Part 3

How to involve the private sector?

7 Private sector involvement in crisis resolution and mechanisms for dealing with sovereign debt problems

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7.1 Introduction

In the last decade, many emerging market economies experienced a currency and/or financial/banking crisis (Mexico, Thailand, Indonesia, Korea, Russia, Brazil, Ecuador, Turkey and Argentina, to name the main ones). In each one of these crises, in addition to sharp falls in asset prices and economic activity, the crisis country faced a large external (and sometimes domestic) financing gap that was the result of a combination of large pre-crises current account deficits and large reversals of capital flows ("sudden stops", "capital inflows reversals", short-term government debt rollover crises and/or liquidity runs on the banks' domestic or cross border short-term liabilities). These facts support the new view that the financial crises in the past decade have been mostly "capital account" crises (or "sudden stop" crises) having to do with balance sheet stock imbalances (maturity, currency and capital structure mismatches) rather than just traditional flow imbalances.

While one would ideally want to prevent crises from occurring in the first place, once one occurs the central issue becomes one of crisis management and resolution. And once an external financial gap emerges in a crisis, one of the main policy issues is how to fill it. Domestic policy adjustment and a painful economic contraction may lead to a reduction or reversal of the current account deficit, but large capital outflows (and the unwillingness of investors to rollover short-term claims on the country, its government and its residents) usually imply that the financing gap will remain large. Thus, in addition to the role of the country's adjustment, there are two ways to fill such a gap: official financing (or "bail-outs") by IFIs and other official creditors, or private financing in the form of "bail-ins" of private investors, also referred to as private sector involvement (or PSI) in crisis resolution. This bail-in can take various forms along a spectrum going from very coercive to very soft forms of PSI: at one coercive extreme are defaults on external (and domestic) claims (Ecuador, Argentina, Russia); in the middle are debt/suspensions and standstills, semi-coercive debt exchange offers and semi-coercive rollover agreements (Ukraine, Pakistan, Korea, Indonesia, Thailand); on the softer end of the

PSI spectrum are semi-voluntary rollover agreements and other mild forms of PSI (Brazil in 1999, Turkey in 2001) or outright bail-outs with little PSI (Mexico in 1995, Turkey more recently).

Indeed, the issue of bail-ins versus bail-outs – or private sector involvement in crisis resolution – is the most controversial question in the debate on the reform of the international financial architecture. While there is broader agreement on measures for crisis prevention, there is much more disagreement about how to approach crisis resolution. Even the definition of the problem has been debated with different terms used over time to characterise the issue at stake: bail-in, burden sharing, private sector involvement in crisis resolution, constructive engagement of the private sector, private sector contribution to resolution of capital account crises, etc.

And, apart from the formal definitions, the substantial questions have been hotly debated: will PSI help to resolve crises or lead to a severe reduction of financing to emerging market economies? When to do bail-ins and when to do bail-outs or a combination of both? Is moral hazard a serious issue? Should we introduce collective action clauses into bond contracts or move to an international bankruptcy regime? Should PSI be concerted/coercive or semi-voluntary/catalytic? When should access to official (IMF) resources be exceptional in size and when should it be normal? Should debt suspensions/standstills be part of the crisis resolution toolkit? Should capital/exchange controls be used as part of crisis resolution? These are all highly controversial questions on which there is a wide range of views.

One should also observe that, while the Asian crisis led to the perception that capital account crises were the result of vulnerabilities in the private, rather than public sector balance sheet, sovereign debt problems have been central to most of the currency and financial crises of the past decade, especially in Mexico, Russia, Brazil, Ecuador, Pakistan, Romania, Ukraine, Turkey, Argentina (and most recently again Brazil). Also, sovereign debt problems are central to the debate on the desirability of PSI in cases such as Nigeria and Côte d'Ivoire. Thus, the perception that recent capital account crises are private sector crises, rather than sovereign ones, is incorrect. And even in the case of Asia where public deficits and debts were not the initial trigger of the crisis, balance sheet imbalances of the private sectors (the financial and banking system especially) became implicitly or explicitly sovereign liabilities when governments decided to guarantee private sector external liabilities. And in some cases, such as Indonesia, the severity of the economic crisis following the financial crisis led to the emergence of a large stock of sovereign domestic and foreign debt that partly turned a private sector crisis into a sovereign one.

More recently, the debate on PSI has centred on the issue of the appropriate mechanism to be used to ensure orderly sovereign debt restructurings when the latter become unavoidable. While recent sovereign bonded debt restructuring cases (Pakistan, Ecuador, Ukraine and Russia) have

been successfully completed with the use of unilateral exchange offers (at times complemented by the use of exit consents), many have expressed dissatisfaction with this approach. There are two alternative mechanisms that could provide an alternative restructuring regime: first, a "contractual approach" where collective action clauses (CACs) are introduced in most bond contracts and used to achieve bonded debt restructurings.[1] Second, a new "statutory regime" where an international bankruptcy regime for sovereigns is created and used to achieve sovereign debt restructurings. The latter regime – which has been suggested in past decades by a number of authors – has been recently proposed again by Anne Krueger, the first Deputy Managing Director of the IMF, in a series of speeches and public statements (Krueger 2001a, 2001b, 2002).[2]

So one of the new policy questions is when sovereign debt restructuring becomes necessary, what is the appropriate regime that allows orderly restructuring, while safeguarding the balance of rights of both creditors and the debtor? Is it better to continue with the market-based status quo regime where exchange offers have been used to do bonded debt restructuring; or should we move to the wholesale use of collective action clauses; or should we consider creating an international bankruptcy mechanism such as the one proposed by the IMF?

The issue of international bankruptcy regimes has taken on even greater importance after the decision by Argentina to default on its sovereign debt in 2001. Since a new international bankruptcy regime does not yet exist, and collective action clauses are not contained in most of the international bonds issued by Argentina, is it going to be possible to achieve an orderly bonded debt restructuring in Argentina by using status quo techniques, such as bonded exchange offers? Or will the restructuring process be long, costly, protracted and disorderly given the heterogeneity of the claims and the creditors? In part, the desirability of a new international bankruptcy regime will depend over the long run on how messy, delayed and disorderly the Argentine debt restructuring turns out to be.[3]

The G7 doctrine and framework for PSI policy has also evolved over time. After the Asian and global crisis of 1998–1999, the G7 and the IMF undertook a process of reform of the international financial architecture that has two components – crisis prevention and crisis resolution. In the context of crisis resolution, the G7 evolved over the 1999–2001 period towards a tentative consensus, the "Prague Framework" that was agreed at the autumn 2000 meetings of the IMF in Prague. But this framework left many difficult issues open, such as what to do in large, systemically important "liquidity" cases. Thus, all of the G7 have expressed a desire to improve this framework. Moreover, while the previous US administration (under Rubin and Summers) had leaned towards a case-by-case, constrained discretion approach that allowed for the option of providing large IMF packages when necessary, the new US administration took, at least rhetorically, a harder official stance against large IMF "bail-out" packages.

In this regard, the new US position came closer to that of other G7

members (especially the UK, Canada and Germany) who also favoured clearer rules to limit the ability of the IMF to provide exceptional finance to countries in crisis. But progress by the G7 and the IMF towards defining a new and clearer PSI framework has so far been limited.

Moreover, against the background of the official rhetoric of "no more bail-outs" and not having American "carpenters and plumbers" taxes pay for the bail-out of poor-performing emerging market economies, the reality of the new political and strategic interests of the USA and the other G7 countries has emerged. Even before September 11, 2001, but more so afterwards, the US tendency to support financial aid to countries that are considered as friends, allies or otherwise strategically or systemically important (Turkey, Pakistan, Indonesia and possibly Brazil) has clearly emerged, more strongly even than during the previous administration. Even in the case of Argentina, where IMF support was eventually cutoff leading to the sovereign default of this country, political considerations have been dominant: the August 2001 augmented package was pushed for political rather than economic reasons. And political considerations are likely to become even more important in decisions about official lending in the new global geo-strategic security climate.

Thus, the current official PSI policy framework of the G7/IMF is in partial disarray, as it has several open gaps and gives confused signals on many crucial issues. Specifically, there is:

- a large gap between the new official rhetoric of no bail-outs and the continued practice of politically motivated bail-outs;
- fuzziness of the official framework on important issues such as when exceptional access versus normal access to IMF resources is warranted, whether PSI should be voluntary or coercive, and what to do about systemically important countries that may be too-big-to-fail;
- an open debate on whether one should follow a "contractual" versus a "statutory" approach to sovereign debt restructurings.

This chapter will thus address the broad open issues in PSI theory and policy and the debate on the alternative mechanisms for sovereign debt restructurings. Section 7.2 will start with a review of what PSI is and its logic, and PSI policy in the 1990s versus the 1980s. Section 7.3 will offer an analytical framework to understand the logic of PSI and the relative merits of bail-ins versus bail-outs; we will take a novel approach by stressing the need to be clear about the economic arguments justifying official sector intervention in crisis resolution. Section 7.4 will present a discussion of the pros and cons of the three alternative approaches to sovereign debt restructuring (contractual versus statutory versus market-based status quo). Section 7.5 will discuss the open issues in the G7/IMF PSI framework. Section 7.6 will present some concluding remarks.

7.2 Basic issues in private sector involvement in crisis resolution

What is PSI?

The main issue in PSI policy is what to do when there is a crisis in an emerging market and there is a potentially large external financing gap even after domestic policy adjustment by the crisis country. In principle, there are three options.

First, a large "bail-out" in the form of an official support package filling most or the entire financing gap (where the term "bail-out" is loosely, and somewhat improperly, used to describe large official loan packages). Given the size of external financing gaps, this implies exceptional or high access financing packages from the IMF/IFIs. Ideally, the IMF support will be catalytic – that is, the country's policy adjustment together with IMF financing, in amounts large but *ex ante* smaller than the financing gap, will be able to restore investors' confidence and market access so that, *ex post*, the financing gap not filled by the IMF resources will be filled by private capital reflows.

Second, a full bail-in of private investors (debt rescheduling or restructuring) with little provision of official financing. Debt suspensions, standstills and/or default followed by debt reduction may be warranted in cases where the country's debt path is unsustainable and the country is effectively "insolvent" by some criteria. Significant macro-policy adjustment and reforms are also essential in these cases to restore confidence and growth prospects.

Third, a combination of official financing, "appropriate" forms of PSI and policy adjustment by the crisis country. In this third case, if IMF financing in amounts that are "normal" (rather than "exceptional") and country adjustment are not likely to restore investors' confidence and market access at sustainable interest rates, the form of PSI is more likely to be somewhat coercive or concerted rather than being soft and catalytic (as in the first case).

Rationale for PSI

The rationale for PSI is pretty straightforward. First, if there is a crisis, it is likely that there will be an external financing gap even after policy adjustment by the country; second, official support can help to fill the gap but not fully; and third, exceptional financing is not only infeasible but also undesirable, as large bail-outs may lead to creditor and debtor "moral hazard". Given this, there is a need for "appropriate" forms of PSI that will help to fill the external financing gap.

Trade-offs in PSI approaches

There is an inherent trade-off between the amount of bail-in versus the amount of bail-out, for a given external financing gap: more of one means less of the other. Ideally, one would want to keep official support to the minimum necessary (to avoid moral hazard), but also to avoid more coercive forms of PSI (as they may negatively affect private flows of capital to emerging markets).

But there is some tension, or even contradiction, in this view. Smaller IMF packages may mean more PSI and more PSI of a more coercive form, while less coercive PSI may mean the need for larger official packages. The new US administration faces a similar tension between the hawkish views of some (such as those represented on the Meltzer Commission who preferred no more large bailouts and more restructurings and defaults) and the Wall Street, national security and foreign policy interest groups (who tend to prefer bail-outs to bail-ins).

PSI in the 1980s versus the past decade

The 1980s developing countries' debt crisis had its own PSI (suspension of payments on syndicated bank loans, concerted loan rollovers and new money) and eventually led to debt reduction (the Brady Plan). So what is new in the 1990s? First, the instruments (bonds and short-term interbank lines rather than syndicated medium- and long-term bank loans); second, the creditors (bondholders in addition to banks); and third, the debtors (private debtors in addition to sovereign ones). In the 1980s, the challenge was to restructure medium- and long-term syndicated bank loans to the sovereign. In the last decade, the challenge has been to restructure both sovereign and private bonds as well as short-term interbank lines.

There are a number of flawed arguments on how easy PSI was to do in the 1980s versus the 1990s. It has been argued that, in the 1980s, it was easy to restructure loans of a small number of homogeneous regulated banks pliant to forbearance, while in the 1990s it would be impossible to restructure bonds (without collective action clauses) held by thousands of creditors. It is often argued that it would be hard to restructure interbank lines as investors would rush to the door before the concerted rollovers could be arranged. But the reality of the last decade has instead been that there has been lots of PSI, both through bond restructurings and interbank rollover arrangements.

In the 1980s, PSI was often not that easy to arrange as there were collective action problems of: co-ordinating many different creditors; hundreds of banks with different interests; holdout problems, especially among smaller banks; and non-homogeneous syndicated loans that had to be restructured into more homogeneous instruments. Conversely, experience over the past decade has been that sovereign bond restructurings are possible even without collective action clauses (CACs); see the

cases of Pakistan, Ukraine, Russia, Ecuador (and hopefully Argentina in the near future) and, less successfully, Romania; and that the bail-in of interbank lines is also possible: see Korea, Indonesia, Thailand, Russia, Brazil and, somewhat unsuccessfully, Turkey.

In general, the 1990s crises were addressed with a combination of partial bail-outs and bail-ins, despite the superficial perception among some that international financial crises were mostly dealt with through large "bail-outs". More recently, the increasing hawkishness of the official sector on the PSI issue has been associated with several cases of coercive "bail-ins" and sovereign defaults (Russia, Ecuador and Argentina for defaults; Pakistan and Ukraine for coercive bonded debt restructurings).

These episodes of bonded debt restructuring and default have led to a debate on the appropriate regime or mechanism to achieve orderly debt restructuring. But before we discuss appropriate mechanisms to deal with (sovereign) debt problems, it is useful to consider more formally the analytical and economic arguments on the relative merits of bail-ins versus bail-outs.

7.3 An analytical scheme for the analysis of bail-ins versus bail-outs

In this section, I will discuss the analytical underpinnings and logic of PSI and analyse what economic theory suggests on the relative merits of bail-ins and bail-outs. In doing this, I will take a somewhat novel approach. Most of the policy work on PSI starts from the assumption that, once a financial crisis occurs, official financing will be a main source to fill the external financing gap, while PSI and bail-ins may or may not be added to the crisis resolution programme. I will take the opposite approach. I will start by assuming that we are in a world where official creditors do not exist and consider what happens when a financial crisis occurs and the debtor (either the sovereign and/or the private sector of the country) has to service a debt due to foreign private creditors. In such a world, if capital outflows or roll-offs of debt occur, there is by definition no official creditor that can provide finance while private creditors exit the country. If the country does not have enough liquid reserves to service its debt, some form of bail-in or PSI or not-fully-voluntary debt reprofiling will have to occur by definition.

We next consider market failures or externalities that would prevent socially efficient (*ex ante* and *ex post*[4]) debt restructurings or market-based resolutions of debt servicing difficulties. Once these market failures are identified (such as self-fulfilling bank runs or panic-driven debt rollover crises), the case for official finance can possibly be made and the issue of how much "bail-out" should be provided can be meaningfully addressed. So we will start from a world where crises necessarily lead to bail-ins and then make the case for why, when and how much official finance may lead to more orderly and socially efficient crisis resolution.

Crisis resolution with and without official lending

Consider a world where there are essentially three players (we will introduce a fourth – official creditors or the IMF – at a later stage of the analysis): a debtor country government that borrows from domestic and international private agents; the private sector of the debtor country that is also borrowing from private international creditors; and a group of private international creditors.[5]

What are the sources of debt servicing problems in this world? A sovereign debtor may have difficulties in servicing its domestic and external debt because of bad shocks, i.e. poor economic fundamentals. A sovereign debtor may also not service its debt because of unwillingness to pay (given the existence of sovereign immunity), i.e. opportunistic default. A sovereign may opportunistically default both in good and bad states of the world. A variant of this opportunistic default is the case where, after receiving a foreign loan, the sovereign debtor decides to exert poor policy effort (high consumption and low investment when the loan was originally meant to finance investment; or weak economic reform policies) so that the likelihood of a bad shock occurring rises. Both of these cases are a variant of the moral hazard problem: once the loan is received, the creditor can only partly observe the behaviour of the borrower and cannot control its actions (policies, default decisions, etc.). Indeed, the theoretical literature on sovereign debt in the 1980s (starting with Eaton and Gersovitz 1984) stressed the importance of opportunistic default on sovereign debt.

With opportunistic default and moral hazard, access to debt/borrowing is more restricted (relative to a case where such unwillingness to pay is not an issue) unless there are reputational mechanisms that can sustain debt repayment and/or punishment costs associated with default when the borrower is able to pay (see Eaton and Fernandez 1995 for a survey). Given such informational asymmetries, limited enforcement problems (partial sovereign immunity) and the possibly counterbalancing effects of reputation and punishment cost, an optimal amount of borrowing will be determined. In this world, the cost of default (output costs, trade costs, cutoff from international capital markets) is the price that has to be paid to minimise the risk of opportunistic default. These costs are stressed by those (like Dooley 2000) who are concerned about reforms that would make sovereign default too easy (such as more orderly debt restructuring arrangements) in a world with debtor moral hazard: the result could be less lending to emerging markets.

In the world just described, debt servicing difficulties may also arise from creditor co-ordination problems. The simplest case is one of a panic-driven creditor run (Sachs (1984) and many other models of self-fulfilling runs[6]) when there is short-term debt in excess of liquid assets. The run may occur both in good and bad states of the world and in states where the debtor is exerting a good or bad policy effort. For the moment, assume that moral hazard is not a problem so that nature is the only source of

uncertainty. Then, co-ordination-failure-based liquidity runs are costly both in cases where there is a bad state of the world and a good state of the world. When the state of the world is good, a run causes severe costs in the form of real liquidation/bankruptcy costs. If creditors could be convinced to rollover such debt, these costs could be avoided altogether. Even in bad states of the world where the debtor needs to reduce its debt burden, co-ordination failures may induce *additional* avoidable bankruptcy costs on top of the real costs of the bad shock. The simplest way to avoid these costs is for creditors to accept the unavoidable economic cost due to bad shocks, but to rollover their liquid claims that are experiencing a run.[7]

Co-ordination failures and self-fulfilling runs can also occur when moral hazard is an issue. In those cases, the debtor may have an opportunistic incentive to default in some states of the world and/or an incentive to exert less economic effort. But even in those situations, a self-fulfilling creditor run cannot be ruled out.

The existence of such creditor co-ordination failures is one of the main justifications for an international lender of last resort (ILOLR), as long as such co-ordination failures cannot be easily resolved in the absence of an ILOLR.[8] Of course, as discussed in detail below (pp. 00–00), such liquidity support may induce debtor or private creditor moral hazard. Thus, the benefits of avoiding self-fulfilling runs have to be weighed against the costs deriving from such distortions.

There are other potential justifications for an IMF-style institution and its role as a lender in a crisis situation.[9] First, even when the debtor has an incentive to exert poor policy effort and opportunistically default, the official creditor can control/monitor policy effort (via IMF conditionality-based lending) and thus provide liquidity that reduces avoidable liquidation costs or the excessive – socially inefficient – economic/policy adjustment that would occur in the absence of official finance.[10]

Second, IMF liquidity support could prevent the international spread of financial crises (crisis contagion) that can occur if systemically important countries experience a crisis. In this sense, the IMF may have the same role as a domestic lender of last resort (or deposit insurance) in avoiding the spread of bank runs.[11] This argument in favour of IMF lending is a variant of the lender of last resort role of the IMF in liquidity runs. Moral hazard deriving from too-big-to-fail distortions is obviously an issue to be kept in mind when considering such a role.

Let us consider in more detail the first justification for the existence of an official creditor like the IMF – the need for an ILOLR to avoid self-fulfilling or panic-driven liquidity runs. Let us assume first that there are no debtor or private creditor moral hazard problems; we will introduce these distortions later. In the absence of such an ILOLR, if a run occurs when the debtor is in a good state of the world, the appropriate solution is a voluntary rollover of the debt that avoids the liquidation/bankruptcy costs. If such a rollover cannot be achieved, socially inefficient liquidation

costs will occur. If a run occurs when the debtor is in a bad state of the world and there is no moral hazard, the right approach is for creditors to take a haircut (equivalent to the amount of insolvency of the debtor in the bad state) and avoid the additional liquidation costs deriving from a disorderly liquidation of the illiquid assets of the debtor. If such partial rollover is not avoidable, again socially inefficient liquidation costs will result which are above the unavoidable costs deriving from the bad shock.

What would be the market solution to a liquidity run when there is no ILOLR? There are several options: securing liquidity in pure liquidity cases; sovereign debt suspensions/standstills; debt rollover agreements; holding enough liquidity (foreign reserves) to avoid a run; private contingent credit lines; and debt rollover options. Let us consider these solutions in more detail.

Securing liquidity in pure liquidity cases would appear to be the first and best way to deal with a liquidity run. If the crisis is due to a pure liquidity run and there is no doubt that the sovereign is solvent, the country should be able to receive new liquidity (loans) from private international creditors to avoid a run. In an international context, there is plenty of international liquidity (liquid assets) that can be provided by the markets (inside liquidity in the system). Thus, if the country is not able to receive such liquidity support, there must be some uncertainty about the fundamentals of the country and whether the country is truly solvent. This point is important for the discussion of an ILOLR: it is often argued that, in liquidity cases, a full ILOLR is warranted. But if the country does not receive private international liquidity support, the case may not be one of pure liquidity and thus a full ILOLR may not be warranted either.

In general, it is not obvious that there are "pure" liquidity cases. Formally, a country may not be insolvent in the sense that its debt servicing problems are caused by sudden illiquidity (lack of market access and unwillingness of creditors to roll over credits), but even such a country may have weak fundamentals and serious policy shortcomings. Indeed, it is hard to believe that a country with fully sound fundamentals and policies would become illiquid and subject to self-fulfilling speculative runs. Even in theory, if fundamentals are strong enough, such multiple equilibria runs can be ruled out, as weak fundamentals are necessary for an economy to be in the multiple equilibria region. Empirically, all observed cases with something close to an illiquidity problem were characterised by fundamental or policy weaknesses. In cases like Mexico, Korea, Brazil and Indonesia, that are conceptually closer to being an illiquidity problem, some serious macro, structural or policy shortcomings certainly played a role in triggering the crisis.[12]

Moreover, even if a pure panic were to lead to a run in a pure liquidity case and, for some reason, the borrower has no access to new private liquidity, there is another solution that is equivalent to an ILOLR – a debt standstill/suspension. In particular, while in such pure liquidity cases one could make the argument that a "full bail-out" is the right policy, one

could as well argue that the alternative policy of a "full ball-in" is as desirable, efficient and optimal.[13] Indeed, if there is no uncertainty, no risk aversion and there is a pure liquidity run, both the full bail-out and the full bail-in are equivalent solutions to the collective action problem faced by investors.

Paradoxically, in these pure liquidity cases, the bail-in solution may be superior to the bailout one. The threat of a full bail-in solution is sufficient to sustain *ex ante* the good equilibrium of "no run" without having to resort to such a threat *ex post*. In fact, if all agents know that, if and when a run occurs, the debtor will introduce standstills and/or capital controls to avoid the run, the incentive to run will disappear. Thus, the threat of a full bail-in is *sufficient* to rule out the bad run equilibrium and, *ex post*, no run will occur and the threat will not be exercised.[14]

This conceptual superiority of the full bail-in solution is, however, extremely fragile in practice. For example, if the case under consideration is not one of pure illiquidity but one in which some policy shortcomings lie behind the illiquidity; or if there is some uncertainty about the fundamentals and the policy response to the crisis; or if creditors are risk-averse, then the dominance of a "full bail-in" solution will break down. When fundamentals are weak and uncertain and agents are risk-averse, they will react to the expectation or threat of a bail-in by rushing to the front of the queue. And in this way a bail-in may imply real costs and financial losses to investors. Indeed, the fundamental problem with any solution that represents partial or full bail-in is that it may actually trigger a crisis earlier or even trigger a crisis that would not otherwise have occurred in the absence of such a policy.[15,16]

What about other market solutions to liquidity runs? Debt rollover agreements suffer from the same problems as the provision of liquidity during a panic; if there are doubts about solvency, lenders will not provide loans. They may also be hard to arrange as there is a collective action problem among creditors. Countries could hold enough liquidity (foreign reserves) to avoid a run by accumulating large balance of payment surpluses for a while (as Korea has done after the 1998 crisis to build a "war chest" of reserves). But this solution begs the question of why there is a maturity mismatch in the first place. Also, holding reserves equal or in excess of short-term debt is very costly in opportunity cost terms. And borrowing liquid reserves with longer-term loans is hard and costly for most emerging market debtors. Private contingent credit lines may also be hard to arrange and may not provide net new financing if creditors can roll-off other exposures to the country. There is also a moral hazard problem as they may lead to risky policies being pursued in the first place.[17] Debt rollover options, if appropriately priced in the market, are just another way of saying that countries should not borrow too much at short-term maturities.[18]

The implications of moral hazard and unwillingness to pay

Let us consider next how the discussion changes once we introduce moral hazard. When the debtor can strategically default (as in Dooley and Verma 2001) or affect its solvency through its actions/efforts (as in Kumar *et al*. 2000), there must be punishment mechanisms to reduce such distorted incentives for the debtor. Dooley and Verma (2001) show that the costs of renegotiating debts should not be too low. Otherwise, opportunist sovereigns may use debt suspensions too often and the flow of capital to emerging markets will shrink in equilibrium. This means that default costs (output costs in the case of Dooley and Verma (2001), or trade sanctions costs or cutoffs from international lending in other models) are necessary to support international lending to emerging markets when lenders cannot distinguish between default due to inability rather than unwillingness to pay. Compared to the case where lenders can distinguish between the two types of default, the maximum sustainable amount of foreign debt is lower.[19] Thus, debt restructuring must be costly to reduce opportunistic defaults, but not too costly as there are cases of inability to pay (insolvency) where orderly restructuring would benefit all parties. This result has implications for the debate on the international bankruptcy court (or the IMF's SDRM). It suggests that, if such reforms make the decision to default less costly to the debtor, the flow of capital to emerging markets may shrink, thus hurting debtors.[20]

In Kumar *et al*. (2000), where moral hazard from unobserved effort is the distortion, short-term debt provides a punishment mechanism: it imposes costs on the debtor country that are related to outflows of short-term capital that take place in bad states of the world. Issuing short-term debt allows the debtor to signal commitment to fiscal discipline. Here, the probability of a bad state is affected by borrower effort. In equilibrium, the existence of short-term debt affects the amount of effort undertaken because it increases the cost to the debtor of a bad state.

How does the existence of an official creditor (and international lender of last resort) affect the strategic game between private creditors and sovereign debtors and the desirability of an ILOLR? This is a most complex question that has been addressed by a number of authors: see Bulow and Rogoff (1988b), Rogoff (1999), Wells (1993), Klimenko (2001), Bhattacharya and Detragiache (1994), Spiegel (1996), Paasche and Zin (2001), Kumar *et al*. (2000) and Dooley and Verma (2001).

In general, the case for an international lender of last resort is severely weakened when there is moral hazard, as such support exacerbates moral hazard distortions. Take the Diamond–Dybvig model. Without an ILOLR, panic-driven runs may occur, but the existence of a lender of last resort (or mispriced deposit insurance) creates moral hazard ("gambling for redemption" games) when the bank owners do not put enough capital into the bank. Thus, liquidity support leads to moral hazard even if it can prevent liquidity runs. In a closed economy set-up, such a moral hazard

distortion can be reduced through incentive-compatible deposit insurance, capital adequacy regulation and the overall supervision and regulation of the bank. And, in the event that financial distress occurs, the central bank or regulatory authority has the power to seize the bank, change its management, restructure it, merge it with other banks or even liquidate it.

In an international context, the moral hazard distortions deriving from the existence of an ILOLR may be exacerbated. The effects on the incentives of the debtor ("gambles for redemption") are similar to the closed economy set-up if the ILOLR support is implicitly or explicitly subsidised. But the distortion to debtor's incentives is smaller if IMF support is in the form of loans that do not have a subsidy element. The provision of ILOLR implies that the official lender can distinguish between runs due to inability to pay versus those due to an unwillingness to pay. If, however, such an informational advantage does not exist, bail-in solutions may be socially superior to bail-out solutions.[21] Moreover, in an international context, the powers of a domestic regulator are not available: sovereign debtor countries with sovereign immunity cannot have their assets seized, and nor can they be merged or closed down.[22] Thus, the tools available in a closed economy to reduce moral hazard distortions are more limited.[23]

On the other hand, the empirical evidence on moral hazard (both debtor's and creditors') in international lending is extremely thin. For example, Jeanne and Zettelmeyer (2001) show that domestic taxpayers, rather than the IMF/IFIs or creditors, pay for the costs of official support packages. Thus, the idea that emerging market economies borrow too much and follow reckless economic policies in expectation of being bailed out by the IMF has little basis. The idea that countries would willingly follow policies that lead to currency, banking and financial crises and possible default in expectation of a bail-out is not supported by the evidence. The costs of crises are severe and crises lead (good and bad, democratic and autocratic) policymakers to be removed from power.[24] It is also true, however, that while a sovereign may not deliberately follow reckless policies to get IMF support, its policies may at the margin be biased towards risky and unsound behaviour (lower effort) if there is some expectation of external financial support.

Dooley and Verma (2001), Kumar *et al.* (2000), Gai *et al.* (2001) and Ghoshal and Miller (2002) discuss the role of an ILOLR (or official creditor lending) in models with moral hazard and/or opportunistic default. In Kumar *et al.* (2000), self-fulfilling runs can also occur because of "sunspots", even in good states of the world. Thus, there is a trade-off between the disciplining role of short-term debt and its role in increasing the probability of self-fulfilling runs. Also, since there are moral hazard distortions, full insurance in the form of an ILOLR is not optimal as it negatively affects debtor country effort. So there is a trade-off between the role that the ILOLR plays in preventing panic-driven runs and the moral hazard that its existence creates. These authors show that IMF conditionality is a solution to this problem. If IMF lending is conditional on policy effort that can be effectively monitored by the IMF, runs can be avoided

while ensuring good effort. However, such an equilibrium requires a "carrot" (a reduction in debt in the bad state, i.e. a bail-in) in addition to the "stick" (IMF conditionality). In the Dooley and Verma (2001) model where opportunistic default is an option, anticipated and unconditional lending (insurance) by official creditors leads to moral hazard, subsidises capital inflows before the crisis and intensifies capital account reversals and output losses once a crisis occurs.

Another important issue is whether the official lender has enough information to be able to distinguish crises due to pure panic runs from those due to insolvency, or from those due to opportunistic default. The pros and cons of an ILOLR when there are asymmetries of information is studied by Spiegel (2001). Gai *et al.* (2001) model the IMF as reducing the costs of disorderly adjustment following debt servicing difficulties in a model where ability to pay is affected by debtor moral hazard distortions. The IMF role is more likely to be beneficial if the IMF can make an accurate assessment of the country's policy efforts. If the IMF makes mistakes, the reduction in the costs of crisis to the debtor will lead, in equilibrium, to a lower amount of lending.[25] Ghosal and Miller show that, if the nature of the crisis (insolvency versus opportunistic/moral hazard-driven default) cannot be assessed by the official creditor, there is a case for "constructive ambiguity". Official liquidity support should be provided with probability less than one to reduce the moral hazard distortion.

The presence of official creditors also affects strategic interactions between sovereign debtors and their private creditors, an important issue whenever debtors and private creditors bargain on how much to reduce external debt. Bulow and Rogoff (1988b) modeled this strategic interaction between three sets of players: sovereign debtors, their private creditors and official creditors. In their model, private creditors know that official creditors care about flows of international trade and cannot credibly commit not to be involved in debt restructuring negotiations. Thus, in equilibrium, creditors charge sovereign debtors lower loan spreads than they would have done in the absence of official creditors. The existence of official creditors increases the moral hazard distortion in sovereign lending.[26] In Bhattacharya and Detragiache (1994), the existence of a multilateral lender such as the IMF strengthens the credibility of official creditor governments not to bail-out a sovereign that has defaulted. Corsetti *et al.* (2003), Dasgupta (1999) and Corsetti *et al.* (2002a) also discuss the role of informational asymmetries in models of large players, where a private or official (such as the IMF) agent is large – in terms of its financial resources – relative to a group of atomistic private agents. Some of these contributions are discussed further below (pp. 00–00).

On the possibility of "middle solutions" in semi-liquidity cases

In many recent semi-solvent liquidity cases (such as Korea and Brazil), the policy response has been a combination of policy adjustment, official

money and PSI, with the relative weights being different in different circumstances. Indeed, effectively, the official response to these liquidity cases has been based on the view that a combination of adjustment, catalytic official money and appropriate PSI (a partial rather than a full bail-in) can be successful in preventing a wider crisis, restoring confidence and market access and returning the country to a path of recovery and growth.

Conceptually, however, this "middle" solution has been intellectually challenged as not being feasible. Some observers such as Paul Krugman and Mervyn King have argued that only corner solutions are feasible in these liquidity cases: either there is an international lender of last resort with enough resources to engineer a full bail-out and avoid a disruptive run; or, at the other extreme, a full bail-in is necessary (that locks in all assets and prevents domestic and foreign creditors from trying to turn short-term claims into foreign assets). According to this view, a partial bail-in would not work because, as long as the economy is in the multiple equilibria region, locking in some creditors and assets (but not all) would lead the others to run to avoid being locked in next. Conversely, a partial bail-out would not work either because, as long as the financing gap is not eliminated, the multiple equilibria problem is not solved and agents will rush to the exits to claim limited foreign reserves, including those provided by the official support. Thus, conceptually, it is argued that the "middle" solution may not be feasible.

Indeed, the Krugman–King hypothesis is supported by some theoretical work. Zettelmeyer (1999) and Jeanne and Zettelmeyer (2001) formalise this hypothesis by showing that partial bail-outs are bound to fail in models where illiquidity may lead to self-fulfilling crises. Such partial bail-outs (or bail-ins) would not avoid the possibility of a bad equilibrium because, as long as the size of this support is not large enough to fill the financing gap, the possibility that agents will coordinate on the bad equilibrium cannot be ruled out. Worse still, partial bailouts will imply that the greater the official support, the larger the reserves loss if a run occurs. Why? Because the operating constraint on the size of the run is the amount of official reserves (including those provided by the bail-out package); thus more support in this case means only a larger run on reserves. Goldfajin and Valdes (1999) make a similar point on the ineffectiveness of partial bail-outs, though they do not provide a proof of such statement in their model of self-fulfilling runs.

This theoretical ineffectiveness of "middle solutions" stands in stark contrast to the PSI philosophy that catalytic official money, domestic policy adjustment and partial and appropriate bail-ins or PSI may indeed succeed, even when such a three-pronged solution does not formally fill *all* of the external gap. This difference between the theoretical analysis (that supports the "corner" solutions) and actual policies and case studies (that support the view that "middle" solutions can be successful) can be bridged as follows. In multiple equilibria models, as long as the financing gap is not completely filled via a full bail-in or full bail-out, the possibility of a

self-fulfilling run cannot be ruled out. The economy may end up in bad equilibrium if those who are not bailed-in decide to rush to the exits. Moreover, in the multiple equilibrium region, there is nothing (apart from "sunspots") that can nail down the probability that the economy will end up in bad equilibrium. In existing models, this probability is indeterminate. In reality, however, domestic policy choices, official support and the amount of bail-in *do* affect such a probability.

The argument for a "middle" solution is based on the view that domestic policy adjustment will reduce the probability of a run, as the debtor government can credibly commit to reducing the imbalances that created the risk of a run in the first place; that the amount of official support can also affect the probability of a run, as more official money means that the size of the remaining gap is proportionally reduced; and that appropriate PSI may also reduce the probability of a run, by leading some investors and asset classes to stay in (through voluntary and/or concerted rollover) and inducing others (who are not subject to a bail-in) not to run by restoring confidence.[27] Quite recently, Corsetti *et al*. (2002a) and Morris and Shin (2002) have developed an analytical model of the IMF's catalytic finance role where middle solutions can work. Such models use game-theoretical approaches where the multiplicity of equilibria of most self-fulfilling run models is eliminated through a "global games" approach.

Recent work on the trade-off between ILOLR and moral hazard and the IMF's "catalytic" approach

A number of authors have recently started to study the trade-off between the need for an international lender of last resort to avoid liquidity runs and the moral hazard that such support may trigger. These authors have also analysed the conditions under which the IMFs "catalytic approach" is likely to succeed (Corsetti *et al*. 2002a; Morris and Shin 2002).[28] The catalytic approach implies that, provided a crisis is closer to illiquidity than to insolvency, a partial bail-out granted conditional on policy adjustment by the debtor country can restore investors' confidence and voluntary lending and therefore stop destructive liquidity runs.

Corsetti *et al*. (2002a) extend current analytical models of the ILOLR and moral hazard in a number of directions. First, most papers analyse an ILOLR in models following Diamond and Dybvig (1983), interpreting crises as a switch across instantaneous (rational-expectations) equilibria, but ignoring or downplaying macroeconomic shocks or any other risk of fundamental insolvency. In contrast, Corsetti *et al*. (2002) develop a model where a crisis may lie anywhere along a spectrum going from pure illiquidity to pure insolvency (as in Allen and Gale 2000a). Thus, they present a more realistic specification of an open economy where fundamentals, in addition to speculation, can cause debt crises. Specifically, the framework draws on the literature on global games, developed by Carlsson and van Damme (1993) and Morris and Shin (1988). As is well known, in global

games the state of the economy and speculative activity is not common knowledge among agents. With asymmetric information, there will be some heterogeneity in speculative positions even if everybody follows the same optimal strategy in equilibrium. Moreover, the precision of information need not be the same across individuals. Arguably, global games provide a particularly attractive framework to analyse the co-ordination problem in financial markets at the onset of a crisis.

Second, many of the contributions drawing on Diamond and Dybvig downplay the issue of moral hazard. The few contributions that do discuss moral hazard distortions generated by liquidity provision cannot give strong analytical support to their conclusions. The reason is that, in models of multiple equilibria, the results of comparative static analysis depend on which equilibrium is selected. There is no endogenous mechanism that leads agents to select one equilibrium over the other(s). In contrast, in global-games models, the co-ordination mechanism is endogenous, and (provided that the precision of private signals is sufficiently accurate relative to public signals) the equilibrium is unique. These models can therefore be used to perform comparative static analysis (as well as the normative analysis of optimal official liquidity support), tracing out the effect on government behaviour of various assumptions about IMF size, the structure of incentives, the precision of information and other parameters of the model. The conventional wisdom is that official finance exacerbates the moral hazard problem. The novel result from this analysis is that, under some circumstances, the existence of official liquidity assistance can give a debtor country the right incentives to implement policy adjustment.

Third, in the context of global games and the literature on the ILOLR building on them (see Morris and Shin 2002, but also the closed-economy model by Goldstein and Pauzner 2002 and Rochet and Vives 2002), official financial institutions are modelled as large players whose behaviour is endogenously derived in equilibrium. Many of the new analytical insights stem from this feature of the model. In specifying the preferences of its shareholders, Corsetti *et al*. (2003) model a "conservative" IMF in the sense that it seeks to lend to illiquid countries, but not to insolvent countries.

Fourth, the models take domestic expected GNP as the natural measure of national welfare. This may differ from the objective function of the domestic government because of the (political) costs of implementing reforms and adjustment policies. They analyse the impact on the welfare of domestic citizens of alternative intervention strategies by the IMF.

Fifth, the framework of global games allows them to assess the role of IMF information precision in strengthening the IMF's influence on private investors' strategies and government behaviour. In general, a better-informed IMF reduces the aggressiveness of private speculators, and therefore lowers the likelihood of a crisis. The role of information precision in catalytic finance, however, becomes much more important when

the IMF can strategically signal its position to the market, e.g. it can choose to move before private investors. Some results on signaling by Corsetti *et al.* (2003) and Dasgupta (1999) suggest that there is an equilibrium in which the IMF has a much stronger impact on market behaviour by moving before private investors. As in Dasgupta (1999), an IMF with sufficiently precise information can induce strong herding behaviour – private fund managers disregard their private information and make their portfolio choices conditional on the IMF move, rolling over their debt if the IMF makes liquidity available to the country and withdrawing otherwise.

Sixth, these frameworks provide a useful starting point for a number of extensions of the analysis, such as a study of the optimal size of IMF interventions and the desirability of the preferred creditor status of IMF loans. In the model, the IMF will optimally set the size of liquidity support so as to minimise the likelihood of default, assessing the relative importance of illiquidity versus moral hazard distortions. Numerical simulations show that the IMF will tend to choose large contingent funds. Increasing the complexity of the model to encompass risk aversion may make the IMF more conservative. A similar consideration applies when assessing the desirability of the preferred creditor status of the IMF. If IMF loans are senior in relation to private creditors, all other things being equal, the IMF will be more willing to intervene, thus reducing the likelihood of a crisis. On the other hand, private investors stand to lose more in the event of default. They will therefore be less willing to rollover their debt, increasing vulnerability to crisis. The model fully accounts for the first effect, and provides a framework for a heuristic discussion of the second. A fully-fledged analysis would require a more general approach to specifying the preferences of both the IMF and private investors.

These models shed light on possible channels through which IMF catalytic finance may work, i.e. conditions under which (and channels through which) the presence of contingent liquidity provision makes international investors more willing to rollover their loans to a country rather than roll-off and run. When fundamentals are sound enough, catalytic finance can work. Yet catalytic finance does not and cannot work when the macroeconomic outlook is hopelessly weak. The model also emphasises the possibility that liquidity assistance does not necessarily produce moral hazard distortions. Rather, under some circumstances, it may turn out to be the key for well-intentioned governments to undertake appropriate policies. In other words, by insuring against liquidation costs caused by self-fulfilling speculation, the IMF could raise the expected gains from reform, therefore making them more attractive relative to their costs.

Morris and Shin (2002) reach similar conclusions on the potential success of the IMF's catalytic approach in a stylised one-period model; Corsetti *et al.* (2002a) instead articulate their analysis in a multiperiod bank-run framework. Moreover, the latter authors model explicitly the payoffs of the IMF and domestic policymakers, showing how the equilib-

rium allocation depends on the incentive structure faced by the main players (private and public). They show how this approach can account for a number of realistic features of the international financial architecture. It is reasonable to expect that this literature will soon have further important developments as regards both theory and policy analysis.

Operational implications for crisis management

What does the above analysis suggest for the appropriate mix of policy adjustment, official support (bail-outs) with conditionality and appropriate PSI (bail-ins) in crisis resolution?

In general, the possibility of a self-fulfilling run does not justify a full bail-out solution to financial crises, especially since most crises are caused by a combination of weak fundamentals and poor policies. These fundamentals trigger the panic, market over-reaction and excessive outflows of capital that exacerbate the consequences of the crisis. But the provision of official liquidity support, in addition to policy adjustment and appropriate forms of PSI, may contribute to solving financial crises in an orderly way, helping restore economic stability and growth. Such provision of official liquidity is more warranted (and its optimal size is larger) when a country is suffering from an illiquidity crisis.

Crises in emerging markets cannot be reduced to a simple dichotomy between illiquidity and insolvency cases. They are distributed on a continuous spectrum going from pure liquidity cases, to solvent but illiquid countries with policy weaknesses, to countries with more serious macro and structural problems who may be solvent if reform/adjustment will occur but that have lost market access and face large debt servicing problems, to cases closer to insolvency.

In cases closer to a "pure" liquidity crisis, a solution closer to a full "bail-out" is warranted, even if economic theory suggests that a full bail-in (a standstill to break the panic) could work just as well. While some (see Sachs 1995) may argue that, even in the cases of liquidity runs, one could use capital controls, standstills, debt suspensions and debt reprofiling/restructuring as a way to prevent such panics, this approach would be seriously counterproductive and destabilising in practice. In a world with uncertainty, risk aversion and imperfect policy credibility, expectations of a standstill may trigger an early and destructive "rush to the exits".[29] Thus, at least for cases closer to illiquidity runs, there is a broad intellectual and policy consensus that large IMF loans, rather than standstills and forced rollover, may be the way to resolve such crises. This is also the way central banks use lender of last resort liquidity support, rather than bank holidays (deposit freezes), to deal with pure liquidity runs and panics.[30] This does not mean that the amount of official support should be equal to the (potentially very large) external financing gap. In cases closer to the illiquidity corner of the crisis spectrum, the IMF's "catalytic" approach is most likely to succeed: a large official package (that is, in size smaller than

the potential external financing gap) will restore investor's confidence and market access, so that the remaining part of the external financing gap is filled by voluntary private capital flows. And if a country's fundamentals are so good that it pre-qualifies for a CCL type of facility, the mere existence of such a facility may actually prevent the run from starting in the first place.

When the policy problems that trigger the crisis are more serious, but the country is still essentially solvent and illiquid, a greater policy adjustment is needed to restore policy credibility and investors' confidence. Large and exceptional official financing (conditional on policy change) may be required and be warranted, but soft forms of PSI (like foreign investors' commitment to maintain interbank lines in Brazil in 1999) may also be needed to avoid a rush to the exits. In this modified catalytic approach, a combination of policy adjustment, official finance and appropriate soft PSI will, in due time, restore confidence and market access.

When the country's policy problems are more severe, it has lost market access and is facing large debt-servicing obligations (as in Ukraine and Pakistan) and/or a run on its official or private short-term liabilities (the interbank lines in Korea), a more coercive reprofiling/restructuring of external liabilities will become inevitable; hence the need for more concerted or coercive forms of PSI in these cases. These are cases where the country may be solvent (conditional on appropriate reforms), but has lost market access and is unlikely to regain it in the short run. In these cases, policy adjustment is the most important response to restore credibility; official finance may help but it should be at normal, rather than exceptional, levels and highly conditional on policy change. Thus, the remaining financing gap will have to be filled by semi-coercive forms of PSI (such as the bonded debt restructurings in Pakistan and Ukraine). When elements of panic are important in these cases (on top of the fundamental problems triggering the crisis) because of short-term debt roll-off problems (as in Korea), large official finance (but again in amounts short of the financing gap) could be justified in addition to policy adjustment and semi-coercive forms of PSI.

In cases that are closer to the insolvency corner of the spectrum (Ecuador, Russia, Argentina), further official finance before a default is counterproductive as it postpones the necessary adjustment and debt restructuring. The country will have to suspend payments on its external sovereign (and possibly private) liabilities and a debt reduction will be necessary. Even in these cases, policy adjustment and appropriate reforms are essential (even more so, as the crisis is triggered by severely weak economic and policy fundamentals) to restore stability and growth. PSI will need to be coercive as default will require a reduction in the value of external liabilities. While policy adjustment and bail-ins are central in these insolvency cases, there is still room for some official lending, in amounts that are not exceptional. First, conditionality-based lending may give "carrots" or incentives to pursue the painful policy adjustment

process. Second, even after default and adjustment, the country may have a flow constraint; it may need to run a small current account deficit (to avoid an even more painful contraction of imports and economic activity) and/or a small budget deficit (while it is cleaning up its medium-term fiscal house) to avoid an excessive economic contraction. Since there is no market access in these default cases, these flow needs can only be filled by the official sector. Of course, such official support should be highly conditional on policy and economic adjustment.

Thus, our analysis suggests that different combinations of domestic economic and policy adjustment, conditionality-based official lending (bail-outs) and PSI (or bail-ins) will be appropriate depending on the nature of the crisis.

Official lending could also be justified to avoid international contagion (the international equivalent of systemic bank runs) when systemically important countries experience a crisis. But all of the caveats on the limits of an ILOLR (especially moral hazard issues and asymmetric information on the nature of the crisis) again apply in the case of contagion. And the lessons from the banking literature on the distortions created by blanket guarantees of "too-big-to-fail" banks also apply. While contagion and systemic risks may justify, at the margin, more official lending than in cases where such effects are not at stake, optimal policy may require some degree of "constructive ambiguity".

The analysis also implies that liquidity cases should be dealt with on a case-by-case basis: no simple or rigid rules can or should be applied and all relevant factors may have to be considered to decide whether and how much PSI should be applied. Moreover, some degree of "constructive ambiguity" may have to be maintained in this regime to provide the appropriate response to specific cases and avoid expectations of systematic bail-outs.

7.4 Alternative debt restructuring regimes: the debate on "contractual" versus "statutory" versus "status-quo" approaches to debt restructuring

Recently, the debate on the reform of the international financial architecture has centred on the issue of the appropriate mechanism or regime to ensure orderly sovereign debt restructurings. While recent sovereign bonded debt restructuring cases (Pakistan, Ecuador, Ukraine and Russia) have been successfully completed with the use of unilateral exchange offers (at times complemented by a system of carrots and sticks such as exit consents to ensure successful deals), many have expressed dissatisfaction with this "market based" status quo approach. Also, the recent default by Argentina suggests that we need to reconsider the issue of optimal debt restructuring regimes. And recently, Anne Krueger, the First Deputy Managing Director of the IMF, has proposed the creation of a "sovereign debt restructuring mechanism" (SDRM) that would have many of the features of an international bankruptcy regime.[31,32]

The question is whether we need an institutional change in the international financial system that would lead to a new way of providing for orderly sovereign debt restructuring. When sovereign debt restructuring becomes necessary and unavoidable, what is the appropriate regime that provides an orderly restructuring, while safeguarding the balance of rights of both the creditors and the debtor?[33] Is it better to continue with the "market based" status quo regime where exchange offers have been used to do bonded debt restructurings? Or should we move to the wholesale introduction and use of collective action clauses (a "contractual approach")? Or should we consider creating an international bankruptcy mechanism (or "statutory approach") such as the one proposed by the IMF?[34]

Each of these three approaches to sovereign debt restructuring has pros and cons. One way to think about the relative merits of these three regimes is to first ask what are the market failures that may prevent an orderly and efficient restructuring of sovereign debt when such orderly restructuring is beneficial to both debtors and creditors? One can think of several externalities that prevent orderly restructurings, but three of them are crucial and centre around collective action problems among creditors.[35,36]

1 The "rush to the exits". As a sovereign debt crisis is unfolding, creditors may try to rush to the exits and cause a disorderly crisis that has real and avoidable costs, as in liquidity or rollover runs. But, as discussed below (pp. 00–00), a debt suspension/standstill (including capital/exchange controls and/or deposit freezes) may avoid such a destructive reaction.
2 The "rush to the courthouse" externality. While a unilateral debt standstill may take care of the inefficiencies of a "rush to the exits", such a standstill may cause a "rush to the courthouse". Creditors may start litigation and this can become a serious problem if creditors can attach assets. But as discussed below (pp. 00–00), there are important differences between the corporate paradigm and the sovereign one on this matter, as the ability of creditors to seize/attach sovereign assets is very limited.
3 The "free rider", "holdout" or "rogue creditor" problem. This is an important obstacle to orderly restructuring. In situations where unanimity may be required to restructure debt, minority holdout creditors may scuttle a restructuring that is advantageous to the majority of creditors. While the unanimity problem can be sidestepped with exchange offers, the holdout problem may potentially remain serious. If a holdout does not accept the offer and then receives (via post-deal litigation or its threat) the full amount of his/her claims, while those who accept the offer receive a lower amount than their full claim, there is a strong incentive to hold out ("free riding"), with the consequence that an otherwise mutually advantageous deal may fail. If

this co-ordination problem among creditors cannot be solved, a disorderly and costly workout may be the outcome, even if it would have been in the interests of all creditors to achieve a co-operative solution. In this regard, the ability to have a restructuring plan approved by a majority of creditors which is binding on the entire creditor body (a "cram-down" or majority enforcement provision) would solve this holdout externality.

In addition to these three collective action problems among creditors, any efficient restructuring mechanism has to deal with a fourth potential market failure on the side of the debtor.

4 The "rush to default" or the debtor's incentive to engage in "opportunistic defaults". As the literature on sovereign debt suggests, a default decision may not be due to "inability to pay" but to "unwillingness to pay". There is always the possibility of opportunistic default given that a sovereign benefits from sovereign immunity. Thus, an efficient international debt workout mechanism needs to trade-off two objectives: not to make workouts too costly, as default may at times be due to inability to pay; but not to make workouts too easy either, as otherwise the temptation to have opportunistic defaults may increase.

I will first analyse how the three regimes address the three collective action problems of creditors, before addressing the question of the "rush to default".

Collective action problems

Supporters of a new statutory regime[37] or international bankruptcy mechanism stress the fact that, while the above collective action problems have always existed, they have become more severe in the past few years given developments in international financial markets.

In the 1980s, most sovereign debt was held in the form of medium and long-term syndicated bank loans. The covenants on these loans included sharing clauses and other limits to initiation of litigation that made the "rush to the courthouse" problem less serious. They also had implicit or explicit majority clauses that helped to deal with holdout banks. Moral suasion, deriving from repeated interaction among banks, was also more likely to rein in holdouts. In the 1990s, most of the flows to emerging market sovereigns have taken the form of bonds. The number, heterogeneity and differences of interest of this wider group of creditor makes the holdout problem much more severe.

The emergence of new bond creditors with no ongoing relations with the debtor or other creditors also suggests that the presence of aggressive holdouts ("vulture" creditors) who are willing to pursue their claims in court may have increased. Indeed, the recent Peru–Elliott case is seen as a

major threat to orderly debt restructuring, as the creditor successfully pursued a litigation strategy and ended up being paid in full.

In summary, the variety of claims (bank loans of various maturities, different types of bonds under different legal jurisdiction, with or without collective action clauses) and types of creditors (retail investors, investment and commercial banks, real money funds, hedge funds and other highly-leveraged aggressive creditors, dedicated emerging market funds and cross-over investors) makes the collective action problem of coordinating the interests and actions of such an heterogeneous world of claims and claimants almost impossible. If this view is correct, a new international bankruptcy mechanism could facilitate an orderly restructuring. The main advantage of such a mechanism is that it would solve the three collective action problems by: allowing a suspension of debt payments that stops the "rush to the exits"; imposing a "stay of litigation" following the debt suspension that is legally binding on all creditors and thus prevents disruptive litigation (the "grab race"); and allowing for a majority vote on a restructuring agreement that is binding on all creditors, thus eliminating the "free riding" or "rogue creditor" problem.

Supporters of the second option,[38] the "contractual approach" (the universal introduction and use of collective action clauses in bond and debt contracts), would argue that most of the benefits of the "statutory approach" could be obtained with the use of collective action clauses (CACs). Such clauses do not usually allow individual bondholders to start litigation (litigation has to be agreed by a majority of creditors) and/or include sharing clauses that reduce the benefits of being a holdout and litigating. Also, CACs typically include majority "cram-down" clauses, so that an agreement reached by a majority of creditors is binding on all holdouts, thus solving the free-rider problem. Thus, in principle, all of the collective action problems that prevent an orderly restructuring could be solved with the use of CACs. And relative to an international bankruptcy regime, the contractual solution could be more market-friendly, relying on voluntary agreements being reached between the sovereign debtor and its creditors.

However, it is important to note that the sovereign debt restructuring regime proposed by the IMF (at least its last incarnation, see Krueger 2002) would not be substantially different from a contractual approach, as it would be "creditor-centred" rather than "IMF-centred". Specifically, the latest SDRM proposal would give creditors all the rights related to approving an initial stay of litigation (and its continuation) and a restructuring deal that would be binding on minority holdout creditors.

Moreover, supporters of the "statutory" approach would counter-argue that the statutory solution is superior to a contractual regime for several reasons. First, there is a transitional problem as many outstanding bonds, mainly those issued under New York law, do not have CACs. So even if new bonds included them, the past stock of outstanding bonds would not have them.

Second, under traditional CACs, the vote to start litigation or cram down is taken bond-by-bond, rather than by a majority of all creditors in the asset class. So holdout problems and litigation problems may re-emerge if a majority of bondholders in one issue decides not to co-operate. While one could conceive of super-clauses that would imply a super-majority vote by all creditors in a particular credit class, these clauses do not exist so far and are not likely to be introduced in a uniform way any time soon.

Third, while collective action clauses could be eventually included in all bond covenants, many other claims on the sovereign (banks loans, various other credit instruments) would not have them. Over time, financial innovation may lead to the creation of new financial instruments, such as various credit derivatives, that may not include such clauses. The statutory approach has the advantage that, regardless of what current and future claims on the sovereign are, they would all be included in the restructuring mechanism and would be subject to the same overall majority vote to initiate or withhold litigation and to approve a restructuring agreement.

Fourth, achieving uniformity of CACs (their wording and interpretation) in different legal jurisdictions may be very hard to achieve. Messy, costly and protracted legal issues of interpretation and adjudication may result. A uniform international bankruptcy regime would codify a standard set of rules, case law and interpretations.

While some of these difficulties could be surmounted under a contractual approach through the use of super-clauses, arbitration and other meta-clauses, such a beefed-up contractual approach ends up coming very close to a creditor-centred statutory one.[39]

Supporters of the status quo regime[40] start from the observation that, while ideally a "statutory approach" or a "contractual approach" would solve these collective action problems, they are both unlikely to emerge. The USA will not agree to having an international legal regime over-rule US security laws and its protection of creditor rights; many emerging markets may resist the bankruptcy regime based on a concern that it would make it easier for the IMF to cutoff lending to crisis countries; and the other G7 (while being in principle more sympathetic to the idea of an international bankruptcy regime)[41] will not aggressively push for it. A "contractual approach" is also unlikely to make progress as, while rhetorically supported by the G7/G10 since the time of the Rey Report in 1996, there is no system of carrots and sticks to ensure that both creditors and debtors include CACs in new bond issues. Thus, if neither the statutory nor the contractual approach are likely to make progress in the foreseeable future, one has to try to make the most of the status quo regime to achieve orderly restructuring. In this regard, recent experience suggests that bonded debt restructurings are feasible and have been successfully achieved, even in the presence of hundreds or thousands of heterogeneous creditors in Pakistan, Ukraine, Ecuador and Russia.

Moreover, the collective action problems emphasised by many may be

exaggerated in reality. First, any sovereign faced with a "rush to the exits" can stop it with a unilateral debt suspension. Thus, this collective action problem already has a solution available under the current status quo. It is true that a debt suspension, in the absence of a stay of litigation, may lead to a "rush to the courthouse". But the collective action problem of a "rush to the courthouse" is not in any case severe for sovereign debtors.

This "rush to the courthouse" is certainly important and severe in a corporate bankruptcy context, where rushing to litigate may allow a creditor to attach assets. Thus, bankruptcy regimes such as Chapter 11 or 7 prevent such a grab race through a stay of litigation once the debtor has applied for bankruptcy protection. The stay is mostly about protecting creditors' rights (to avoid the unfairness of some creditors attaching assets to the disadvantage of other creditors) in a corporate context.

In a sovereign context, the "rush to the courthouse" is much less of a problem as sovereign immunity implies that creditors have trouble finding assets worth rushing to claim. The ability to attach assets via early litigation is severely limited. In fact, there is a scarcity of assets under the jurisdiction of foreign courts that can be potentially attached. And, indeed, there is little evidence of a rush to litigate in sovereign debt crises when a country has suspended debt payments.

If the "rush to the exits" and the "rush to the courthouse" are not real problems, one is left with the "holdout " friction as the main collective action problem that cannot easily be resolved in the absence of majority cram-down clauses. But even the free rider problem (and the related litigation threat) has not been as severe as initially thought. There are plenty of sensible ways to overcome and minimise the rogue creditor problem without majority cram-down clauses. Here are ten reasons why the holdout problem is not a big one in practice.

First, the unanimity problem can be bypassed with the use of unilateral exchange offers. While these offers do not eliminate the holdout problem, they allow for a majority of co-operative bondholders to accept new bonds with new payment features even when the old bonds required unanimity to change their terms. Indeed, in cases where there were thousands of bondholders (Ukraine, Pakistan, Ecuador and Russia) such unilateral exchange offers have had overwhelming success, with 99 per cent plus of creditors accepting the offer.

Second, "exit consents", which change by majority vote the non-financial terms of the bond covenant, have been successfully used (in Ecuador) to dilute the benefits of being a holdout. Third, a system of carrots (sweeteners in the form of cash, collateral release and seniority upgrades) and sticks (the threat of default, *ex post* use of CACs, exit consents) has been used, and can be used, to ensure a successful completion of deals.

Fourth, the "holdout" problem is predicated on the assumption that, in a debt restructuring, a creditor that holds out would receive a financial benefit that is greater than they would receive by participating in an

exchange offer. But in all recent debt exchanges (Pakistan, Ecuador, Ukraine and Russia) creditors have enjoyed mark-to-market gains of 20 per cent to 30 per cent on average. Such gains increased the likelihood that the offer would be accepted by a majority of creditors.

Fifth, litigation is costly (especially for small creditors); some creditors (the small retail ones) are more risk averse than others and the outcome of litigation is uncertain; and some have a high rate of time preference and may not want to wait for the delay costs of protracted litigation. Thus, a majority of creditors are likely to rationally accept an offer that is mark-to-market neutral or slightly positive, rather than holdout and incur the costs and risks of litigation.

Sixth, large financial institutions that have ongoing business relations with a sovereign debtor (for example, through the franchise value of their commercial banking operations) are unlikely to hold out and fight. They may actually be the catalytic agent that would apply moral suasion on holdouts and, if necessary, bribe them into accepting a deal. The desire to gain the large fees/commissions involved in a successful deal leads the intermediaries to design workout packages that minimise such "deal risk".

Seventh, the holdout problem can be minimised through side payments ("bribes") offered by creditors who have a lot to gain from a successful deal; or by the debtor (that "*ex post*" buys out a limited number of holdouts); or by official creditors (via extra amounts of official finance that provide enhancements and/or sweeteners to a deal).

Eighth, the Elliott–Peru decision was, from a legal standpoint, highly controversial and unusual and, most likely, its logic would not stand if challenged in other legal cases. A legal doctrine that interprets the "pari passu" clause as allowing a holdout to block payments to creditors that have accepted an exchange offer is very likely to be successfully challenged in court.

Ninth, creative variants of the status quo regime of exchange offers can be designed to provide market-based orderly restructurings that reduce the risks of litigation and/or free riding.[42] Tenth, rogue creditors and vulture funds are often part of the solution rather than the problem. Low risk-aversion vultures tend to buy low, when default has occurred and debt prices have collapsed and get large mark-to-market gains from a successful deal. Thus, they may accept an exchange offer rather than litigate. For example, Elliott Associates who successfully sued Peru, held Ecuadorian debt but decided together with 99 per cent plus of creditors to accept an exchange offer rather than holdout as the offer provided significant mark-to-market gains. Morover, even "rogue creditors" who will eventually sue will not jeopardise the completion of an exchange offer. Only after a majority of creditors have accepted a deal will a rogue creditor have the incentive to litigate and attempt to obtain their full claim.

Thus, while one cannot fully solve the free rider problem in the absence of a majority cram-down clause, there are creative ways to minimise its risks and consequences under the current market-based status quo.

Indeed, recent experience has shown that holdout problems have not prevented the successful achievement of orderly bonded debt restructurings. In most cases, the status quo may still work and allow successful exchange offers, with the holdout problem becoming only a post-deal nuisance.

"The rush to default" problem

In a world where countries benefit from sovereign immunity and creditors have very limited ability to attach sovereign assets, there is always a possibility that a sovereign would "opportunistically" default. As a result, a restructuring that is too "easy" or "orderly" may not be socially efficient. Indeed, given the pervasiveness of sovereign immunity, the appropriate costs (in terms of loss of access to international capital markets, output and trade losses) that creditors can impose on the debtor are an important component of a well-balanced regime that minimises the moral hazard of opportunistic default. But while default that is too easy may not be efficient, a disorderly default (triggered by an inability to pay) can impose losses that are socially inefficient and thus can hurt both the debtor and creditors. Thus, subject to the caveat that defaults should not be too easy, an orderly debt restructuring should allow countries with unsustainable debt profiles to restructure their liabilities.

How would the three restructuring regimes deal with the "rush to default" issue? Supporters of the status quo regime would argue that the "rush to default" is not a big issue in the first place. According to this view, even in the current regime with limited sovereign immunity, sovereigns have strong incentives not to opportunistically default, as such action has severe reputational and financial costs in terms of protracted loss of access to international capital markets and output and trade losses.[43] A healthy and balanced regime is similar to the current one, where the incentives of the sovereign to default opportunistically are already limited by the consequences and costs of such default. Thus, making it easier for the debtor to default via a statutory regime may tip the balance in favour of debtors and trigger opportunistic default that would ultimately reduce the ability of emerging markets to access capital markets.

At the other extreme, a well-designed SDRM regime would have safeguards against the abuse of this protection by opportunistic debtors. In one variant of the SDRM, access by the debtor to the SDRM's legal protection would be conditional on an IMF assessment that the country had an unsustainable debt position. Without having passed such a sustainability test, the country would not receive legal protection. In another variant, a majority of creditors would take the decision on whether to approve or extend a stay of litigation.

Under the contractual approach, opportunistic defaults could again be addressed by the threat of litigation on the part of a qualified majority. Unlike the current status quo, where any creditor can start legal action if they so desire, under the contractual approach the decision to start litiga-

tion would be made by a majority of creditors (to avoid disruptive litigation by a small minority).

7.5 Open issues in the G7/IMF PSI policy framework

The G7 and IMF dialogue on the appropriate PSI framework continues. While recently the greatest attention has been given to the debate on SDRM versus CACs, the overall G7/IMF framework is still vague on many other aspects of PSI, especially in cases short of pure "insolvency". Since most PSI cases in the past (and likely in the future) will be in this grey area, there is a need to clarify the nature of PSI policy in these cases. In this regard, there is some dissatisfaction with the vagueness of the Prague Framework on many important issues and the 2001 Genoa Summit did not achieve a new consensus or framework.

The appropriate crisis resolution and PSI approach depends on the nature of the financial crisis

In principle, what is the optimal approach to crisis resolution and PSI in different crisis episodes? In general, as discussed in detail in section 7.3, the answer depends on the nature of the crisis: the appropriate form of PSI and the amount of access to IMF resources depends on where a country falls in the continuous spectrum going from pure liquidity cases to pure insolvency cases.

But many open issues remain. First, how to distinguish between illiquidity and insolvency? Most cases are in a grey region where illiquid countries have serious macro and structural problems and countries that look insolvent may not be given serious reform and adjustment. Second, is a full bail-out appropriate in cases closer to the illiquidity corner? Conceptually, one may think of using appropriate PSI (beyond the soft PSI used in cases where the catalytic approach is attempted) even in these cases. Third, the willingness to attempt debt restructurings or concerted PSI becomes weaker in cases where the country is large and systemically important for economic and/or political reasons. In these cases, there is a political bias towards providing exceptional finance. How to restrain these political biases towards bail-outs? Fourth, when is exceptional access warranted and when should the IMF provide normal access? Fifth, when should PSI be catalytic (soft) and when should it be concerted?

Optimal policy in liquidity cases and cases of systemically important countries

The right policy for "liquidity" cases is more complex. In principle, the full bail-out and a full bail-in solutions are equivalent. But real liquidity crises are different from the abstract ideal as there is uncertainty, risk aversion and policy and macro problems in countries subject to a run. Illiquid

countries typically have serious macro and/or structural problems. This is why "appropriate" PSI, in addition to policy adjustment and appropriate amounts of official financing, is necessary to address liquidity crises. At the same time, the threat of a coercive bail-in in liquidity crises risks a "rush to the exits" and other destabilising outcomes.

The hardest open issue in PSI policy is what to do when a large, systemically important country gets into trouble. Ideally, a combination of policies would be the appropriate response: policy adjustment on the part of the country, especially when this is not a pure liquidity case; large but not exceptional official financing (to prevent moral hazard); and "appropriate" forms of PSI.

In the best cases, one would hope that the "catalytic" approach would work. But the catalytic approach is less likely to succeed when the crisis country has serious policy problems and uncertain policy credibility. Thus, more concerted forms of PSI may become necessary in these cases of liquidity with serious macro/policy imbalances. Moreover, when large systemic countries suffer macro and policy problems, the issue emerges of how large access to IMF resources should be and whether large access should be conditional on "concerted" forms of PSI.

However, there is a big gap between the public rhetoric about no more big bail-outs and the political-economy reality of specific cases. When a large, systemically important country gets into trouble, political pressure to bail-out this country is common. The recent episodes in Argentina and Turkey confirm that bail-outs are more common than bail-ins. All of these programmes have been long in official support and quite short in their PSI elements. Only when the Argentine situation became clearly unsustainable, after two large support packages in December 2000 and August 2001, was IMF support eventually cut off. Note that based on standard measures of debt sustainability, Argentina and Turkey were in a worse condition than, say, Ukraine or Pakistan. While in Ukraine and Pakistan a debt restructuring at below market rates was forced, in Argentina and Turkey there was no meaningful PSI. The Argentine megaswap of bonds occurred at market rates, while in Turkey large official support allowed a rollover of domestic debt at very high, market-determined real interest rates and a roll-off of cross-border interbank lines. Debt suspension ended up occurring too late in Argentina.

This leaves open the question of whether the bar for declaring when a large country is insolvent has been set too high. The answer is probably yes. The incentives to bail-out large countries stem from several factors. First, these countries tend to be systemic and there is often concern about potential international contagion (Mexico, Korea, Russia, Argentina and Brazil). Second, they are often subject to a liquidity run, in spite of also having fundamental weaknesses; thus, some exceptional package may be part of the initial optimal policy response. Third, they are often geostrategically, politically and/or militarily important (Mexico, Turkey, Korea and Russia).

In conclusion, semi-liquidity cases in large systemic countries are always difficult and complex. Ideally, a combination of policy adjustment, large but not exceptional financing in most cases and appropriate forms of soft PSI should restore confidence and market access. Large catalytic official money may be better when the country is closer to a pure liquidity case and large access is highly likely to restore confidence and market access.

These cases may, however, be the exception rather than the rule. Smaller official money packages and concerted PSI will be better when macro problems are more severe and prospects of restoration of investors' confidence and market access are not high. In some cases, large access may be warranted even if restoration of market access is unlikely. But in these cases, large access should be associated *ex ante* with concerted PSI. Some degree of "constructive ambiguity" will also be necessary to avoid moral hazard and "too-big-to-fail" distortions. In general, it is very hard to have mechanical rules in these complex cases. A lack of rules may lead to "destructive ambiguity", but rigid rules ("PSI whenever exceptional money is provided") may be even more destabilising. Given the political biases towards providing high access in large systemic cases, the conditions under which such exceptional access will be provided, and whether PSI should be catalytic or concerted, should be spelled out more clearly than currently.

Standstills

The main argument in favour of coercive bail-ins and standstills on external debt payments in liquidity or semi-liquidity cases is that they solve the collective action problem of the investors' rush to the exit. But standstills also have several potentially destabilising shortcomings. They may lower long-run lending and capital flows to emerging markets. They may lead to a "rush to the exits" (as in the case of anticipated capital controls). They may lead to international financial contagion (see the Russia/Malaysia contagion to emerging markets in the summer of 1998). Partial standstills on sovereign claims may not be enough, as private claims may run too. In this event, exchange and capital controls will be needed. But standstills on private claims are hard to arrange and there is also the risk of "asset stripping" (as in Indonesia).

There are also a number of complex legal issues to be addressed when thinking of legally binding stays on litigation after a standstill. The IMF's Article VIII.2.b is not likely to be amended to allow this to happen given current G7 views on this issue. A court-enforced "stay of litigation" after a debt suspension is unlikely to occur in the absence of such an amendment. The IMF's "lending into arrears" policy may be useful and appropriate, but it will not formally prevent litigation if creditors decide to take their case to court.

The creation of an SDRM would allow standstills with a stay of litigation, but the likelihood that the IMF's SDRM proposal will be enacted is

very small. Also, the SDRM would most likely apply to cases of outright insolvency, while the idea of officially sanctioned standstills is to provide a tool for early restructuring even in cases where solvency is not at stake.

Given these problems with standstills, supporters of these solutions need to address the risks of a systematic use of them more carefully. While standstills may become necessary in some extreme cases (one can even interpret some concerted PSI solutions such as the interbank rollover in Korea as being conceptually close to a standstill) and they have been officially sanctioned as a tool of last resort, their use should be infrequent and not linked via a mechanical rule to the provision of official finance. Otherwise, the risk of a "rush to the exits" would be serious. But while rigid rules specifying *ex ante* when standstills should occur may end up being destabilising, their *ex post* discretionary use may be appropriate at times.

Degree of coercion in PSI

The G7 PSI doctrine has stressed the importance of voluntary, rather than coercive, solutions to crises whenever these are feasible. Some go as far as saying that there should never be coercion in the approach to PSI, but this option is not realistic. Experience shows that market access may not be restored, especially when a country with significant problems, policy uncertainty and lumpy external debt payments gets into trouble. Thus, more concerted forms of PSI that imply effectively some degree of coercion will become necessary. Hoping otherwise is not realistic.

Involvement of the official sector in PSI solutions

A laissez-faire approach, where the official sector decides how many resources to provide and lets debtors and creditors work out the remaining gap, may not be appropriate, especially in large systemic cases where provision of low access will trigger a run. As the Korea case shows, an involvement of the official sector in concerted forms of PSI may become necessary to resolve collective action problems and allow orderly workouts. Similarly, in cases where bonded debt restructuring becomes necessary, the official sector has an important role to play for a number of reasons and laissez-faire solutions are not appropriate.

First, restructuring deals should be consistent with medium-term debt sustainability; failure to ensure that would jeopardise the programme and official resources. Second, since official support is always at stake and since programmes often require a restructuring of bilateral Paris Club claims, the official sector cannot ignore the process, terms and outcomes of a private workout. Third, collective action problems are prevalent both in bonded debt and bank rollover cases; the official sector may contribute to solving such problems in constructive ways. Fourth, the official sector has to decide when lending-into-arrears is appropriate; this amounts to an effective decision on whether a formal or informal standstill or debt

payment suspension is appropriate. Thus, the official sector cannot just pretend that its role is to determine the amount of official finance and then let the debtor and creditors work out their claims.

This suggests that IMF programmes should be clearer about their PSI conditions and the consequences of failing to implement adequate PSI. The monitoring of PSI in IMF programmes should be more systematic and the consistency of programme assumptions about private financing with medium-term debt sustainability should be appropriately fleshed out.

7.6 Conclusion

The debate on the appropriate form of PSI and alternative mechanisms for dealing with sovereign debt problems and achieving orderly restructurings is still wide open. Economic analysis suggests that the appropriate combination and mix of domestic policy adjustment, official lending (bail-out) and private sector involvement (bail-in) to resolve crises depends on the nature of the crisis. Thus, an eclectic case-by-case approach to PSI is appropriate, where discretion is constrained by principles, criteria, guidelines and an objective assessment of the nature of the crisis and the debt sustainability of the country.

While such a constrained discretion approach is the most appropriate one and dominates rigid and mechanical rules, there is ample scope for improving and clarifying the current fuzziness of the official G7/IMF framework and the continued political biases in bail-out policies. A clearer access policy is needed that clarifies when exceptional versus normal access should be provided, while leaving room for some discretion and "constructive ambiguity". This access policy should be guided by a careful assessment of the debt sustainability and financeability of the country in crisis. In this regard, the consistency of IMF programme assumptions about private financing with medium-term debt sustainability should be significantly improved. The PSI framework should be clearer about when PSI should be catalytic and voluntary and when more concerted and coercive forms of PSI are instead necessary. Also, IMF programmes should be clearer about PSI conditions and the consequences of failing to achieve appropriate PSI.

Regarding debt restructuring mechanisms, the three regimes discussed in the chapter (contractual, statutory, market-based exchanges) provide different creative solutions to the collective action problems inherent in debt restructurings. While the statutory approach provides in principle the cleanest way to solve in a consistent and coherent way all the collective action problems involved in an orderly restructuring of sovereign bonds, it has no chance of being implemented in the near future given the political difficulties – especially in the USA – of amending the IMF's Articles of Agreement and given the substantial objections to it. The contractual approach has some appeal, being more market-based, but transitional problems and incentives to implement it are not easily surmountable. That

said, the recent decision by Mexico to introduce collective action clauses (CACs) in its New York law external bonds gives hope that, over time, contractual changes to bonds providing majority action may become more common.[44] Thus, for the time being, working with the status quo remains the dominant option. I have argued that the current, market-based regime (or non-regime) can be used to address many collective action problems and provide for orderly restructurings.

In part, the verdict on the appropriate debt restructuring regime will depend on experience with the Argentine restructuring. This is a most complex case given the heterogeneity of both the claims and the claimants. If the Argentine debt restructuring becomes messy, disorderly, protracted and causes avoidable loss of economic value that hurts both the debtor and creditors, the political pressure to reform the current approach and move towards the adoption of an international bankruptcy regime will increase. If instead the creative use of exchange offers with various carrots and sticks achieves orderly restructurings, the incentives to create a new statutory regime will be permanently buried. In either event, there is now some momentum towards a contractual approach. The G7 and the G10 firmly support the introduction of CACs in bonded debt issues under New York law. And the recent example of Mexico suggests that collective action clauses may be progressively introduced into a larger fraction of external bonded debt.

Notes

1 This "contractual approach" based on CACs, long supported by a number of academics, has recently received the support of John Taylor, the Under Secretary for International Affairs at the US Treasury (Taylor 2002a, b). Support for the progressive introduction of CACs in bond contracts can also be found in other official reports, like the Rey Report issued after the Mexican peso crisis and in several past G7 communiqués.

2 The policy debate on the SDRM versus CACs reached a conclusion in the spring of 2003. While the IMF and some European countries strongly supported the SDRM, the US administration effectively vetoed this proposal and strongly pushed for a CACs/contractual approach. Thus, the SDRM appears, for the time being, to have little chance of being implemented. See Roubini and Setser (2003) for a recent discussion of SDRM versus CACs and the political feasibility of alternative approaches to debt restructuring.

3 See Roubini (2001a, b) on the currency and debt restructuring challenges faced by Argentina.

4 The distinction is important as solutions that are *ex post* efficient, such as providing official finance to reduce the costs to debtors and creditors of crises, may be inefficient *ex ante* if they distort incentives to borrow (the moral hazard problem).

5 For the time being, we do not discuss debt servicing difficulties of private sector borrowers. As long as a domestic bankruptcy regime is well established, debt problems of such agents can be dealt with through this regime. But there are several caveats. Often debtor governments assume/guarantee the external liabilities of private borrowers, as in the case of banks in Asia or Turkey most recently. The policy decision of the government can also directly (through

capital controls) and indirectly (through tax levies, regulations, poor policies) affect the ability of private debtors to pay. This is what Tirole (2002) refers to as the dual-agency problem.

6 Many of these open economy models of bank or debt runs (such as Chang and Velasco 1999 and Cole and Kehoe 1998) are international variants of the Diamond and Dybvig (1983) and Bryant (1980) models of bank runs.

7 As shown by Allen and Gale (2000a) in a model of fundamental-based bank runs, even if we rule out the pure self-fulfilling equilibria and a bank crisis is triggered by real fundamental shocks, in equilibrium a fundamental run will occur and this will trigger extra and avoidable liquidation costs. See Chui *et al.* (2000) for a model of self-fulfilling runs where there is an important role of poor fundamentals in triggering the run.

8 See Sachs (1995) for an argument in favour of an ILOLR along such lines. Indeed, in the Diamond–Dybvig model, a full lender of last resort or even a government guarantee of deposits – deposit insurance – is able to prevent self-fulfilling bank runs. Jeanne (2000) shows that global welfare is increased through ILOLR intervention. Moral hazard issues are finessed in the ILOLR model of Jeanne and Wyplosz (2001).

9 In this chapter we do not discuss the fact that many other market failures may justify the existence of other forms of official finance (not related to crisis resolution), such as the development finance provided by institutions such as the World Bank and other MDBs.

10 There is a large literature on the arguments for IMF conditionality, several of which studies are based on the better ability of the IMF to monitor and enforce good policy behaviour by debtor countries; see Guitan (1995), Marchesi and Thomas (1999), Kumar *et al.* (2000) and Khan and Sharma (2001). The lending is subject to "conditionality" to ensure repayment of the loans, as standard finance and agency theory would suggest (see Kahn and Sharma 2001 for this justification of "conditional" IMF lending). In principle, totally market-based regimes, where private creditors could impose such policy conditionality on a debtor in crisis to ensure debt servicing could be designed. In practice, such attempts have failed in the past, in part because of collective action problems among private creditors. Thus, the need to delegate this role to a separate institution like the IMF. Tirole (2002) refers to it as "delegated monitoring" in situations of a common agency. We will assume in this chapter that the IMF can provide such delegated monitoring even if there is an open debate on this issue. Diwan and Rodrik (1992) assume that the IMF has a comparative advantage in enforcing conditionality; this advantage implies that the value of a debt reduction agreement between debtors, private and official creditors is increased.

11 See Gorton and Winton (2002) for a recent survey of contagion in bank crises. Goodhart and Huang (2000) show that an ILOLR can prevent international bank runs (contagion) but their model does not consider the issue of moral hazard, discussed below (pp. 00–00).

12 And in the bank run literature, in addition to models of panic driven runs such as Diamond and Dybvig, there are also plenty of models of bank runs and crises driven by fundamentals: see Allen and Gale (2000a), Jacklin and Bhattacharya (1988) and Gorton (1987) to name but three.

13 Such standstills are the international equivalent of bank holidays in the case of a run on a solvent bank. A credible bank holiday avoids the collective action problem (the sequential service constraint or "first-come-first-served" rule) that triggers the run in the first place.

14 Indeed, Diamond and Dybvig (1983) suggest that a temporary debt suspension (bank holiday) is the optimal policy to prevent multiple equilibria runs.

15 One can argue that hair-triggers (liquidity runs) by creditors are the response of creditors who want shorter maturities so they can get out at par (indeed,

hair-triggers in secondary markets for long-term instruments are not as damaging). As suggested by Jeanne (1999) and Jeanne and Wyplosz (2001), the maturity of external debt is endogenous and may serve as a discipline mechanism. But if debtors believe that short maturities increase the risk of liquidity crises, and if liquidity crises are costly, debtors have countervailing incentives to lengthen maturities. One should maybe accept that there will always be some risk of shortening maturities (that can lead to liquidity runs) and that this threat can be compensated by policy action by debtors to lengthen maturities.

16 This point is familiar from economic theory: while "unexpected" capital controls may prevent a speculative attack and run on a currency, "anticipated" controls may actually trigger a run or make it occur earlier than otherwise, as creditors rush to the door to avoid the controls and the risk of being locked in. This "rush to the exits" effect is also the main potential drawback of any semi-coercive PSI policy: if creditors anticipate partial or full bail-in they may try to avoid it by unwinding their position before the policy is implemented.

17 We will discuss below (pp. 00–00) in more detail how moral hazard affects the arguments about the need for an ILOLR or other market mechanisms to avoid runs.

18 Note also that while short-term debt is a source of potential liquidity runs, it can also work as a disciplining device for fiscally deviant countries and in situations where moral hazard is an issue. See Jeanne (2000) for a model where short-term debt is endogenously determined and works as a discipline device. His point is important as it suggests that mechanical policy recommendations, such as "avoid borrowing at short-term maturities" beg the question of why, in equilibrium, short-term debt emerges. Thus, imposing policy solutions from above, such as lengthening debt maturities, may lead to a reduction of lending in the first place.

19 In the optimal contract, default sanctions are imposed with a probability less than unity, as some defaults are due to inability to pay and some to unwillingness and lenders cannot distinguish between the two; if such information asymmetry was not an issue, sanctions would not be imposed in the true insolvency cases.

20 This is a variant of the view of those who believe that coercive PSI will shrink the amount of lending to emerging markets.

21 In a closed economy bank run context, Wallace (1988) showed that an optimal debt suspension policy (increasingly tighter caps on deposits as a run starts) dominates a lender of last resort policy (in the form of deposit insurance) unless the lender of last resort has superior information on the nature of the run.

22 Historically, this seizure solution to sovereign debt problems was actually available. In previous centuries when "gunboat diplomacy" was the rule, defaulting sovereign countries could be taken over by creditor governments and their assets, or tax authorities, seized to ensure the servicing of external debts.

23 In the corporate finance jargon of Tirole's (2002) analysis, the problem faced by both corporate and sovereign debtors are the limits to pledgeable income that can be used as effective collateral for borrowing. Sovereign immunity makes this problem even more serious for sovereign borrowers.

24 A side implication of this observation is that Bulow's (2002) aversion towards lending by the IMF/IFIs (the IMF should not make loans) because it induces gaming between debtors and private creditors does not have a strong factual basis.

25 Such informational problems for the IMF are also discussed by Dooley and Verma (2001).

26 Wells (1993) analyses how the presence of an official creditor affects the bargaining game between a sovereign debtor and its private creditors in an asym-

metric information debt reduction game, an issue that is relevant for the debate on the IMF's SDRM proposal. An IMF policy of "lending into arrears" is more efficient than one of "no lending into arrears". The former policy leads to more efficient bargaining as delay times are reduced, and the benefits of IMF transfers go to the debtor. In this chapter, the IMF is an exogenous source of funding rather than a strategic player in the game. Klimenko (2001) shows that the market power in trade of a debtor country affects its bargaining power in debt restructuring games involving official and private creditors. Also, he shows that if the official lender is a strategic player rather than a passive source of funds, the debtor is better off in a lending into arrears regime, not because its bargaining power increases relative to the private creditor, but because its power increases relative to the IMF. Variants of the games where the IMF is a passive provider of funds rather than a strategic player are the papers on the "debt buyback" debate (see Bulow and Rogoff 1991) where the controversial issue was whether debtors or creditors obtain most of the surplus deriving from IMF-financed debt buyback schemes.

27 Note that the middle solutions that have worked best have been those with most financing, such as Mexico in 1995 and Korea at the end of 1997. This is especially true if the crisis is primarily one of liquidity. In the case of Indonesia, initial disbursements were much smaller than in Korea and one can thus argue that is may have contributed to the deepening of the crisis. However, policy problems and the lack of commitment to adjustment and reform were also more serious in Indonesia, a factor that can explain the failure of the original rescue package and the deeper crisis experienced by this country. Similarly, the first Korea package (early December 1997) did not work, in the sense of preventing a deepening of the crisis, because of a combination of the official package being too partial (in terms of disbursements, and uncommitted resources), not enough commitment to sound policies and reform before the presidential elections and the inherent desire of smaller creditors to exit.

28 See Cottarelli and Giannini (2002) for an empirical study of the IMF's catalytic approach.

29 See Frankel and Roubini (2001) and Roubini (2000, 2002b) for various arguments against standstills as a tool to prevent runs.

30 Even the views of Jeffrey Sachs on the issue of IMF loans in liquidity cases appear to have changed over time. While in his 1995 paper he made the argument that the IMF should become an international lender of last resort to deal with liquidity crises, he then argued that, even better than large bail-out packages, liquidity runs could be addressed by turning the IMF into an international bankruptcy court with the power to declare standstills and restructure sovereign debts and thus avoid the destructive effects of a "rush to the exits". But his later analysis of the Asian crisis as being driven mostly by self-fulfilling liquidity runs suggested again that large IMF liquidity packages would be necessary to deal with such destructive panics. Thus, his later support, within the work of the Meltzer Commission, of turning the IMF into a quasi-ILOLR that would lend very large amounts to well-behaved countries that experienced liquidity runs, panics and contagion.

31 Krueger (2001a, b, 2002). After a long debate, the G7 agreed in the spring of 2003 that the SDRM/statutory approach was not politically feasible given that it would require an amendment of the IMF's Articles of Agreement; also many have expressed doubts on the desirability of the SDRM approach and suggested that most of the goals of the SDRM can be achieved in a contractual setting. Thus, it has been agreed that priority should be given to the CAC/contractual approach. See Roubini and Setser (2003) for these latest policy developments.

32 Sachs (1995) was an early advocate of an international bankruptcy court for

sovereign debtors, while his current contribution concentrates on the debt crisis and the debt reduction needs of low income countries. See Rogoff and Zettelmeyer (2002) for a survey of the literature on sovereign bankruptcy ideas.

33 When debt becomes unsustainable and the country has to restructure its sovereign (and possibly private sector) external liabilities, it is in principle in the interests of all parties to have an *orderly* debt restructuring process, one that can minimise losses of value that are socially inefficient and allow the country to adjust and return to a sustainable debt path. Thus, subject to the caveat that defaults should not be too easy (to prevent opportunistic defaults), an orderly debt restructuring should be the objective of an international regime that allows countries with unsustainable debt profiles to restructure their liabilities.

34 I discuss these issues in more detail in Roubini (2002b, c).

35 See Sachs (1995) for an early statement of these market failures as the basis for the need for an international bankruptcy regime.

36 In Roubini (2002c) I discuss a number of other potential market failures in addition to the four discussed in my remarks here. Specifically, I consider the "rush to the exits" and the "rush to the courthouse" on non-sovereign claims (and the ensuing need for capital or exchange controls); the risk of debtor actions (such as preferential treatment of some creditors) that damage creditor interests; the risk of asset stripping by the debtor; and how to provide senior private "new money" (debtor in possession (DIP) financing) during a default. Sachs (2002) states that, in addition to the collective action problem among creditors, another motivation of bankruptcy law is to provide a "fresh start" to insolvent debtors, i.e. avoid situations of "debt overhang" and provide some fairness, in addition to efficiency, to the workout process. I interpret this "fresh start" as the need to provide debt workouts that are beneficial to both debtors and creditors when a disorderly, costly and lengthy workout would lead to a loss of value that is not beneficial to either side. Thus, the issue is which regime (statutory, contractual or market-based) can provide such an orderly workout. See also Roubini and Setser (2003).

37 See Krueger (2001a, b, 2002).

38 See Eichengreen (1999), Taylor (2002a, b).

39 The main difference remains that a statutory approach requires an amendment of the IMF's Articles of Agreement or an international treaty, while the contractual approach could evolve over time without such a radical institutional change. But even a contractual approach would require changes in legislation in some major legal jurisdictions.

40 Roubini (2002b).

41 See the very cautious endorsement of the idea of an international bankruptcy regime in the February 2002 communiqué of the G7 Finance Ministers.

42 See, for example, the recent JP Morgan proposal by Bartholomew and Stern (2002).

43 There is a broad literature on reputational mechanisms and which type of costs of default are able to sustain an equilibrium without opportunistic default. See, for example, Bulow and Rogoff (1989a) and Wright (2001b).

44 See Roubini and Setser (2003) for a recent discussion.

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