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DEALING WITH DESTABILIZING 'MARKET DISCIPLINE'

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ABSTRACT

If interest rates (country spreads) rise, debt can rapidly be subject to a snowball effect, which then becomes self-fulfilling with regard to the fundamentals themselves. This is a market imperfection, because we cannot be confident that the unaided market will choose the "good equilibrium" over the "bad equilibrium". We see here a fundamental flaw in the process of market discipline. We propose a policy intervention to deal with this structural weakness in the mechanisms of international capital flows. This is based on a simple taxonomy that enables us to break down the origin of crises into three components: a crisis of confidence (spreads and currency crisis), a crisis of fundamentals (real growth rate), and a crisis of economic policy (primary deficit). The policy would seek to short-circuit confidence crises, partly by using IMF support to improve ex ante incentives.

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1. Towards efficient market discipline *ex ante*, orderly workouts *ex post*

1.1. Orderly workouts: SDRM and CACs

The widespread debt crisis of the 1980s became ‘the lost decade’ for Latin America, and the banks ultimately had to accept substantial writeoffs. The Asian crisis of 1997-98 was devastating at the time and is still not over for Indonesia. The Russian default of August 1998 was settled relatively quickly, but even quicker were the shock waves it sent out to the financial markets – with some role in the failure of LTCM, a sharp rise of all emerging market bond spreads, and the subsequent Brazilian exchange-rate crisis. Dealing with country debt crises is always very messy, often protracted and very costly to both debtor and creditors.

There are alternatives. After the Mexican crisis of 1994-95, Jeffrey Sachs (1995) proposed an international bankruptcy regime modelled on Chapter 11 of the US bankruptcy code. Eichengreen and Portes (1995) argued instead for a combination of contractual and institutional changes that would not require an international bankruptcy court. The G10 deputies issued a report in May 1996 that endorsed the latter route. Nothing was done, because the G10 left any action to the initiative of market participants. But the lenders had already expressed their opposition to any measures that would, as they put it, “make default easier”. It should instead be as “painful and messy” as possible, they said, in order to deter any violation of the sanctity of contracts.

This is one aspect of “market discipline” that we shall not explore in this paper. It is clear, however, that this argument is wrong. If the debtor perceives default as infeasible or unacceptably costly, even when an objective assessment would say it is unavoidable, then we see “gamble for resurrection”: policies with some small chance of getting out of the hole but a high probability of a failure that exacerbates the difficulties. The Argentine debt exchange in summer 2001 is an excellent example, perhaps the costliest such gamble in history. On the other hand, if default is too easy, then we do get moral hazard.

The discussions on the international financial architecture that followed the Asian crisis of 1997-98 revived the debate, but the results were the same as before: no change. The crises in Turkey and Argentina were handled in much the same way as the Asian crises – a pre-crisis period of exchange-rate rigidity, endorsed by the IMF, followed by big bailout packages when trouble came. Only the debacle and default of Argentina broke the pattern, and the consequences have been disastrous for that country, if not for the international financial system. And all these episodes have weakened the IMF and its authority.

There are now signs of serious change in the framework for crisis resolution and debt restructuring. Stanley Fischer (1999) proposed that the IMF act as international lender of last resort (ILLR). In November 2001, Anne Krueger, his successor as First Deputy Managing Director of the IMF, advocated a Sovereign Debt Restructuring Mechanism (SDRM) to facilitate a declaration of insolvency for an over-indebted country along the lines of Chapter 11 of the US Bankruptcy Code (Krueger, 2001). One institutional manifestation of the Fischer proposal is the Contingent Credit Line (CCL) facility, which would enable a country affected by a contagion crisis to draw on additional lines of credit. No country, however, has as yet made use of this facility. The proposal described in this paper has some kinship with it, but it is designed to meet a specific market failure and should be more attractive to borrowers.

The Krueger proposal has also not been implemented. Despite subsequent revisions that reduced the role of the IMF (Krueger, 2002), the SDRM would still require an international treaty or amendment of the IMF Articles of Agreement. John Taylor, US Undersecretary of the Treasury for International Affairs, had meanwhile responded with a version of the

proposals for contractual changes that had appeared in 1995-96 (Taylor, 2002). At the autumn 2002 IMF annual meetings, a ‘two-track’ approach was confirmed: further work on the SDRM, with the intention of getting to an operational proposal by spring 2003, side-by-side with efforts to make actual progress on Collective Action Clauses (CACs). But at the April 2003 meetings, the proposal was shelved, specifically because it would have required an amendment to the Articles (IMF, 2003).

Both these proposals (ILLR and SDRM) are too ambitious to constitute a realistic agenda for reform. An ILLR must have at its disposal either the resources to inject an indeterminate quantity of fresh liquidity or perfect information regarding solvent and insolvent financial intermediaries. As the latter assumption is virtually ruled out by the very nature of financial crises, the former is tantamount to giving the IMF the means to create liquidity *ex nihilo*. Such a transfer of monetary sovereignty, which was extremely difficult to implement in the European case, seems totally unrealistic on a world scale. If there is to be a world LLR, it is rather for the large central banks (Fed, ECB and BoJ) to play this role.

Anything along the lines of the Fund’s SDRM proposal is infeasible for the same political reason. Setting up an international court with authority over the handling of sovereign debt would entail a substantial transfer of sovereignty, in order to give the court the statutory basis for suspending legal procedures against a country. Nevertheless, there is no doubt that the Krueger initiative dramatically changed the terms of the discussion and at the least gave impetus to the adoption of CACs (see our discussion in Cohen and Portes, 2003).

1.2. “Market discipline” can destabilize *ex ante*

These policy developments reflect a reality that is admittedly complex in itself but which raises one simple and essential question. When financial crises erupt, the action taken by the IMF cannot ignore the underlying causes. It is not possible to treat in the same manner a country that is the victim of an unforeseeable loss of market confidence and a country where the macroeconomic indicators have long been unsatisfactory and which therefore is borrowing at abnormally high interest rates. Note that here we deal only with “emerging market” economies. Whereas their cost of capital in international markets has risen and become more volatile in recent years, the very poor countries have no market access whatsoever.

It is for dealing with situations in which a country is suffering from a lack of confidence unjustified by any major deterioration in its fundamentals that the ILLR approach would be useful. It is for dealing with situations in which the debt no longer bears a relation to the fundamentals that the procedures involving bankruptcy or debt reduction are essential. Correctly applying such a distinction is very difficult under pressure of time, when the crisis erupts. This is partly because there will always be doubts over the motives prompting investors to withdraw their confidence. The doubt regarding the nature of crises explains the risk of moral hazard. Because it is not always possible to distinguish the "good" debtors which have been unlucky from the "bad" which have continued to implement unsustainable policies, intervention by the IMF has continually swung between too much and too little. It was to circumvent these difficulties that the Meltzer Commission (2000) proposed confining the Fund's scope for action to only those countries that "pre-qualify" based on strict criteria of indebtedness and transparency. But this proposal offers nothing for the countries that would fall outside the scope of such pre-qualification, and this is hardly feasible.

Just as for orderly workouts, analytical economics offers tools for understanding and dealing with financial instability. One key reason why the distinction between confidence crises and crises of fundamentals is difficult to make is that the former often rapidly turn into the latter: if interest rates rise, debt can rapidly be subject to a snowball effect, which then becomes self-fulfilling with regard to the fundamentals themselves. This is the argument used by Williamson (2002) to characterize the Brazilian crisis: the debt is at a level made unsustainable by high interest rates but which would rapidly be brought down to an equilibrium level (recalling the government's primary surpluses) by low interest rates. Economics is familiar with such multiple equilibria: low rates represent one equilibrium, high rates another.

This is a market imperfection, because we cannot be confident that the unaided market will choose the "good equilibrium" over the "bad equilibrium". We see here a fundamental flaw in the process of market discipline. We describe a policy intervention to deal with this structural weakness in the mechanisms of international capital flows. This is based on a simple taxonomy that enables us to break down the origin of crises into three components: a crisis of confidence (spreads and currency crisis), a crisis of fundamentals (real growth rate), and a

crisis of economic policy (primary deficit). The policy would seek to short-circuit confidence crises, partly by using IMF support to improve *ex ante* incentives.

There are many differences between sovereign and corporate debt (Eichengreen and Portes, 1995; Cohen and Portes, 2003). One of the most important arises from a country's lack of transferable collateral. If its market access is blocked by a confidence crisis, then it may be endogenously obliged to default, in effect fulfilling the initial fear. Self-fulfilling debt crises are a phenomenon whose theoretical rationale has been explored in the literature (Calvo, 1988; Cole and Kehoe, 1996, 2000). The intuitive rationale is quite simple: perception of high risk raises the spread, which in turn raises the debt service burden, which in turn provokes the debt crisis. This may happen as a rational equilibrium if the fundamentals out of which a country can service its debt depend partly on its creditworthiness. If default reduces the amount that a country can service (even reduces this ability to nothing in the case of outright default), then lenders that expect that nothing will be paid do indeed get nothing. This is less likely in the case of corporate debt if default amounts, say, to changing the management of the firm. Any mechanism that is geared towards maintaining *ex post* efficiency of debt workouts is then bound to reduce the risk of a confidence crisis. In particular, a mechanism which guarantees an efficient debt write-off *ex post* can eliminate the risk of a confidence crisis (Cohen, 2003). This is one of the key advantages of an orderly workout mechanism: by guaranteeing that *ex-post* resolution of the crisis is efficient, it deters the emergence of *ex-ante* confidence crises. The proposal here offers a different way of avoiding market destabilization leading to the "bad equilibrium".

In addition to the theoretical literature on self-fulfilling debt crises, there are at least two areas of empirical work that are relevant to our story, but which we shall not explore here. First, we have a literature on whether country spreads are accurate predictions of default and recovery rates – that is, what are the *ex post* returns to sovereign debt? In fact, *in the aggregate*, and going back to the 19th century, *lenders have not mispriced* sovereign debt: the *ex post* average real rate of return is remarkably stable, at around 2-3%, for lending in the periods before 1913 (Lindert and Morton, 1990), 1920-29 (Eichengreen and Portes, 1986), and 1970-2000 (Klingen *et al.*, 2003). But the averages conceal very wide variation between large losses and high returns. Second, there are studies of the *determinants* of country spreads (*e.g.*, Kamin and Kleist, 1999; Grandes, 2003; Uribe and Yue, 2003) and the relation of spreads to

sovereign ratings (*e.g.*, Cantor and Packer, 1995, 1996; Afonso, 2003). These conclude that there is some relationship between spreads and a country's fundamentals, but it is not tight; nor is that between spreads and ratings; and global factors (like US interest rates) have a strong influence on each country's spread, independently of its fundamentals and policies.

Overall, this literature does not give a reassuring picture of how market discipline operates for individual countries, even if despite crises and defaults, lenders to sovereigns have earned approximately the risk-free rate on average *ex post*.

2. The financial crises of the 1990s are different from those of the 1980s

In the period leading up to 1982, when Mexico suspended payment on its debt, spreads were very low, rarely exceeding 200-250 basis points, as most bankers at the time thought that countries do not default. Spreads on both Mexican and Brazilian debt did rise in the few months before the debt moratoria, but the syndicated bank lending of the 1970s and early 1980s showed no signs of recollection of the 1930s. Although spreads did vary somewhat with the characteristics of the borrower, there was no perceptible market discipline. The bulk of the financial crises involved syndicated loans with very low spreads, and the average real rate of interest on sovereign borrowing in the 1970s was negative. The debt crisis of the 1980s was not anticipated by the lenders. The resolution of the crisis took several painful years, during which Latin American economies stagnated – to the point where income per capita returned to the late 1960s level, in what has often been called a lost decade.

The nature of the debt crises changed in the 1990s. The agents are now different. Corporate borrowers have joined sovereign debtors. Lenders are different, too: bondholders rather than bank loan syndicates. The 1980s story according to which high public deficits created high debt, and eventually interest rate rises brought major crises, is not the only one at hand. Confidence crises, through exchange rates or through interest rates, create new scenarios. Crises are more complex: the Asian crises, the Mexican crisis, the Russian crisis give a range of cases that are difficult to subsume under one story. Some crises were expected, some were unexpected, and quite often, in each case, for good reasons.

As examples of "foretold" crises, take the cases of Argentina and Ecuador; at the other extreme, take Korea or Mexico.

CASE 1
FORETOLD CRISES: ARGENTINA, ECUADOR
(data two years before the crisis)

	Argentina	Ecuador
D/X	380%	250%
D/GDP	36%	85%
Spreads (basis points)	623	597
Current account (% of GCP)	-5%	-11%

CASE 2
UNEXPECTED CRISES: MEXICO, KOREA
(two years before the crisis)

	Mexico	Korea
D/X	180%	76%
D/GDP	35%	25%
Spreads (basis points)	367	106
Current account (% of GDP)	-7.2%	-1.9%

From the comparison of these two cases, it is fairly clear that Argentina and Ecuador were fundamentally insolvent, at least with respect to one of the two criteria which are commonly used: debt-to-export ratio above 200% and/or debt-to GDP ratio above 50% (note, however, that it takes both indicators to anticipate a crisis, on which more later). Huge spreads were paid, and at the time when the crisis erupted, no lender could claim that it was taken by surprise. Yet despite this apparent market discipline, many lenders were taken by surprise; and the discipline of higher spreads had little perceptible effect on the policies of Argentina or its creditors. Argentina was able to borrow at excessive spreads, which simply worsened its fiscal position and exacerbated the crisis and its consequences. This is a case where a write-down of the debt is needed, in order to return as soon as possible to sustainable growth.

Case 2 is exactly the opposite. No major macroeconomic disequilibria were observable, insofar as the outstanding stocks were concerned; spreads were correspondingly low. In the case of Mexico, however, it is clear that the large current-account deficit was creating liquidity pressures. On the other hand, Korea failed by none of these criteria. Indeed, its weakness came from elsewhere, i.e. the short-term nature of its debt. As the current account demonstrates, however, there was no particular need for a major exchange rate adjustment.

CASE 3

FORETOLD CRISES WITHOUT APPARENT MACROECONOMIC DISEQUILIBRIA (two years before the crisis)

	Turkey	Russia
D/X	194%	121%
D/GDP	54%	26%
Spreads	738	800
Current Account	-0.7%	+0.7%

In Case 3, the sovereign risk pertains to the nature of the debtor. Despite good macroeconomic performance, creditors could examine the macroeconomics and perceive the

risk of defaults that the shaky government or the shaky banking system could create. The spreads were correspondingly high.

Let us summarize the discussion so far with the following table.

	High Debt	Low Debt
Low Spread	None	Case 2
High Spread	Case 1	Case 3

Compared to the 1980s, then, it does not appear to be the case that large disequilibria went unnoticed by the markets. As we now discuss, the high-debt/low-spread cell is empty. In this sense, market discipline improved.

3. Debt crises of the 1990s: a taxonomy

We present in the Appendix the list of countries which signed a program with the IMF during the nineties. We distinguish three groups of countries according to the nature of the program. Group A ("hard crises") includes all countries which have experienced one EFF (Extended Fund Facility); Group B includes all (other) countries which have experienced more than one SBA (Standby Agreement) in a row (intermediate crises); Group C includes all countries which have experienced only one SBA (short crisis).

Except for a few cases to which we shall return, the three groups behave as one would expect. Debt is high in group A, moderate in group B, low in group C. More specifically, the debt-to-GDP ratio is significantly higher in group A, where it stands at 75%, on average. In both groups B and C it is a little over 50%, which is the conventional wisdom threshold for a risk of debt crisis (see Cohen, 2002). While the debt-to-GDP ratio is a good predictor for being in A rather than in B or C, the debt-to-export ratio is instead a discriminating factor for being in B or C: it stands at 200% for group B (again, 200% is the conventional wisdom number); it stands well below on average for group C, at about 150%.

There are a few exceptions to this broad pattern. In group A we find Russia, which despite good macroeconomic data had to resort to an EFF, in the face of its inability to raise foreign funds (as reflected by the huge spread paid on the debt). Another similar story comes from Colombia, a country where internal politics and the sheer stability of the state are the critical problem, more than any macroeconomic imbalance. In group B there are a few exceptions to the rule that debt-to-GDP is high, but this is often the case with countries such as Brazil or India where it is the debt-to-export ratio which is very high (well above the 200% threshold); again this is the not-so-surprising case of relatively closed countries for which both indicators are needed to assess the overall solvency of the country. The only exception in group B is Uruguay, where both ratios are relatively low and which appears to be a *prima facie* case of contagion from the two risky neighbors. In group C Nigeria is a mirror image of Brazil or India: high debt-to-GDP but low debt-to-export, which is easily explained by the outward orientation determined by oil exports.

An additional statistic shows the share of public debt in GDP for each of the three sub groups. Public debt represents 90%, 80% or 70% in groups A, B or C.

The key to our story is the spread paid on the debt. All countries in group A and B paid high spreads well before (at least two years before) the crisis occurred. At the other extreme all countries in group C were paying low spreads even one month before the crisis exploded. Their crises were basically unpredictable, or if predicted, not expected to last very long.

We can summarize these findings so far as follows: *Major crises (types A and B) are old-style crises: high debt (in the sense of either D/GDP above 50% or D/X above 200%) and mostly public. They are predictable at least two years ahead of time.*

4. The high-spread/high-debt crisis

Let us now shed some light on the nature of the debt dynamics. The self-fulfilling story is one in which a high spread causes high debt rather than the other way around. Although this phenomenon is theoretically plausible, it is not easy to show empirically that it is indeed convincing. In order to shed some light on this debate, we have decomposed the debt dynamics into the following identity:

$$\begin{aligned} \text{Increase of the Debt-to-GDP ratio} = & \\ & \text{real interest rate} * \text{Debt-to-GDP ratio} \\ & - \text{Growth rate of the economy} * \text{Debt-to-GDP ratio} \\ & - \text{Primary Surplus/GDP} \end{aligned}$$

The real interest rate is the nominal rate (risk free rate + spread) adjusted for the deviation of the exchange rate from PPP. The dynamics are computed from 1990 up to the year of the debt crisis itself. We present this decomposition below by dividing each of the three terms of the right-hand side by the left-hand side (the sum adds to one). We reach the following results.

TABLE 1

	Interest	Growth	Deficit
Argentina	0.16	-0.51	0.33
Brazil	0.47	-0.51	0.01
Colombia	0.01	-0.99	-0.01
Korea	0.22	-0.26	0.52
Ecuador	0.42	-0.54	-0.04
India	0.35	-0.49	0.16
Indonesia	0.10	-0.73	0.17
Malaysia	-0.07	-0.49	0.44
Mexico	-0.45	-0.51	0.04
Pakistan	-0.25	-0.45	0.30
Panama	0.07	-0.40	-0.54
Papua	0.51	-0.37	0.12
Peru	0.25	-0.73	-0.02
Philippines	-0.46	-0.07	-0.47
Russia	0.50	-0.50	0.00
Thailand	-0.06	-0.33	0.61
Turkey	0.52	-0.10	-0.39
Uruguay	-0.85	0.00	0.14
Venezuela	-0.41	-0.08	-0.51
Zimbabwe	0.29	-0,50	-0,20

Each item is expressed as a fraction of the sum of absolute values.

The first term is roughly interpreted as a *confidence premium*, the second term as a measure of the underlying fundamentals and the third term as a measure of the policy choices. We see that on average, the growth component (second column) is the critical factor behind the dynamics of debt. The confidence premium factor (first column) is the second important item, while the deficit itself appears to play the least important role. This confirms, if not the self-fulfilling theory according to which the confidence term would account for all of the debt dynamics, at least the idea that confidence risks do indeed levy a substantial charge on the country's resources.

Overall we can then say that the debt crises of the nineties are a combination of three factors of equal importance: a self-sustained dimension by which the interaction of interest rates and the fiscal position (often also exchange rates) create a perverse dynamics that is in part self-fulfilling; a risk that arises from weak fundamentals; and finally a term that arises from the primary deficits and the lack of internal discipline.

This decomposition suggests three observations. Given the role of policy mismanagement in debt dynamics, early corrective devices could be quite useful in avoiding spiralling debt. That the important role of bad “fundamentals” raises the issue of the need for debt write-offs. Finally, the role of the confidence term suggests that efficient measures (taken ex ante and ex post) could alleviate the importance of that term.

5. How to prevent market discipline from creating a confidence crisis

5.1 Prequalification alone is not credible

Until very recently, the Fund could make six different types of loan: 1) the traditional Standby (SBA); 2) the SRF (Supplementary Reserve Facility) introduced in 1998; 3) the CCL (Contingent Credit Line) created in 1998 but never used and now discarded; 4) the EFF (Extended Fund Facility) created in 1975 to provide long-term help for countries whose financing problems have a "structural" cause; 5) the PRGF (Poverty Reduction and Growth Facility), the means by which the Fund helps the poor countries; 6) the CCFE, created in the 1960s and intended for countries subject to a crisis in their terms of trade that is temporary in nature (or regarded as being temporary).

The EFF was created when the financial markets were mostly inaccessible to the developing countries, even to the middle-income countries that we would now call "emerging market countries". Williamson (2001) proposed its abolition. He also argued for abolishing the CCL: countries are reluctant to use it and want to avoid signaling to the financial markets that they are afraid of a speculative attack of the kind that they could easily trigger off in trying to avert it. Another drawback of the CCL facility is that it is supposed to be "automatic" for countries meeting certain eligibility criteria, yet the Fund has been averse to making it fully automatic,

and the final agreement for access to the CCL remains dependent on an *ad hoc* decision. "Virtually automatic" is a long way from "absolutely automatic" in the field of financial flows. For such reasons, the IMF Executive Board has just pronounced formally the demise of the CCL (November 2003).

Williamson opted for a single so-called "crisis window", combining those of the SRF and the CCL, making it possible to face up to crisis situations. In addition, there would be another CCFW window designed for countries undergoing shocks that are outside their control, natural disasters or commodity price shocks.

A critical question is whether the crisis window should be open to all. A good start to the question of how to avoid confidence crisis is the discussion, revived by the Meltzer report (Lerrick and Meltzer, 1999; Meltzer Commission, 2000), which relates to the "pre-qualification" of countries entitled to draw on lines of credit from the Fund. The criteria for pre-qualification could possibly include some of those involved in eligibility for the granting of CCL. This is in principle interesting, in that it encourages countries to adopt reasonable behavior *ex ante* and rewards them *ex post* by actual support from the Fund.

The pre-qualification criteria discussed in the Meltzer report include: freedom of capital movements, adequately capitalized commercial banks, transparent statistics for official and officially-guaranteed debt, balanced budget. Williamson rightly criticizes the report's demand for the requirement of free movement of capital, but underlines the importance of transparent criteria as regards banking (the Basle Core Principles) and taxation. The discussion in this case would center on the question of whether norms of the Maastricht type (deficit below 3%) are needed or whether discretionary assessment by the Fund would suffice. This tends to raise also the more general question of "rating". Should the Fund add its own voice to those of the existing bodies?

This idea of pre-qualification is obviously weakened by the time-inconsistency of such a policy. It is hard to imagine that the international financial community would disregard Turkey or Argentina on the grounds that these countries had not previously "pre-qualified". The associated idea that the Fund should commit itself in advance never to exceed certain "presumptive limits" on its lending (*e.g.*, a given multiple of quotas) is also attractive. It sets a prior limit on the system of maximum guarantees granted to the countries and should

therefore limit the amount of reckless lending. But again, it is hard *ex post* -- even assuming the resources exist -- to limit the supply in a credible manner. In fact, the case in which the commitment not to intervene beyond the quota of available resources is credible is the only case in which one would prefer it not to be: when a systemic crisis strikes a whole region, with the action by the Fund exposed to quantitative limitations dictated by the scarcity of its own resources. And yet this is perhaps the only case in which the supply of credit could be capable of being "unlimited" or at least very substantial, if the Fund were to be helped to play the role of lender of last resort.

In order to derive a positive conclusion from the debate, it seems essential that pre-qualification should commit a country, in a constructive manner, to take measures that ensure its solvency or minimize the risk of crisis. Presumptive limits, on the other hand, can hold only if there is an alternative to unacceptably messy defaults (see Cohen and Portes, 2003).

5.2 A lender of *first* resort

Let us start by discussing a "pure" confidence crisis, where market discipline is dysfunctional: the case where fears of default create high spreads and raise debt to unsustainable levels. Take a situation in which creditors realize that a country could be safe if only it could borrow at low rates. Assume however that the problem is simply one of co-ordination. If all creditors could agree on lending at the riskless rate, the country would indeed be safe and the fear of default could be overcome. On the other hand, in the very nature of self-fulfilling crises, if one creditor expects other creditors to lend at punitive rates, then it would have to join the crowd and also charge the high rate. In such circumstances, one might apply a method which is common in the field of venture capital and which amounts to allowing an individual investor to make an offer that is conditional on other investors' commitments (Chamon, 2002). Assume for instance that an investor is allowed to post a willingness to purchase a specified quantity of a bond issued by a country at a given spread, but could retract its offer if the country fails to convince other subscribers. In that case the individual investor does not need to worry about other investors' reluctance. Either the subscription is entirely subscribed at the "good" spread and the "good" equilibrium is reached, or it is not and the individual investor does not get trapped into an equilibrium in which he would be alone in lending at the riskless rate.

There is a great merit to this suggestion, which makes it possible to trace out the supply curve of the market, at a given spread. But it is only a static solution to a fundamentally dynamic problem. Indeed the core of the problem is quite often that creditors are worried by the action of the debtor, not only for the present but also for the future. The fact that a debtor could be tempted to raise its risk profile in the future is one key reason for the reluctance of creditors to commit themselves at low spreads (Cohen, 1991). In order to solve this dynamic problem, what is really needed is a commitment mechanism that allows a given debtor to rule out borrowing at excessive spreads, not only today but for the future as well.

The simplest way to proceed would be as follows. Assume that the country manages to commit itself *not* to borrow at punitive rates. Think for instance of a kind of "usury law" that the country would apply to itself, forbidding it to borrow above a given interest threshold, say a spread over 300 basis points. In the model of self-fulfilling debt crises of the kind that is analysed in Cole and Kehoe (1996) and Cohen (2003), a debtor that is the victim of a confidence shock usually wants to get out of the danger zone by taking stringent actions. We find it useful for a country to be able to commit itself to implement such behavior. Before we return below to how the mechanism could actually be implemented, one can see the merits of such a commitment. If it could be made credible, then it would avert the self-fulfilling spiral that we alluded to before. Furthermore, by raising the stakes of maintaining a good reputation, this is a mechanism that can ease the policy choices of a country: it would politically facilitate the early resolution of debt crises. This would be a positive interaction between policies and market discipline.

To summarize, there are two arguments for a commitment on spreads. First, the informational content of spreads is quite rich. Second, spreads are a symptom and a cause of future troubles.

Let us now investigate what it takes to make such a mechanism credible. Assume that a country initially borrows at low spreads: think of Mexico today, and assume that a new shock (fall in the price of oil...) suddenly lowers the market's assessment of its creditworthiness. If the country accepts higher spreads, it "gambles for resurrection" by taking the chance that things will eventually settle down, or simply buys time in order to make internal adjustments. The problem with this option is that the debt may meanwhile spiral upwards, making it more difficult *ex post* to get the country to act decisively. For a country that is committed, say, to a

300-400 basis point spread, the IMF would work with the country on an analysis of the cause of the problem and of the remedies which could resolve it. A programme would then be designed, which, if agreed upon by the country, could grant access to IMF money if needed.

Nothing need be automatic in this process. Countries signal *ex ante* their willingness to avoid the snowball effect of rising spreads and rising debts and seek to avoid it at an early stage. But IMF support remains conditional on taking appropriate measures, so that it is not a free lunch. Furthermore, IMF money could be granted at a rate that incorporates a spread, say of 300 basis points, so that countries will not necessarily want to tap IMF resources.

One may fear that the informational content of spreads will be reduced as they become a policy variable (a version of Goodhart's law). It is true that lenders, being aware of the fact that countries will take actions against rising spreads, will change their pricing policy. If, as a result, spreads become lower, this is in itself a good thing as it reduces the snowball effect. But it is very unlikely that they could fail to detect a country that becomes insolvent. Indeed, actions to correct imbalances are voluntary, not automatic. Lenders must then keep track of a debtor's solvency. But the policy may achieve the role of making self-fulfilling spread crises if not impossible, at least less likely.

This approach would allow the country to take very early corrective actions, with the support of IMF loans. By acting early the measures should not be daunting. By showing its willingness to act, the country further boosts its reputation, not too late as is often the case, but early on: when the country can still see the benefit of raising its profile in the eyes of international investors.

Such a mechanism could be a feasible and effective replacement for the Contingent Credit Line facility. The CCL was created to help "first-class policy" countries to face confidence shocks. As Stanley Fischer emphasized, such countries do not need to be "perfect". They need to obey international standards such as the Basle Committee's Core Principles for Banking Supervision, the code on Transparency in Monetary and Financial Policies, etc. The country must have enjoyed "constructive relations with its private creditors and be taking appropriate measures to limit its external vulnerability", the latter including exchange rate viability and the absence of arrears on sovereign debt. The idea is to create a "first-class" policy straitjacket

that discriminates between the implementation of good and bad policies and eradicates the moral hazard risk.

The problem, however, is that the practical balance between the straitjacket and the flexible response to confidence crises does not appear to have been found. No country ever used the CCL. They feared that to ask for it would send a wrong signal to the market, and despite the quasi-pre-qualification clauses, they could never be quite sure that they would get it, which could make things even worse. The mechanism described here would be reserved for countries that have never defaulted on their claim in order to avoid the high risk strategy. It would be based on spreads and perhaps on other additional measures of solvency. The reason why we attach so much importance to spreads is that they both reveal a problem and contribute to creating it.

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Appendix

Taxonomy of Debt Crises

CRISIS A (crisis = 1 EFF (<i>Extended Fund Facility</i>))									
	(t): year of agreement		Debt/GDP			Debt/Exp			Public debt as share of long-term debt ***
	date of prog.		(t-2)	(t-1)	(t)	(t-2)	(t-1)	(t)	
Algeria	May -95	EFF	54.2	74.3	84	219.5	277	265.6	100
Argentina	Feb-98	EFF	35.8	38.7	48.5	331.2	362.4	380.4	74.8
Colombia	Dec-99	EFF	34.9	34.5	42.1	186.6	225.4	217.2	62.7
Egypt	Sept-93	EFF	100.2	78	67.2	240.4	180.6	181.9	97.8
Gabon	Nov-95	EFF	99.8	113	102.8	144.6	160.6	148.9	100.0
Indonesia*	Aug-98	EFF	58.3	65.3	167.9	219.3	206.9	262	57.6
Jamaica	Dec-92	EEF	122.8	132.9	147.4	189.8	184.9	173.5	99.2
Jordan	Feb-96	EFF	132.4	126.2	121.7	185.7	167.6	151.7	99.6
Pakistan	Oct-97	EFF	49.4	45.7	47.5	252.2	249.7	263.9	92.3
Panama	Dec-97	EFF	68	68.3	65.3	83	76.4	75.4	97.4
Peru	June-99	EFF	50.1	53.8	57.8	321	332.4	320.6	85.6
Philippines	June-94	EFF	61.2	64.9	59.9	187.1	187.3	161	93.2
Russia**	March-96	EFF	37.9	35.3	29.7	156.7	129.6	119.5	100.0
Yemen	Oct-97	EFF	178.1	137.6	76.7	190.5	174.6	103.6	100.0
Zimbabwe	Sept-92	EFF	38.2	41.1	62.9	159.6	172.4	219	91.5
Average			74,8	74.0	78,8	204.5	205,9	203.0	90.1
* political and economic consequences of the Asian crisis									
** plus an SRF (<i>Supplemental Reserve Facility</i>) component in 07/98									
*** 3-year average									

CRISIS B (crisis = 2 or 3 consecutive SBA)									
	(t): year of agreement		Debt/GDP			Debt/Exp			Public debt as share of long-term debt ***
	date of prog.		(t-2)	(t-1)	(t)	(t-2)	(t-1)	(t)	
Brazil*	Dec-98	2SBA	23.5	24.1	31.4	302.5	291.6	372.8	55.8
Costa Rica	Aug-91	3SBA	91.2	68.8	74.6	236.2	179.4	174.8	91.5
Dominican Rep.	Aug-91	2 SBA	63.3	64.9	61.9	164.9	195.8	197.5	97.3
El Salvador	July-95	3SBA	29.4	27.6	27.7	92.9	83.7	82.7	99.7
Ecuador**	Dec-91	3SBA	97.5	97.5	97.5	291.3	291.3	291.3	97.4
India	Jan-91	2 SBA	26	26.7	32.5	318	330.9	317.2	97.8
Papua N.G.**	July-91	3SBA	69.2	69.2	69.2	119.5	119.5	119.5	60.7
Turkey*	Dec-99	2 SBA	47.1	47.1	54.3	157	155.8	194	67.8
Uruguay *	March-99	3SBA	33.5	34.9	36.8	138.5	159.8	174.9	94.0
Average			53.4	51.2	54.0	202.3	200.9	213.9	84.7

* Brazil, Turkey and Uruguay also benefited from SRF combined with SBA (2 for Brazil, 1 for Turkey and Uruguay)
** 3 SBA spread over the 1990s. Data in (t) are averages for the period 1990-2000

CRISIS C (crisis = 1 SBA)									
	(t): year of agreement		Debt/GDP			Debt/Exp			Public debt as share of long-term debt ***
	date of prog.		(t-2)	(t-1)	(t)	(t-2)	(t-1)	(t)	
Korea	Dec-97		25.4	27.4	32.8	76.1	83.8	84.9	61.6
Indonesia	Nov-97		64.6	58.3	65.3	226.7	219.3	206.9	62.0
Malaysia*	July-97		40.6	41.3	49.8	39.9	41.8	49.3	55.4
Mexico	Feb-95		33.6	34.4	61.1	195.1	179.4	172.5	82.5
Nigeria	Aug-00		103.4	93.4	92.9	257.7	189.9	146.8	99.0
Thailand	Aug-97		50.5	51.3	62.6	112.1	120.2	122.7	37.0
Venezuela	July-96		65.18	47.1	50.18	190.87	157.11	128.58	93.1
Average			54.7	50.5	59.2	156.9	141.7	130.2	70.1

* Malaysia has not asked for IMF aid. July 97 is the date of the floating of the currency.

Pre-crisis spreads

	> -1 m.	> -6 m.	> -6 m. to -1 yr	>-1yr	> -1 to -2 yrs
Crisis A					
Argentina	3413.7	2051.8	795.2	1428.3	622.5
Russia	1399.6	869.0	492.5	682.2	
Crisis B					
Brazil	1030.1	1030.1	444.7	597.5	363.7
Ecuador	2184.9	1527.8	1135.7	1333.3	596.9
Turkey	591.8	503.9	462.9	483.6	737.9
Crisis C					
Indonesia (sov)	253.51	257.64	261.63	259.62	
Korea (corp)	270.5	136.1	74.8	105.7	
Mexico	285.2	263.7	252.1	257.9	366.9

> - 1 m. : average 1 month before crisis

> - 6 m. : average 6 months before crisis

> - 6 m. to - 1 yr : average 6 months to 1 year before crisis

> - 1 yr: average 1 year before crisis

> - 1 to - 2 yrs: average between 1 and 2 years before crisis