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Debt resolution processes for sovereign debt - current policy issues

Some reflections

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Introduction

The recent political and institutional backdrop to the Sovereign Debt Resolution Mechanisms (SDRM) discussion

Over the last few years, sovereign debt restructurings have often been difficult and somewhat disorderly. Agreement on how to best undertake such restructuring and involve the private sector in the process has also been elusive. However, support for a market-oriented contractual approach to debt restructuring has recently gathered considerable momentum while the statutory approach to sovereign debt resolution continues to be challenged by the private sector.

Currently both the contractual and statutory approaches are being pursued in parallel. The US Treasury has been one of the major forces in promoting the contractual approach while the IMF is moving the statutory approach forward.[1] The **statutory** approach would provide a final settlement agent the power to bring any disputes about sovereign debt between the debtor country and private debtors to an end by a legally binding adjudication.

A working group of the G10[2], established in June 2001, has been working on the legal provisions underlying the **contractual** approach. The remit of the Group is to make concrete drafting proposals or arrive at underlying principles for model clauses which would pave the way for a level playing field for all sovereign debt restructurings under all legislations where sovereign bonds are issued. Obtaining ownership on the part of both debtors and creditors is key to the adoption and activation of Collective Action Clauses (CACs). To this end, a well-designed framework in terms of appropriately balanced debtor and creditor roles would be critical and should in itself facilitate the adoption and implementation of the legal provisions in a voluntary manner, as it would be in the interest of both parties.

Part I provides a brief review of the current thrust of policy, i.e. the motivation behind current efforts. Part II elaborates the broad consensus that has emerged on moving forward but also shows some of the further challenges ahead. Part III looks at some of the issues of CACs, while Part IV attempts to summarize the status of the SDRM discussion. This is followed by a Summary.

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[1] More recently, the idea of a third road has been launched by Claude Trichet (Governor of the Banque de France) and others (see Banque de France, Financial Stability Review, November 2002, p.23). This avenue of a "Code of Good Practices" is not covered in this paper.

[2] This Group was called the Quarles Group named after Randal Quarles of the US Treasury.

I. The nature of the underlying problem and a possible solution

Difficulties in achieving an orderly sovereign debt workout in recent years derive from both administrative/behavioural as well as economic/legal aspects. A vast and diverse creditor base for sovereign debt has made collective decisions administratively difficult due to coordination problems; a situation often referred to as a collective representation problem. In addition, and sometimes not independently, there are behavioural problems or what are generally referred to as collection action problems. These generally occur when there is a difference between individual (private) and collective (social) returns related to a given course of action. The main economic issue is in how markets will value CACs[3]. Individual emerging market issuers are hesitant in adopting these clauses, as they fear potential first mover costs. The key legal issue is to craft clear procedures that cannot easily be undermined legally.

In suggesting solutions for sovereign workouts, analysts have drawn on the analogy with corporate bankruptcy, where the framework attempts to maximise the value for all interested parties, and thus prevent the wider economic costs of a disorderly workout. The proposed contractual approach framework would allow for differences between a firm and a sovereign, and - analogous to maximising the ex-post value of assets in the corporate workout - would aim to enhance the ex-post income and growth prospects for the debtor country. It would also attempt to encourage the adherence to the ex-ante provisions of the contract. Collective action clauses would play a useful role as an integral part of such a framework.

Insolvency procedures only exist according to national legislations. Insolvency procedures for sovereigns are undefined worldwide. The SDRM is an attempt to plug this gap. As we are dealing here with sovereign states, which will continue to exist, and as any collateral, like in domestic bankruptcy procedures, may not be seized domestically, there is a need to have some basic understanding of how a default of a sovereign borrower should be dealt with. A major impetus to move the SDRM decisively forward is due to a series of key speeches of Anne Krueger, Deputy General Manager of the IMF starting toward end 2001. She proposed a two-pronged approach the statutory and contractual approaches to bankruptcy of a State. This initiative was broadly supported by the G7 as well as the G10.

The Deputy Governors of the G10 were asked to spearhead the effort on the **contractual** front. The G10 set up a Working Group on Contractual Clauses in June 2002 and the first public statement of the work of this group was reflected in the 27 September 2002 Communiqué of the G10 Ministers and Governors.[4]

What is the logic and work behind this Communiqué? Today there is less discussion about the question of why we need CACs but the emphasis has shifted to equity and fairness towards all the parties involved in potential bankruptcy, that is official debtors, private creditors, the markets and the official sector and how such procedures could be crafted. It is widely accepted that CACs are a market based instrument for overcoming obstacles to debt rescheduling and there is a wide ranging consensus that such clauses should become the global market standard.[5] It is widely accepted that holdout rogue creditors should not be permitted to hold countries to ransom (see Box 2).

The Group of Ten released a "Report of the G-10 Working Group on Contractual Clauses" to the Ministers and Governors of the G10 countries and the same Reports was also discussed informally by the G10 plus Brazil, China, Korea, Mexico, Poland, Russia and Turkey.[6]

II. Broad agreement on underlying motivation

The motivation for moving these initiatives forward are based on (1) underlying changes that have taken place in world capital markets, in particular widespread/diffused holding of sovereign bonds; (2) the realisation that the time lags involved in restructuring foreign debt are too long and thus costly for

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[3] This paper does not deal with the exact nature of CACs (the 'required' legal covenants) but only alludes to what CACs are aimed at achieving.

[4] See Annex I.

[5] Ackermann (2002).

[6] India had also been asked to participate. However, as this informal meeting was taking place at fairly short notice during the IMF meetings in Washington in September 2002, the Indian delegation was unable to attend due to earlier arrangements.

debtors and creditors and that underlying resolution processes have been opaque and disorderly; (3) legal uncertainty where and who is able to litigate worldwide as reflected in the fact that rogue creditors have been able to implicitly hold some debtors to ransom.

1. Capital markets have become the principal source of external finance for emerging market economies. While the 1980s may be called the era of syndicated loans, the beginning of the 1990s saw a shift to increased bond issuing by sovereign borrowers, a tendency which was reinforced with the beginning of the Mexican crisis in late 1994 and the subsequent Asian and Russian crises in 1997-98. These crises led to a reduction of bank lending to emerging markets generally and boosted borrowing by bonds. There was thus a fundamental shift in emerging market debt away from syndicated loans towards bonds. The issuance of sovereign foreign debt in terms of bonds has led to a worldwide holding of this debt by institutional as well as diversified retail bondholders. While such diversified holdings are perfectly sensible from an a diversified portfolio point of view, i.e. from the investors' perspective, they are also generally desirable from the debtor's point of view as is becomes easier to place new debt to a broader investor base and as diversification may lead to desirable liquidity in these markets thus avoiding erratic price swings in these instruments.

If these international bond markets for sovereign debt are to play this international financing role, there must be an effective means to deal with debt distress. Without such a process one important route of financing may be seriously constrained for any sovereign borrower, be it an industrial or emerging market issuer. Orderly workouts of sovereign debt would thus be a desirable underpinning for both parties. Orderly essentially refers to an efficient bundling of claims, rules that clearly specify who is to represent the interests of the creditors and some consensus where litigation is to take place.

The aim of the process is thus to arrive at an orderly and timely resolution of sovereign debt restructuring in default for all bondholders for bonds, which are subject to legislation other than their own.

2. Recent restructurings have invariably been messy and somewhat protracted. Due to the long time lags involved and also the associated uncertainty with regard to the question of the finality of the settlement, bankruptcy procedures have imposed large economic and legal costs on debtors and creditors. While there are only a few sovereign bonds restructuring cases, they all have suffered from various degrees of disorderliness due to underlying legal uncertainty. The most blatant case of the intervention of rogue creditors has been in settling the debt of Peru (see Box 2). There is some early evidence that the move towards CACs has helped in the case of the Ukraine.

3. The current **legal underpinning** is different. Sovereign bonds are traditionally only offered in a few markets (mainly N.Y, London, Germany, France, Luxembourg and Japan).

Especially sovereign bonds issued under N.Y. law are currently different from those issued in other jurisdictions as covenants of the US bonds do permit the individual bondholder to hold out against all other bondholders. Quite a few countries have issued bonds under NY law during the last twelve years (Table 1). The US Trust Indenture Act of 1938 enshrined the legal right of the individual to litigate, a right that could not be rescinded by legal covenants. While the Trust Indenture Act was to apply to domestic debt it was also traditionally (that is by standard market practice) implanted in foreign debt issues under NY law. Under current proposals, the U.S. is about to make a major move by allowing majority representation and action rules in sovereign bonds issued in N.Y.

Table 1 about here

However, the aim of the initiative on contractual clauses is in the limit to achieve more: to harmonise or standardise as far as possible the legal contractual texts in all sovereign bonds in all major legislations. Such clauses would be an attempt to move toward a level playing field in a debt resolution crisis for all sovereign bonds[7] by reducing legal uncertainty and by providing for equitable processes and procedures in debt resolution. In moving ahead, the "new" legal covenants will lean on current established market practice, especially in London.

III. Inside CACs: economic, legal and political issues

During 2002 there were noticeable shifts. While at the beginning of the year there was much resistance to including CACs in sovereign bonds, some consensus seemed to emerge in the private

[7] There have also been early discussions whether other instruments like syndicated loans might be subject to similar covenants.

as well as official sector by about the September 2002 IMF meetings that such clauses could be beneficial to debtors and creditors, i.e. a positive sum game.

a. Economic issues

The **economic dimension** has been one of the serious stumbling blocks. This dimension is primarily concerned with the question: Are CACs costly? This section will review the available evidence. Will markets adopt CACs?

While CACs may not change the probability of default, as this is primarily the characteristic of the issuer, it would facilitate quicker and more orderly debt restructuring. During the restructuring process therefore the recovery value should be higher for bonds with CACs.[8] Whether the above arguments hold some merit can only be tested by empirical investigation. Recent studies consistently conclude that there are no additional costs involved from the inclusion of CACs but that there may be additional net benefits (see Box 3).

The thrust of the cost arguments is quite clear: there are no first mover disadvantages but there are probably first mover advantages. This will be the overriding consideration by Finance Ministries/Treasuries when considering CACs. The CAC route should thus appeal to the enlightened self-interest of lenders and investors. Accordingly, the tone of the comments by emerging market issuers and the (primary) market makers has become much more conciliatory as the nature of the underlying CACs is becoming clearer and better explained and as the underlying paradigm has been shifting over time from concerns about costs to the potential benefits to be reaped.

Bond markets[9] are by their very nature heterogeneous. This is mainly because the underlying product is not very standardised, and so the international bond markets are still quite segmented. The bond markets for sovereign debt of emerging markets are perhaps even less homogeneous[10] and bond characteristics may change from one issue to the next. In fact the markets for sovereign debt are segmented along a variety of lines as sovereign borrowers issue debt in a range of legal jurisdictions, using a variety of instruments, to a diverse and diffuse group of creditors.

CACs at issue of sovereign debt

According to market makers in sovereign debt, the question of including CACs or not has not been relevant in selling sovereign bonds.[11] This seems to imply that the value of CACs thus far has been considered negligible. Issuers and underwriters in selling sovereign bonds have thus tended to be indifferent towards inclusion of CACs or they have been negative as they are unable to assess the value of CACs at issue. Because of the current uncertainly regarding CACs in future bond contracts one might even argue from a point of view of risk aversion that the range of outcomes, as some instruments may include CACs and others not, may have widened the probability distribution of future negotiation outcomes and this may have increased the risk. Admittedly, this latter argument might be a temporary phenomenon. If the sovereign borrower were quite indifferent towards inclusion of CACs, then the intermediary will probably also not raise the question of inclusion of CACs at issue. However, current evidence does not vindicate such arguments as is shown later.

CACs during default

A different market scenario may arise just before or during restructuring. In historical sovereign debt restructurings thus far a country will default on its sovereign bonds regardless of whether the bonds include CACs or not. It appears thus that the probability of default will be the same with and without CACs for the same issuer. The probability of default is unlikely to be different for the same sovereign borrower under the impact of either no differentiation between sovereign bonds on account of CACs during restructuring or due to the existence of acceleration clauses. Recent history of sovereign debt restructuring has not provided any firm indication that CAC have indeed provided all the benefits during restructuring. This is partly due to the fact that some of the restructured debt included CACs

[8] Current pricing differences of Argentine bonds seem to hinge on concepts of liquidity (size of issues) and currency.

[9] While the following is focused on loans, the motivation for CACs is to be applied to all sovereign debt (instruments).

[10] As the number of sovereign issuers is relatively small, the move towards a common CAC platform appears to be potentially easier.

[11] See Becker et al. (2001 and 2002).

and other parts did not (Argentina is currently a case in point). As restructuring tended to encompass both types of instruments, benefits of including CACs in sovereign bond contracts have thus far been muted.

b. Legal issues

Next to the economic issues in introducing CACs, arriving at legal clauses in the major legislations where sovereign bonds are issued has not been accomplished. A lot of progress has already been made by involving private sector lawyers of all the major jurisdictions in the formulation of the CACs. The aim is to provide clauses that are fair to debtors and creditors and contain multiple litigations. The clauses are thus to meet the following requirements:

- To foster early dialogue, co-ordination and communication among creditors and a sovereign experiencing debt problems;
- To ensure that there are effective means for creditors and debtors to re-contract, without a minority of debt-holders obstructing the process; and
- To ensure that disruptive legal action by individual creditors does not hamper a workout that is underway (see Box 1).

The envisaged contractual clauses would make possible a restructuring agreement that was binding on all bondholders. The clauses would also be quite clear on who is allowed to litigate, providing legal certainty.

c. Political and other issues

The political dimension is understandably multifaceted. Who has and who is going to introduce these clauses? Canada and the UK have included CACs in their bond issues for some time now without any noticeable impact on pricing. EU Member States announced in September 2002 that they intend to include appropriate contractual provisions in their new government bonds to be issued under foreign jurisdiction.[12] (See Table 1)

The following challenges may hamper faster progress in introducing CACs for sovereign bonds issued in major markets:

First, the process at arriving at fairly standard CACs in terms of definite/final formulations that are valid in all major legislations (France, Germany, Japan, Luxembourg, United Kingdom, United States) is not yet finished.

Second, even if there were such clauses, these were only introduced over time and the old large stock of sovereign debt would be without such clauses. The data in Table 2 may provide some indication of the time frame involved. Similarly, CACs only apply to one issue of homogeneous bonds. A country has usually several classes of bonds outstanding and the question whether or not the calling upon the CACs in one-bond issues affects the others is largely unresolved (i.e. the question of accelerating clauses).[13]

Table 2 about here

Third, many emerging economies and some market participants still fear that there may be costs involved or that they may provide a greater incentive to default when introducing CACs. While this may contradict the facts and current empirical evidence, poor communication or fear alone may act as a deterrent. The challenge is to ensure that emerging market economies are actively involved in moving this process forward (to ensure ownership). CACs will have (to continue to be) adopted by some larger emerging market economies as several industrial economies have already led by example.

Fourth, CACs may prove a toothless tiger if something like a bankruptcy court may not be threatening in the end. The big stick may have to be somewhere, especially if both debtor and creditors conclude in negotiations that it might be better to hold out as the "official international community" may come to the rescue. Or, we may come up with other mechanisms, which will effectively cope with the current motivations for introducing CACs. The challenge to bind the progress on CACs or on the statutory

[12] Wall Street Journal *Finance Ministers in Europe Back New Bond Clauses*, 9 September 2002.

[13] The group of eminent lawyers elaborating CACs proposes that majority be counted across instruments no broader than individual issuances of sovereign bonds so that each issue would have its own majority.

SDRM approach in consistently with the evolutionary thinking on lender of last resort, bailing in the private sector, early intervention and assessments of debt sustainability remains.

IV. SDRM - taking stock

The progress on the statutory approach to SDRM faces a long time horizon especially as national legislatures will have to adopt it. At this point in time it is still an avenue, which is actively pursued by the IMF, and further work has been endorsed by the G7 and the G10. For many there is no contradiction in pursuing a contractual, market oriented approach and a more rigorous statutory approach. The two approaches are not opposed but one should perhaps continue pursuing more vigorously the contractual approach, as the statutory approach is a longer-term proposition given the complications that its implementation would entail. The CAC approach and the statutory SDRM are thus not seen as being mutually exclusive but complementary.

Involvement in producing a set of standard CACs worldwide and perhaps the threat of a more incisive statutory approach have led to a much more positive attitude by the private investment community in the course of 2002 towards CACs.[14]

The IMF has over time modified and further elaborated its view on the SDRM. The private sector remains sceptical due to the fact that the IMF will keep its preferred creditor status in resolution, that the SDRM might reduce the prospects of large financial support in case of future crises and that the underlying question of debt-sustainability remains large unresolved.[15] Furthermore, also the threat of loss of business as fees may be lost in bond workouts reinforces opposition by some underwriters and investors.

It is also not quite clear which sovereign debt should be subject to the SDRM mechanism and whether there should by a hierarchy of claims (priority): exclude IMF and World Bank claims (due to preferred statue), exclude also the bilateral official claims as they are currently effectively dealt with by the Paris Club, exclude or give priority to claims based on short-term trade credit and include domestic debt claims as well? Are certain other short-term financial claims for liquidity reasons to be dealt with outside the SDRM mechanism? Is there a fairly clear concept of sovereign debt in particular as sub-government issuers come in different cloaks (e.g. states/districts, municipalities, quasi government institutions...).

There are, however, also a range of strong arguments in favour of the statutory (compared with the contractual approach) as it explicitly addresses the problem of the outstanding stock of all debt, as it would better facilitate aggregate voting across instruments (it aggregates creditors), while preserving seniority of certain private claims. It might also provide a mechanism for a super majority of creditors to vote to subordinate their claims to new money enabling the private sector to participate in ways that so far had not been possible. Furthermore, the process of resolution itself would become more transparent and standardised for all countries and perhaps also more equitable.

It is also clearly argued that the treat of a more official SDRM may induce cooperative behaviour by the debtor and the creditor in the “shadow of the law”, i.e. before the actual SDRM process is being started. The SDRM is only a means at the end of an impasse that should only exceptionally occur.

Summary (to be redrafted)

Progress on the current worldwide debate on contractual and statutory approaches to improving resolution mechanisms of sovereign debtors in default will not be easily forthcoming. As sovereign financial crises will continue to occur a better understanding of processes and procedures involved may hopefully result in less output lost to the debtors and also a better restructuring deal for the creditor (a positive sum game for the parties involved). Market mechanisms will be part of the process, as the official sector will aim more at avoiding any moral hazard issues. Current proposals are not seen as the futile search for the Holy Grail or a silver bullet that could provide clockwork like solutions to sovereign financial restructuring. Be reminded that this paper only dealt with issues in sovereign

[14] In the US this is notable in the formation of the “Gang of Six”, the Emerging Markets Creditors Association (EMCA), Emerging Markets Traders Association (EMTA), the Institute of International Finance (IIF), the Institute of International Primary Market Association (IMPA), the Securities Industry Association and the Bond Market Association (see International Financial Review, 5 October 2002).

[15] Euromoney, SDRM finds few friends in the markets, November 2002.

debt resolution while issues of prevention and prediction should probably much higher on the international agenda. Governor Ortiz of Mexico has frequently remarked that it is much more important to have an efficient emergency ward when a patient arrives at the hospital than take pains of treatment when he is ion the morgue.

The progress on developing contractual clauses has been very substantial and such clauses could be included in some emerging market debt during 2003. To implement some statutory approach will take substantially longer.

As it is widely accepted that collective action clauses are a useful means of dealing with rogue creditors and more generally as there are benefits to be gained by debtors and creditors as the debt resolution process becomes more transparent and efficient as well as equitable, the G10 will pursue making further progress on the contractual approach to sovereign debt workout mechanisms. Obviously this is only possible with close involvement of sovereign debtors and market participants.

Table 1

Sovereign bond issues in New York by country, 1991-September 2002

Asia	China, Indonesia (Kazakhstan), Korea, Malaysia, Philippines, Thailand
Europe (EU)	Austria, Finland, Greece, Iceland, Ireland, Italy, Portugal, Spain, Sweden
Central and South Americas	Argentina, Barbados, Belize, Bermuda, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Grenada, Guatemala, Jamaica, México, Panamá, Peru, Trinidad & Tobago, Uruguay, Venezuela
Other countries	Bulgaria, Canada, Egypt, Hungary, Israel, Lebanon, Poland, Qatar, South Africa

Source: Bondware

Table 2

Sovereign[1] bond issues by emerging markets under various governing laws, end-September 2002

Laws	Amounts (billions of US dollars)	Average maturity[2]
New York	135.3	10.5
English	58.8	9.6
German	33.7	7.7
Japanese	19.8	6.9

[1] Central governments.

[2] Average term weighted by size of issue.

Source: Bondware

Box 1: Recent Sovereign Bond Restructurings

Sovereign bond restructuring was important recently e.g. in Russia, Pakistan, Peru, Ukraine and currently in Argentina. The role of CACs/no CACs is particularly illuminating in three cases: Ukraine, Peru and Argentina.

In **Ukraine** in 2000 the threat of a more orderly resolution and in particular a better co-ordinated approach by the creditors led the sovereign debtor to pre-empt such a move by creditors and a well argued and well marketed exchange offer was accepted by the bondholders. That is the potential threat of CACs led to an exchange offer, which was accepted by the bondholders.

The case of **Peru** in 2000 has been reviewed widely (see Box 1) and demonstrates that a country can be held to ransom by some holdout minority in restructuring. This case has been called upon repeatedly to justify collective action clauses, which bind a minority to majority action and preventing hold out creditors to upset the process of restructuring.

In the current **Argentine** crises, some Argentine bonds have CACs others not. A look at outstanding bonds by Argentina subject to New York or English law revealed no difference in pricing. A preliminary look at bond prices revealed, of course, difference in prices but these could be attributed either to the size of the issue and more or less liquid markets and/or the currency of issue. For example, there appeared a slight premium on issues in Italian lira.

The financial crisis in Argentina, however, which involves a large number of bonds that are issued under different jurisdictions and which are spread over numerous creditors, underscores the relevance of the current process of including so-called collective action clauses (CACs) in sovereign bonds by ensuring that creditors are dealt with fairly ensuring inter-creditor equity.

Box 2: Elliot Associates vs. Peru

In 2000 LP Elliot Associates obtained an order from the Brussels Appeals Court preventing Euroclear from accepting payment or paying out cash from Peru to discharge the interest due on its Brady bonds. This order was granted without the defendants, Euroclear and Peru, being given the opportunity to present their counter arguments. It was based on a broad interpretation of the pari passu provision. According to this interpretation, Peru could not make interest payments on its restructured sovereign debt (Brady bonds) without at the same time paying holdout creditors (Elliott). Instead of challenging the decision of the Belgian court, Peru decided to settle with Elliot in order to avoid being forced to default on its Brady bond payments being made through Euroclear.

2. This case raises a number of issues. One of the most important is the threat it poses to the orderly workout of sovereign debt problems If holdout creditors are able to use the pari passu clause to induce debtors to pay them in full, other creditors will be reluctant to reach agreement with a debtor on restructuring terms that will make the debt sustainable. Another is the risk that payment systems could be disrupted when holdout creditors seek to enforce their claims.

3. There are a number of avenues for solving this problem. A first avenue would be to achieve a more definitive interpretation of the *pari passu* clause, through a legal opinion, an amicus brief or a declaratory judgement. A second possibility would be to modify national legislation on settlement systems, in order to forbid any freezing of accounts held within the books of settlement systems or of settlement systems' cash correspondents. And a third solution would be, through Collective Action Clauses (CACs) or the establishment of a Sovereign Debt Restructuring Mechanism (SDRM), to make it impossible for minority creditors to hold out in a debt restructuring agreed upon by a required majority.

Box 3: Recent Empirical Studies on the Costs of CACs

While the econometric evidence cannot be definitive in this matter, there is a growing literature that confirms that the introduction of CACs will have no direct negative impact on emerging market borrowing costs. Indirectly, by promoting market depth and continuity, it can be expected to improve the flow of finance and lower risk premia.

Tsatsaronis (BIS, 1999) using regression analysis proxies CACs in bond markets by comparing sovereign bond yield spreads for bonds with (UK) and without (US) CACs. He concludes, "The results suggest that while the flexibility in the renegotiation process afforded by the governing law of international sovereign bonds may give rise to higher spreads, this influence is not very systematic".

Eichengreen and Mody (1999, 2000) using multinomial logit approach note that the impact of contract structure is discernible only when borrowers are disaggregated by credit quality. They find that "more credit-worthy emerging-market borrowers value their capital markets access and are unlikely to walk away from their debts. For less credit-worthy borrowers, in contrast, the presence of collective-action clauses significantly aggravates moral hazard and increases borrowing costs. Still, the fact that collective-action clauses allow such borrowers to restructure in a more orderly fashion is attractive to creditors. The two effects tend to work in opposite directions, resulting in a relatively small and insignificant overall impact on borrowing costs." (1999, pp. 18-19)

In a more recent paper, Eichengreen and Mody (2001) are somewhat more positive about their empirical results "... we found that opting for collective action clauses raised spreads for borrowers with low credit ratings but reduced them for borrowers with high credit ratings. The impact was particularly strong at the extremes."

In contrast, a study by Becker et al (2001, 2002) finds no evidence that the presence of collective action clauses increases primary or secondary markets yields for either higher- or lower rated issuers. It concludes that the perceived benefits from easier restructuring are at least as large as any costs from increased moral hazard.

The introduction of CACs in sovereign bonds by Canada and the UK apparently had no impact on markets (in terms of yields or behaviour).

Annex I: Communiqué of the G10 Ministers and Governors, 27 September 2002

Ministers and Governors discussed procedures for the orderly and expeditious resolution of sovereign debt crises in a manner beneficial to both debtors and creditors. They stressed that crisis prevention, and sound macroeconomic policies are the first line of defence. They welcomed the progress made on both the contractual and statutory approach, and, agreed that contractual and statutory approaches are complementary and mutually reinforcing in developing effective crisis resolution procedures. They agreed that suitably crafted provisions in sovereign debt contracts would greatly enhance sovereign debt resolution and foster the orderly expansion of the market for emerging market debt.

Ministers and Governors reviewed progress made in developing, with input from market participants, provisions that would facilitate the orderly restructuring of sovereign bonds governed by the laws of the major jurisdictions. They welcomed the work of the G-10 working group on contractual clauses. They concluded that the contractual provisions should aim at: a) fostering early dialogue, coordination and communication between creditors and sovereigns, b) helping to ensure effective means for creditors and debtors to agree to restructuring, when necessary, through collective action, and c) helping to ensure that disruptive legal action by individual creditors does not hamper sovereign debt workouts underway. They welcomed the announcement of the European Union Member States that they intend to include appropriate contractual provisions in the new government bonds that they issue under foreign jurisdictions. Ministers and Governors noted the importance of making rapid progress in incorporating suitable collective action provisions in the external bonds of sovereign emerging market issuers. In that context they stressed the importance of close and collaborative work between the G-10, the private sector and the emerging market economies. The objective of this collaboration is to make it common practice to include collective action clauses in sovereign bonds issued in foreign jurisdictions.

Annex II: Pricing of bonds

This Annex takes the **pricing of bonds** calculations by Dixon and Wall (2000) one step further.

Their starting point is for a one period bond: If investors are risk neutral[16], the yield (y) on a single period risky (zero coupon) bond, may be calculated by assuming that its expected return is equal to the risk free rate, r:

$$(1 + r) = (1 - \pi)(1 + y) + \pi.\delta (1 + y)$$

$$y = \frac{r + \pi (1 - \delta)}{1 - \pi (1 - \delta)}$$

where π is the cumulative probability of default over the lifetime of a bond and

δ is the (expected) recovery rate in the event of a default defined as the fraction of the face value of the bond.

In a numerical example by Dixon and Wall the values were set as follows: $\pi = .20$, $\delta = .4$ and $r = .05$. In order to provide a better feeling for possible outcomes we looked at the results for r= .02, $.20<\pi<.0025$ and $.3<\delta<.5$. These ranges were broadly mapped from historical patterns of domestic bonds assuming for simplicity that the ranges are somewhat similar.[17] If one iterates these parameters over all the values one is led to conclude that at fairly low probabilities of default even large changes in expected recovery have very little impact on expected yield. For example, if the recovery value is expected to drop over the whole range from .5 to .3 (i.e. the face value of the bond is expected to drop from 50 per cent to 30 percent of face value) the yield will only change by 5 basis points when the expected default probability is estimated at .005.

Table: Expected changes in basis points of a bond under various assumptions

$\Delta\delta = -.20$	r = .02					r = .05				
	π					π				
	.20	.10	.05	.01	.005	.2	.10	.05	.01	.005
	530	230	105	21	5	550	237	112	21	5

It is probably unrealistic to assume a default rate of 20 percent when a sovereign bond is issued. In such case the price of the bond would be too low and the rating too low to permit placement (one could, of course, envisage many sovereign bond issues at junk bond levels). Yet even at an expected default level of 10 per cent. the massive expected decrease in the recovery value would require the expected yield at issue to be higher by around 230 basis points.[18] At lower levels of changes in the expected recovery value, the impact would still be there but likely not be as discernible. On the basis of these calculations and on the basis of the assumption that CACs indeed shorten the time to resolution (during which period bond prices generally fall), we might posit that CACs lower required yields at issue.[19]

[16] The risk neutrality assumption may always be challenged.

[17] These ranges were chosen as the underlying parameters change over time. Of course the assumption of risk neutrality is somewhat weak.

[18] The table also demonstrates that the level of the risk-free rate has little impact on the following assertions.

[19] Pricing the orderliness in restructuring may also be captured by this approach. What is not captured are the legal fees due when introducing CACs as well as the (probably much larger) legal fees during restructuring.

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