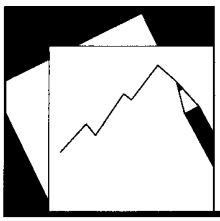
WP/12/203



IMF Working Paper

Sovereign Debt Restructurings 1950–2010: Literature Survey, Data, and Stylized Facts

Udaibir S. Das, Michael G. Papaioannou, and Christoph Trebesch

INTERNATIONAL MONETARY FUND

 WP/12/203

IMF Working Paper

Monetary and Capital Markets Department

Sovereign Debt Restructurings 1950–2010: Concepts, Literature Survey, and Stylized Facts

Prepared by Udaibir S. Das, Michael G. Papaioannou, and Christoph Trebesch[1]

Approved by Udaibir Das

August 2012

Boxes

I. INTRODUCTION

  - There has been no distressed sovereign debt restructuring in an advanced economy since 1950. All restructurings occurred in developing or emerging market economies.
  - 18 were sovereign bond restructurings, while 168 affected bank loans.
  - 57 involved a cut in face value (debt reduction), while 129 implied only a lengthening of maturities (debt rescheduling). However, both types of debt operations can involve a "haircut," i.e., a loss in the present value of creditor claims.
  - 109 cases occurred post-default, while 77 were preemptive.
  - Only 26 involved cash buybacks, meaning the exchange of old instruments into cash, at a discount to face value. This means that the overwhelming majority of restructurings implied the exchange of old into new debt instruments. Most of the buyback operations were implemented in the context of debt relief initiatives in poor, highly indebted countries, and involved discounts of 80 percent, or more.
- The main elements of a debt restructuring appear to be similar in most cases, whether domestic or external, private or public debt.
- Debt renegotiations have become quicker and less disputed since the 1980s and 1990s. Most bond restructurings of the last 15 years were relatively smooth, in the sense that they could be implemented within one or two years and with creditor participation exceeding 90 percent. The only two outlier cases were Argentina in 2005 and Dominica in 2004.
- The problem of creditor holdouts and litigation is widespread, but less severe than commonly thought.
- Restructurings can have serious adverse effects on the domestic economy and the financial sector, e.g., foreign and domestic banks, pension funds and insurance companies.

Our findings and stylized facts should not be interpreted as providing a full analysis of the underlying causes of restructurings or of their macroeconomic consequences. Instead, we provide new descriptive evidence and historical data, in a field in which data are notoriously scarce. It should also be underlined that our insights are based on developing country experiences and may therefore not apply to advanced economies or to countries with large, interconnected financial systems.

The remainder of the paper is organized as follows. Sections II and III summarize the basic concepts and describe the process of sovereign debt restructurings. Section IV discusses historical experiences based on a comprehensive dataset on the occurrence and characteristics of sovereign debt restructurings since the 1950s. Sections V and VI present legal aspects in sovereign debt restructurings and the role of credit default swaps, respectively. Section VII summarizes the literature on the cost and implications of sovereign debt restructurings, while section VIII presents evidence on domestic debt restructurings. Sections IX, X, and XI discuss considerations relating to (i) the government's decision on whether and when to restructure; (ii) the decision on the scope

affected domestic creditors. Foreign creditors include foreign commercial banks as well as foreign bondholders.[2]

-

$$\underline{\qquad\qquad\qquad\qquad\qquad\qquad} \tag{1}$$

exchange in January 2010, involving both a cut in face value and a lengthening of maturities of its debt. Specifically, we assume that the total outstanding principal of 4.5 billion US$ is reduced to 3 billion US$. This 1.5 billion dollar debt write-off is equivalent to a nominal debt reduction of 33 percent (1-3/4.5). In addition, most principal payments until 2015 are shifted to the period between 2016 and 2021, implying a present value reduction of the debt.

Figure 2. Stylized Timeline of a Sovereign Debt Restructuring

After the restructuring offer is presented to creditors, they have to decide whether to accept or reject the offer. In most cases, a successful exchange requires a certain minimum threshold of acceptance by creditors. Creditor coordination problems and holdout risks are thus likely to be most acute during this period.

In most crisis cases, restructurings mark the end of a debt crisis episode, because the exchange of old into new debt puts the country back on the path of debt sustainability. However, restructurings do not always put an end to debt distress. Some countries continue to incur arrears after a completed restructuring process and there are many examples in which sovereigns implemented a series of subsequent restructurings, in particular during the 1980s debt crisis (see section IV).

In the next subsections, we briefly review the evidence on debt restructuring processes for each type of creditor involved. Specifically, we summarize the experience of restructuring processes with regard to: (i) bilateral (government to government) debt renegotiated under the Paris Club umbrella; (ii) commercial bank debt (London Club); and (iii) bond debt (sovereign bond restructurings).[6]

Table 1 summarizes the differences in negotiation settings across creditors. Note that the restructuring of supplier and trade credits is not discussed in detail, as it usually takes place ad hoc or is excluded from the restructuring exercise. We also do not discuss the recent Heavily Indebted Poor Country (HIPC) initiative or the Multilateral Debt Relief Initiative (MDRI) to coordinate debt relief to

Table 1. Overview of Debt Restructuring Vehicles by Type of Creditor

Sovereign Debt Restructuring by Type of Creditor					
Creditor	Commercial Banks	Bondholders	Bilateral (Governments)	Multilateral (World Bank, IMF)	Suppliers, Trade Creditors
Restructuring Vehicle	London Club (Creditor Committees)	Exchange Offers	Paris Club	Preferential Treatment; Restructuring only for poorest countries	Ad hoc

B. Restructuring Bilateral Debt: The Paris Club

The Paris Club is the main institutional framework to restructure external bilateral sovereign debt, referring to public and publicly-guaranteed debt that debtor countries owe to other governments. The origins of the Paris Club date back to 1956, when Argentina met its sovereign creditors in Paris in an effort to prevent an imminent default. With the 1980s debt crisis, the Paris Club became one of the key vehicles to resolve debt crises around the world and has since arranged more than 400 restructuring agreements.

Table 2. Paris Club Creditors in Selected Restructurings

Source: Paris Club website

The process of debt restructuring with the Paris Club can be summarized as follows: A country that wants to restructure its debt has to approach the Club's secretariat and demonstrate its payment difficulties and need for debt relief based on its economic and financial situation. Debtor countries are also required to agree to a structural adjustment

A key principle of the Paris Club is the “comparability of treatment” clause, contained in each agreement. The clause foresees equal burden sharing across all creditor groups, in particular private creditors (banks, bondholders and suppliers), but also by other official bilateral creditor countries that are not members of the Paris Club. In practice, this means that the scope of debt relief granted by Paris Club creditors will determine how much debt relief other creditors should also grant to the country in question. As highlighted by the IMF (2001a, p. 43), “comparability of treatment is more an art than a science” and it is ultimately the Paris Club must judge whether any agreement with banks or bondholders has comparable terms or not. However, a clear breach of the comparability clause can

debt to commercial banks in the 1980s and 1990s. The rest was held by an often fragmented group of banks in a variety of countries. Table 3 gives an overview of the structure of BACs in selected debt renegotiations, as well as the total number of banks involved in each deal.

London Club negotiations tend to proceed as follows: In the early stage of financial distress, a debtor government contacts its one or two major bank creditors asking them to organize and chair a steering committee. During the 1970s and 1980s, it was easy for the government to identify their major creditors, as most lending took place via syndicated loans and there was barely any trading on secondary markets. Also, banks were well informed about who held the debt, so that communication was easier than in today's more dispersed bond markets.

Once the committee of major bankers was established, the banking representatives would meet the country's government officials on a regular basis, often at monthly or weekly

In addition, the implementation of bank loan restructurings was plagued by technical and legal hurdles. The Yugoslav debt deal of 1983 is just one example of a technically very challenging restructuring. Reportedly, the deal required the signature of some 30,000 documents in up to eight international financial centers (Financial Times, September 2, 1983). Legal and technical issues also led to significant delays in finalizing deals, such as in Mexico in 1984/85 and in Vietnam's Brady deal negotiations in the mid-1990s.

Box 1. The Brady Plan

By the late 1980s, many developing countries had been in default for nearly a decade. They had settled on a chain of rescheduling agreements with their bank creditors, granting short-term liquidity relief but no cuts in face value. In this situation, the Brady plan constituted a major policy shift, because the official sector started to encourage outright debt reduction so as to restore debtor solvency. The plan was first announced by U.S.ler

Relatedly, the belief that Brady bonds were 'undefaultable' turned out to be wrong. Ecuador was the first country to restructure its Brady bonds, in 2000, followed by Uruguay (2003), Argentina (2005), and Côte d'Ivoire (2010).

In recent times, the experience with bank debt restructuring has been mixed. Those of Pakistan (1999) and the Dominican Republic (2005) could be implemented quickly and

Table 3. Selected Bank Advisory Committees since the 1980s (London Club Process)

Country	Period	Size of Banking Committe	Head of Committee	US	Japan	UK	France	Germany	Switzerland	Canada	Other

Source: Trebesch (2010) and the sources cited therein.

Bondholder communication and negotiation

With dispersed creditor structures it can be difficult to identify bondholders and to communicate with them, especially if they are retail investors. The main challenge in this regard is that bond trading occurs over the counter and no central agency registers the holders of bonds at each point in time. Governments undergoing a bond restructuring, therefore, need to identify the holders of bonds to initiate a form of dialogue with them.

Table 4. Negotiating with Sovereign Bondholders

		Creditor Structure	Creditor Representation	Negotiations with Creditors	Participation Rate
Argentina	**2005**	Very fragmented. Of Argentina's external bonds, 56.5% were held by institutional investors and 43.5% by retails investors. Country distribution: Argentina 38.4%, Italy 15.6%, Switzerland 10,3%, US 9.1%, Germany 5.1%, Japan 3.1%. Approximately 600,000 retail investors affected (450,000 Italians, 35,000 Japanese and 150,000 Germans and Central Europeans)	Several groups formed. In Dec. 2003 creation of the GCAB, representing about 50% of outstanding foreign private sector debt. No group recognized by government (see footnotes)	No regular negotiations. Some informal contacts in 2002; Some meetings in 2003, 2004, 2005	76%
Belize	**2007**	Rather concentrated. Mostly institutional investors from the region, in particular from Trinidad and Tobago but also from Barbados and Jamaica	Creditor Committee composed of 13 financial institutions from the Caribbean, representing more than 50% of outstanding debt (see footnotes)	The government anounced a preemptive restructuring and asked creditors to form a committee in August of 2006. Until early 2007 extensive interactions with creditors	98%
Dominica	**2004**	Very dispersed creditor group with many small bondholders. The majority of bonds were held by domestic and Carribbean creditors, in particular the Dominica Social Security and the National Bank of Dominica who account for over 50% of eligible debt. Only a handful of external private creditors, including the Kuwait Fund for Arab Economic Development, the Royal Bank of Trinidad and Tobago (RBTT) and the Exim bank from Taiwan Province of China, who together held approximately 20% of eligible debt.	No committee formed		

Argentina: The GCAB is the Global Committee of Argentine Bondholders formed in December 2003. It was comprised of Task Force Argentina, which represents Italian retail investors holding $14.5 billion of bonds; the Argentina Bondholders Committee, which represents $7.5 billion of bonds held by institutional investors; the Argentine Bond Restructuring Agency (ABRA), which holds $1.2 billion of bonds from German, Austrian and Luxembourg retail investors, and Bank of Tokyo-Mitsubishi and Shinsei Bank, which represent $1.8 billion of Samurai bonds held by Japanese investors. (Source: WSJ, 30 Jan. 2004)**. Belize:** The committee members included AIC Finance Limited, British-American Insurance Company, Caribbean Money Market Brokers, First Citizens Asset Management, First Global Financial Services, Guardian Asset Management, Jamaica Money Market Brokers, National Commercial Bank, RBTT Merchant Bank, RBTT Trust, Republic Bank, Sagicor Life., Trinidad & Tobago Unit Trust Corporation.

Creditor Structure	Creditor Representation	N

Sources: Trebesch (2010), complemented with information by Andritzky (2010), Lim, Medeiros and Xiao (2005) and IMF (2003). **Grenada:** The committee members included Republic Bank, RBTT, T&T Unit Trust Corporation, Sagicor Financial Corporation, Caribbean Money Market Brokers and First Citizens Trust and Asset Management.

F. Pitfalls in the Restructuring Process

Building on the above, this section briefly discusses typical pitfalls in the restructuring process. Why are some debt renegotiations delayed over so many years? What explains the disputes between debtor governments and their debtors? And why do some restructurings fail with low creditor participation? Although we cannot address these questions in depth, we summarize some main insights from new research in the field.

Creditor coordination failures, litigation, and holdouts

The problem of creditor holdouts and litigation is widely seen as the main reason for delayed and inefficient debt restructurings. In a typical holdout scenario, a creditor will refuse to participate in a restructuring offer, so as to enforce better terms later on, possibly by suing the sovereign in a court in London or New York (see section IV for a detailed discussion on litigation). This type of free-riding behavior and other forms of creditor coordination failures are seen as increasingly important stumbling blocks, mainly due to the shift from bank to bond financing in emerging markets (see Pitchford and Wright, 2007, 2008, or Krueger, 2002). Intuitively, large bondholder groups may

both countries had difficulties in re-accessing international capital markets after the exchange.[20]

This may lead to hurdles in creditor talks, or governments can decide to impose unilateral moratoria and abort debt negotiations.[23]

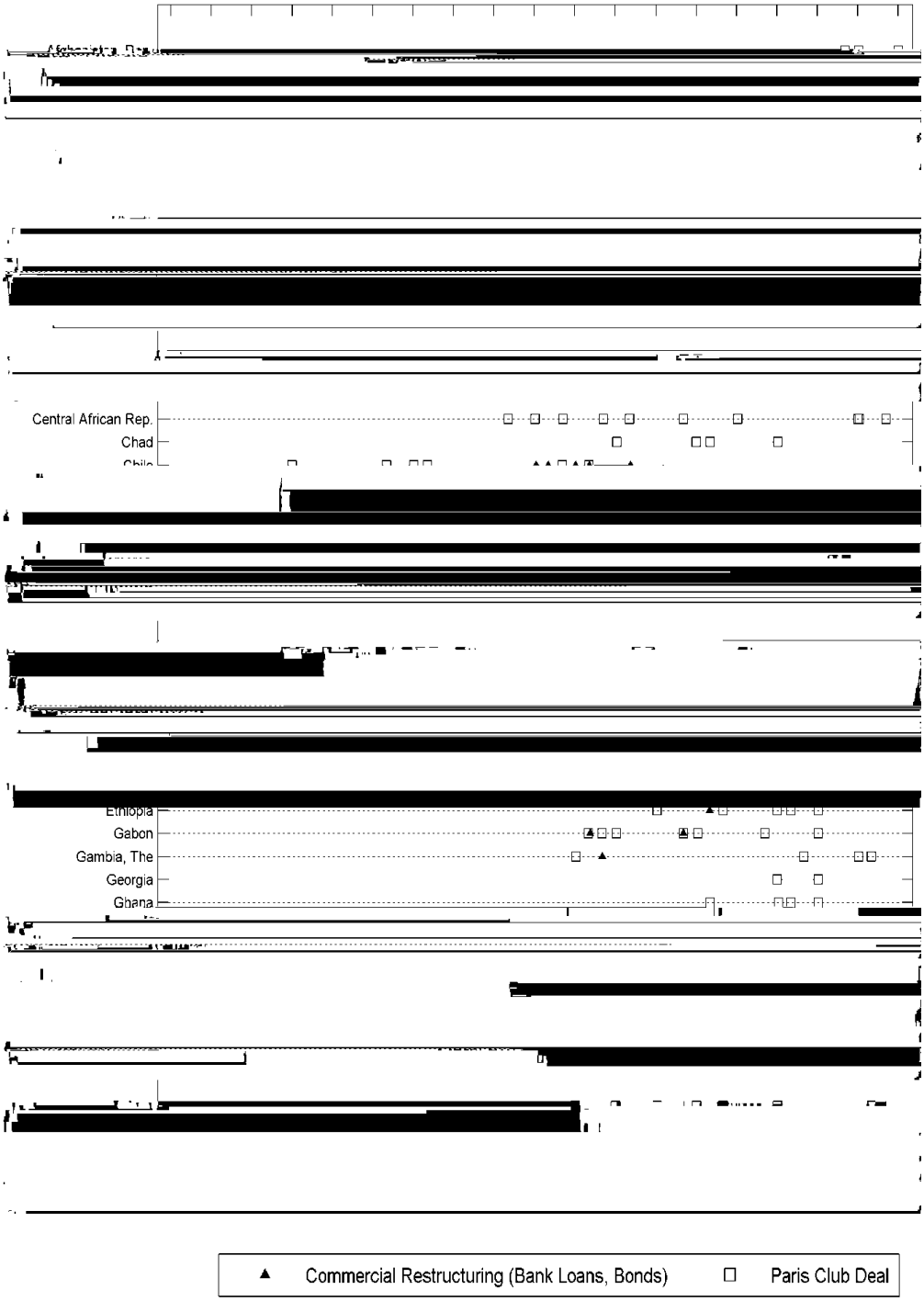
A last important factor for the failure or success of a debt exchange is the size of haircuts. According to the model by Bi, Chamon and Zettelmeyer (2011), excessive haircuts will decrease creditor participation and increase the likelihood that an exchange offer will fail. Their theoretical model suggests that haircuts should stay in line with a government's capacity to pay. Otherwise, this gives small creditors an incentive to coordinate and block an exchange offer.

IV. SOVEREIGN DEBT RESTRUCTURINGS 1950–2010: AN OVERVIEW

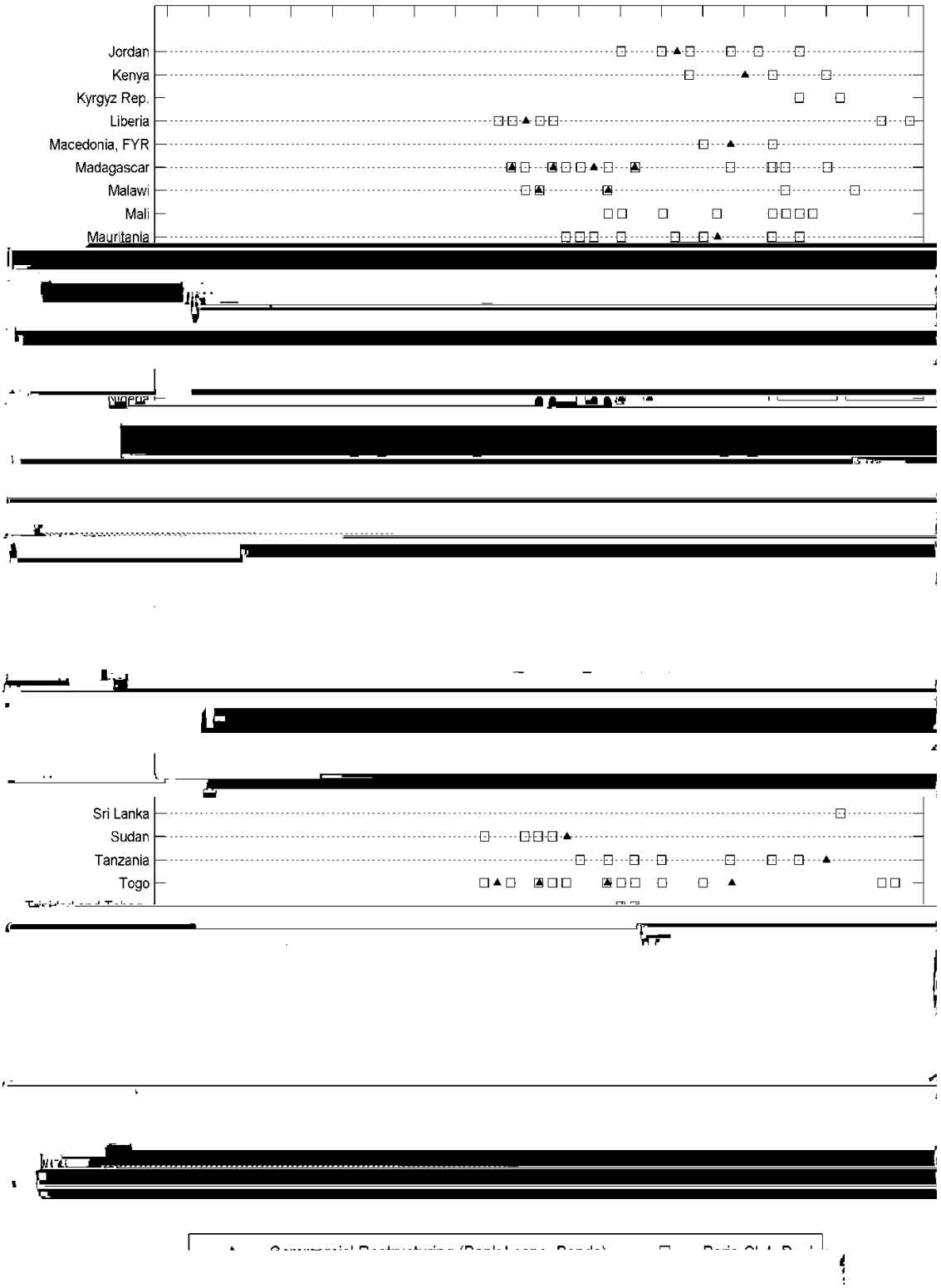
This section presents a panorama of restructuring experiences since the 1950s. In the first part we summarize insights from a new dataset by Trebesch (2011), which is the first data collection to document all sovereign restructurings of external debt between 1950 and 2010, including both Paris Club agreements and debt exchanges with commercial creditors. To the best of our knowledge, no other dataset exists covering a full sample2ve tahis(sincWorld War IIns.)]TJ0.0035 Tc 0 Tw 7.5077 0 0 7.507288..145 40.94 Tm24( )Tj-0.020

Figure 4. Foreign Debt Restructurings by Country

(1950–2010)



Source: Trebesch (2011).



Source: Trebesch (2011).

Figure 4 illustrates that some developing country governments have implemented more than a dozen debt restructurings in the last few decades, and these have often been preceded by defaults and debt arrears. In contrast, advanced economies, like the United

States, Japan or countries of the European Monetary Union, have not undertaken any restructurings since World War II.

A second insight is that the number of official debt restructurings by the Paris Club far exceeds the number of private debt restructurings with commercial banks or bondholders, with nearly double as many deals. Since the 1950s, the Paris Club implemented 447 agreements in 88 countries, while there were 186 restructurings in 68 countries with private creditors. Part of this large difference can be explained by the fact that there simply was not much sovereign lending by private creditors during the 1950s and 1960s. As a result, debt restructurings vis-à-vis banks or bondholders in this period are very rare. Another reason why the number of Paris Club restructuring operations has been larger than commercial operations is associated with the Paris Club's reluctance to grant debt relief until the 1980s. Most Paris Club restructurings before the 1990s implied short-term refinancing and maturity lengthening, but did not address deeper solvency problems. This likely triggered a pattern of serial rescheduling with some debtors.

In terms of restructuring volumes, however, private creditors were more affected, with the debt treated by the Paris Club amounting to US$545 billion, versus US$768 billion vis-à-vis private creditors. On average, the amount of debt exchanged in bank or bond restructurings is typically larger than the volume restructured in Paris Club agreements. This is particularly true for restructurings in emerging market economies, such as the Brady deals or recent bond exchanges in Argentina or Russia.

Third, there have been several clusters of restructuring cases. The 1980s in particular saw a strong increase in debt restructuring activity with regard to both private and official creditors. The number of debt exchanges increased drastically in 1983, continued to remain very high until 1990, and then gradually declined. Case numbers rose again between 1998 and 2004 due to a new wave of emerging market crises and several debt relief initiatives. Times have been relatively quiet since 2006, with less than 10 debt restructurings per year overall, including only one or two restructurings of sovereign bonds and bank debt per year.

Fourth, the data show that sovereign bond restructurings reentered the sovereign debt universe only after the Brady plan of the mid-1990s. Since 1998, with the debt crises in Pakistan, Russia and Ukraine, there have been 17 distressed sovereign bond exchanges with foreign bondholders in 13 countries. In addition, there have been six bond restructurings mainly aimed at domestic creditors (Ukraine (1998), Russia (1998), Argentina (2001), Uruguay (2003), Dominican Republic (2005), and Jamaica (2010)). This does not mean, however, that bank debt restructurings are a phenomenon of the past. Recent loan restructurings include a number of debt buybacks in low-income countries, but also bank debt restructurings such as in Pakistan (1999), Serbia and Montenegro (2004), the Dominican Republic (2005), and Iraq (2006). The next subsection looks at the set of recent bond and bank debt restructurings in more detail.

Figure 5. Debt Restructurings with Paris Club and Private Creditors

Figure 7. Restructurings with Face Value Debt Reduction (Nominal Write-Offs)

7a) Paris Club

7b) Bank Loan and Bond Restructurings

Note: The y-axes plot the number of finalized restructurings per year. Source: Trebesch (2011).

One can also differentiate past deals by their timing. The recent data collection by Asonuma and Trebesch (2011) shows that most debt restructurings since the 1950s occurred post-default, as they were implemented only after the government went into arrears on all or parts of the debt owed to private creditors (109 cases). However, the remaining 77 deals were preemptive, i.e., prior to a default or moratorium. Of the recent sovereign bond restructurings since 1998 (17 cases), about half of the cases were preemptive, namely Jamaica (2010), Belize (2007), Dominican Republic (2005), Grenada (2005), Moldova (2002), Pakistan (1999), Uruguay (2003) and the two

restructurings in Ukraine (1998 and 2000). In contrast, all of the bank debt restructurings of recent years were post-default cases.

Finally, we find that 24 distressed restructurings took the form of cash buybacks, meaning that outstanding debt instruments were repurchased against cash. Of these 24 deals, the large majority (20 deals) were supported by bilateral or multilateral donors, in particular through the World Bank's "Debt Reduction Facility." This facility was established in 1989 and provides funds to highly indebted poor countries to buy back the debts owed to external commercial creditors at deep discounts (see World Bank 2007).

B. Characteristics of Bond and Bank Debt Restructurings Since 1998

Table 5 provides a detailed overview of recent cases of bank and bond debt exchanges in emerging market economies. The left side of the table shows different duration measures in detail, including the dates of the announcement of a restructuring, the start of negotiations (or informal market sounding), the date of the exchange offers, and the date of the final restructuring. In line with the above, it is evident that many restructurings were implemented within a very short time period. Of the 19 deals listed, nearly half took one year or less.

Table 5. Characteristics of Main Sovereign Debt Restructurings with Foreign Banks and Bondholders,

(1998–2010)

Case	Preemptive or Post-Default?	Default Date	Anouncement of Restruct.	Start of Negotiations	Final

Note: Debt exchanged refers to effective old debt exchanged in the deal, not eligible debt. Similarly, we only list old and new instruments that were actually exchanged.
Sources: Cruces and Trebesch (2010), Trebesch (2011) and sources cited therein. The data on preemptive vs. post-default restructurings is from Asonuma and Trebesch (2011).

Two figures indicate the scope of debt relief, namely the (i) cut in face value in percent of all debt restructured; and (ii) the size of haircuts, as estimated by Cruces and Trebesch (2011). Both figures are computed by averaging the loss across all the instruments exchanged. While the cut in face value can be calculated in a straightforward way and without making assumptions, it is more challenging to estimate the scope of investor haircuts. In essence, Cruces and Trebesch (2011) follow the methodology suggested by Sturzenegger and Zettelmeyer (2008) but extend it back to the 1980s and 1990s, thus covering 180 deals. Specifically, their methodology builds on equation (2) and compares the present value (PV) of new debt instruments in the old 2(m)11(e)03(t)7(ho)-5x

Figure 8. Financial and Macroeconomic Indicators in Restructuring Periods

Note: The Panels plot median values for a six-year time interval around the restructuring year. The sample considered here covers 44 “final restructurings” with banks and bondholders since the 1980s (see the list in Table A2 in the Appendix) and excludes low income and highly indebted poor

notches, in the three years prior to a sovereign default event. Ratings start to recover after restructurings, but gain only 1.7 notches, on average, in the three subsequent years.

Figure 9. Ratings Evolution During Sovereign Restructuring Episodes

Note: The graph shows ratings evolution over time, averaged across nine recent bond restructuring episodes shown in Table 6. Source: Moody's (2011)

Table 6. Sovereign Ratings in Nine Recent Bond Restructurings

Source: Moody's (2011)

Table 6 shows the Moody's rating data in more detail. It is evident that ratings recover only slowly after restructurings. After one year, most sovereign bonds retained a

V. LEGAL ASPECTS OF SOVEREIGN DEBT RESTRUCTURINGS

Figure 10. Bond Issuance in Main Emerging Markets 2003–2010, by Governing Law

Note: The figure plots the share of bond issuances by governing laws between 2003 and 2010. The shares are based on issuance volumes in current US$ figures and are calculated from sovereign and quasi-sovereign debt, i.e. bonds issued by the central government and by government owned companies. Source: Dealogic and own calculations.

Among those countries that issued at least part of their central government bonds under foreign law, English law is clearly the most widespread form. In particular, new EU member countries, including the Baltic countries, Cyprus, Poland, Romania, and Slovakia, issued considerable volumes of their central government debt under English law, while EMU countries, like Greece, Portugal, and Spain issued only a minor part, of 5 percent or less, under this law. New York law plays a negligible role. Only Austria, Hungary, Italy, Poland, and Sweden issued a non-negligible volume of public bonds under New York law, but these volumes are small compared to total issuances.

litigation may be discouraged in this context due to sharing clauses, which ensure that any amounts recovered via litigation have to be shared with all

English law reportedly contributed to a quick restructuring. In Pakistan, however, the authorities decided not to invoke the CACs imbedded in their English law Eurobonds in 1999 because of a concern that this might not be approved in a bondholder meeting and that convening such a meeting might result in a less favorable outcome than a voluntary exchange (see IMF, 2001b). Notably, CACs were also embedded in some of the instruments exchanged by Dominica in 2004[28] and Argentina in 2005, but they did not prevent the serious holdout problem both countries faced after the restructuring.

C. Further Key Bond Clauses

Amendment clauses/exit consents

Exit consents, also known as exit amendments, are a legal technique that is used to amend the non-payment terms of old bonds in an exchange ('stick feature' to render the old bonds unattractive or illiquid). More specifically, exit consents allow a simple majority of bondholders to modify bond provisions, such as a waiver of sovereign immunity, financial covenants or listing requirements. By stripping away favorable bond features and creditor rights, the old bonds become less attractive, thus inducing bondholders to participate in the exchange into new bonds ("poisoning the well behind you").

Exit consents can be particularly useful for restructuring bonds that do not contain CACs to alter payment terms. Instead of changing the financial characteristics of old bonds via majority restructuring provisions, exit consents can be used to alter *non-payment terms*, for example legal features that affect the bond's liquidity or the holder's ability to litigate. Most commonly, exit consents include (i) the de-listing of the outstanding bonds to reduce liquidity, (ii) the removal of cross-default clauses, and (iii) the removal of acceleration clauses (see below for an explanation of these clauses).

The decision to use exit consents has to occur in agreement with the issuer and often takes place in the context of a bondholder meeting. After the exchange, non-participating bondholders will generally not be able to reverse the amendments without the consent of the sovereign issuer. This can considerably reduce the leverage of holdouts, as they may be left with a less liquid bond with unattractive legal features and a low secondary market value.

Exit consents were first used in Ecuador's 2000 exchange of a sovereign bond issued under New York law (see Buchheit and Gulati, 2000). The terms of the exchange offer required each participating bondholder to also agree to a list of amendments of nonpayment terms. Also, the exchange of Uruguay in 2003 involved exit consents; however, their scope was narrower than in the case of Ecuador. The Uruguay exit consents were mainly aimed at avoiding litigation and limited the possibility of attaching any future payments on the new bonds via a court ruling (waiver of sovereign immunity). Additionally, they deleted the cross-default and cross-acceleration provisions (see below). In comparison, Ecuador requested amendments on a broader range of terms.[30] According to the IMF (2003a, p. 23) the use of exit

consents in the Ecuador case, was perceived as part of a "take-it or-leave-it" strategy, while in Uruguay, participants could opt out of the exit consents.[31]

More recently, non-payment terms have been amended in the bond restructurings of Dominica (2004), the Dominican Republic (2005), Argentina (2005), and Belize (2007). The exchange prospectus of Argentina, for example, points out several times that the country might delist the old securities from the secondary markets. However, as of August 2011, this delisting has not taken place. Furthermore, it should be underlined that exit consents under New York law have generally withstood legal challenges in U.S. courts. For example, U.S. courts have refused to invalidate exit consents that removed important bondholder rights and protections in a few corporate restructurings, including financial covenants (see IMF, 2001b, for more details).

Acceleration

Acceleration clauses are a standard feature in sovereign debt contracts and entitle creditors to "accelerate" unmatured principal following a default event (see Buchheit and Gultai, 2002). This means that in the case of any missed payments, all principal and accrued interest become immediately due and payable. Typically, the decision to accelerate payments requires a minority vote of at least 25 percent of outstanding principal. This practice follows the general rule for corporate bonds issued in the United States (see Buchheit and Gulati, 2002). Depending on the drafting of terms, an acceleration can also be revoked or vetoed ("de-accelerated") by a majority of bondholders, provided that the default has been "cured." One example was the debt exchange in Ecuador 2000, which was made conditional on bondholders revoking the acceleration decision on their old bonds (see Sturzenegger and Zettelmeyer, 2007, p. 60).

Cross-default and cross-acceleration

A default event on one debt contract can trigger a default on another agreement. This is called cross-default. In essence, cross-default clauses can strengthen the principle of

Table 8. Legal Characteristics of Sovereign Bond Restructurings

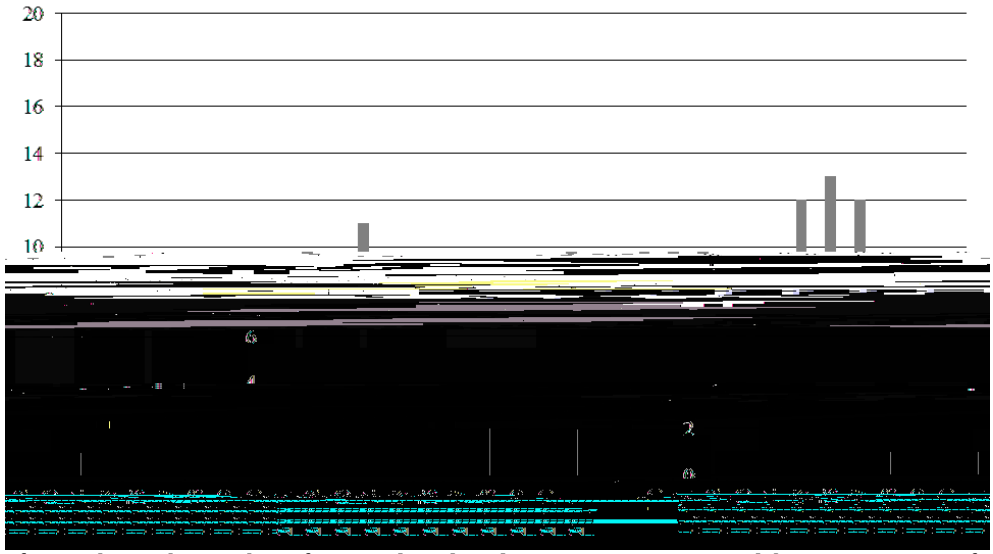
(1999–2009)

Sources: Andritzky (2006, 2010), Cruces and Trebesch (2011), Enderlein, Schumacher and Trebesch (2011), IMF Staff and Country Reports, Sturzenegger and Zettelmeyer (2006).

of GDP (IMF and World Bank, 2006). Yet, despite its growing relevance, data on creditor litigation against sovereigns is scarce.

Enderlein, Schumacher and Trebesch (2011) provide a new comprehensive database on litigation cases in the sovereign debt area.[34] The data reveal two main stylized facts. First, it turns out that most sovereign debt litigation cases have little to do with a default or restructuring. Only a minority of creditor lawsuits involve sovereign bonds or loans, while most cases relate to other types of government liabilities, such as unpaid energy bills or trade invoices. Second, the dataset confirms the common view that the number of default-related lawsuits in New York and London has been increasing since the 1980s. More than half of all cases were initiated after the year 2000, despite the fact that the number of sovereign defaults and restructurings has gone down in the last decade. However, the overall number of cases is rather small. Between 1980 and 2010, a total of 109 cases were filed against debtor governments in connection to a default on sovereign bonds or loans. Figure 12 shows the distribution of cases across time.

Figure 12. Creditor Litigation after Defaults/Restructurings: New Cases Filed per Year



Note: The figure shows the number of initiated creditor litigation cases against debtor governments for each year between 1980 and 2010. Only lawsuits relating to sovereign bonds or loans are considered and only those filed in the United States and the United Kingdom. The spike in 1990 is due to the large number of cases initiated against Peru in the run-up to its Brady deal, while the increase in case numbers after 2001 relates to the dozens of lawsuits following Argentina's default (Enderlein, Schumacher and Trebesch, (2011).

[34] The authors code all lawsuits filed by banks, bondholders, and other professional investors against debtor governments in the period after 1980 in two jurisdictions, New York and the United Kingdom.The main coding source was a systematic search in the legal databases (NexisLexis, PACER). This was complemented with publicly available lists on litigation cases, in particular by the IMF and the World Bank in its annual HIPC implementation report, Sturzenegger and Zettelmeyer (2006), the Emerging Market Traders Association, and the Institute of International Finance.

VI. DOMESTIC SOVEREIGN DEBT RESTRUCTURINGS

This section presents the experience of restructuring domestic sovereign debt and "quasi-sovereign" debt, as well as debt restructurings in monetary unions.

Due to data constraints, there is limited evidence on the occurrence, causes and effects of domestic debt defaults and restructurings. Here, we build on a series of recent contributions, in particular Reinhart and Rogoff (2009), and the case studies in Erce and Diaz-Cassou (2010) and Sturzenegger and Zettelmeyer (2006). To our knowledge, no empirical studies exist on the case of restructurings in monetary unions. For this reason we rely on the case archive collected by Enderlein, Trebesch and von Daniels (forthcoming) and Trebesch (2010), as well as IMF staff reports and other country sources.

The available evidence shows a large number of parallels between domestic debt restructurings and external debt restructurings. The negotiation process and the basic restructuring mechanics are essentially the same. One difference is that domestic debt is often adjudicated domestically, so that investors may be constrained to litigate in domestic courts and may not be able to file suit in London or New York. [35]

A second notable difference is that investors in domestic instruments are normally mostly residents. Domestic banks, insurance companies, and pension funds often hold the majority of outstanding domestic public debt, also because they may act as primary dealers or because governments require them to hold a minimum fraction of public debt. A restructuring of domestic debt instruments will therefore directly affect the balance sheets of domestic financial institutions and, relatedly, the country's overall financial stability (see Box 2 for a recent example and section VIII.D, for further discussion on 'top-down' risk spillovers).

This said, there have been cases, like Russia (1998) or Ukra

debtor governments do not need to tailor the exchange offer in a way that accounts for exchange rate risks. However, financial sector stability considerations often play an important role in domestic sovereign debt restructurings.

A. Evidence on Domestic Debt Restructurings

Reinhart and Rogoff (2009) have provided the first comprehensive dataset on incidences of domestic debt default and restructurings. For the period 1800 to 2007, they identify 70 cases of overt (de jure) domestic default, including outright payment suspensions and cases of unilateral principal and interest reduction. They also count more than 150 cases of de facto domestic currency default, defined as episodes with inflation above 20 percent per annum. Most of the overt domestic default and restructuring cases occurred after 1980, often in parallel with external debt defaults. One example is Argentina, which defaulted on its domestic debt in 1982, 1989–90 and 2002–2005, the same years that the country renegotiated its external debt. A further interesting stylized fact by Reinhart and Rogoff (2008) is that output declines associated with domestic debt default appear to be worse than for external debt crises. On average, the output decline in the year prior to a domestic default is 4 percent, compared to only 1.2 percent in the year before external defaults.

More detailed evidence on the process and outcome of domestic debt restructurings is provided by Erce and Diaz-Cassou (2010) and Sturzenegger and Zettelmeyer (2006). Erce and Diaz-Cassou (2010) focus on a sample of recent debt crises and show that seven out of eleven external restructurings were preceded or followed by domestic debt restructurings. Thus, it seems that “twin restructurings” of external and domestic debt have become the norm in recent years. As with external debt restructurings, there are only few pre-emptive restructurings that occur without a prior payment default, namely Ukraine in 1998, Uruguay in 2003, Dominica in 2004, and Jamaica in 2010.

The database by Trebesch (2008) indicates that domestic debt restructurings were implemented fairly quickly, especially when compared to external debt. Argentina’s domestic debt was restructured in November 2001.Argentinaber s8.77 0 Td7ed by dt–2005,

one year without missed payments (1999). The latest default occurred in January 2011; only two years after the country had successfully restructured its Brady bonds in 2009. Further, we find very few references to the country's currency peg or to other CFA countries in the debt renegotiation talks or background documents with the London and Paris Club.

C. Restructuring "Quasi-Sovereign" Debt

The financial crisis has given rise to widespread debt problems of corporations around the world, including many government-related corporations with "quasi-sovereign" status. Debt owed by public or quasi-public enterprises occupies the middle ground between private and sovereign debt. Moody's (2005) defines a government related issuer (or "quasi-sovereign") as an issuer which is fully or partially owned by the government, but which does not have taxing authority. S&P (2010) adds that some entities with little or no government ownership might also be considered as a government related entity, if they have systemic importance or if they play a critical role as providers of public goods.

insolvency framework based upon internationally accepted standards for transparency and creditor protection. The process, therefore, took place under the umbrella of a widely accepted corporate insolvency law regime and was subject to decisions of an independent tribunal.

The subsequent creditor negotiations resembled those of sovereign debt restructuring processes in many ways. A creditor committee was formed, representing about 90 financial institutions and headed by British and Japanese banks. The committee reached a principal agreement in May 2010 and a successful debt restructuring was implemented in September, implying a lengthening of maturities by five to eight years, lower interest rates, but no outright face value reduction. One month later, a last holdout creditor was convinced to sell its debt stake, so that the deal ultimately reached a creditor participation rate of 100 percent.

Ukraine's Naftogaz

In September 2009, the cash-strapped Ukrainian gas company Naftogaz announced plans for a debt restructuring of a US$500 million bond coming due at the end of the month. Naftogaz subsequently refused to make the principal repayment, thus triggering a failure-to-pay credit event.

The exchange offer implied a maturity extension of five years and a higher 9.5 per cent coupon. Although a group of investors had threatened to block the restructuring, the vast majority of bondholders accepted the offer by October 8th, which was the early participation deadline. Ultimately, over 93 percent of bondholders accepted the offer, with the remaining holders being bound in via collective action clauses contained in the old bonds. In addition, Naftogaz succeeded in renegotiating its debt owed to Western banks and other bilateral creditors, with all old claims being exchanged into a new Eurobond of $1.6 billion, which is guaranteed by the government. The company itself was restructured from a state-owned entity into a public joint-stock company with shares owned by the government. Overall, the bond restructuring techniques used in the exchange resembled more closely those in corporate debt exchanges rather than in sovereign practice (Lareya, 2010).

VII. CREDIT DEFAULT SWAPS A

B. Potential Distortions: Insurable Interest and the “Empty Creditor” Problem

Policymakers have raised concerns that “naked CDSs” may distort incentives in a debt distress situation of both corporate and sovereign debtors. “Naked CDSs” refer to CDS purchases in which the investor does not actually own the underlying bond to which the contract refers. In simple terms, it means purchasing an insurance against the event of a sovereign's default without owning the respective sovereign bond. This raises a potential ground for moral hazard in that the holder of a naked CDS may have an interest in the borrower triggering a credit event.

the size of haircuts, or creditor losses. Building on a new dataset on haircuts in all 180 restructurings with banks and bondholders since 1978, the authors show that the size of haircuts is a main predictor for post-restructuring bond spreads. A one standard deviation increase in the haircut (20 percentage points) is associated with post-restructuring bond spreads that are 170 basis points higher as compared to the baseline, after controlling for fundamentals and country and time-fixed effects. The effect decreases over time but is still significant in years six and seven after the restructuring, implying higher spreads of 50 basis points.[46] The authors also find that the haircut size is highly correlated with the duration of capital market exclusion. Ceteris paribus, a one standard deviation increase in haircuts is associated with a 50 percent lower likelihood of being able to re-access international capital markets in any year after the restructuring.[47]

B. Effects on Output and Trade

Several studies have estimated the extent of output losses in times of sovereign default and debt restructuring. Sturzeneger (2002) estimates output losses at around 2 percent of GDP, a figure which has also been used to calibrate theoretical models (see e.g., Asonuma 2010). De Paoli, Hoggarth, and Saporta's (2009) findings suggest that output losses in the wake of sovereign default may be even larger, of around 5 percent a year, and up to ten years, depending on the duration of arrears and negotiations. The authors find that the size of output costs largely depends on whether debt crises occur simultaneously with banking and currency crises. "Twin" or "triple crises" are associated with much larger output costs than debt crises alone. Another recent study, by Levy-Yeyati and Panizza (2011) comes to the conclusion that defaults tend to follow, not precede, output contractions. The authors come to this novel result by using quarterly data for defaults occurring between 1982 and 2003, instead of annual data as in previous studies.

Rose (2005) finds a relationship between sovereign restructurings and declines in trade flows. Rose employs a gravity panel framework that covers 1948 to 1997. He regresses bilateral trade flows on a binary variable capturing Paris Club debt restructurings and finds very strong effects: trade falls bilaterally by about 7 percent per year after a restructuring, an effect lasting for about 15 years, on average. Rose acknowledges that he is not able to identify "whether the effect of default on international trade appears because of a natural shrinking of trade finance, because creditors seek to punish and deter default, or some other reason" (Rose, 2005, p. 205). To gain additional insights, Martinez and Sandleris (2008)

---

[46] The estimates result from an unbalanced fixed effects panel data regression with robust, country-clustered standard errors. The dependent variable is the monthly average country spread to US treasury bonds (EMBIG stripped spread) with a country sample of Argentina, Algeria, Colombia, Brazil, Bulgaria, China, Chile, Côte d'Ivoire, Croatia, Dominican Rep, Ecuador, Egypt, El Salvador, Hungary, Indonesia, Lebanon, Malaysia, Mexico, Morocco, Nigeria, Panama, Pakistan, Peru, Philippines, Poland, Russia, Serbia and Montenegro, South Africa, South Korea, Thailand, Tunisia, Turkey, Ukraine, Uruguay, Venezuela, Vietnam.

[47] These estimates result from a Co

adopt Rose's approach and data, but augment his gravity equation to allow identifying potential bilateral punishment by creditor countries. In particular, they add a dummy for bilateral creditor-debtor relationships[48] that is intended to capture the specific effect of a

episodes have also triggered interest rate hikes, thereby, increasing the cost of banks' funding and affecting their income position. Finally, some debtor countries, particularly in advanced economies, have a large retail base among investors in sovereign debt, so that a restructuring may curb household savings too.

During the debt crises of the 1980s and early 1990s foreign banks and investors were most affected because developing country debt during this time was to a large extent held by Western banks. The effects of emerging market defaults on Western banking systems have first been analyzed by Cornell and Shapiro (1986) and Bruner and Simms (1987). These studies assess the impact of the 1982 Mexican debt default, and of rumors about it, on Western banks' financial market valuations. They find a significant and long-lasting negative effect, especially for those banks with large exposures to Mexican debt. Slovin and Jayant (1993) show that this negative effect was more pronounced for capital deficient banks than for banks with larger capital adequacy buffers. In a similar vein, Musumeci and Sinkey (1990) and Karafiath et al. (1991) document a negative market value effect, as well as contagion across banks, after the Brazilian debt moratorium of 1987. Unal et al. (2003) show that the announcement of the Brady plan in 1989 led to a significant drop in the stock prices of US banking multinationals, while Japanese bank stocks were less affected.

More recently, Fissel et al. (2006) find that the Mexican peso devaluation in December 1994 and the Asian financial crisis in 1997 were associated with a notable decline in the market value of large Western banking companies, although the stocks subsequently recovered relatively quickly. This was not the case after the August 1998 Russian debt default, which was associated with a stark and long-lasting drop in US bank valuations and a rapid widening of default spreads on bank debt for the top 25 bank holding companies in the United States. In a similar vein, Arezki et al. (2011) find that sovereign rating downgrades have significant spillover effects both across countries and financial markets, including on corporate CDS prices, and on bank and insurance sector stocks.

Other papers do not focus on bank valuation or spread effects, but specifically on the link between debt crises and banking crises. Levy-Yeyati et al. (2010) find that sovereign distress affects the behavior of depositors and can contribute to bank runs. In a similar vein, Borensztein and Panizza (2009) provide indicative evidence that debt crises may trigger systemic banking crises. More recently, Gennaioli, Martin and Rossi (2010) reassess the link between government default and domestic financial markets in a panel of emerging and developed countries from 1980 to 2005. The authors find that public defaults are followed by large and systematic drops in aggregate financial rkdo . n 0 0

by a systemic banking crisis, yet

suggest that the effect depends on the creditor-borrower relationship. According to their findings, the reduction in FDI does not come from every country that could be a potential source of capital flows, but from countries directly affected by the default, based on Paris Club data.

As to private sector access to credit, Arteta and Hale (2008) find that sovereign debt crises and restructurings with official creditors have a strong negative impact. After controlling for fundamentals and external shocks, the drop in foreign loans and bond issuance by domestic firms amounts to more than 20 percent. Their analysis was among the first to provide direct evidence on the domestic costs of sovereign default, an issue that has been at the core of recent theoretical work. The findings by Arteta and Hale were complemented by Das, Papaioannou and Trebesch (2010, 2011). They find a drop of up to 40 percent in private sector external borrowing compared to what it would have been otherwise. Defaults on debt to private creditors are found to have a stronger impact than defaults to official creditors. In addition, they find that other risk measures, such as higher sovereign bond spreads and lower sovereign ratings, also have a strong negative impact on private sector foreign borrowing, even without a formal default.

Beyond private sector credit and FDI, there are only few related papers on "top-down" spillovers from the sovereign to private firms.[50] A small empirical literature shows that sovereign risk and defaults influence emerging market firms both in normal times and during crisis episodes. Borensztein et al. (2007) show that sovereign ratings are strong determinants of corporate ratings. With regard to stock markets, Cruces (2007) finds sizable sovereign risk related to equity premia. According to his results, corporations in countries with credit ratings in the default range are forced to pay much higher expected rates of return compared to companies based in non-default countries.

E. Fees and Negotiation Costs

In sovereign bond restructurings, debtor governments generally face expenses for their financial and legal advisors and for negotiating and communicating with bondholders, e.g., due to roadshows or travel expenses. Restructuring can also imply administrative deadweight loss, as government staff and senior officials in the country may need to invest months of work into preparing and implementing a debt exchange.

early 1980s and came down in the late 1980s. Apparently, lower restructuring fees were charged in debt workouts after 1989 (Rieffel, 2003, p. 129).

Box 5 summarizes the above literature survey on the costs and consequences of defaults and debt restructurings.

Box 5. Costs of a Restructuring and Default

Borrowing costs and exclusion from capital markets
New research indicates that the consequences of restructurings depend on the size of creditor losses. An increase in haircuts by 20 percentage points is associated with borrowing costs that are at least 50 basis points higher during the six years after the restructuring, and a lower likelihood of re-accessing capital markets.

Output and trade costs
The academic literature agrees that debt crisis years are associated with a drop in GDP of between 2 and 5 percent per year. The size of this effect depends on the duration of the crisis, and whether it occurs simultaneously with banking and currency crises. Bilateral trade flows fall up to 7 percent after Paris Club restructurings, and for more than 10 years. However, it is difficult to conclude that these are causal effects, rather than correlations.

Financial Sector Implications:
Restructurings affect the holders of government papers, in particular banks, pension funds, and insurance companies. Debt exchanges can thereby endanger financial sector stability and contribute to a credit crunch. While bank bailouts have in the past contributed to sovereign funding pressures, debt restructurings have also contributed to banking sector distress, causing bank failures and bank runs, such as in Russia in 1998.

FDI Flows and Private Sector Access to Credit:

Box 6: Key Concepts in Sovereign Debt Restructuring

1) "Illiquidity" vs "Insolvency"

A popular categorization of default and restructuring cases is to assess whether they are the result of illiquidity or insolvency. Illiquidity refers to a situation in which the sovereign has insufficient financial means to roll-over its debt in the short term. An entity is illiquid if, regardless of whether it satisfies the solvency condition, its liquid assets and available financing are insufficient to meet its maturing liabilities. Typically, liquidity crises are faced by countries with a high ratio of short-term debt to reserves, with large financing needs relative to revenues and a loss in access to fresh capital.

Insolvency, in contrast, is a situation in which the country's overall debt burden has become unsustainable, that is, when future primary surpluses will not be large enough to pay back the debt. More technically, solvency requires that the current debt stock plus all future expenditures in present value terms exceed the present discounted value of all revenues.[51] An insolvent country may not be able to repay even with the "maximum feasible domestic adjustment."[52] In such a situation, a debt restructuring involving a debt reduction may be necessary to restore solvency.

As highlighted by the IMF (2002b) "the distinction between solvency and liquidity is sometimes blurred because illiquidity may be manifested in rising interest rates in the limiting case that no further financing is available, the marginal interest rate becomes infinite, which eventually calls into question the entity's solvency."

2) "Unwillingness" vs "Inability" to Pay

A further important distinction is between a government's inability and its unwillingness to pay (e.g., Reinhart and Rogoff, 2009 and S&P, 2006). Willingness to pay is a qualitative concept that is often linked to political and institutional factors in the debtor country. Domestic political considerations can affect willingness to pay, as policymakers may tend to retain scarce resources for socioeconomic needs of domestic constituents rather than continuing to repay external creditors in times of distress. A country may also be unwilling to pursue (large) fiscal adjustments or enact reforms to achieve debt sustainability. This can result in situations in which a government defaults and restructures its debt, even if it has the financial capacity for full repayment. Panizza et al. (2009, p. 668) argue that the distinction of ability vs. willingness to pay is of limited usefulness "since even crises that are triggered by a bad shock could be viewed as "willingness to pay" crises in the sense that, with sufficient adjustment (e.g., a large decline in consumption), repayment would be feasible."

3) Default in "Good" and "Bad" Times

Another strand of literature distinguishes whether defaults (and restructurings) occur in "good" or "bad" times. "Good times" are typically defined as years with output above trend and "bad times" are years with below-trend GDP. Aguiar and Gopinath (2006), for example, predict that defaults are countercyclical and will occur after a series of bad output shocks. The recent paper by Levy-Yeyati and Panizza (2011) provides evidence in support of this assumption, as defaults in the last decades tend to follow output contractions. This result is confirmed in Tomz and Wright (2007), who use a much larger sample (1820–2004). They find output and default to be negatively correlated; however, the relationship is less close than expected. Only 62 percent of the default episodes in their sample occurred when output was below trend, while about a third of defaults occurred in "good times." Thus, one can conclude that GDP growth alone is not a sufficient predictor of the occurrence of debt crises.[53]

A. Warning Signals: Determinants of Restructurings and Default

A popular way to assess the vulnerability of a sovereign debtor is to focus on central economic variables, risk ratios, and market indicators of sovereign risk. Roubini (2003) underlines that the most widely used sustainability indicators include external debt to GDP (or public debt to GDP) and the ratio of public debt (or debt service) to government revenues. A fairly large literature on the determinants of default and restructurings has assessed the role of these and other risk indicators.

(i) Sovereign Risk Indicators: Bond Spreads, CDS Prices, and Credit Ratings

Market indicators have in the past influenced the timing and occurrence of sovereign debt restructurings. When markets perceive a government as less likely to repay in the future, this can have effects on country borrowing costs and, thereby, the risk of default. Common risk indicators include secondary market bond spreads or the price of sovereign CDSs. These indicators, as well as changes in sovereign ratings, can play a crucial role for debtor policies in distress. For example, governments may react to an increase in risk perceptions by announcing additional fiscal tightening. However, when borrowing costs surpass a critical threshold, defaulting can also become more likely.

Under extreme circumstances, a sudden change in investor perceptions may even act as a default trigger. Debt crises and restructurings can indeed be self-fulfilling and caused by contagion, as shown by a small body of related literature (see Cole and Kehoe, 1996, 2000, and Chamon, 2007). In case of a "debt run" or the effective exclusion from capital markets, countries may in fact have no alternative than to halt payments. This risk is especially high when governments face large liquidity/roll-over risks (see also Detragiache and Spillimbergo, 2001).

(ii) Risk Indicators and Triggers of Restructurings and Defaults

[53] Nevertheless, GDP growth may be important for the timing of restructurings. The model by Bi (2008) predicts that it can be beneficial for both creditors and the debtor country to delay any restructuring until output recovers ("waiting for a larger cake").

In their article on “rules of thumb” for sovereign debt crises, Manasse and Roubini (2008) identify the debt/GDP ratio and liquidity indicators, such as the ratio of short-term debt to reserves, as key risk indicators of debt crises. The authors categorize crises episodes into three types: (i) episodes of insolvency with high debt and high inflation; (ii) episodes of illiquidity, which are associated with excessive short-term liabilities relative to foreign reserves; and (iii) episodes of macro and exchange rate weaknesses, e.g., due to large overvaluations or negative growth shocks (see also Box 6). In a similar vein, Sturzenegger and Zettelmeyer (2006, p. 6) categorize default and restructuri

critical debt/GDP ratio depends largely on the country's record of default and inflation. According to the authors,

- the debt/GDP threshold for "safety from default" may be as low as 20 percent for some countries; and
- the risk thresholds are much higher (above 60 percent of debt/GDP) for advanced economies and for EM countries that have never defaulted.

- For a subsample of more recent debt crises, Finger and Mecagni (2007) show that most occurred at a debt to GDP level exceeding 39 percent.

3) A wide range of risk indicators is analyzed in **"***Rules of Thumb for Sovereign Debt Crises***"** by Manasse and Roubini (2008). The authors suggest the following "danger zones" in the EM context:

- External debt to GDP: > 50 percent
- Short-term debt to reserves: > 130 percent
-

- External shocks (e.g., oil, interest rate, commodity prices, conflicts);
- Currency overvaluation; and
- Low growth rate.

B. Assessing Debt Sustainability

The IMF's advice on a potential debt restructuring is usually based on an assessment of the country's debt sustainability. According to the IMF (2002b, p. 4), debt sustainability is defined as "a situation in which a borrower is expected to be able to continue servicing its debts without an unrealistically large future correction to the balance of income and expenditure." This definition implies that governments cannot indefinitely accumulate debt faster than their capacity to service these debts.

Sustainability incorporates the concepts of solvency and liquidity, without making a sharp distinction between them (see Box 6). From a solvency angle, debt sustainability implies that a government must be able to generate primary surpluses that are sufficient to cover its debt-service obligations in the long run. From a liquidity angle, sustainability requires that governments must be able to roll-over debt and raise sufficient financing in each period to close any financing gaps. A key factor for both aspects is the cost of financing. In principle, when interest rates increase above the economy's rate of growth, solvency is at stake in the long run and countries may face a liquidity crisis in the short run.

The definition also implies that there are social and political limits to adjustment. Debtor countries are not expected to adopt "unrealistically large corrections." IMF (2002b, p. 4). Not all fiscal adjustment paths are realistic, because political and other constraints will influence a country's willingness to pay (as opposed to ability to pay). The key question in assessing sustainability is, therefore, whether a government can *plausibly* generate and maintain primary surpluses that shield the country from a default or restructuring in the medium and long run.

Any debt sustainability analysis

at its current level. The model's appeal is that the "sustainable" long-run primary balance can be easily calculated and compared to the country's current primary balance. The required adjustment, the fiscal gap between the two measures, can then be viewed against the country's fiscal policy track record. Note, however, that the model does not allow making a judgment on whether or not stabilizing the current debt/GDP ratio is an appropriate target.

To derive the model's core equation, the long-run debt sustainability condition, we start with a basic identity, the

If, in addition, we assume that and that the primary surplus is constant over time, then, equation (4) is reduced to:

Table 9. Static Solvency Analysis: Primary Surplus (in percent of GDP) Required to Keep the Debt Ratio Stable

	Growth at 1% p.a.			Growth at 3% p.a.	
Debt/GDP	i = 3%	i= 5%	i= 7%	i= 5%	i= 7%
30%	0.6	1.2	1.8	0.6	1.2
40%	0.8	1.6	2.4	0.8	1.6
50%	1.0	2.0	3.0	1.0	1.9
60%	1.2	2.4	3.6	1.2	2.3
70%	1.4	2.8	4.2	1.4	2.7
80%	1.6	3.2	4.8	1.6	3.1
90%	1.8	3.6	5.3	1.7	3.5
100%	2.0	4.0	5.9	1.9	3.9
110%	2.2	4.4	6.5	2.1	4.3
120%	2.4	4.8	7.1	2.3	4.7
130%	2.6	5.1	7.7	2.5	5.0
140%	2.8	5.5	8.3	2.7	5.4
150%	3.0	5.9	8.9	2.9	5.8

Note: Debt stabilizing primary balances calculated from eq. (5), as percent of GDP.

The necessary adjustment is lower when real growth is stronger, but even at a 3 percent real growth rate, the country needs to generate a permanent surplus of 1.7 percent to achieve sustainability. The table illustrates the strong impact of real growth rates and nominal interest rate increases. As can be seen, a nominal interest rate jump from 5 percent to 7 percent or a real growth reduction from 3 percent to 1 percent makes it significantly more difficult to achieve debt sustainability for a given level of indebtedness.

Based on a related DSA approach, Cotarelli et al. (2010) estimate the scope of fiscal adjustment required to achieve debt sustainability in today's advanced economies. According to their estimates, the average cyclically adjusted primary balance to stabilize the current debt-to-GDP ratio requires a surplus of 1 percent of GDP. With a median deficit of 5.3 percent of GDP in 2010, advanced economies would thus need to increase their primary balances by over 6 percentage points relative to GDP on average, a very large adjustment.

Advanced Debt Sustainability Analysis

While useful and easy to interpret, the traditional static solvency analysis has obvious limitations. The main shortcomings of the approach outlined above can be summarized as follows:

- First, static DSA is based on an arbitrary definition of sustainability, namely that of stabilizing the debt-to-GDP ratio. However, stabilizing the debt ratio may not be sufficient when the debt-to-GDP ratio is already at a high level, leaving a country vulnerable to shocks. The model can be augmented by defining a "safe" debt/GDP

threshold. But there is no agreement on obvious cut-off points for sustainable vs. unsustainable debt ratios (see IMF, 2011b).

- Second, it only allows for a constant path of debt accumulation. However, high deficits and debt levels may be temporarily appropriate in some circumstances, while it is unlikely that a country should try and maintain a stable debt-to-GDP ratio at all times. In fact, there is an infinite number of primary surplus paths that could make the sustainability equation (3) hold, with the question being whether at least some of these paths are feasible.
- Third, the models do not account for the maturity structure or currency composition of the debt (foreign vs. domestic indebtedness), which can be crucial for debt sustainability.
- Finally, the DSA approach does not incorporate uncertainty or volatility in the underlying macroeconomic parameters, relying instead on steady state assumptions. A particularly important source of uncertainty is associated with contingent claims, such as those resulting from explicit or implicit guarantees of bank debt or of bonds and deposits. These, however, are not explicitly incorporated in the traditional DSA. A further risk not taken into account is an increase in the

on projections of key variables that affect the evolution of public debt, in particular the primary account, GDP growth, interest and exchange rates, and inflation. To account for the country's track record, the DSA template requires decomposing the historical change in the debt stock into the following six contributing factors: (i) the primary balance, (ii) the nominal interest bill, (iii) the capital loss from any nominal exchange rate depreciation, (iv) the inflation correction, (v) the real interest bill, and (vi) the real growth contribution.

Departing from this central projection, the template foresees the implementation of sensitivity tests that are broadly comparable across countries. One alternative scenario presents the evolution of the debt ratio under a "historical scenario," i.e., the assumption that all key variables are at their
ective 10-year historical averages throughout the five-year projection period. A second
tivity test is the no-policy-change scenario. This scenario is presented as one in which a
ary balance is kept constant in future years (and equal to the projection for the current year).

emplate also foresees stress tests by assuming shocks to individual variables. These include a
standard-deviation shock to real GDP growth, the real interest rate, and the primary balance,
e leaving the remaining variables as in the baseline scenario. Additional tests include a
oined shock to all three of these variables of one standard deviation; a one-time 30 percent
eciation of the real exchange rate; and an increase in debt equal to 10 percent of GDP, which
arise as a result of public sector contingent liabilities.

e tests provide a set of alternative scenarios showing the dispersion of debt paths under
rent assumptions on key variables. The idea is to gain additional indications of the country's
erability to a payments crisis. Nevertheless, it should be kept in mind that even the most

Mendoza and Ostry (2008) provide cross-country evidence that the marginal response of the primary balance to debt is weaker at high levels of debt. This suggests that, as the debt-to-GDP ratio increases, it may be more difficult to generate a primary balance that is sufficient to ensure sustainability.

C. Idiosyncrasies in Recent Sovereign Debt Restructurings

Deciding on a restructuring or default is a difficult and multifaceted decision, with economic, legal, and political factors all playing a role. Box 9 below briefly summarizes the circumstances of defaults and restructurings in some recent cases.

are (i) the amount and maturity of sovereign bonds held, (ii) the amount of public debt insured via CDS markets, and (iii) the use of government securities for collateralization in interbank markets.

- Second, *increases in bank funding costs*. These could have the strongest impact on the banks with relatively weak fundamentals, high upcoming debt redemptions and/or high sovereign risk exposures. As the pricing of debt securities hinges on the perceived credit

Table 10. Risks to Debt Sustainability: Contingent and Non-Contingent Liabilities

	Non-contingent liabilities (the existence of government obligations does not depend upon particular events)	*Contingent liabilities* (the existence of obligations depends upon the realization of particular events)
Explicit (government obligations have a legal basis)	• Government debt • Government expenditure commitments (legally enforceable) • Provisions (e.g., clearly defined accrued pension rights not backed by a fund) •	

- *Currency composition*. The last decades have shown that a high share of external debt in government de

question that depends heavily on country and crisis characteristics and for which no generally applicable answers exist. The following considerations are particularly important:

- *The amount of debt relief should be tailored to ensure a return to debt sustainability.* A debt sustainability analysis can, therefore, help to assess how much domestic adjustment is economically necessary, as well as how much is politically/socially feasible. This, in turn, will help to determine the debt relief needed to put the country back on a sustainable growth and fiscal path. The IMF's DSA framework has played a crucial role in many past debt renegotiations between sovereigns and their creditors and it can, thus, provide some guidance. However, any DSA should not be interpreted in a mechanistic or rigid fashion and cannot be the sole basis for calculating the appropriate haircut. Rather, the DSA results must be assessed against relevant country-specific circumstances, including the particular features of a given country's debt, its policy track record, and its policy space.

- *The size of the losses will affect creditor balance sheets*. In the early 1980s, for example, the negotiated haircuts in most debt restructurings were low (often less than 20 percent, see Cruces and Trebesch 2011). One reason for this was that Western banks faced considerable solvency risk due to their exposure to developing country sovereign debt (see Section IX C). Similar concerns apply today in Europe, as European banks hold significant amounts of sovereign debt of Euro-periphery countries on their books. A restructuring with large haircuts may, thus, become a source of systemic instability in the financial sector, if appropriate remedial measures are not taken.

- *Governments may face a trade-off between*

(6)

Now we can pose the following question: With an actual debt-to-GDP ratio of, say, 120 percent, what is the required haircut to achieve this steady-state? Based on this highly stylized model, the required haircut can be computed as 1- (50.5/120)=57.9 percent. Thus, in a steady-state world with perfect foresight and assuming the above parameter values, the debt stock would have to be reduced by approximately 58 percent to reach a permanent debt-to-GDP ratio of 50.5 percent.

Table 11 illustrates the results of this simple illustrative example for a permanent surplus of 2 percent and a range of actual debt-to-GDP ratios. As in Table 9, it can be seen that the nominal interest rate-real growth differential plays a crucial role for the debt dynamics and, accordingly, for the required haircut at different debt ratios. For example, in a high real growth scenario of 3 percent per annum and with nominal interest rates at 5 percent, the sustainable debt ratio exceeds 100 percent, so that debt relief is required only at very high debt ratios.

While illustrative, it is obvious that these figures have to be viewed with considerable care. The results are derived from a highly stylized model that does not account for country circumstances, uncertainty, or exchange rate and interest rate risks. The figures should, thus, not be seen as a benchmark for any real-world restructuring process.

Table 11. Required Haircuts in a Static Solvency Model

Parameter Asumptions	Growth = 1% p.a., Permanent Surplus = 2%		Growth = 3% p.a., Permanent Surplus = 2%	
	i= 5%	i= 7%	i= 5%	i= 7%
	Max. Debt/GDP ratio that is sustainable at these values:			
	50.5%	33.7%	103.0%	51.5%
Actual Debt/GDP	REQUIRED HAIRCUT to achieve a stable debt ratio			
30%	-	-	-	-
40%	-	15.8%	-	-
50%	-	32.7%	-	-
60%	15.8%	43.9%	-	14.2%
70%	27.9%	51.9%	-	26.4%
80%	36.9%	57.9%	-	35.6%
90%	43.9%	62.6%	-	42.8%
100%	49.5%	66.3%	-	48.5%
110%	54.1%	69.4%	6.4%	53.2%
120%	57.9%	71.9%	14.2%	57.1%
130%	61.2%	74.1%	20.8%	60.4%
140%	63.9%	76.0%	26.4%	63.2%
150%	66.3%	77.6%	31.3%	65.7%

Note: The table is based on equations (5) and (6) and computes the size of haircuts required to stabilize the debt/GDP ratio in a highly stylized model of static debt sustainability. The parameter i stands for the annual interest rate paid on sovereign debt.

B. Targeting a Specific Debt-to-GDP Threshold

Another approach to decide on the scope of debt relief is to target a debt-to-GDP ratio that may be chosen ad-hoc, or based on historic data, simulations, or debt sustainability ratios. For example, a recent report to the European Parliament (Gros, 2010) suggests the Maastricht fiscal criteria as a benchmark. Haircuts may be set in such a way that the public debt of the country concerned is equal to 60 percent of the country's GDP. For a country with a debt-to-GDP ratio of 150 percent this would imply a haircut, on the entire stock of its public debt of 60 percent (1-60/150=0.6).

Some private sector analysts have also suggested arbitrary thresholds to target the scope of debt relief. For example, a recent report by Citibank (see Buiter, 2010) suggests using the average Euro Area debt to GDP ratio during 2009 as a benchmark, which is just over 79 percent. Thus, a country with a debt-to-GDP ratio of 150 percent would need to impose a haircut on the entire stock of its public debt of 47 percent (1-79/150=0.47).
Relatedly, Buchheit and Gulati (2011b) underline that a country's creditor composition plays an important role for the fiscal implications of a restructuring with private bondholders. Intuitively, the smaller the share of debt owed to bondholders, the smaller the debt relief effect of a bond exchange and related haircut. Put differently, the more a debtor government relies on official funding sources, such as IMF credits, the more difficult it will be to achieve a certain debt sustainability level via a market based bond restructuring only. This intuition can be broken down into the following simple formula:

$$\frac{\overline{\quad} \quad \overline{\quad}}{\overline{\quad}} \qquad (7)$$

Where *Actual Debt/GDP* is the total public debt of a country, *Target Debt/GDP* is the targeted debt ratio after the restructurings and *Eligible Debt/GDP* refers to the debt of the targeted creditor group, i.e., those creditors affected by the restructuring.

For illustration, let us assume a bond restructuring of a debtor country with total public debt of 150 percent of GDP (Actual Debt/GDP). Two-thirds of the country's public debt (100 percent of GDP) is owed to private bondholders while the remaining debt of 50 percent of GDP is owed to the IMF, governments bilaterally, and other entities that are legally protected against debt restructurings. Next, assume that the country decides to target a Debt/GDP ratio of 90 percent (*Target Debt/GDP*), e.g., as the calculated ratio that ensures long-term debt sustainability. To reach that target ratio, the country could in principle impose a 40 percent haircut on its entire stock of public debt (1-90/150=0.4). In case that this is not possible, it could decide to only impose a haircut on its private bondholders, so that the *Eligible Debt/GDP* amounts to 100 percent of GDP. With reference to the simple formula above, this would translate into an *Effective Haircut* on its bonds of 60 percent, resulting from (150-90)/100=0.6.

C. Market Measures as Benchmark

Market-based measures such as bond spreads, CDS prices, or ratings can provide further points of reference to decide on the scope of debt relief.

Among others, Roubini (2010) underlines the important role of bond prices at the point of the exchange. For creditors that mark to market, any exchange offer is likely to be benchmarked against the trading price of the old instruments (and not to the nominal claims).[59] Roubini argues that any debt exchanges in which the present value of the new instruments is higher than or equal to the traded price of the old instruments has a high likelihood of success, meaning that participation rates will be high. The rationale is that an offer that implies no further loss compared to the market value can be attractive to investors, because the new instruments are likely to carry a lower risk of default compared to the old instruments and, possibly, lower liquidity risk. This argument is closely related to

Table 12. Recovery Ratings of Sovereign Issuers Rated by Standard & Poor's

Source: Standard & Poor's, November 30, 2010

In late 2010, S&P did not provide recovery ratings for investment grade issuers in the Euro area, except for Greece. In April 2010, when S&P lowered the Greek rating to BB+, it also assigned a recovery rating of '4'. This rating implies the expectation that, in the event of a debt restructuring or payment default, the recovery for private debtholders will be in the range of 30 percent to 50 percent. In other words, S&P projected the haircut, given default, to range between 50 percent and 70 percent, which was very high in historical comparison (Cruces and Trebesch, 2011, estimate that the mean present value haircut was 37 percent in the period 1978–2010).

Finally, the academic literature has suggested estimating recovery rates based on bond spreads and CDS prices. Pan and Singleton (2008), in particular, exploit the term structure of sovereign CDS spreads to estimate both thngapp

briefly summarizes what motivates the debate, presents four of the most prominent proposals to improve sovereign debt workouts, and goes on to discuss the content and challenges of a code of conduct for debt restructuring processes.

Many authors take a strong view on why the international financial architecture needs reform, or why it does not. Reform proponents view the current market-based regime as disorderly, inefficient, and overly costly (see the many papers discussed in Rogoff and Zettelmeyer, 2002). A central concern relates to creditor collective action problems, in particular debt runs, holdouts and litigation (Krueger 2002). The resulting inefficiencies are said to cause deadweight losses, reputational damage for debtors, and unnecessary delays, both in initiating debt restructurings and in concluding them. As suggested by authors such as Weder di Mauro and Zettelmeyer (2010) and Gianviti et al. (2010), a well-designed statutory system could reduce some of these problems, increase transparency, lower creditor moral hazard, minimize the need for official sector bailouts, and be better suited to tackle the cross-border externalities of a default. A statutory regime could also explicitly include third-party countries that provide financial support and wish to protect their financial systems.

Other contributions, like Eaton (2002), the Group of Ten (1996), Rieffel (2003), Roubini (2010), and Shleifer (2003) are skeptical and argue that it may be difficult to implement a better system via statutory means. A common view is that a formalized sovereign bankruptcy framework could result in “regulatory overkill” and is unlikely to solve the main shortcomings of the current system. For example, Roubini (2010) argues that the fear of litigation has been exaggerated and that no legal mechanism is necessary for effective negotiations or to declare a debt standstill. Similarly, Rieffel (2003) states that the system of restructuring sovereign bonds has been successful so far and needs further time to develop “organically.” Relatedly, Eichengreen and Portes (1995) suggested that a contractual approach is the more promising avenue for reform. The argument in favor of a contractual approach is simple. Instead of creating a statutory framework “top-down”, it could suffice to alter the documentation of bond and loan contracts to regulate the restructuring process in a more efficient way. Initially, the focus was placed on including CACs in bond documentation, so as to facilitate debt exchanges (Group of Ten, 1996). More recent proposals suggest including clauses for dispute resolution via arbitration (Paulus, 2010) or clauses for the appointment of trustees to represent bondholders in times of crisis (see Häseler, forthcoming). In the following section, we will present four main reform proposals in detail.

important theoretical contributions on the issue, including Ghosal and Miller (2003), Pitchford and Wright (2007), Bolton and Jeanne (2007, 2009) and Jeanne (2009). To this day, however, it is the IMF proposal on a sovereign debt restructuring mechanism (SDRM)

SDRM
(IMF 2002, 2003)

The proposals by Paulus (Sovereign Debt Tribunal) and by Raffer and Kaiser (FTAP) are much less formalized. They do not require a change in international laws, nor do they foresee the creation of sizable institutions. Instead, they rely on arbitration mechanisms, similar to the dispute resolution procedures

with an early opportunity to give input on the design of the restructuring and of individual instruments. In addition, member countries should share relevant, non-confidential information with all creditors on a timely basis.

Besides the IMF criteria, a prominent code of conduct was set up in the IIF's "Principles for Stable Capital Flows and Fair Debt Restructuring" (IIF, 2006), which were supported by the G7, the G20, the World Bank, and the IMF. Initially, the IIF Principles were only applicable to emerging market sovereign issuers. But in 2010, it was agreed to encompass all sovereign issuers on a voluntary basis (see IIF 2010). The Principles' main aim is to establish voluntary rules of best practice for both debtor governments and creditors to improve the debt restructuring and crisis resolution process. A restructuring process is defined as fair if debtor governments closely cooperate with creditors, adhere to information sharing, avoid unjustified capital controls, and resume partial or full debt service payments as soon as conditions allow. Box 10 quotes the IIF principles on debt restructurings in detail.

Box 11. The IIF Principles on Fair Debt Restructuring

The IIF Principles (2006) contain the following main paragraphs on the restructuring process:

(i) Transparency and Timely Flow of Information

- "*General disclosure practice.* Issuers should ensure through disclosure of relevant information that creditors are in a position to make informed assessments of their economic and financial situation, including overall levels of indebtedness. Such disclosure is important in order to establish a common understanding of the country's balance of payments outlook and to allow creditors to make informed and prudent risk management and investment decisions."
- "*Specific disclosure practice.* In the context of a restructuring, the debtor should disclose to all affected creditors the maturity and interest rate structures of all external financial ecotoi ioean(l)4(p(or)og(or)asc)ssm

  [illegible]/C2_0 1 Tc -07296 -1.22 T
  economid fi9(nc)9(ia)9(po(u)5(l)2(i)-cnc)9(t)-2nce anp(der)infur m ve i

that political support for these measures be developed. Countries should closely monitor the effectiveness of policies, strengthen them as necessary, and seek investor feedback as warranted."

- *"Consultations:* Building on IRPs, debtors should consult with creditors to explore alternative market-based approaches to address debt-service problems before default occurs. The goal of such consultations is to avoid misunderstanding about policy

generally act as a communication link between the debtor and the creditor community. Past experience also demonstrates that, when a creditor committee has been formed, debtors have borne the reasonable costs of a single creditor committee. Creditors and debtors agree jointly what constitute

- In such a situation, countries should start good faith negotiations to involve private creditors in an adequate way. These negotiations should be transparent and fair, including an open dialogue with creditors and timely information sharing.

- Potential spill-over effects on other member states should explicitly be taken into account in the restructuring negotiations.

- CACs can play an important role in facilitating debt restructurings. However, their presence is no guarantee for a quick debt exchange with high participation. Other legal vehicles and exchange characteristics can play an important role as well, in particular exit consents, aggregation clauses, and minimum participation thresholds.

Further, this paper provides a review of the current system of ad-hoc bond restructurings, which typically involves exchange offers with a menu of options, a mix of “carrot” and “stick” features, informal creditor consultations and roadshows. We find that most recent sovereign bond exchanges could be implemented quickly and without severe creditor coordination problems. Since 1998, only two out of seventeen bond exchanges had a share of holdouts exceeding 10 percent of the debt. Similarly, creditor litigation in the context of bond restructurings has been rare, with the exception of the default of Argentina after 2001. Overall, the system of ad-hoc debt exchanges seems to have worked reasonably well for emerging market countries. These experiences may also prove useful to any distressed country, including advanced economies.

APPENDIX I: SOVEREIGN DEBT RESTRUCTURINGS 1950–2010: A NEW DATABASE

This Appendix presents the dataset by Treb

excluded, while cases in which short-term debt is exchanged into debt with a maturity of more than one year are included.

4. *Only public debt restructurings:* Restructurings of private-to-private debt are not taken into account, even in cases such as Korea 1997 or Indonesia 1998, where large-scale t13.8255 0 Tdhercoordinivad byt

Table 14. List of Sovereign Debt Restructurings

(1950–2010)

Country	Date	Type of Creditors	Debt Affected (m US$)	Part of HIPC Debt Relief?	Reduction of Face Value?	Bond Exchange?	Comment
Brazil	09 / 1986	Commercial	6671		0	0	0
Brazil	01 / 1987	Paris Club	3100	0	0	0	
Brazil	07 / 1988	Paris Club	5600	0	0	0	
Brazil	11 / 1988	Commercial	62100		0	0	0
Brazil	02 / 1992	Paris Club	10384	0	0	0	
Brazil	11 / 1992	Commercial	9167		0	0	0
Brazil	04 / 1994	Commercial	43257		1	0	Brady Deal
Bulgaria	04 / 1991	Paris Club	642	0	0	0	
Bulgaria	12 / 1992	Paris Club	251	0	0	0	
Bulgaria	04 / 1994	Paris Club	200	0	0	0	
Bulgaria	06 / 1994	Commercial	7910		1	0	Brady Deal
Burkinc 01a29e(Co)c 01a2s 0ga04 / 1991	Paris Club71						

01a2s 0ga04 / 1987 Paris Club 71

Country	Date	Type of Creditors	Debt Affected (m US$)	Part of HIPC Debt Relief?	Reduction of Face Value?	Bond Exchange?	Comment
Comoros	11 / 2009	Paris Club	13	1	1	0	
Comoros	08 / 2010	Paris Club	na	1	1	0	
Congo, Dem. Rep.	06 / 1976	Paris Club	280	0	0	0	
Congo, Dem. Rep.	12 / 1977	Paris Club	170	0	0	0	
Congo, Dem. Rep.	12 / 1977	Paris Club	40	0	0	0	
Congo, Dem. Rep.	12 / 1979	Paris Club	1200	0	0	0	
Congo, Dem. Rep.	04 / 1980	Commercial	402		0	0	0
Congo, Dem. Rep.	07 / 1981	Paris Club	600	0	0	0	
Congo, Dem. Rep.	01 / 1983	Commercial	58		0	0	0
Congo, Dem. Rep.	12 / 1983	Paris Club	1490	0	0	0	
Congo, Dem. Rep.	06 / 1984	Commercial	64		0	0	0
Congo, Dem. Rep.	05 / 1985	Commercial	61		0	0	0
Congo, Dem. Rep.	09 / 1985	Paris Club	322	0	0	0	
Congo, Dem. Rep.	05 / 1986	Commercial	65		0	0	0
Congo, Dem. Rep.	05 / 1986	Paris Club	350	0	0	0	
Congo, Dem. Rep.	05 / 1987	Commercial	61		0	0	0
Congo, Dem. Rep.	05 / 1987	Paris Club	883	0	0	0	
Congo, Dem. Rep.	06 / 1989	Commercial	61		0	0	0
Congo, Dem. Rep.	06 / 1989	Paris Club	1530	0	1	0	
Congo, Dem. Rep.	09 / 2002	Paris Club	8980	0	1	0	
Congo, Dem. Rep.	11 / 2003	Paris Club	na	1	1	0	
Congo, Dem. Rep.	02 / 2010	Paris Club	2957	1	1	0	
Congo, Rep.	07 / 1986	Paris Club	470	0	0	0	
Congo, Rep.	09 / 1990	Paris Club	1052	0	0	0	
Congo, Rep.	06 / 1994	Paris Club	1175	0	0	0	
Congo, Rep.	07 / 1996	Paris Club	1758	0	1	0	
Congo, Rep.	12 / 2004	Paris Club	3016	1	1	0	
Congo, Rep.	03 / 2006	Paris Club	na	1	1	0	
Congo, Rep.	12 / 2007	Commercial	2100		1	0	0
Congo, Rep.	12 / 2008	Paris Club	961	1	1	0	
Congo, Rep.	03 / 2010	Paris Club	2474	1	1	0	
Costa Rica	01 / 1983	Paris Club	104	0	0	0	
Costa Rica	09 / 1983	Commercial	609		0	0	0
Costa Rica	04 / 1985	Paris Club	93	0	0	0	
Costa Rica	05 / 1985	Commercial	440		0	0	0
Costa Rica	05 / 1989	Paris Club	182	0	0	0	
Costa Rica	05 / 1990	Commercial	1384		1	0	Brady Deal
Costa Rica	07 / 1991	Paris Club	97	0	0	0	
Costa Rica	06 / 1993	Paris Club	57	0	0	0	
Côte d'Ivoire	05 / 1984	Paris Club	224	0	0	0	
Côte d'Ivoire	06 / 1985	Paris Club	215	0	0	0	
Côte d'Ivoire	06 / 1986	Paris Club	380	0	0	0	
Côte d'Ivoire	12 / 1987	Paris Club	600	0	0	0	
Côte d'Ivoire	12 / 1989	Paris Club	881	0	0	0	
Côte d'Ivoire	11 / 1991	Paris Club	724	0	0	0	
Côte d'Ivoire	03 / 1994	Paris Club	1849	0	1	0	
Côte d'Ivoire	03 / 1998	Commercial	6462		1	0	Brady Deal
Côte d'Ivoire	04 / 1998	Paris Club	1402	1	1	0	
Côte d'Ivoire	04 / 2002	Paris Club	1822	1	1	0	
Côte d'Ivoire	05 / 2009	Paris Club	4690	1	1	0	
Côte d'Ivoire	04 / 2010	Commercial	2940		1	1	Bond Restructuring
Croatia	03 / 1995	Paris Club	861	0	0	0	
Croatia	07 / 1996	Commercial	858		0	0	0
Cuba	12 / 1983	Commercial	130		0	0	0
Cuba	12 / 1984	Commercial	103		0	0	0
Cuba	07 / 1985	Commercial	90		0	0	0

Source: Trebesch (2011)

Country	Date	Type of Creditors	Debt Affected (m US$)	Part of HIPC Debt Relief?	Reduction of Face Value?	Bond Exchange?	Comment
Cuba	07 / 1985	Paris Club	156	0	0	0	
Cuba	07 / 1986	Paris Club	100	0	0	0	
Djibouti	05 / 2000	Paris Club	16	0	0	0	
Djibouti	10 / 2008	Paris Club	76	0	0	0	
Dominica	09 / 2004	Commercial	144		1	1	Bonds and Bank Loans
Dominican Rep.	05 / 1985	Paris Club	115	0	0	0	
Dominican Rep.	05 / 1985	Paris Club	172	0	0	0	
Dominican Rep.	02 / 1986	Commercial	823		0	0	0
Dominican Rep.	11 / 1991	Paris Club	100	0	0	0	
Dominican Rep.	11 / 1991	Paris Club	700	0	0	0	
Dominican Rep.	11 / 1991	Paris Club	45	0	0	0	
Dominican Rep.	08 / 1994	Commercial	1087		1	0	Brady Deal
Dominican Rep.	04 / 2004	Paris Club	193	0	0	0	
Dominican Rep.	05 / 2005	Commercial	1100		0	1	Bond Restructuring
Dominican Rep.	10 / 2005	Commercial	180		0	0	Bank Loan Restruct.
Dominican Rep.	10 / 2005	Paris Club	193	0	0	0	
Ecuador	07 / 1983	Paris Club	169	0	0	0	
Ecuador	10 / 1983	Commercial	970		0	0	0
Ecuador	08 / 1984	Commercial	350		0	0	0
Ecuador	04 / 1985	Paris Club	330	0	0	0	
Ecuador	12 / 1985	Commercial	4224		0	0	0
Ecuador	01 / 1988	Paris Club	277	0	0	0	
Ecuador	10 / 1989	Paris Club	393	0	0	0	
Ecuador	01 / 1992	Paris Club	339	0	0	0	
Ecuador	06 / 1994	Paris Club	293	0	0	0	
Ecuador	02 / 1995	Commercial	7170		1	0	Brady Deal

/OSbeps 0.965 0.965 0.957 /Ex1.9531 Tf0 T0.0000 scn 0 Tj[(1995)-2190(C)-35(om)14(m)6(e)-56(r)-27(c)-56(i)42(a)-56(l671954(1124.90 Td[(00)62(0)]TJ/Cs(0.9$)T)14(i)42(ni)42

Country	Date	Type of Creditors	Debt Affected (m US$)	Part of HIPC Debt Relief?	Reduction of Face Value?	Bond Exchange?	Comment
Gambia, The	06 / 2007	Paris Club	3	1	1	0	
Gambia, The	01 / 2008	Paris Club	15	1	1	0	
Georgia	03 / 2001	Paris Club	58	0	0	0	
Georgia	07 / 2004	Paris Club	161	0	0	0	
Ghana	04 / 1996	Paris Club	93	0	0	0	
Ghana	12 / 2001	Paris Club	199	1	1	0	
Ghana	05 / 2002	Paris Club	163	1	1	0	
Ghana	07 / 2004	Paris Club	1560	1	1	0	
Grenada	11 / 2005	Com					

Country	Date	Type of Creditors	Debt Affected (m US$)	Part of HIPC Debt Relief?	Reduction of Face Value?	Bond Exchange?	Comment
Jamaica	09 / 1978	Commercial	63		0	0	0
Jamaica	04 / 1979	Commercial	149		0	0	0
Jamaica	06 / 1981	Commercial	89		0	0	0
Jamaica	06 / 1984	Commercial	165		0	0	0
Jamaica	07 / 1984	Paris Club	207	0	0	0	
Jamaica	07 / 1985	Paris Club	67	0	0	0	
Jamaica	09 / 1985	Commercial	369		0	0	0
Jamaica	03 / 1987	Paris Club	81	0	0	0	
Jamaica	05 / 1987	Commercial	285		0	0	0
Jamaica	10 / 1988	Paris Club	146	0	0	0	
Jamaica	04 / 1990	Paris Club	178	0	0	0	
Jamaica	06 / 1990	Commercial	332		0	0	0
Jamaica	07 / 1991	Paris Club	125	0	0	0	
Jamaica	01 / 1993	Paris Club	142	0	0	0	
Jamaica	01 / 1993	Paris Club	140	0	0	0	
Jordan	07 / 1989	Paris Club	586	0	0	0	
Jordan	02 / 1992	Paris Club	771	0	0	0	
Jordan	12 / 1993	Commercial	1289		1	0	0
Jordan	06 / 1994	Paris Club	1147	0	0	0	
Jordan	05 / 1997	Paris Club	400	0	0	0	
Jordan	05 / 1999	Paris Club	821	0	0	0	
Jordan	07 / 2002	Paris Club	1170	0	0	0	
Kenya	01 / 1994	Paris Club	535	0	0	0	
Kenya	06 / 1998	Commercial	91		1	0	0
Kenya	11 / 2000	Paris Club	300	0	0	0	
Kenya	01 / 2004	Paris Club	353	0	0	0	
Kyrgyzstan	03 / 2002	Paris Club	102	0	0	0	
Kyrgyzstan	03 / 2005	Paris Club	555	0	1	0	
Liberia	12 / 1980	Paris Club	35	0	0	0	
Liberia	12 / 1981	Paris Club	30	0	0	0	
Liberia	12 / 1982	Commercial	30		0	0	0
Liberia	12 / 1983	Paris Club	19	0	0	0	
Liberia	12 / 1984	Paris Club	16	0	0	0	
Liberia	04 / 2008	Paris Club	1043	1	1	0	
Liberia	09 / 2010	Paris Club	1366	1	1	0	
Macedonia	09 / 2000	Paris Club	46	0	0	0	
Macedonia, FYR	07 / 1995	Paris Club	220	0	0	0	
Macedonia, FYR	07 / 1995	Paris Club	70	0	0	0	
Macedonia, FYR	03 / 1997	Commercial	229		0	0	0
Madagascar	04 / 1981	Paris Club	130	0	0	0	
Madagascar	11 / 1981	Commercial	147		0	0	0
Madagascar	07 / 1982	Paris Club	94	0	0	0	
Madagascar	03 / 1984	Paris Club	179	0	0	0	
Madagascar	10 / 1984	Commercial	195		0	0	0
Madagascar	05 / 1985	Paris Club	162	0	0	0	
Madagascar	10 / 1986	Paris Club	200	0	0	0	
Madagascar	06 / 1987	Commercial	60		0	0	0
Madagascar	10 / 1988	Paris Club	265	0	1	0	
Madagascar	04 / 1990	Commercial	49		0	0	0
Madagascar	07 / 1990	Paris Club	99	0	1	0	
Madagascar	03 / 1997	Paris Club	1247	0	1	0	
Madagascar	01 / 2000	Paris Club	23	0	1	0	
Madagascar	09 / 2000	Paris Club	34	0	1	0	
Madagascar	03 / 2001	Paris Club	254	1	1	0	
Madagascar	11 / 2004	Paris Club	1057	1	1	0	
Malawi	09 / 1982	Paris Club	29	0	0	0	

Source: Trebesch (2011)

Country	Date	Type of Creditors	Debt Affected (m US$)	Part of HIPC Debt Relief?	Reduction of Face Value?	Bond Exchange?	Comment
Malawi	03 / 1983	Commercial	57		0	0	0
Malawi	10 / 1983	Paris Club	30	0	0	0	
Malawi	04 / 1988	Paris Club	20	0	0	0	
Malawi	10 / 1988	Commercial	35		0	0	0
Malawi	01 / 2001	Paris Club	66	1	1	0	
Malawi	10 / 2006	Paris Club	355	1	1	0	
Mali	10 / 1988	Paris Club	56	0	1	0	
Mali	11 / 1989	Paris Club	29	0	1	0	
Mali	10 / 1992	Paris Club	19	0	1	0	
Mali	05 / 1996	Paris Club	32	0	1	0	
Mali	10 / 2000	Paris Club	3	1	1	0	
Mali	07 / 2001	Paris Club	1	1	1	0	
Mali	06 / 2002	Paris Club	1	1	1	0	
Mali	03 / 2003	Paris Club	155	1	1	0	
Mauritania	04 / 1985	Paris Club	80	0	0	0	
Mauritania	05 / 1986	Paris Club	50	0	0	0	
Mauritania	06 / 1987	Paris Club	55	0	0	0	
Mauritania	06 / 1989	Paris Club	51	0	1	0	
Mauritania	01 / 1993	Paris Club	217	0	1	0	
Mauritania	06 / 1995	Paris Club	65	0	1	0	
Mauritania	08 / 1996	Commercial	53		1	0	Buyback (Donor Funded)
Mauritania	03 / 2000	Paris Club	99	1	1	0	
Mauritania	07 / 2002	Paris Club	384	1	1	0	
Mexico	06 / 1983	Paris Club	1300	0	0	0	
Mexico	08 / 1983	Commercial	18800		0	0	0
Mexico	03 / 1985	Commercial	28600		0	0	0
Mexico	08 / 1985	Commercial	20100		0	0	0
Mexico	09 / 1986	Paris Club	1800	0	0	0	
Mexico	03 / 1987	Commercial	52300		0	0	0
Mexico	03 / 1988	Commercial	3671		1	0	0
Mexico	05 / 1989	Paris Club	2400	0	0	0	
Mexico	02 / 1990	Commercial	54300		1	0	Brady Deal
Moldova	10 / 2002	Commercial	40		0	1	Eurobond Exchange
Moldova	04 / 2004	Commercial	115		1	0	Gazprom Debt (Buyback)
Moldova	05 / 2006	Paris Club	151	0	0	0	
Morocco	10 / 1983	Paris Club	1210	0	0	0	
Morocco	09 / 1985	Paris Club	687	0	0	0	
Morocco	02 / 1986	Commercial	538		0	0	0
Morocco	03 / 1987	Paris Club	1000	0	0	0	
Morocco	09 / 1987	Commercial	2444		0	0	0
Morocco	10 / 1988	Paris Club	940	0	0	0	
Morocco	09 / 1990	Commercial	3200		0	0	0
Morocco	09 / 1990	Paris Club	1390	0	0	0	
Morocco	02 / 1992	Paris Club	1250	0	0	0	
Mozambique	10 / 1984	Paris Club	142	0	0	0	
Mozambique	05 / 1987	Commercial	253		0	0	0
Mozambique	06 / 1987	Paris Club	612	0	0	0	
Mozambique	06 / 1990	Paris Club	707	0	1	0	
Mozambique	12 / 1991	Commercial	124		1	0	Buyback (Donor Funded)
Mozambique	03 / 1993	Paris Club	440	0	1	0	
Mozambique	11 / 1996	Paris Club	663	0	1	0	
Mozambique	05 / 1998	Paris Club	na	0	1	0	
Mozambique	07 / 1999	Paris Club	1860	1	1	0	
Mozambique	11 / 2001	Paris Club	2800	1	1	0	
Nicaragua	12 / 1980	Commercial	582		0	0	0
Nicaragua	12 / 1981	Commercial	192		0	0	0

Source: Trebesch (2011)

Country	Date	Type of Creditors	Debt Affected (m US$)	Part of HIPC Debt Relief?	Reduction of Face Value?	Bond Exchange?	Comment
Nicaragua	03 / 1982	Commercial	100		0	0	0
Nicaragua	02 / 1984	Commercial	145		0	0	0
Nicaragua	12 / 1991	Paris Club	722	0	1	0	
Nicaragua	03 / 1995	Paris Club	848	0	1	0	
Nicaragua	11 / 1995	Commercial	1100		1	0	Buyback (Donor Funded)
Nicaragua	04 / 1998	Paris Club	213	0	1	0	
Nicaragua	03 / 1999	Paris Club	448	0	0	0	
Nicaragua	12 / 2002	Paris Club	580	1	1	0	
Nicaragua	03 / 2004	Paris Club	1579	1	1	0	
Niger	11 / 1983	Paris Club	30	0	0	0	
Niger	03 / 1984	Commercial	27		0	0	0
Niger	11 / 1984	Paris Club	32	0	0	0	
Niger	11 / 1985	Paris Club	32	0	0	0	
Niger	04 / 1986	Commercial	52		0	0	0
Niger	11 / 1986	Paris Club	26	0	0	0	
Niger	04 / 1988	Paris Club	38	0	0	0	
Niger	12 / 1988	Paris Club	43	0	1	0	
Niger	09 / 1990	Paris Club	151	0	1	0	
Niger	03 / 1991	Commercial	111		1	0	Buyback (Donor Funded)
Niger	03 / 1994	Paris Club	160	0	1	0	
Niger	12 / 1996	Paris Club	128	0	1	0	
Niger	01 / 2001	Paris Club	115	1	1	0	
Niger	05 / 2004	Paris Club	250	1	1	0	
Nigeria	07 / 1983	Commercial	1350		0	0	0
Nigeria	09 / 1983	Commercial	585		0	0	0
Nigeria	04 / 1984	Commercial	925		0	0	0
Nigeria	12 / 1986	Paris Club	4010	0	0	0	
Nigeria	12 / 1986	Paris Club	2436	0	0	0	
Nigeria	12 / 1986	Paris Club	291	0	0	0	
Nigeria	11 / 1987	Commercial	4249		0	0	0
Nigeria	01 / 1988	Commercial	1213		0	0	0
Nigeria	03 / 1989	Paris Club	3530	0	0	0	
Nigeria	03 / 1989	Paris Club	660	0	0	0	
Nigeria	03 / 1989	Paris Club	710	0	0	0	
Nigeria	06 / 1989	Commercial	5829		0	0	0
Nigeria	01 / 1991	Paris Club	1715	0	0	0	
Nigeria	01 / 1991	Paris Club	1529	0	0	0	
Nigeria	12 / 1991	Commercial	5883		1	0	Brady Deal
Nigeria	12 / 2000	Paris Club	23060	0	0	0	
Nigeria	12 / 2000	Paris Club	340	0	0	0	
Nigeria	10 / 2005	Paris Club	30066	0	1	0	
Pakistan	05 / 1972	Paris Club	234	0	0	0	
Pakistan	06 / 1974	Paris Club	650	0	0	0	
Pakistan	01 / 1981	Paris Club	260	0	0	0	
Pakistan	01 / 1999	Paris Club	3254	0	0	0	
Pakistan	07 / 1999	Commercial	777		0	0	Bank Loan Restruct.
Pakistan	12 / 1999	Commercial	610		0	1	Eurobond Exchange
Pakistan	01 / 2001	Paris Club	1752	0	0	0	
Pakistan	12 / 2001	Paris Club	12500	0	0	0	
Panama	09 / 1985	Paris Club	19	0	0	0	
Panama	10 / 1985	Commercial	579		0	0	0
Panama	11 / 1990	Paris Club	185	0	0	0	
Panama	08 / 1994	Commercial	452		0	1	Bond Restructuring
Panama	05 / 1996	Commercial	3936		1	0	Brady Deal
Paraguay	07 / 1993	Commercial	20		0	0	Buyback
Peru	06 / 1968	Commercial	128		0	0	0

Source: Trebesch (2011)

Country	Date	Type of Creditors	Debt Affected (m US$)	Part of HIPC Debt Relief?	Reduction of Face Value?	Bond Exchange?	Comment
Peru	09 / 1968	Paris Club	120	0	0	0	
Peru	09 / 1968	Commercial	58		0	0	
Peru	09 / 1969	Commercial	152		0	0	
Peru	11 / 1969	Commercial	290		0	0	
Peru	11 / 1969	Paris Club	100	0	0	0	
Peru	11 / 1978	Paris Club	211	0	0	0	
Peru	07 / 1983	Paris Club	590	0	0	0	Brady Deal
Peru	06 / 1984	Paris Club	640	0	0	0	0
Peru	09 / 1991	Paris Club	4661	0	0	0	0
Peru	05 / 1993	Paris Club	1884	0	0	0	
Peru	07 / 1996	Paris Club	6723	0	0	0	
Peru	01 / 1980	Commercial	340		0	0	0
Peru	07 / 1983	Commercial	380		0	0	0
Peru	03 / 1997	Commercial	10600		1	0	0
Philippines	12 / 1984	Paris Club	1000	0	0	0	
Philippines	01 / 1986	Paris Club	1300	0	0	0	
Philippines	04 / 1986	Commercial	3242		0	0	0
Philippines	01 / 1987	Paris Club	870	0	0	0	
Philippines	12 / 1987	Commercial	9690		0	0	0
Philippines	05 / 1989	Paris Club	1859	0	0	0	
Philippines	02 / 1990	Commercial	2120		1	0	0
Philippines	06 / 1991	Paris Club	1096	0	0	0	
Philippines	12 / 1992	Commercial	4471		1	0	Brady Deal
Philippines	07 / 1994	Paris Club	585	0	0	0	
Poland	04 / 1981	Paris Club	2200	0	0	0	
Poland	04 / 1982	Commercial	1957		0	0	0
Poland	11 / 1982	Commercial	2225		0	0	0
Poland	11 / 1983	Commercial	1192		0	0	0
Poland	07 / 1984	Commercial	1390		0	0	0
Poland	07 / 1985	Paris Club	10200	0	1	0	
Poland	11 / 1985	Paris Club	1370	0	0	0	
Poland	09 / 1986	Commercial	1970		0	0	0
Poland	12 / 1987	Paris Club	8500	0	0	0	
Poland	07 / 1988	Commercial	8441		0	0	0
Poland	07 / 1989	Commercial	206		0	0	0
Poland	02 / 1990	Paris Club	9400	0	0	0	
Poland	04 / 1991	Paris Club	29871	0	0	0	
Poland	10 / 1994	Commercial	13531		1	0	Brady Deal
Romania	07 / 1982	Paris Club	410	0	0	0	
Romania	12 / 1982	Commercial	1598		0	0	0
Romania	05 / 1983	Paris Club	126	0	0	0	
Romania	06 / 1983	Commercial	567		0	0	0
Romania	09 / 1986	Commercial	800		0	0	0
Russia	04 / 1993	Paris Club	15000	0	0	0	
Russia	06 / 1994	Paris Club	7100	0	0	0	
Russia	06 / 1995	Paris Club	6421	0	0	0	
Russia	04 / 1996	Paris Club	40160	0	0	0	
Russia	12 / 1997	Commercial	30500		0	1	GKOs (non-residents)
Russia	03 / 1999	Commercial	4933		1	1	"MinFin 3" Bonds
Russia	08 / 1999	Paris Club	8113	0	0	0	
Russia	02 / 2000	Commercial	1307		0	1	PRINs, IANs
Russia	08 / 2000	Commercial	31943		1	0	0
Rwanda	07 / 1998	Paris Club	54	0	1	0	
Rwanda	03 / 2002	Paris Club	1	1	1	0	
Rwanda	05 / 2005	Paris Club	90	1	1	0	
São Tomé and Príncipe	08 / 1994	Commercial	10.1		1	0	Buyback (Donor Funded)

Source: Trebesch (2011)

Country	Date	Type of Creditors	Debt Affected (m US$)	Part of HIPC Debt Relief?	Reduction of Face Value?	Bond Exchange?	Comment
São Tomé and Príncipe	05 / 2000	Paris Club	27	0	1	0	
São Tomé and Príncipe	09 / 2005	Paris Club	27	1	1	0	
São Tomé and Príncipe	05 / 2007	Paris Club	24	1	1	0	
Senegal	10 / 1981	Paris Club	78	0	0	0	
Senegal	11 / 1982	Paris Club	74	0	0	0	
Senegal	12 / 1983	Paris Club	70	0	0	0	
Senegal	02 / 1984	Commercial	77		0	0	0
Senegal	01 / 1985	Paris Club	106	0	0	0	
Senegal	05 / 1985	Commercial	20		0	0	0
Senegal	11 / 1986	Paris Club	88	0	0	0	
Senegal	11 / 1987	Paris Club	74	0	0	0	
Senegal	01 / 1989	Paris Club	136	0	1	0	
Senegal	02 / 1990	Paris Club	107	0	1	0	
Senegal	09 / 1990	Commercial	37		0	0	0
Senegal	06 / 1991	Paris Club	233	0	1	0	
Senegal	03 / 1994	Paris Club	233	0	1	0	
Senegal	04 / 1995	Paris Club	168	0	1	0	
Senegal	12 / 1996	Commercial	80		1	0	Buyback (Donor Funded)
Senegal	06 / 1998	Paris Club	427	0	1	0	
Senegal	10 / 2000	Paris Club	22	1	1	0	
Senegal	06 / 2002	Paris Club	11	1	1	0	
Senegal	06 / 2004	Paris Club	463	1	1	0	
Serbia and Montenegro	11 / 2001	Paris Club	4324	0	1	0	
Serbia and Montenegro	07 / 2004	Commercial	2700		1	0	0
Seychelles	04 / 2009	Paris Club	163	0	1	1	0
Seychelles	02 / 2010	Commercial	320		1	0	
Sierra Leone	09 / 1977	Paris Club	50	0	0	0	
Sierra Leone	02 / 1980	Paris Club	30	0	0	0	
Sierra Leone	02 / 1984	Paris Club	34	0	0	0	
Sierra Leone	11 / 1986	Paris Club	95	0	0	0	
Sierra Leone	11 / 1992	Paris Club	163	0	1	0	
Sierra Leone	07 / 1994	Paris Club	41	0	1	0	
Sierra Leone	08 / 1995	Commercial	235		1	0	Buyback (Donor Funded)
Sierra Leone	03 / 1996	Paris Club	39	0	1	0	
Sierra Leone	10 / 2001	Paris Club	180	1	1	0	
Sierra Leone	07 / 2002	Paris Club	3	1	1	0	
Sierra Leone	01 / 2007	Paris Club	363	1	1	0	
Slovenia	06 / 1995	Commercial	812		0	0	0
Somalia	03 / 1985	Paris Club	39	0	0	0	
Somalia	07 / 1987	Paris Club	132	0	0	0	
South Africa	03 / 1987	Commercial	10900		0	0	0
South Africa	10 / 1989	Commercial	7500		0	0	0
South Africa	09 / 1993	Commercial	5000		0	0	0
Sri Lanka	05 / 2005	Paris Club	227	0	0	0	
Sudan	11 / 1979	Paris Club	487	0	0	0	
Sudan	03 / 1982	Paris Club	270	0	0	0	
Sudan	02 / 1983	Paris Club	516	0	0	0	
Sudan	05 / 1984	Paris Club	263	0	0	0	
Sudan	10 / 1985	Commercial	920		0	0	0
Tanzania	09 / 1986	Paris Club	800	0	0	0	
Tanzania	12 / 1988	Paris Club	341	0	1	0	
Tanzania	03 / 1990	Paris Club	199	0	1	0	
Tanzania	01 / 1992	Paris Club	691	0	1	0	
Tanzania	01 / 1997	Paris Club	1608	0	1	0	
Tanzania	04 / 2000	Paris Club	711	1	1	0	
Tanzania	01 / 2002	Paris Club	1245	1	1	0	

Source: Trebesch (2011)

Country	Date	Type of Creditors	Debt Affected (m US$)	Part of HIPC Debt Relief?	Reduction of Face Value?	Bond Exchange?	Comment
Tanzania							

Country	Date	Type of Creditors	Debt Affected (m US$)	Part of HIPC Debt Relief?	Reduction of Face Value?	Bond Exchange?	Comment
Yugoslavia	16.05.1984	Commercial	1250		0	0	0
Yugoslavia	22.05.1984	Paris Club	787	0	0	0	
Yugoslavia	24.05.1985	Paris Club	1097	0	0	0	
Yugoslavia	18.12.1985	Commercial	3600		0	0	0
Yugoslavia	13.05.1986	Paris Club	442	0	0	0	
Yugoslavia	13.05.1986	Paris Club	320	0	0	0	
Yugoslavia	13.07.1988	Paris Club	952	0	0	0	
Yugoslavia	21.09.1988	Commercial	6895		0	0	0
Zambia	16.05.1983	Paris Club	380	0	0	0	
Zambia	20.07.1984	Paris Club	207	0	0	0	
Zambia	04.03.1986	Paris Club	547	0	0	0	
Zambia	12.07.1990	Paris Club	963	0	1	0	
Zambia	23.07.1992	Paris Club	918	0	1	0	
Zambia	01.06.1994	Commercial	570		1	0	Buyback (Donor Funded)
Zambia	28.02.1996	Paris Club	566	0	1	0	
Zambia	16.04.1999	Paris Club	1062	0	1	0	
Zambia	13.09.2002	Paris Club	249	1	1	0	
Zambia	11.05.2005	Paris Club	1763	1	1	0	

Source: Trebesch (2011)

Table 15. Macroeconomic and Financial Indicators at the Time of Restructuring

Country	Year	External Debt to GDP (total, in %)	Public Debt to GDP (in %)	Share of Government Debt Owed to Official Cred.	Inflation (annual CPI, in %)	Budget Balance (% of GDP)
Albania	1995	16.3%	13.4%	92.8%	12.7%	-11.0%
Algeria	1996	64.1%	59.6%	63.7%	5.7%	2.4%
Argentina	1993	29.1%	19.5%	36.8%	4.2%	0.0%
Argentina	2005	54.1%	28.4%	33.2%	10.9%	1.8%
Belize	2007	78.8%	77.2%	36.4%		0.9%
Bolivia	1993	81.5%	68.9%	98.0%	7.9%	-3.0%
Bosnia and Herzegovina	1997					-7.8%
Brazil	1994	20.9%	12.8%	28.3%	66.0%	-6.7%
Bulgaria	1994	79.4%	67.4%	33.5%	62.1%	-5.3%
Cameroon	2003	65.3%	55.7%	98.9%	0.2%	-0.3%
Chile	1990	49.3%	27.6%	52.4%	21.8%	1.8%
Congo, Rep.	2007	50.3%	46.7%	75.4%		21.9%
Costa Rica	1990	55.8%	45.7%	79.5%	28.7%	-2.7%
Cote d'Ivoire	1998	104.9%	77.2%	74.8%	0.8%	-2.4%
Cote d'Ivoire	2010					
Croatia	1996				4.1%	-2.7%
Cuba	1985					
Dominican Rep.	1994	27.2%	22.3%	82.0%	12.5%	0.8%
Dominican Rep.	2005	23.8%	17.3%	56.2%	7.6%	-1.2%
Dominica	2004	91.5%	74.1%	77.6%	2.2%	
Ecuador	1995	67.3%	57.7%	42.9%	24.4%	-2.7%
Ecuador	2009					-3.1%
Ethiopia	1996	113.5%	106.2%	96.3%	2.4%	-1.2%
Gabon	1994	87.9%	80.2%	95.0%	9.7%	5.4%
Gambia,The	1988	118.9%	101.7%	91.2%	8.3%	-1.9%
Grenada	2005	87.2%	79.3%	46.1%		
Guinea	1998	92.1%	80.1%	98.9%		-5.3%
Guyana	1999	191.5%	157.7%	96.0%	6.2%	-7.3%
Honduras	2001	68.0%	52.7%	98.0%	7.7%	-4.0%
Iraq	2006					9.0%
Jamaica	1990	111.7%	94.6%	87.8%	51.1%	
Jordan	1993	121.0%	108.0%	65.0%	3.5%	-1.9%
Kenya	1998	50.2%	41.4%	90.0%	5.7%	-0.3%
Liberia	1982	110.6%	78.4%	75.9%	2.7%	
Macedonia, FYR	1997	41.7%	29.8%	76.5%	0.5%	-1.7%
Madagascar	1990	146.7%	132.0%	96.4%	8.5%	
Malawi	1988	88.6%	79.0%	94.6%	12.5%	
Mauritania	1996	177.9%	148.2%	98.9%	4.6%	
Mexico	1990	36.3%	24.7%	32.1%	22.7%	2.8%
Moldova	2004	68.6%	23.4%	95.2%	12.0%	2.0%
Morocco	1990	80.8%	76.9%	70.0%	8.0%	-2.1%
Mozambique	1991	260.6%	238.8%	95.5%	45.5%	

Note: The Table shows financial and macroeconomic indicators one year prior to the restructuring year. The table only lists “final restructurings” with foreign banks and bondholders, defined as those deals that were not followed by another restructuring (vis à vis private creditors) within the subsequent four years. Data is from the IMF’s IFS dataset, the World Bank’s GDF and WDI dataset and Economist Intelligence Unit.

Country	Year	External Debt to GDP (total, in %)	Public Debt to GDP (in %)	Share of Government Debt Owed to Official Cred.	Inflation (annual CPI, in %)	Budget Balance (% of GDP)
Nicaragua	1995	179.7%	155.2%	91.1%	11.6%	-6.8%
Niger	1991	66.0%	51.1%	99.9%	-4.5%	
Nigeria	1991	88.7%	80.9%	69.2%	44.6%	-6.4%
Pakistan	1999	44.3%	36.7%	92.4%	4.4%	-4.5%
Panama	1996	59.6%	50.2%	22.4%	1.3%	-0.4%
Paraguay	1993	30.3%	19.6%	90.0%	20.6%	2.3%
Peru	1997	53.7%	34.0%	76.1%	7.3%	-1.0%
Philippines	1992	66.5%	50.9%	77.1%	6.9%	-0.9%
Poland-31(0.)-49(9%)]TJ-1e-6.9%						9%

Note: The Table shows financial and macroeconomic indicators one year prior to the restructuring year. The table only lists “final restructurings” with banks and bondholders, defined as those deals that were not followed by another restructuring (vis à vis private creditors) within the subsequent four years. Data is from the IMF’s IFS dataset, the World Bank’s GDF and WDI dataset and Economist Intelligence Unit.

REFERENCES

Abiad, Abdul and Jonathan D. Ostry. 2005. "Primary Surpluses and sustainable Debt Levels in Emerging Market Countries," IMF Policy Discussion Paper 05/6. International Monetary Fund.

Aguiar, Mark, and Gita Gopinath. 2006. “Defaultable Debt, Interest Rates and the Current

Barnhill, Theodore and George Kopits. 2003. “Assessing Fisc

Borensztein, Eduardo, Kevin Cowan and Patricio Valenzuela. 2007. "Sovereign Ceilings "Lite"? the Impact of Sovereign Ratings on Corporate Ratings in Emerging Market Economies," IMF Working Paper 07/75, International Monetary Fund.

Bowe, Michael and James Dean. 1997. "Has the Market Solved the Sovereign Debt Crisis?", Princeton Studies in International Finance No. 83.

Brixi, Hana Polackova, and Allen Schick. 2002. *Governments at Risk: Contingent Liabilities and Fiscal Risk*. World Bank and Oxford University Press.

Buchheit, Lee C. and Mitu G. Gulati, 2000. "Exit Consents in Sovereign Bond Exchanges." *UCLA Law Review*, 48 : 1–31.

Buchheit, Lee C. and Mitu G. Gulati, 2002. "Sovereign Bonds and the Collective Will" *Emory Law Journal*, 51: 1317–64.

Buchheit, Lee C. and Mitu G. Gulati. 2010. "How to Restructure Greek Debt." Duke Law Faculty Paper 2336.

Buchheit, Lee C. and Mitu G. Gulati. 2011a. "Greek Debt – The Endgame Scenario" Unpublished Paper.

Buchheit, Lee C. and Mitu G. Gulati. 2011b. "Drafting a Model Collective Action Clause for Eurozone Sovereign Bonds" Unpublished Paper.

Buchheit, Lee C. and Elizabeth Karpinski. 2007. "Belize's Innovations." *Butterworths Journal of International Banking and Financial Law*. 22(5).

Buiter, Willem H., 1985. "Guide to Public Sector Debt and Deficits", *Economic Policy*, 1:13-79.

Buiter, Willem H., 2010. "Global Economics View: Sovereign Debt Problems in Advanced Industrial Countries" Citigroup Report. 26 April 2010

Burnside, Craig. 2005. *Fiscal Sustainability in Theory and Practice: A Handbook*. Washington, D.C: World Bank.

Catão, Luis and Sandeep Kapur, 2006. "Volatility and the Debt-Intolerance Paradox," IMF Staff Papers, vol. 53(2), pages 195-218.

Celasun, Oya and Philipp Harms, 2007, "How Does Private Foreign Borrowing Affect the Risk of Sovereign Default in Developing Countries?" Study Center Gerzensee Working Paper No. 07.04, Swiss National Bank.

Celasun, Oya and Philipp Harms, 2008, "Boon or Burden: The Effect of Private Sector Debt on the Risk of Sovereign Default in Developing Countries," unpublished manuscript.

Celasun, Oya, Xavier Debrun, and Jonathan Ostry. 2006. “Primary Surplus Behavior and Risks to Fiscal Sustainability in Emerging Market Countries: A ‘Fan-Chart’ Approach.” *IMF Staff Papers* 53(3):401–25.

Chalk, Nigel and Richard Hemming. 2000. “Assessing Fiscal Sustainability in Theory and Practice.” IMF Working Paper No. 00/81.

Chamon, Marcos, Borensztein, Eduardo, Jeanne, Olivier, Mauro, Paolo and Jeromin Zettelmeyer. 2005. "Sovereign Debt Structure for Crisis Prevention," IMF Occasional Papers 237, International Monetary Fund.

Chuhan, Punan, and Federico Sturzenegger. 2005. “Default Episodes in the 1980s and 1990s: What Have We Learned.” In *Managing Economic Volatility and Crises: A Practitioner's Guide*, ed. Aizenman, Joshua and Brian Pinto, 471-519. Cambridge, MA: Cambridge University Press.

- *Corporate Restructuring: Lessons from Experience*
- *International Debt Reexamined*

Cohen, Benjamin J.. 1989. “Developing Country Debt: A Middle Way.” *Princeton Essays in International Finance* 173. Princeton: Princeton University Press.

Cole, Harold, and Timothy Kehoe. 1996. “A Self-fulfilling Model of Mexico's 1994-1995 Debt Crisis," *Journal of International Economics*, 41(3-4): 309-330.

Cole, Harold L., and Patrick Kehoe. 1998. “Models of Sovereign Debt: Partial versus General Reputations.” *International Economic Review*, 39(1): 55–70.

Cole, Harold, and Timothy Kehoe. 2000. “Self-fulfilling Debt Crises.” *Review of Economic Studies*, 67(1): 91–116

Cornell, Bradford and Alan Shapiro. 1986. "The reaction of bank stock prices to the international debt crisis," *Journal of Banking and Finance*, 10(1): 55-73.

Cotarelli, Carlo, Forni, Lorenzo, Gottschalk, Jan and Paolo Mauro. 2010 “Default in Today's Advanced Economies: Unnecessary, Undesirable, and Unlikely.” IMF Staff Position Note 10/12. International Monetary Fund.

Couillault, Bertrand, and Pierre-Francois Weber. 2003. “Toward a Voluntary Code of Good Conduct for Sovereign Debt Restructuring.” Banque de France, Financial Stability Review, June, Paris.

Cruces, Juan. 2007. “The Value of Pleasing International Creditors.” Unpublished Paper. Universidad Torcuato di Tella.

Cruces, Juan and Christoph Trebesch. 2011. “Sovereign Defaults: The Price of Haircuts.” CESifo Working Paper, No. 3604.

Das, Udaibir S., Papaioannou, Michael G. and Christoph Trebesch, 2010. "Sovereign Default Risk and Private Sector Access to Capital in Emerging Markets", IMF Working Papers 10/10, International Monetary Fund. Washington DC; and in Carlos A. Primo Braga and Dörte Dömeland (eds), *Debt Relief and Beyond: Lessons Learned and Challenges Ahead*, Chapter 7, The World Bank, Washington, DC, pp. 141-179, 2009.

Das, Udaibir S., Papaioannou, Michael G. and Christoph Trebesch, 2011. "Spillovers of Sovereign Default Risk: How Much Is the Private Sector Affected?", in *Sovereign Debt: From Safety to Default*, ed. Kolb, R. W., 33-42, New York: Wiley.

De Paoli, Bianca, Hoggarth, Glenn and Victoria Saporta. 2009. “Output costs of sovereign crises: some empirical estimates”, Bank of England Working Paper No. 362.

Detragiache, Enrica and Antonio Spilimbergo. 2001. Crises and Liquidity: Evidence and Interpretation. IMF Working Paper No. 01/2. International Monetary Fund.

Duffie, Darrell. 2020. “Is there a Case for Banning short Speculation in sovereign bond markets? Banque de France Financial Stability Review, No. 14, July 2010.

Eaton, Jonathan, and Mark Gersovitz. 1981. “Debt with Potential Repudiation: Theoretical and Empirical Analysis.” *Review of Economic Studies*, 48(2): 289-309.

Eaton, Jonathan. 2002. “Standstills and an International Bankruptcy Court.” Unpublished Paper, New York University.

ECFIN. 2004. “Implementation of the EU commitment on Collective Action Clauses in documentation of International Debt Issuance” Available at http://europa.eu/efc/sub_committee/pdf/cacs_en.pdf

Eichengreen, Barry, and Ashoka Mody. 2000. “Lending Booms, Reserves and the Sustainability of Short-term Debt: Inferences from the Pricing of Syndicated Bank Loans.” *Journal of Development Economics*, 63(1): 5–44.

Eichengreen, Barry and Ashoka Mody. 2004. "Do Collective Action Clauses Raise Borrowing Costs?," *Economic Journal*, 114(495): 247-264.

Eichengreen, Barry, and Richard Portes. 1989. “After the Deluge: Default, Negotiation, and Readjustment during the Interwar Years.” In *The International Debt Crisis in Historical Perspective*, ed. Eichengreen, B. and Lindert, P.H., 12-47. Cambridge, MA: MIT Press.

Eichengreen, Barry, and Richard Portes, 1995, *Crisis? What Crisis? Orderly Workouts for Sovereign Debtors*. London: Centre for Economic Policy Research.

Enderlein, Henrik, Schumacher, Julian and Christoph Trebesch, 2011. ”Sovereign Debt Litigation” Unpublished Paper. Hertie School of Governance.

Enderlein, Henrik, Trebesch, Christoph and Laura von Daniels. “Sovereign Debt Disputes: A Database on Government Coerciveness during Debt Crises“ forthcoming, *Journal of International Money and Finance*.

Engelen, Christian and Johann Graf Lambsdorff. 2009. "Hares and stags in Argentinean Debt Restructuring," *Journal of International Economics*, vol. 78(1), pages 141-148.

European Council. 2011. European Council Conclusions, 24/25 March 2011. http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/120296.pdf

Erce, Aitor and Javier Díaz-Cassou, 2010. "Creditor Discrimination During Sovereign Debt Restructurings." Banco de España Working Papers 1027, Banco de España.

Escolano, Julio. 2010. “A Practical Guide to Public Debt Dynamics, Fiscal Sustainability, and Cyclical Adjustment of Budgetary Aggregates.” IMF Technical Notes and Manuals, Fiscal Affairs Department, Washington D.C..

Federal Ministry of Finance, Germany. 2004. “Erklärung der Bundesregierung zur Zulässigkeit von Umschuldungsklauseln bei ausländischen Staatsanleihen, die deutschem Recht unterliegen“ Berlin, 14. Januar 2000. Available at http://www.bundesbank.de/download/presse/pressenotizen/2000/20000214bbk2.pdf

Finger, Harald and Mauro Mecagni. 2007. "Sovereign Debt Restructuring and Debt Sustainability: An Analysis of Recent Cross-Country Experience," *IMF Occasional Paper* 255, Washington D.C..

Fisch, Jill E. and Caroline M. Gentile. 2004. “Vultures or Vanguards?: The Role of Litigation in Sovereign Debt Restructuring.” *Emory Law Journal*, 53, pp. 1043-1113.

Fissel, Gary, Goldberg, Lawrence and Gerald Hanweck. 2006. "Bank portfolio exposure to emerging markets and its effects on bank market value," *Journal of Banking and Finance*, 30(4): 1103-1126

Fitch. 2009. “International Public Finance. 2009 Transition and Default Study” Report of March 26, 2010.

Fitch. 2010. “Contagion, Support and Euro Area Sovereign Ratings” Report of December 9, 2010.

Fuentes, Miguel and Diego Saravia. 2010. “Sovereign Defaulters: Do International Capital Markets Punish Them?" *Journal of Development Economics*, 91(2): 336–347.

Gapen, Michael, Gray

Honohan, Patrick and Luc Laeven, 2005. *Systemic Financial Crises*. Cambridge University Press.

Hornbeck, Jeff. 2010. "Argentina's Defaulted Sovereign Debt: Dealing with the 'Holdouts'" Congressional Research Service. Available at: http://fpc.state.gov/documents/organization/142740.pdf

Hu, Henry, and Bernard Black, 2008. "Debt, Equity, and Hybrid Decoupling: Governance and Systemic Risk Implications." *European Financial Management*, 14: 663-709.

IIF. 2001. "Survey of Debt Restructuring by Private Creditors." Institute for International Finance, Washington, DC.

IIF. 2006. "Principles for Stable Capital Flows and Fair Debt Restructuring in Emerging Markets: Report on Implementation by the Principles Consultative Group." Institute of International Finance, Washington, DC.

IIF. 2010, "Principles for Stable Capital Flows and Fair Debt Restructuring: Report on Implementation by the Principles Consultative Group." Institute of International Finance, Washington, DC.

IMF. 1999. "IMF Policy on Lending into Arrears to Private Creditors." International Monetary Fund, Washington, DC.

IMF. 2000. "International Capital Markets: Development and Prospects." International Monetary Fund, Washington, DC.

IMF. 2001a. "Official Financing for Developing Countries." International Monetary Fund, Washington, DC. Available at http://www.imf.org/external/pubs/cat/longres.cfm?sk=14803.0

IMF. 2001b. "Involving the Private Sector in the Resolution of Financial Crises - Restructuring International Sovereign Bonds." International Monetary Fund, Washington, DC. Available at http://www.imf.org/external/pubs/ft/series/03/IPS.pdf

IMF. 2002a. "The Design and Effectiveness of Collective Action Clauses" International Monetary Fund, Washington, DC. Available at http://www.imf.org/external/np/psi/2002/eng/060602.htm

IMF. 2002b. "Assessing Sustainability." International Monetary Fund, Washington, DC. Available at http://www.imf.org/external/np/pdr/sus/2002/eng/052802.pdf

IMF. 2002c. "Sovereign Debt Restructurings and the Domestic Economy Experience in Four Recent Cases" International Monetary Fund, Washington, DC. Available at http://www.imf.org/external/NP/pdr/sdrm/2002/022102.pdf

IMF. 2002d. “Fund Policy on Lending into Arrears to Private Creditors: Further Consideration of the Good Faith Criterion.” Available http://www.imf.org/external/pubs/ft/privcred/073002.pdf.

IMF. 2003a. “Reviewing the Process for Sovereign Debt Restructuring within the Existing Legal Framework.” International Monetary Fund, Washington, DC. Available at http://www.imf.org/external/np/pdr/sdrm/2003/080103.htm

IMF. 2003b. “Sustainability Assessments—Review of Application and Methodological Refinements” International Monetary Fund, Washington, DC. http://www.imf.org/external/np/pdr/sustain/2003/061003.htm

IMF. 2005. “Information Note on Modifications to the Fund’s Debt Sustainability Assessment Framework for Market Access Countries.” International Monetary Fund, Washington, DC. Available at http://www.imf.org/external/np/pp/eng/2005/070105.htm

IMF. 2008. “Staff Guidance Note on Debt Sustainability Analysis for Market Access Countries” International Monetary Fund, Washington, DC. Available at http://www.imf.org/external/np/pp/eng/2008/070308a.pdf

IMF. 2011a. “Eastern Caribbean Currency Union: 2010 Discussion on Common Policies of Members Countries—Staff Report”. Available at www.imf.org/external/pubs/ft/scr/2011/cr1130.pdf
IMF. 2011b. “Modernizing the Framework for Fiscal Policy and Public Debt Sustainability Analysis”. International Monetary Fund, Washington, DC (forthcoming).

IMF and World Bank. 2006. “Heavily Indebted Poor Countries Initiative (HIPC) and Multilateral Debt Relief Initiative (MDRI). Status of Implementation.” Available at http://www.imf.org/external/pp/longres.aspx?id=3887

IMF and World Bank. 2009. “Heavily Indebted Poor Countries Initiative (HIPC) and Multilateral Debt Relief Initiative (MDRI). Status of Implementation.” Available at http://www.imf.org/external/pp/longres.aspx?id=4365

Jeanne, Olivier. 2009. "Debt Maturity and the International Financial Architecture,"

Kaiser, Jürgen. 2010 “Resolving Sovereign Debt Crises. Towards a Fair and Transparent International Insolvency Framework” FES Working Paper, September 2010

Karafiath, Imre, Mynatt, Ross and Kenneth L. Smith. 1991. “The Brazilian default

Lipworth Gabrielle, Nystedt Jens, 2001. “Crisis Resolution and Private Sector Adaption”. IMF Staff Papers 47: 188-214.

Liu, Yan 2002. “Collective Action Clauses in International Sovereign Bonds” August 30, 2002. Available at http://www.imf.org/external/np/leg/sem/2002/cdmfl/eng/liu.pdf

Love, Inessa, Preve, Lorenzo A. and Virginia Sarria-Allende, 2007. "Trade Credit and Bank

Moody's. 2010. "Sovereign Default and Recovery Rates, 1983-2009." Report of April 2010.

Morgan Stanley. 2011. "Sovereign CDS: Credit Event and Auction Primer" Report of May 31, 2011.

Musumeci, James and Joseph Sinkey. 1990. "The International Debt Crisis, Investor Contagion, and Bank Security Returns in 1987: The Brazilian Experience," *Journal of Money, Credit and Banking*, 22(2): 209-20.

Oechsli, Christopher G. 1981. "Procedural Guidelines for Renegotiating LDC Debts: An Analogy to Chapter 11 of the

Sachs, Jeffrey. 1995, “Do We Need an International Lender of Last Resort?” Frank D. Graham Lecture at Princeton University, Vol. 8, April 20. Available at h*ttp://www.earth.columbia.edu/sitefiles/file/about/director/pubs/intllr.pdf*

Salmon, Felix 2004. “Stop selling bonds to retail investors” Unpublished Paper. Georgetown University.

Sandleris, Guido. 2008. “Sovereign Defaults: Information, Investment and Credit.” Journal *of International Economics*, 76(2): 267–275.

Schwarcz, Steven L. 2000. “Sovereign Debt Restructuring: A Bankruptcy Reorganization Approach,”

Trebesch, Christoph. 2008. “Delays in Sovereign Debt Restructurings.” Unpublished Paper. Free University Berlin.

Trebesch, Christoph. 2010. “Sovereign Default and Crisis Resolution.” Dissertation. Free University Berlin.

Trebesch, Christoph. 2011. “Sovereign Debt Restructurings 1950-2010: A New Database.” Unpublished Paper. University of Munich.

Unal, Haluk, Demirguc-Kunt, Asli and Leung Kwok-Wai. 1993."The Brady Plan, the 1989 Mexican debt reduction agreement, and bank stock returns in the United States and Japan," *Journal of Money, Credit and Banking,* 25(3): 410-29.

Van Rijckeghem, Caroline, and Beatrice Weder. 2009. “Political Institutions and Debt