

# Coping with Disasters: Two Centuries of International Official Lending

Sebastian Horn

(Kiel Institute)

Carmen Reinhart

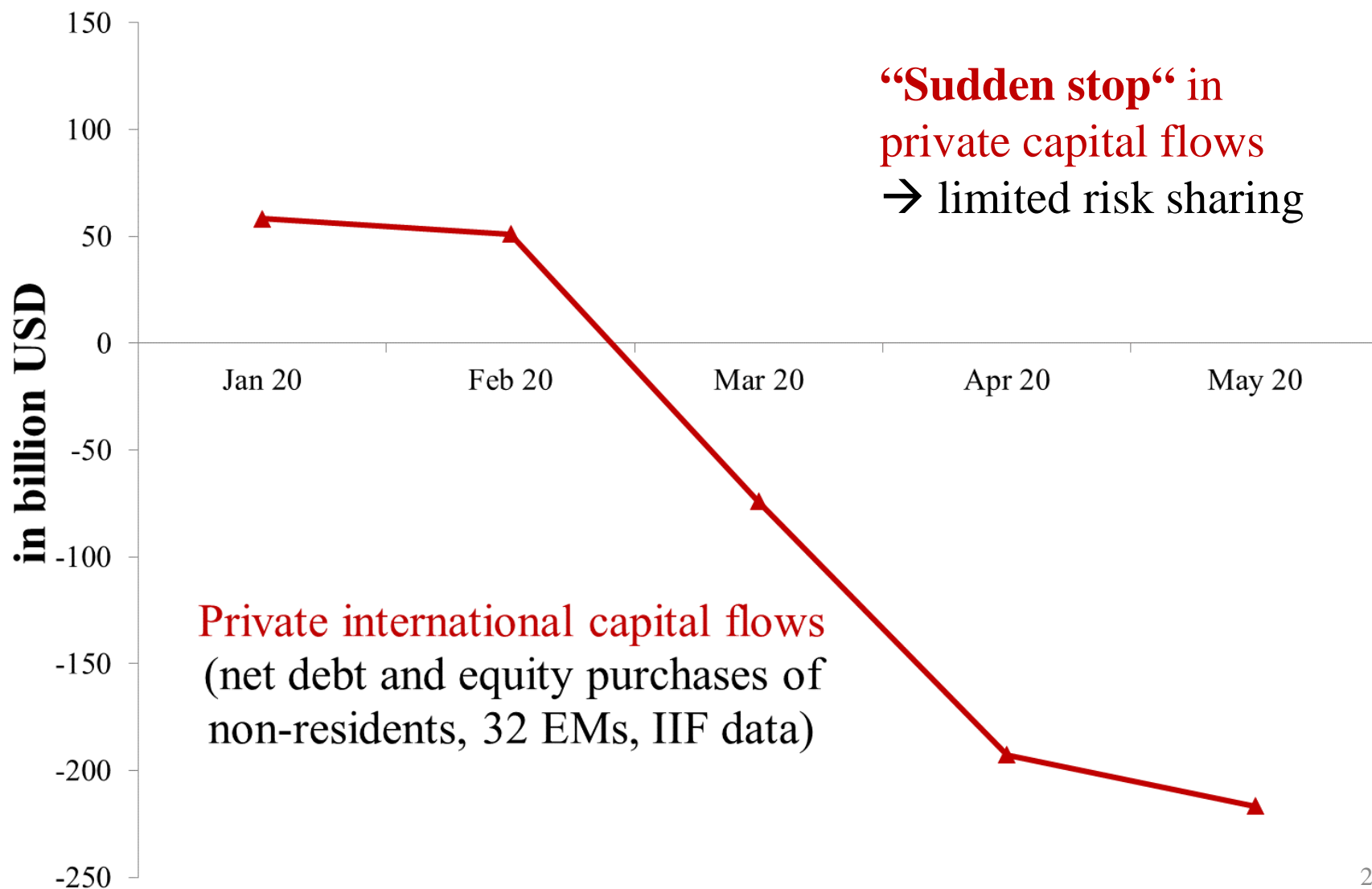
(World Bank, Harvard)

Christoph Trebesch

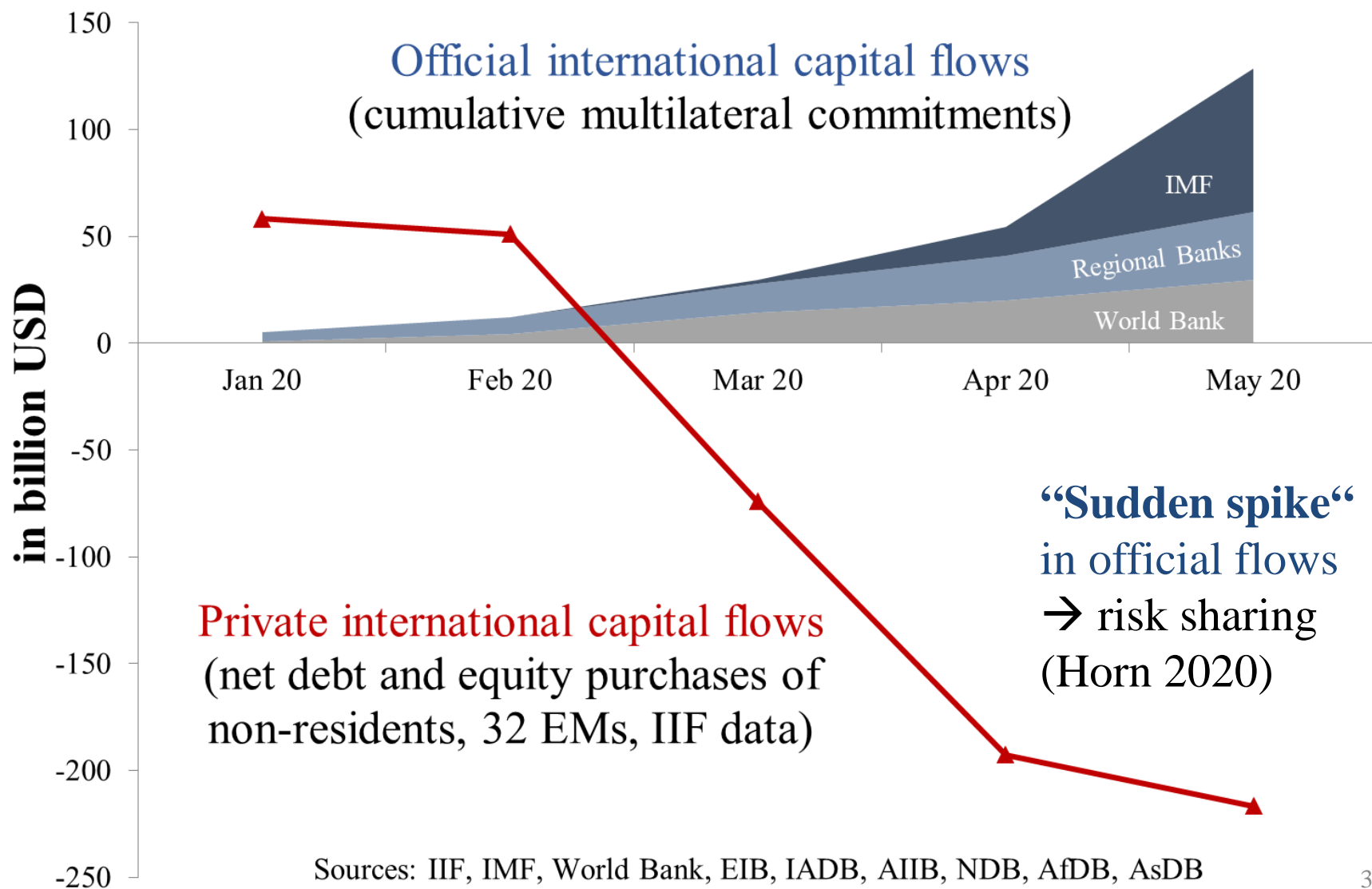
(Kiel Institute)

NBER Summer Institute, July 2020

# The Covid-19 disaster: private capital flows



# The Covid-19 disaster: the official response



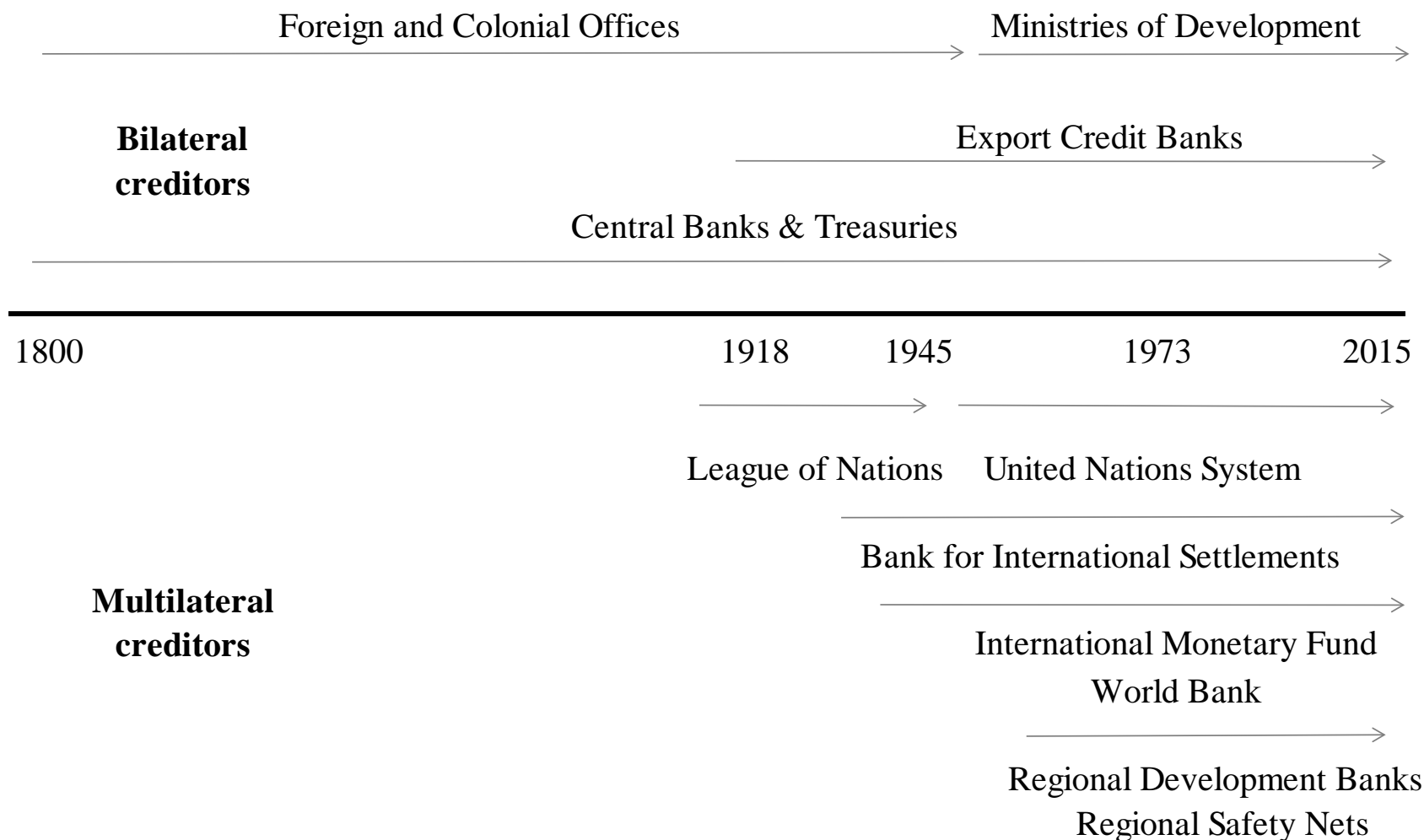
# The (unexplored) world of official capital flows

- Extensive literature on private cross-border flows (see paper), but little work/data on official flows; narrower focus/time spans

## **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 (commitments 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 - -	120,013	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 - - -	§ 501,017	6	—
D° - - - of the Emperor, to ena- - - -	186	—	—

## 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

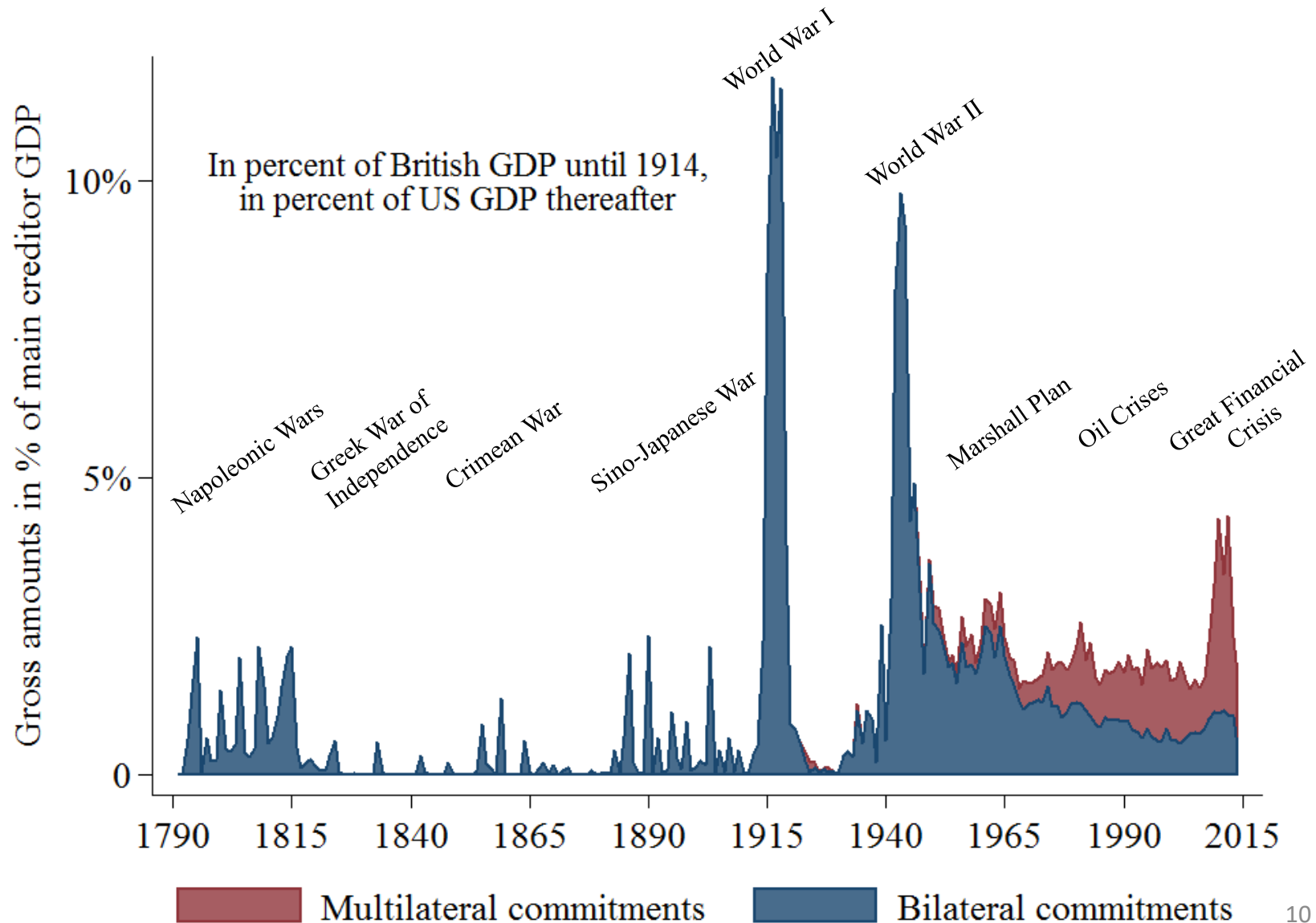
# Research questions and key take aways

- 1. Scale of official lending: It is large, often larger than private flows**
  - Rescue lending common long before IMF/World Bank
  - Much more institutionalized today (“globalization of assistance“)
- 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 interpretation issue)

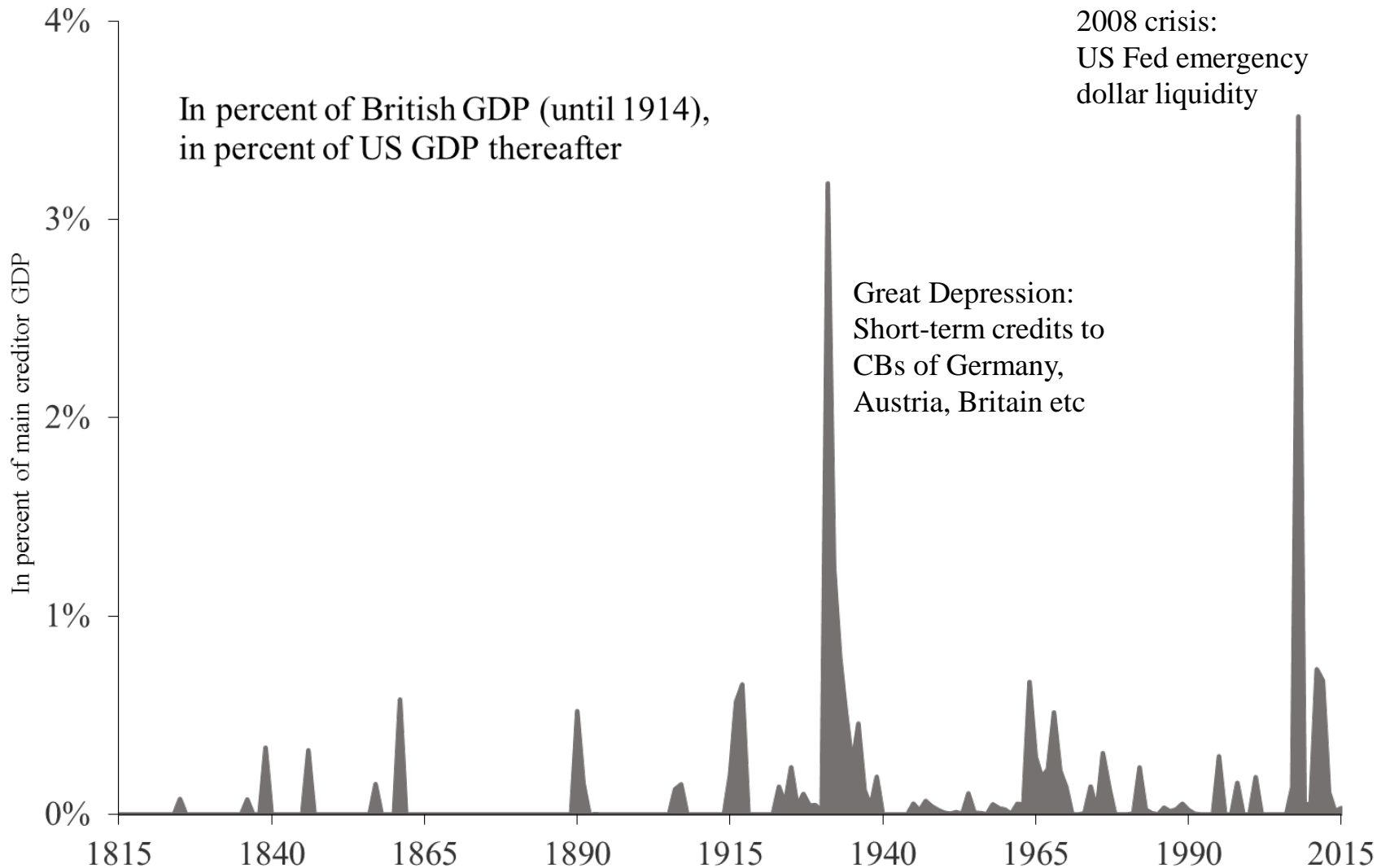


# A panorama of international official lending

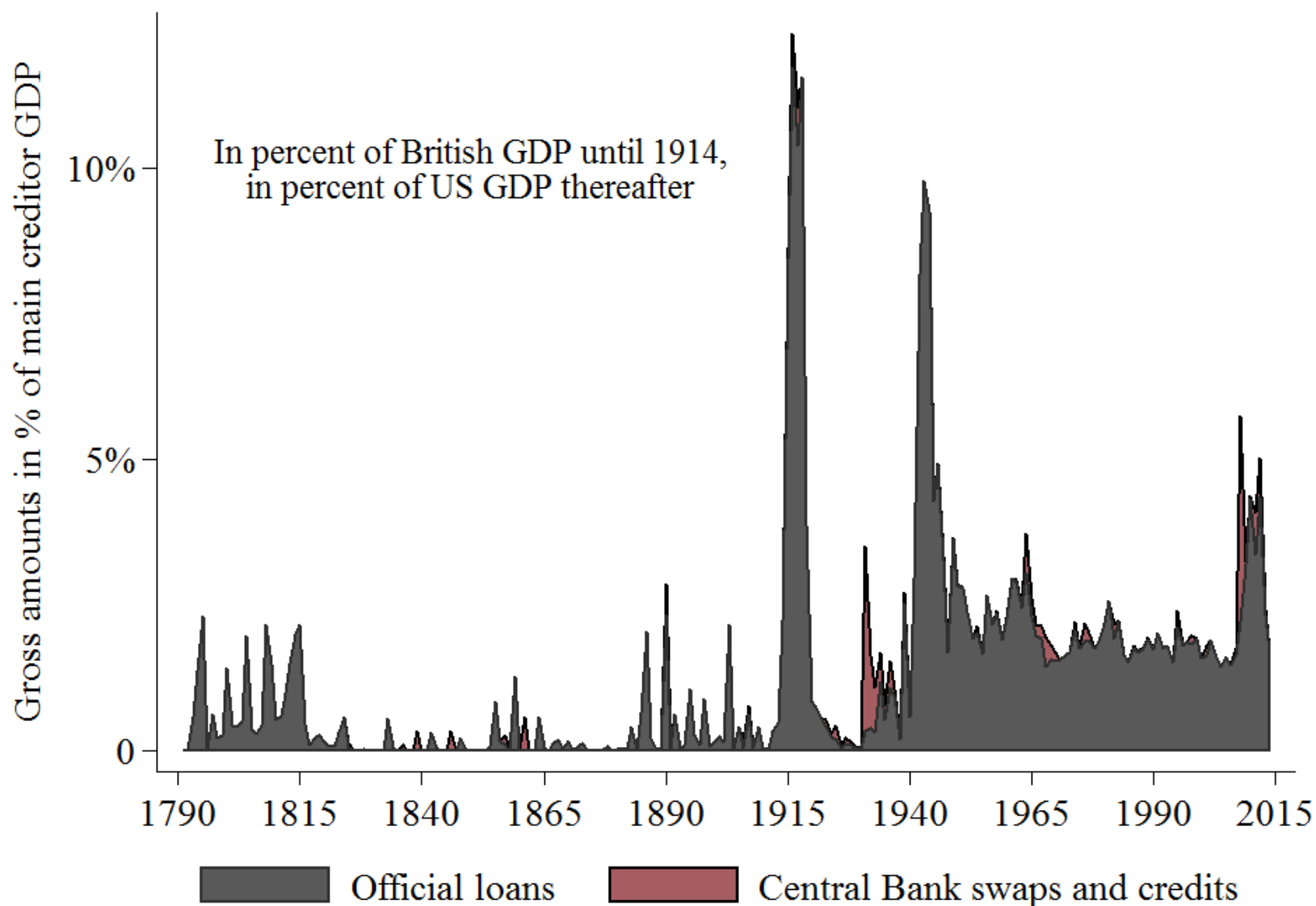
# Official international lending: 1790 - 2015



# Central bank lending: credits then, swap lines now



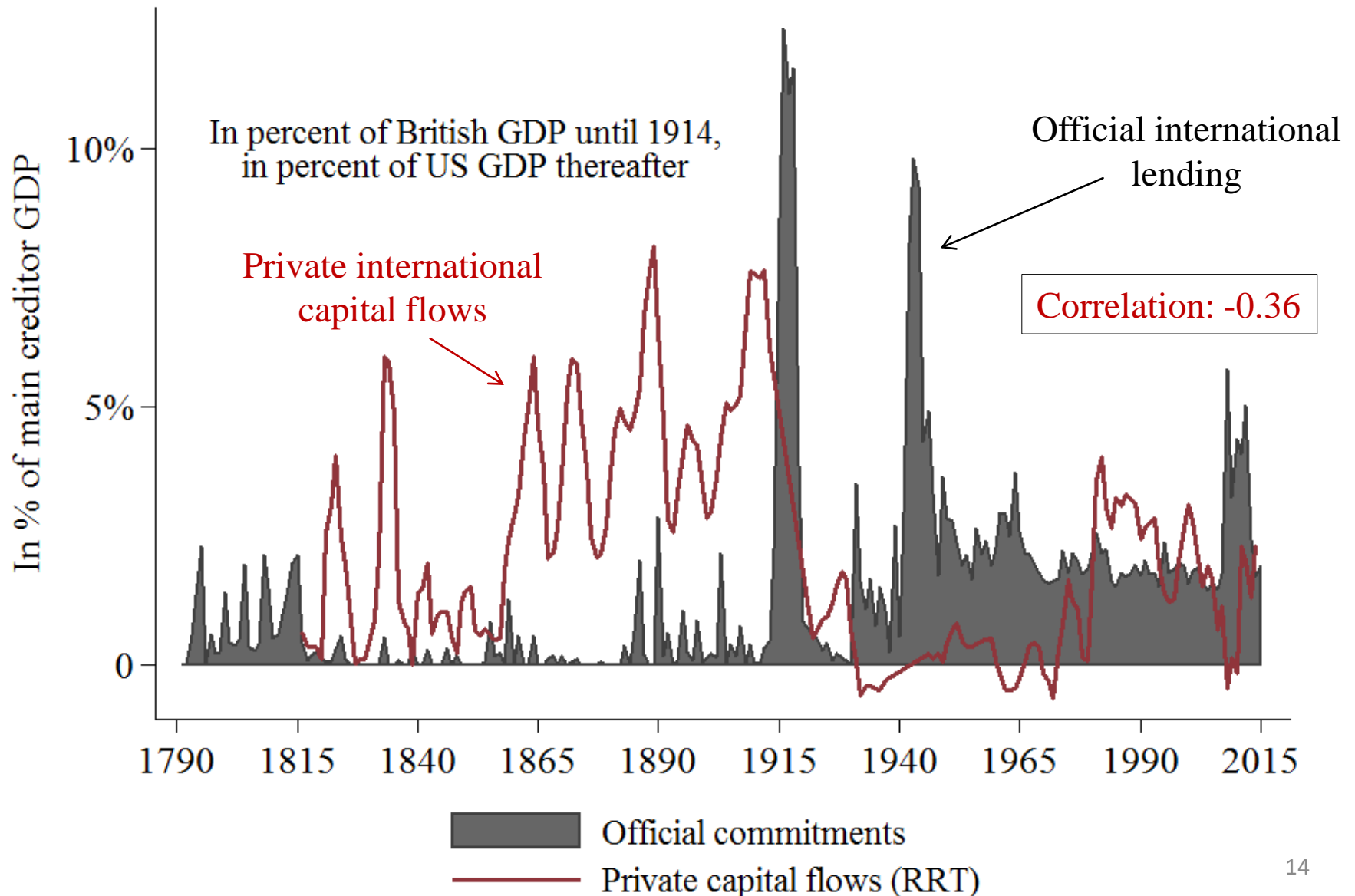
# Adding central bank lending across borders



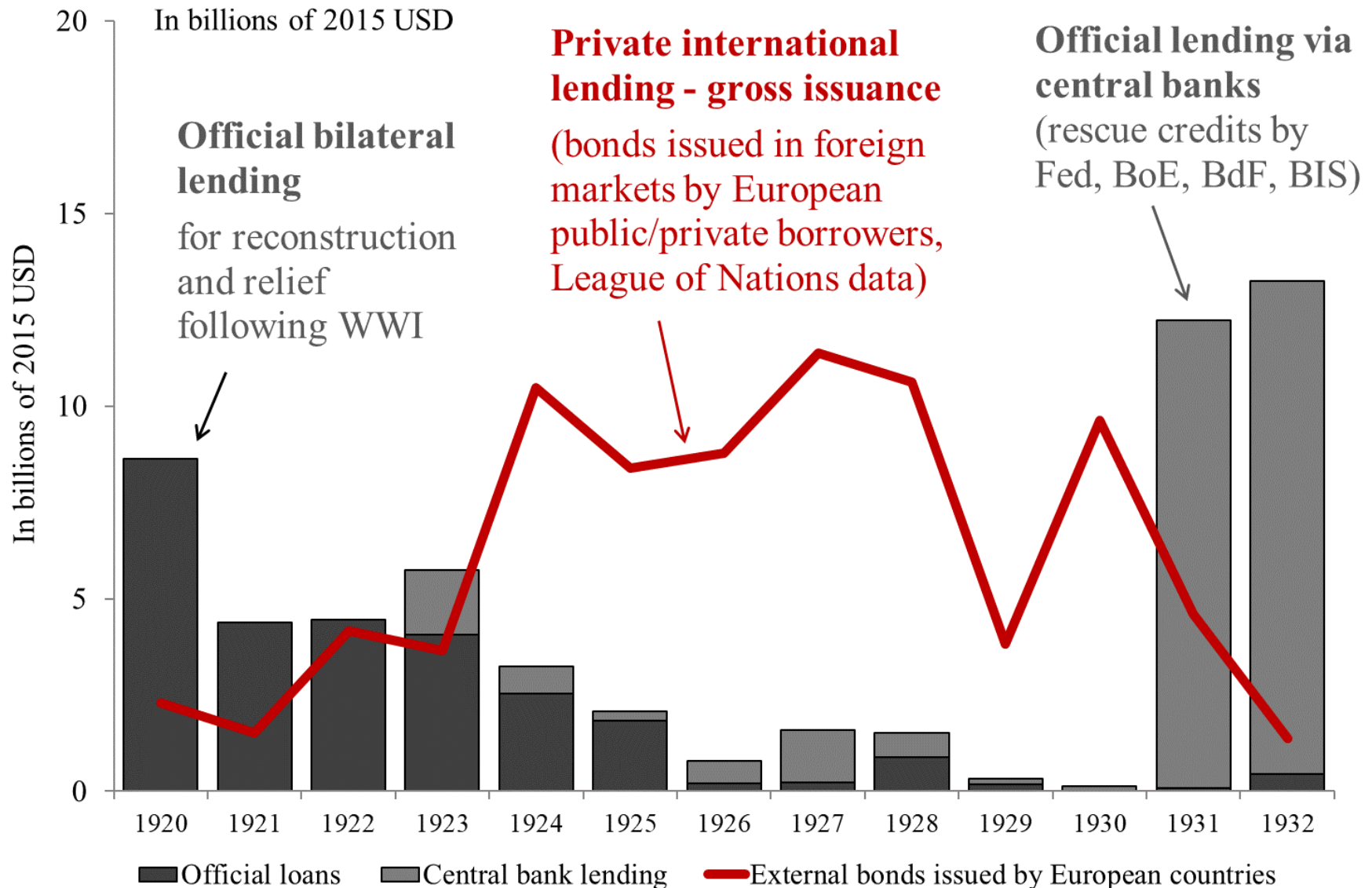
When private investors retrench,  
official lending often steps in

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

# Official vs private capital flows: 200 year view



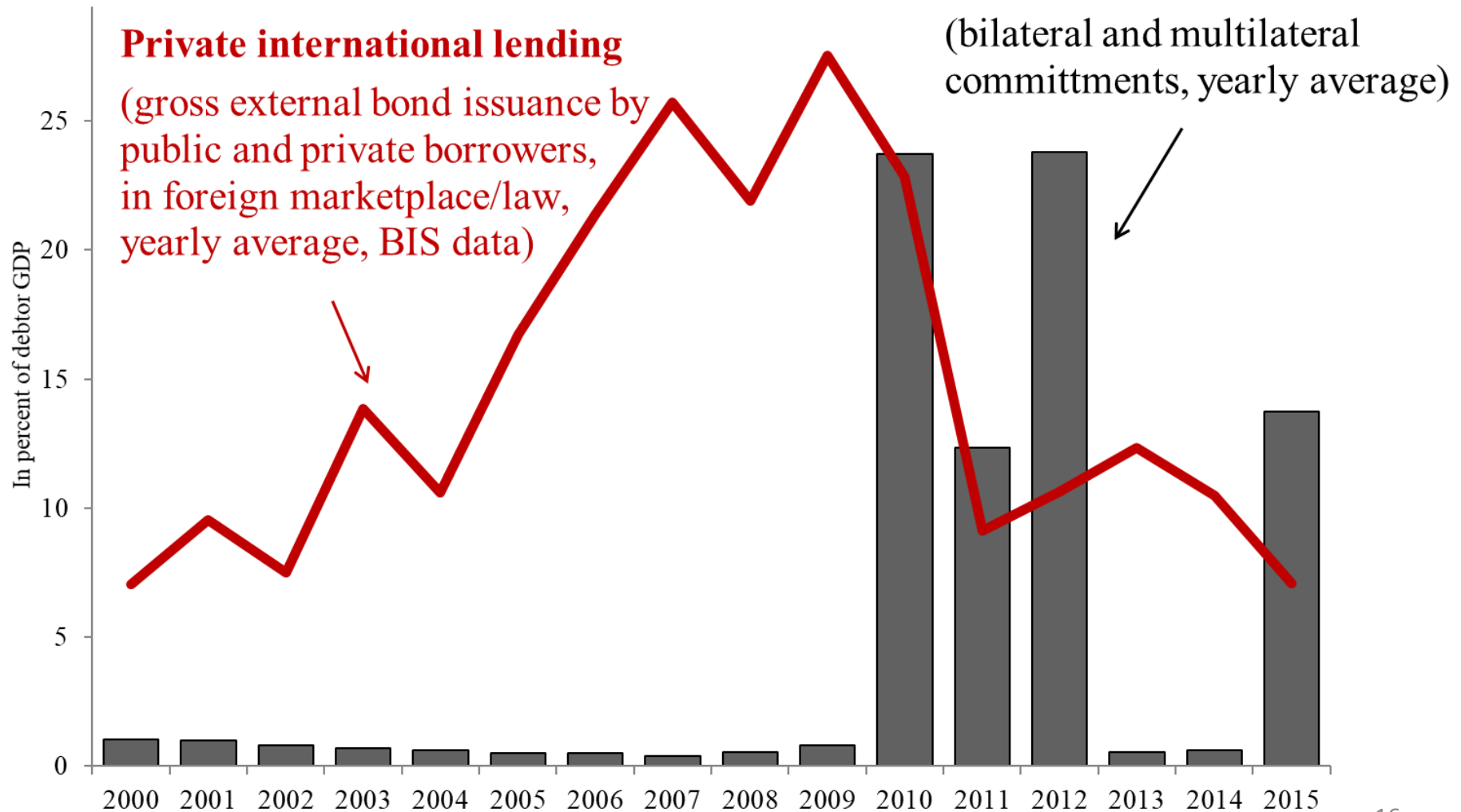
# Case study: Interwar and Great Depression



# Case study: Eurozone crisis (2010-2012)

Percent of debtor GDP (Greece, Ireland, Portugal, Spain)

**Official international lending**

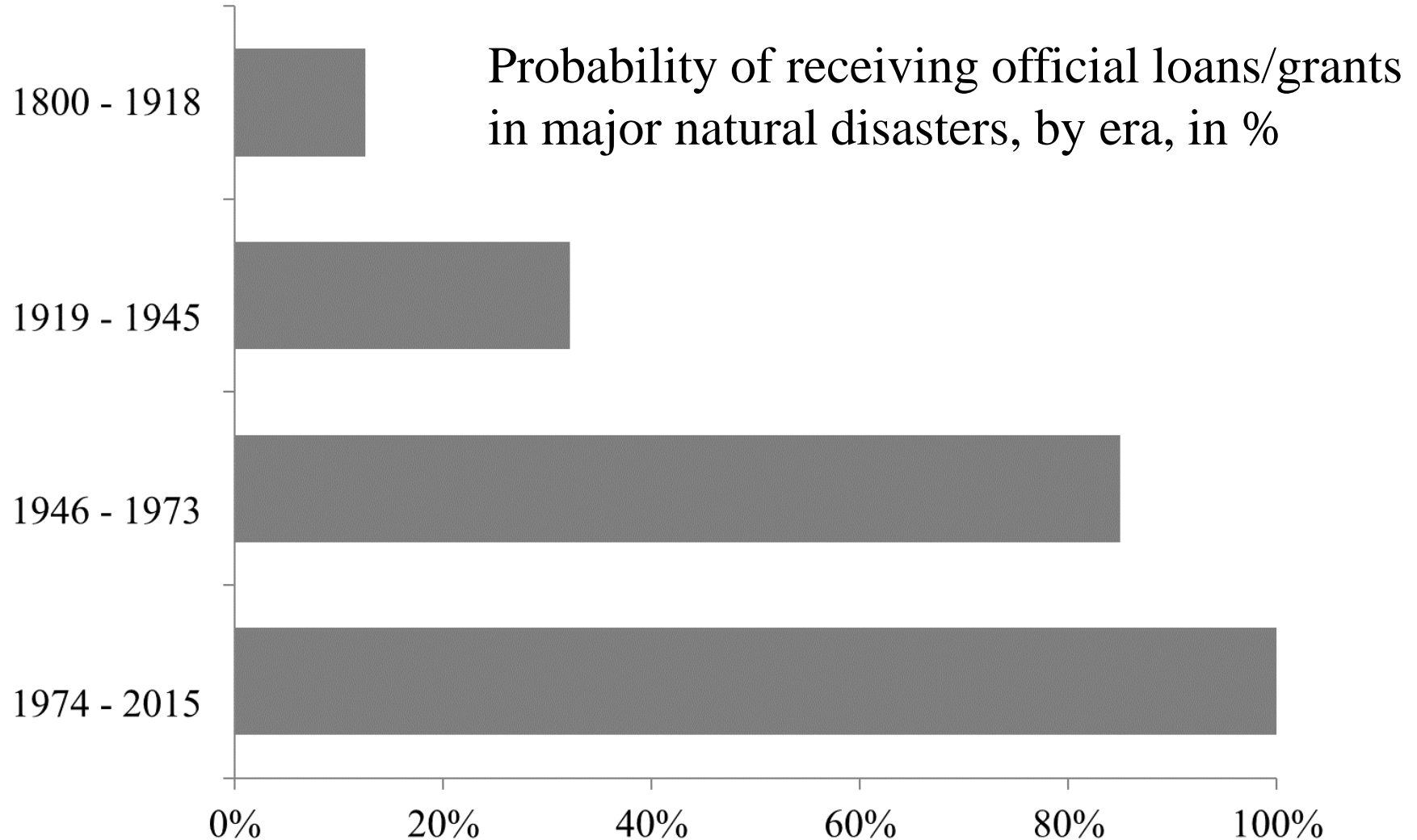




Why do countries extend rescue loans?

*(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 with largest trade and finance exposure (Tirole 2015, Gourinchas et al. 2019)

Interpretation: helping your friends vs. self-interest of preventing negative spillovers

Empirical approach: gravity model of bilateral rescue lending:

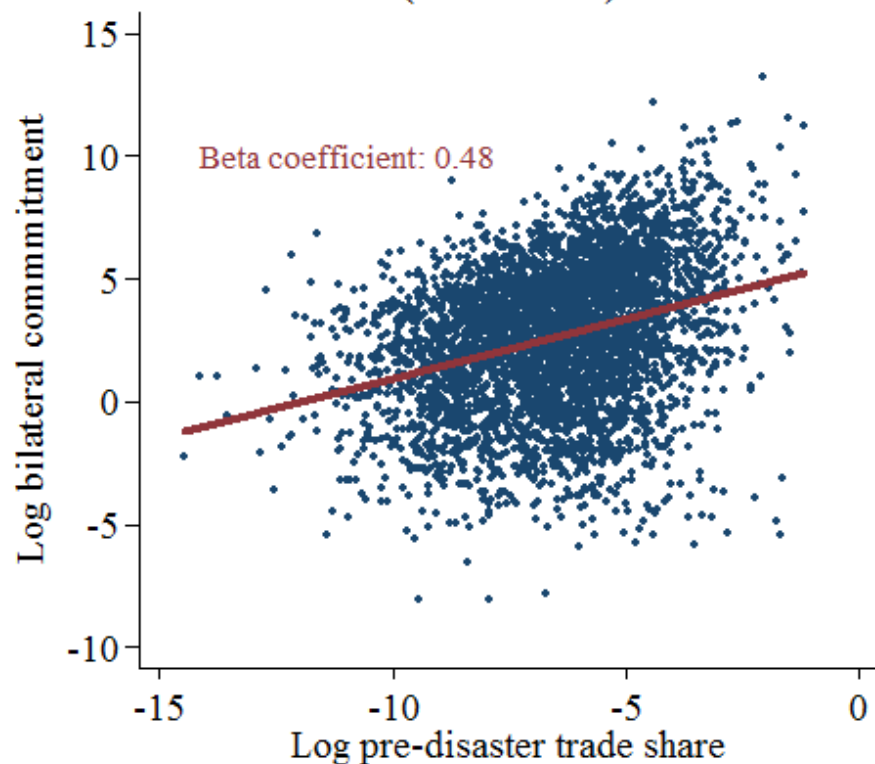
$$\ln \mathbf{RescLoans}_{i,j,t} = \beta \ln \mathbf{Econ Exposure}_{i,j,t} + \gamma \mathbf{Political Ties}_{i,j,t} + \delta \ln \mathbf{Distance}_{i,j} + \Delta \mathbf{Controls}_{i,j,t} + \vartheta_t + \sigma_i + \theta_j + \epsilon_{i,j,t}$$

... loans by creditor country  $j$ , to crisis country  $i$ , in disaster episode  $t$   
in constant 2015 US;

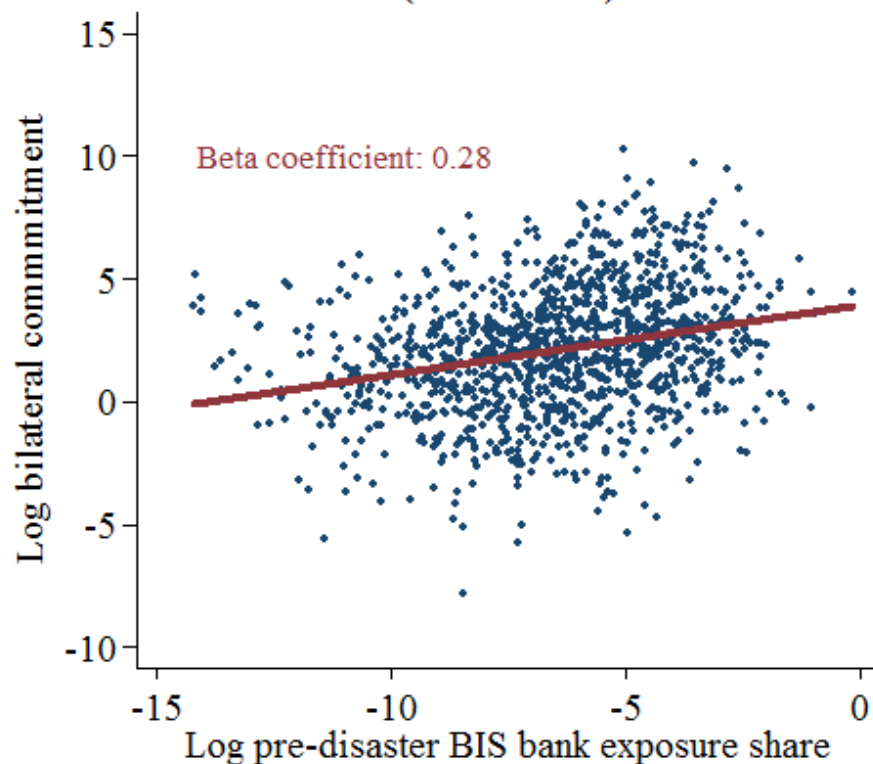
... *Econ Exposure*: pre-disaster shares of bilateral trade and bank loans

# Trade and bank exposure predicts rescue loans

Panel A: Trade exposure and official lending  
(1830 - 2015)



Panel B: Banking exposure and official lending  
(1984 - 2015)



# 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*** (0.10)	0.99* (0.54)	0.32** (0.15)	0.50*** (0.12)	
Financial exposure					0.26*** (0.06)
Distance	-0.35** (0.15)	-0.95** (0.48)	-0.63** (0.28)	-0.30* (0.18)	-0.55*** (0.17)
UN voting			6.60*** (1.45)	2.54** (1.25)	5.44** (2.41)
(Former) colony	1.12*** (0.29)	1.37*** (0.46)	1.53*** (0.34)	0.69*** (0.26)	1.18*** (0.22)
Constant	9.67*** (1.26)	7.10 (4.63)	8.25*** (2.65)	0.67 (1.53)	-0.43 (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	✓	✓	✓	✓	✓

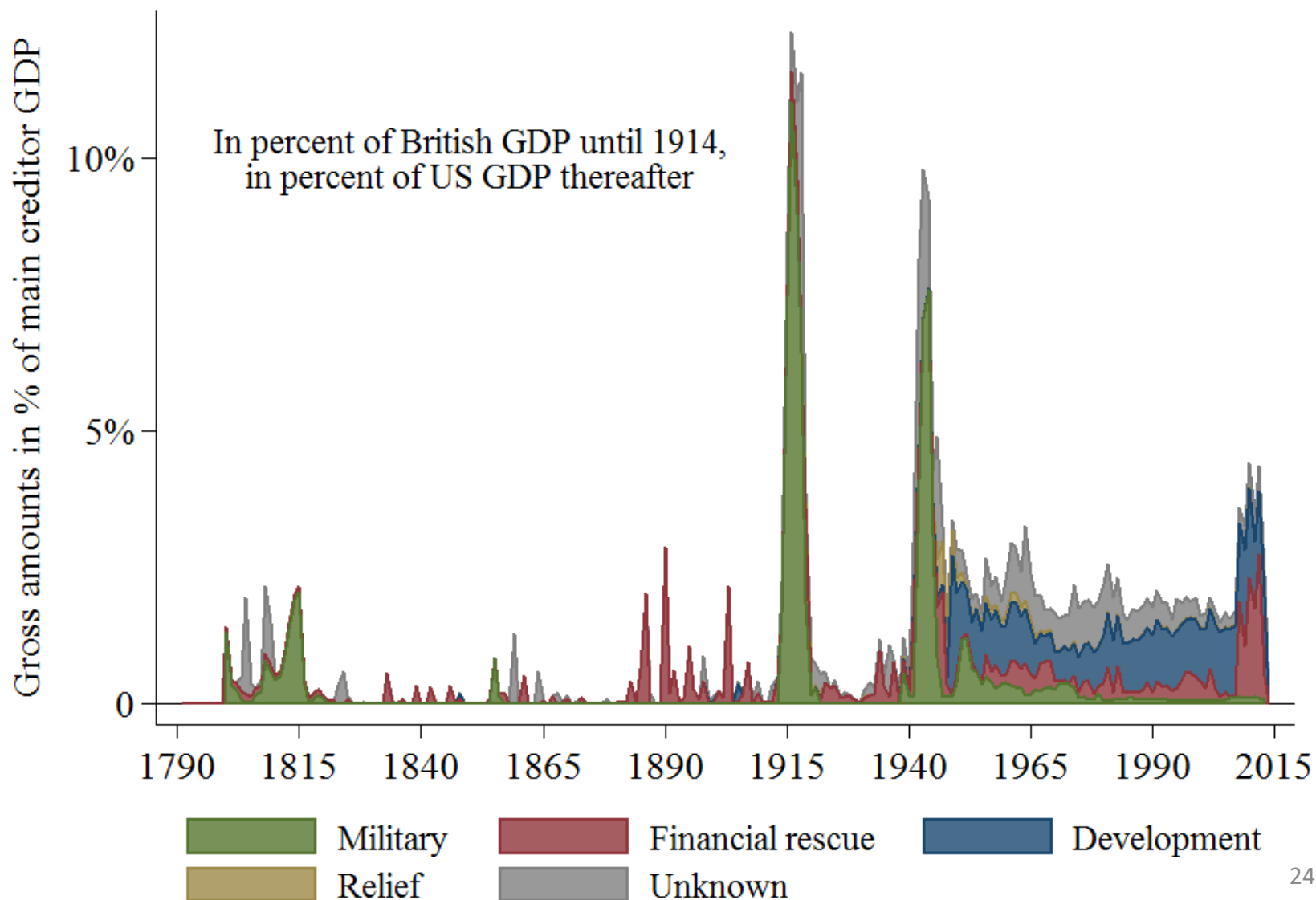
1% higher  
trade exposure  
0.34% more  
official loans

# 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

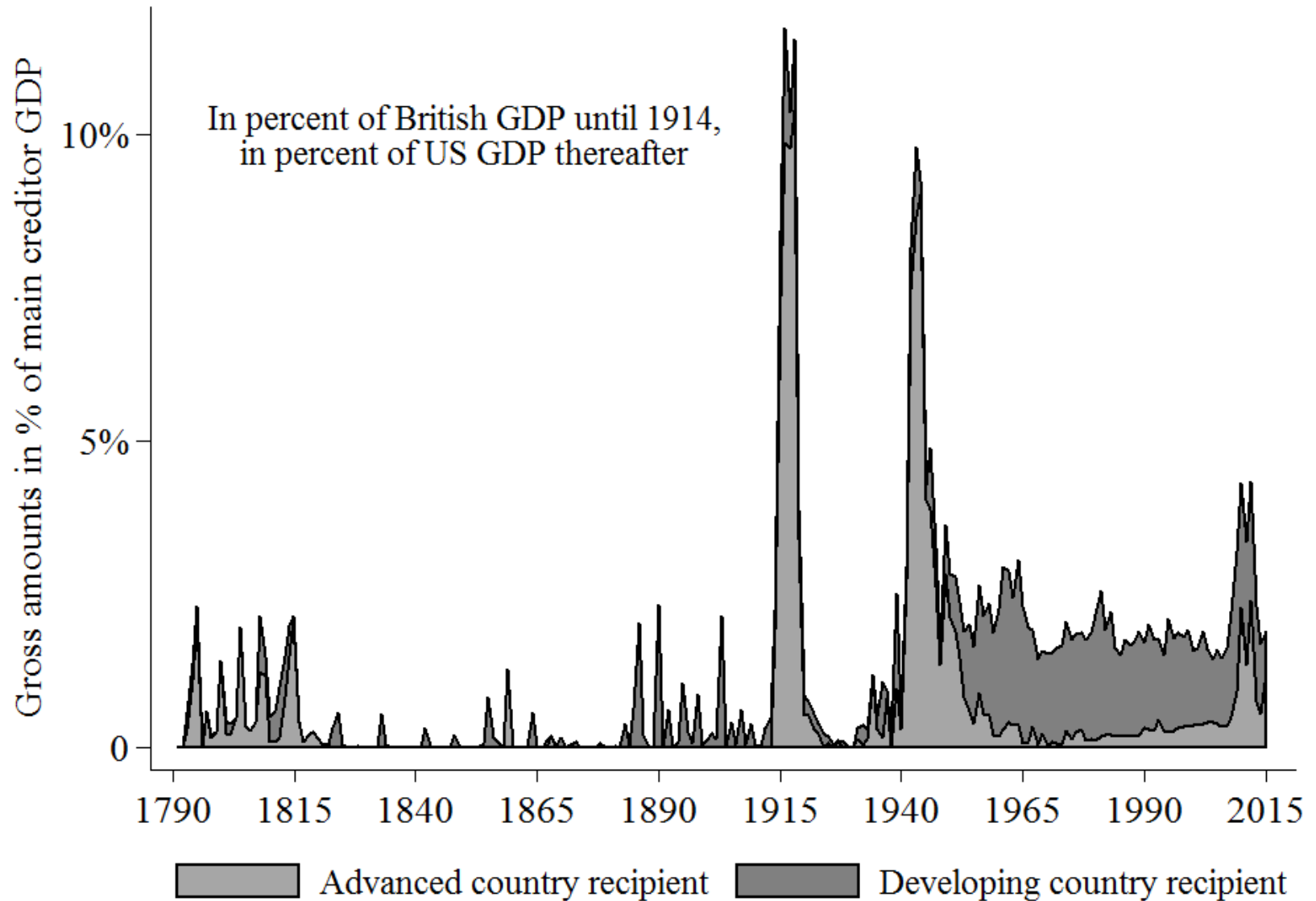
# Appendix

# Purposes of official cross-border lending

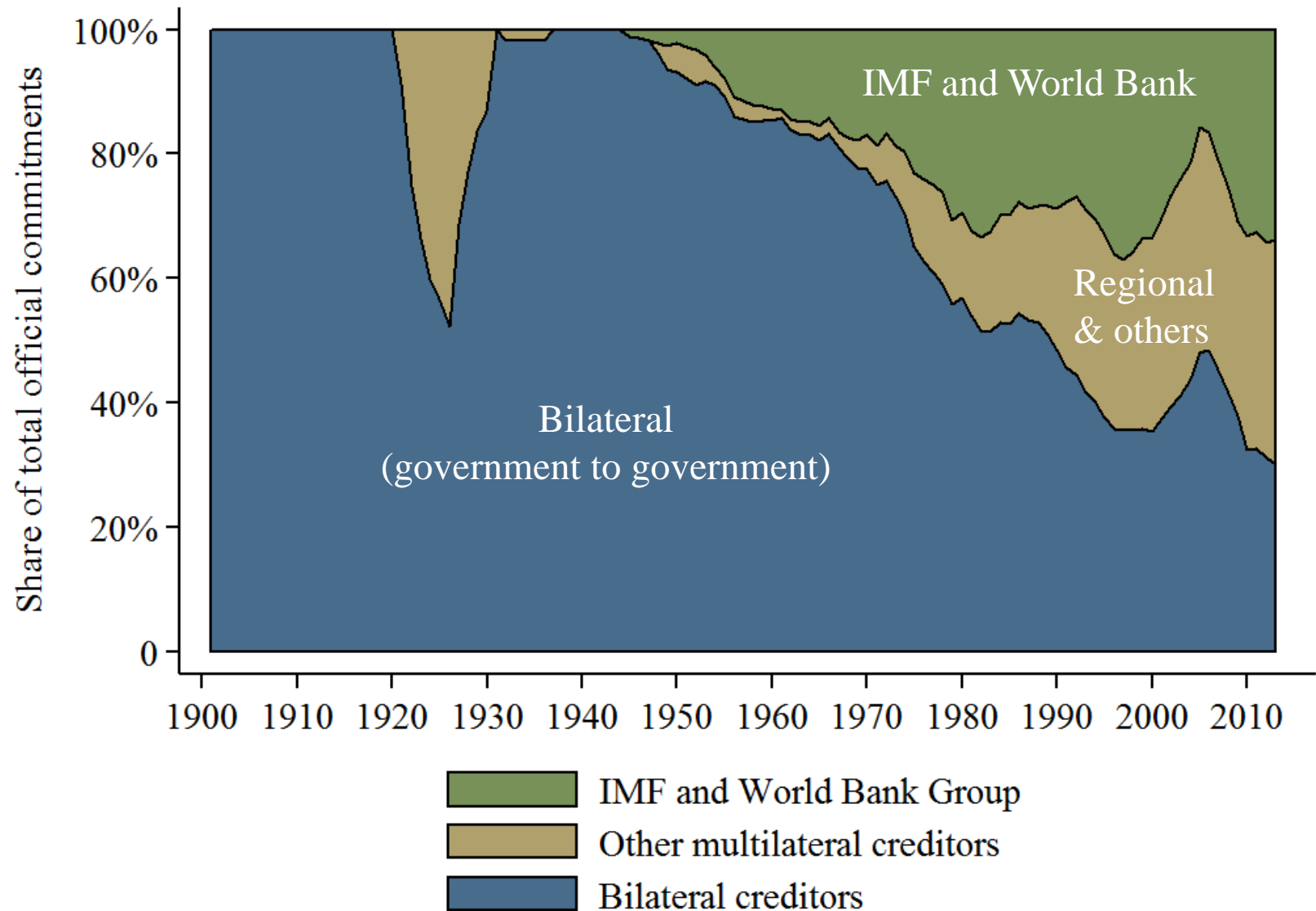




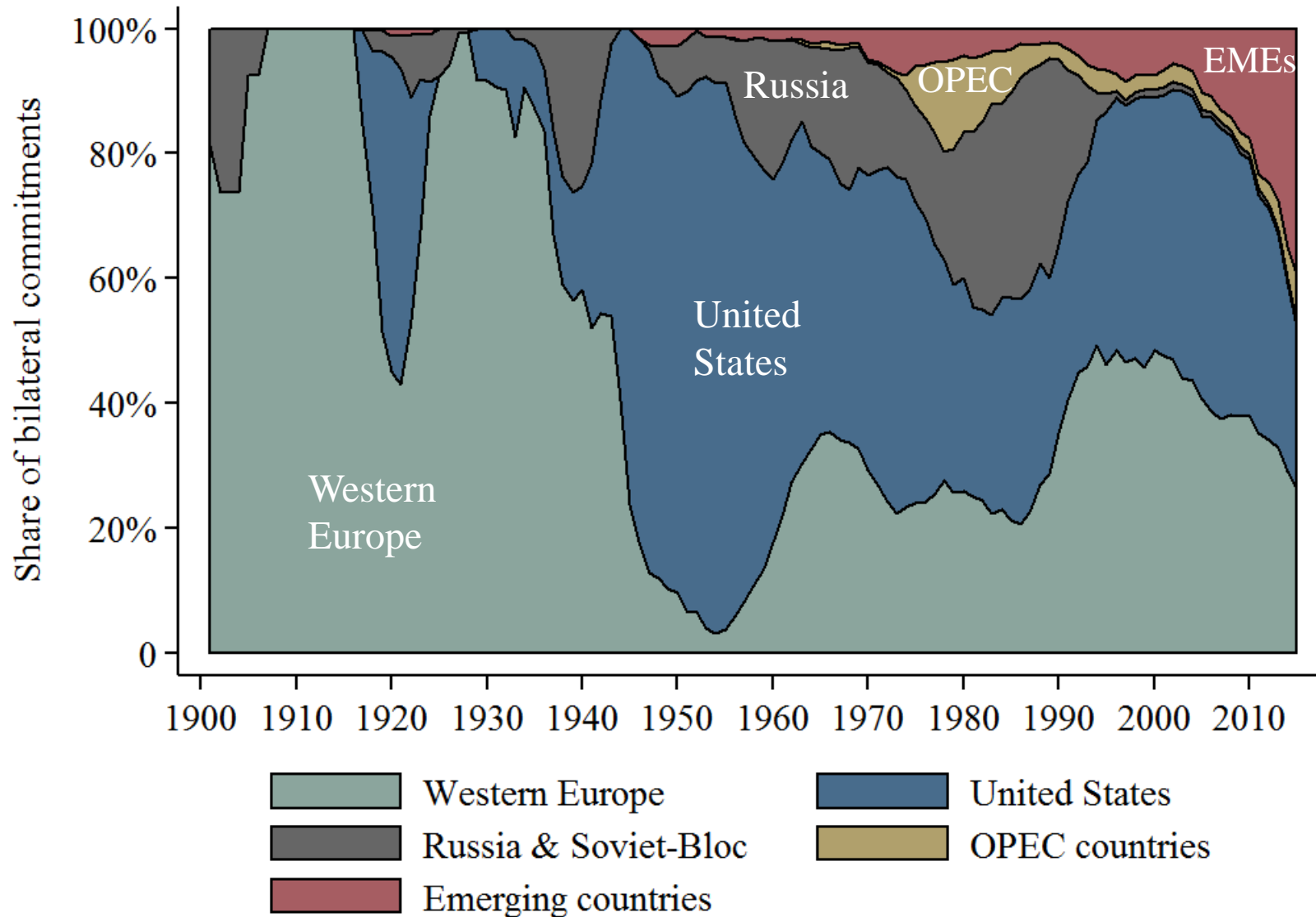
# Recipients of official finance



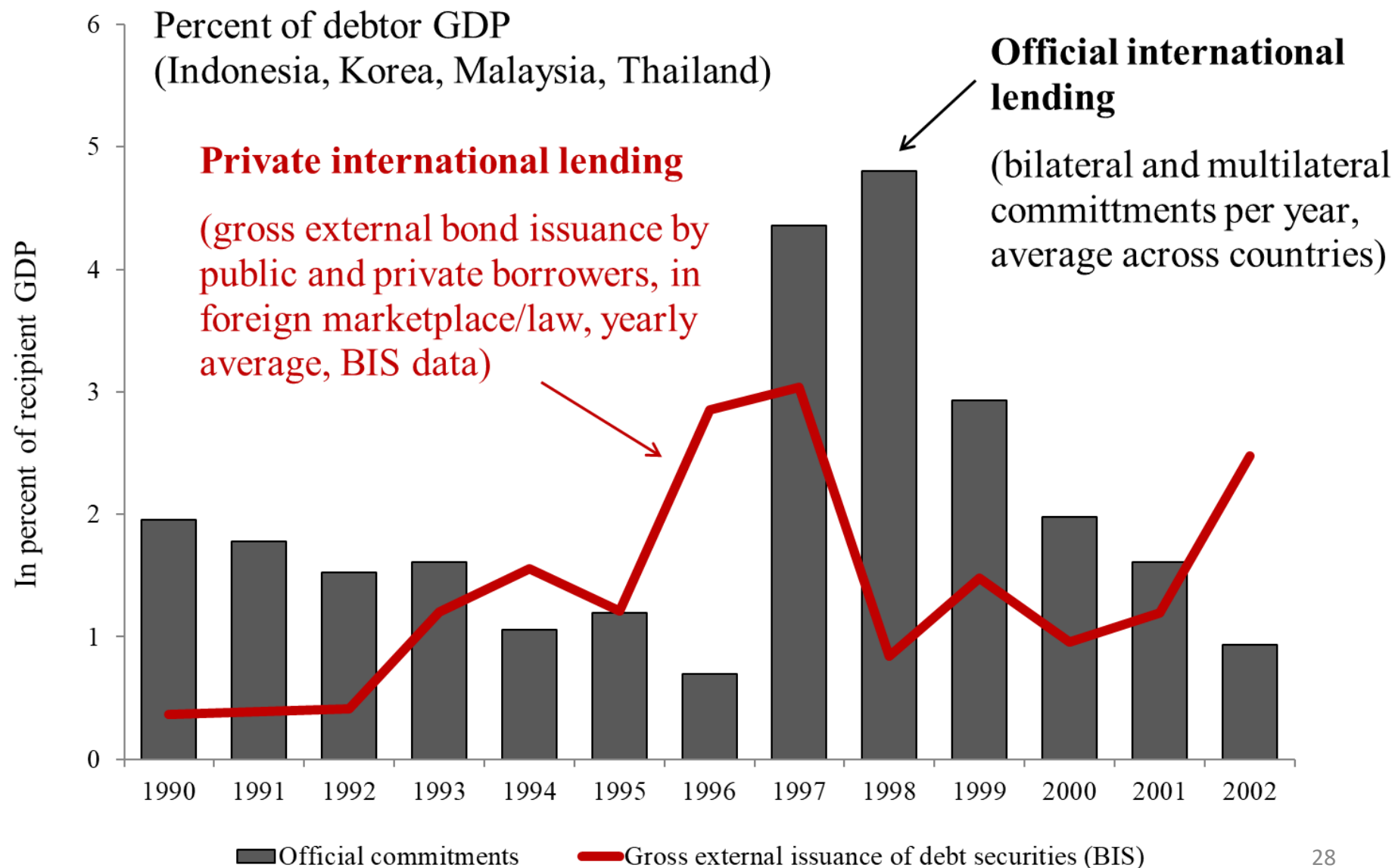
# Official lending is much bigger than IMF & World Bank



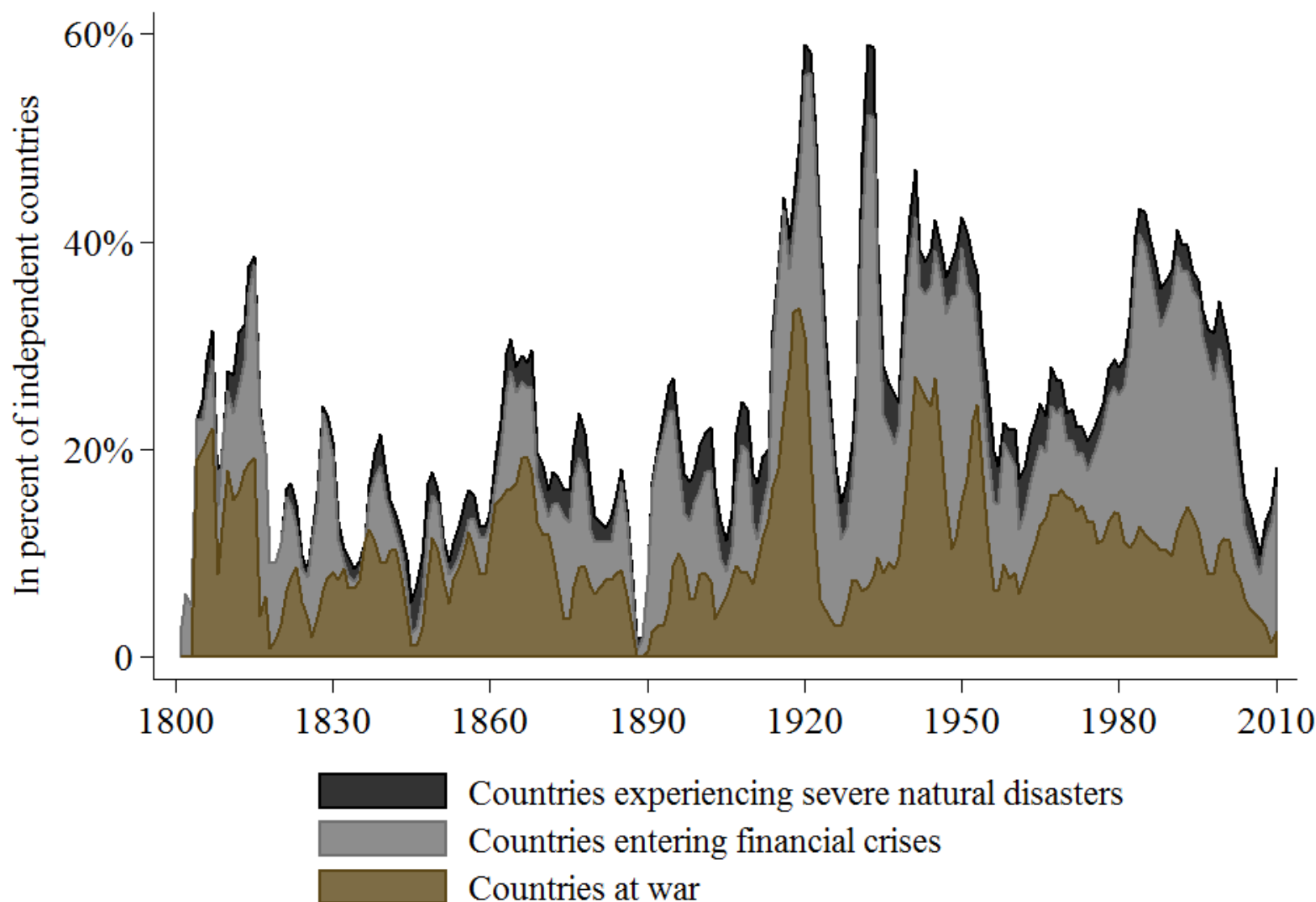
# Bilateral creditors 1900 - 2015: Europe then, China now...



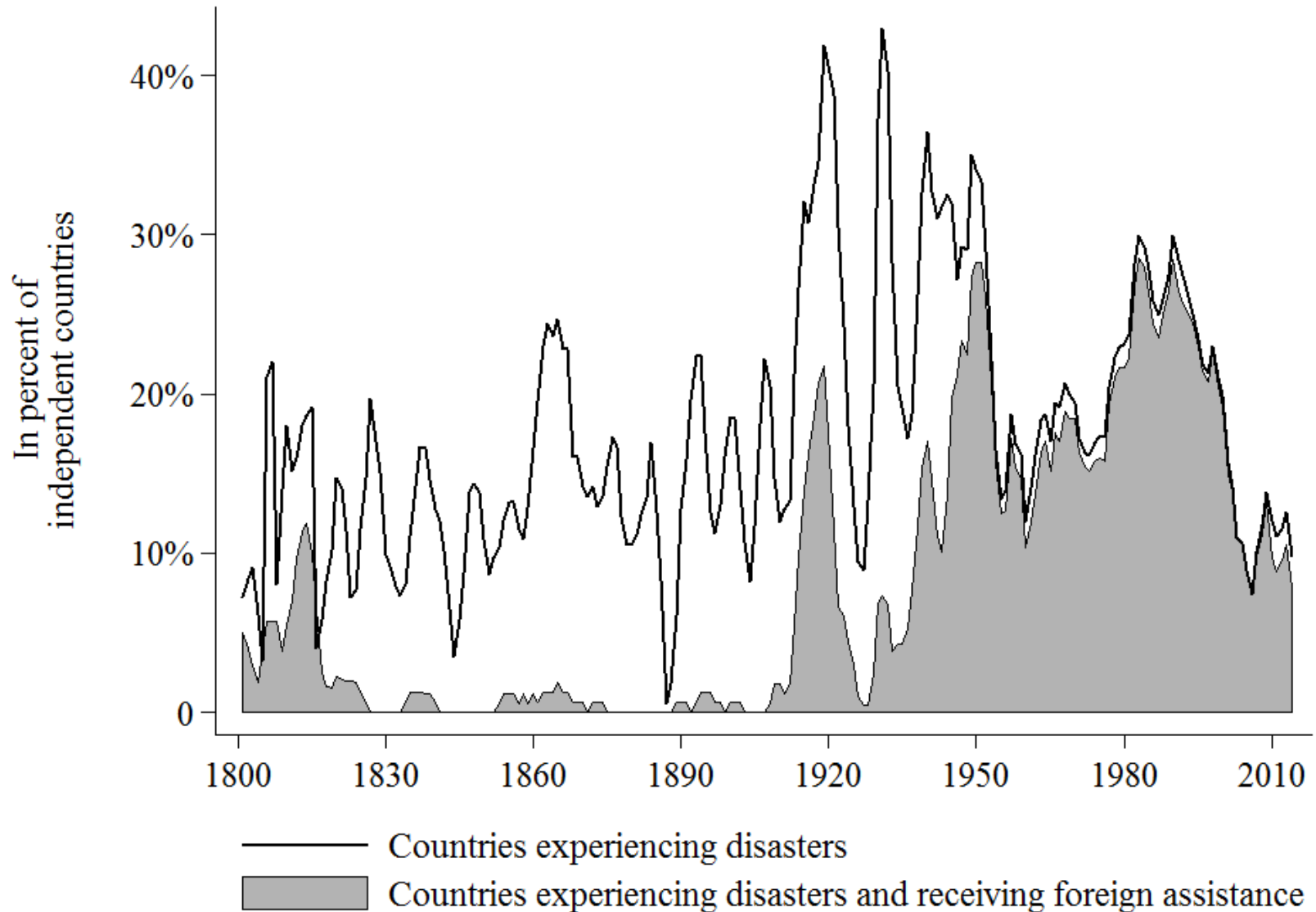
# Case study: Asian crisis (1997)



# Financial crises, wars, and natural disasters



# Rescue lending has become much more systematic



# Bilateral loans 1790-2015

