of GPR on portfolio weights is negative, persistent, and statistically significant
- ▶ There are places **where** GPR matters more, and periods **when** it matters more:
 - ▶ Where: EMEs, especially Emerging Europe and MENA
 - ▶ When: GPR is high
- ▶ GPR triggers financial fragmentation:
 - ▶ The number of destination countries and their political distance fall
- ▶ Fund flows decline sharply on the impact but recover quickly

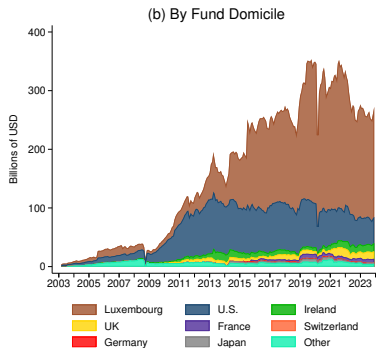
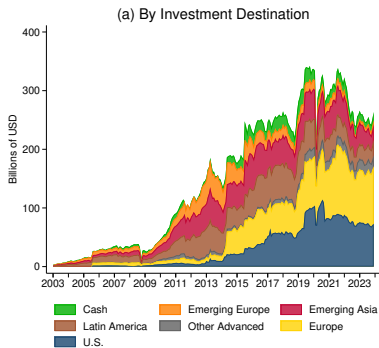
Policy Considerations

- ▶ Policy makers concerned about the financial stability implications of GPR, should focus on periods of elevated GPR, especially in EMEs
- ▶ Policy makers should react promptly. Fund managers adjust portfolios slowly but persistently
- ▶ GPR may undermine globalization, as it triggers financial fragmentation
- ▶ Bond funds promote financial stability, as they intermediate between fickle end investors and financial markets. Because of that, they could become stressed

Geopolitical Risk Indexes

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Portfolios

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Source: EPFR, authors' calculations

Econometric Specification I

We derive our specification from the law of motion of portfolio weights w_{ijt} (Raddatz & Schmukler 2012):

$$w_{ijt} \equiv w_{ijt-1} \frac{R_{ijt} + f_{ijt}}{R_{it} + f_{it}}.$$

Loglinearizing:

$$\omega_{ijt} = \omega_{ijt-1} + (r_{ijt} - r_{it}) + (f_{ijt} - f_{it}) + \epsilon_{ijt}$$

- ▶ ω_{ijt} : Portfolio weight of country j at time t in fund i
- ▶ $(r_{ijt} - r_{it})$: Excess returns of country j
- ▶ $(f_{ijt} - f_{it})$: Relative flows of new funds to country j

Econometric Specification II

The relative flow equation is:

$$f_{ijt} - f_{it} = \delta \omega_{ijt-1} + \phi(r_{ijt} - r_{it}) + \gamma GPRC_{jt} + \psi_{ij} + \theta_t + \nu_{ijt}$$

- ▶ $GPRC_{jt}$: log of country-specific geopolitical risk
- ▶ ψ_{ij} & θ_t Factors specific to the fund-country match and time

Combining the law of motion for ω_{ijt} with the relative flow equation, we get our baseline specification:

$$\omega_{ijt} = \beta \omega_{ijt-1} + \zeta(r_{ijt} - r_{it}) + \gamma GPRC_{jt} + \psi_{ij} + \psi_t + \nu_{ijt}.$$

- ▶ We approximate r_{ijt} with r_{jt} [▶ Back](#)

NATO Membership Mitigates the Impact of GPRC

	ω_{ijt}	ω_{ijt}
ω_{ijt-1}	0.914*** (0.00470)	0.917*** (0.00817)
$r_{jt} - r_{it}$	0.981*** (0.0485)	0.813*** (0.0544)
GPRC	-0.00857*** (0.00106)	-0.00828*** (0.00153)
GPRC * NATO	0.0128*** (0.00264)	0.00631* (0.00321)
Fund-Country FE	Yes	Yes
Time Fixed Effects	Yes	Yes
Domicile	Anglo/Lux	NATO

► Portfolio weights of NATO EMEs are less sensitive to GPRC

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