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Aitor Erce
*Universidad Pública de Navarra
& LUISS School of European Policy*

Enrico Mallucci
Federal Reserve Board

Mattia Picarelli
European Stability Mechanism

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Departamento de Economía
Universidad Pública de Navarra

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A Journey in the History of Sovereign Defaults on Domestic-Law Public Debt^{*†}

Aitor Erce[‡], Enrico Mallucci[§] & Mattia Picarelli[¶]

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Abstract

We introduce a novel database on sovereign defaults that involve public debt instruments governed by domestic law. By systematically reviewing a large number of sources, we identify 132 default and restructuring events of domestic debt instruments, in 50 countries from 1980 to 2018. Domestic-law defaults are a global phenomenon. Over time, they have become larger and more frequent than foreign-law defaults. Domestic-law debt restructurings are achieved faster than foreign ones, often through extensions of maturities and amendments to the coupon structure. While face value reductions are rare, net-present-value losses for creditors are still large. Unilateral amendments and post-default restructuring are the norm, but negotiated pre-default restructurings are becoming increasingly frequent. Finally, we document that domestic defaults are widely heterogeneous and we complement our analysis with a collection of documents, named “sovereign histories”, that provide the fine details about each default episode.

JEL classification: E62, E65, F34, G01, H12, H63, K00, K41

Keywords: Public debt, sovereign default, domestic law, database.

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[†]The database accompanying this paper can be accessed [here](#).

[‡]LUISS School of European Policy & Navarra Public University, Pamplona, Spain. E-mail: erceaitor@gmail.com

[§]Board of Governors of the Federal Reserve System, Washington, U.S.A. E-mail: enrico.mallucci@frb.gov

[¶]European Stability Mechanism, Luxembourg, Luxembourg. E-mail: m.osvaldopicarelli@esm.europa.eu

1 Introduction

Sovereign debt markets in emerging economies have experienced radical transformations in recent decades. As many sovereigns began to tap international capital markets, bonds replaced bank loans, and increasingly perfected clauses were added to bonds to facilitate debt restructuring (Buchheit et al., 2019; IMF, 2020). Another critical, yet less discussed, change is the increased relevance of domestic debt markets (Gelpern and Panizza, 2021; Reinhart and Rogoff, 2008). Traditionally, domestic debt markets for emerging sovereigns were either non-existing or closed to foreigners (CGFS, 2007). Emerging sovereigns could only borrow from foreign investors in foreign currencies and international markets (Eichengreen and Panizza, 2005). Since the 90s, as a result of financial deepening and economic growth, governments are increasingly relying on domestic borrowings to fund their financing needs (Gelpern and Setser, 2004; Burger and Warnock, 2006; IMF, 2020).¹

Despite the growing importance of domestic debt, the very definition of what constitutes domestic debt remains elusive (Gelpern, 2008; Gelpern and Panizza, 2021). Some authors have focused on sovereign debt denominated in local currency (Kohlscheen, 2009; Jeanneret and Souissi, 2016; Beers and de Leon-Manlagnit, 2019). Others (Sturzenegger and Zettelmeyer, 2008; Reinhart and Rogoff, 2011; Duggar, 2013) have focused on whether the creditors are domestic residents. Yet, there is no systematic work focused on sovereign defaults under domestic law. This is, according to leading legal experts (Gelpern and Panizza, 2021; Gulati and Weidemaier, 2015), a key gap in the economic literature.

In this paper, we present our efforts to fill this gap. We introduce a novel database identifying sovereign defaults on debt instruments governed by domestic law. Our database focuses on explicit defaults towards private creditors and is the first effort to systematically record domestic sovereign defaults that are identified on the basis of the legal jurisdiction. We use it to present key stylized facts that may prove informative for theoretical work.² We also shed light on a range of related issues, including the incidence of selective sovereign defaults (Mendoza and D’Erasmus, 2016; Broner et al., 2014; Gelpern and Panizza, 2021) and the extent to which different definitions of what constitutes domestic debt coincide (Burger and Warnock, 2006; Gelpern, 2008; Bradley et al., 2016).³

Our definition of domestic public debt, grounded on whether government debt is governed by the domestic law, highlights a dimension that crucially shapes the restructuring process: debt

¹Brazil and Mexico exemplify this trend. Bank of International Settlements data reveals that domestic debt accounted for 22% of Mexico’s public debt in 1995. By 2010 that share was over 80%. In Brazil, the share increased from 54% in 1995 to over 90% in 2010.

²Recent theoretical quantitative contributions study domestic sovereign defaults. Bocola (2016) and Sosa-Padilla (2018) study the nexus between domestic defaults and bank crises. Aguiar et al. (2015), Mendoza and D’Erasmus (2016) and Arellano and Kocherlakota (2014) analyze their distributional implications. Erce and Mallucci (2018) study borrowing and default decisions when sovereigns can discriminate between domestic and foreign debt. Thaler (2021) models the effect default on access to domestic sovereign debt markets.

³Our work complements Asonuma and Trebesch (2016), who compile a database with information on 184 restructurings of sovereign debt instruments governed or held externally.

jurisdiction (Gelpern and Panizza, 2021). While the residence of investors and the currency denomination have implications for the macroeconomic consequences of sovereign default, the jurisdiction directly affects governments' ability to restructure debt. As described in Chamon et al. (2018) or IMF (2020), the terms of government debt issued in the domestic jurisdiction can be more easily restructured using legislative or executive measures, with repercussions for market access.

Moreover, domestic sovereign debt markets are the backbone of domestic financial systems. According to CGFS (2007), domestic bond markets promote financial stability not only by reducing currency mismatches but also by creating a benchmark (market-determined) yield curve that reflects the costs of borrowing domestically at different maturities. In economies lacking well-functioning domestic debt markets, banks may find it hard to price and provide long-term lending. As a result, defaulting upon domestic-law debt may affect the financial standing of the private sector over and beyond what a default of debt governed under foreign laws may do (Gelpern and Panizza, 2021). In fact, as the consequences of sovereign default are increasingly borne domestically, government incentives to default have likely changed. While governments defaulting externally were primarily concerned with exclusion from international capital markets, we document that those defaulting domestically are most concerned with the financial stability and distributional implications.⁴

To build our database we reviewed a large number of sources, ranging from IMF official documents to local news articles, and identified 132 events of restructuring of domestic-law debt instruments in 50 countries from 1980 to 2018. We organized the information in two distinct products: a database on domestic defaults and a collection of documents, named "sovereign histories" (see Erce et al. (2021)). The database collects variables that measure the timing and size of domestic defaults, as well as the terms and restructuring methods used. Where information was available, the database was constructed using a bottom-up approach, collecting information at the debt instrument level and aggregating it to obtain episode-level variables. Sovereign histories keep track of the complexity and heterogeneity of domestic defaults, and report finer details of each domestic default. In particular, each sovereign history provides an overview of the events leading to the default and the available details of the restructuring process for each debt instrument involved.⁵

We draw various lessons from our database and our sovereign histories. First, domestic-law defaults are a global phenomenon occurring in every continent. While they are more frequent in poor and middle-income countries, they also happen in advanced economies. Second, domestic-law defaults are increasingly frequent. Combining our data with the database on foreign defaults of Asonuma and Trebesch (2016), we find that in the 1980s roughly 14 percent of default episodes involved domestic-law debt. In the 2000s, around 82 percent of default episodes did. Between the late 1990s and 2016, domestic defaults have actually become more frequent than foreign ones. More often than not, governments operate selec-

⁴According to IMF (2020) "While debt governed by domestic law is often easier to restructure than international debt from a legal perspective, restructuring such debt can negatively impact financial stability".

⁵Domestic-law defaults receive little international coverage, and documenting them is a challenging exercise. This marks the value of our "sovereign histories".

tive defaults. Third, defaults on bonded debt are the most common form of domestic-law defaults. Defaults on bank loans and deposits are fairly rare nowadays. Fourth, the median size of domestic-law defaults has increased over time, reaching almost 20% of GDP in the last decade. The size of domestic defaults varies greatly depending on the instruments involved in each episode. Defaults that involve deposits, bonds with CACs or multiple debt instruments are typically larger than those involving bank loans or bonds without CACs. Fifth, an extension of maturities is by far the most frequent form of restructuring, featuring in almost 80% of the episodes. Amendments to the coupon structure are also fairly frequent, while face value reductions are rare. Sixth, domestic debt restructuring often proceeds much faster than external one, but it can also protract significantly. Seventh, net-present-value losses for creditors during domestic-law sovereign debt restructuring are sizable. Eighth, domestic debt restructurings are normally faster than foreign ones. Ninth, negotiated preemptive restructurings are gaining traction. Tenth, despite financial globalization the triple coincidence is very much alive: domestic-law defaults typically involve debt denominated in domestic currency and held by domestic investors.

We also draw an additional lesson: domestic-law defaults are complex and heterogeneous. Summarizing them in a few indicators may conceal more than reveal. This is why we complement this paper with a collection of “sovereign histories” (Erce et al., 2021). Reading them, one quickly learns that shocks triggering domestic defaults are disparate ranging from regional economic crisis to fluctuations in commodity prices to wars, pandemics, extreme natural events, and political animosity. At the same time, governments’ approach to domestic default varies greatly from episode to episode. Some countries, like Jamaica in 2013, seek an early involvement of creditors and restructure government debt in a market friendly fashion. Other countries, like Peru, are still trying to reach an agreement with creditors on bonds that have been in default since the early 1990s.

The rest of this paper is organized as follows. Section 2 describes the construction of our database and the data sources we consulted. Section 3 introduces the database and the sovereign histories. Section 4 discusses domestic-law defaults overtime. Section 5 analyzes their geographic distribution. Section 6 reports descriptive statistics about the size of domestic defaults. Section 7 discusses the duration of domestic-law defaults. Section 8 describes net-present values losses. Section 9 examines how governments choose to default and restructure debt. Section 10 compares our database to existing databases covering other aspects of domestic default. Finally, last Section concludes.

2 Data and Sources

Sovereign debt is a contractual obligation referring to debt issued or guaranteed by the government of a sovereign state. Defaults can take place through a plethora of mechanisms, ranging from unilateral reduction of principal or coupons, forcible currency conversions,

forcible conversions in other debt instruments, suspensions of payments, or freezes.⁶

Our database focuses on explicit domestic defaults towards private creditors on the basis of the legal jurisdiction. Consistent with the definitions adopted by rating agencies and the empirical literature on sovereign defaults (Reinhart and Rogoff (2008), Beers and de Leon-Manlagnit (2019)), we consider a domestic default event to have happened when one or more of the following events occur:

- A government fails to meet a principal or interest payment on a debt instrument on the due date or within a specified grace period (as occurred in Brazil 1990 or in Argentina 2001).
- Debt instruments are written off the books without a proper compensation for debt-holders (as occurred in Liberia 1989).
- Contractual terms of debt instruments are unilaterally amended by a government law-decree, such as the abrogation of indexation clauses (as occurred in Brazil 1986) or the introduction of retrospective taxes targeting sovereign debt service payments (as in Turkey in 1999).
- Absent an outright payment default, the government undertakes a restructuring exercise, that reduces interest rates and/or extends maturities of outstanding securities (as occurred in Greece 2011 or in Barbados 2018).
- Deposits that are either guaranteed by the government or held by public banks are frozen and/or forcibly converted from foreign to local currency or into government bonds (as occurred in Pakistan 1999).

Documenting domestic-law defaults, their timing, their size, and the details of the restructuring terms is a challenging exercise. Given the limited attention paid by the international community to these events, information about domestic-law defaults needs to be collected across a large and dispersed number of sources.⁷ As a result, the compilation of our database and the drafting of our sovereign “histories” was an intensive effort that required the consultation of several and diverse sources. Sources included country reports from the IMF, the World Bank and the OECD. Sources also included IMF program reviews, books and Public Information Notes, policy reports from development banks and other international institutions, accounts from Ministries and Central Banks, rating agencies publications, debt exchange offers, academic books, and research papers. In order to minimize errors, where feasible, we compared available details across different sources.

We complemented our resources with information collected from an extensive google search and a press review through Factiva, a news search tool that enables the consultation of more

⁶Other authors have considered less explicit definitions of domestic default, such as episodes of high inflation and financial repression.

⁷This is especially true for episodes involving smaller countries and not involving bonded debt.

than 32,000 sources that include local and international newspapers, journals, and magazines. Factiva proved very useful especially to identify domestic defaults in African countries that are widely publicized in the local press but receive little to no-coverage in the international press. The news search on Factiva was carried out using keywords, such as “country name” + “domestic debt” + “default” in English, French and Spanish, and analyzing the results obtained. We also conducted additional searches using the following terms: “restructuring”, “rescheduling”, “reprofiling”, “missed payments”, and “unpaid” instead of “default”; and searches using “internal” and “local” instead of “domestic”.

We also consulted existing databases that contain information on domestic sovereign default episodes, such as [Reinhart and Rogoff \(2008\)](#) and [Beers and de Leon-Manlagnit \(2019\)](#). However, they could only provide a starting point for our efforts. As we mentioned already, our definition of domestic government debt differs from the one adopted by [Reinhart and Rogoff \(2008\)](#), who classify domestic debt according to the residence of the investors, or [Beers and de Leon-Manlagnit \(2019\)](#), who classify debt according to the currency of denomination. Our classification, according to the law governing the debt, not always overlaps with the currency denomination of debt or the residence of investors.

To process the information we proceeded as follows. For each domestic default event, we systematically scrutinized official documents from the IMF. These often provide detailed information on the restructuring process, including volumes, terms and the type of assets involved, as well as on the economic background in which defaults and restructuring episodes unfolded. Among them, program documents and Article IVs, proved especially useful. We also searched into the websites of the countries’ Ministries of Finance, debt management agencies and Central Banks to cross-check the information and to add any additional details we could find.⁸ Whenever possible, we consulted the parliamentary resolutions, bills, and decrees that amended the terms of the debt instruments.⁹ Finally, we also browsed news in the local media to gain additional knowledge about each default episode.

The information was organized and systematized in two distinct products. First, a database collecting key information about defaults and restructurings, which we describe in this paper. Second, a collection of documents, named “sovereign histories”, that provides a detailed summary of each sovereign debt restructuring of liabilities governed under domestic law ([Erce et al., 2021](#)).

⁸Whenever possible, we contacted local authorities to confirm the accuracy of the information.

⁹Many of these sources are not in English. Hence, in the collection of the histories we may have run in a language bias. We are more familiar with the English, Spanish, Italian, and French terminology for sovereign defaults than with the terminology in other languages.

3 The Database and the Sovereign Histories

The database was constructed using a bottom up approach. We first collected information at liability level in order to build a database of *default events*. Then we aggregated the *default events* to obtain a database of *default episodes* where episode-level variables measure different aspects of default. We bundled different default events into a single episode when one of these two conditions were met: (i) two or more default or debt restructuring events occurred in the same or in the following year (as in Nicaragua 1994); (ii) the government announced a comprehensive restructuring of public debt (as in Grenada 2013).

Our efforts led to the identification of 132 *default events* on different instruments (bonds, bank loans or deposits), which we further group into 74 sovereign default and restructuring *episodes*. The sample spans from 1980 to 2018 and covers events in 50 countries in all five continents. Our exercise went beyond the simple identification of each default event. We also collected finer details on the default, such as the type of instruments involved, the volumes involved, or the restructuring strategy pursued.

Variables in the database measure different aspects of sovereign defaults. A first set of variables measures the timing of defaults. In particular, we collect information on the start and end dates of each default event at the monthly level. The start date is either the date in which debt instruments entered in default or were frozen, or the date of the announcement of the debt restructuring exercise. The end date is either the date in which debt payments resumed and deposits were unfrozen, or to the data in which restructuring plans were agreed and executed. In most cases, a comprehensive restructuring marks the end date of default episodes. Another set of variables measures the size of defaults. In particular, we collect information on the dollar value of the instruments involved and we compute aggregate default volumes for three categories of instruments: bonds, bank loans, and deposits. To ease the comparison with existing databases on domestic debt, we also collected information on the domicile (domestic or foreign) of the investors and the currency denomination (local or foreign) of the instruments involved. The database also includes variables that monitor how governments restructure each instrument. These variables keep track of the way in which governments amend the terms of its debt and of the net-present-value (NPV) losses for creditors. In particular, we collected information on whether the terms were amended through a face value reduction, a change in the maturity structure, or an amendment of the coupon structure. We also classified default events in either pre-default or post-default restructurings depending on whether the government was in default or not at the time the restructuring plan was announced. Finally, we also classified domestic defaults in unilateral or negotiated, depending on whether the government involved creditors in the design of the restructuring plan.

Our “Sovereign histories” provide the full narrative for each of the 74 default episodes. In particular, each history is structured in two sections. The first section provides an overview of the events leading to either the default or the restructuring. The second section provides the full details of the restructuring process for each instrument involved. Take for instance the

case of Grenada’s default in 2013. The restructuring exercise involved T-Bills, government bonds, arrears to domestic suppliers, loans, and guaranteed loans. Each asset received a different treatment and investors were also discriminated on the basis of their residence and identity. In the sovereign history of Grenada, we detail the terms and the timing of the restructuring process for each asset and each creditor. The detail of the information provided in each history makes the collection of our sovereign histories a unique source of examples for the ongoing policy and academic debates. Take, for instance, the ongoing debate around legal innovations in sovereign debt markets. Our histories speak to the debate as they document the effects of the activation of collective action clauses and the consequences of a default on collateralized bonds in St. Kitts and Nevis in 2011. Our stories also provide the finer details of cases where sovereign debt was collateralized (as in St. Kittis and Nevis), or where the exit from the default required financial engineering operations, such as transforming deposits into bonds (as in Serbia) or designing payment structures that accommodate for natural disasters (as in Barbados).

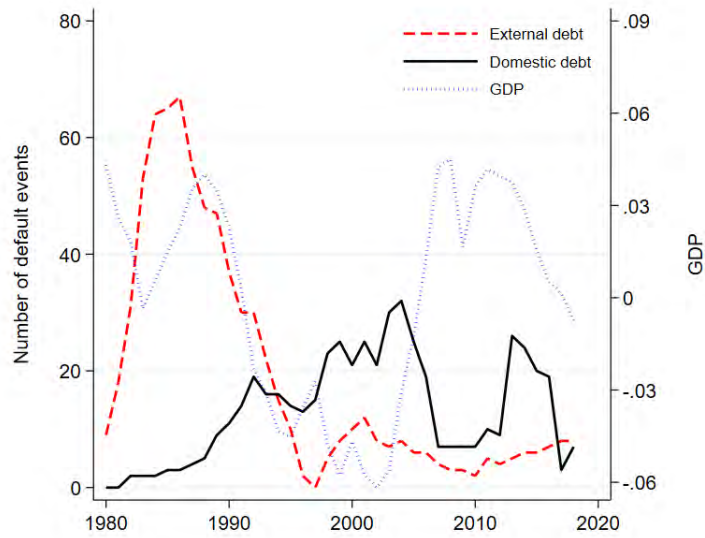
While digging for domestic-law defaults, we found 30 episodes of accumulation of domestic arrears, defined as overdue payments by governments to suppliers, civil servants and pensioners. Given that basic information regarding these episodes, such as starting date, volumes, and clearance strategy were often impossible to accurately reconstruct (arrears are usually reported as flows and in a discontinued manner), we describe them in our stories and report the information we collected in Appendix A, but don’t include them in our database.¹⁰

4 The Chronology of Domestic-Law Defaults

Domestic-law defaults have happened in each of the four decades spanned by our database. The black line in Figure 1 reports the total number of domestic default events occurring in overlapping four-year windows from 1980 to 2018. Domestic defaults were relatively rare in the first half of the 1980s and became increasingly frequent in the 1990s and in the 2000s, peaking in 2004. The incidence of domestic defaults declined markedly in the second half of the 2000s before inching up again in the first half of the 2010s, reflecting high debt levels and subdued growth in the aftermath of the Global Financial Crisis. The incidence of domestic defaults declined sharply in the second half of the 2010s reaching a through in 2018, just before the onset of the COVID-19 crisis.

¹⁰Often governments accumulate arrears over multiple years, and these tend to be disputed, forcing reconciliation processes (through domestic courts or ad-hoc tribunals) to validate the claims before resolving them. Arrears are usually settled either by cash payments or through an exchange with newly issued debt to creditors. [Beers et al. \(2021\)](#), studies domestic arrears using data obtained from IMF documents.

Figure 1. Distribution of Domestic Default Events



The solid black (dashed red) line plots the four-year rolling sum of domestic (external) default events. External defaults are as reported by [Asonuma and Trebesch \(2016\)](#). The dotted blue line is the cyclical component of low and middle-income countries aggregate GDP obtained applying the Hodrick-Prescott filter to the annual series.

The red-dashed line in Figure 1 plots the total number of external default events, as reported by [Asonuma and Trebesch \(2016\)](#), using overlapping four-year windows from 1980 to 2018. Foreign-law debt restructuring peaked in the mid 1980s and declined sharply thereafter. This pattern strongly contrasts with that of domestic defaults, which peaked in the late 1990s. All told, the analysis suggests that the expansion of domestic debt markets in the 1990s has translated into a greater involvement of domestic debt in defaults.¹¹

We also investigate the relation between the timing of domestic defaults and fluctuation of the economic cycle. The dotted blue line in Figure 1 plots the cyclical component of GDP in low and middle-income economies, which make up the bulk of our sample.¹² Default events are more frequent when economic growth falls below the trend, confirming that domestic defaults, like external ones, are more frequent in bad times ([Tomz and Wright, 2007](#)).

¹¹The increase in the frequency of defaults on domestic-law debt relative to defaults on external law ones since the nineties suggests that the partial substitution of external debt for domestic one has increased governments' inclination to operate selective defaults, as suggested by [Erce and Mallucci \(2018\)](#)

¹²Of the 132 domestic default events, 110 occurred in low and middle-income economies.

Table 1. Default Events by Instrument and Decade

	Full Sample	1980-1989	1990-1999	2000-2009	2010-2018
Default Events					
Bonds	86	6	24	31	25
Bank loans	28	2	11	7	8
Deposits	18	4	11	3	0
Total	132	12	46	41	33
Default Episodes					
Multiple instruments	20	2	8	7	3
Total	74	9	35	17	13

Number of default events involving bonds, bank loans or deposits. Default episodes that involve multiple instruments are double counted.

We categorize government instruments in three categories: bonds, bank loans, and deposits. Table 1 reports the evolution over time of the incidence of defaults by instrument. As shown in the first column, defaults on bonded debt are by far the most common form of domestic default: of the 132 events, 86 involve bonds, 28 involve bank loans, and 18 involve deposits. Looking at the evolution over time of the composition of defaulted debt, a clear pattern emerges. Defaults on bonded debt have become an increasingly large fraction of total domestic defaults. In the 1980s, 50% of the restructuring episodes involved bonded debt. In the last two decades, the share of domestic defaults involving bonded debt has risen to well above 70%. Over the same period of time, the percentage of defaults involving deposits has dropped, declining from 33% in the 1980s to 0% in the 2010s. Finally, the incidence of defaults involving bank loans has remained fairly constant over time.¹³ To investigate the frequency of domestic defaults that involve multiple instruments, we focus on default episodes. We find that roughly 30% of the 74 default episodes in our sample involve multiple instruments.

5 The Geography of Domestic Sovereign Defaults

Domestic-law sovereign default is a global phenomenon. Table 2 breaks down the number of defaults by continent. Looking at the number of events, America is the continent where most restructurings have occurred. All of them in Latin America: South American countries recorded 34 events; Central American countries recorded 10; and Caribbean countries

¹³These findings suggest that the shift in governments' foreign borrowing from bank loans in the 1980s to tradable bonds in the 1990s has also involved domestic debt and is reflected in the greater involvement of bonded debt in default episodes.

recorded 32 defaults. Africa, with 29 events, is next runner up. Europe also recorded a high number of defaults: 16. The vast majority of the defaults occurred in emerging European countries, such as Macedonia and Ukraine. Yet, defaults have also involved two euro area countries: Greece and Cyprus. Domestic defaults are less frequent in Asia, where we only discovered 10 events. Bundling the events into episodes, as described in paragraph 3, we observe a similar ranking despite several restructurings in America occurred in subsequent years, triggering a large drop in the number of defaults when moving from events to episodes.

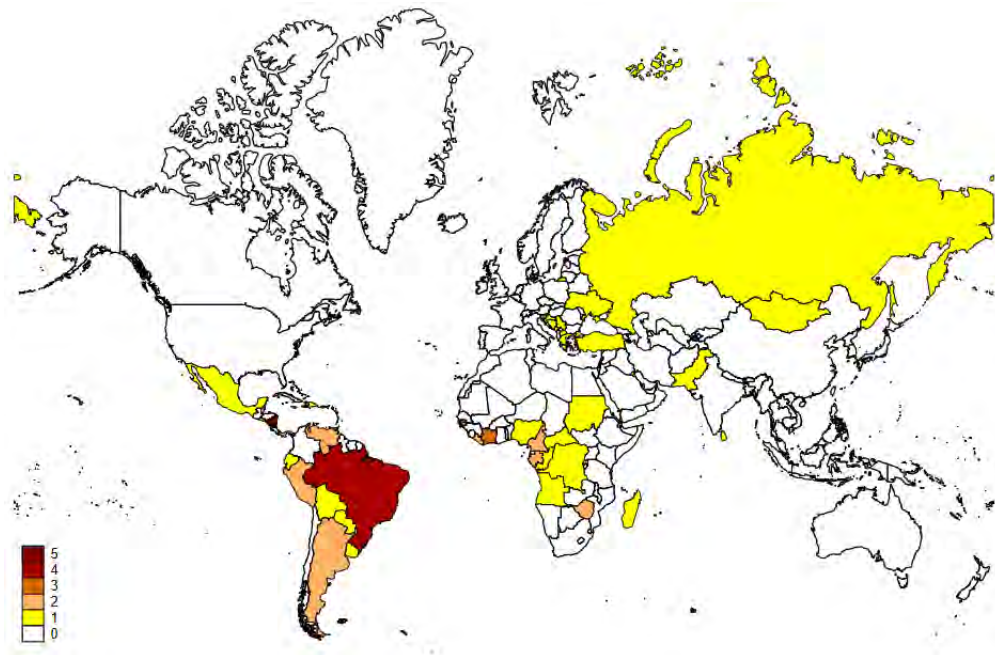
Table 2. Domestic Default Events and Episodes by Continent

	Total	Africa	America	Asia	Europe	Oceania
Bonds	86	13	56	7	9	1
Bank loans	28	15	11	1	1	0
Deposits	18	1	9	2	6	0
<i>N</i> ^o of events	132	29	76	10	16	1
<i>N</i> ^o of episodes	74	23	33	5	12	1

Total number of domestic-law debt restructurings across continents from 1980 to 2018.

An interesting aspect of the geography of sovereign defaults, is that domestic-law default episodes have occurred in just 50 countries, with about one third of these countries defaulting multiple times. Nicaragua is the front runner with 5 default episodes since 1980. Brazil with 4 default episodes is the runner up. Figure 2 plots the world map. Countries are color-coded according to the total number of default episodes in that country. Serial defaulters are found in every continent, but they are especially numerous in Latin America, where 6 countries have defaulted multiple times.

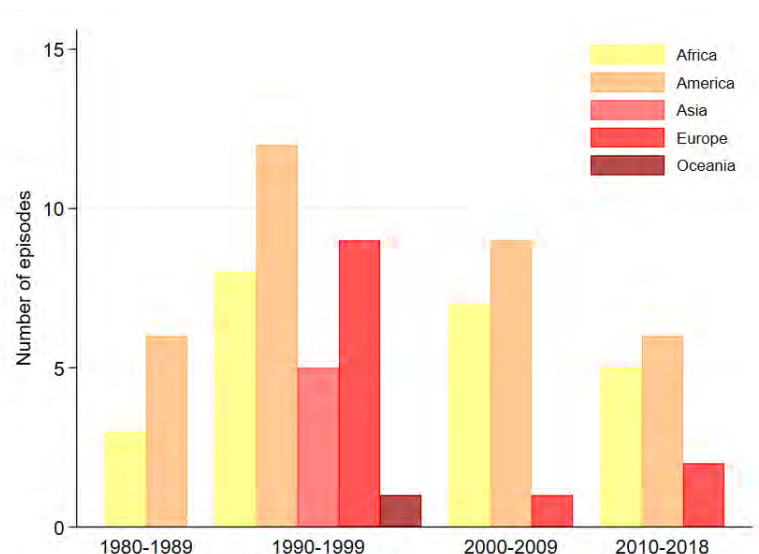
Figure 2. Distribution of Domestic Default Episodes



Total number of default episodes per country.

Figure 3 shows how the geography of domestic defaults has evolved over time. The number of domestic-law defaults has been persistently high in Latin American countries. In each of the four decades from 1980 to 2018, Latin America recorded at least 6 domestic defaults. In Africa, domestic defaults have steadily increased from the 1980s to the 1990s, likely reflecting progresses in the development of domestic financial markets. The trend, however, has reversed in the last two decades and Africa has recorded only 5 domestic defaults from 2010 to 2018. Finally, domestic-law default episodes in Europe have peaked in the early 1990s, when the dissolution of the Soviet Union and the break-up of Yugoslavia have left many countries in poor financial standing. The euro-area debt crisis has also left its mark. The two European defaults in the 2010s are those of Greece and Cyprus.

Figure 3. Evolution of Domestic Default Episodes by Continents

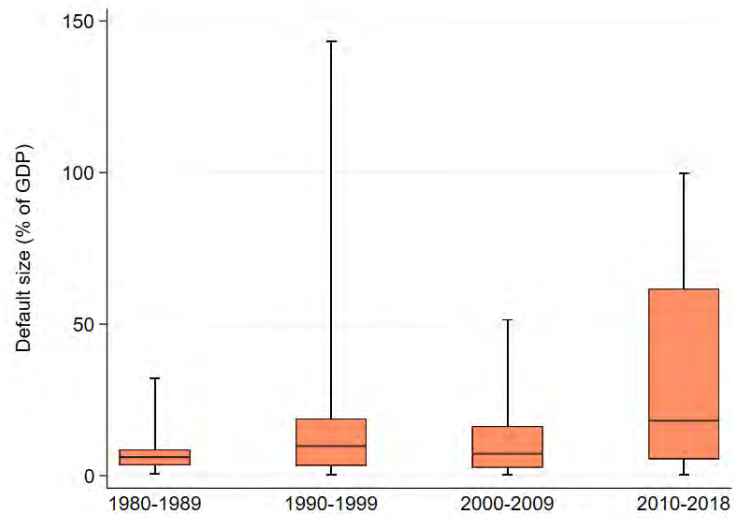


Total number of default episodes in each continent for each decade.

6 The Size of Domestic Sovereign Defaults

Our database also tracks the volume of sovereign debt involved in each default. Figure 4 reports the median size of debt in default as a fraction of GDP in the four decades spanned by our sample. While the median size of domestic debt in default was roughly constant and close to 10 percent for default episodes in the 1980s, 1990, and 2000s, the median size of default as a fraction of GDP has doubled from 2010 to 2018, reaching almost 20%.

Figure 4. Median Default Size by Decade



Median size of default as a fraction of GDP by decade.

Median values mask significant heterogeneity. Peak values are more than 10 times larger than median values. For example, the Kuwait’s deposit freeze in 1990 involved deposits worth 143% of GDP and the large restructuring in St. Kitts and Nevis in 2011 involved assets worth 99% of GDP. The size of default also varies greatly depending on the instruments involved. Table 3 reports summary statistics on the size of debt in default using our sample of 132 instruments.

Table 3. Default Volumes by Instrument in Default

	Mean	Median	SD	Min	Max	N
Default Events						
Foreign law	13.2%	6.0%	20.9%	0.1%	183.1%	178
Domestic law	10.2%	3.9%	19.1%	0.0%	143.2%	132
Default Episodes						
Multiple instruments	24.3%	18.1%	23.0%	4.4%	99.7%	17

Summary statistics for default volumes as a percentage of GDP. Data for foreign law debt comes from [Asonuma and Trebesch \(2016\)](#)

The first two rows of Table 3 report summary statistics for domestic and external default events. Data for external default events is taken from Asonuma and Trebesch (2016). The comparison between default volumes in domestic and foreign default events suggests that domestic defaults are generally smaller than foreign ones. The size of domestic defaults, however, varies greatly depending on which instrument is involved in the default event. Defaults on domestic bonds are generally small in size and yet, when bonds feature collective action clauses, the average volume of restructured debt reaches 26% of GDP, which is much larger than the median default volume of any other instrument.¹⁴ Defaults that involve deposits are also large, with an average volume of debt in default of 23% of GDP. Defaults on domestic bank loans display the lowest average volume of debt in default: only 6.8% of GDP.¹⁵ Notably, around 60% of the default events that involve bank loans have occurred in Africa and 3 of these episodes occurred in Cote d’Ivoire. Finally, we examine domestic-law default episodes that involve multiple instruments. We find the average volume of debt in default is sizable reaching 24.3 percent of GDP.

7 The Duration of Domestic Sovereign Defaults

The median duration of domestic defaults has changed over time. As shown in Figure 5, the median duration was 12 months, in the 1980s. In the 1990s the median duration tripled reaching 3 years, as the number of domestic defaults also increased dramatically.¹⁶ Since the 2000s, the duration of domestic defaults has been on a downward trend. In the last decade, the median duration of debt restructuring has fallen to 7 months, reflecting the increasing role of pre-default restructurings and the adoption of collective action clauses (CACs).¹⁷ In some cases, such as Barbados 2018, CACs were introduced retroactively to accelerate the restructuring process. As a result, the duration of Barbados’ debt restructuring was just 5 months.

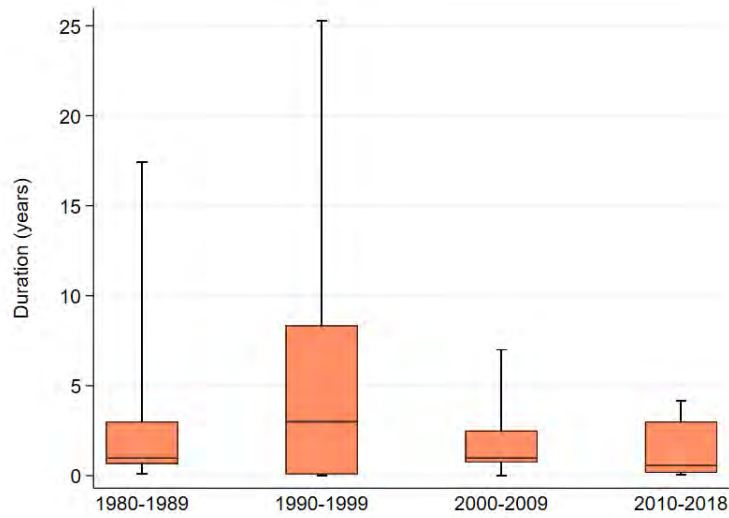
¹⁴This result may be driven by the interaction between collective action clauses (CACs) and domestic-law bonds. In some domestic defaults, such as Greece 2011 and Barbados 2018, CACs have been unilaterally and retroactively introduced in bonds contracts issued under domestic law to achieve a high participation rate.

¹⁵This results reflect perhaps the intention to protect banks in an environment in which other sources of domestic funding are not available.

¹⁶The resolution of domestic defaults in the Balkans, Liberia and Peru was extraordinarily slow.

¹⁷As we highlight in Section 9, the negotiation process between governments and creditors has shifted from a unilateral defaults to a more frequent involvement of creditors ahead of defaults.

Figure 5. Median Duration of Domestic Defaults



Median default duration by decade.

Table 4 explores the duration of the default and restructuring process in our sample of 132 default events. We define the duration of a sovereign debt restructuring as the time between its start (defined by either an actual default or the announcement of a debt restructuring operation) and its end (defined as either when arrears are cleared or when a debt restructuring is agreed or enacted). As shown in Table 4, around 40% of domestic-law debt restructurings were resolved within 6 months. Yet, a non-negligible fraction of episodes took a very long time to get resolved. Almost one third of the domestic restructuring events lasted more than 3 years, and a 6% of them lasted more than 12 years. Peru is the most extreme case: the government began to negotiate a solution in 1992 and is yet to reach an agreement with creditors. The comparison with the duration of foreign law debt restructuring is striking. While just a little over ten percent of foreign law episodes got resolved in less than six months, four of every ten domestic episodes did.

Table 4. Distribution of Domestic Defaults' Duration

	Less than 6	Between 6 and 12	Longer than 36
Domestic-law Defaults	39%	13%	28%
Foreign-law Defaults	13%	24%	29%

The table reports the percentage domestic-law events lasting less than 6 months, from 6 to 12 months, and longer than 36 months.

Table 5 provides summary statistics for the duration of our domestic-law defaults and restructurings. Domestic defaults are on average resolved faster than foreign defaults. There are, however, instances in which the resolution took more than a decade, as shown by the last column that reports the maximum value. Defaults on bank loans feature the longest duration, followed by defaults on deposits. Defaults on bonds feature, instead, the shortest duration, especially when they encompass CACs.¹⁸ Finally, episodes that involve restructuring diverse instruments take very long to be resolved, lasting on average more than 5 years.

Table 5. Duration (months)

	Mean	Median	SD	Min	Max	N
Default Events						
Foreign law	38.3	17.0	50.2	1.0	271.0	184
Domestic law	33.1	12.0	55.1	0.0	303.0	132
Bonds	20.0	5.0	43.4	0.0	303.0	86
Bonds with CACs	10.9	5.0	12.2	2.0	32.0	9
Bank loans	61.9	39.0	67.3	0.0	301.0	28
Deposits	50.4	24.5	64.9	0.0	206.0	18
Default Episodes						
Multiple instruments	63.1	48.0	65.6	1.0	209.1	20

Summary statistics for duration of domestic defaults. As in [Asonuma and Trebesch \(2016\)](#), when the information on the starting or ending month was missing we took the following approach: in case start and end years are different, we take June; in case start and end years are the same and we have no information regarding start and end months, we take June; in case start and end year are the same and we have information regarding either the start or the end month, we set the missing month to the mid-point of the remaining part of the year.

8 Investors' Losses in Domestic Sovereign Defaults

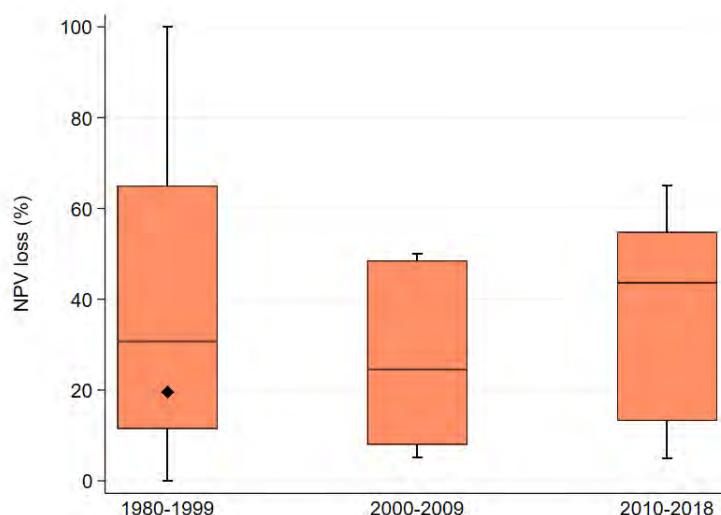
Restructuring terms determine the size of investors' losses, which are measured in terms of their net present value. Unfortunately, our sources do not always report all the details of the restructuring terms. In particular, discount rates for the different instruments are rarely available, making the comparison between the net present value of old and new instruments impossible. Consequently, we decided not to try to compute investors' NPV losses ourselves and to rely, instead, on estimates provided by our sources. Using these, we gathered information on NPV losses for 53 instruments in 28 distinct default episodes.

NPV losses at episode level are computed as the weighted average of the NPV losses at the

¹⁸According to [Bai and Zhang \(2012\)](#), the duration of restructuring of foreign-law bonds is over 12 months. Five times more in the case of foreign bank loans.

instrument level. We find that median NPV loss is sizable and is about 33% of the total asset value. That said, the distribution of NPV losses has a wide support. In 36% of the default episodes, NPV losses were smaller than 20% of the value of the debt. However, in the worst 11% of the episodes NPV losses exceeded 80% of the value of the debt. Analyzing the evolution of creditors' losses over time, we find that the size of the median loss has increased from roughly 19% in the 1990s to almost 44% in the 2010s, as reported in Figure 6. The upward trend confirms that the rapid growth of domestic debt markets has translated in a greater involvement of domestic debt in defaults.

Figure 6. Median Creditors' Losses by Decade



Median value of creditors' losses as a fraction of the NPV of the instrument by decade. Median NPV losses in the 1980s equaled 70%, but as we have data on NPV losses for just 3 default episodes in the decade, we add them together with those of the 1990s. The dot in the first box represents the median value computed from 1990 to 1999.

The size of NPV losses varies greatly depending on the instrument involved. As shown in Table 6, creditors' losses are smaller when government defaults on deposits, and are larger when either bonds or bank loans are involved. When we compare investors' losses in domestic and external restructurings, we find that investors' losses on domestic debt are slightly larger than those reported by Asonuma and Trebesch (2016) for foreign law debt.

Table 6. NPVs of Creditors' Losses by Instrument in Default

	Mean	Median	SD	Min	Max	N
Foreign law	38%	33%	27%	-10%	97%	178
Domestic law	43%	54%	23%	-05%	100%	53
Bonds	43%	50%	22%	-5%	100%	37
Bonds with CACs	47%	55%	15%	23%	65%	9
Bank loans	50%	54%	19%	5%	65%	8
Deposits	37%	31%	29%	0%	74%	8

Summary statistics for creditors' losses. Losses are expressed as a percentage of the NPV of the security in default.

9 The Mechanics of Debt Restructuring

In this section we shed light on how governments restructure domestic-law debt. Three dimensions are especially relevant for us. First, we classify restructuring episodes in either pre-default or post-default. Second, we check whether restructurings were either unilateral or negotiated. Finally, we collect information on how the original terms were amended distinguishing between cases featuring a modification of maturities, a change in coupons, or a reduction of face values.

Pre-default restructurings happen when the government is able to reach a restructuring agreement with creditors before default. Post-default restructurings, instead, happen when the government defaults on its debt before a restructuring process is started. Table 7 reports the split between pre-default and post-default restructurings. About 37% of the domestic debt restructurings are pre-default.¹⁹ The incidence of pre-default restructuring is in line with the one found by Asonuma and Trebesch (2016) for external defaults: 39%. Table 7 also compares the size, the duration, and investors' losses for pre-default and post-default restructurings. Pre-default restructurings are quicker, they involve higher volumes of debt, and deliver smaller losses than post-default ones.

¹⁹Pre-default restructurings have become more frequent over time. While only 30% of the restructurings were pre-default before 2000, their incidence increased to 45% after 2000.

Table 7. Pre-default versus Post-default: Main Features

	Percentage of Total	Size (% of GDP)	Duration (months)	NPV Losses
Pre-default	37%	12.2%	2.3	34.1%
Post-default	63%	10.7%	49.6	42.7%

The table reports average values for pre-default and post-default domestic-law debt restructurings.

Turning to the restructuring procedures, we identify two of them: unilateral conversions and negotiated ones. As in [Enderlein et al. \(2012\)](#), we determine that a unilateral conversion occurs when contractual terms are modified unilaterally by the debtor government. This occurred, for instance, in Turkey in 1999. Negotiated conversions, instead, are characterized by the involvement of creditors. Governments may approach investors informally or propose an exchange offer. Governments often choose an informal approach when they seek to restructure selectively a portion of the debt (as in the case of Antigua and Barbuda in 1998) or when they have a direct relation with the creditor (as it is generally the case with bank loans). Exchange offers are more often used in larger restructurings that involve multiple instruments and investors.

Table 8 reports the breakdown of restructuring events by instrument and procedure. While defaults on bonds and bank loans are usually resolved through negotiated restructurings, governments always took a unilateral approach when deposits were involved. Table 8 also shows that pre-default defaults are usually negotiated with investors, suggesting that governments take a more market-friendly approach for pre-default restructurings. On the contrary, post-default restructurings are often unilateral.

Table 8. Restructuring procedure by instrument

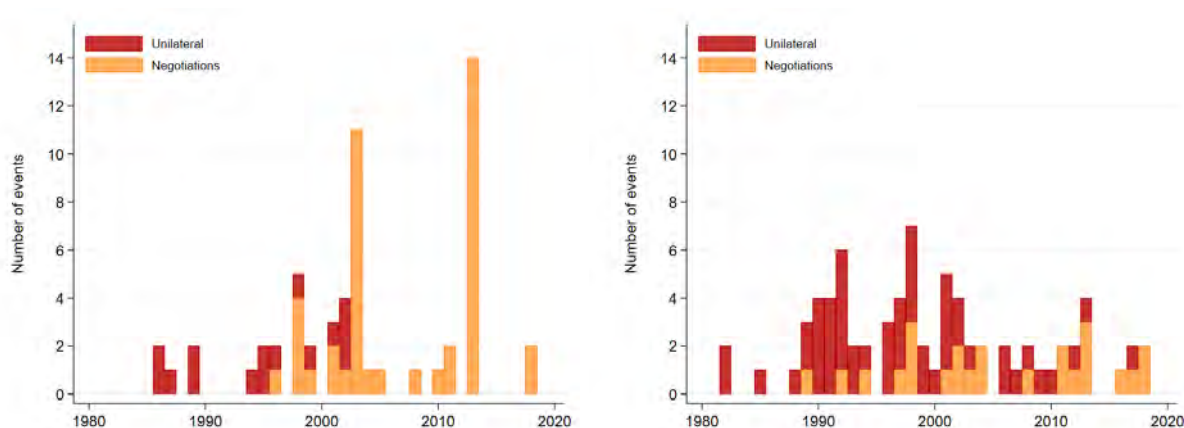
	Unilateral conversion	Negotiation
Bonds	36%	64%
Bank loans	33%	67%
Deposits	100%	0%
Pre-default	34%	66%
Post-default	62%	38%

Domestic-law restructuring events by restructuring procedure and instrument.

Figure 7 plots the evolution over time of unilateral and negotiated defaults for pre-default and post-default restructurings. A clear pattern emerges. Negotiated restructurings have become more frequent over time, along with calls for increased transparency and a more

open dialogue between creditors and debtors. This pattern is especially visible for pre-default restructurings. Since Slovenia’s default in 2002, there has not been any unilateral restructuring.

Figure 7. Unilateral and Negotiated Restructuring Overtime: Pre- vs Post-Default Cases



Breakdown of restructuring events in pre-default cases (left hand side chart) and post-default cases (right hand side chart) according to the procedure used.

Finally, we review how terms are amended when government debt is restructured. Table 9 summarizes our findings. Maturity extension is by far the most common amendment. In 74% of the default events in our sample, the government has amended the original maturity of instruments, typically extending it.²⁰ Maturity extensions vary greatly from case to case ranging from just a few months (as in Venezuela 2003) to 50 years (as in Bosnia 1992). Amendments to the coupon structure are also frequent and are featured in 63% of the restructuring events in our sample. Coupon amendments often involve a reduction of coupon and the exchange of variable-rate coupons for fixed-rate ones. There are, however, instances (such as Argentina’s 2001 Megaswap) in which coupon payments are increased, at least on a fraction of the instruments in default, to compensate investors for some of the losses involved with the restructuring.

²⁰There are, however, cases, such as Nicaragua 1994, in which maturities were actually extended.

Table 9. Restructurings by Amendment of the Terms

	Maturity Change	Coupon Change	Face Value Reduction
Bonds	68	53	14
Bank loans	18	17	6
Deposits	14	14	5
<i>N</i> ^o of events	100 (115)	84 (99)	25 (108)

Number of restructurings by type of amendments of the original terms. Events featuring more than one type of amendments of terms are double counted. The number in parenthesis corresponds to the number of events for which information on the corresponding change is available. The numbers reported in parenthesis are bigger than the number of the events, as for several default episodes our sources did not report information about amendments of the terms at the security level.

Face value reductions are far less common. Only 20% of the restructuring events in our database feature face value reductions, and pre-default restructuring almost never feature them.²¹ The experiences of Uruguay in 2002, Jamaica in 2010, or Cyprus in 2013 shed a light on the reason why face value reductions are not welcomed by investors and are uncommon. In all these cases, amid a twin sovereign and bank crisis, the authorities approached investors to discuss the terms of a pre-default restructuring of sovereign debt. Creditors expressed their preference for a maturity extension over face value reductions, motivating their choice with the more negative impact that a face value reduction would have on their balance sheets.²²

10 Triple Coincidence and Comparison with the Existing Literature

Our definition of domestic debt is based on the law governing the debt instruments. We consider domestic debt any government security that is issued under domestic law, regardless of the residence of the investors and the currency denomination. Other works have used different definitions of domestic debt. In particular [Reinhart and Rogoff \(2008\)](#) classify debt according to the residence of investors, while [Beers and de Leon-Manlagnit \(2019\)](#) classify debt according to its currency denomination.

²¹The only 2 cases where a pre-default restructuring involved face value reductions are Ukraine 1998 and Greece 2011.

²²Restructurings that involve deposits are a special case. While the restructuring of bonds and bank loans normally only affect the terms of the securities, the restructuring of deposits typically involve transforming them into a different instrument: bonds. In 13 of the 16 restructuring episodes that involve deposits, investors were either given the option or were forced to convert deposits into bonds.

Table 10 reports the mean share of domestic-law debt restructuring events that involve local currency debt and debt held by domestic investors.²³ In each of the four decades spanned by our database, the share of domestic-law debt restructuring that involve assets held by domestic investors exceeds 85%, indicating a strong overlap between residence and jurisdiction. The share of domestic-law restructurings involving local-currency debt hovered around 65% in the 1980s and 1990s before declining to 38% in the 2010s. In the last decade, however, the trend has reversed. The share of local-law restructurings involving debt instruments denominated in local currency has increased to 90%. All told, results suggest that triple coincidence is very much alive, despite financial globalization. The law, the residence, and the currency denomination of assets being restructured very often coincide.

Table 10. Triple Coincidence

	Local currency	Local resident	N. events
1980-1990	63%	88%	8
1990-2000	66%	86%	29
2000-2010	38%	86%	19
2010-2018	90%	81%	30

Average share of domestic-law restructuring involving local-currency debt and domestic residents by decade.

Table 11 compares our database against the database of [Beers and de Leon-Manlagnit \(2019\)](#), that is based on the currency denomination of the instruments in default, and the database of [Reinhart and Rogoff \(2008\)](#), that is based on the residence of the creditors. Each cell of the table reports the number of defaults jointly reported in the databases specified by the corresponding row and column. For instance, the cell corresponding to the first row and the second column reports the number of defaults in our database that are also reported in [Beers and de Leon-Manlagnit \(2019\)](#). The diagonal reports the total number of default episodes reported by each database. The last column reports the number of defaults that are common to all three databases. To identify overlapping episodes that might have been reported with slightly different starting dates, we consider a time window of $(-2, +2)$ years around our domestic debt default episodes.

²³Data on the currency denomination and investors' residence of restructuring events were only available for 86 of the 132 default events.

Table 11. Domestic Defaults: Comparing Databases

Database Criterion	Our Data Law	B&LM (2019) Currency	R&R (2008) Residence	All All
Our Data	74	20	17	10
B&LM (2019)	20	38	15	10
R&R (2008)	17	15	26	10

Number of defaults reported by the database specified by the row and by the database specified by the column. To identify overlapping episodes, we consider a time window of $(-2, +2)$ years. Data for local currency defaults are from [Beers and de Leon-Manlagnit \(2019\)](#). Data for defaults on domestic residents are from [Reinhart and Rogoff \(2008\)](#).

We find that our database contains about half of the 38 default episodes reported in [Beers and de Leon-Manlagnit \(2019\)](#) and 17 of the 26 default episodes reported in [Reinhart and Rogoff \(2008\)](#), suggesting that there is substantial overlap between the legal jurisdiction, domicile, and currency. There are two key reasons why our database does not capture some of the default episodes reported in the other databases. First, the time span is different. Second, our database does not include *de facto* defaults, such as those associated with hyperinflation or changes in the legal tender.²⁴ That said, our database extends significantly the coverage of domestic defaults. It reports 20 default episodes that are not included in [Beers and de Leon-Manlagnit \(2019\)](#) database, and 34 default episodes that are not included in [Reinhart and Rogoff \(2008\)](#). Table 16 in the Appendix B reports the full list of domestic defaults included in our database and compares them with those in [Beers and de Leon-Manlagnit \(2019\)](#) and in [Reinhart and Rogoff \(2008\)](#).

Conclusion

This paper introduces a novel database on domestic sovereign defaults based on the jurisdiction governing public debt: Domestic debt is defined as public debt issued under domestic law. The database contains 132 domestic-law default events in 50 countries from 1980 to 2018, and systematically reports information on the timing and outcome of each event.

The stylized facts we present in this paper provide interesting insights that can inform the growing theoretical work on this area. In particular we draw the following lessons:

1. Domestic defaults are a global phenomenon occurring in every continent.

²⁴Appendix C explains for each default episode the reason why they are included in either [Beers and de Leon-Manlagnit \(2019\)](#) or [Reinhart and Rogoff \(2008\)](#) and not in our database.

2. Domestic defaults are frequent and, from the mid-1990s to 2015, have become more frequent than foreign ones.
3. Governments operate selective defaults.
4. The median size of domestic defaults has increased over time reaching almost 20% of GDP in the last decade.
5. Domestic defaults on bonded debt are by far the most common form of domestic defaults. Defaults on bank loans and deposits, used to be more frequent, but are fairly rare nowadays.
6. Maturity extension is the most frequent form of restructuring. Amendments to the coupon structure are also frequent, while face value reductions are relatively rare.
7. Investor losses are sizable, as large as those faced during foreign law defaults.
8. Domestic debt restructurings often proceed much faster than external ones, but they can also protract significantly.
9. Post-default restructurings were the norm, but governments show an increasing preference for negotiated, pre-default restructurings.
10. Despite financial globalization, the triple coincidence is very much alive.

There is an additional lesson that we draw from our efforts to identify, review, and analyze domestic defaults. Domestic defaults are complex and highly heterogeneous. Summarizing their characteristics using a limited number of variables may conceal more than reveal. Mindful of this risk, we complement this paper and our database with a collection of “sovereign histories” that provide both an overview of the events leading to the default and the full details of the restructuring process for each debt instrument involved.

Reading our sovereign histories, one quickly learns that shocks triggering domestic defaults are disparate. This paper is just a first step in the direction of exploiting our database to foster the understanding of government debt and sovereign defaults. Topics that are especially interesting, in our view, include: the comparison between domestic and external defaults, the role played by disasters in shaping default risk, the interplay between domestic defaults and financial stability, and the interaction between political instability, inequality, and sovereign risk. We plan to address these topics in future research.

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Appendix A Payment Arrears

We found fragmented information on 30 events involving payment arrears with domestic suppliers. As the information about these events is often incomplete, we chose to report them in our sovereign histories but to exclude them from our database. In this appendix we review some empirical facts about domestic payment arrears, using the information from our admittedly incomplete sample.

Chronology

As reported in Table 12, the number of default events involving domestic arrears peaked in the 1990s at the same time in which domestic defaults also peaked, suggesting that domestic arrears are often accumulated when governments default on domestic debt. As a consequence, the number default events involving domestic arrears as a fraction of the total number of defaults has remained fairly constant over time, with perhaps only a slight decline in the 2010s.

Table 12. Events of Domestic Payment Arrears by Decade

	Full Sample	1980-1989	1990-1999	2000-2009	2010-2018
Payment Arrears	30	3	15	9	3

Number of default events involving domestic suppliers by decade.

Default Volumes

Domestic arrears tend to be large. Table 13 reports summary statistics for default volumes. The average volume of domestic arrears as a fraction of GDP is close to 19%. That said, the distribution is skewed toward zero. The median value of domestic arrears is 6%, suggesting that the volume of domestic arrears is moderate in most domestic default events.

Table 13. Default Volumes as a Percentage of GDP

	Mean	Median	SD	Min	Max	N
Payment Arrears	18.9	6.18	43.45	0.74	229.64	30

Summary statistics for domestic payment arrears as percentage of GDP.

Duration

Domestic arrears to employees and suppliers feature very long duration (14). Their resolution is significantly slower than the resolution of defaults that involve any other debt instruments. Delays in the resolution of domestic defaults that involve arrears happen in part because the planning and execution of clearance operations of domestic arrears are complex and normally involve a reconciliation process between the government and creditors to assess and validate arrears. Once the validation process is completed, arrears are usually settled either by cash payments or through an exchange with newly issued debt.

Table 14. Duration (months) of Domestic Payment Arrears

	Mean	Median	SD	Min	Max	N
Payment Arrears	88.6	72.0	74.8	2.0	305.0	30

Summary statistics for the duration of events of domestic payment arrears.

Investors' Losses

We only managed to find information for five events. For these events, investors' losses associated with domestic arrears are significant. On average 54% of the NPV of the unpaid liability is never repaid. Average losses on payment arrears are larger than average losses on any other instrument.

Table 15. NPVs of Creditors' Losses for Domestic Payment Arrears

	Mean	Min	Max	N
Losses on payment arrears	54%	30%	74%	5

Summary statistics for creditor's losses for domestic arrears. Losses are expressed as a percentage of the NPV of the liability in default.

Appendix B List of Defaults

Table 16. Default and restructuring episodes

Database Criterion	Our Dataset Law	Reinhart and Rogoff (2008) Residence	Beers and de Leon-Manlagnit (2019) Currency
Angola	2010	1992	1990
Antigua-Barbuda	1998, 2008		
Argentina	1989, 2001	1982, 1989, 2001	1982, 1989, 2002
Barbados	2018		2018
Bolivia	1982	1982, 1984	
Bosnia	1992		
Brazil	1986, 1990, 1993, 1996	1986, 1990	1983, 1986, 1990
Cameroon	1993, 2001		
Cabo Verde	1998, 2018		1999
Central African Rep.	1992		
Congo Dem. Rep.	1997		
Congo Rep.	1992		
Cote d'Ivoire	1989, 2001, 2011		
Croatia	1992		
Cyprus	2013		
Dominica	2003		
Dominican Rep.	1996	1981	
Ecuador	1997	1999, 2008	
El Salvador	2017	1981	
Gabon	1997, 2001		
Gambia	2017		
Ghana		1982	1982
Greece	2011	2012	
Grenada	2004, 2013		
Iraq			1990, 1993
Jamaica	2010, 2013		2010, 2013
Korea, North			1992, 2009
Kuwait	1990		
Liberia	1989, 2016		
Macedonia	1991		
Madagascar	2002		2002
Mexico	1982	1982	
Mongolia	1997		1997
Montenegro	1991		
Mozambique			1980
Myanmar		1984, 1987	1985, 1987
Nicaragua	1994, 1996, 1999, 2003, 2008	2003, 2008	1988, 2005
Nigeria	1995		1984
Pakistan	1998		
Panama	1988, 1998	1988	
Paraguay	2002		
Peru	1985, 1992	1985	1980
Russia	1998	1998	1991, 1993, 1998
Rwanda	1989, 1994		1995
Serbia	1991		
Sierra Leone			
Slovenia	1991, 1995, 2002		
Solomon Islands	1996		1995
Sri Lanka	1996	1996	1996
St. Kitts and Nevis	2011		
Sudan	2007		1991
Suriname			2001
Turkey	1999		1999
Ukraine	1998		1998
Uruguay	2002		
Venezuela	1998, 2002	1995, 1998	1998, 2016
Vietnam			1985
Zimbabwe	2001, 2006	2000, 2006	2001, 2006

Domestic debt defaults and restructurings from 1980 to 2018. The first column lists episodes included in our database that classifies domestic debt according to the law criterion. The second column lists episodes included in [Reinhart and Rogoff \(2008\)](#) who classify domestic debt according to the residence of investors. The third column lists episodes included in [Beers and de Leon-Manlagnit \(2019\)](#) who classify domestic debt according to the currency denomination.

Appendix C Comparison with existing datasets

After cross-checking our list of episodes with those reported by [Reinhart and Rogoff \(2008\)](#), we did not take into account various episodes they report. There were five main reasons: (i) the episode refers to arrears accumulation with suppliers (which we also cover but separately), (ii) the episode refers to a period of hyperinflation, (iii) the episode relates to foreign law debt (and it is included because part of the debt was held domestically), (iv) default corresponds to currency reforms, and (v) we found no information on the episode other than its presence in [Reinhart and Rogoff \(2008\)](#) database. Specifically, our database does not cover the following episodes:

- Bolivia (1984) and Angola (1992) are hyperinflationary episodes. For Angola, we found information regarding the accumulation of domestic arrears to suppliers since 1992.
- Argentina (1982) and Ecuador (2008) relate to the external debt restructuring interventions reported in [Asonuma and Trebesch \(2016\)](#), which affected both foreigners and residents.
- Ghana (1982) and Myanmar (1984, 1987) correspond to defaults due to currency changes.
- Panama (1988) and Venezuela (1995) relate to an accumulation of domestic arrears toward suppliers.²⁵
- For El Salvador (1981) and Dominican Republic (1981), we did not find any available information regarding the episodes.²⁶

In our search, we identified 48 domestic-law default episodes involving residents, which were not covered in [Reinhart and Rogoff \(2008\)](#). Of these, 40 correspond to the period starting from 1980 until the last episode reported in that database.

After cross-checking our list of episodes with those reported by [Beers and de Leon-Manlagnit \(2019\)](#), we did not take into account various episodes they report. There were three main reasons: (i) the episode relates to foreign law debt (and it is included because denominated in domestic currency), (ii) default corresponds to currency reforms, and (iii) we found no information on the episode other than its presence in [Beers and de Leon-Manlagnit \(2019\)](#). Specifically, we did not include the following episodes:

- Angola (1990), Ghana (1982), Iraq (1990), (1993), Korea, North (1992), (2009), Mozambique (1980), Myanmar (1985), (1987), Nicaragua (1988), Nigeria (1984), Russia (1991),

²⁵We report Panama (1988) in our database but as a deposit freeze episode.

²⁶El Salvador (1981) is classified as a local currency default by Standard & Poor (2004), which reports government and central bank securities, bank loans, and central bank currency as local currency obligations.

(1993), Sudan (1991), Venezuela (2016), Vietnam (1985) correspond to defaults due to currency changes.

- Argentina (1982) and Brazil (1983) relate to the external debt restructuring interventions reported in [Asonuma and Trebesch \(2016\)](#), which affected both foreign and local currency-denominated debt.
- Suriname (2001) relates to an accumulation of external arrears, amounting to U.S. \$36 million, on bank loans and not reported in [Asonuma and Trebesch \(2016\)](#).
- For Nicaragua (2005) we did not find any available information regarding the episode.

In our search, we identified 27 domestic-law default episodes involving local currency debt, which were not covered in [Beers and de Leon-Manlagnit \(2019\)](#).