

International Lending in War and Peace

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Official lending is little understood

Vast literature on private capital flows

- Widely tracked and reported on (press, IMF, rating agencies etc)
- Rich, granular data (e.g. Coppola et al. 2021)
- Key insight: pro-cyclical, prone to sudden reversals

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Official capital flows underresearched

- Little research, little data (exceptions: Alfaro et al, Bordo & Schwartz)
- Governments avoid the topic... taxpayer money
- Not traded in secondary markets
- Discussion in “silos”, e.g. IMF bailouts, development aid, NextGenEU, Global Gateway, China’s Belt and Road, Ukraine

Official lending is a central pillar of global finance

Official international lending (by governments, multilaterals, central banks) is . . .

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2. **counter-cyclical** – official flows rise when private flows decline

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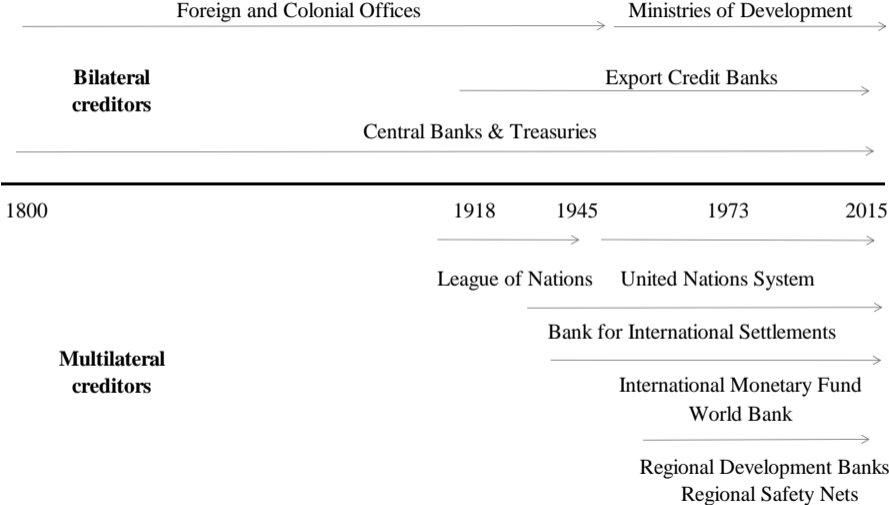
1. **large** – repeatedly surpassed global private flows
2. **counter-cyclical** – official flows rise when private flows decline
3. **driven by great powers** – “benign self-interest” key

We compile 200 years of capital flow data

1. **Official international capital flows 1790-2020**, encompassing new dataset:
 - Definition by OECD: loans, grants and guarantees *by governments, government agencies and multilateral institutions* across borders
 - Transaction-level data: Commitment amounts and financial terms
 - Sample: 1.1 mn grants & loans by 150+ governments, 50 intl. institutions
 - Not included: bond purchases by central banks, sovereign wealth funds, reparations

2. **Private capital flows since 1790**: focus on sovereign bonds, crisis spells

Who lends? The universe of official creditors



Examples of sources

Historical budget accounts

RETURN to an Order of the Honourable House of Commons,
of the 28th Day of May last, for

"AN ACCOUNT of the several Sums of MONEY advanced by way
"of LOAN or SUBSIDY, to different States, from the Com-
"mencement of the present War; together with an Account of the
"INTEREST received on such Sums as have been advanced by way
"of Loan."

	£.	s.	d.
There was issued for the Service of Prussia, in the Year 1794 -	1,223,891	10	6
D ^s - - - of Sardinia, in 1793, 4, 5, &c 6	* 500,000	—	—
D ^s - - - of the Emperor, in 1795 & 6	† 6,220,000	—	—
D ^s - - - - D ^s - - in 1797 - -	700,000	—	—
D ^s - - - of Portugal - in 1797 - -	247,205	—	—
D ^s - - - - D ^s - - in 1798 - -	120,013	13	—
D ^s - - - of Russia - in 1799 - -	825,000	—	—
D ^s - - - of the Emperor, Elector of Bavaria, &c. - - - -	500,000	—	—
D ^s - - - of the Emperor - - - -	† 1,066,666	13	4
D ^s - - - of Russia - - - -	545,494	—	—
D ^s - - - of Bavaria - - - -	§ 501,017	6	—
D ^s - - - of the Emperor. to ens- } - - - - - - - - - - - - - - } - - - - - - - - - - - - - - } - - - - - - - - - - - - - - }			

CIA reports on Sino-Soviet loans

ECONOMIC INTELLIGENCE REPORT

SOVIET ECONOMIC ASSISTANCE TO THE SINO-SOVIET BLOC 1956-57



CIA/RR 146
8 September 1958

Guiding questions today

1. **When do states support each other (in disasters)?**

- Which shocks trigger large official loans and grants? How large?
- Who are the international lenders of last resort?

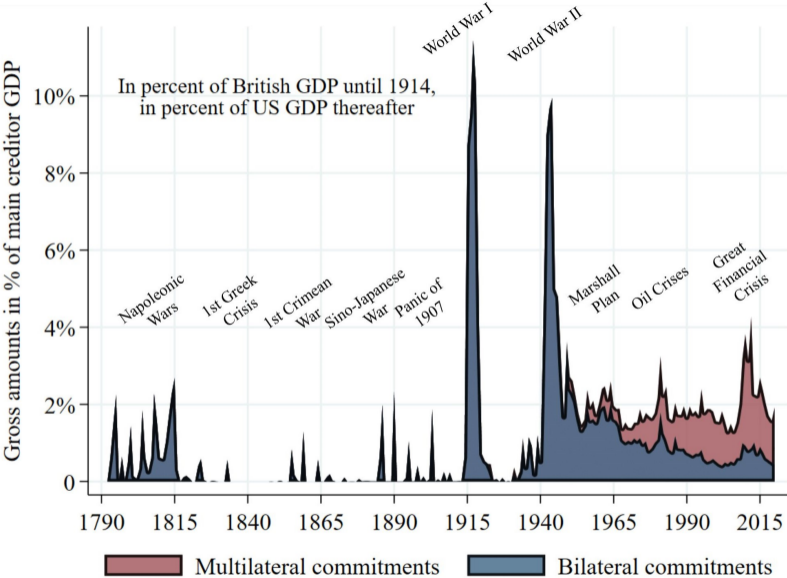
2. **How do official and private cross-border flows relate?**

- Amounts, cyclicity, terms?
- Global capital allocation in peace vs. war

3. **Why do countries extend official lending?**

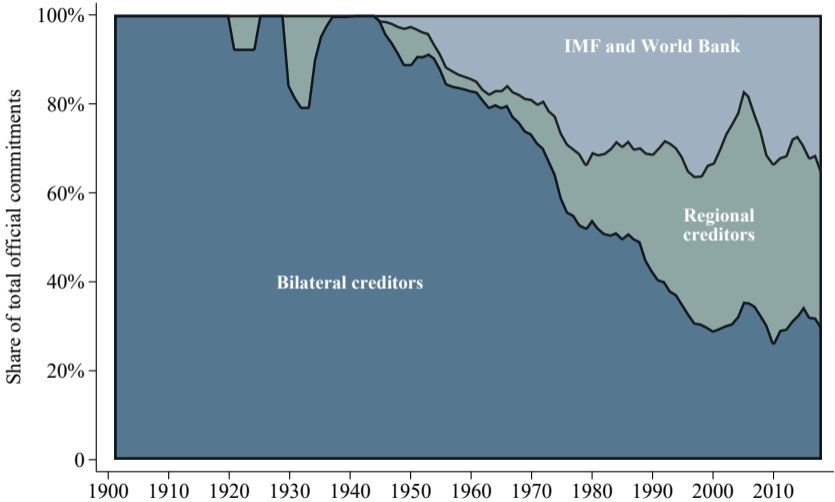
A panorama of **official** cross-border flows

Official international lending: 1790 – 2020

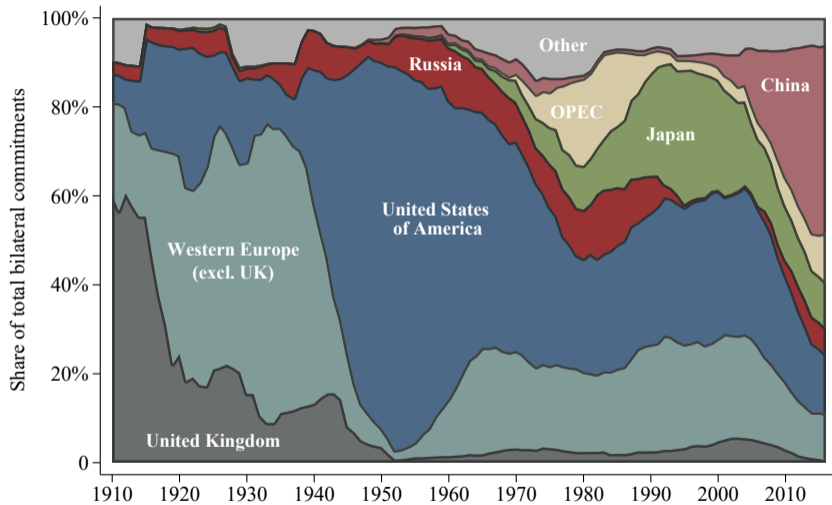


Who lends?

Not just the IMF: bilateral and regional lenders dominate

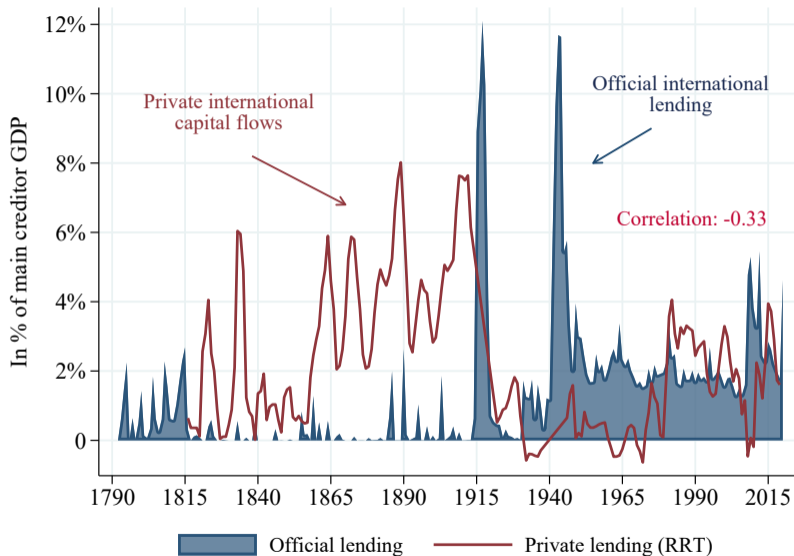


Great powers are the big official lenders

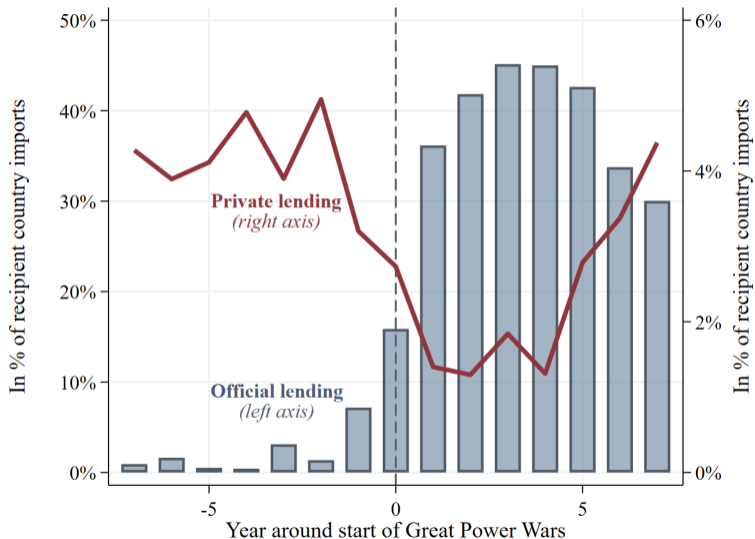


Private vs. official flows

Private vs. official capital flows: 200 year aggregates



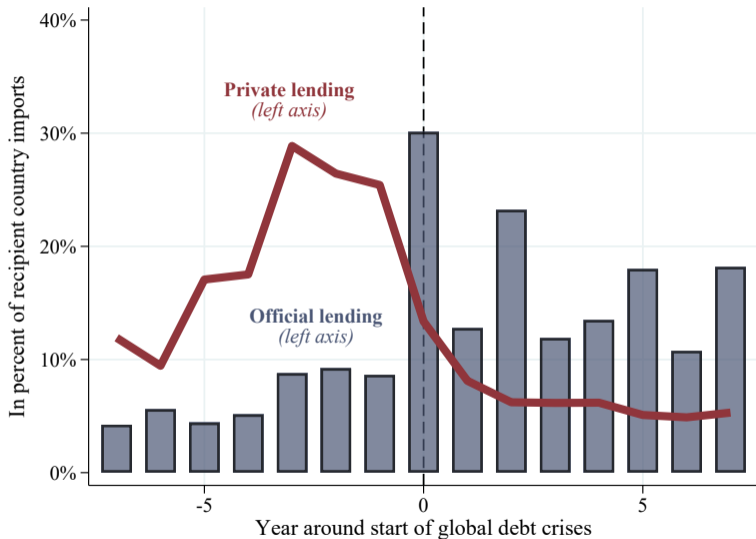
Great Power Wars



29 episodes in which great powers fight on both sides (Levy 1983). Data by Correlates of War. Focus on countries with war fighting sites (examples: Napoleonic Wars, Crimean War, WW1& WW2, Korea).

We use % of imports as GDP not always available.

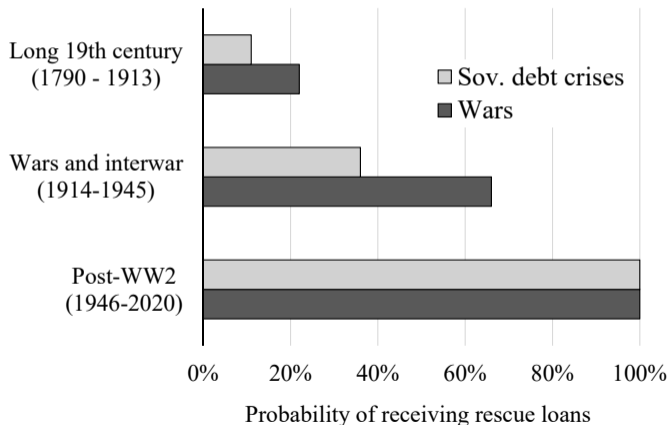
Global Debt Crises



32 main global financial crisis events from Reinhart and Rogoff (2009) → Most severe financial crises of the past 200 years (defaults of 1820s, Great Depression, Crash of 2008). **We use % of imports as GDP** not always available.

Not just major crises: Rescue loans have become the norm

Probability of receiving official loans in debt crises and wars:



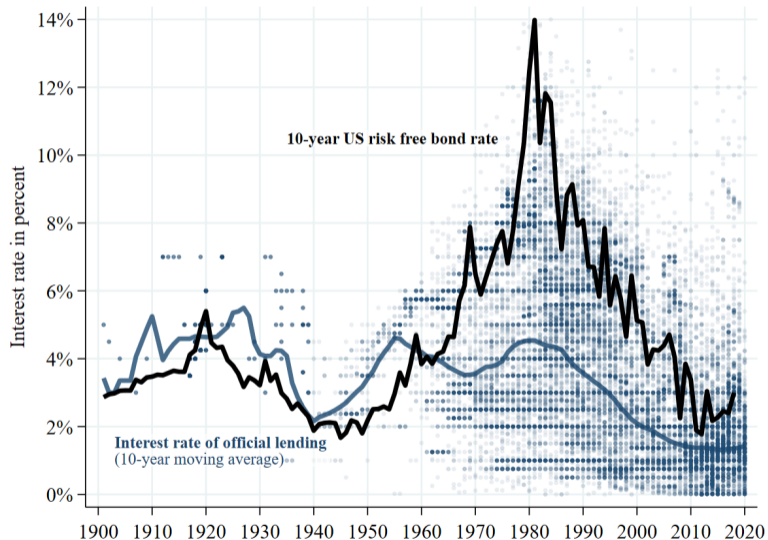
Debt crises data from
Reinhart/Rogoff &
Mitchener/Trebesch.

Wars: Correlates of War

Loan size in wars and crises
doubled since 19th century
- from an avg. of 60% of
imports to more than 100%

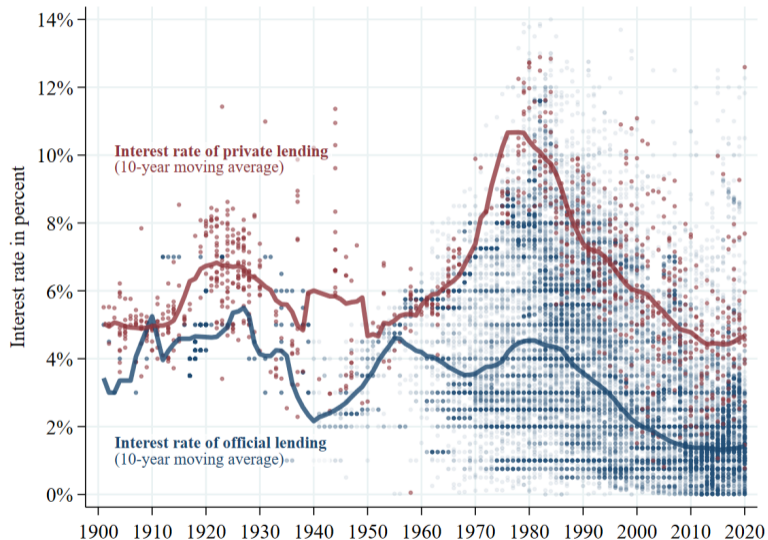
How do the **terms** compare?

Official lending rates - highly concessional



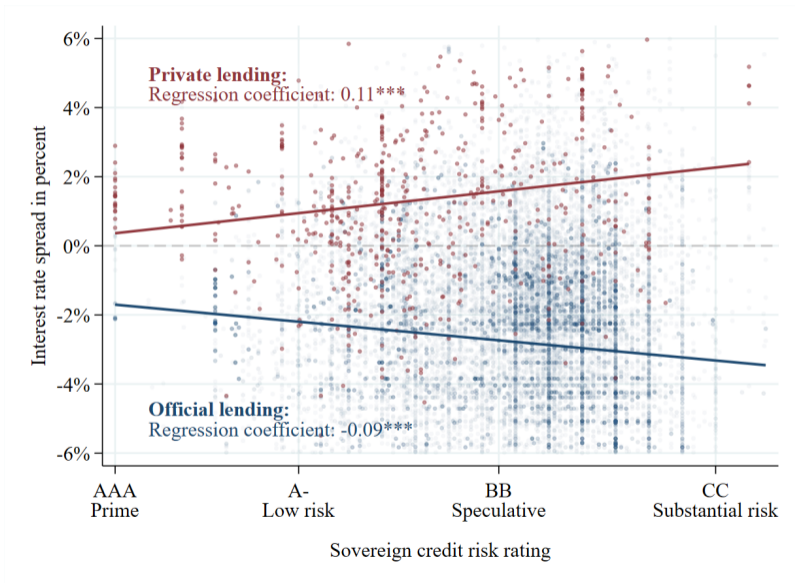
Private rates: bond coupons on ext. sov. bonds since 1900 from Meyer, Reinhart, Trebesch (2022) and syndicated loan rates 1970-2000 from World Bank

Private lending rates - large risk premia



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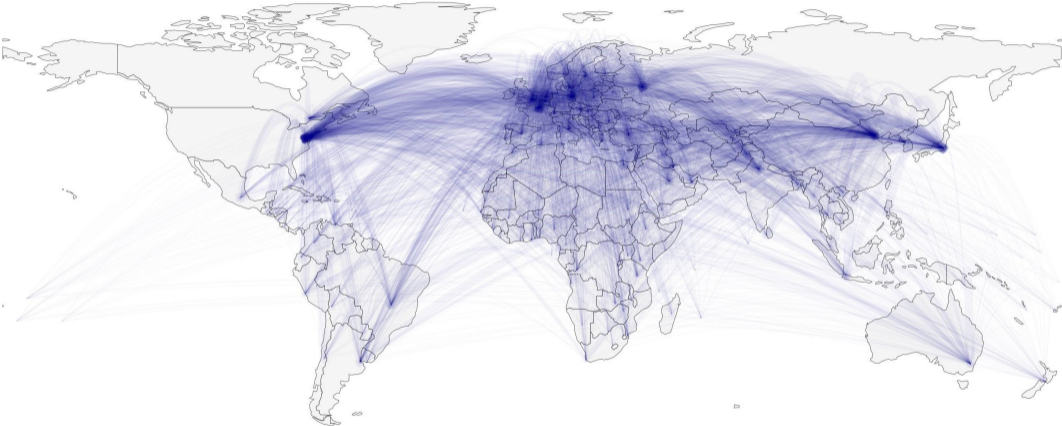
Interest rates on official loans *decrease* with borrower risk



Risk measured using ratings. We collected 100 years of sovereign ratings by Moody's and S&P (since 1920)

The gravity of official finance

We make use of the dyadic data structure



Two hypotheses on lending in peace & war

1. In financial crises, official lending follows private exposure

Sovereigns rescue countries to which their private sector is exposed → "benign self-interest" as in Tirole 2015, Gourinchas et al. 2019, Azzimonti/Quadrini 2023

Measurement:

- Financial crises: External sovereign debt crises from Reinhart & Rogoff (2009) and Mitchener & Trebesch (2022)
- Bilateral exposure: trade, sov. debt holdings, bank claims

2. During wars, official loans follow political/military alliances

e.g., Bianchi & Sosa-Padilla 2024

Measurement:

- Wars: Inter-state wars from Correlates of War
- Alliances: defense pacts, ententes, joint warfare

A gravity model of bilateral lending, 1820-2010

Framework: PPML augmented gravity model of bilateral lending

$$\ln Loans_{i,t} = \beta \ln EconExposure_{i,j,t-1} + \gamma Alliance_{i,j,t-1} + \delta \ln Distance_{i,j} + \Delta Controls_{i,j,t-1} + \sigma_i + \theta_j + \epsilon_{i,j,t}$$

- ... loans by creditor country j , to debtor country i , in year t ;
- ... dyadic measures for economic exposure, alliances, cultural/geographic distance
- ... creditor and debtor country fixed effects (also time X country & pair FE)
- ... time-varying controls (population, GDP, Polity, total multilateral& bilateral lending)

The gravity of official finance, 1820-2010

	Dep. variable: Bilateral official lending				
	(1) Full Sample	(2) Full Sample	(3) Full Sample	(4) History	(5) Modern
Trade exposure	0.19*** (0.02)	0.20*** (0.02)	0.15*** (0.03)	0.19*** (0.06)	0.28*** (0.10)
Distance	0.11 (0.09)	0.11 (0.09)	-0.26* (0.14)	0.15 (0.34)	-0.19 (0.20)
Alliance	0.71*** (0.23)	0.77*** (0.24)	1.00*** (0.23)	1.58*** (0.38)	0.29 (0.36)
Former Colony	1.41*** (0.41)	1.42*** (0.40)	1.13*** (0.27)	1.33** (0.54)	1.17*** (0.32)
War		2.07*** (0.28)	1.08*** (0.31)	1.56** (0.65)	0.47* (0.26)
Sovereign Debt Crisis		0.65*** (0.18)	0.45*** (0.11)	-0.88 (0.57)	0.39*** (0.12)
Observations	104249	104249	104249	22272	77432
Sample	1820 - 2010	1820 - 2010	1820 - 2010	1820 - 1945	1946 - 2010
Controls	✓	✓	✓	✓	✓
Debtor FE			✓	✓	✓
Creditor FE			✓	✓	✓

1% higher trade exposure → 0.2% more official loans

Lending in war – alliance as main predictor

	Dep. variable: Bilateral official lending			
	(1) Full Sample	(2) Full Sample	(3) Full Sample	(4) Full Sample
Trade exposure	0.15*** (0.03)	0.15*** (0.03)	0.14*** (0.03)	0.15*** (0.03)
Alliance	1.01*** (0.22)	0.77*** (0.25)	1.03*** (0.22)	0.99*** (0.22)
Former Colony	1.14*** (0.28)	1.21*** (0.26)	1.14*** (0.28)	1.21*** (0.26)
War	1.04*** (0.31)	0.29 (0.27)	2.05** (0.91)	1.20*** (0.36)
Sovereign Debt Crisis	0.47*** (0.11)	0.39*** (0.12)	0.46*** (0.11)	0.47*** (0.11)
Alliance * War		2.16*** (0.45)		
Trade exposure * War			0.22 (0.16)	
Former colony * War				-0.94* (0.56)
Observations	104626	104626	104626	104626
Sample	1820 - 2010	1820 - 2010	1820 - 2010	1820 - 2010
Controls	✓	✓	✓	✓
Debtor FE	✓	✓	✓	✓
Creditor FE	✓	✓	✓	✓

Lending in debt crises – economic exposure is key

	Dep. variable: Bilateral official lending			
	(1) Full Sample	(2) Full Sample	(3) Full Sample	(4) Full Sample
Trade exposure	0.15*** (0.03)	0.15*** (0.03)	0.14*** (0.03)	0.15*** (0.03)
Alliance	1.01*** (0.22)	0.97*** (0.23)	1.00*** (0.22)	1.01*** (0.23)
Former Colony	1.14*** (0.28)	1.14*** (0.28)	1.14*** (0.28)	1.17*** (0.28)
War	1.04*** (0.31)	1.03*** (0.31)	1.03*** (0.31)	1.05*** (0.31)
Sovereign Debt Crisis	0.47*** (0.11)	0.34** (0.15)	1.32*** (0.36)	0.52*** (0.12)
Alliance * Sov Debt Crisis		0.33 (0.33)		
Trade exposure * Sov Debt Crisis			0.17*** (0.07)	
Former colony * Sov Debt Crisis				-0.58* (0.31)
Observations	104626	104626	104626	104626
Sample	1820 - 2010	1820 - 2010	1820 - 2010	1820 - 2010
Controls	✓	✓	✓	✓
Debtor FE	✓	✓	✓	✓
Creditor FE	✓	✓	✓	✓

Concluding remarks

- **Key take aways**

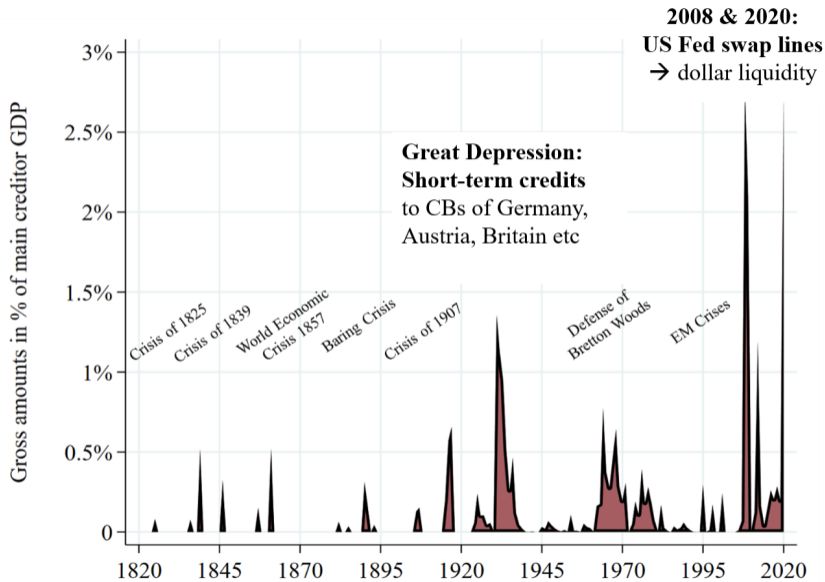
- Official int. lending is large, counter-cyclical, and driven by great powers
- Official flows spike when private flows decline (macro disasters, wars, crises)
- Self-interest: private exposure & alliances predict official rescue lending

- **Official flows likely to grow**

- Geopolitical tensions and war risk
- Rise of China, India, Global South (more active users of state banks, SWFs, swap lines)
- More work needed on geopolitics of international capital flows

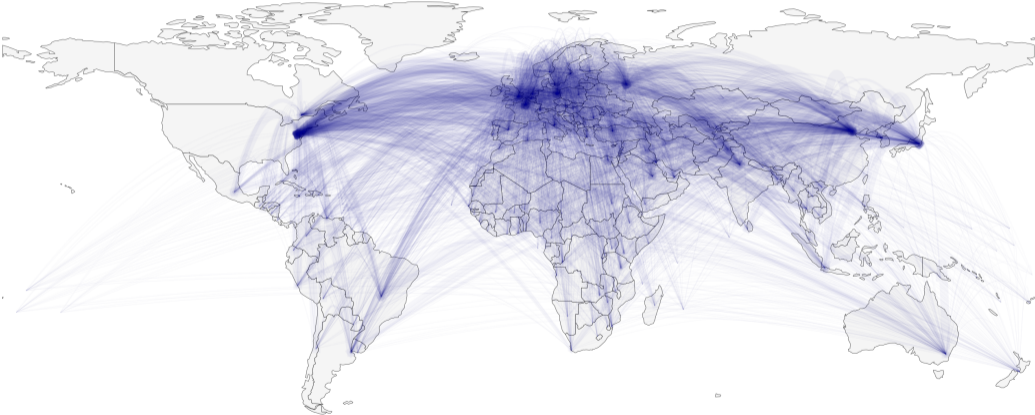
Appendix

Central bank to central bank support: credits & swap lines



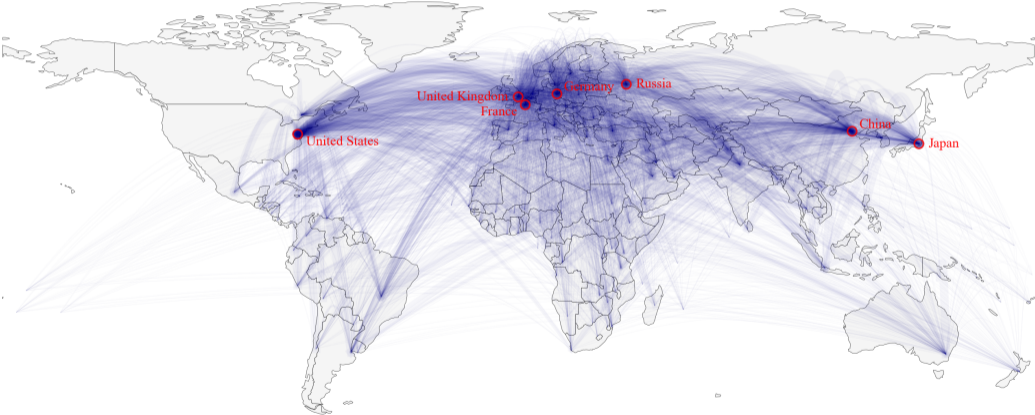
Great powers are the big official lenders

All bilateral loans and grants, 1790-2020



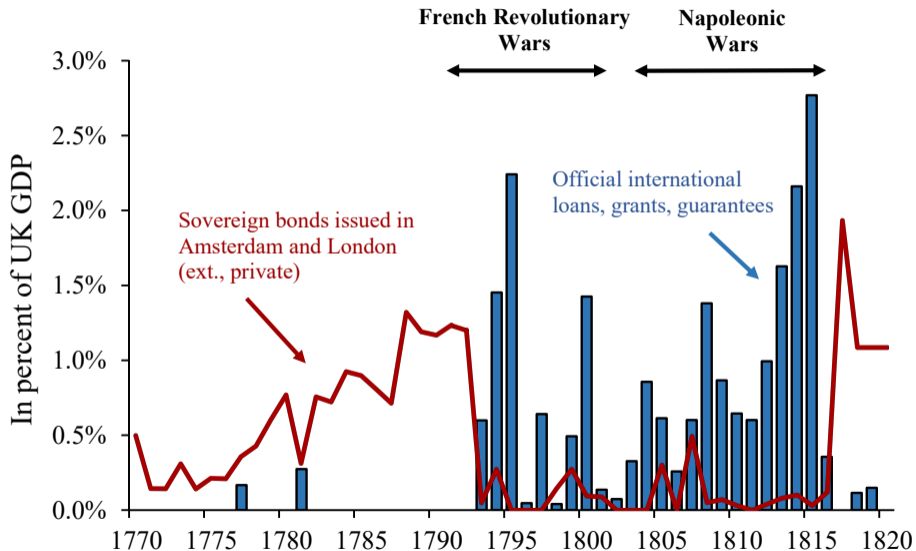
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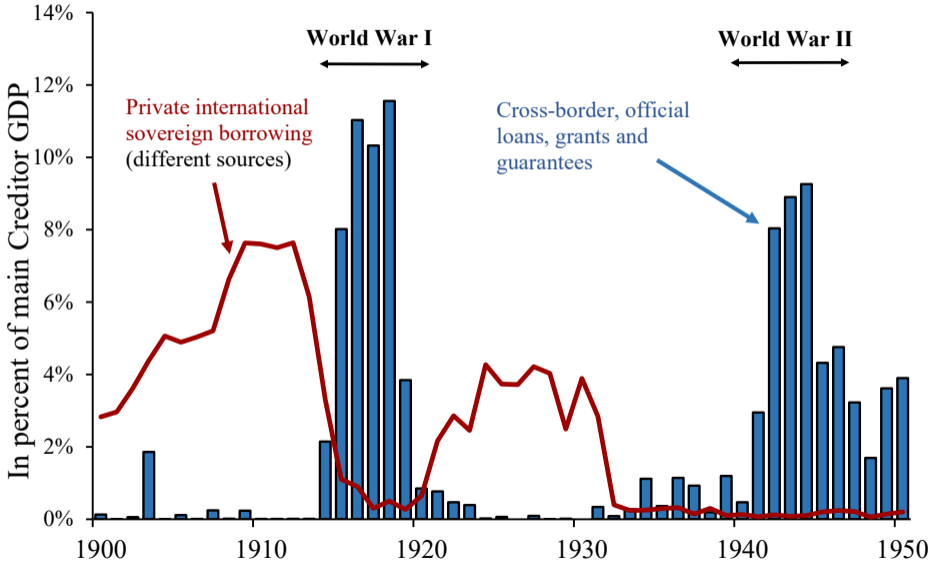


Flows in major wars

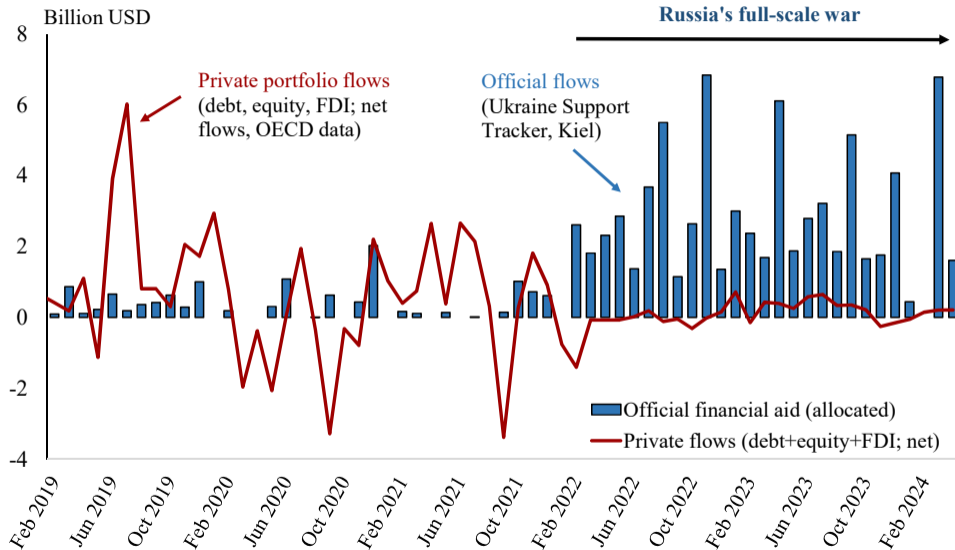
The Napoleonic Wars ("WW0")



WW1 and WW2

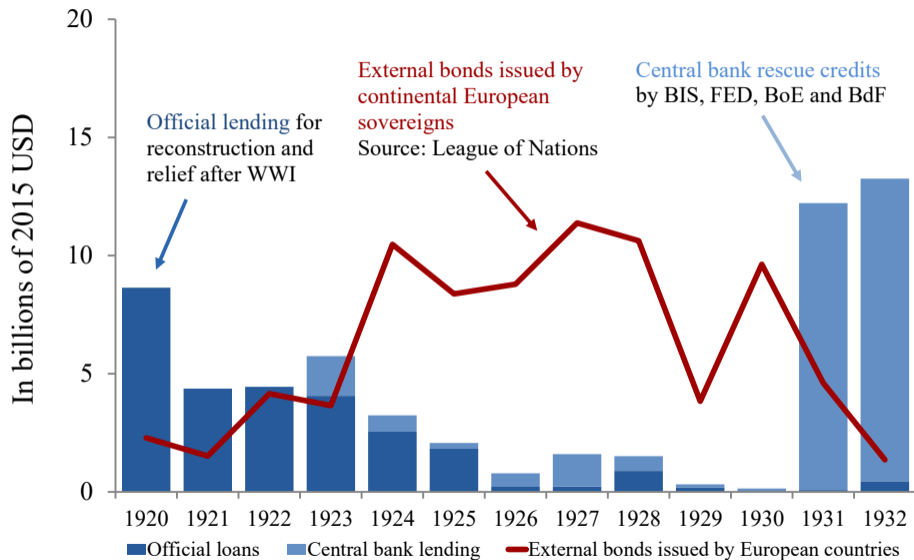


Ukraine 2022-24

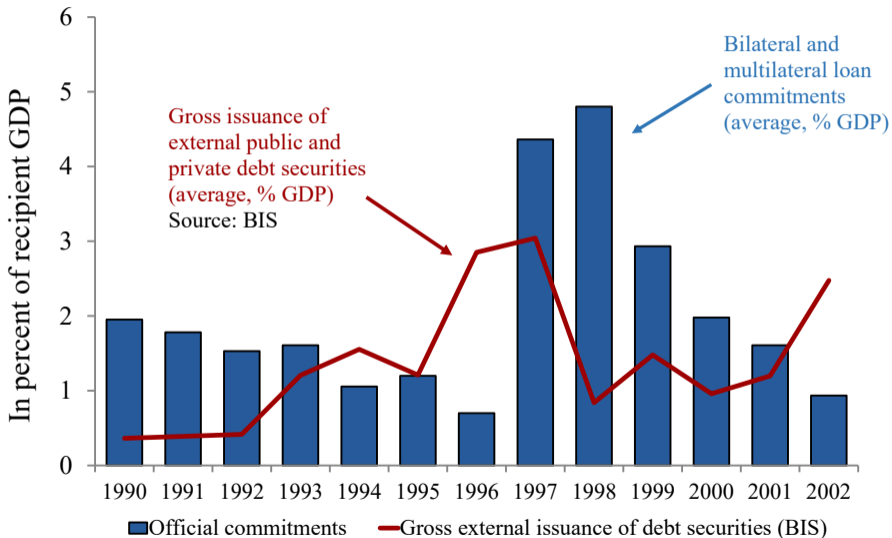


Flows in major financial crises

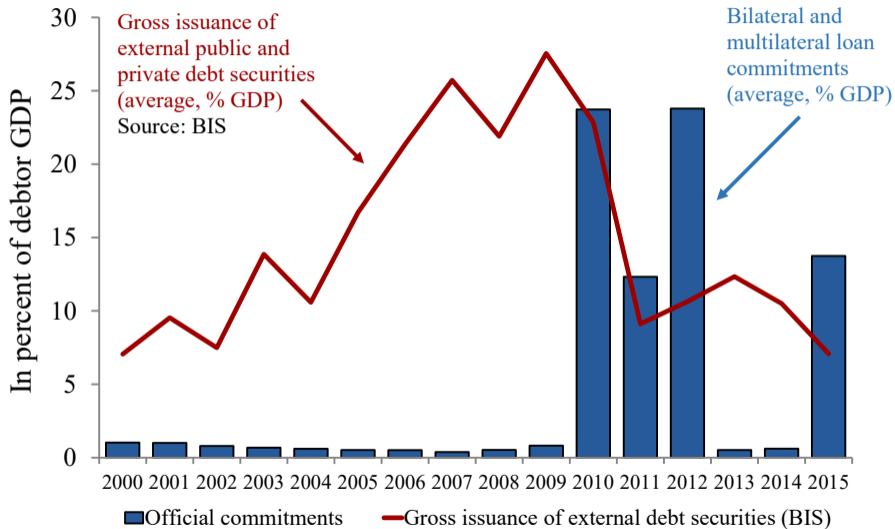
Great Depression 1929- (Europe)



Asian crisis 1997/98 (Korea, Malaysia, Thailand, Indonesia)



Eurozone crisis 2010-12 (Greece, Ireland, Portugal, Spain)



Summary – private vs. official flows

	Private international lending	Official international lending
Share of external public debt (in %)		
Unweighted mean (all countries and years)	40%	60%
GDP-weighted mean (all countries and years)	71%	29%
Lending terms		
Interest rate spread over risk-free rate	177 bps.	-305 bps.
Correlation of spread and sov. credit ratings	0.11***	-0.15***
Global shocks and crises - corr. coeff.		
Financial crisis tally (Reinhart & Rogoff)	-0.12*	0.31***
Macroeconomic disasters (Barro & Ursua)	-0.10	0.47***
Geopolitical risk (Caldara & Iacoviello)	-0.34***	0.81***
Incidence of war (Correlates of War)	-0.25***	0.46***