

## **International financial crises: prevention, management and resolution**

Speech by William R White, Economic Adviser, Bank for International Settlements, at a conference on 'Economic governance: the role of markets and of the State', on the occasion of the Annual Congress of the Swiss Society of Economics and Statistics, Berne, 20 March 2003.

### **1. Introduction**

Today I am going to speak primarily about international financial crises, and how they might be prevented, managed and resolved. At the risk of being boring right from the start, let me begin with some definitions. By **international financial crises**, I mean financial crises likely to have international implications. This casts the net wider than just sovereign crises in emerging market economies. However, this is not to deny that such problems figure prominently, in what I wish to say today. While the word **prevention** is, I think, self-explanatory, the word **manage** should be taken to include measures to reduce the economic damage and the costs likely to be associated with such crises should preventive measures fail. Finally, I take crisis **resolution** to mean that there is the need for some element of debt restructuring or even forgiveness.

While such distinctions - prevention, management and resolution - have a certain analytical appeal, it must be recognised that in the real world they are often inextricably linked. Perhaps most importantly, the procedures followed in managing crises can easily have implications for the willingness of creditors to write off debts, as well as the likelihood of crises occurring in the future. Otherwise put, public policies that alter private sector incentives can easily have undesirable side effects if not carefully designed.

Let me begin with some background descriptions of some recent financial disruptions, including full-blown crises, as well as recent changes in financial structure that could have contributed to these events. I will then go on to discuss my main topic, drawing liberally on recent events to provide lessons as to how the public sector might contribute more effectively to international financial stability.

### **2. Financial disruptions and structural change**

Over the last 20 years or so, there seems to have been a continuous series of financial incidents meriting the attention of public policymakers. In large part, this attention has seemed justified because financial disruptions were perceived as having the potential to feed back on the real side of the economy: that is, there was the possibility of systemic effects or externalities. In both the 1980s and 1990s the greatest focus was put on international debt crises, but in fact the existence of a much wider range of financial problems should also be recognised. While some of these seem essentially domestic, the increasingly globalised world in which we live (of which more below) implies that any of them might lead to serious international repercussions. Although any classification system has its deficiencies, I would suggest that most recent financial disruptions fit into one of the following four categories.

The first of these has to do with **operational disruptions and institutional insolvencies**, in effect short sharp shocks to financial institutions. The former includes internal and external fraud, losses arising from inappropriate employment and business practices, damage to physical assets, business disruptions and system failures, and losses from failed transaction processing and process management. Such disruptions are clearly on the rise, in large part because the financial world has now become so much more complex and systems-dependent. Examples of this genre would include the failure of Bankhaus Herstatt in 1974, the collapse of Baring Brothers in 1995, the events of 11 September 2001 and the failure of a number of continental European insurance companies in recent years. Note should also be taken of the failure of financial institutions for non-operational reasons, with the bankruptcy of Drexel Burnham Lambert in 1990 being a noted example. It threatened the functioning of the US payment system even though the bank was relatively small, did a plain vanilla derivatives business and had little international exposure.

The second category of disruption involves **excessive market volatility**, often leading up to sharp discontinuities. Two good examples would be the global stock market crash of 1987 and the LTCM affair in 1998. In both cases there were concerns about institutional exposures globally and significant injections of central bank liquidity in consequence. It also seems to be a fact that many measures of volatility in financial markets, for equities, bonds and spreads (including sovereign spreads), have increased sharply since the second half of the 1990s. Whether this will prove to be worrisome in an environment characterised by still very high levels of debt and leverage remains to be seen. The principal lesson arising from the LTCM incident is that increased volatility can force deleveraging, which in turn exacerbates volatility.

The third category of financial disruptions I would describe as **medium-term misalignments and systemic vulnerabilities**. In fact, it is this kind of problem that most people think of when thinking about international financial crises, and particularly those involving sovereign debtors. The underlying problem is a subtle one, that of justified optimism about the future of the economy quietly metamorphosing into something unjustified and unsustainable. The process commonly involves accelerating credit growth, rapid increases in asset prices, and some kind of an investment or consumption boom, a subsequent deflation of expectations and associated bust, and then feedback effects on the health of those who granted the credit in the first place. The Mexican crisis of 1994-95 is an example, with the initial optimism generated by a massive fiscal swing and the introduction of NAFTA. The East Asian crisis of 1997-98 had similar origins in prudent macroeconomic policies and the belief that "Asia is the future". Closer to home, reference can be made to systematic overvaluations in equity markets, especially of the high-tech stocks thought likely to benefit most from "new era" increases in productivity and profits. The Nasdaq collapse in 2000 has now spread in lesser measure to other equity markets around the world and the reverberations are now being felt by insurance companies and pension funds in particular.

The fourth category of financial disruptions I would characterise as **contagion across countries and markets**. A number of recent examples can be given. The Mexican crisis of 1994 had reverberations throughout Latin America and even into Asia. The Asian crisis itself showed some signs of contagion from one country to another and even had effects in eastern Europe. The Russian debt default of 1998 led to the market volatility which contributed to the demise of LTCM and subsequently the depreciation of the Brazilian real. Yet, all this having been said, the degree of such contagion was generally much more limited than some had earlier feared. Moreover, when we look at recent market behaviour in the light of the crises in Argentina and Turkey in 2001, what seems to emerge is not contagion, although Uruguay is an exception, but rather an increasingly sharp differentiation by the markets between more worthy and less worthy sovereign credits. Looking to the future, this gives some grounds for confidence. Nevertheless, the possibility still remains, particularly if the global economy weakens further, of a more generalised flight from risk that might yet affect a wide range of both countries and markets.

My second set of background remarks has to do with ongoing changes to financial structure. The underlying forces for change are well known. The first is **new technology** that allows risks to be unbundled and rebundled in novel ways. This presumably allows risk to be borne by those best able to do so, but of course there is no guarantee of such an outcome. Moreover, the opacity of such a system of transfers makes the jobs of supervisors and regulators much more difficult. The second is **deregulation**, which has allowed significant increases in the efficiency with which capital is deployed. The whole of society benefits from this. However, this search for efficiency and shareholder value can also lead to excessive risk-taking, particularly if public sector safety nets are extensive. Put otherwise, these essentially positive developments with respect to financial structure do come with a price tag attached.

These underlying changes are manifesting themselves in three major financial trends: **securitisation, globalisation and consolidation**. Securitisation means that more credit is being granted via disembodied financial markets and less via financial intermediaries. Globalisation refers to the trend to integrated international financial markets and to an increased presence of internationally active banks in all parts of the globe. Consolidation refers to the fact that concentration levels in many markets and countries are rising fast. All of these changes have implications for how crises might be most effectively prevented, managed and resolved, the topic to which I now turn.

### 3. Crisis prevention

I would like to draw three sets of lessons from recent financial events, bearing upon the question of how to prevent financial crises. First, I would like to suggest that individual crises might not in fact be independent events. This implies - and this builds on the points I have just made - that we must look for still deeper causes in trying to prevent crises. Second, I suggest some specific lessons for emerging market economies and then another set for industrial countries. Third, I would finally like to suggest that a high degree of policy credibility might actually be counterproductive, and ultimately harmful to the economy, if that credibility is not based on solid enough foundations.

Let me speak to the first lesson. In recent years we have witnessed an enormous number of major financial events. Many of these have been in emerging market economies but, as I have just noted, a number of serious financial incidents have actually occurred much closer to our industrial homelands. Moreover, there are also many worrying financial imbalances that remain to be resolved. Not least of these is the long-standing disparity between Asian and US private savings rates and associated current account imbalances. In recent years, massive capital flows into the United States have increased foreign gross exposure to around US\$ 9 trillion. Should the dollar decline significantly in value, who would take the associated losses? How prepared are they to bear those losses? These questions are made even more interesting given the simultaneous exposure of foreigners to changes in the dollar valuations of US assets and, in many cases, the risks assumed upon issuing credit risk transfer instruments of various sorts.

Is there a thread linking all of these past and prospective financial problems? I suspect that they are all, in part, by-products of the long period of rapid credit expansion, asset price increases and heavy investments seen in the industrial countries in the 1990s. These excesses, combined of course with other shortcomings in many emerging market countries, have contributed to the serious financial crises that we have observed both at home and abroad.

What is the *prima facie* case that a **thread** exists? One aspect of it is that a whole decade of deregulation and of rapid technological change has led to increased competition globally in the financial services industry. At the same time, financial institutions have been increasingly encouraged to hit high "hurdle" rates for profits, even when increased competition made such ratios harder to achieve. In this environment, particularly given the secular growth of public sector safety nets and financial institutions supported by the public sector, it would not have been surprising if private sector financial institutions were drawn into imprudent behaviour. If the rate of return must go up, and you cannot achieve it in any other way, then increased risk-taking might seem the only option. This may have been a particular problem for European financial institutions given the various legal and financial constraints they faced in trying to adjust to competitive pressures through raising efficiency in their home markets.

Another set of evidence that a common cause relates these individual crises is based on the growth rates of the broad credit and monetary aggregates in the major countries in the second half of the 1990s. What one observes is that they have been fluctuating between 6 and 8% in aggregate terms, peaking at about 10% at the end of 2000. To me, these seem worryingly large numbers, particularly given an environment of effective price stability. A similar observation can be made using a rather different framework: one in which we compare real rates of interest to the level of the so-called "natural" rate of interest as described by Wicksell. While subject to considerable measurement difficulties, both *ex ante* and *ex post*, *ex post* real rates averaged around 3% in the major countries in 1993. Moreover, they have effectively trended down since. While measures of the "natural interest rate" are even harder to calculate, there seems to be general agreement that it bears some rough equality with the long-run rate of growth potential in the economy. This would seem to indicate that, in the late 1990s, *ex post* real rates were heading down even as "new era" estimates of growth potential were heading up. An Austrian interpretation would be that the resultant overinvestment could be building up trouble in the future - a kind of prolonged deflationary hangover of low investment.

On this view, "boom" conditions ultimately lead to painful "busts". If one accepts this story, then one must also ask whether policymakers should pay more attention to macroeconomic factors. The microeconomic factors - financial architecture, corporate governance - that have attracted so much attention may not go to the heart of the problem. For instance, Enron and related affairs have raised our consciousness that many layers of corporate oversight failed to work as intended. The emphasis on removing the conflicts of interest that prevented individual overseers from behaving prudently has much to recommend it. But, viewed from a more macroeconomic perspective, the more fundamental question arises as to why all these layers of governance failed simultaneously. Irving Fisher, in his classic article entitled "The debt deflation theory of great depressions" (*Econometrica*, 1933), may have provided the answer when he noted that the public psychology of going into debt for gain passes through more or less distinct phases. The last two of these he describes as "reckless promotion and finally, downright fraud". In the midst of any bubble, no one has ever been inclined to ask obvious questions about the origins and sustainability of above normal rates of return.

So to conclude the general point about "threads". There are many useful ways in which reforms to improve governance might help prevent or mitigate future financial crises. But we must also recognise that crises of this sort may be endemic. Thus, measures to enhance stability could well come at the expense, not only of static efficiency, but also the creative part of Joseph Schumpeter's dynamic process of "creative destruction". In short, institutional reforms must be nested within the broader macroeconomic context in order to judge whether they are sensible or not. Safety is important, but it is not everything.

Let me now turn to a second set of more idiosyncratic lessons pertaining to crisis prevention. Some are more specific to emerging market economies and some to industrial countries.

The principal point to make concerning **emerging markets** is that portfolio mismatch problems can have powerfully disruptive effects on the domestic economy. While this applies to duration mismatches, the problems associated with currency mismatches can be even more damaging. We saw this problem for the first time in recent years in the 1994 crisis in Mexico. We saw it again in East Asia in 1997, in particular in Indonesia, and yet again in Turkey in 2001. Still more recently, currency mismatch problems were central to the meltdown in Argentina. Moreover, similar concerns associated with indexation to both inflation and the exchange rate have made a significant contribution to recent market instability in Brazil. The principal problem with a country having more liabilities than assets denominated in foreign currency (generally the dollar) is that any significant decline in the value of the domestic currency can take the banking system down with it. This is generally not because the banking system itself is mismatched, but because enough of the bank's clients suffer from this problem to ensure a sharp rise in non-performing loans. My BIS colleague, Philip Turner, in association with Morris Goldstein of the IIE, has recently written a very interesting paper on this issue.

What can be done to avoid such currency mismatch problems? Many suggestions have been made: more flexible exchange rate systems, development of domestic currency debt markets, better banking supervision, better disclosure, and better property rights among them. The central point that I would like to make, and I do not wish to sound overly pessimistic, is that emerging market countries should probably try to implement as many of these recommendations as their resources allow. Given the nature of things, not least human psychology, there is not likely to be any silver bullet that will deal with the currency mismatch problem all on its own. For example, consider the merits of greater disclosure of a country's foreign exchange exposure, a recommendation made particularly forcefully after the Asian crisis. However, it is a fact that the dangerous extent to which a number of Asian countries were exposed to short-term foreign currency liabilities had been perfectly clear for years, on the basis of publicly available numbers compiled by the BIS. The related fact is that many people in authority chose not to look at these numbers and, in this regard at least, were derelict in their responsibility for "due diligence". One suggestion could be for the IMF to be asked to explicitly assess mismatches on the occasion of their Article IV consultations, and to give prominence to any large or growing mismatches they discover.

Turning to crisis prevention in the **industrial countries**, what are the principal lessons to draw from recent financial crises? To return to a point I made at the beginning of this presentation, we need to pay more

attention to the inherent procyclicality of the financial sector. Given this tendency, the achievement of low inflation, while absolutely imperative and desirable, may still have one downside. The optimism generated about future sustained growth in output and earnings (manifest in lower risk premia) could potentially lead to the sorts of credit excesses and balance sheet exposures that can ultimately feed back negatively on the health of the financial system itself. We saw such "headwinds" in the United States in the early 1990s, and in Japan through much of the 1990s. Providing reliable empirical methodologies to predict such problems is an issue that needs more attention from academics as well as other interested parties. Indeed, my colleague Claudio Borio and Philip Lowe of the Reserve Bank of Australia have recently prepared an interesting paper on this topic. It shows that sustained above trend growth, in a number of financial variables taken together, can give a quite accurate indication of when problems in the financial sector will subsequently emerge. As an added bonus, their results seem to apply to emerging market countries as well as industrial ones.

The next question is an obvious one. How should policymakers respond to signs of such growing financial imbalances? Chairman Greenspan recently gave at Jackson Hole an eloquent statement emphasising the difficulties of using monetary policy for such a purpose. Such difficulties, allied with the realisation that the principal concern is less financial excess itself than harmful feedback effects on the financial system, would seem to point to a regulatory response. Such a response would, of course, have to be directed to minimising the exposure of the financial system as a whole rather than the exposure of individual financial institutions. Greater emphasis on a regulatory response also raises some interesting issues having to do with the institutional relationships, both formal and informal, between supervisory bodies and central banks. These issues also need further analysis by academics as well as others.

The third lesson that I would draw from recent financial crises is that policy "credibility" can sometimes be bad for a country's health. What I mean by this is that financial gimmicks, indexation provisions of various sorts or reliance on exchange rate regimes to peg expectations, can have dangerous consequences if they are used as a substitute for the fundamental changes to underlying policies that might really be required. Should these endeavours build up a significant degree of certainty and security in the future external value of the currency, it will absolutely invite people to borrow in foreign currency. The resulting potential for a currency mismatch problem of the sort mentioned above would seem obvious. Here, Argentina is the example that springs immediately to mind. The underlying problems resurface when the policy fundamentals for some reason come once again into question and confidence then recedes. In effect, such financial gimmicks are equivalent to tying oneself to the mast. This may be good practice in a strong gale, but not if the ship is actually sinking.

#### **4. Crisis management**

Let me make two sets of comments. The first one has to do with the emerging markets and potential IMF support in the case of difficulties. The second comment has to do with domestic macroeconomic policy responses in industrial countries in the face of international pressures. In both cases, I wish to focus on the potential for moral hazard. That is, we must evaluate the possibility that sensible actions directed to crisis management can have longer-lasting negative effects as well.

With respect to the **emerging market countries** and crisis management, a good place to begin is with analysis of the "G7 Action Plan" published in June 2002. The Plan begins by saying that "We are prepared to limit official sector (IMF) lending to normal access levels". This is a major step forward which should, in principle, help disabuse private sector creditors of the view that unlimited public sector funds will be made available to bail them out in the event of distress. However, the Plan then goes on to say that such limits will apply "except when circumstances justify an exception". While, again in principle, this seems sensible, it does also raise some very practical questions. What are the specific principles according to which discretionary action could be invoked, within the proposed framework of essentially limited financing? Without such principles, the presumed limits could be systematically violated.

Three sets of exceptional circumstances immediately spring to mind. A first possibility is that a crisis might be clearly identified as a liquidity rather than a solvency (or debt overhang) crisis. This would be more likely

if the problem did not seem to originate in the country itself, but was a product of contagion from some other country in distress. In this case, it would be very easy to argue for virtually unlimited lending in the tradition of Bagehot. Moreover, political considerations and associated pressures might sometimes support such an interpretation. This stands in contrast to a situation where a debt overhang was clearly identified, presumably leading to a decision not to lend at all. The objective of such a tough policy would be to induce creditors and debtors to recognise reality and to begin negotiating how the debt should be restructured. In practice, the fact that these different kinds of crises often cannot be clearly distinguished ex ante leaves the door open for a lot of discretionary activity.

A second set of exceptions might occur in the case of crises identified as having systemic implications. The problem here, as was evident in the Mexican crisis of 1994, is that what is judged systemic is often in the eye of the beholder. Again, this raises the possibility of discretionary action. And finally, a third reason for extraordinary support arises when the market seems to be demanding interest rates in the crisis country which are well above what the Fund believes to be consistent with the underlying economic fundamentals. In such a case of multiple equilibria, the Fund might be tempted to support its views with a very large package indeed. Alternatively, of course, it might conclude that the market should be forced to accept the implications of its own judgment: namely, if the market believes the country's debt is unsustainable, then negotiations should begin as soon as possible on a restructuring package. In this case, presumably the Fund would be very reluctant to lend ex ante in order to get the bargaining agents to the table.

The point being made here is not that exceptional lending is always bad. There are many circumstances in which it might be desirable. However, clearly stated principles on access ("presumptive limits") would allow for a more consistent pattern of exceptions as well as greater accountability on the part of those making such decisions.

My second lesson concerning crisis management has to do with how, at the margin, the conduct of domestic macroeconomic policies in the major **industrial countries** might be influenced by international developments. A possible concern is that, over the last decade, every time an international financial crisis has erupted there has been a tendency either to fail to raise interest rates, when it might otherwise have been desirable, or even to lower policy rates in consequence. The "headwinds" in the US in the early 1990s led to a sharp easing of monetary policy and further declines in the value of the US dollar. The decision of many Asian countries to let their currencies float down with the dollar led to major increases in foreign direct investment and other capital inflows that contributed materially to the subsequent Asian crisis. The fact that this helped dampen inflationary pressures in a number of industrial countries led to interest rate increases being put on hold, which contributed in turn to the inflows into Russia and the massive use of leverage by LTCM. Subsequent interest rate decreases were then followed by a further 150% increase in the value of the Nasdaq and substantial gains in other markets as well. When this bubble collapsed, sharp reductions in interest rates were followed by major increases in housing prices in a number of countries, accompanied by heavy cashouts of equity which were in significant part spent on consumption.

These accommodative policy moves provided welcome support to the expansion in economic activity in the main industrial economies. Such activity was generally sustained throughout the last decade, led in large part by demand growth in the United States. Nevertheless, some doubts are now beginning to surface about future prospects. In effect, many imbalances have built up over the last decade that could yet weaken future economic activity. Should policymakers have been less willing to adjust policy to offset the impact of individual cases of financial instability? While it is now accepted that letting little forest fires burn unimpeded on a regular basis is the best way to avoid occasional massive fires, this conclusion rests on having actually seen the big fires occur. Clearly, that has not yet happened in the financial sphere. Hopefully, it never will, given the very substantial efforts, by both the public and private sectors, to improve the resilience of the financial systems in many countries so as to help prevent financial crises.

## 5. Crisis resolution

I have defined crisis resolution as a set of measures that restructure or reduce outstanding debt, whether internal or external, to levels compatible with a sustainable growth path. Debt restructuring may not be sufficient to achieve this goal, but there may well be cases in which it is necessary. This raises two important issues, one analytical and one having to do with processes.

The **analytical issue** is how to estimate a sustainable debt level, as well as a manageable pattern of repayments over time. A measure of debt sustainability is needed to guide debtors and creditors in their discussions as to how much debt restructuring is required. Such a methodology would also be useful for crisis prevention: that is, it would allow a better understanding of when debt levels should be seen as a potential problem and action could then be taken to avoid this outcome. Indeed, such measures would also be useful in crisis management. As noted above, knowledge of whether a country is facing a liquidity as opposed to a solvency crisis is crucial for deciding whether international liquidity support from the IMF is desirable or not.

Accepting in principle all these potential uses of better measures of debt sustainability, developing such a methodology will not be easy. Presumably it will involve judgments about potential growth rates, sustainable tax levels and "essential" government expenditures. One problem, of course, is that these judgments are highly interrelated: for example, government spending on education will clearly help determine potential growth rates. A further serious complication is that we may actually live in a world of potential multiple equilibria. If with very high interest rate spreads the debt is not sustainable, but with lower interest rates it is, is the debt burden sustainable or is it not? This is a problem for which there is no obvious solution. What is clear is that simple calculus of the  $(r-g)$  type is not going to get us very far. Again, insights from our academic colleagues could be very helpful.

The **process issue** has to do with getting debtors and creditors to face up to the reality that debt restructuring is inevitable, and to further recognise that forbearance in the face of the unsustainable will materially increase everyone's ultimate costs. This raises the question of the incentive systems faced by the negotiating partners. A case could be made that debtors would come to the table earlier if the costs of doing so were less and the benefits greater. The principal costs of default are thought to be reputational loss and subsequent increases in borrowing costs. Another cost could be litigation by disappointed (rogue?) creditors. In practice, the latter concern did not materialise in a serious way in the case of recent sovereign defaults. However, the benefits of default to the debtors could be enhanced if the process ensured access to "new money" and also materially reduced debt service requirements. As for the creditors, perhaps the single most effective catalyst for early action would be "presumptive limits" on access to IMF funding as I have already discussed.

Still on process issues, it is important to be clear about the identity of the creditors and debtors as well as the type of debt instruments involved. The debt crisis of the early 1980s involved sovereign borrowers and a limited number of bank creditors who had extended bank loans. It was not so hard to get this limited number of players around the table, though even so the process took many years. The Mexican crisis of 1994 involved a sovereign borrower and a disparate group of private sector bondholders. International support for that single borrower, whether desirable or not, was not so hard to organise. In contrast, the Asian crisis of 1997 involved a wide range of private sector debtors who had largely borrowed money from internationally active banks. The banks in fact suffered big losses, and were effectively denied access to legal redress given the nature of the bankruptcy laws in many of the countries concerned.

Over the last year or so, a great deal of attention has been paid to two complementary suggestions to facilitate "orderly workouts" in cases where sovereign borrowers cannot service bonds which have been purchased by a wide range of creditors. Note that these suggestions would have been useful in the 1994 Mexican crisis but would not have been applicable to other types of crises. This limitation noted, both sets of suggestions have merit. The less controversial one is that all bonds issued by sovereign borrowers should include collective action clauses (CACs) that explicitly specify processes to follow in the case of a default. A number of countries, in particular Mexico, have recently begun to do so. Of course, it will take years before the flow of new bond issues with such clauses replaces the outstanding stock of bonds without and, in the

interval, the danger of disorder will remain. Moreover, this approach fails to deal with debts other than bonds, a significant complication in many cases. A second set of suggestions, proposed by Anne Krueger of the International Monetary Fund, also has pros and cons. The intention would be to establish international laws for a sovereign debt restructuring mechanism (SDRM). This would provide a much more definitive answer to the problems of disorder, rogue creditor suits and the equal treatment of all classes of creditors. At the same time, it would entail a considerable loss of sovereignty to nation states. Negotiating such an agreement, if possible at all, would take years.

## **6. Conclusions**

The global financial system has become more efficient in allocating capital and providing financial services. At the same time, the plethora of recent and prospective difficulties in financial systems worldwide indicates a troubling degree of instability. Many questions can be raised that could attract the attention of academics as well as policymakers. Has the swing to efficiency and away from stability gone too far? How can we predict more accurately the build-up of prospective problems in financial systems? What kinds of institutional relationships between central banks, regulators and other interested parties would best serve to avoid and manage financial difficulties? Is there a reliable way to determine whether a financial problem is likely to have systemic implications? How should we go about estimating sustainable debt levels? Perhaps the only reliable conclusion, and I finish on this note, is that providing answers to such questions could keep many thoughtful people in work for a very long time.