

REPATRIATION OF SOVEREIGN DEBT DURING CRISES

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We study sovereign debt investorbase dynamics during crises based on near-global data set

- Who holds sovereign debt? Characteristics of sovereign debt investors are understudied but important: Shape borrowing and repayment incentives
- We find that sovereign debt is repatriated - shifted from external to domestic creditors - during defaults but not other types of crises
- Crisis management matters: Preemptive defaults less likely to be associated with repatriation. Financial repression is unlikely to drive the findings.

Motivation and contribution

- **Data limitations** are common when studying sovereign borrowing, particularly during rare crises
- Previous papers: Limited sets of countries, short time series, individual crises
- Our advantage: Leverage a **new, comprehensive sovereign debt data set** to overcome power problems
- **Question: Who holds sovereign debt during crises?**
- Focus:
 - Private **external versus domestic** creditors
 - Dynamics during **different types of crises**

Empirical specification: Event study

We regress repatriation on crisis start dummies at a range of horizons:

$$y_{it} = \alpha_i + \sum_k \sum_s \beta_{sk} D_{it sk} + \epsilon_{it}$$

- y_{it} : Repatriation measure in country i , year t
- $D_{it sk}$: Dummy = 1 if country i in year t is $s \in [-4, 4]$ years away from a crisis of type $k \in \{\text{default, banking, currency}\}$
- α_i : Country fixed-effects (robust to two-way FEs)
- Significant drop in β_{sk} over the event window: Repatriation

Measures of repatriation

- Baseline measure (F_t external debt, D_t : domestic debt):

$$\text{External debt share} = \frac{F_t}{F_t + D_t}$$

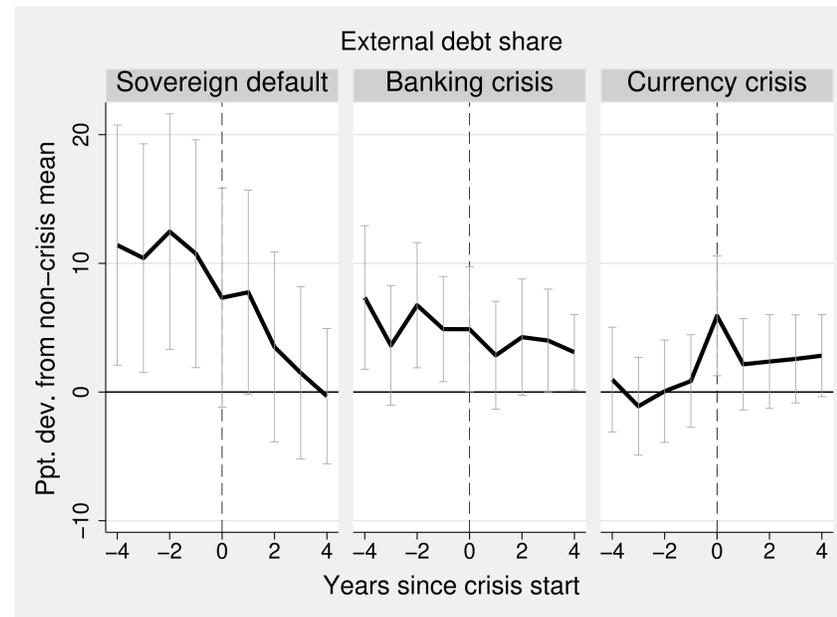
- Two concerns:
 - Repatriation inherently a flow concept
 - Depreciation \rightarrow rise in external debt share because foreign-currency denominated debt tends to be external

- Alternative measure:

$$\frac{\text{External flows}}{\text{GDP}} = \frac{F_t - F_{t-1}}{\text{GDP}}$$

- We adjust foreign-currency denominated part of $F_t - F_{t-1}$ for exchange rate changes

Main result



- Estimates of coefficients on external debt share at different horizons by crisis type
- The external debt share falls significantly during sovereign defaults; less evidence for repatriation during banking/currency crises
- Alternative repatriation measure: Same conclusions

Investigating the mechanism

Type of default matters for repatriation

- We split the sovereign default crisis sample by type: "Hard" versus preemptive (Asonuma Trebesch 2016)
- Find that repatriation stronger during "hard" defaults

Financial repression not associated with repatriation

- We split sample of crisis episodes by strength of capital controls (Chinn-Ito index)
- Find that strong capital controls are not more associated with repatriation
- Evidence against financial repression as a driver of repatriation

Work in progress:

- Evaluate secondary market hypothesis (Broner et al. 2010)

The sovereign debt data set

- Extension of Arslanalp Tsuda (2014)
- Near-global cross-section (180 countries), long time series (1989-2020)
- Consistent debt definition (general government; face value)
- Consistent external/domestic creditor definition: Residency principle
- Foreign official loans are excluded: Interested in private creditor behavior

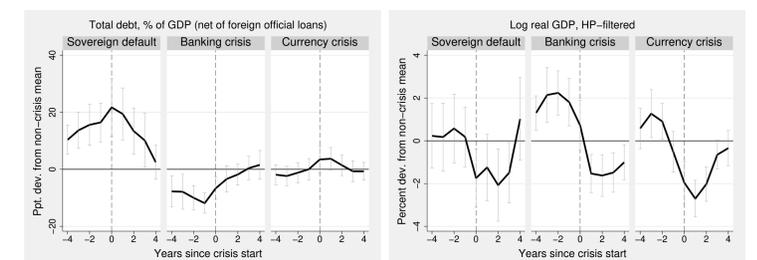
The crisis data set

- Three main crisis types: Sovereign default, banking crisis, currency crisis
- Episodes identified based on existing sources (Asonuma Trebesch 2016, Laeven Valencia 2018, Bordo et al. 2001, Frankel Rose 1996)
- Frequency distribution: 65 defaults, 129 banking crises, 213 currency crises
- Emerging markets more crisis-prone than advanced countries

Additional results/ robustness

- No evidence for cyclical repatriation
- Output not significantly worse during strong-repatriation crises
- Reverse causality: Granger tests favor crises causing repatriation rather than the reverse
- 10-year-trend: Emerging market sovereign debt moving abroad
- Foreign official loans offset repatriation
- Results robust to country selection, event study horizon, crisis definitions

Crisis dynamics of other relevant variables



- Total debt/GDP falls during defaults and currency crises
- But not banking crises: Borrowing part of crisis response measures
- All crises associated with GDP downturns (and current account improvements - not pictured)