Finance Research Letters 101 (2026) 110078

Contents lists available at ScienceDirect

Finance Research Letters

journal homepage: www.elsevier.com/locate/frl

Local and anglosphere-based geopolitical risk and sovereign stress in the Euro Area ☆

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ARTICLE INFO

JEL classification:
E44
F51
G01
H63
F45
G15

Keywords:
Sovereign stress
Local projections
Euro area
Sovereign debt markets
Local geopolitical risk
Anglosphere-based geopolitical risk

ABSTRACT

Is Geopolitical Risk (GPR) detrimental to sovereign stress in the Euro Area (EA)? We address this question by estimating the dynamic effects of GPR shocks—originating either globally or in specific countries—on EA sovereign stress. Our analysis employs the local projections approach alongside the SovCISS index, which captures a broad dimension of sovereign distress. We find that neither global GPR shocks nor those originating in smaller Euro Area countries have a statistically significant impact on EA sovereign stress. In contrast, GPR shocks originating in Germany generate sizable effects, against the backdrop of the recent surge in geopolitical risk following the Russian invasion of Ukraine. Furthermore, GPR measures for Germany based on local-language newspapers produce stronger effects on EA sovereign stress than those measured by Anglosphere-based indices, underscoring the importance of how GPR is measured. Our results provide new evidence on the asymmetric responses of Euro Area-wide sovereign stress to global and country-specific GPR shocks, offering economically relevant insights for the design of targeted surveillance and stabilization policies aimed at containing spillovers and preserving sovereign debt market stability.

1. Introduction

Sovereign stress in the Euro Area (EA) has risen sharply following the recent escalation of geopolitical tensions, most notably the Russian invasion of Ukraine, reaching levels comparable to those observed during the sovereign debt crisis. Fig. 1 illustrates this evolution using the ECB Sovereign Composite Indicator of Systemic Stress (SovCISS; Garcia-de Andoain and Kremer, 2017), a comprehensive measure capturing credit and liquidity risk, volatility, transaction costs, and overall liquidity conditions in sovereign debt markets. While sovereign stress increased markedly during the global financial crisis and the COVID-19 pandemic—highlighted by the grey shaded areas in Fig. 1—it surged again after the outbreak of the war in Ukraine and during subsequent geopolitical episodes (red shade in Fig. 1).

Geopolitical risk (GPR) is a key driver of sovereign stress. Heightened geopolitical tensions increase financial market volatility and induce fiscal interventions often associated with higher military or security spending, raising concerns about public debt

☆ This work has been supported by the project "L'économie mondiale face à l'insécurité géopolitique : quels enjeux et solutions pour les années à venir ?" funded by the Alliance Paris-Lumières, founded by the University Paris VIII, the University Paris Nanterre, and the CNRS.

The authors are also grateful to the editor, Yizhi Wang, and three anonymous referees for their valuable comments and suggestions, which have significantly improved the paper.

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https://doi.org/10.1016/j.frl.2026.110078
Received 16 February 2026; Received in revised form 23 April 2026; Accepted 24 April 2026
Available online 27 April 2026

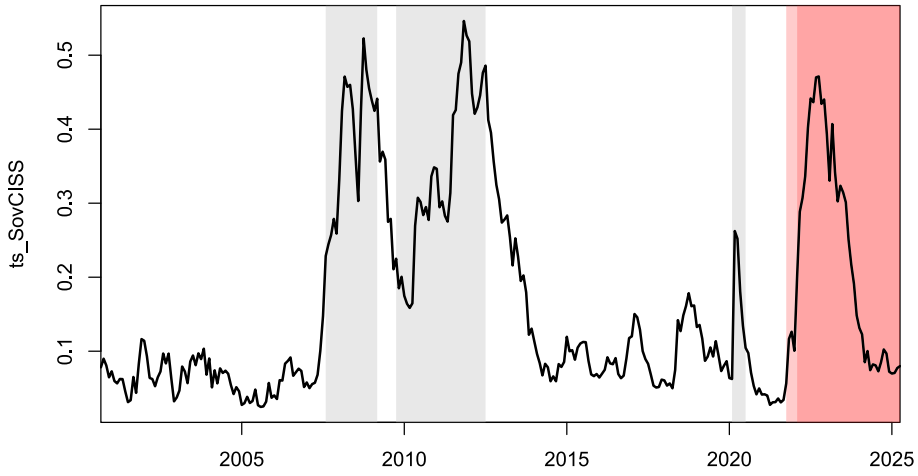

Fig. 1. Sovereign stress in the Euro Area.
Note: Grey areas denote financial and pandemic recessions; light and dark red areas indicate, respectively, the escalation of tensions and the post-Russian invasion of Ukraine period.

sustainability and, ultimately, sovereign risk premia. Moreover, an important channel operates through effects on the real economy. Indeed, GPR shocks exert adverse real effects, as shown by Caldara and Iacoviello (2022), also affecting the economy through disruptions in critical sectors.[1] Furthermore, recent empirical evidence provided by Reynolds and Lloyd (2026) shows that GPR shocks amplify macroeconomic tail risks, particularly growth-at-risk and inflation-at-risk. This implies that such shocks may harm the economy and result in higher fiscal risks. Additionally, GPR shocks disrupt international trade and capital flows, and undermine financial stability, with potentially systemic consequences for sovereign debt markets.

The literature has mainly examined the effects of GPR on narrow sovereign risk indicators, such as bond yields, spreads, or credit default swaps (CDS) (e.g. Afonso et al., 2024; Bratis et al., 2024; Demiralay et al., 2024; Papavassiliou, 2025). While informative, the focus on such narrow indicators does not fully capture the broader and systemic dimensions of sovereign market stress. Only (Jiang et al., 2025) considers the broader SovCISS index, focusing on spillovers across EA countries using Granger causality tests. In addition, existing studies typically rely on global or country-specific GPR indices constructed by Caldara and Iacoviello (2022). Recent evidence suggests, however, that these anglosphere-based indices, derived from US newspapers, may fail to capture country-specific risk perceptions, while GPR measures based on local newspapers and languages better identify domestic geopolitical shocks and yield different economic responses (Bondarenko et al., 2024; Alonso-Alvarez et al., 2025).

This paper addresses these limitations and contributes to the literature along three dimensions. First, we examine the impact of geopolitical risk on the *level* of systemic sovereign stress in the Euro Area, as measured by the SovCISS, rather than on individual sovereign risk indicators. The SovCISS index aggregates several market-based dimensions of sovereign stress, including risk premia, volatility, and liquidity conditions, thereby providing a comprehensive measure of sovereign market frictions and capturing how geopolitical shocks are priced in sovereign debt markets at the systemic level. Second, we disentangle the effects of global and country-specific GPR shocks on EA-wide sovereign stress. This allows us to identify which geopolitical risk shocks are systemically relevant for the Euro Area. Geopolitical risk affects sovereign debt markets by increasing uncertainty about future fiscal conditions, growth prospects, and policy responses. In financial markets, such uncertainty is priced through higher risk premia, greater volatility, and tighter liquidity conditions. These effects are likely to be amplified when geopolitical shocks originate in systemically important countries whose fiscal and economic outlooks serve as benchmarks for the broader market. Third, unlike much of the existing literature, we trace the dynamic responses of sovereign stress to GPR shocks using local projections. This approach allows us to move beyond purely contemporaneous effects and to assess how geopolitical shocks propagate over time in sovereign debt markets.

Our results show that neither global GPR shocks nor shocks originating in smaller EA countries significantly affect EA sovereign stress. In contrast, GPR shocks originating in the leading EA country, Germany, generate sizable and persistent increases in EA sovereign stress. This reflects Germany's central role as a pricing reference for sovereign debt in the EA, both directly through its bond market and indirectly through its influence on fiscal expectations and policy credibility. Moreover, this result is consistent with Germany's heightened exposure to recent geopolitical developments, in particular the Russian–Ukrainian war. The Russian invasion of Ukraine exposed Germany's exceptional dependence on Russian energy inputs and triggered large fiscal interventions, including energy price subsidies, defence spending increases, and support to firms and households. As a result, geopolitical shocks affecting Germany may have disproportionate effects on Euro Area-wide sovereign stress, even when similar shocks in other countries do

[1] One example is the tourism sector, for which it is found that GPR shocks are important drivers of demand fluctuations in this sector (Papagianni et al., 2024). Moreover, a related study by Sun et al. (2025) shows that GPR shocks significantly dampen stock market returns in this sector.

not. Finally, we show that GPR measured using German local sources produces stronger effects than German GPR captured by anglosphere-based indices.

The remainder of the paper is organized as follows. Section 2 describes the data and the methodology employed. Section 3 reports and discusses the findings. Section 4 concludes.

2. Data and methodology

We collect monthly data on sovereign stress from the ECB Sovereign Composite Indicator of Systemic Stress (SovCISS), obtained from the ECB Data Portal.[2] The sample spans from September 2000 to April 2025, which determines the period of analysis.[3]

Geopolitical risk is measured using both global and country-specific GPR indices. Global GPR data are taken from Caldara and Iacoviello (2022). To capture local geopolitical shocks, we rely on the recently developed country-specific GPR indices of Alonso-Alvarez et al. (2025), from the Bank of Spain, using local newspapers in the respective national languages. As shown by the authors, these indices capture country-specific risk perceptions that differ from both the global GPR measure and the country-level GPR indices constructed by Caldara and Iacoviello (2022).[4]

Finally, we draw monthly macroeconomic and financial control variables from the EA-MD-QD dataset of Barigozzi et al. (2024).

We estimate the dynamic effects of geopolitical risk (GPR) shocks on sovereign stress in the Euro Area using local projections (Jordà, 2005). This approach is particularly well suited to our analysis, as it allows us to trace the propagation of shocks over time rather than focusing solely on contemporaneous effects, as in simple regression frameworks. Moreover, it is widely used and represents one of the state-of-the-art approaches for estimating impulse response functions.[5] Furthermore, this approach has been widely applied in the empirical literature assessing the effects of GPR shocks on financial outcomes, as in Yilmazkuday (2024a). Specifically, we estimate the following specification:

$$y_{t+h} = \alpha_h + \beta_h \,\mathrm{GPR}_t + \sum_{i=1}^{p} \gamma_{h,i}\, y_{t-i} + \sum_{i=1}^{p} \delta_{h,i}\, \mathrm{GPR}_{t-i} + \sum_{i=1}^{p} \boldsymbol{\theta}'_{h,i}\, X_{t-i} + \varepsilon_{t+h}, \tag{1}$$

where y_t denotes the EA SovCISS index and $h = 0, 1, \ldots, 12$ indexes the forecast horizon in months. The lag length p is set to 12 in the baseline specification, in line with standard empirical practice for monthly data. Indeed, Montiel Olea and Plagborg-Møller (2021) recommend the use of lag-augmented local projections, which are better suited to handling persistent data. Then, Jordà (2005) argue that conventional lag selection criteria are not valid when residuals are autocorrelated, as is typically the case in LPs by construction.[6]

Identification of the GPR shock follows the approach of Caldara and Iacoviello (2022) and Bondarenko et al. (2024). We assume that geopolitical risk affects sovereign stress contemporaneously, while sovereign stress and other macro-financial conditions affect measured GPR only with a lag of at least one month. This recursive short-run restriction is plausible given that GPR indices are constructed to capture exogenous geopolitical events—such as wars, military escalations, and international tensions—that are unlikely to be driven by contemporaneous macroeconomic or financial developments at the monthly frequency. Accordingly, the specification includes contemporaneous GPR and lags of both GPR and sovereign stress.

The vector X_t contains a parsimonious set of monthly macro-financial control variables, namely manufacturing industrial production growth and the short-term interest rate, which proxy for real economic activity and financial conditions, respectively.[7] Including lags of the SovCISS index accounts for persistence in sovereign stress and captures information related to fiscal sustainability and sovereign balance sheet conditions, thereby obviating the need to include public debt or fiscal balance variables, which are only available at quarterly frequency and would constrain the sample and identification strategy.[8]

Under these assumptions, the coefficient β_h identifies the impulse response of EA sovereign stress to an exogenous GPR shock at the horizon h, as it estimates the effect of geopolitical risk while holding all other controls constant. Thus, in this setting, β_h can be interpreted as the causal effect of an identified GPR shock, holding constant lagged sovereign stress, lagged geopolitical risk, and other macro-financial conditions.[9]

[2] The baseline specification uses the real GDP-weighted aggregate index; using the version of the index with equal country weights yields very similar results (see the online appendix).

[3] The GPR series for Ireland starts in January 2001, resulting in the loss of only the first four months of the sample.

[4] We prefer the Bank of Spain indices to those of Bondarenko et al. (2024), as the former cover a larger set of EA countries, including smaller economies. Nevertheless, using the German local GPR index of Bondarenko et al. (2024) yields very similar results (see the online supplemental appendix).

[5] There is a large literature discussing the advantages and disadvantages of LPs and their main alternative, the Vector Autoregression (VAR). We do not review it here, as it falls outside the scope of this study, but we refer the reader to Montiel Olea and Plagborg-Møller (2021), Jordà and Taylor (2025), and Montiel Olea et al. (2025).

[6] However, we check the robustness of the results using different numbers of lags, ranging from five to eleven, and obtain very similar findings (see the online appendix).

[7] Given the moderate sample size, we include a minimal set of controls. Nevertheless, adding other monthly indicators from the EA-MD-QD dataset (Barigozzi et al., 2024)—such as inflation, unemployment, economic sentiment, stock market returns, or the real effective exchange rate—one at a time does not materially affect the results (see the online appendix). Moreover, we also control for country-specific SovCISS indices when estimating the effects of local GPRs on the Euro Area SovCISS, in order to account for country-specific fiscal conditions, and the results remain the same, as shown in the online appendix.

[8] Inflation also plays an important role, as documented in the literature. In particular, GPR shocks have been found to be inflationary and associated with higher inflation uncertainty (Caldara et al., 2025). Relatedly, recent evidence highlights the interaction between GPR, supply chain pressures, and global inflation dynamics, pointing to limited long-run but non-negligible short-run effects of GPR shocks (Asadollah et al., 2024).

[9] This result follows from the Frisch–Waugh–Lovell theorem and allows the identification of shocks in local projections through recursive short-run restrictions as in a VAR with Cholesky identification (Montiel Olea et al., 2025).

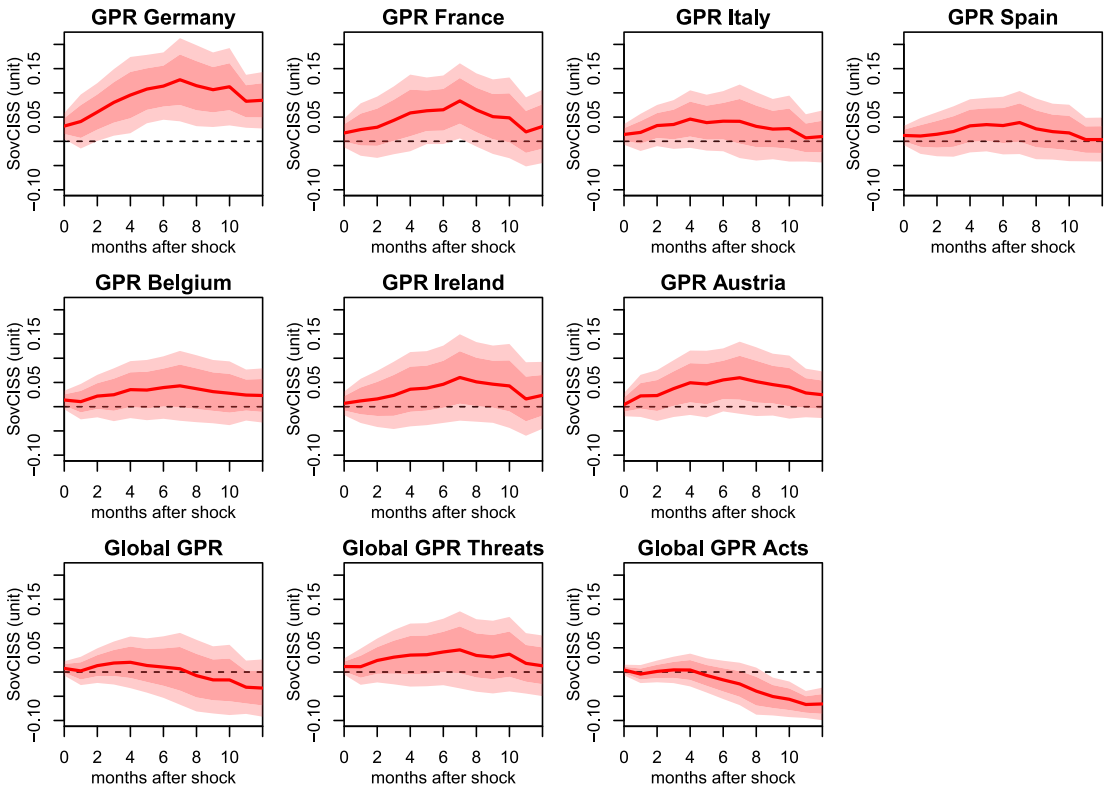

Fig. 2. Euro Area sovereign stress responses to GPR shocks.
Note: IRFs scaled to a three-standard-deviation GPR increase; light/dark shading is 90%/68% HAC-robust CIs.

3. Results and discussion

Fig. 2 summarizes the main findings. To facilitate economic interpretation, we report the responses of the EA SovCISS index to a three-standard deviation increase in each GPR index. This shock size corresponds to the change observed between February and March 2022, or between March and April 2022, during the onset of the Russian invasion of Ukraine for most of the countries considered.

The results show that global GPR shocks do not generate statistically or economically significant effects on EA sovereign stress, as illustrated by the panels in the last row of Fig. 2. Relying exclusively on global GPR measures would therefore lead to the conclusion that geopolitical risk does not affect sovereign stress in the Euro Area. Our findings indicate that this conclusion is misleading. In particular, GPR shocks originating in smaller Euro Area countries, as well as in other large EA economies such as Italy and Spain, do not significantly affect EA-wide sovereign stress, while GPR shocks in France generate a mildly significant increase only after seven months. By contrast, GPR shocks originating in Germany produce sizable and persistent increases in sovereign stress at the EA level.

This result can be rationalized by two main factors. First, Germany plays a systemic role within the monetary union. As a fiscal benchmark and an implicit backstop for the Euro Area, shocks that alter expectations about German public finances or macroeconomic stability are likely to propagate to sovereign debt markets across the entire currency union. We should also acknowledge that this result could, in principle, reflect a "size of economy" effect, given that Germany is the largest economy in the Euro Area. However, the evidence suggests that the result is more closely related to Germany's "systemic" role. In fact, using an equal-country-weighted SovCISS index instead of the GDP-weighted version yields virtually identical results (see the online appendix). This indicates that the finding is not driven by Germany's larger GDP weight mechanically increasing its contribution to Euro Area sovereign stress, and thereby amplifying the estimated effects of German GPR shocks. Rather, it is Germany's systemic importance within the Euro Area that appears to drive the result. Additionally, and closely related to this argument, Germany represents a central hub in European global value chains. As such, GPR shocks originating in Germany may lead to more severe disruptions in trade linkages and capital flows, thereby undermining economic and financial stability and exerting a disproportionate impact on Euro Area-wide sovereign stress. This argument is supported, for example, by the findings of Yilmazkuday (2025), who show that countries more deeply integrated into global value chains exhibit lower exchange rate stability and greater economic vulnerability when exposed to GPR shocks, ultimately translating into a higher risk of sovereign distress. Second, Germany was particularly exposed to recent geopolitical tensions during the 2022–2024 period. Germany's strong dependence on Russian energy

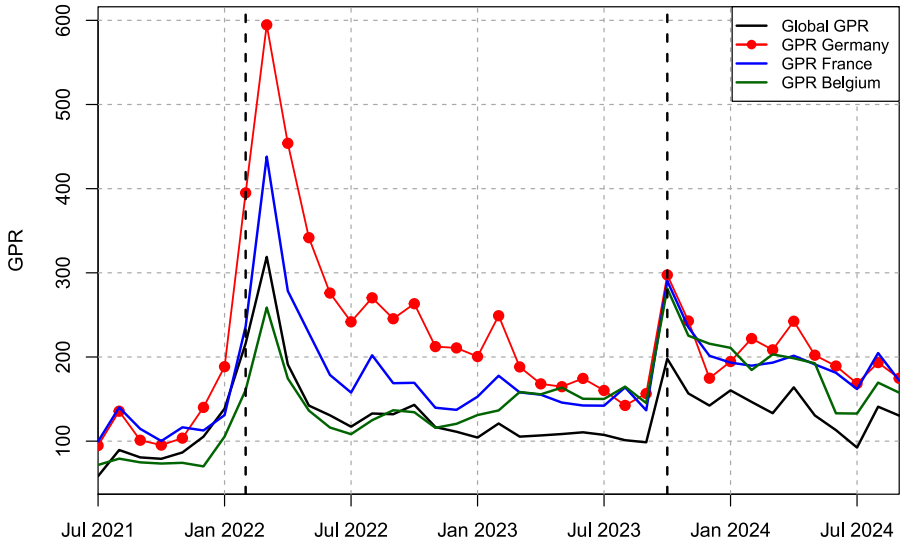

Fig. 3. Recent geopolitical risks developments.
Note: Dashed vertical lines indicate the Russian invasion of Ukraine (Feb. 2022) and the Hamas attack (Oct. 2023).

prior to 2022 implies that geopolitical tensions had immediate implications for inflation dynamics, industrial output, and the scale of fiscal support measures. Indeed, prior evidence has highlighted the important role of GPR shocks in driving increases in both global (Mignon and Saadaoui, 2024) and domestic energy prices, particularly in Euro Area countries (Yilmazkuday, 2024b). Moreover, GPR shocks generate heightened energy-related uncertainty, which in turn acts as a negative demand shock for advanced economies (Yilmazkuday, 2024b). This, in turn, could necessitate substantial subsequent fiscal support.

Fig. 3 provides supporting evidence for this narrative. It shows that Germany experienced unusually elevated levels of geopolitical risk during the 2022–2024 period, following the Russian invasion of Ukraine and during the Israel–Hamas conflict. These increases were markedly larger than those observed at the global level and in other major EA economies (such as France) or smaller EA countries (such as Belgium), with the spike associated with the escalation of the war in Ukraine being particularly pronounced. This finding further suggests that GPR indices based on U.S. newspapers may miss important local events or underestimate their intensity, which are better captured by country-specific measures constructed from local-language newspapers. This discrepancy is particularly evident during the recent period surrounding the Russian–Ukrainian war and the conflict in Gaza, as highlighted in Fig. 3. Additional support is provided by the comparison between the U.S.-based "Anglosphere" index and the German local GPR over a longer sample period (see the online appendix). The former places greater weight on events such as the 9/11 attacks and the Iraq War—episodes in which the United States was more directly involved—whereas the corresponding increase in German GPR is considerably more muted. By contrast, the German local GPR index more accurately captures events that are particularly relevant for Germany, especially those occurring in the latter part of the sample, including conflicts in regions geographically closer to Europe.

Consistent with this evidence, the response of EA sovereign stress to German GPR shocks in Fig. 2 is both statistically and economically meaningful. A three–standard deviation increase in the German GPR index—comparable to the rise observed at the onset of the war in Ukraine—raises the EA SovCISS index by about 0.1 units after five months, with the response peaking slightly above this level. While this magnitude may appear modest, it is economically relevant, as it matches the increase in the EA SovCISS observed between February and March 2022.

The significant response of Euro Area sovereign stress to German geopolitical risk shocks is consistent with a risk-premium channel. Heightened geopolitical uncertainty in Germany—particularly following the Russian invasion of Ukraine—translated into increased uncertainty about energy costs, fiscal policy, and long-term growth prospects. These uncertainties are likely to have been priced into sovereign debt markets across the Euro Area, leading to higher systemic stress even in countries less directly exposed to the underlying geopolitical events.

These results have important implications. Given Germany's role as a benchmark safe asset issuer and its central position in Europe, adverse geopolitical shocks can trigger a union-wide repricing of risk, tightening financial conditions beyond national borders and underscoring Germany's systemic importance in the Euro Area sovereign bond market.

Finally, the results highlight the importance of how geopolitical risk is measured, in line with Alonso-Alvarez et al. (2025) and Bondarenko et al. (2024). Fig. 4 compares the effects of German GPR shocks measured using the anglosphere-based index of Caldara and Iacoviello (2022) with those obtained using the local German GPR index. The former substantially understates the impact of geopolitical risk on EA sovereign stress, both statistically and economically. This result is also consistent with a growing body of literature suggesting that the origin of the shock plays a crucial role in shaping economic outcomes and policy responses. In particular, Afonso et al. (2024) emphasize the importance of GPR shocks originating in neighbouring countries in driving higher

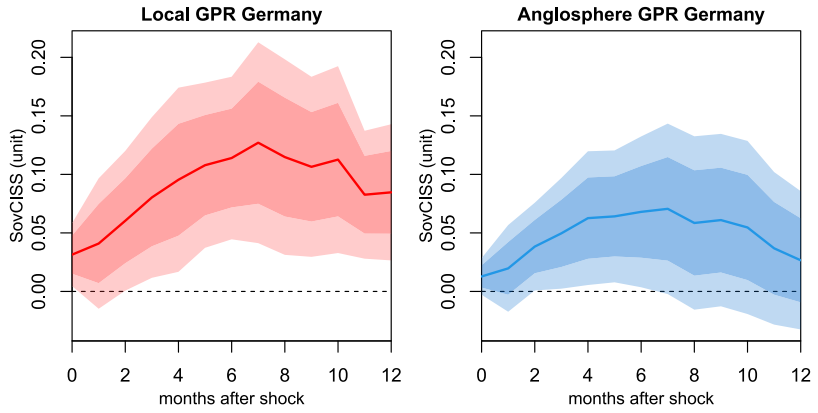

Fig. 4. Euro Area sovereign stress responses to local and anglosphere GPR in Germany.
Note: IRFs scaled to a three-standard-deviation GPR increase; light/dark shading are 90%/68% HAC-robust CIs.

sovereign risk premia. Similarly, Yilmazkuday (2024c) show that monetary policy rates respond differently across countries to global GPR shocks and to the war in Ukraine, with the latter triggering a uniformly contractionary policy stance. Overall, these findings underscore the importance of both the geographic proximity and the nature of the shock (Yilmazkuday, 2024c), and the relevance of using country-specific GPR measures based on local newspapers and languages to accurately capture domestic geopolitical risk perceptions.

Importantly, this measurement result also provides insight into the underlying transmission mechanism. The stronger effects obtained using local German GPR indices suggest that sovereign stress responds primarily to *domestically perceived* geopolitical risk, rather than to global geopolitical news. This finding is consistent with a financial mechanism operating through national policy expectations and domestic uncertainty, which are more relevant for sovereign risk pricing than global geopolitical risk.

4. Conclusions

Euro Area sovereign stress is not affected by global geopolitical risk shocks nor by shocks originating in smaller EA countries, whereas GPR shocks in Germany play an important role. This paper documents these facts by applying local projections to analyse the dynamic response of the Euro Area Composite Index of Sovereign Stress (SovCISS) to global GPR and to new country-specific GPR indices based on local newspapers, which better capture country-level risk perceptions. Moreover, we find that anglosphere-based German GPR measures (constructed using US newspapers) underestimate the impact of geopolitical risk shocks in Germany on EA sovereign stress.

These results highlight the importance of monitoring geopolitical risk developments for the stability of the Euro Area sovereign debt market, especially when GPR shocks affect systemically important countries such as Germany. This calls for appropriate policy measures that dampen the negative consequences of geopolitical risk shocks and motivates further research on how policy interventions may mitigate these adverse effects.

CRediT authorship contribution statement

Francesco Frangiamore: Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Software, Resources, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Jamel Saadaoui:** Writing – review & editing, Validation, Resources, Project administration, Methodology, Investigation, Funding acquisition, Conceptualization.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary data

Supplementary material related to this article can be found online at https://doi.org/10.1016/j.frl.2026.110078.

Data availability

Data will be made available on request.

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