

# **Crises in Global Financial Markets: career-concerned traders and insured elites?**

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### **Introduction**

Michael Bordo has told a fascinating tale. He has revisited the 19<sup>th</sup> century to see whether crises recently observed in East Asia, in Russia, and in Latin America have precedents in an earlier era of globalisation. His finding - that they do - suggests that global financial markets have a persistent propensity for crisis. Surprising as it may sound, the damage so-caused in modern times is greater than it was under the Gold Standard, Bordo (2006, Table 1).

We are indebted to Michael for giving this historical perspective: but crucial questions remain unanswered. Why are financial in emerging markets so persistent? Is it an inherent feature of the markets themselves or is it to do with the clients in emerging markets? Why are the output losses greater now than they were in the 19<sup>th</sup> century, despite the creation of the IMF?

Where are we to turn for the answers? For asset markets, one surely needs to needs to consider how information is distributed and the resulting incentives for the players in these markets, subject to private performance targets and whatever official rules may be imposed to regulate market performance. Recent research offers tantalizing results.

But, for emerging markets in particular, one needs to ask more about the borrowers. Who are these sovereigns who raise money in the name of the nation only to default on their debts and plunge their countries into chaos? Why do they borrow so much from the IMF at a cost which *ex post* often proves dear? It is as if sovereign borrowers are not, in fact, acting as appropriate delegates for the nations they serve: political factors in debtor countries may pose incentive problems, too. We look at two, in particular: short-termism; and the role of elites who may be insulated from the cost of crisis.

### **Asymmetric Information and Career Concerns: is there a Heisenberg principle at work?**

Problems of asymmetric information arise within financial firms wherever the quality of traders is not known to their employers. To deal with this, traders may, for example, be fired if losses on the portfolio under their control (measured from previous peak valuation) exceed a critical sum. In response, however, traders may display increasing risk aversion as the market falls, as Grossman and Zhou (1993) have shown: and this, in turn, can influence the market itself. Application of such a firing rule to foreign exchange trading, for example, may lead to excess exchange rate volatility as market prices reflect the operation of the hiring and firing rules as well as news of the fundamentals themselves, Krugman and Miller (1993). In obedience to some higher-order Heisenberg principle, it seems, the way markets behave can change as a result of performance targets set up to monitor trader's performance.

Could this be because the rules are arbitrary? Evidently not: for in a model of delegated portfolio choice, Dasgupta and Prat (2006) show that rules which are effectively optimal can still generate market inefficiency, inducing traders to indulge in excess churning of their portfolios, for example. The implications this behaviour has for market performance include excess volatility and market crashes : traders may begin by trading 'sincerely', but career concerns can induce them to join the herd and follow the market, Dasgupta and Prat (2005). Empirical studies seeking to discern the effects of

monitoring rules involve mutual funds in the USA: but the implications are surely more widespread. The message is that asymmetries of information in financial firms can seriously disrupt market behaviour as monitoring rules and trader behaviour interact: and these symptoms will be as persistent as the asymmetries that are their root cause. Is there any reason to believe that such factors did not operate in the nineteenth century bond markets? Are global bond markets of today immune from career concerns?

Herding behaviour is not, however, synonymous with market inefficiency: Parks and Sabourian (2006) have shown how particular assumptions on the distribution of signals can generate herding behaviour in efficient markets. This may provide a salutary warning against over-hasty rush to judgement : but the assumptions needed to get efficient herding seem so special that the exercise lends support to the alternative hypothesis - that observed herding behaviour is inefficient!

### *Contagion*

Empirical evidence suggests that there are crises in different countries are linked; that contagious effects are at work to spread and amplify the effects, Fratzscher(2003). This may be due to financial linkages in inter-bank markets, Dasgupta (2004): or it may be due to signalling effects. Calvo (1999) argues, for example, that forced selling of emerging market debt by investment houses who had lost money on the Russian default of 1998 led to widespread sales due to such a signalling effect.

### *Deregulation*

The deregulation of the Savings and Loans institutions in the USA is a classic example of how distorted incentives can lead to financial crisis: allowing managers to invest insured deposits in risky assets invited strategy of “gambling for resurrection”. More generally, Joseph Stiglitz (2002) has argued that the bull markets in the USA of the 1990s owed a lot to excessive deregulation across the board. By implication appropriate regulation may reduce the risk of financial crisis: the capital adequacy ratios promulgated by the Basle Committee provides one example; another is the Sarbanes-Oxley legislation designed to check corporate moral hazard in the US.

## Sovereign debt crises: issues of governance

### (a) Short-termism; and “Gambling for Resurrection”

Short-termism can lead to financial crisis. Instead of using international capital markets to smooth consumption in the face of supply shocks to income, a myopic government may load up with debt and be forced to default when national income falls; and the market will continue to lend at spreads which price in this risk. This is what Rochet (2005) shows in a paper which may help to explain why financial liberalization has led to *increased* consumption volatility in many emerging markets, Prasad et al. (2003).

Short-termism may involve taking actions with short-term benefits, despite the long term costs. But it may also involve *deferring* actions. If devaluing an exchange rate involves loss of office for the Finance Minister, for example<sup>1</sup>, then departure from a pegged rate may be unduly postponed. In defending the peg, the Minister may be tempted to ‘gamble for resurrection’.

Argentina’s deferred departure from its peg against the dollar – sometimes described as a ‘slow motion train crash’ – could be a topical example. This view is attributed to Kenneth Rogoff, Head of the IMF Research Department at that time, in Blustein (2005, p 142) who writes:

In Argentina’s case, Rogoff believed, [Finance Minister] Cavallo and his colleagues fervently wanted to avoid a crash occurring on their watch, and were evidently willing to take extreme measures in furtherance of that aim. But the Fund was doing the country no favour by lending in support of that policy, in Rogoff’s view. Rather than throw money on the embers of a dying fire, he contended that it would be better to use the resources available for Argentine to aid the country after default.”

What about the so-called Mussa theorem which treats the fact that the IMF is typically repaid in full<sup>2</sup> as *prima facie* evidence that the Fund cannot be causing moral hazard problems? Does the fact that Argentina repaid all its IMF borrowings in full by end-2005 mean that there can be no moral hazard issues involved? In more detail, the theorem states that “as long as the IMF lends at an actuarially fair

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<sup>1</sup> As Cooper (1971) finds is typical.

<sup>2</sup> As it was in the case of Argentina which repaid all its IMF borrowings in full by end-2005.

interest rate and debtor governments maximize the welfare of their taxpayers, any changes in policy effort, capital flows, or borrowing costs in response to IMF crisis lending are efficient... under these assumption, the IMF cannot cause moral hazard.”<sup>3</sup> Clearly governance problems in debtor countries can invalidate the assumption of the Mussa theorem. We proceed with another demonstration of how IMF lending that is repaid in full, is nevertheless associated with socially inefficient outcomes.

### **(b) Elite (and creditor) moral hazard**

What if the incentive problem in government is not short-termism but excessive insurance, where those who take decisions in the debtor country have the power to insulate themselves from the consequences of failure? Will this not increase the sovereign’s *ex ante* propensity for risk taking? And will creditors not be happy to lend to them if creditor-exit can be arranged on the back of an IMF bailout. This is the account of debtor and creditor moral hazard we sketch below.

Consider a sovereign borrower who finances a project by issuing a bond. Suppose there are two classes in this country, an elite and a non-elite. Assume that elites have all the bargaining power and determine all relevant policy choices subject to a participation constraint for the non-elite. Once a bond has been issued and creditors have lent funds to the sovereign borrower, the elite makes a policy choice that determines the probability of default: “good” policies which minimizes default probability will however be more costly than “bad” policies with high default probability. If there is no default, interest payments due to creditors are made and the bond continues to maturity.

Conditional on default, the creditors have to decide whether or not to roll over the debt. When creditors don’t roll over the debt, a sovereign debt crisis is triggered with output losses and costly debt restructuring. Even if the debt is rolled over, the creditors take some “haircut” as the continuation value, conditional on default is low.

As neither of these options is appealing, the sovereign debtor, at this point, applies for financial support from the IMF. With freedom of capital movements, exit by creditors can take place without loss: borrowed funds can be transferred directly to creditors who exit<sup>4</sup>. Conventionally, such IMF lending is accorded seigniority is also repaid in full even when remaining private creditors face the possibility of a

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<sup>3</sup> This is the interpretation given in Jeanne and Zettelmeyer (2004).

write-down. In order to ensure repayment to itself by the sovereign debtor, IMF intervention is conditional on the sovereign running a primary budget surplus. When elites have all the bargaining power, the cost of running such a budget surplus is shifted to the non-elite (for example, reduced public expenditure on state education, public health).

The sequence of events involved in a such sovereign debt crisis can be depicted in the following diagram:

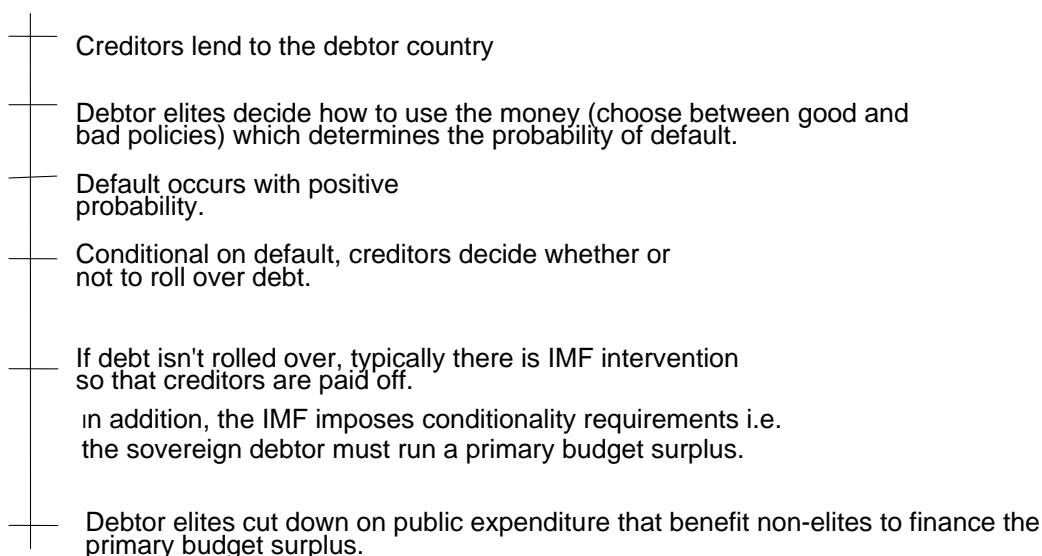


Figure 1 Sovereign debt crisis: A stylized sequence

The upshot of the analysis is that both elites and creditors are effectively insured against the downside risks of default, while the non-elites bear a disproportionately high share of default costs. Consequently elites do not have an incentive to put in place policies that significantly lower the probability of default; and creditors have an incentive to lend to sovereign debtors even when they anticipate a high probability of default. Elite (and creditor) moral hazard combine to create a persistent propensity for crisis.

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<sup>4</sup> As the IMF is a senior creditor, this phenomenon is may described as dilution, Jeanne and Zettlemeyer(2004).

The assumptions made here render Mussa's theorem irrelevant. If it is the non-elite that repay the Fund, the elite will face distorted probabilities when they make decisions on foreign currency borrowing. See Ghosal and Thampishvong (2006) for the political economy implications of this type analysis for debt write-downs.

## **Conclusion**

To account for the persistence of sovereign debt crises and their coexistence with market liberalization, we focus on incentive problems: first at the centre, where asymmetric information can lead to market inefficiency and market crashes as trader's act to protect their careers; and second in emerging markets themselves, where incentives may be severely distorted by political factors. In considering how IMF lending may interact with such political factors, we have had to go further than Michael Bordo, whose historical focus leaves the issues to one side. Political distortions mean that the Mussa theorem - with its reassurance that the IMF lending need cause no moral hazard - is alas! not relevant.

To mitigate moral hazard aspects of policy-making discussed here implies a significant shift from the IMF policies of the 1990s. Instead of quasi-automatic bail-outs with conventional conditionality, it calls for a three- pronged strategy: (i) liquidity support to promote adjustment, followed by (ii) creditor bail-ins (debt write-down) and accompanied by (iii) conditionality structured to ensure that elites share the costs of default - by taxing capital gains on foreign currency assets held by the private sector while protecting the provision of public goods, for example. In the case of Argentina this would have called for earlier devaluation and default, with resources provided to held avoid bank insolvency, much as Rogoff and Roubini argued for at the time.<sup>5</sup> In addition, however, it would have implied taking steps to tax the capital gains made those who took their money offshore, becoming substantially better off as the currency collapsed (and the sovereign debt to GDP ratio soared to about 150%).

Keynes once suggested that economists should aspire to becoming like dentists: not exotic and exciting, just professional (and well paid). Maybe sovereign debt should aspire to becoming like US junk bonds - more risky than Treasuries for sure, but not subject to excessive sovereign risk.

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<sup>5</sup> See Blustein (2005) and also Roubini and Setser (2004).

What of the objection that commercial debt can be restructured under judicial supervision (of Chapter 11 of the US Bankruptcy code) while there are no explicit provisions of for sovereign debt? The IMF failed to secure support for its proposal for a Sovereign Debt Restructuring Mechanism to remedy this. But Collective Action Clauses which permit restructuring have become the standard in sovereign bonds; and the judge handling the Argentine case is acting in ways suggestive of Chapter 11 procedures, Miller and Thomas (2006). So sovereigns in future will have one less reason to postpone adjustment until too late.

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