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Aitor Erce, Enrico Mallucci and Mattia Picarelli

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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. Overtime, 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. Face value reductions are rare. Unilateral amendments and post-default restructuring are the norm, but negotiated pre-default restructurings are being increasingly used. Finally, we document that domestic defaults are widely heterogeneous. As such, we complement this paper 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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[†]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, 2008; 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 (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 and Setser, 2004). 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, 2008; Gulati and Weidemaier, 2015), a key gap in the economic literature.²

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.³ We also shed light on a range of related issues, including the incidence of selective sovereign defaults (Broner et al., 2014; Gelpern and Setser, 2004) and the extent to which different definitions of what constitutes domestic debt coincide (Burger and Warnock, 2006; Gelpern, 2008; Bradley et al., 2016).⁴

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.

²The often used assumption that local currency, domestic investors and domestic law coincide shows that the definition of domestic is blurred Gelpern (2008).

³Recent 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.

⁴Our work complements Asonuma and Trebesch (2016), who compile a database with information on 184 restructurings of sovereign debt instruments governed or held externally.

Our definition of domestic public debt, grounded on whether government debt is governed by the domestic law, irrespective of the currency denomination and the residence of investors, has the merit of highlighting a dimension that crucially shapes the restructuring process: debt jurisdiction. While the residence of investors and the currency denomination have implications for the macroeconomic consequences of sovereign default, the jurisdiction directly affect 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 ([Erce and Mallucci, 2018](#)). 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 their financial stability and distributional implications.⁵

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". 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 defaults. 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.⁶

We draw seven 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

⁵According 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".

⁶Domestic law defaults receive little international coverage, and documenting them is a challenging exercise. This marks the value of our "sovereign histories".

of defaults episodes did. Between the late 1990s and 2015, domestic defaults have actually become more frequent than foreign ones. 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, negotiated preemptive restructurings are gaining traction.

A final lesson from our work is that domestic law defaults are complex and heterogeneous, and often escape the strict principles laid down by international bodies such as the IMF. Due to their complexity, summarizing them in a few indicators them may conceal more than reveal. This is why we complement this paper with a collection of “sovereign histories”. Reading them, one quickly learns that shocks triggering domestic defaults are disparate. Regional economic crisis, fluctuations in commodity prices, wars, pandemics, extreme natural events, and political animosity may all tip vulnerable countries into default. 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 describe our definition of domestic law defaults, and the construction of our database and the data sources we consulted and reports. Section 3 introduces the database and the sovereign histories. Section 4 presents our domestic law defaults overtime. Section 5 analyzes the geographic distribution of domestic defaults. Section 7 discusses the duration of domestic law defaults. Section 8 reports descriptive statistics about the size of domestic defaults. 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. Section 11 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.⁷

⁷Other authors have considered less explicit definitions of domestic default, such as episodes of high inflation and financial repression.

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 Argentina 2001 or Brazil 1990).
- 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 or in Argentina 2001).

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 defaults needs to be collected across a large number of sources.⁸ 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.⁹

We conducted an extensive google search and a press review through Factiva.¹⁰ 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”

⁸This is especially true for episodes involving smaller countries and not involving bonded debt.

⁹In order to minimize errors, where feasible, we compared available details across different sources.

¹⁰Factiva is a news search tool that enables the consultation of more than 32,000 sources that include local and international newspapers, journals, and magazines.

+ “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.

For each identified 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.¹¹ Whenever possible, we consulted the parliamentary resolutions, bills, and decrees that amended the terms of the debt instruments.¹²

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. 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.¹³

¹¹For a portion of our episodes, local authorities have confirmed the accuracy of our information.

¹²Many of these sources do not report the information in English. In the collection of the stories we may have run in a language bias in that we are more familiar with English, Spanish, Italian and French terminologies to describe sovereign defaults than in other languages.

¹³While 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. Often governments accumulate arrears 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. 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 but don’t include them in our database. Arrears are usually settled either by cash payments or through an exchange with newly issued debt to creditors. According to [Beers et al. \(2021\)](#), who

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 restructuring events occurred in the same or in the following year (as in Nicaragua); (ii) the government announced a comprehensive restructuring of public debt (as in Grenada).

A first set of variables contained in the database measures the timing of defaults. In particular, we collect the month and year of the start and end dates of each default episodes. The start date of each episode corresponds to either the date in which the debt instruments entered in default or were frozen, or the date of the announcement of the debt restructuring exercise. The end date, corresponds to 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 a domestic debt episode.

To measure the size of defaults, we collect the dollar nominal value of the liabilities involved in each default episode. We report breakdowns for three categories of liabilities: bonds, bank loans, and deposits. When available, we also collected information regarding the residence of the investors (domestic or foreign) and their currency denomination (local or foreign). We also keep track of how government defaults. In particular we keep track of the way the government amends the terms of its debt and, where available, of the net-present-value (NPV) losses for creditors. We register instances in which: (i) the restructuring involves a reduction of the face value of the debt, (ii) the restructuring involves a change in the maturity structure, and (iii) when the coupon structure is amended. We also collect information regarding the extent to which the restructuring occurred pre-default or the government incurred in arrears. Finally, we consider whether the restructuring was the result of a negotiated process or the government unilaterally imposed the terms on its creditors.

Our second product are the “sovereign histories”. Each “history” provides a detailed summary of sovereign defaults and restructurings. In particular, each story is structured in two sections. The first section provides an overview of the events leading to the default. The second section provides the full details of the restructuring process for each liability involved in the default. 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 story we keep track of the terms and timing of the restructuring process for different liabilities and creditors.

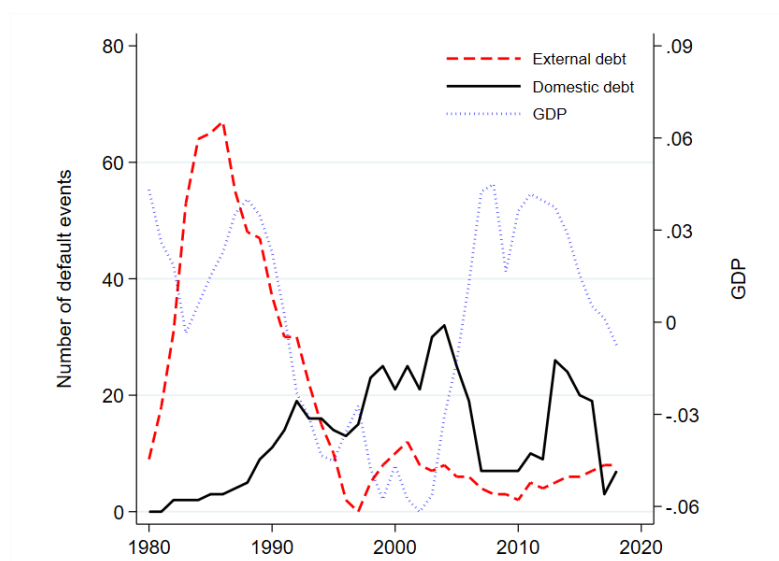
studies domestic arrears using data obtained from IMF documents, arrears are an effective sovereign default.

While each story is unique, the multiple details we collect make of them a useful reference point to think about the future. For example, we document the introduction of legal innovations such as collective action clauses on domestic law bonds, as well as the use of such clauses where they traditionally existed (as in St. Kitts ad Nevis). Our stories also provide the finer details of cases where sovereign debt was collateralized (as in Antigua and Barbuda), or where the exit from the default required financial engineering operations, such as transforming deposits into bonds (as in Serbia) or designing repayment structures that accommodate for natural disasters (as in Grenada).

4 Domestic Law Sovereign Defaults Overtime

Domestic law defaults have happened in each of the four decades spanned by our database. That said, defaults were most frequent in the late 1990s and early 2000s, where almost half of the events are concentrated. Based on our 132 events, the black line in Figure 1 reports the total number of domestic defaults occurring in overlapping four-year windows from 1980 to 2018. Domestic defaults were relatively rare in the first half of the 1980s and became much more frequent in the 1990s and 2000s, peaking in 2004. Domestic default events declined markedly in the second half of the 2000s before inching up again around mid-2010s. Recently, until the pandemic hit, the number of domestic defaults events has been limited.

Figure 1. Distribution of Domestic Default Events

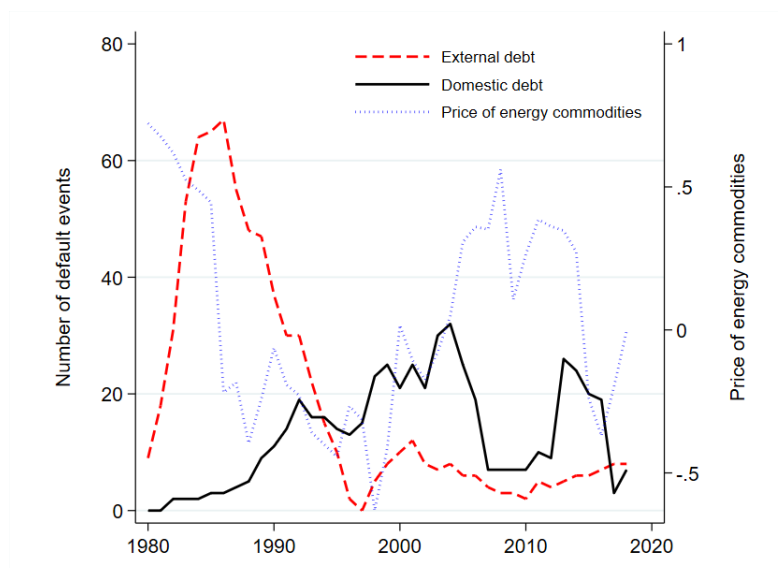


The solid black (dashed red) line plots the four-year rolling sum of domestic (external) default events. External defaults are as reported by [Asonuma and Trebesch \(2016\)](#). The dotted blue line is the cyclical component of low and middle-income countries aggregate GDP obtained applying the Hodrick-Prescott 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 an overlapping four-year windows from 1980 to 2018. External debt restructuring peaked in the mid 1980s and declined sharply thereafter. This pattern strongly contrasts with that of domestic defaults, which only peaked in the late 1990s. While the expansion of domestic debt markets in the 1990s has broadened and deepened the investor base of government debt, it also had the unintended consequence of increasing the involvement of domestic securities in defaults.¹⁴

We also investigate the relation between the timing of domestic defaults and GDP. 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.¹⁵ 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.

Figure 2. 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 the cyclical component of the price of energy commodities obtained applying the Hodrick-Prescott filter to the annual series.

Digging into the drivers of this synchronicity, Figure 2 shows the correlation between defaults and the price of energy commodities. Global commodity price cycles are among the most influential drivers of sovereign defaults in history. Higher export commodity prices improve sovereign solvency by spurring economic growth and tax revenues and by generating inflows

¹⁴The increase in domestic law defaults relative to external law ones since the nineties shows that governments partial substitution of external for domestic debt has led governments to operate selective defaults as suggested by Erce and Mallucci (2018)

¹⁵Of the 132 domestic default events, 110 occurred in low and middle-income economies.

of foreign exchange. Even if our sample also includes several countries that are not primary commodity producers, we observe that domestic defaults are more frequent when the price of commodities is low, confirming the strong overlap between the commodity super-cycle and the incidence of defaults (Reinhart et al., 2016). A similar pattern is observed for the correlation between defaults and the price of non-energy related commodities.

Our database distinguishes between three types of liabilities: bonds, bank loans, and deposits. Based on our 132 default events, Table 1 reports the incidence of defaults by instrument, as well as the incidence of defaults involving multiple instruments. As shown in the first columns, defaults on bonded debt are by far the most common form of domestic defaults: of the 132 events, 86 involve bonds, 28 involve bank loans, and 18 involve deposits.¹⁶

Table 1. Defaults by Instrument

	Full Sample	1980-1989	1990-1999	2000-2009	2010-2018
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
Various instruments (episodes)	20	2	8	7	3
Payment Arrears	30	3	15	9	3

Number of default events involving bonds, bank loans or deposits. Default episodes that involve multiple instruments are double counted. The last line refers to arrears events with employees and suppliers.

Looking at the evolution of the composition of defaulted debt by instrument a clear pattern emerges. Defaults on bonded debt have become an increasingly large fraction of domestic defaults. In the 1980s bonded debt corresponded to 50% of the restructuring episodes involving domestic debt. In the last two decades, the share of domestic defaults involving bonded debt has exceeded 70%. Over the same period of time, the percentage of defaults involving deposits has halved, declining from 33% to 0%. The percentage of events concerning bank loans has remained roughly constant.¹⁷

¹⁶Domestic arrears episodes are also frequent (30). Most happened between 1990 and 2009.

¹⁷These 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. The diversification of funding sources can also be found in the data aggregated at episode level, which shows how default episodes involved different type of instruments, especially between 1990 and 2009.

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 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 50% drop in the number of defaults when moving from events to episodes.

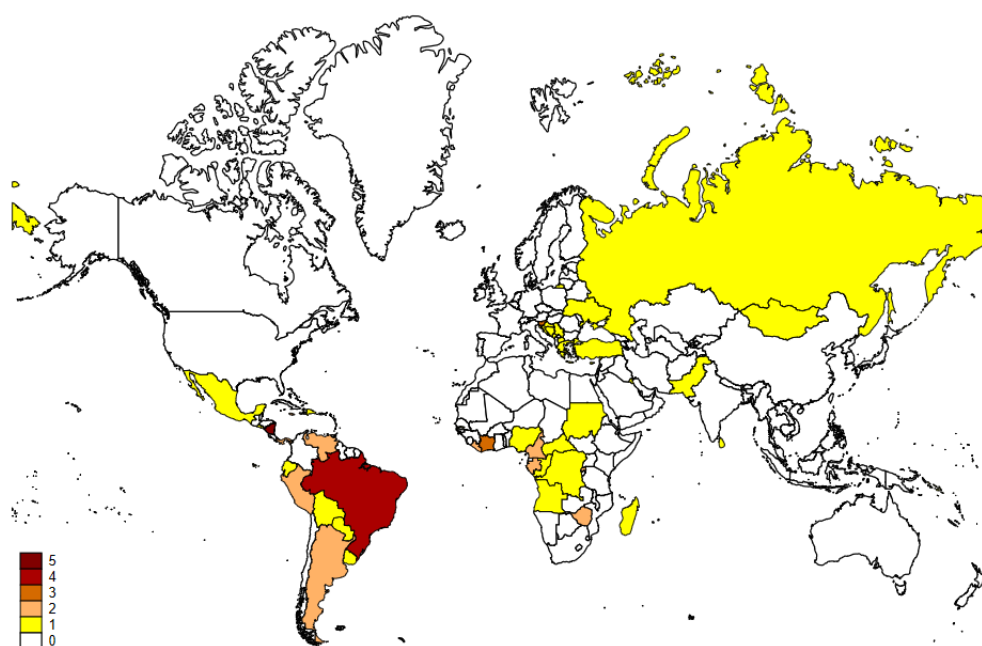
Table 2. Domestic Default Events and Episodes by Continent

	Total	Africa	America	Asia	Europe	Oceania
Bonds	87	13	56	7	9	1
Bank loans	28	15	11	1	1	0
Deposits	18	1	9	2	6	0
<i>N</i> ° of events	132	29	76	10	16	1
<i>N</i> ° 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 all episodes occurred in only 50 countries, with about one third of the countries defaulting multiple times. Nicaragua holds the record of 5 default episodes since 1980, followed by Brazil at 4. Figure 3 plots the world map. Countries are color-coded according to the number of times they have defaulted. Serial defaulters are found in every continent, but they are especially numerous in Latin America, where 12 domestic default episodes have happened in only 8 countries.

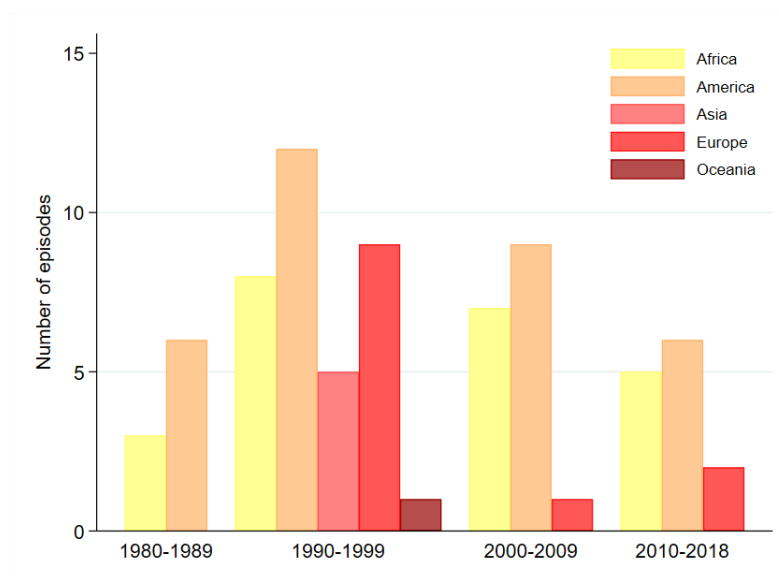
Figure 3. Distribution of Domestic Default Episodes



Total number of default episodes per country.

Figure 4 shows various interesting patterns regarding the geography of sovereign default episodes 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. However, in the last two decades, the trend has reversed with Africa recording only 5 domestic defaults from 2010 to 2018. Finally, domestic law default episodes in Europe 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 2010 – 2018 decade are those of Greece and Cyprus.

Figure 4. Evolution of Domestic Default Episodes by Continents

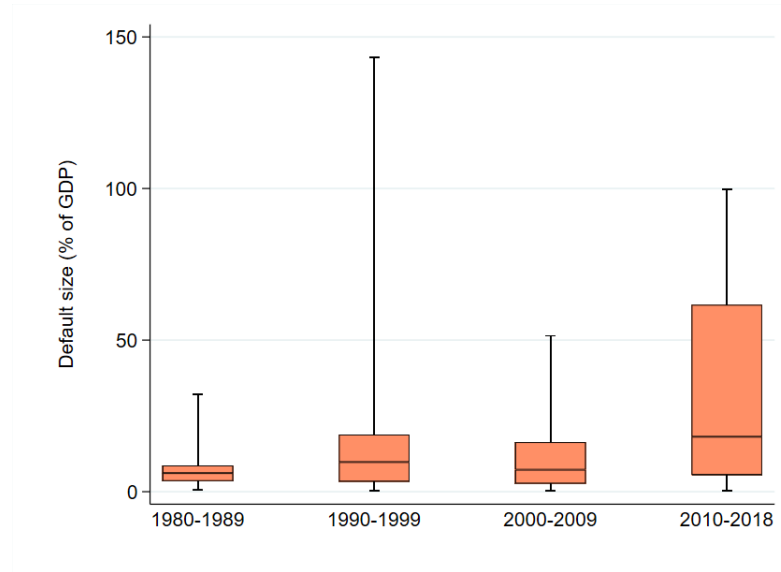


Total number of default episodes in each continent for each decade.

6 The Size of Domestic Sovereign Defaults

Our database also tracks the volume of sovereign debt involved in each default episode. Figure 5 reports the median size of the sovereign liabilities involved, as a fraction of GDP, for each of the four decades in our sample. While the median size of domestic law defaults hovered around 8 percent in the period from 1980 to 2009, this figure masks that the recent growth of domestic government debt markets has also translated into a more relevant role of domestic law debt in sovereign defaults. In fact, most recently the size of domestic defaults has increased dramatically. Between 2010 to 2018 the median volume of domestic law debt undergoing debt restructuring has risen to almost reach 20% of GDP.

Figure 5. Median Default Size by Decade



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

Median default volumes mask notable heterogeneity. The peak volume corresponded to Kuwait’s deposit freeze in 1990, affecting deposits for 143.19% of GDP. Next is the large restructuring in St. Kitts and Nevis in 2011 at 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 Size by Instrument in Default

	Mean	Median	SD	Min	Max	N
External debt (total)	13.19	6.03	20.86	0.14	183.13	178
Domestic debt (total)	10.24	3.89	19.12	0.04	143.19	132
Bonds	8.64	3.89	14.98	0.04	84.05	86
Bonds with CACs	25.62	13.90	27.68	2.99	84.05	9
Bank loans	6.81	1.75	16.14	0.12	84.10	28
Deposits	23.23	15.13	32.72	2.06	143.19	18
Various instruments (episodes)	24.27	18.14	22.99	4.40	99.68	17
Payment Arrears	18.9	6.18	43.45	0.74	229.64	30

Rows reports the average size of debt in default as a percentage of GDP.

Looking at instrument-level data, one can immediately notice that defaults on domestic debt tend to be smaller than defaults on foreign debt. This, however, masks a wild heterogeneity

among domestic debt instruments. While defaults on domestic bonds seems to be small in size, in the few cases that have involved the use of collective action clauses, defaults on bonds are much larger than defaults on other types of instruments, including foreign-law debt. The volume of restructured debt reaches almost 26% of GDP for these specific instruments.¹⁸ Defaults that involve deposits are the second largest, with an average volume of debt in default above 23% of GDP. Defaults on domestic bank loans feature the smallest amount of restructured debt.¹⁹ Notably, around 60% of these events occur in Africa, with the record of 3 held by Cote d'Ivoire. Default episodes that involve multiple assets are large as well. The average volume of debt in default reaches 24.27% when multiple instruments are simultaneously affected.

Finally, while the median size in events of domestic payment arrears amount to 6% of GDP, in several episodes the amount of payment arrears is far larger than the amount of defaulted debt of other instruments. This likely comes from the fact that periods of payment arrears accumulations tend to last for several years, at times resulting in a substantial accumulation of unpaid claims.

7 The Duration of Domestic Sovereign Defaults

The median duration of defaults has varied greatly over time, as shown in Figure 6. In the 1980s the median duration was 12 months. In the 1990s, as the number of domestic defaults also increased dramatically, the median duration tripled, reaching 3 years. Since the 2000s, the duration of domestic defaults has been on a downward trend. Perhaps reflecting the increasing role of pre-default restructurings (as we highlight in Section 9, the negotiation process between governments and creditors has shifted from a unilateral use of law to a less coercive stance), in the last decade the median duration of debt restructuring has fallen to 7 months.²⁰ Similar to the experience with foreign-law bonds, restructuring domestic law bonds using collective action clauses is fastest.²¹

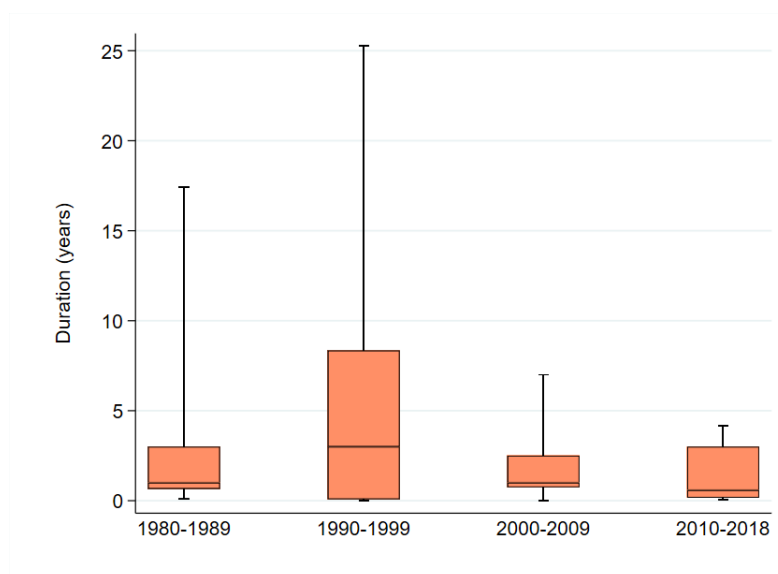
¹⁸This might be a implicit consequence of the interaction between CACs and domestic-law. CACs, which have been retroactively introduced in some domestic law restructuring events (such as in Greece and in Barbados), are designed to achieve a high participation rate.

¹⁹This happens perhaps to protect the banks in an environment in which other sources of domestic funding are not available.

²⁰The dispersion of duration in the nineties was extraordinarily large due to the protracted resolution of the debt situation in the Balkans, Liberia and Peru.

²¹In Barbados and Greece, where CACs were retroactively introduced, the duration of the restructuring spell was just 5 months.

Figure 6. Median Duration of Domestic Defaults



Median default duration by decade.

Table 4 explores the duration of the default and restructuring process using our 132 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 out of three domestic-law debt restructuring events lasted more than 3 years, and a 6% of them lasted more than 12 years.²²

Table 4. Duration

	less than 6	between 6 and 12	larger than 36
Bonds	56%	13%	15%
Bank loans	4%	11%	64%
Deposits	17%	17%	33%
Domestic debt	39%	13%	28%
External debt	13%	24%	29%

The table reports the percentage of default on domestic and external debt instruments lasting less than 6 months, between 6 and 12 months, and larger than 36 months.

²²Peru is the most extreme experience: the government began to negotiate a solution in 1992 and hasn't reached an agreement with all creditors yet.

Table 5 provides summary statistics of duration at instrument level. On average domestic-law defaults tend to be resolved faster than foreign ones. There are, however, instances in which the resolution took decades. Defaults on bank loans feature the highest duration, followed by defaults on deposits. Defaults on bonds feature instead the shortest average and median duration, especially when bonds encompass CACs. Finally, restructuring episodes involving multiple instruments feature a longer duration.

Table 5. Duration (months)

	Mean	Median	SD	Min	Max	N
External debt (total)	38.26	17.00	50.15	1.00	271.00	184
Domestic debt (total)	33.05	12.00	55.05	0.00	303.00	132
Bonds	20.03	5.00	43.39	0.00	303.00	86
Bonds with CACs	10.89	5.00	12.19	2.00	32.00	9
Bank loans	61.89	39.00	67.25	0.00	301.00	28
Deposits	50.39	24.50	64.88	0.00	206.00	18
Various instruments (episodes)	63.08	48	65.60	1.02	209.10	20
Payment Arrears	88.60	72.00	74.77	2.00	305.00	30

The table reports summary statistics for duration. Similar to [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.

Payment arrears with respect to employees and suppliers feature very long duration, significantly longer than that of any other instrument. This happens in part because the planning and execution of clearance operations of domestic arrears usually takes long time to be implemented.²³

8 Investor Losses in Domestic Sovereign Defaults

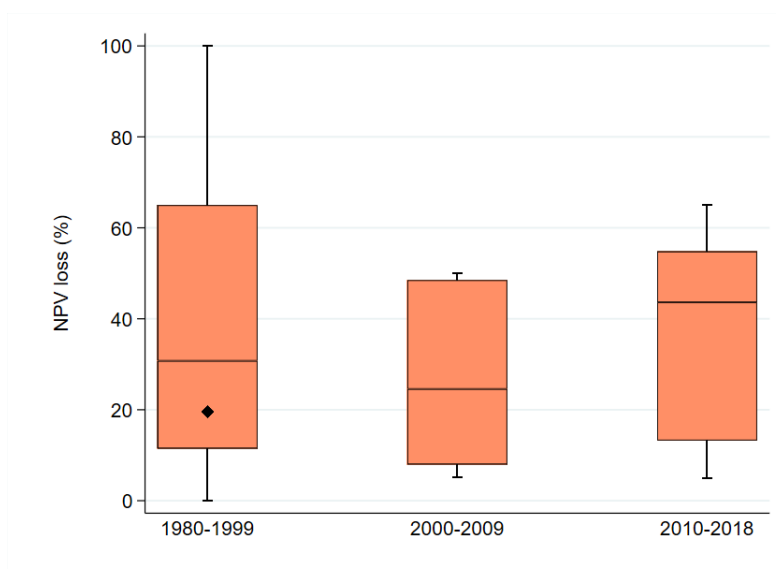
Obtaining the data necessary to compute investor losses is for many episodes not possible. Unfortunately, our sources often lack details on the restructuring terms and/or the terms of the old debt. Similarly, for many instruments there is not available discount rates to allow a comparison between the net present value of the old and the new instruments. Thus, we rely on estimates provided by our sources. Using these sources, we recouped information on

²³When governments accumulate arrears over a number of years or when their legality is disputed, governments and creditors usually undertake reconciliation processes (through domestic courts or ad-hoc tribunals) to validate the claims before resolving them. Once the validation process is completed, arrears are usually settled either by cash payments or through an exchange with newly issued debt to creditors.

net present value (NPV) losses for 53 instruments in 28 default episodes. When NPV data were available, we computed the values at episode level taking the weighted average of the NPV losses and the size of defaulted debt of the different instruments involved.

Looking at the episode level, we find that median creditor losses are roughly 33%. That said, the distribution of creditors' losses has a wide support. In 36% of the default episodes, creditors lost less than 20% of the NPV of the debt in default. In the worst 11% of the episodes, however, creditors lost more than 80% in NPV terms. Analyzing the evolution of creditors' losses over time, we find that the median size of the losses has increased from roughly 19% in the 1990s to almost 44% in the 2010s, as reported in Figure 7. The upward trend confirms that the rapid growth of domestic debt markets has translated in larger domestic defaults, as highlighted in Section 8

Figure 7. 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.

Also the extent of creditors losses varies depending on the instruments involved. As shown in Table 6, creditors' losses are smaller when the government defaults on deposits, and are higher when bonds or bank loans are involved. Losses are slightly larger than those reported by Asonuma and Trebesch (2016) for external debt.

Table 6. Creditors' Losses by Instrument in Default

	Mean	Median	SD	Min	Max	N
External debt (total)	0.38	0.33	0.27	-0.10	0.97	178
Domestic debt (total)	0.43	0.54	0.23	-0.05	1.00	53
Bonds	0.43	0.50	0.22	-0.05	1.00	37
Bonds with CACs	0.47	0.55	0.15	0.23	0.65	9
Bank loans	0.50	0.54	0.19	0.05	0.65	8
Deposits	0.37	0.31	0.29	0.00	0.74	8
Payment arrears	0.54	0.54	0.17	0.30	0.74	5

The table reports summary statistics for NPV losses.

9 The Mechanics of Debt Restructuring

On this section we shed light on the approach governments follow to restructure their domestic law debt. On the footsteps of the literature on sovereign default on external debt, we focus on three dimensions. We consider the pre-default or post-default nature of the restructuring, whether the restructuring was unilateral or negotiated, and what the type of amendment to the original terms (such as a modification of maturities, a change in coupons or a reduction of face values).

Pre-default restructuring happen when the government is able to reach a restructuring agreement with creditors before default. On the contrary, post-default restructuring happen when the government defaults on its debt before restructuring. Table 7 reports the split between pre- and post-default restructurings. About 37% of the restructuring of domestic law instruments occur pre-default. By comparison, [Asonuma and Trebesch \(2016\)](#) report that 39% of the restructurings involving external debt are preemptive.²⁴ Table 7 also reports the differences in size, duration and investor losses between pre- and post-default restructurings. Pre-default restructuring is much faster, larger in size, and delivers smaller losses than post-default ones.

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

	N. events (%)	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.

²⁴Over time, pre-default restructurings have become more frequent. While pre-default events were just 30% of all domestic default events between 1980 and 1990, the ratio increased to 45% after 2000.

Regarding the restructuring procedure, we identify two different types: unilateral and negotiated (exchange offer) conversions. These procedures reflect a progressively decreasing aggressive stance of the debtor government towards creditors.²⁵ A unilateral conversion occurs when contractual terms are modified via law-decree in an unilateral way by the debtor government (as occurred in Turkey in 1999). In turn, a negotiated exchange can take various forms. On its less formal form, we find evidence of some negotiation among parties. This approach is adopted by governments undertaking a selective restructuring of specific debt instruments (as in Antigua and Barbuda 1998). It is also often used to restructure bank loans, where the direct relationship between banks and governments allows to personalize the negotiation process. Alternatively, the negotiation involves an exchange offer. This is the approach where debtor governments behave more openly and cooperatively with creditors.

Table 8 reports the broken down by restructuring procedure of default events for each debt instrument. While defaults on bonds and bank loans are usually solved adopting a negotiation approach, governments adopt a more aggressive stance on deposits. Table 8 also shows the overlap between pre- and post-default strategies and the adopted restructuring procedures. A more aggressive stance of the debtor government seems to be more likely to occur in a post-default case. Contrarily, pre-default events seem to be associated with a more cooperative approach.

Table 8. Restructuring procedure by instrument

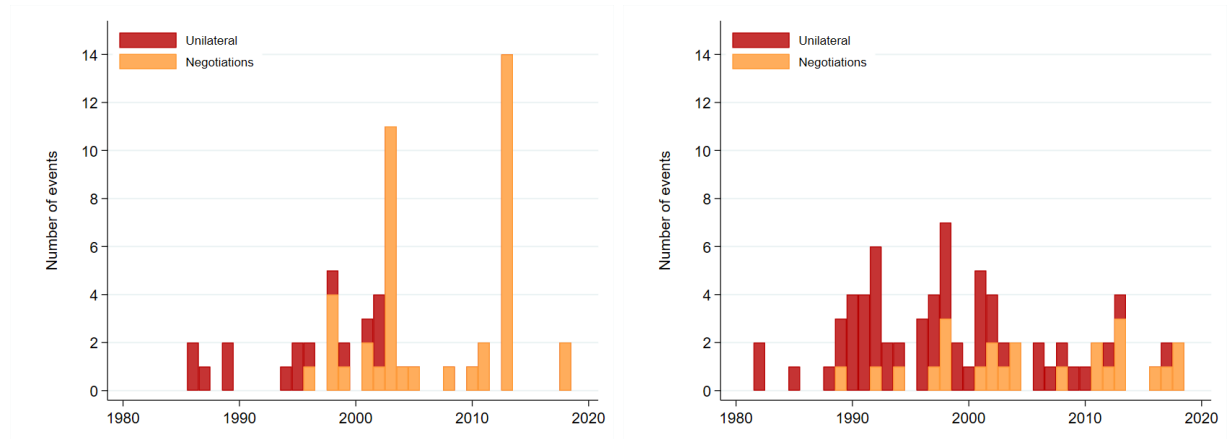
	Unilateral conversion	Negotiation
Bonds	36%	64%
Bank loans	33%	67%
Deposits	100%	0%
Pre-default	34%	66%
Post-default	62%	38%

The table reports the occurrence of default events broken down by restructuring procedure.

Figure 8 reports the adoption of different restructuring procedures over decades grouped in pre- and post-default cases respectively. A common pattern emerges across the two Figures: restructuring via negotiation have become more frequent over time, along with calls for increased transparency and dialogue between creditor and debtor countries. The patterns is very marked for pre-default cases (left hand side chart of Figure 8). Since 2002, year in which Slovenia did so, there haven't been any default events with the debtor government resorting to an unilateral conversion. The right hand side chart of Figure 8 show that historically the approach adopted in post-default cases has been aggressive.

²⁵The procedure can be seen as a proxy for the bargaining power of creditors.

Figure 8. 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 domestic restructurings in our sample, the government amended the original maturity structure, typically extending it (in Nicaragua 1994 maturities were instead reduced). 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.

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.

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.²⁶ 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 preemptive restructuring of sovereign debt. Creditors expressed their preference for a maturity extension over face value reductions, motivating the choice with the more negative impact that a face value reduction would have on their balance sheets.²⁷

10 Comparison with the Existing Literature

Our definition of domestic debt is based on the law. 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. In this section we compare our database to these other two.

Table 10 reports the total number of defaults in our database according to the different definitions of domestic debt. Of the 74 default episodes we review, 47 would still be classified as domestic defaults using the currency criterion ([Beers and de Leon-Manlagnit, 2019](#)), and 60 if using the residence criterion ([Reinhart and Rogoff, 2008](#)). More than half (40) would be classified as domestic under any of the three definitions, as there is a perfect coincidence between the law, the currency and the residence of the investors (triple coincidence).

Table 10. Number of Domestic Defaults by Identification Criterion

Ident. Criterion	Law	Currency	Residence	All
N° Local Law Defaults	74	47	60	40

The first column reports the total number of domestic-law defaults reported in our database. The second column reports the subset of domestic-law defaults in our database that involve local-currency debt. The third column the subset of defaults in our database that involve resident creditors. Finally, the last column reports the subset of defaults in our database that involve local-currency debt held by residents.

²⁶The only 2 cases where a preemptive restructuring involved face value reductions are Ukraine 1998 and Greece 2011.

²⁷Restructurings 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 11 compares our database against two other databases: the database of [Beers and de Leon-Manlagnit \(2019\)](#), 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 the integrated [Beers and de Leon-Manlagnit \(2019\)](#) database. 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.

Table 11. Domestic Defaults: Comparing Databases

Database	Our Data	B&LM (2019)	R&R (2008)	All
Criterion	Law	Currency	Residence	All
Our Data	73	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, unlike the other databases, our database does not include *de facto* defaults, such as those associated with hyperinflation or changes in the legal tender. That said, our database extends significantly the coverage of domestic defaults. It reports 20 default episodes that are not included in the integrated [Beers and de Leon-Manlagnit \(2019\)](#) database, and 34 default episodes that are not included in [Reinhart and Rogoff \(2008\)](#). Table 12 in the Appendix A reports the full list of domestic defaults included in our database and compares the with the list of defaults in reported in the those included in [Beers and de Leon-Manlagnit \(2019\)](#) and in [Reinhart and Rogoff \(2008\)](#). Appendix B provides a detailed explanation of the divergences between these two databases and ours.

11 Conclusions

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.
2. Domestic defaults are frequent and, between mid 1990s and 2015, have become more frequent than external ones.
3. The median size of domestic defaults has increased over time reaching almost 20% of GDP in the last decade.
4. 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.
5. Maturity extension is the most frequent form of restructuring. Amendments to the coupon structure are also frequent, while face value reductions are relatively rare.
6. Domestic debt restructuring often proceeds much faster than external one, but it can also protract significantly.
7. Post-default restructurings are the norm but, as governments show an increasing preference for negotiated solutions, preemptive restructurings are gaining traction.

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 List of Defaults

Table 12. 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, 2002		
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 B 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.²⁸
- For El Salvador (1981) and Dominican Republic (1981), we did not find any available information regarding the episodes.²⁹

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),

²⁸We report Panama (1988) in our database but as a deposit freeze episode.

²⁹El 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 \(2019\)](#).