

CAPITAL FLOWS: EMERGING ISSUES

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I. Recent Currency Crises

A salient fact of Mexico's and Thailand's recent currency crises is the active role played by the monetary authority in contributing to the loss of reserves. In both cases, domestic credit showed a sizable increase, driven in part by central bank loans to the financial sector. This stands in sharp contrast with the standard economist's model in which the proximate cause of a crisis is a sharp contraction in monetary aggregates (Krugman (1979)).

Therefore, I believe that in order to better understand recent currency crises, one has to focus on the workings of the domestic and international financial sectors. Unfortunately, we get little help from macroeconomic models, since most of them highlight "money" but not the other side of the balance sheet, namely, credit.

II. Basic Stylized Facts in Financial Markets

In my view, the following are major stylized facts:

- 1 Central banks are very sensitive to bankruptcies of financial institutions because they fear that, as a result, the domestic payments system may suffer major damage. Frequently, this sensitivity even leads central banks to try to put a cap on domestic interest rates by, if necessary, expanding domestic credit.
- 2 Emerging market funds are very sensitive to news and rumors. Given the increasing number of investment options open to international investors, and the complexity of a country's macroeconomic/political equilibrium, it is not profitable to do much in-depth country analysis. This lays the grounds for rational herding behavior. See Calvo and Mendoza (1997).

Fact 1 generates moral hazard because banks would be rational to expect bailouts. Combining facts 1 and 2, just a rumor of an impending devaluation may induce speculators to "short" the domestic currency, resulting in a sharp rise in commercial bank credit (another stylized fact prior to crisis), which provokes a liquidity crunch, prompting the central bank to extend credit, thus possibly causing a currency crisis. Therefore, a currency crisis may have elements of a self-fulfilling prophecy. To deactivate the above mechanism, countries have tried to

- 1 tie the central bank's hands (Argentina is a prominent example), and
- 2 limit the access to the domestic capital market (Colombia, Chile, Thailand, Malaysia).

Argentina succeeded in preventing a currency run but the central bank also reacted by doing something very similar to expanding domestic credit. First, minimum reserve requirements were substantially lowered and, second, new loans were arranged to ease up the transition. However, the bailout process in Argentina was much more transparent and painful for government's reputation than a surreptitious central bank credit expansion as in Mexico and Thailand. This, together with a timely new arrangement with the Fund, seems to have deactivated the financial self-fulfilling bomb.

Controls on capital mobility appear to have succeeded in lengthening the maturity of capital inflows—a major topic to which I will come back below. However, last-minute tampering with the capital market—as the prohibition of “short sales” of securities in Malaysia—appear to have backfired.

III. The Bond Market. Principles of Public Debt Management

A salient characteristic of capital markets is the increasing share of emerging markets' public and private bonds placed outside the domestic banking system. Currently, several governments (e.g., Argentina, Brazil, Mexico, and Venezuela) have even found it profitable to swap long-maturity unsecured loans for their Bradys.

The above observation, coupled with stylized fact 1 (i.e., central bank's sensitivity to financial trouble), highlights the increasing importance of public and private debt management. This raises issues of currency denomination and maturity. In Mexico, for example, the proximate cause of the 1994 crisis was the inability to rescheduling a sizable amount of dollar-denominated public debt (Tesobonos). In Thailand similar difficulties seem to be encountered by the private sector.

I would like to put forward the following four public debt principles:

- 1** Long maturities are preferable (see Calvo (1997) and Dooley (1997)). For countries where the central bank is lender of last resort, long maturities should also be used in sterilization operations. Under these conditions, chances are that sterilized reserves are employed for a bank bailout, thus generating a dangerous maturities mismatch (as in Mexico during 1994, see Calvo and Mendoza (1996)).
- 2** If long maturity bonds are very expensive then, of course, the government may want to rely on shorter maturities. However, for budget accounting purposes, interest payments should be recorded at the yield of long-maturity bonds. The proceeds corresponding to the yield differential between long- and short-maturity bonds should be accumulated in an account to be used in case of rescheduling difficulties.
- 3** Before relying on short maturity bonds as a result of lack of credibility, governments should explore the possibility of issuing indexed bonds. The latter are especially attractive if the government suffers from lack of credibility. It should be clear, however,

that for indexation to be desirable, the government has to have *very good reasons* to disagree with private sector expectations.

- 4 Finally, if credibility problems seriously interfere with the placement of long-term bonds, the government should aim at drastically lowering the share of total debt in GDP or exports. The logic for this is that credibility problems that do not go away are likely to be rooted in time-inconsistency considerations. For example, in the expectation that the government will repudiate part of the debt if the country is hit by a large negative shock. Under these conditions, lowering the share of total debt reduces the temptation to repudiate, implying lower intramarginal interest rates. (Thus, this logic is parallel to that of removing externalities). See Calvo and Guidotti (1990).

Private debt may also be a public debt problem if the government plays the role of a guarantor for private debts. This is clearly the case when the central bank insures bank deposits. Thus, I would add to the above principles a clarification:

- Total public debt should include all the outstanding and contingent government obligations, appropriately priced.

IV. Output Collapse

A major puzzle is the sizable output loss in Mexico (6.2 %) and Argentina (4.4 %) during 1995. This is an issue that has not received serious attention (see, however, Calvo (1996)). It is particularly puzzling for Mexico because the massive international rescue package (about US\$50 billion) was used to refinance Tesobonos and short-term dollar debt incurred by banks. Output collapse in Mexico becomes easier to explain if one takes into account that the current account deficit in Mexico went from 8 % in 1994 to zero in 1995. But this is somewhat deceiving because now we are faced with the problem of explaining why a country that had recently joined the OECD and signed the NAFTA was suddenly cut from external financing. Also hard to rationalize is the case of Argentina, a country that took the unusual step of undertaking fiscal tightening just before presidential elections.

Output collapse can also be rationalized as a self-fulfilling prophecy. If credit is stopped, projects cannot be completed, there is a liquidity squeeze, credit lines dry up, and output falls, turning performing into non-performing projects. In this context, large current account deficits—a popular *bête noire* among financial press analysts of the recent crises—could be a magnifying factor for output collapse because the bigger it is, the larger will likely be the volume of investment projects that will remain unfinished in case of a cut in external credit. Incidentally, an alternative, and perhaps even better vulnerability index in this respect may be the size of capital inflows because it measures the flow of new external credit in a more direct way. I will refer to this explanation as “the saving-driven view of output collapse.”

Contrast Between *GT* Keynes’s and the Saving-Driven Views of Output Collapse.

A Detour. The view espoused in the *General Theory* is, in a nutshell, that saving is a stable function of income, while investment (or, more generally “autonomous expenditure”) is interest-

inelastic and highly volatile. Thus, the business cycle is a consequence of investors' "animal spirits." The view advanced here puts Keynes on his head. Crises are not seen to stem from a collapse in autonomous expenditure. Rather the conjecture is that saving allocation across countries is highly unstable (stylized fact 1 above) and driven by "animal spirits." Investment in country j , in turn, is determined by total (i.e., domestic + external) saving allocated to country j . Therefore, in tiny nutshell, *GT* Keynes asserts that "Investment causes saving," while the new view states that "saving causes investment." If, in addition, one assumes that domestic saving is a stable function of domestic income (as in *GT* Keynes) and capital-flight (i.e., the allocation of domestic saving to the rest of the world) is a slow-moving variable (or that can be made slow-moving by foreign exchange controls, for example), then the source of economic fluctuations lies with external saving, i.e., the current account of the balance of payments. This view focuses on current account volatility, not necessarily its level. However, if volatility, in some way defined, is seen to be an increasing function of levels then, of course, the depth of crises will be enhanced by the level of current account deficits. Notice that the saving-shortage view is closely linked to the credit view of crises, because drastic changes in saving allocation across countries will likely imply large changes in credit flows. The resulting impact on output could, therefore, be due to demand-side or financial factors.

V. Exchange Rates

Fixed or semi-fixed exchange rates are, of course, natural suspects. As the argument goes, greater exchange rate flexibility would have helped a timely depreciation of real exchange rates and prevented large current account deficits. However,

- 1 As the US dollar experience in the first half of the 1980s illustrates, flexible exchange rates do not prevent the existence of large real exchange rate appreciation.
- 2 In some countries, especially in Latin America, real monetary aggregates are subject to large random shocks. Thus, floating exchange rates may exhibit undesirable variability.
- 3 The latter may be exacerbated by "dollarization," a salient feature of many Latin American and Middle Eastern economies.

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