The Pricing of Geopolitical Tensions over a Century

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Three Geopolitical Indices

- GPT: geopolitical threats index, expectations of future adverse geopolitical events
- GPA: geopolitical acts index, realizations of such events
- GPR: geopolitical risk, aggregate both GPT and GPA
  - Not priced in Hirshleifer et al. (2025)

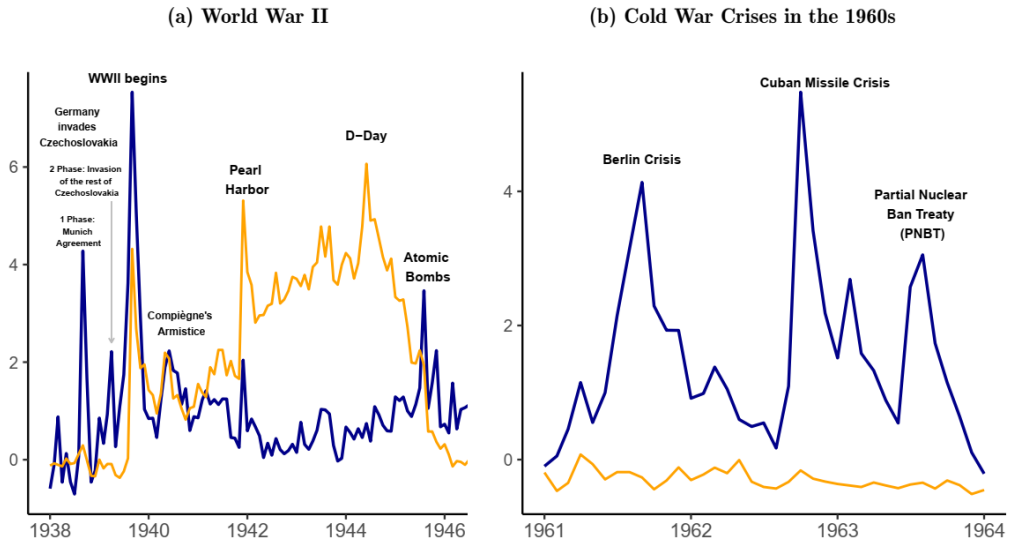

Figure 3
Historical Episodes: GPT (blue) vs GPA (orange)

Economics Intuitions of GPT and GPA

- GPT is strongly related to
  - +: risk indices, historical episodes,
  - -: investor beliefs, investments and allocations

- GPA, less so.
  - Sometimes contradicting signs

	ICRG (All Categories)			ICRG (Internal+External Conflicts)			BofA Surveys of Fund Managers		
	[1]	[2]	[3]	[1]	[2]	[3]	[1]	[2]	[3]
GPT	0.30		0.36	0.31		0.35	1.07		1.01
	[3.61]		[5.17]	[2.46]		[2.64]	[6.64]		[5.42]
GPA		-0.10	-0.31		0.00	-0.20		1.31	0.33
		[-0.67]	[-2.37]		[0.01]	[-1.05]		[3.32]	[1.01]

Pricing Exercises of GPT and GPA

- GPT carries a positive risk premia
  - US stocks, anomaly portfolios
  - Global country-level equity and bond portfolios
  - Predict market returns
- GPA less so

INDEX =	GPT	GPA	GPR
Mimicking Correlation	0.32	0.38	0.42
Risk Premium (%)	3.03	1.83	1.86
	[4.11]	[2.74]	[2.65]
CAPM Alpha (%)	2.53	1.16	1.27
	[3.26]	[1.76]	[1.96]
ICAPM Alpha (%)	2.41	1.15	1.20
	[3.08]	[1.62]	[1.68]

Overall

- A very timely topic!
- Data is rich, lots of work.
- Message is very clear: GPT vs. GPA.
- My comments:
  - An alternative way of organizing current results

Step 1. Theoretically speaking: why should geopolitical risk be priced?

- Connect to the theoretical work on intertemporal CAPM (Merton 1973)
  - Any variable that predicts changes in investment opportunity set can be a state variable and has pricing implications
  - ICAPM (Campbell et al. 2018, Chabi-Yo, et al. 2025)

- Provide evidence that GPT/GPA can predict market returns or market uncertainties
  - Results in Table 7 show predictive power for market returns
  - It is also intuitive to connect to various uncertainty measures
    - Correlation results in Table 1 are relevant, but need to be more rigorous.

Predicting market return and uncertainties

PANEL A - Next 1 Year Returns

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
GPT	3.17						3.00	2.87	4.62	3.08	3.22	3.99
	[1.52]						[1.37]	[1.25]	[2.37]	[1.57]	[1.62]	[2.11]
GPA		1.46					0.48					-0.29
		[1.35]					[0.53]					[-0.33]
GPR			2.18					0.51				
			[1.44]					[0.50]				
WAR				0.73					-1.91			-1.21
				[0.39]					[-1.06]			[-0.56]
EPU					1.93					1.84		1.80
					[1.51]					[1.42]		[0.99]
EMV						-0.43					0.19	-0.47
						[-0.22]					[0.12]	[-0.26]

- More to consider for Table 7
  - Different horizons: main results are monthly?
  - Make uncertainties as dependent variables too
  - Other predictors for market returns/uncertainties
  - Why panel regressions?

Step 2: Empirical results on the risk premia and price of risks

- Normally, we start from a pricing equation:

$$E_t(r_{i,t+1}) = \beta_{it}\gamma_t,$$

β_{it}: risk exposure

γ_t: risk premium

- Hypothesis
  - Risk premium
    - Has a sign
    - Significant, in the existence of other competing risks
  - Intercept is zero
    - Rigorous asset pricing tests
      - Model comparison tests?

Questions on the pricing exercises

- Risk premium definition
  - Price of a systematic risk?
  - HML returns?
  - Mimicking factor return?
    - They are not the same.
    - Which one? It was confusing to read.

- How are betas estimated?
  - Univariate regression?
  - Why choose 3 year of rolling window monthly data?
  - Need justification

More Questions

- Double sort or control for other betas?

- A rigorous asset pricing test?
  - Simultaneously estimate betas and gammas?
  - Examine the prices of risks with different proxies for geopolitical risk factors
    - Model comparison with competing models using different proxies for geopolitical risks or uncertainty risks?
  - Alphas?
  - Time variations in the betas, gammas and alphas?
    - Fama-Macbeth regressions?

Step 3. How GPT/GPA is related to economic activities?

- Correlations with economic activities
  - ICRG indices (Table 2), Firms investments (Table 3)

	Perceived Investment Risk			Aggregate Investment			Industry-Level Investment		
	[1]	[2]	[3]	[1]	[2]	[3]	[1]	[2]	[3]
GPT	0.34		0.50	-0.03		-0.04	-0.03		-0.03
	[1.65]		[3.15]	[-1.61]		[-3.04]	[-1.83]		[-1.80]
GPA		-0.53	-0.83		0.03	0.06		-0.05	-0.03
		[-2.46]	[-2.97]		[0.58]	[1.91]		[-0.86]	[-0.50]

- Questions
  - Signs on GPT and GPA: some positive and some negative, small magnitude?
  - Is this because of the choice of quarterly data? Should the timeline be extended to year?
  - Time line is not clear, need an equation

Why we need equations to illustrate empirical design?

- Verbal discussion might misses out many details
  - Panel vs. time-series vs. Fama-MacBeth
    - Which is optimal?
  - Choices of timeline
    - Predicting? Lagging? Contemporaneous?
    - Predicting 1, 2, 3 … months (quarters/years)?
    - Which is optimal?
  - What controls?
    - Firm level? Market level? FE?

- I would appreciate some equations in the paper to clarify many choices of the empirical design.

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  - I learned a lot.