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Geopolitical Risk – A Growing Concern in an Unstable World

September 2024

Objective

In today's interconnected world, geopolitics is a critical key driver in financial markets, particularly within the inherently volatile commodity sector. Quantifying geopolitical risks presents both challenges and opportunities for market participants.

This study offers a review of the Geopolitical Risk Index (GPRI)*, as published in the Federal Reserve's International Finance Discussion Papers (IFDP), and provides a comparative analysis with other key volatility risk indices, such as the VIX and EPU.

*Measuring Geopolitical Risk, 2022

A Growing Concern in an Unstable World

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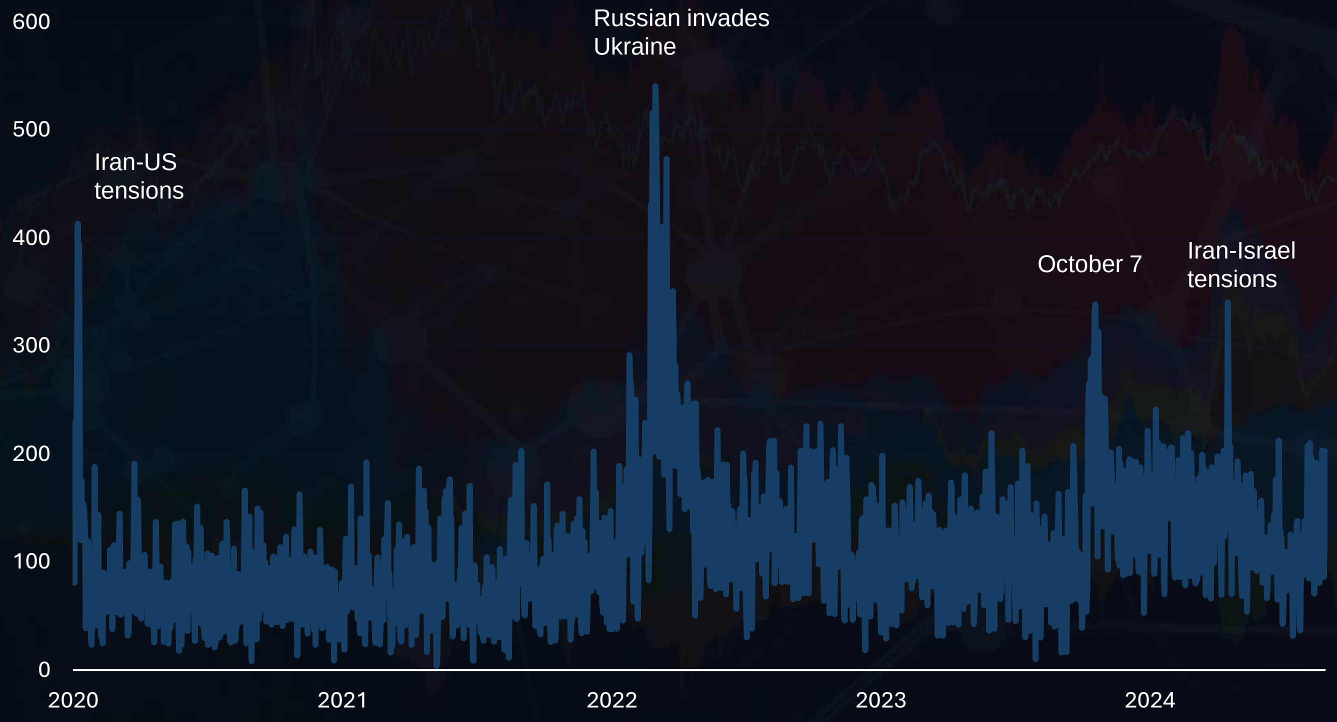
Business C-Suites	Geopolitical issues are disrupting supply chains and impacting businesses worldwide. A recent McKinsey Global Survey reveals that 67% of business executives see geopolitical instability as a major risk to global economic growth in 2024.
Investors	Geopolitical risk is now a key factor in market volatility, influencing financial services more than ever before. In 2017, a Gallup survey found that 75% of investors worry that global conflicts could negatively affect the overall economy.
Central Banks	Monetary policymakers and central banks are now factoring in geopolitics as a significant influence on the economy. The Bank of England highlights the “Uncertainty Trinity”—geopolitical issues, policy uncertainties, and economic uncertainties—as major threats to economic stability (Carney, 2016).

Geopolitical Risk Index Methodology

- The GPRI tracks the frequency and intensity of geopolitical events, including wars, terrorist attacks, and political conflicts. It offers a quantitative assessment of global geopolitical risks, helping to gauge the impact of these events on the global economy.

- The GPRI was developed by “Dario Caldara and Matteo Iacoviello.” This index has been presented at the U.S. Federal Reserve.

- The GPRI has accurately captured all 4 major geopolitical events between 2020 and 2024.

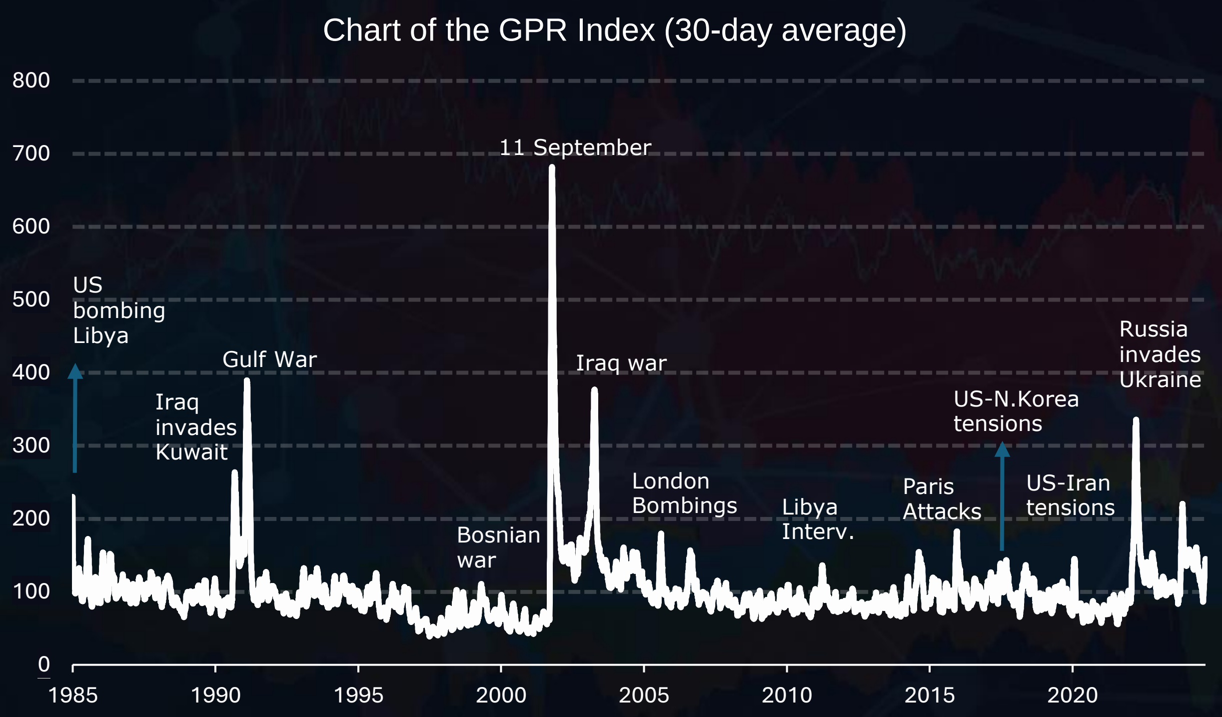


Source: Measuring Geopolitical Risk, 2022

GPRI : Geopolitical Risk Index

- The GPR index focuses on geopolitical events such as wars, terrorism, and tensions between states, offering a more comprehensive measure of global geopolitical risk.

- This captures a wider range of geopolitical events compared to other indicators GPR. The index is widely used to study the impact of geopolitical risks on economic stability, market volatility, and trade disruptions.



Source: Measuring Geopolitical Risk, 2022

Decoding GPRI: How Is It Made?

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Real-Time Geopolitical Tensions

GPRI, an index from the Federal Reserve, measures **real-time** geopolitical tensions **based on news** and reflects perceptions from the press, public, investors, and policymakers.

Geopolitical Risks

The index relies on a **set of keywords** that relate to geopolitical risks, such as "war," "terrorism," "military tensions," "nuclear threats," and similar terms

Media Coverage

GPRI uses an algorithm that computes the share of articles mentioning adverse geopolitical events in leading newspapers published in **the United States**, **the United Kingdom**, and **Canada**.

Newspapers

For **validity** GPRI checks two **timeframes** historical (1900-present) and recent (1985-present). It uses a diverse set of **newspapers** like the NYT, WSJ, and The Guardian, ensuring a robust and balanced measure of geopolitical risks.

How GPRI Sharpens Geopolitical Risk Insights?

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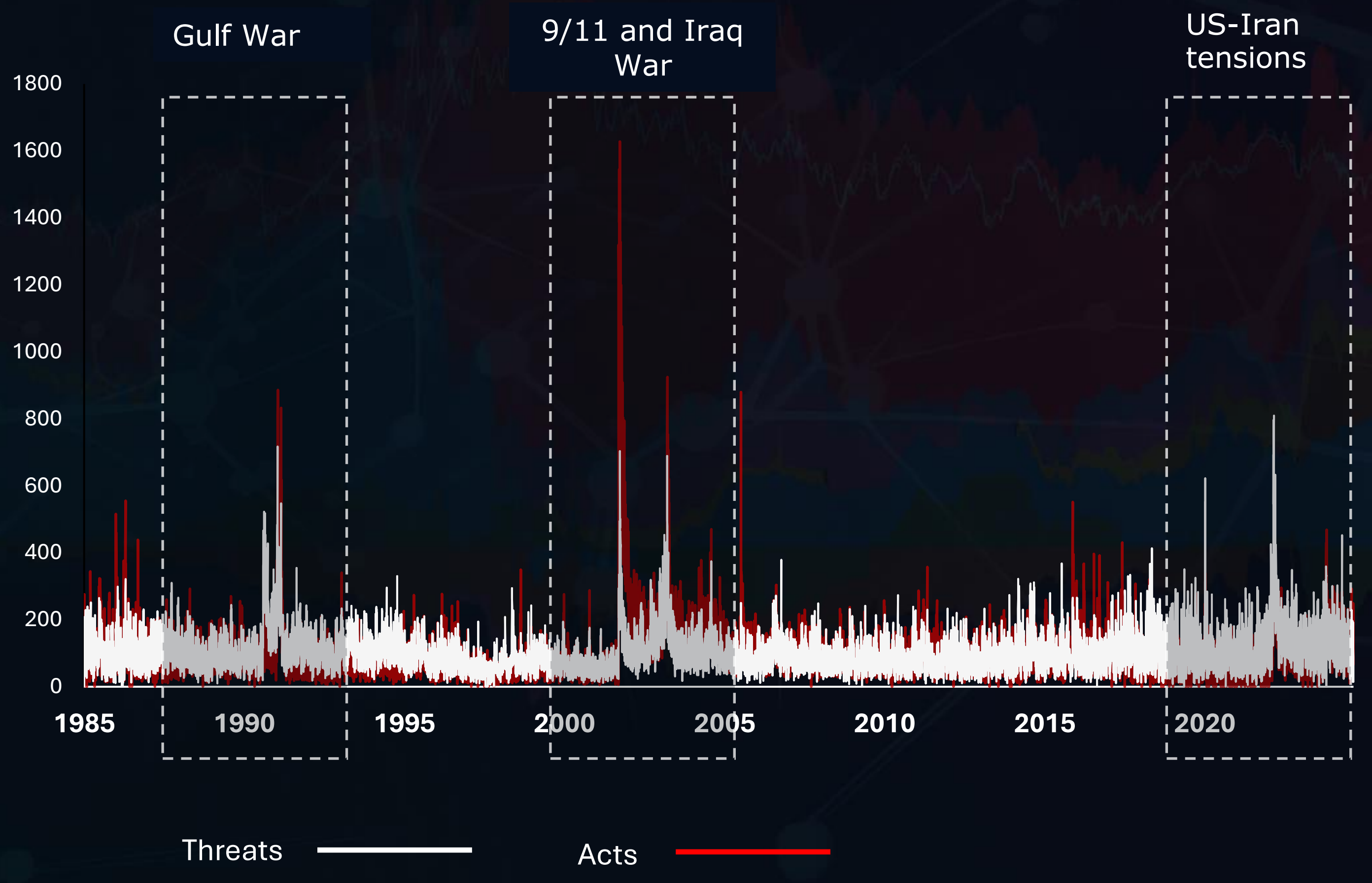
- GPRI effectively distinguishes between the threats of adverse geopolitical events and their actual occurrence by pinpointing the timing of various event types. This allows for more accurate measurement of their effects.

- While threats and acts often correlate strongly, they don't always lead to direct actions. For example, during the US-Iran tensions in early 2020, high perceived threats did not escalate into an act of war. Implications: This distinction offers a clearer perspective on how threats and acts impact the market and other areas.



Source: Measuring Geopolitical Risk, 2022

Comparing Indicators

1. VIX (Volatility Index)
2. EPU (Economic Policy Uncertainty)
3. Deaths in Wars Index

VIX: Volatility Index

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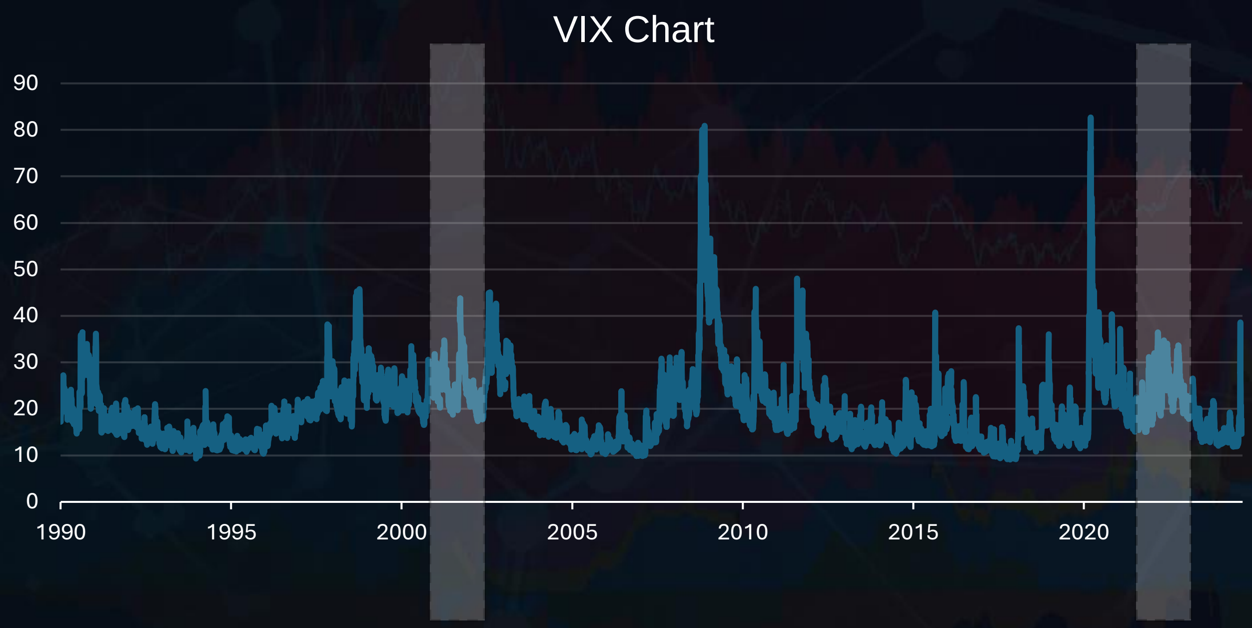
- Constructed by the Chicago Board Options Exchange, the VIX measures the market's expectation of volatility over the next 30 days based on S&P 500 index options.
  - Higher VIX Value: Indicates greater anticipated volatility and market uncertainty.
  - Lower VIX Value: Suggests market stability.

- The VIX index rose during the Gulf War (1990–1991) and after the 9/11 attacks (2001), reflecting increased market uncertainty during these periods. However, this suggests that the VIX may not be a dependable predictor of geopolitical risks, as it primarily measures market volatility rather than specific geopolitical factors.



Limitations of the VIX: It didn't spike much after 9/11, despite the event's real impact.

Missing Spikes for Major Conflicts Like Ukraine War

Source: CBO Volatility Index Methodology 2024

Deaths in Wars Index

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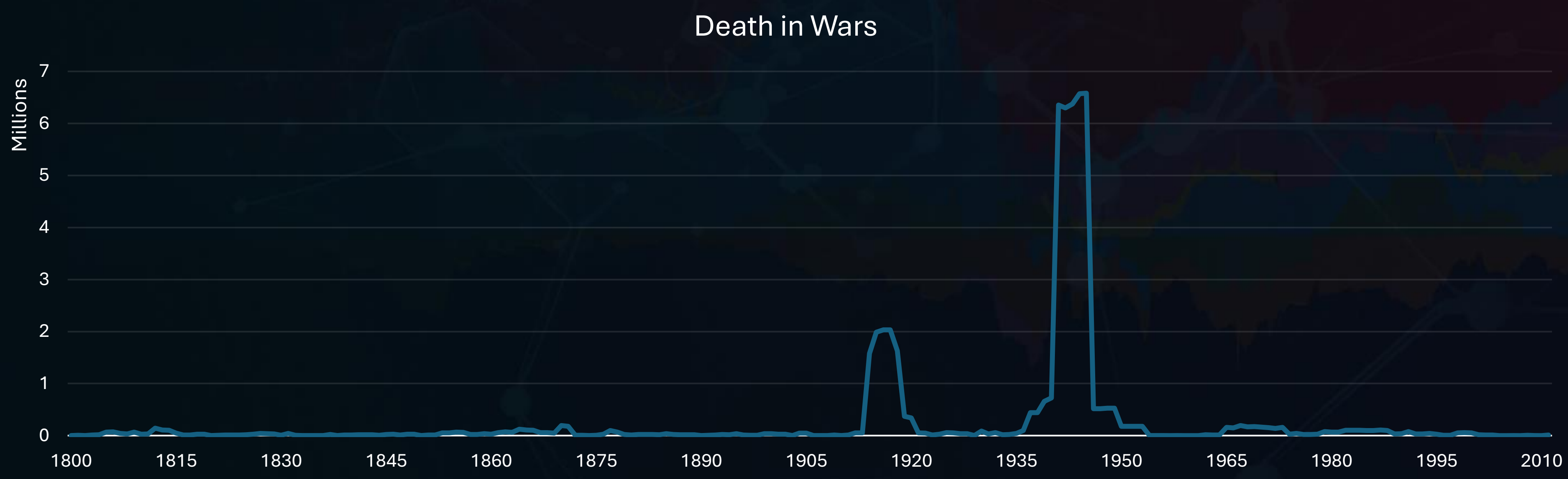
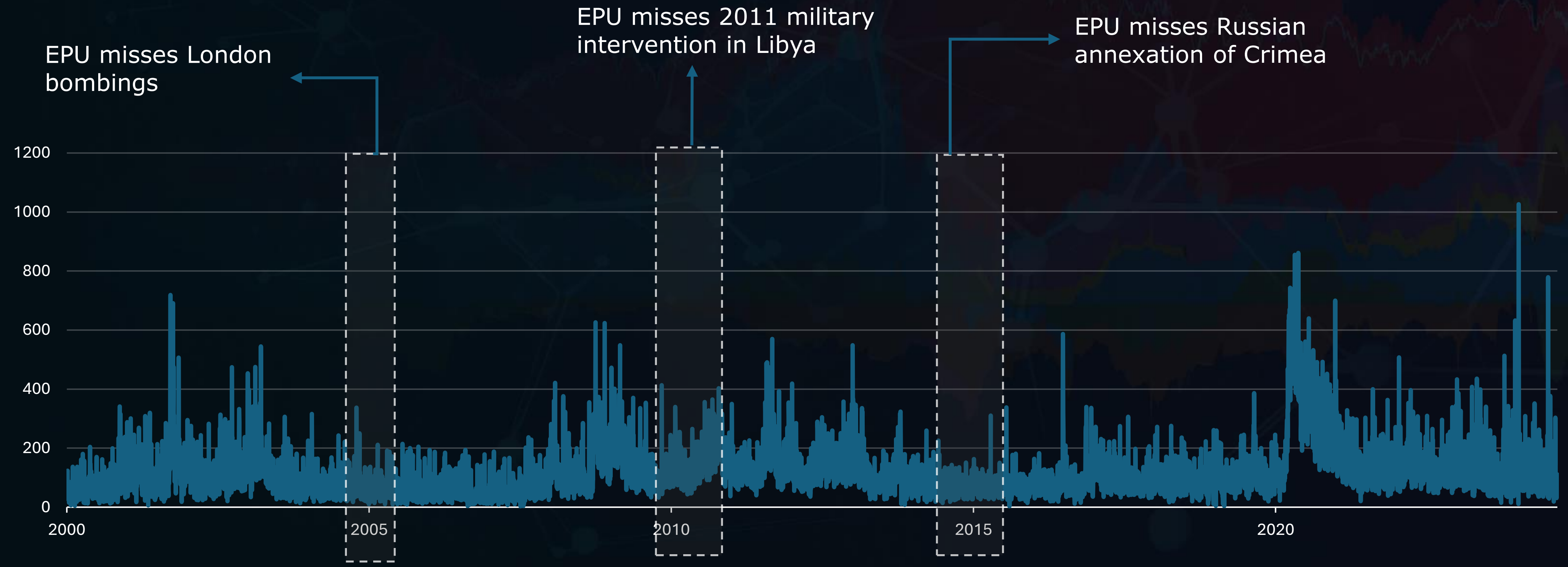
The "Deaths in Wars Index" records the number of deaths resulting from wars and conflicts over a specific period. Conflict-related deaths surged during the two world wars, but the index's correlation with geopolitical events weakened after the 1950s. The index does not capture significant geopolitical tensions beyond major wars.



Source: Our World in Data

EPU Index: Economic Policy Uncertainty

The EPU Index, quantifies the level of uncertainty in economic policies. It is widely used to assess how changes in government policy, political events, and other factors contribute to economic uncertainty, which can affect financial markets, investment decisions, and overall economic performance.



Source: Measuring Economic Policy Uncertainty, 2016

Key Metrics Comparison Overview

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Index	Concentration	Data inputs	Type	Constructor
GPRI	Geopolitics	Newspaper keywords	Coincident / Leading	Dario Caldara and Matteo Iacoviell
VIX	Financial market (S&P 500)	prices of S&P 500 index options, both calls and puts.	Leading	CBOE
Deaths in Wars	War and conflict	Wars that result in at least 500 deaths.	Lagging	Jason Lyall - Project Ma
EPU	Policy	Survey, Newspaper keywords, tax code	Coincident / Leading	Scott R. Baker Nicholas Bloom, and Steven J. Davis

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