Reducing vulnerability to speculative attacks

A speculative attack on domestic assets can occur irrespective of a country's fiscal situation—and political economy considerations may be the reason. What are the sources and risk factors of speculative attacks? And how can countries reduce their vulnerability?

In recent years Mexico and Thailand abandoned fixed exchange rate regimes, reopening the debate on how to reduce vulnerability to capital outflows in developing countries. In both countries—and in contrast with the experiences of the 1980s—speculative attacks did not occur in the context of budget deficits. But recent empirical work has identified other risk factors that, if minimized, can reduce vulnerability to such attacks.

**Sources of speculative attacks**

A speculative attack on domestic liquid assets occurs when speculators believe that a devaluation is imminent. This belief leads speculators to demand central bank foreign exchange reserves in exchange for their domestic currency asset holdings. The speculators' aim is to profit from buying reserves at the prevailing exchange rate and selling them after the attack at a higher exchange rate. If the central bank has no access to international credit or chooses not to borrow abroad, it will devalue the currency the moment it runs out of reserves.

What leads to expectations of devaluation in developing countries? Empirical studies have identified two broad sources: inconsistent macroeconomic policies and a sudden shift in perceptions about the sustainability of macroeconomic policies.

**Inconsistent macroeconomic policies**

The perils of inconsistent macroeconomic policies are evident in the case of Argentina, where the Central Bank was financing the government's budget deficit by creating money while trying to keep the exchange rate fixed—not a viable strategy in an economy integrated with the rest of the world, as Argentina was in the early 1980s (box 1).

Under a fixed exchange rate the central bank commits to exchange foreign currency for domestic money on demand at a sudden shift in perceptions about the sustainability of macroeconomic policies.

Recent events have reopened the debate on how to reduce vulnerability to capital outflows in developing countries.

**Box 1 Argentina, 1979–81**

In 1977 Argentina liberalized its financial sector, and in 1979 it opened its capital account. Fixed exchange rates and high interest rates attracted capital inflows that increased the supply of domestic high-powered money, helping to finance a growing government budget deficit. But policy inconsistencies soon became apparent. With expectations of devaluation on the rise, losing reserves became the order of the day. To stem the hemorrhage in reserves, the government offered incentives to borrow abroad and thus replenish the Central Bank's foreign exchange reserves. But this strategy led to a massive official debt that added an extra burden to government finances. Moreover, it did not restore credibility. In June 1981, after several devaluations, the fixed exchange rate regime was abandoned.

A speculative attack on bonds—instead of currency—can also lead to a devaluation.

Sudden shift in perceptions
Mexico's 1994 crisis shows what happens when there is a sudden shift in perceptions about the sustainability of macroeconomic policies. The expectation that during a presidential campaign the government would not tolerate high interest rates associated with a currency defense led to a loss in reserves (box 2) and to a sudden shift in investor perceptions about the country's solvency. At that point Mexico's short-term public debt was about three times larger than its reserves. This vulnerability led investors to refuse to roll over the debt and to a devaluation. Thus Mexico also shows how a speculative attack on bonds—instead of currency as in Argentina—can lead to a devaluation.

Similarly, in Sweden a sudden shift in expectations about the government's willingness to borrow abroad to defend the currency led to a run on the Swedish krona and ensuing devaluation (box 3).

Other sources of a sudden shift in perceptions include the expectation of realized contingent liabilities, a drop in tax revenues associated with business cycles driven by capital inflows, and investor refusal to roll over debt in countries other than the crisis country, an effect known as contagion. Contagion was evident in many developing countries after Russia devalued the ruble in August 1998.

In all these situations a devaluation was the result of self-fulfilling prophecies about the sustainability of the exchange rate. Models of speculative attacks resulting from sudden changes in perceptions are characterized by multiple equilibria in which an economy can suddenly jump from a no-attack to an attack equilibrium. In these models—so-called second generation models of balance of payment crises, in contrast to the first generation models pioneered by Krugman—an event, no mat-
exposure to profitable but risky sectors. In addition, under explicit or implicit exchange rate risk insurance, such as a fixed exchange rate, financial institutions may not worry about loan risk and the maturity mismatch of (short-term) deposits and (long-term) loans. This situation makes the banking system vulnerable to a crisis due to a sudden drop in deposits (for example, due to a sudden stop in or reversal of capital inflows). This vulnerability leads investors to expect devaluation in economies where they perceive the government will bail out the banking system if banking problems arise.

Similarly, an increasing ratio of short-term debt to international reserves indicates that international reserves are insufficient to help cushion the effects of short-term debt refinancing difficulties. As noted, in Mexico investor refusal to roll over debt led to devaluation because of a large gap between short-term debt and international reserves. In calculating the short-term debt financing gap, both domestic and external public debt must be taken into account. It is particularly important to include domestic debt in countries where the debt is indexed to the exchange rate or there is an explicit or implicit exchange rate guarantee. Each country, however, must decide on the relevant measure of its liquid debt.

What should countries do?
The best way for countries to reduce their vulnerability to speculative attacks is to eliminate sources of fiscal imbalances and prevent large variations in capital flows. More specifically, countries should:

- Adopt consistent macroeconomic policies. The consistency of policies should be assessed using a cyclically adjusted budget deficit to avoid inconsistencies during the down-
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