A Journey in the History of Sovereign Defaults on Domestic Law Public Debt[1]

Aitor Erce (UPNA), Enrico Mallucci (FED), Mattia Picarelli (ESM)

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[1]Disclaimer: These are the authors' views and not those of the Federal Reserve Board or the European Stability Mechanism.

Introduction

- Increasing role of domestic sovereign debt markets
  - Broader and deeper investor base: EMs vs AEs?
  - Feedback loops and financial stability
- What does "domestic" mean?
  - Currency of denomination
  - Residency of creditors
  - Governing law
- Sovereign debt restructuring & governing law
  - Domestic law advantage: debt may be more easily amended
  - Domestic law disadvantage: debt as backbone of domestic financial systems
- Sparse evidence on sovereign restructuring of domestic debt

Our Contribution

1. Introduce a novel database on domestic sovereign defaults involving instruments governed by domestic law
2. Present stylized facts that can inform both academic work and policy-making

- In a companion paper we present a collection of "sovereign histories" that provide the fine details about each default episode, including the references where we obtained our information

The Literature

- Databases
  - Reinhart and Rogoff (2008), Beers and de Leon-Manlagnit (2019), Asonuma and Trebesch (2016)
- Theory
  - Broner et al. (2010), Mendoza and D'Erasmo (2016)
- Empirics
  - Kohlscheen (2009), Jeanneret and Souissi (2016) focus on currency
  - Reinhart and Rogoff (2011), IMF (2021) focus on residence
  - Asonuma et al. (2018), Chamon et al. (2018) focus on governing law

Domestic law defaults database: the structure

- Bottom up approach
  - 134 default events on government bonds, bank loans, deposits
  - Aggregation of subsequent events in 76 default episodes
- 52 countries
- Time span 1980-2018
- Data on:
  - timing
  - instruments involved
  - volumes involved
  - restructuring terms and methods used
  - net-present-value losses for creditors (limited coverage)

Domestic law defaults database: data sources

- Multiple sources:
  - Reinhart and Rogoff (2008); Beers and de Leon-Manlagnit (2019), Asonuma and Trebesch (2016)
  - Reports from rating agencies
  - Local and international press (Factiva)
  - IMF program documents and Article IV reports
  - Reports from Development Banks
  - Accounts from Ministries and Central Banks
  - Parliamentary resolutions
  - Books and academic articles

Comparison with existing databases: RR (2008)

- First paper collecting domestic law sovereign defaults
- Key differences:
  - Covers a much longer period: 1750-2008
    - Contains 68 default episodes
  - For the period 1980-2008, 27 default episodes
  - Annual frequency
  - Episode selection
    - Hyper-inflationary episodes
    - Defaults by Central Banks
    - Payment arrears on resident non-financial creditors
  - No distinction between events and episodes
  - Less detail regarding processes and actors

Comparison with existing databases: IMF (2021)

- Recent IMF paper on domestic debt restructuring (Dec. 2021)
- Covers the period 1980-2020
- Extends RR (2008)
  - 63 default episodes
- Key differences similar to RR (2008)

Payment arrears

- We uncover 30 events of payment arrears with non-financial local creditors
- Not included in the database due to:
  - Incomplete coverage
  - Poor data quality / limited information available
- Features:
  - Large amounts involved (on average 19% of GDP)
  - Very long duration (on average 89 months)
  - Significant losses for investors (54% of NPV on average - 5 observations)

Geography

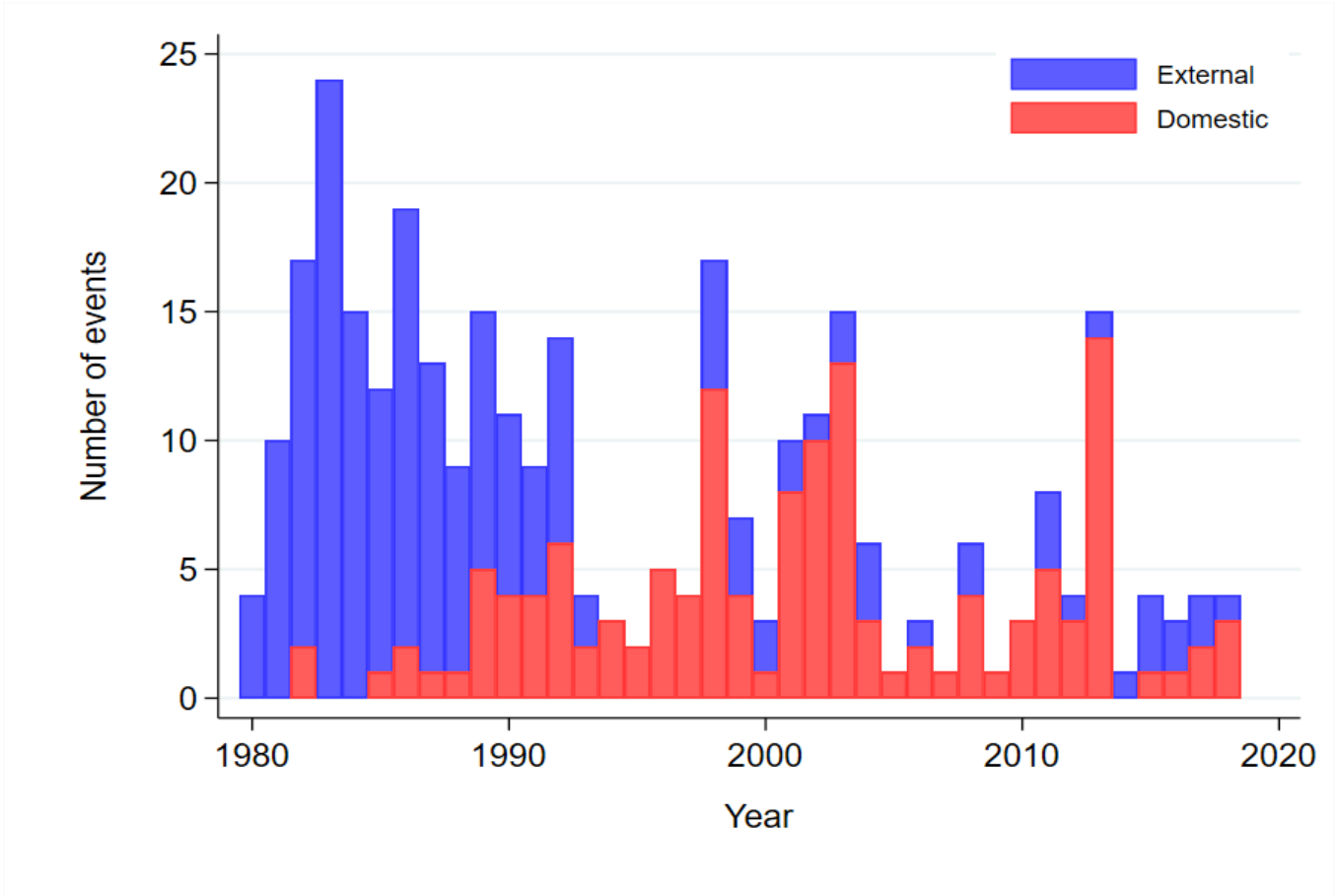
- Domestic defaults are a global phenomenon
- They are more frequent in EMEs and LDCs but they also happen in AEs

Table: Number of defaults by continent

	Total	Africa	America	Asia	Europe	Oceania
N. of events	134	31	76	10	16	1
N. of episodes	76	25	33	5	12	1

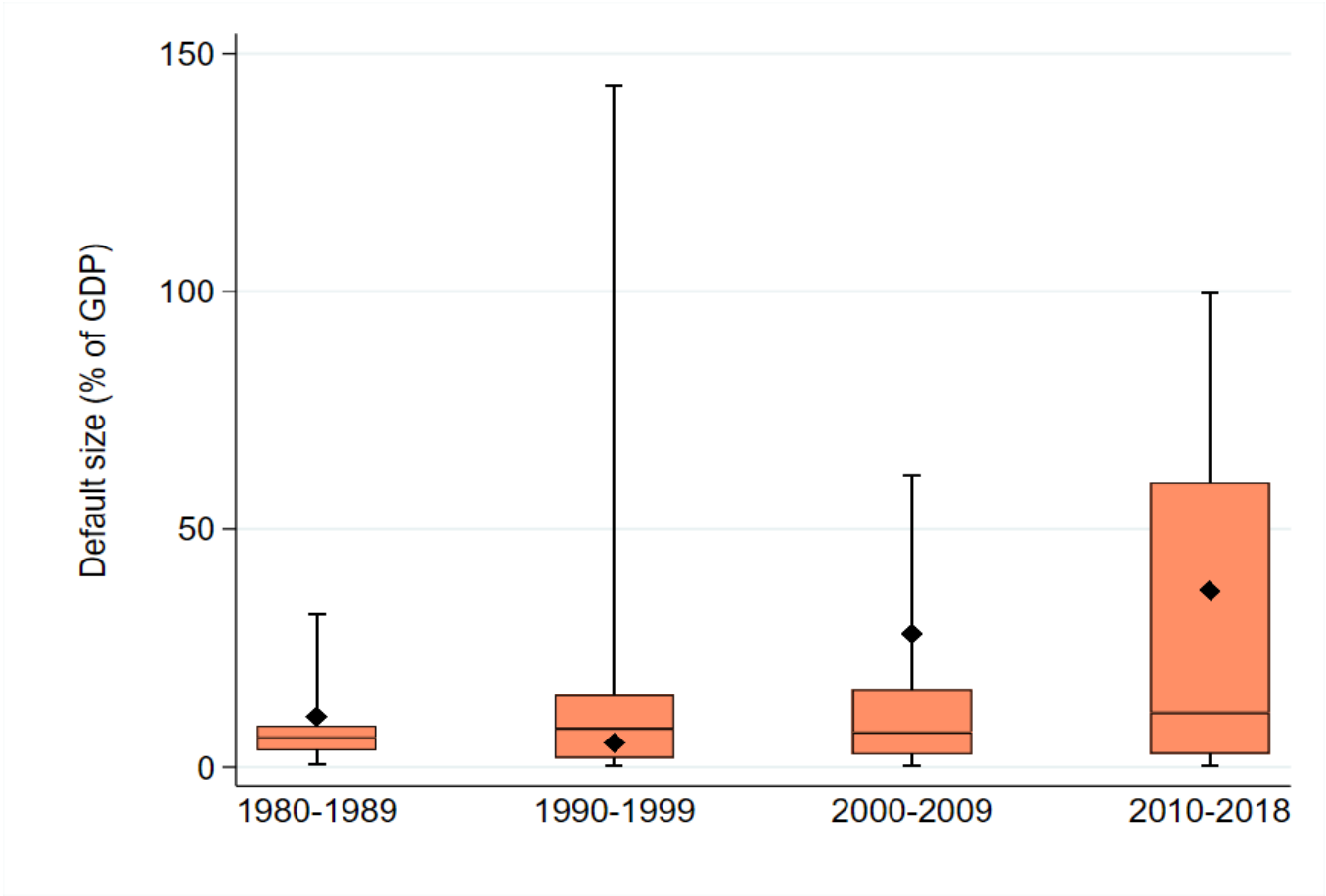
Frequency

- Domestic defaults are increasingly frequent events
- Governments operate selective defaults



Amounts

- The median size of domestic defaults has increased over time...
- ...but it remains lower than the median size of external default episodes



Duration

- Domestic debt restructurings often proceed faster than external one but they can also protract significantly
- 28% of them lasted more than 3 years and 6% lasted over 12 years

Table: Duration (months)

	Less than 6	Between 6 and 12	Larger than 36
Domestic debt	42%	13%	28%
External debt	13%	24%	29%

Instruments involved

- Bonds are the domestic law instrument most often defaulted upon
- They have become an increasingly large fraction of domestic debt in default

Table: Number of default events by instruments

	Full sample
Bonds	84
Bank loans	32
Deposits	18
Total	134

Restructuring by type of amendment

- Maturity extension is the most frequent form of restructuring
- It ranges from just a few months to 50 years

Table: Number of restructuring events by type of amendment

	Full sample
Maturity change	100
Coupon change	83
Face value reduction	24

Mechanics: pre-default versus post-default

- Similar to Asonuma and Trebesch (2016)

Table: Pre-default versus Post-default - main features (averages)

	% (all events)	Size (% of GDP)	Duration (months)	NPV Losses
Pre-default	39%	10.4%	2.2	31.8%
Post-default	61%	10.7%	50.9	40.6%

Mechanics: restructuring procedure

- Similar to Enderlein et al. (2012) we check whether restructurings were either unilateral or negotiated

Table: Restructuring procedure by instrument

	Unilateral conversion	Negotiation
Bonds	38%	62%
Bank loans	29%	71%
Deposits	100%	0%
Pre-default	33%	67%
Post-default	63%	37%

NPV losses (28 episodes/48 instruments)

- Median NPV losses are 20 pp higher than those experienced during external defaults
- Losses tend to be larger when government defaults on bank loans

Table: NPV losses

	Median
External debt	0.33
Domestic debt	0.48
Bonds	0.47
Bank loans	0.54
Deposits	0.31

Triple coincidence

- Large overlap between law, currency and residence of investors

Table: Average shares of local currency debt and domestic residents involved in default events

	Share in local currency	Share of local resident	N. events
2010-2018	79%	75%	29

Conclusions

- Defaults on domestic law instruments are frequent and they often involve bonds
- Selective defaults are the norm (yes, they are!)
- The median size of defaults has increased over time
- Restructurings take either very short or very long time and they are usually implemented via maturity extension
- More cooperative approaches have been adopted recently
- Median NPV losses are larger than in external debt default
- Despite globalisation, the triple coincidence is well and alive

Policy implications & next steps

- Domestic debt is set to be a source of vulnerability
- Our data will allow a more granular analysis of domestic defaults:
  - improved assessment of debt-related fragilities to inform policy makers
  - help refine the calibration of theoretical models
- Work in progress on:
  - what macro implications of domestic defaults?
  - the interplay between domestic and external default
  - the interaction with financial stability
  - the interaction with political instability/inequality

THANK YOU!

Comparison with existing databases

- Partial overlap with existing databases

Table: Number of defaults jointly reported in the databases specified by the corresponding row and column

Database Criterion	Our Data Law	B&LM (2019) Currency	IMF (2021) Residence
Our Data	76	20	37
B&LM (2019)		40	24
IMF (2021)			63