Coping with Disasters: Two Centuries of International Official Lending

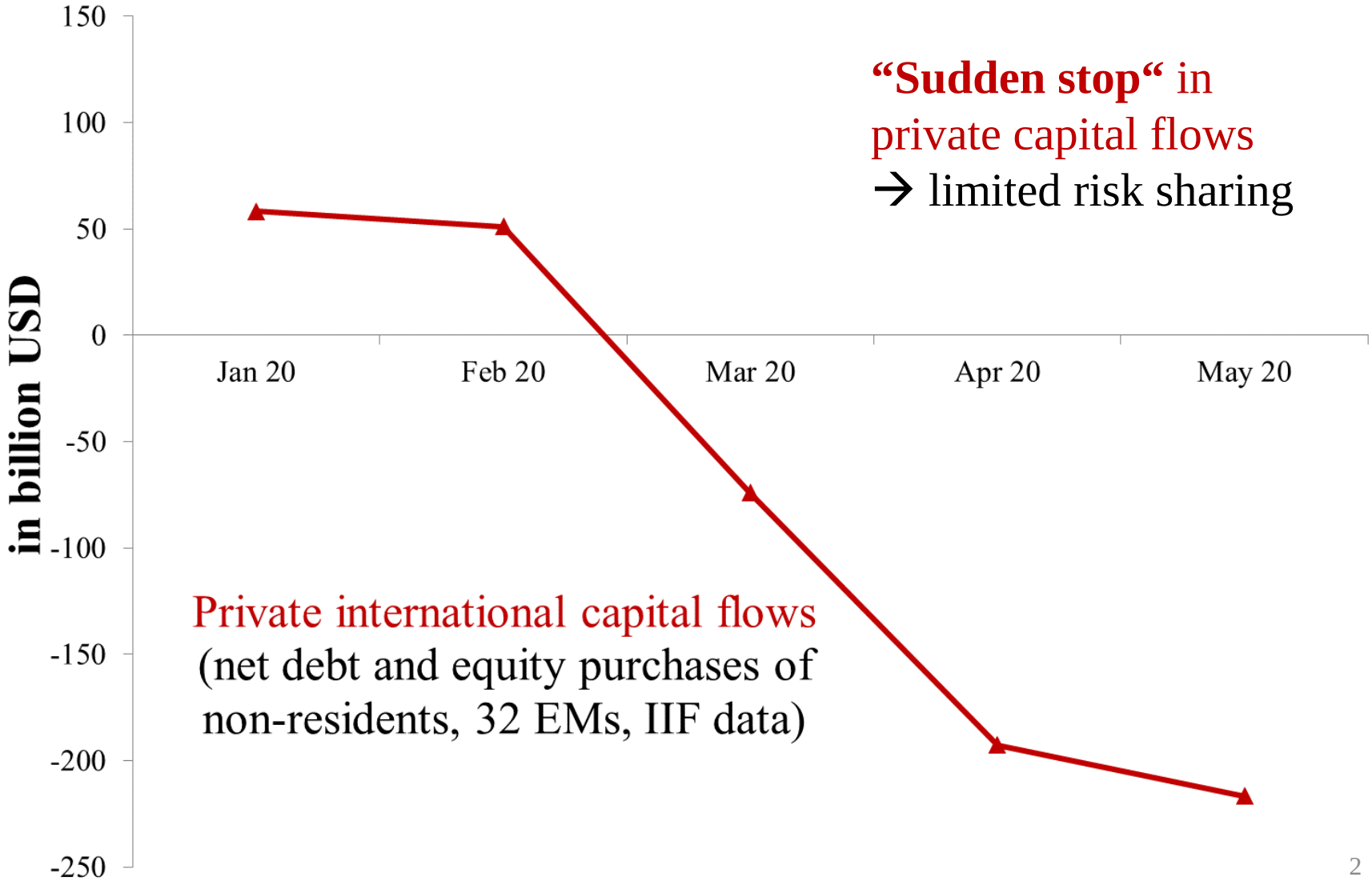
Sebastian Horn
(Kiel Institute)

Carmen Reinhart
(World Bank, Harvard Kennedy School)

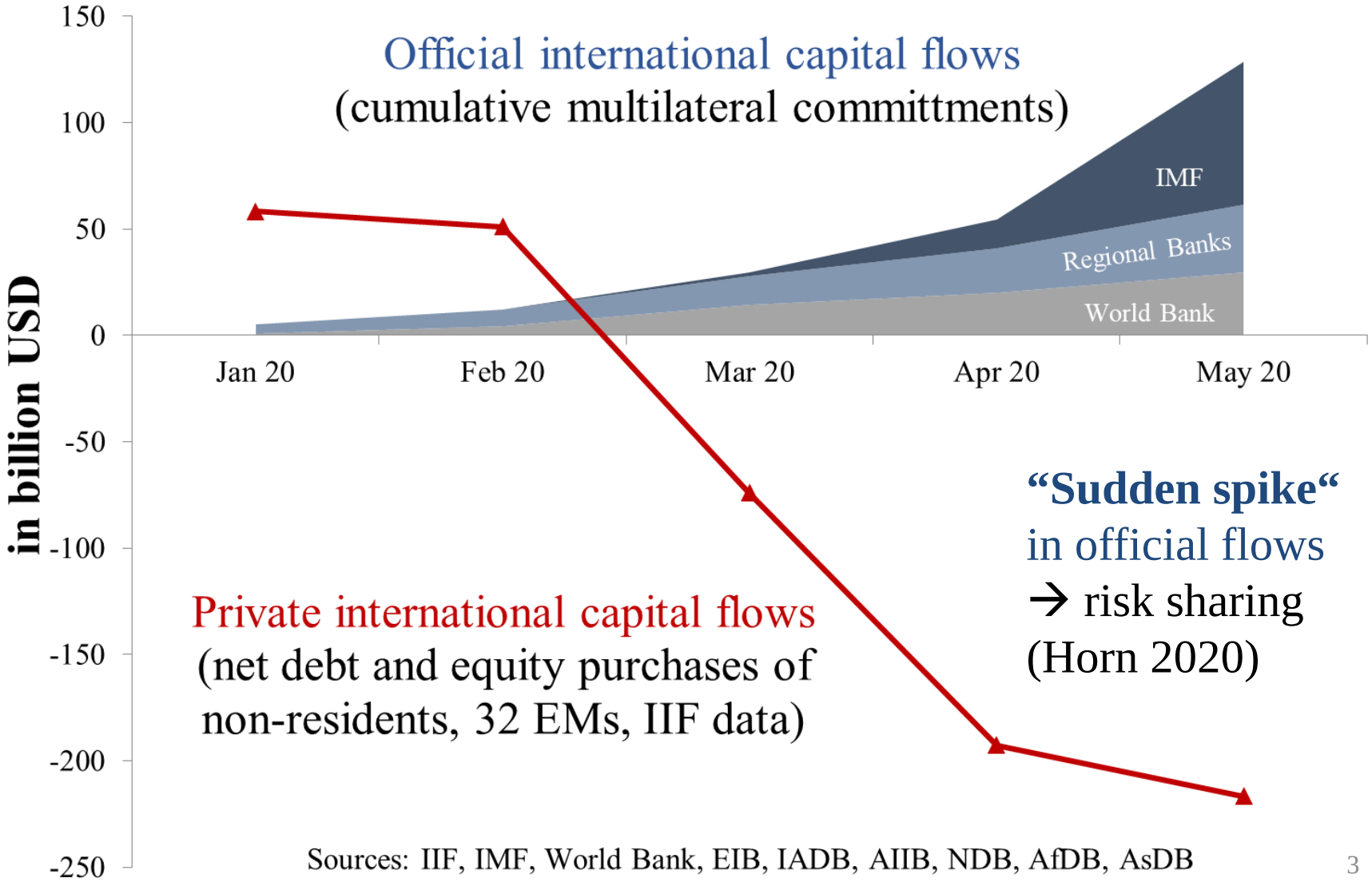
Christoph Trebesch
(Kiel Institute)

NBER Summer Institute, July 2020

The Covid-19 disaster: private capital flows



The Covid-19 disaster: the official response



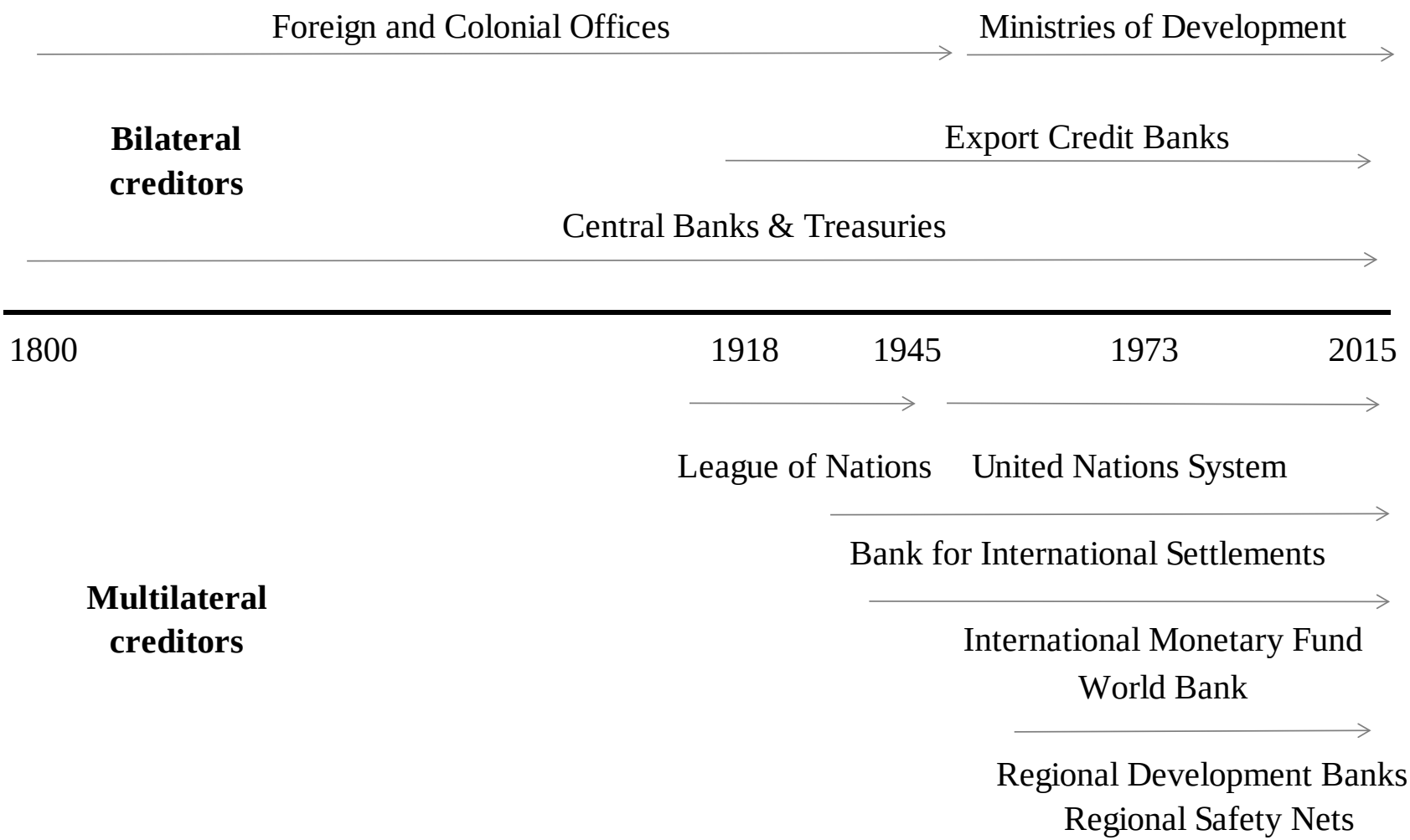
Sources: IIF, IMF, World Bank, EIB, IADB, AIIB, NDB, AfDB, AsDB

The (unexplored) world of official capital flows

Our contribution: encompassing new database and analysis of official international lending, 1790-2015

- Definition: includes loans, grants and guarantees *by governments, multilateral institutions and central banks across borders*
- Sources: International treaty series (archives), creditor and debtor budget accounts, annual reports, post-1970: World Bank, OECD
- 230,000 grants & loans by 134 governments, 50 intl. institutions, in total 15 trillion real USD (committments in 2015 terms)

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° - - - - of Sardinia, in 1793, 4, 5, & 6	* 500,000	—	—
D° - - - - of the Emperor, in 1795 & 6	† 6,220,000	—	—
D° - - - - - D° - - in 1797 - -	700,000	—	—
D° - - - - of Portugal - in 1797 - -	247,205	—	—
D° - - - - - D° - - in 1798 - -	122,013	13	—
D° - - - - of Ruſſia - - in 1799 - -	825,000	—	—
D° - - - - of the Emperor, Elector of Bavaria, &c. - - - -	500,000	—	—
D° - - - - of the Emperor - - - -	‡ 1,066,666	13	4
D° - - - - of Ruſſia - - - - - -	545,494	—	—
D° - - - - of Bavaria - - - - - in 1800	§ 501,017	6	—
D° - - - - of the Emperor, to ena-			

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

Disasters 1800-2015: A new database

We collect data on severe disasters from many sources:

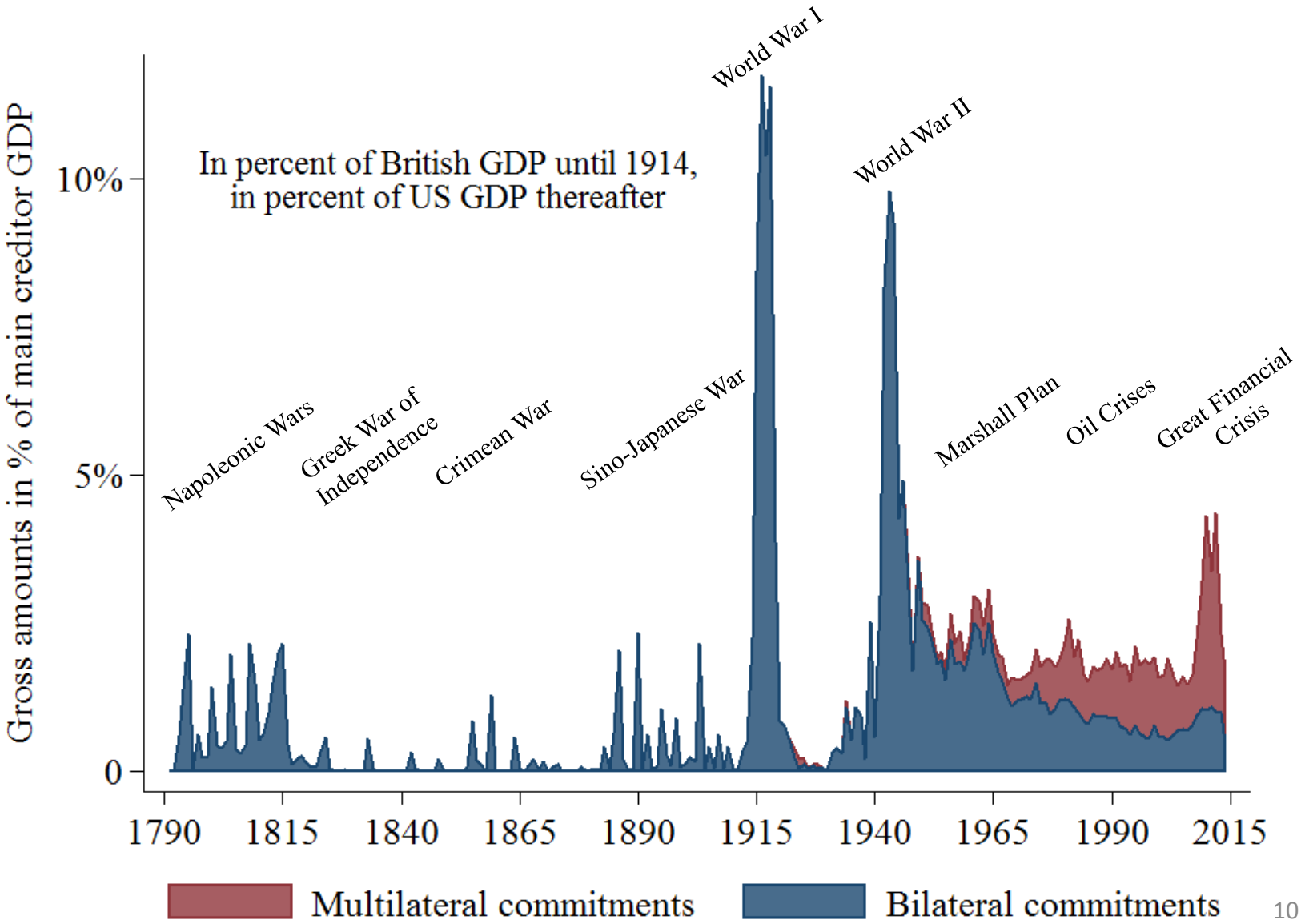
- **Financial crises**: Banking, currency and sovereign debt crises from Reinhart & Rogoff (2009) and Meyer et al. (2019)
- **Wars and military conflict:** Inter- and intra-state wars from the Correlates of War project (Sarkees and Wayman 2010)
- **Natural catastrophes:** Earthquakes, storms, floods, volcano eruptions, famines, epidemics from EM-DAT since 1900. Dozens of historical and country studies for 1800-1900

Research questions and key take aways

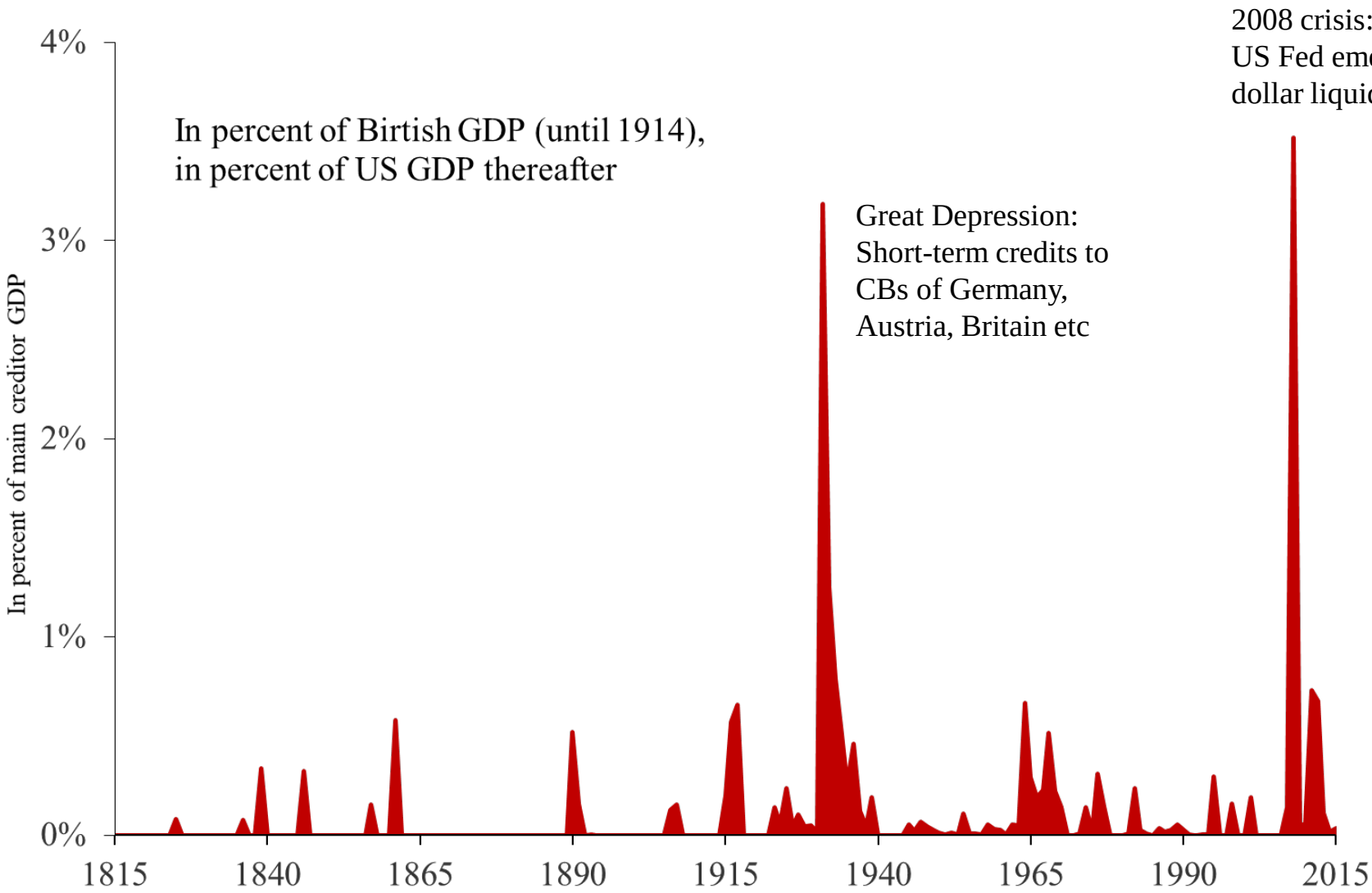
1. **Scale of official lending: It is large, often larger than private flows**
   - Rescue lending common long before IMF/World Bank, but much more institutionalized today
   - Extensive literature on private cross-border flows but little work/data on official flows (see paper); focus was on financial crises and limited time spans; other disasters usually not considered
2. **Interaction of private and official flows: When private flows retrench, official lending often steps in**
   - Private capital tends to be pro-cyclical, while official flows tend to be counter-cyclical (Covid crisis is a recent example)
3. **Patterns of official lending: trade and financial integration matters**
   - What drives country rescues and official lending? (Tirole 2015, Gourinchas et al. 2019)
   - Bailouts increase with economic exposure (selfish motive vs. altruism an intepretation issue)

A panorama of international official lending

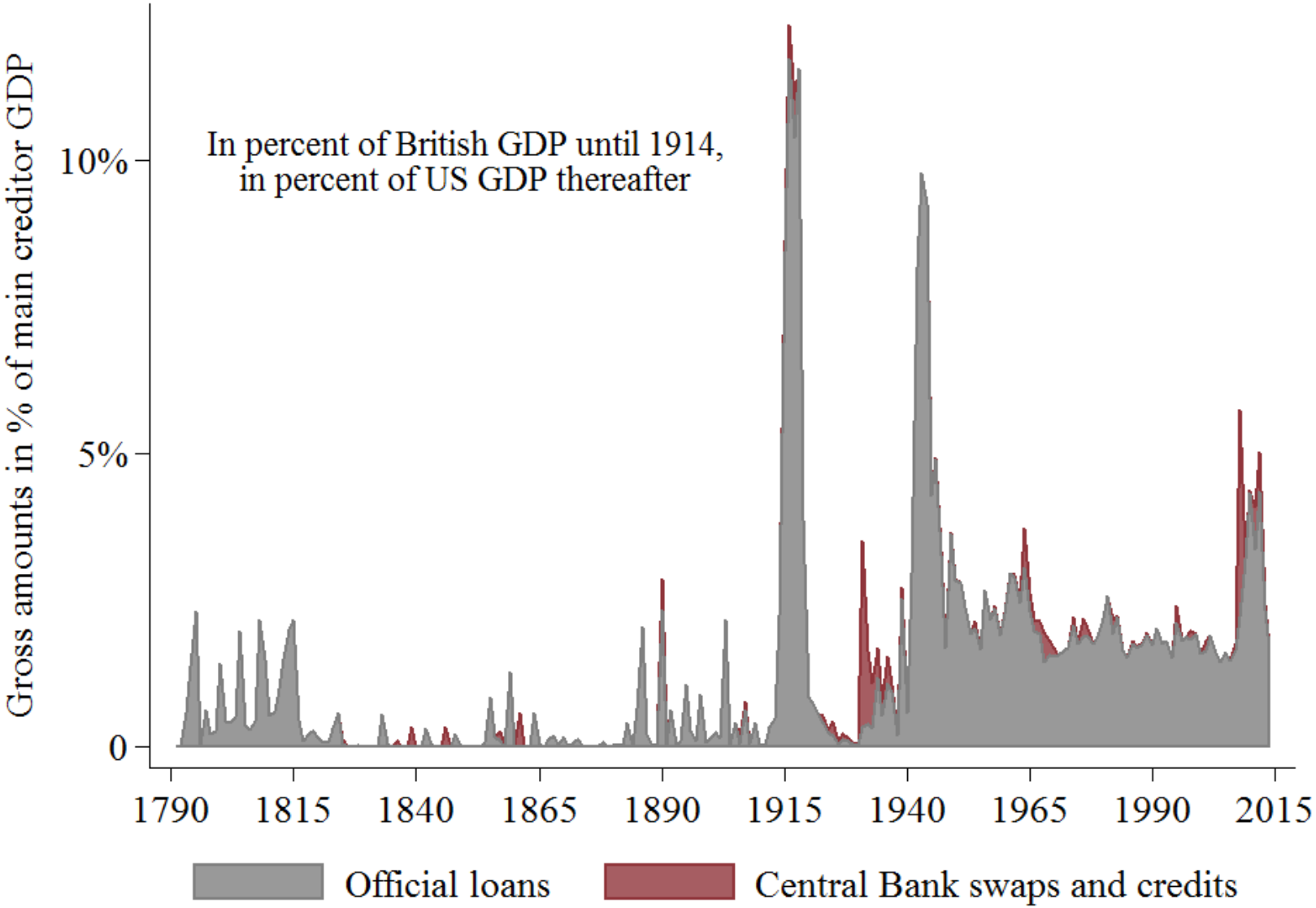
Official international lending: 1790 - 2015



Central bank lending: credits then, swap lines now



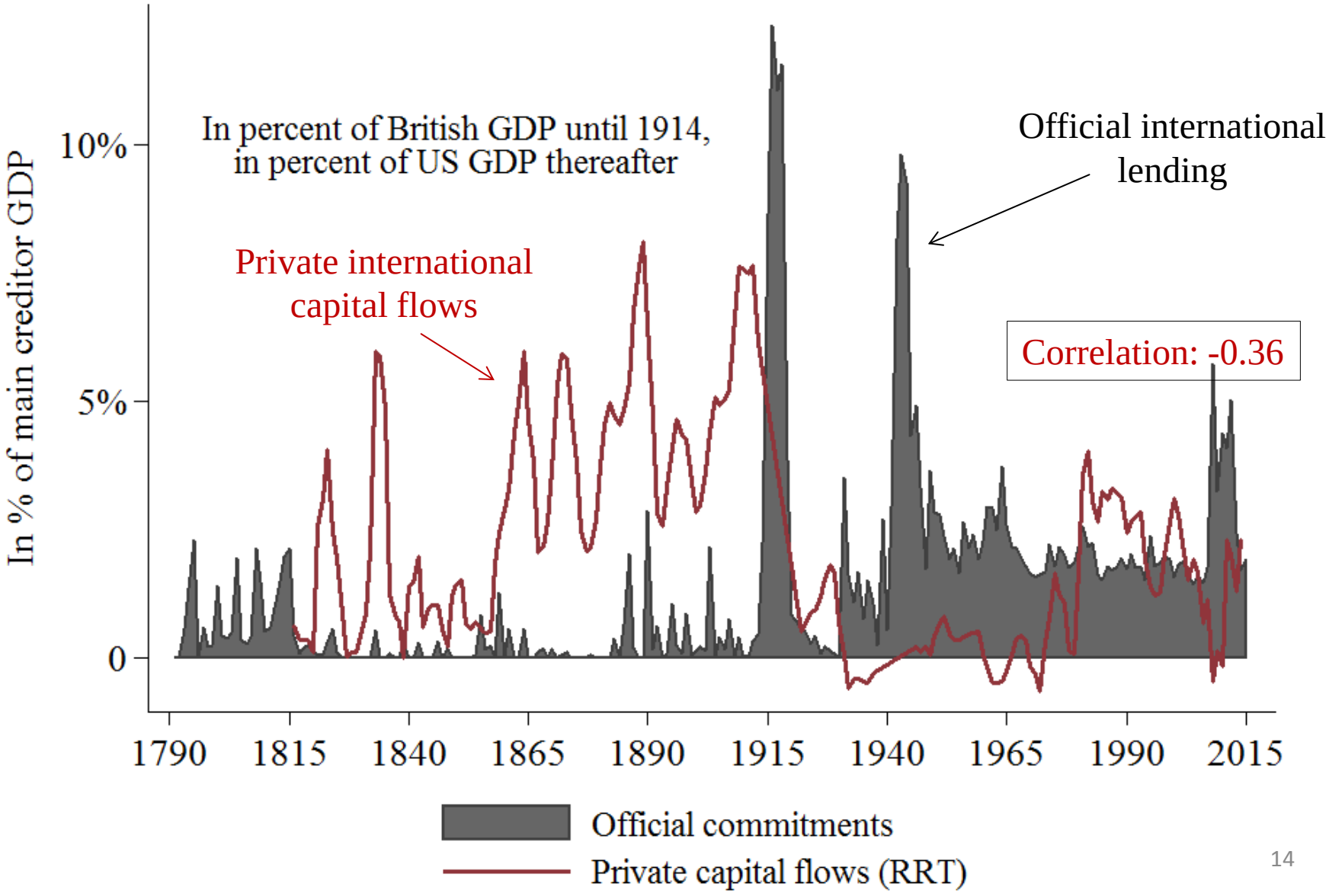
Adding central bank lending across borders



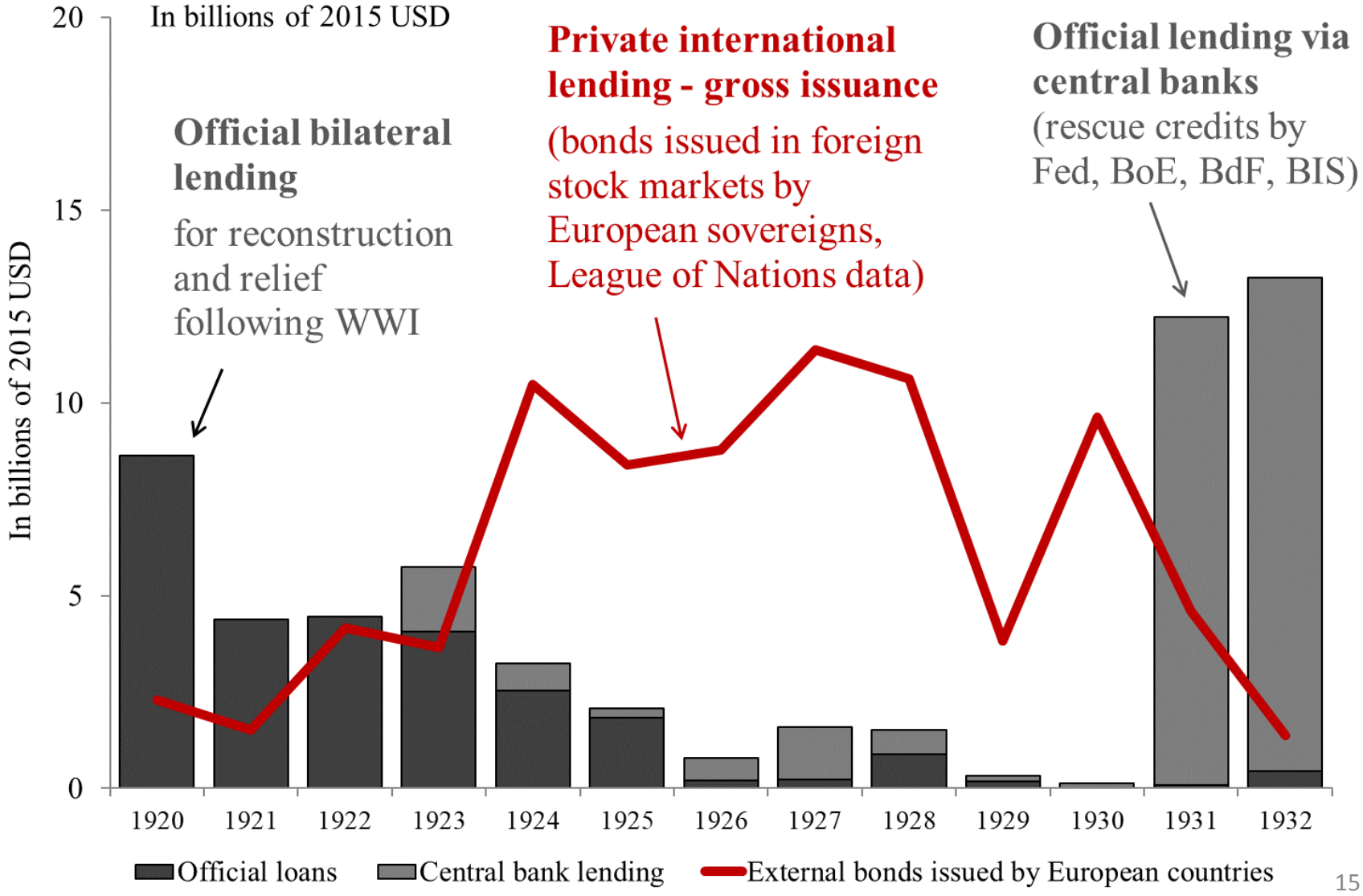
When private investors retrench, official lending often steps in

(private capital tends to be pro-cyclical, while official flows tend to be counter-cyclical)

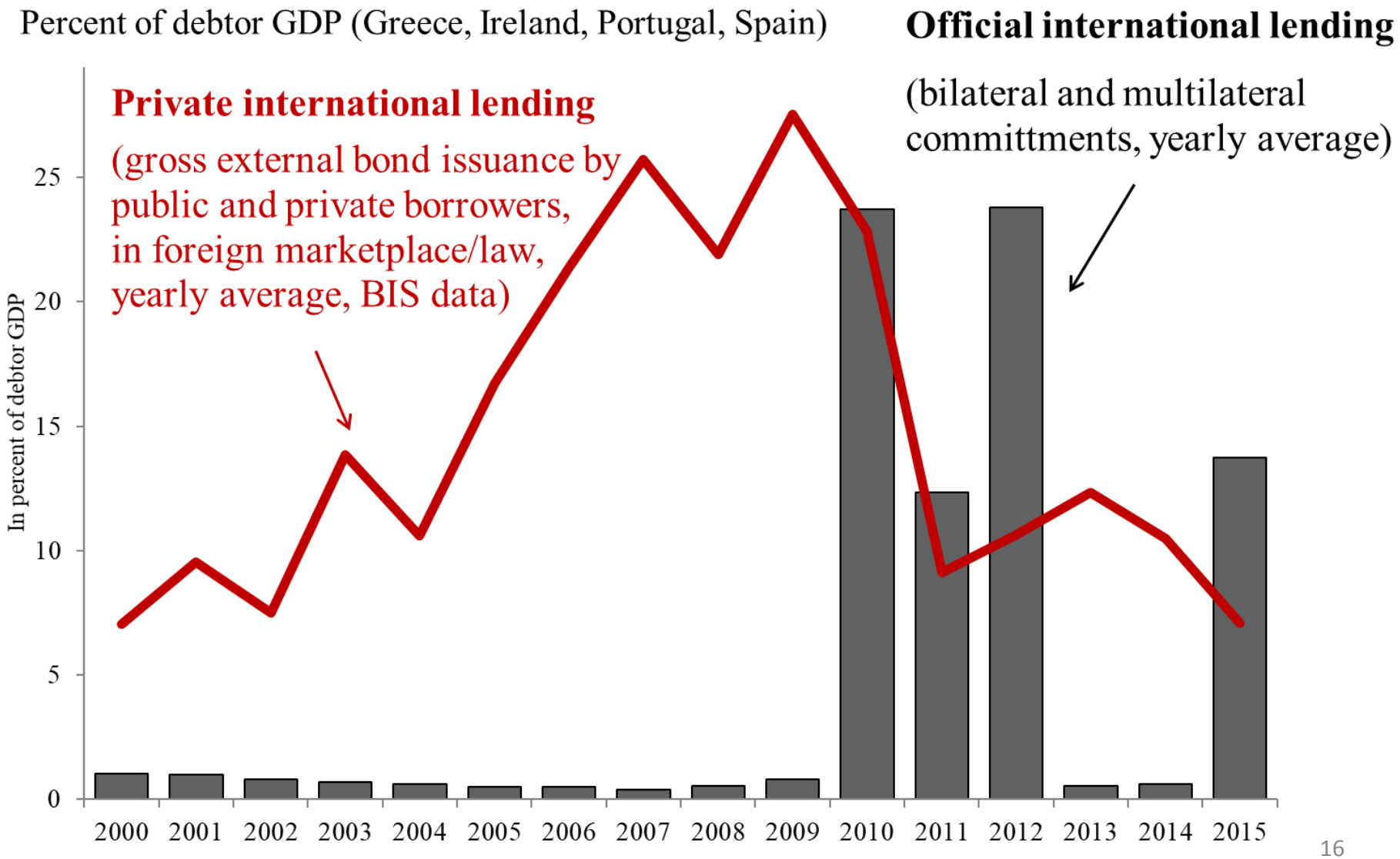
Official vs private capital flows: **200 year view**



Case study: **Interwar and Great Depression**



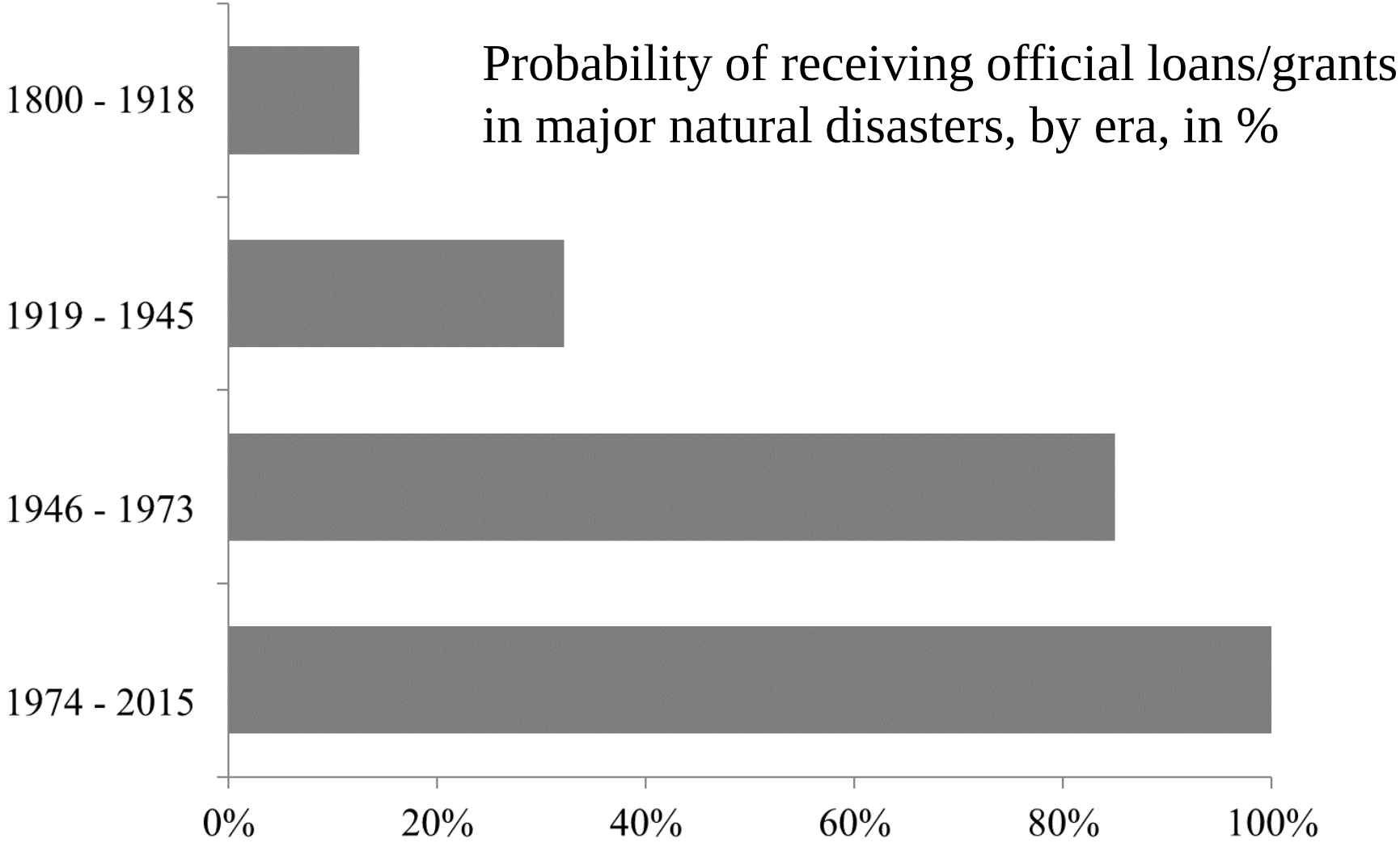
Case study: **Eurozone crisis** (2010-2012)



Why do countries extend rescue loans?

(Who gets what and why?
Altruism or self-interest?)

Natural disasters: increasing odds of rescue lending



Why do countries extend rescue loans?

Main hypothesis: economic integration matters. Sovereigns extend bilateral rescue loans to those countries they are most exposed to in trade and finance.

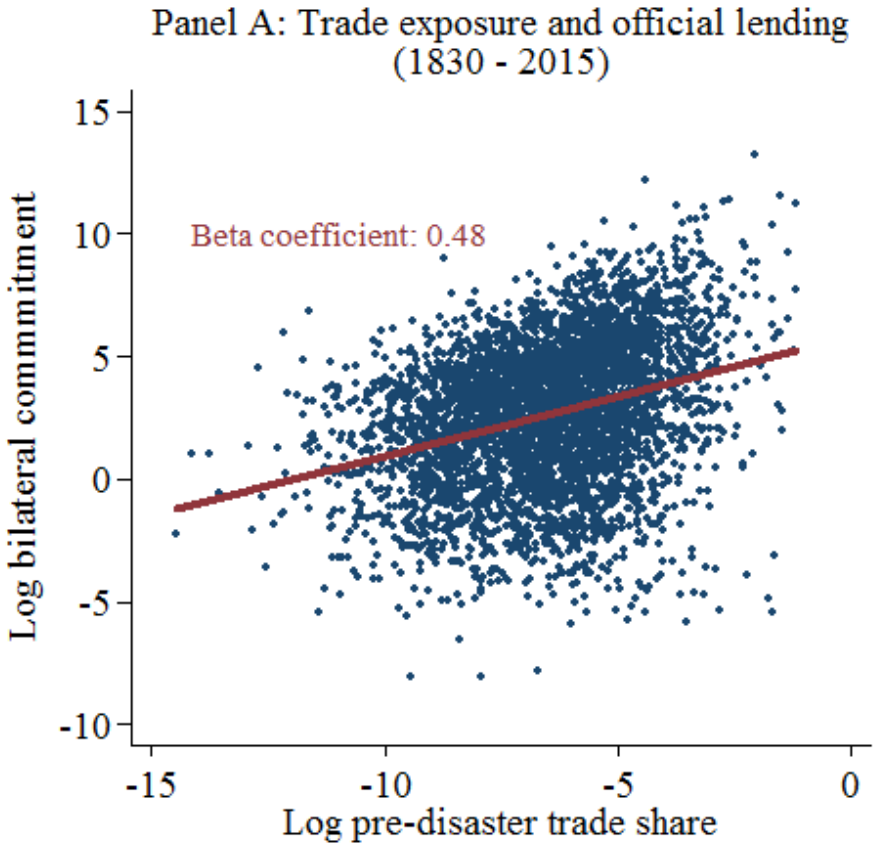
Interpretation: helping your friends vs. self-interest of preventing negative spillovers (Tirole 2015, Gourinchas et al. 2019)

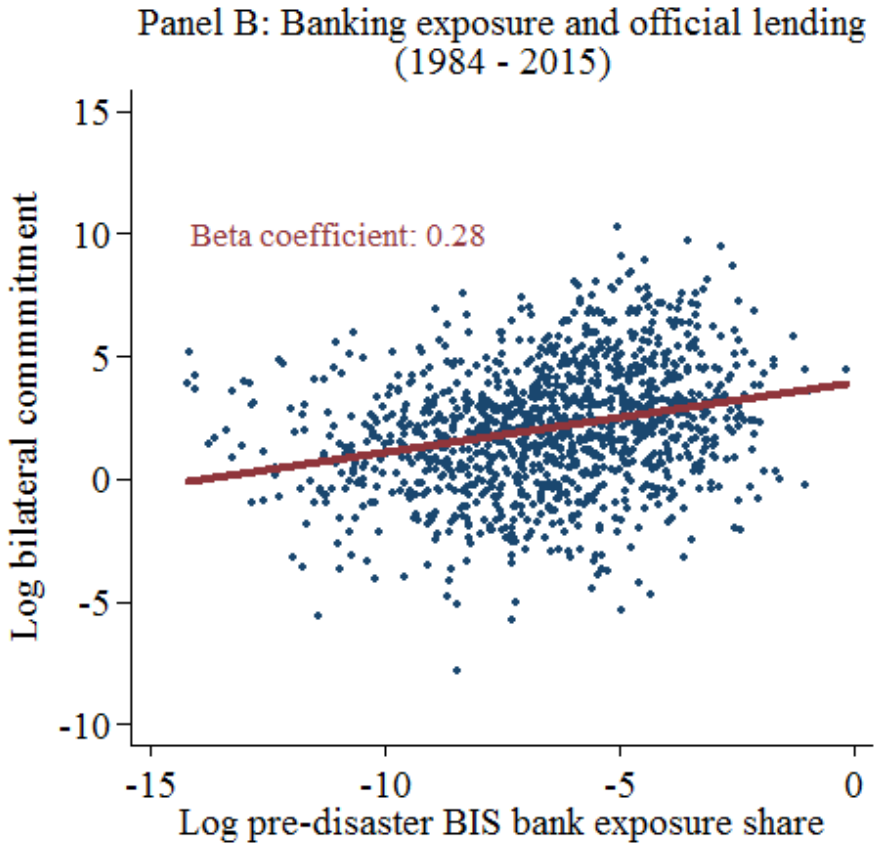
Empirical approach: gravity model of bilateral rescue lending

$$\boldsymbol{ln\ RescLoans_{i,j,t}} = \beta\ ln\ Econ\ Exposure_{i,j,t} + \gamma\ Political\ Ties_{i,j,t} + \delta\ ln\ Distance_{i,j} + \Delta\ Controls_{i,j,t} + \vartheta_t + \sigma_i + \theta_j + \epsilon_{i,j,t}$$

… loans by creditor country j, to crisis country i, in disaster episode t in constant 2015 USD

Trade and bank exposure predicts rescue loans





The more exposed you are, the more you lend

	Dep. variable: Bilateral rescue lending				
	Full Sample 1830 - 2015	Pre-WWII 1830 - 1945	Bretton Woods 1946 - 1973	Modern Era 1973 - 2015 (trade linkages)	Modern Era 1984 - 2015 (banking linkages)
	(1)	(2)	(3)	(4)	(5)
Trade exposure	0.34***	0.99*	0.32**	0.50***	
	(0.10)	(0.54)	(0.15)	(0.12)	
Financial exposure					0.26***
					(0.06)
Distance	-0.35**	-0.95**	-0.63**	-0.30*	-0.55***
	(0.15)	(0.48)	(0.28)	(0.18)	(0.17)
UN voting			6.60***	2.54**	5.44**
			(1.45)	(1.25)	(2.41)
(Former) colony	1.12***	1.37***	1.53***	0.69***	1.18***
	(0.29)	(0.46)	(0.34)	(0.26)	(0.22)
Constant	9.67***	7.10	8.25***	0.67	-0.43
	(1.26)	(4.63)	(2.65)	(1.53)	(1.92)
Observations	15429	449	1736	12042	1283
R-squared	0.825	0.997	0.921	0.730	0.961
Creditor FE	✓	✓	✓	✓	✓
Debtor FE	✓	✓	✓	✓	✓
Episode FE	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓

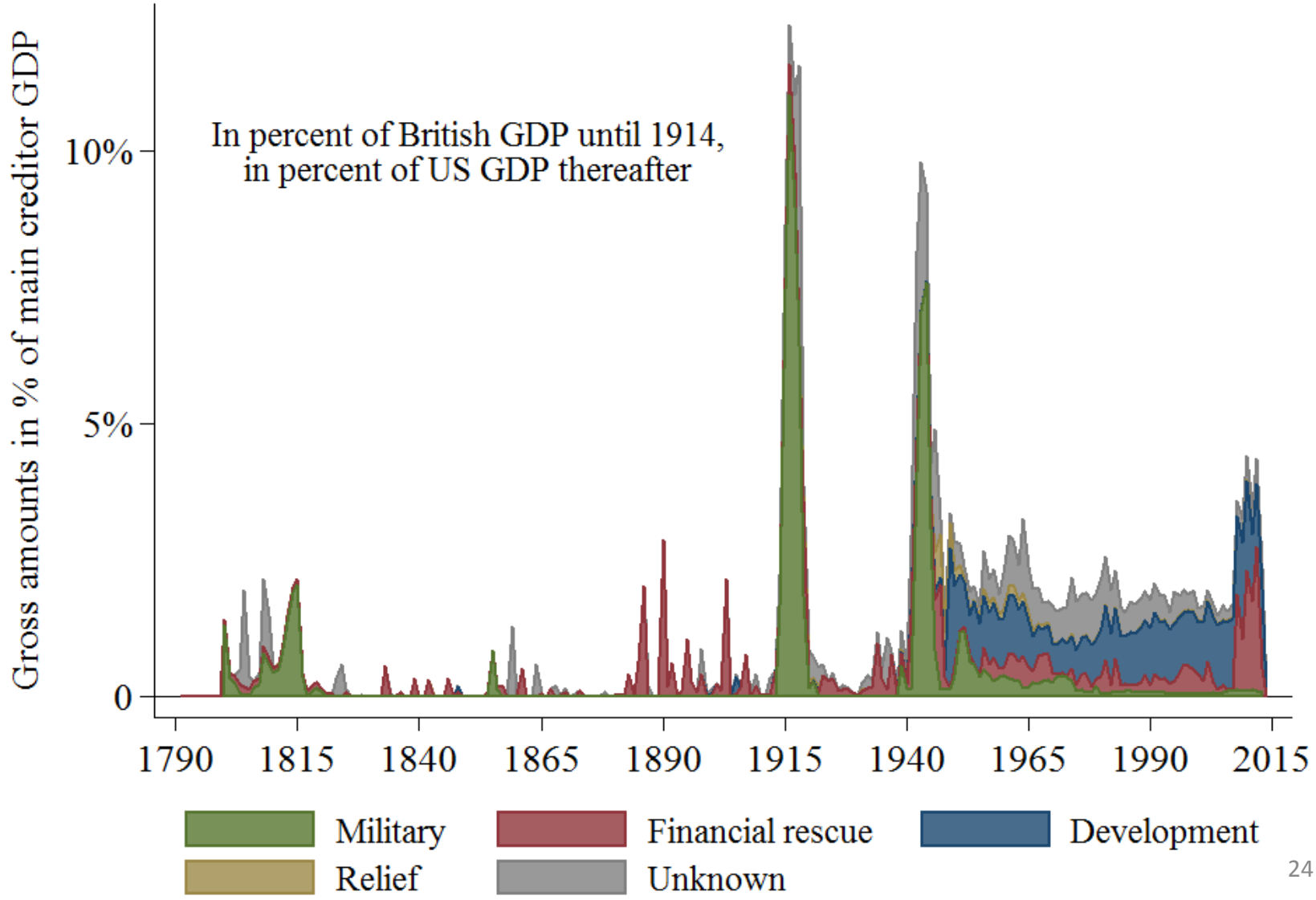
1% higher trade exposure 0.34% more official loans

Conclusion

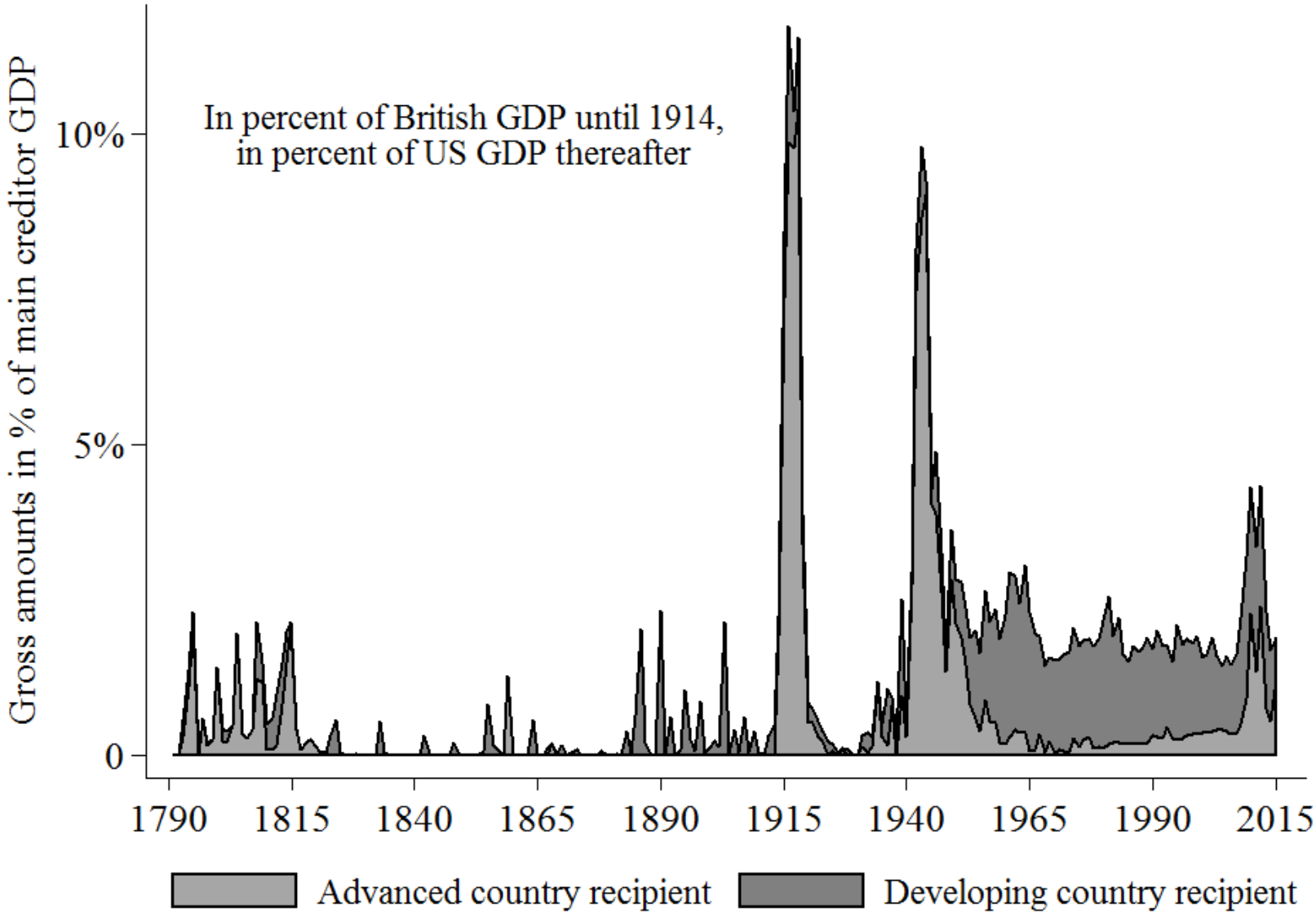
- Official lending is much larger than previously known and existed long before the foundation of IMF and World Bank
- Official lending rises in times of disaster, when private capital flows retrench
- Rescue loans and bailouts much more prevalent today (from exception to norm); economic integration matters

Appendix

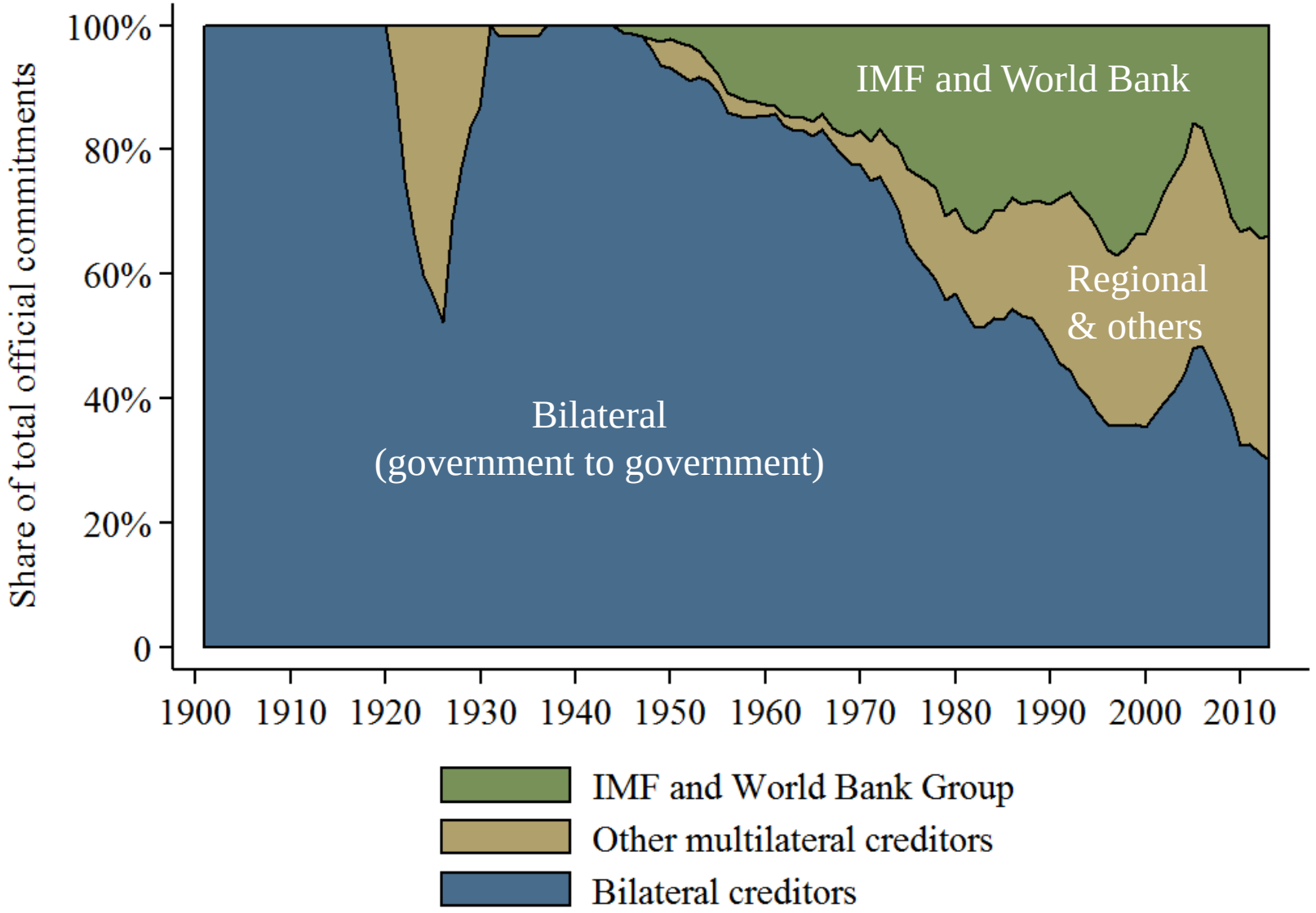
Purposes of official cross-border lending



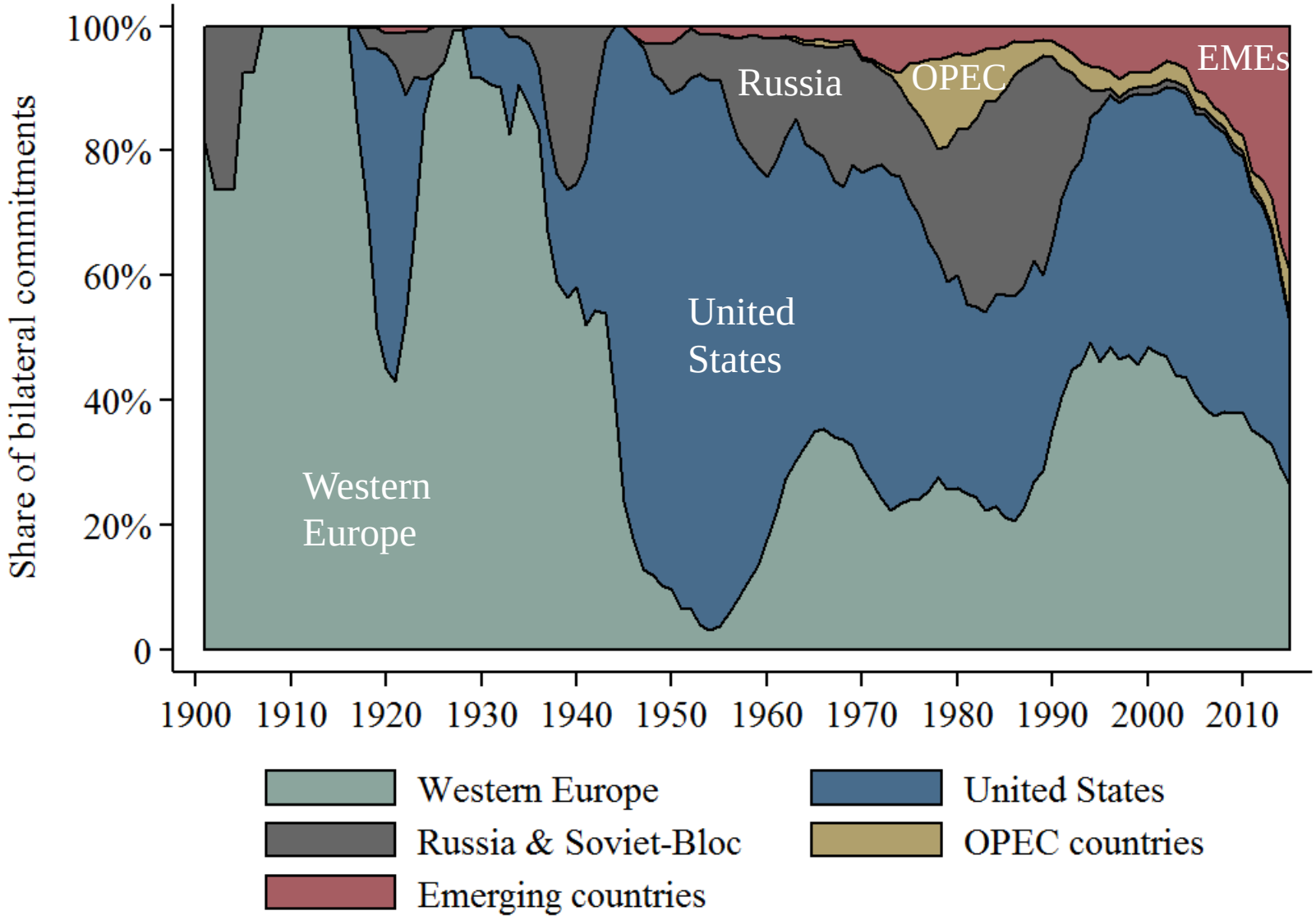
Recipients of official finance



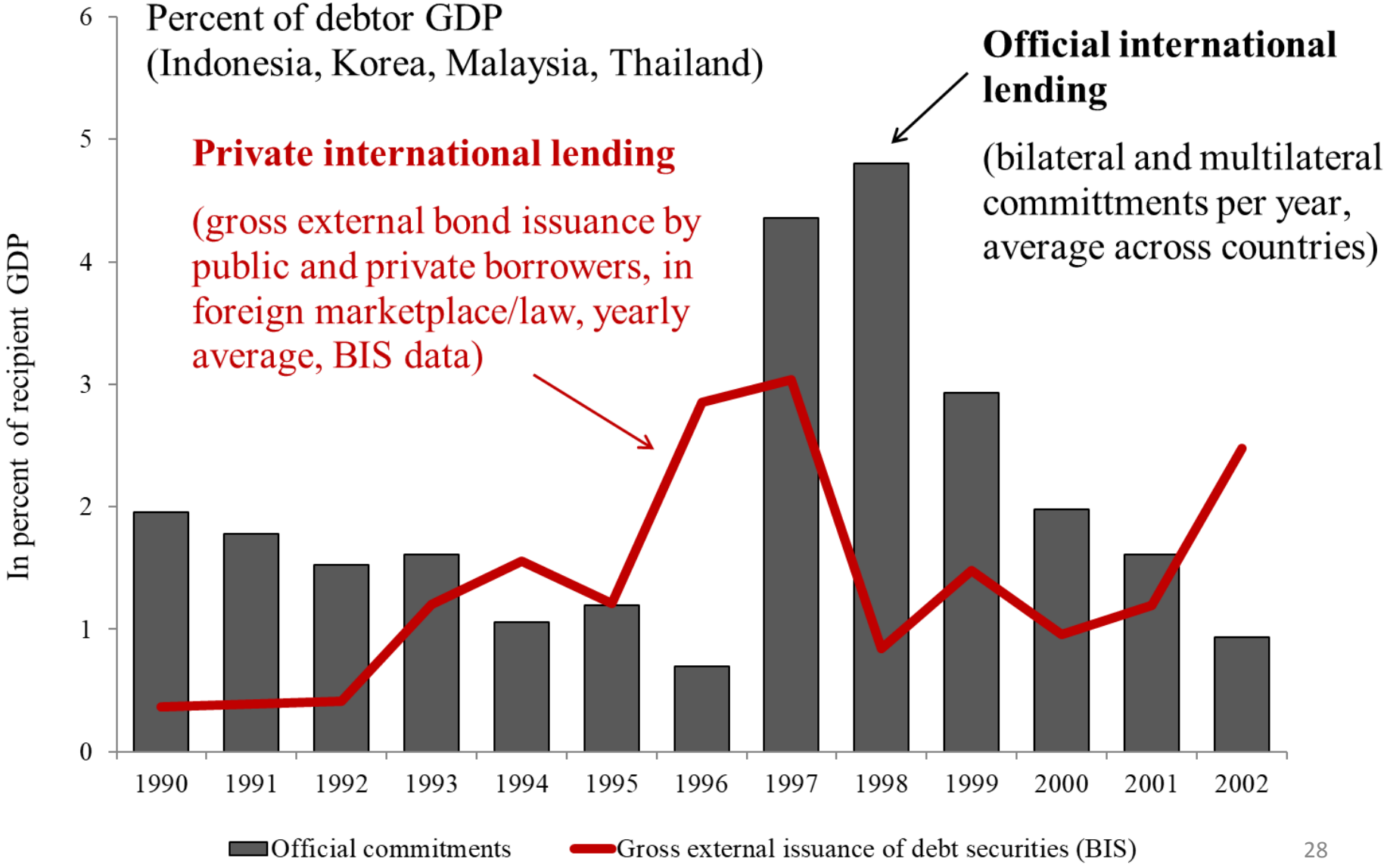
Official lending is much bigger than IMF & World Bank



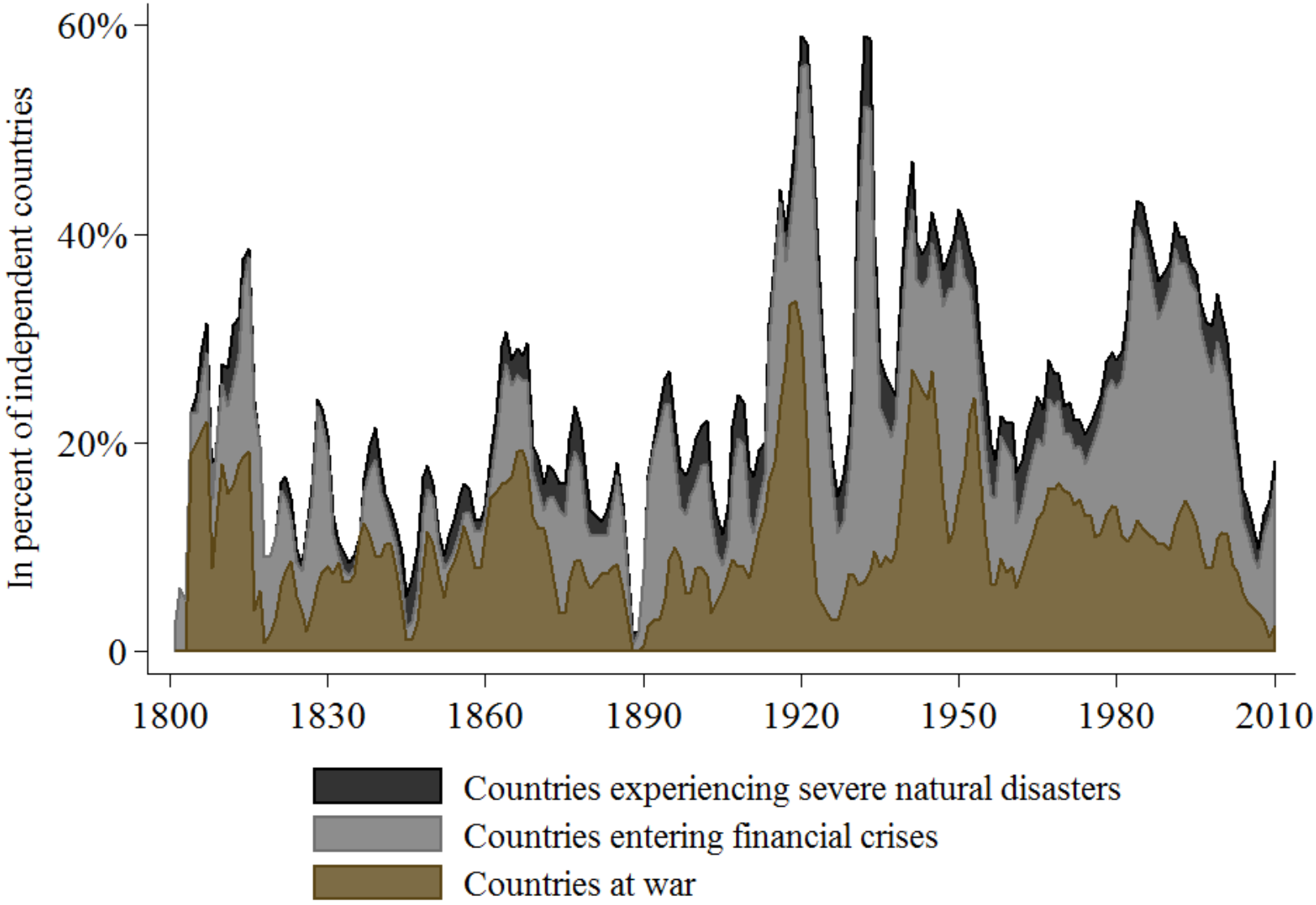
Bilateral creditors 1900 - 2015: Europe then, China now…



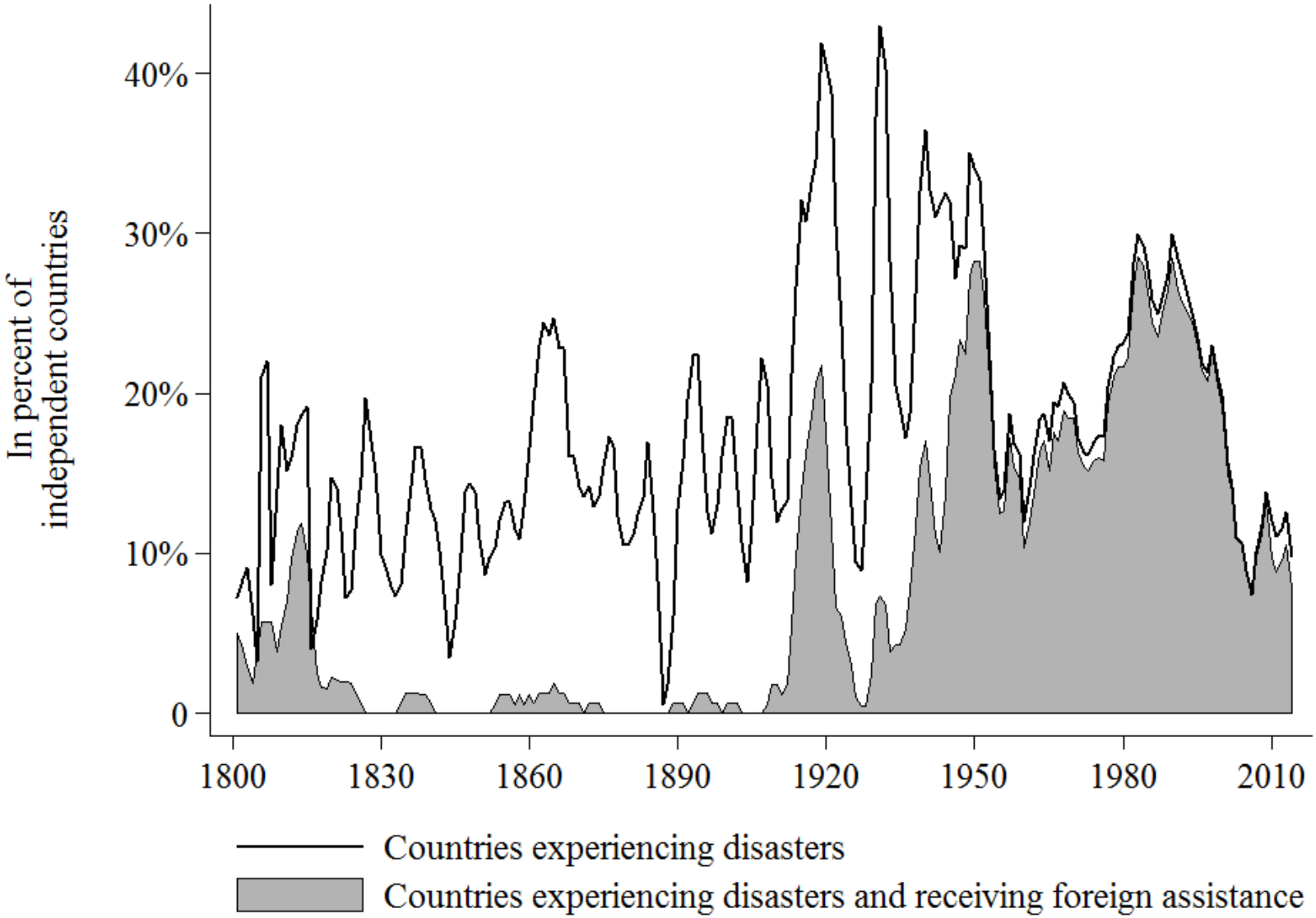
Case study: **Asian crisis** (1997)



Financial crises, wars, and natural disasters



Rescue lending has become much more systematic



Why do countries extend rescue loans in disasters?

