

Geopolitical Risks and Their Impact on Global Macro-Financial Stability: Literature and Measurements

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* The views are mine and do not necessarily represent those of the IMF, its Executive Board, or IMF management.

The topic and paper: timely and important

- A literature review to identify transmission channels through which geopolitical risks (GPR) influence macro-financial stability:
 - **financial channel**, through increased uncertainty and heightened risk aversion, leading to shifts in investment portfolio allocations and capital flows;
 - **real economy channel**, impacting global trade, supply chains, and commodity markets.
- Data from the past 2-3 decades
- Graphical analyses corroborating the literature, highlighting “episodic nature” of GPR’s impact.

CONTEXT: A More Shock-Prone World?

“... Since we last gathered in person, the world has seen extraordinary upheaval. Pandemic, war, and record-high inflation driving a cost-of-living crisis....”

“As we look to the future , the right choices can avoid the worst outcomes. They begin with a more proactive, precautionary mindset to build resilience in a more shock-prone world. There are three pillars: resilient economies, resilient people, and a resilient planet.”

“The IMF’s Role in a More Shock-Prone World”
Kristalina Georgieva, IMF Managing Director
2022 IMF-World Bank Annual Meetings
Plenary Meeting, October 14, 2022



The paper's findings | Overview

- Uncertainty spikes around major geopolitical events, suggesting that, at least partially, a geopolitical shock functions as an uncertainty shock.
- However, the results demonstrate that measures of economic and financial uncertainty are not consistently affected by geopolitical risks from a time series perspective. Instead, the impact of GPR on uncertainty is episodic, characterized by significant but transient spikes corresponding to major geopolitical events.
- ... this suggests that while GPR can cause sharp increases in uncertainty during crises, these effects do not persistently alter the overall trajectory of economic and financial uncertainty.

Measuring risk and uncertainty | Conceptual issues

- GPR captures perception of geopolitical tensions – not necessarily geopolitical risk.
- Unclear whether some of the challenges (e.g. Covid) are “geopolitical tension” events
- “Uncertainty” seems to be used interchangeably with “risk” (yet different concepts)
- In discussing vulnerabilities, useful to more clearly distinguish risk vs exposure to risk.
- The term “risk” as used in this paper, following Caldara and Iacoviello (2022), is a misnomer...
- ... since it mixes both the threat and the realization of adverse events.
- C&I 2022 admit a “slight abuse” of the word “risk”, driven by “journalistic practices and measurement considerations’ (the threat, realization, and escalation of international violence are often intertwined).

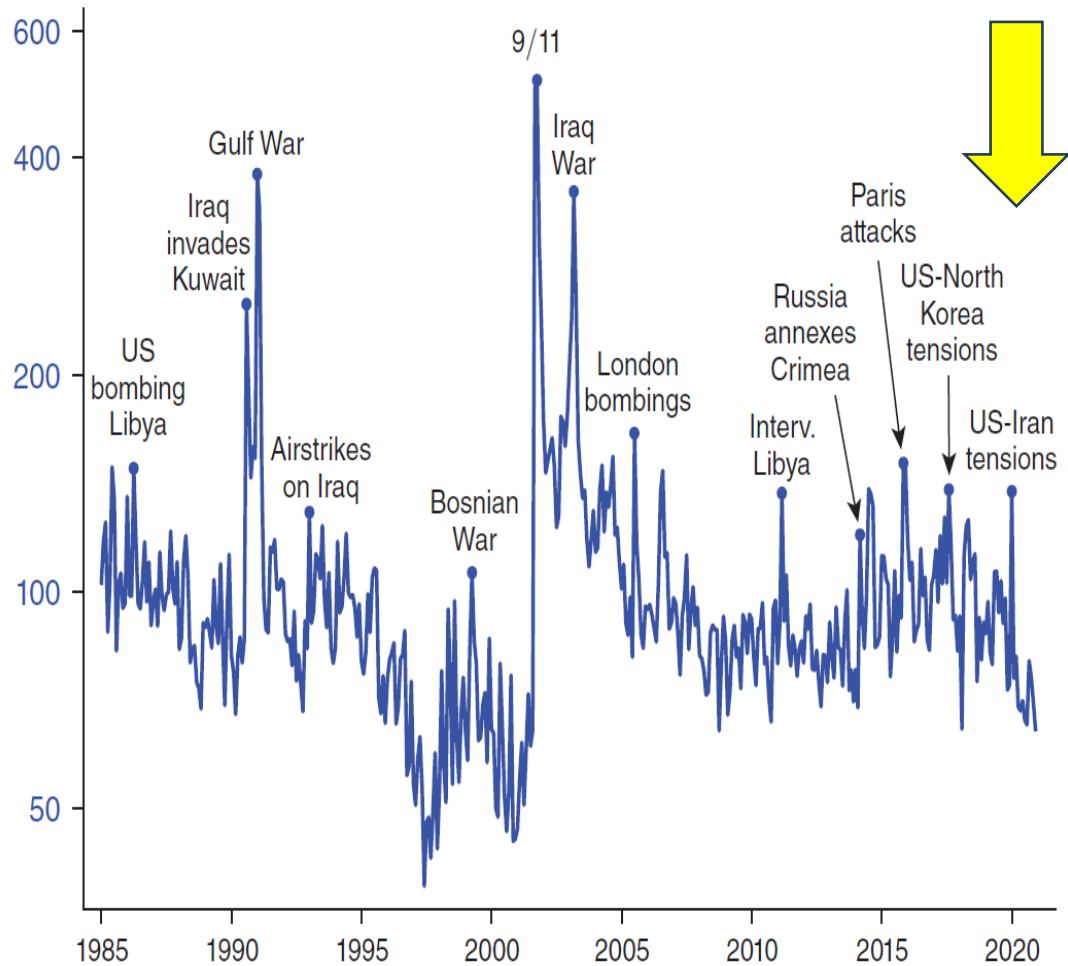


Measuring risk and uncertainty | Conceptual issues

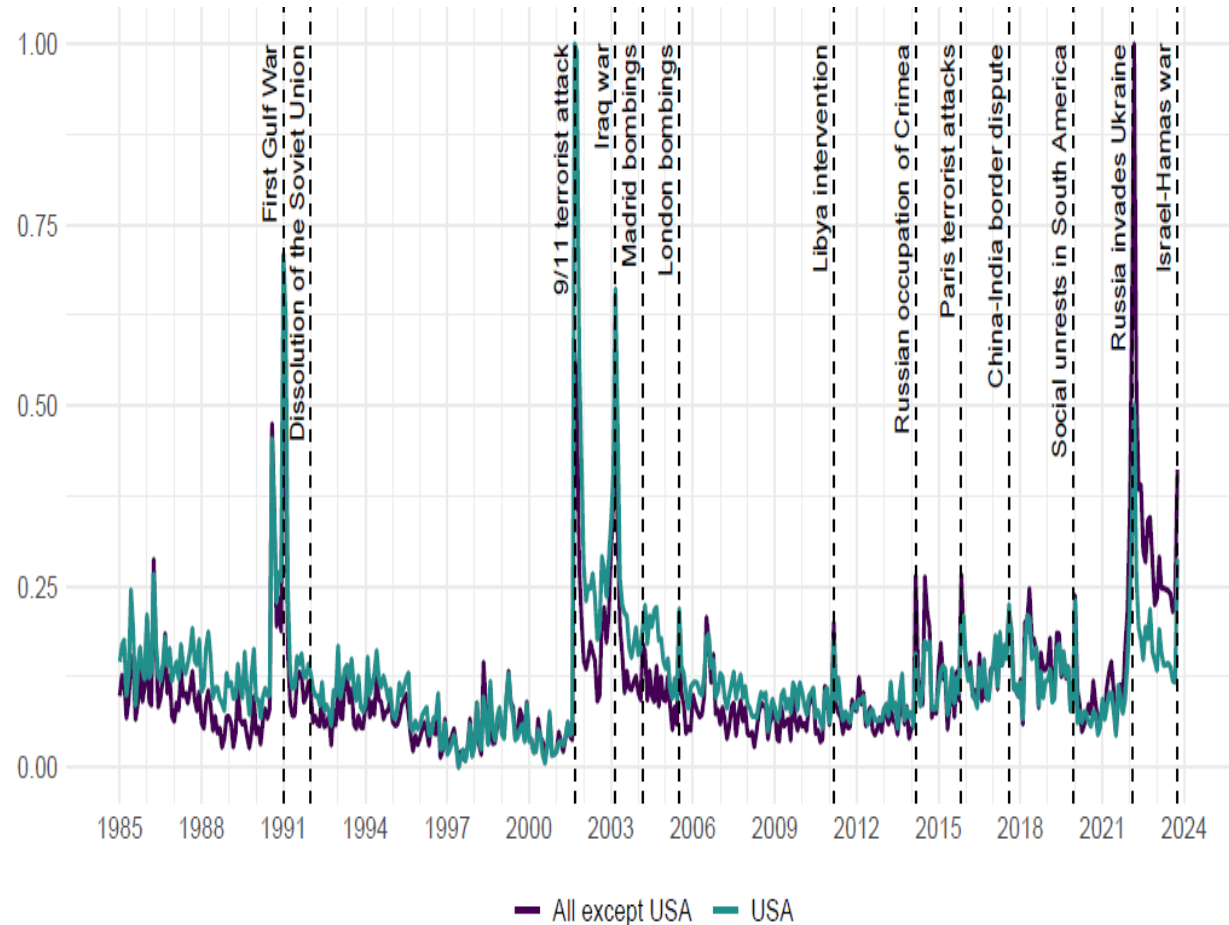
Example: Risk Assessment Matrix, IMF Article IV report for Algeria, April 2024

Risks	Likelihood	Economic Impact	Policy Response
Conjunctural risks (Global)			
<p>Intensification of regional conflicts. Escalation or spread of the conflict in Gaza and Israel, Russia's war in Ukraine, and/or other regional conflicts or terrorism disrupt trade (e.g., energy, food, tourism, supply chains), remittances, FDI and financial flows, payment systems, and increase refugee flows.</p>	High	<p>Low. Algeria has little direct exposure to Russia's war in Ukraine. Indirect exposure could result from the impact of the war on Europe (trade channel), energy security, and the international prices for hydrocarbons, food, and other commodities (per below). Algeria could benefit from higher natural gas prices as Europe seeks to diversify supply.</p>	Reduce procyclicality of the budget and build financial buffers, build emergency food stock, diversify the economy and export markets. Allow the exchange rate to play its role as shock absorber. Continue reforms to diversify the economy, including nonhydrocarbon exports and tapping new export markets.
<p>Commodity price volatility. A succession of supply disruptions (e.g., due to conflicts, export restrictions, and OPEC+ decisions) and demand fluctuations causes recurrent commodity price volatility, external and fiscal pressures in EMDEs, cross-border spillovers, and social and economic instability.</p>	High	<p>High. Algeria's economy is highly dependent on hydrocarbon exports and food imports. The volatility would transmit via the current account (and international reserves), the budget (hydrocarbon revenues, food subsidies), inflation, and economic growth.</p>	Reduce the procyclicality of the budget including by diversifying revenue and funding sources and by building a financial savings buffer when hydrocarbon prices are high. Allow the exchange rate to play the role of shock absorber, in the context of tighter policies. Continue reforms to diversify the economy.
<p>Abrupt global slowdown. Global and idiosyncratic risk factors cause a synchronized sharp growth downturn, with recessions in some countries, adverse spillovers through trade and financial</p>	Medium	<p>High. Transmission would likely mainly come from trade with Europe, Algeria's main export market, which would affect hydrocarbon exports. Financial spillovers</p>	Build savings buffer to help absorb the impact of lower hydrocarbon exports and revenues, including through prudent monetary and fiscal policies; allow the exchange

GPR Index | Do we live in a “more shock-prone world”?

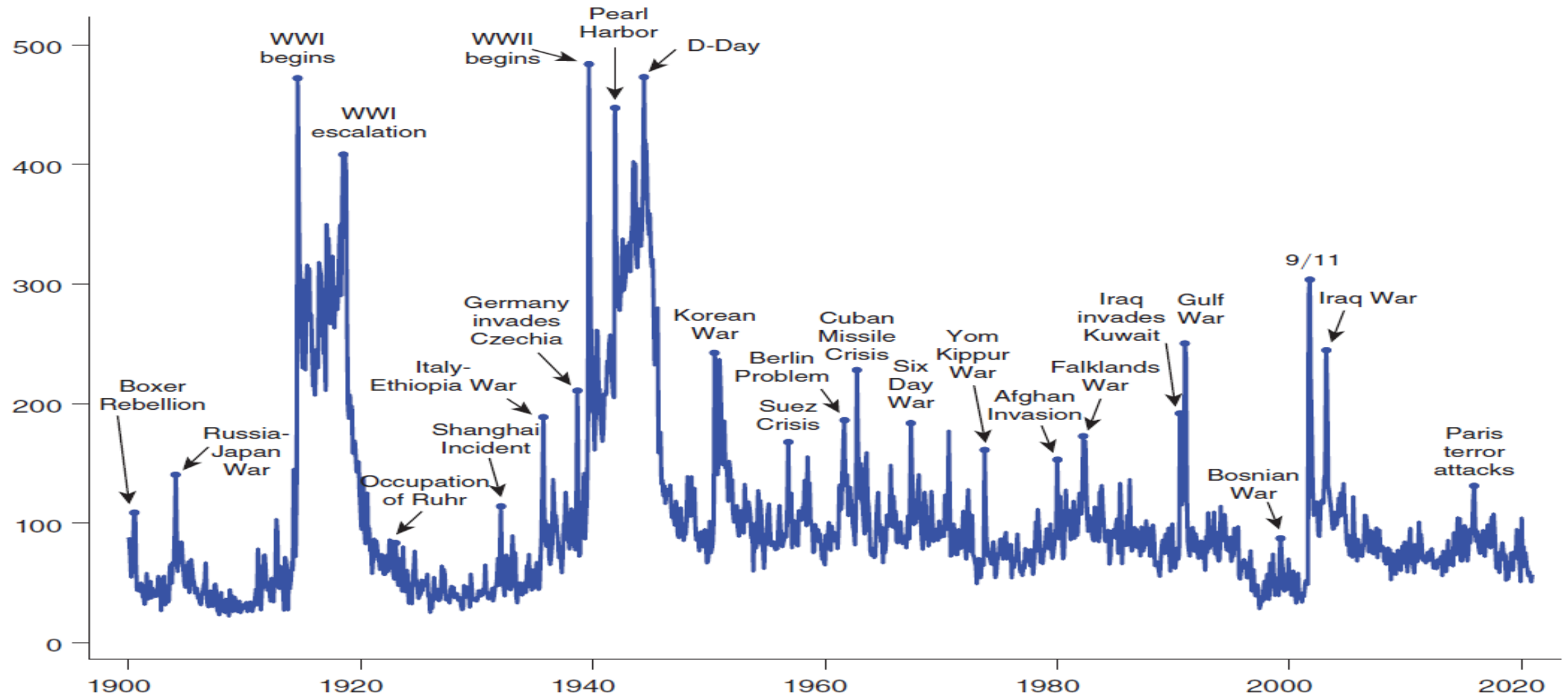


Recent GPR index, 1985–2020. Index normalized to 100 throughout the period (Caldara and Iacoviello, AER 2022).



Normalized using min-max scaling, 0–1 scale. Source: Hodula et al based on Caldara and Iacoviello AER

GPR Index | Do we live in a “more shock-prone world”? (cont’d)



Historical GPR index, 1900–2020. Index normalized to 100 throughout the period (Caldara and Iacoviello, AER 2022).

Measuring risk and uncertainty | Threats vs acts

- Caldara and Iacoviello: “Measuring geopolitical risk” (AER 2022)... components of GPR:
 - **geopolitical threats** (GPT) index: searches articles including phrases related to threats and military buildups
 - **geopolitical acts** (GPA) index: searches articles including phrases referring to the realization or the escalation of adverse events.
- GPT and GPA indices relationship:
 - 0.59 correlation over the full sample...
 - ... and 0.45 from 1985 onward.
 - Some spikes in the two indices coincide, but there is also independent variation that is better highlighted when examining particular historical episodes (e.g., WWI appears largely unexpected).
- **GPT and GPA indices may help enhance the macro-financial analysis in Hodula, Janků, Malovaná, and Ngo.**

Overcoming biases | Language, geography, and perceptions

- **Language and geographical biases**
 - Caldara and Iacoviello (2022) is based on English-language articles, U.S./U.K. centric
 - Could language play a role – Spanish and Portuguese in south of Europe and Latin America?
 - Does it make sense to average indices across countries?
- **Geographical biases**
 - Low-income countries completely missing from the analysis....
 - ... but not only (e.g., in Figure 3: Czech Republic is missing) ... extension for CZE may be relevant
- **Beyond perceptions**
 - An implicit hypothesis underlying the indices is that newspapers' attention to geopolitical events is an accurate measure of the perceptions of investors, economic agents, and policymakers.
 - It would be useful future to extend the measurement exercise using additional sources, such as foreign- language publications, periodical country reports, or the transcripts of parliamentary debates.

Policy implications | Discussion

- The authors conclude that:
 - the impact of geopolitical tensions on economic and financial uncertainty is characterized by significant but short-lived spikes during major geopolitical events, rather than a consistent influence over time...
 - ... policymakers and financial institutions need to adopt “event-specific approaches” to manage and mitigate adverse effects of GPRs.
- Example coming to my mind: [“Changes to the Fund’s Financing Assurances Policy in the Context Of Fund Upper Credit Tranche Financing Under Exceptionally High Uncertainty”](#) (March 2023)
 - “EHU” originates in an exogenous shock to a country’s economic capacity (“beyond the authorities’ control”);
 - the shock’s impact on the economy depends on events fundamentally outside of the control of the authorities’ economic policies, at least in the near-term.
 - it involves severe and continuing BoP impacts, making the scale of the BoP challenge difficult to assess with usual degree of confidence associated with upper credit tranche (UCT) lending (although there could still be a credible basis for assessing that UCT requirements are met). An example is a shock in the form of a large-scale war.
 - No scenario that characterizes the evolution of the shock can be seen as sufficiently “central”; the situation involves significant adverse tail risks where the shock or its impacts could continue beyond the Fund program.
 - The ability of official bilateral creditors to ensure debt sustainability through upfront debt writedowns is impaired due to the lack of a sufficiently “central” scenario and given the presence of large downside risks.

Policy implications | Discussion (cont'd)

- **Challenges with “event-specific approaches” to handling adverse effects of GPRs:**
 - Ex ante vs ex post policies, rules vs discretion
 - Need for policies that are predictable (and evenhanded) yet leave appropriate scope for discretion
- **Linking to yesterday’s keynote speech: need to better understand (and therefore better measure) macrofinancial impacts:**
 - GDP/growth-at-risk
 - finance-at-risk, other “at risk” vars ...
- **Endogeneity of GPR**
 - The empirical analysis rightly treats geopolitical risk as a driver of business fluctuations, highlighting a new force and a new set of shocks that economists have not traditionally emphasized.
 - That said, an active literature in economics and political science has worked to better understand the causes of internal conflict and interstate warfare (see e.g., Blattman and Miguel 2010 and Jackson and Morelli 2011, among others).

Thank you!