Why Developing Countries Should Adopt Intermediate Exchange Rate Regimes: **Examining Brazil's Experience**

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The character of a developing country's exchange rate regime can heavily influence both its domestic monetary stability and its trade competitiveness. But conventional wisdom assumes a trade-off between these two objectives. Hence, policymakers are usually advised to choose either a fixed exchange rate (in order to maintain price stability) or a fully flexible exchange rate (in order to maintain international competitiveness).

This Development Viewpoint argues, in contrast, that an intermediate exchange rate regime is generally preferable for developing countries because it can achieve some degree of both stability and flexibility. In support of such an option, this Viewpoint presents illustrative evidence from Brazil's recent experience (see Kaltenbrunner and Nissanke 2009).

Intermediate regimes could take a range of forms: a discretionary adjustable pegged regime, a target band system or a rule-based 'crawling peg', all of which could satisfy the need for both flexibility and stability. For example, adjusting the exchange rate within a band could help absorb unanticipated shocks, whether real or monetary, and thereby provide some degree of flexibility for domestic monetary policy. Maintaining the exchange rate within the band could also provide an anchor for price stability by demonstrating a degree of monetary discipline.

Here, we present the case specifically for a moving target band regime known as the BBC regime, which combines elements of a 'basket' [of currencies], a 'band' and 'crawling', so that both the central reference rate and the width of the band are adjusted in light of changing macroeconomic fundamentals.

Establishing Credibility
Under financial globalisation, a centrally important policy issue is how a central bank's commitment to an intermediate exchange-rate regime could be regarded as 'credible' by market participants and serve the bank's policy objectives. In the early 2000s, the chief argument against intermediate regimes was that they were no longer viable under the conditions of free capital mobility. Unavoidably, such regimes were vulnerable, it was argued, to speculative attacks on the currency.

Hence, many developing countries were counselled to move towards either 'hard pegs', such as monetary unions, or a floating exchange rate combined with inflation-targeting monetary policy. It was assumed that credible inflation targeting by central banks would ensure monetary stability without having to rely on exchange rate-based stabilization.

However, there is a third perfectly viable option, we would argue. This option could combine a 'half-independent' monetary policy with a 'half-fixed' exchange rate, namely, some form of intermediate regime. Such a choice would be even more viable, and thus become more credible, if policymakers adopted some degree of management of capital inflows and outflows.

Indeed, empirical evidence shows that as a result of the devastating consequences of financial crises and remaining structural weaknesses, such as domestic agents' borrowing in foreign currencies, policymakers in developing countries still fear the exchange-rate instability inherent in having a fully flexible regime. Consequently, many countries have continued managing their exchange rates. But, in the absence of capital controls, they have had to amass a large stockpile of international reserves in order to safeguard their currency against speculative attack.

Hence, it is important that when policymakers are considering the appropriate regime, they understand the forces that cause speculative attacks. For example, the advocates of fully market-determined exchange rates treat currency traders and speculators as rational agents who are assumed to keep the exchange rate in line with macroeconomic fundamentals. Hence, such advocates believe that managing the exchange rate would only distort the currency market.

'Noise' Traders
But we believe that currency traders can usefully be divided into two major groups: informed traders, who make rational decisions on currency values, and what could be called 'noise' traders, who make decisions based on 'fads' unrelated to any underlying economic factors determining the exchange rate.

While volatility of an exchange rate could, indeed, be due to changes in fundamental factors, such as the structure of a country's trade, not infrequently it could also be attributed to the growing influence of 'noise' traders, who follow 'herd instincts' based on short-term trends and their motivation for quick profits.

Often the influence of 'noise' traders has become decisive when an exchanger rate is observed to move further and further away from any value related to fundamental factors. As 'noise' traders increase their speculation on a currency, its volatility is exacerbated. This creates, in turn, greater opportunities for capitalising on risk premiums, attracting even more 'noise' traders into the market. A speculative bubble emerges and becomes self-reinforcing.

We believe, however, that the influence of 'noise' traders and the associated impact of subjective factors in determining an exchange rate can be curbed by the appropriate choice of exchange-rate regime. Intervention by the central bank to manage the exchange rate could, for example, stabilize market expectations and limit exchange-rate variability. Indeed, a stabilized exchange rate might even change the structure of the market itself, as destabilising 'noise' traders--unable to reap any short-term gains--are driven out of the market.

Brazil's Exchange Rate Regimes
In order to test such hypotheses, we examine the effect of Brazil's choice of exchange rate regime on the dynamics of its exchange rate. Given the difficulty of identifying and quantifying underlying exchange-rate fundamentals, our tests are limited to investigating the time series properties and variability of the Brazilian *Real*.

The following graph shows the behaviour of the Brazilian exchange rate from March 1995, when the crawling band regime was introduced, until mid July 2007, well after a floating regime had been introduced. In response to a speculative attack on its currency, Brazil switched in early 1999 from managing its *Real* within a narrow band to allowing a freely floating exchange rate combined with strict domestic inflation targeting.

Daily Spot Nominal Exchange Rate
Brazilian Real/US$ (1995-2007)
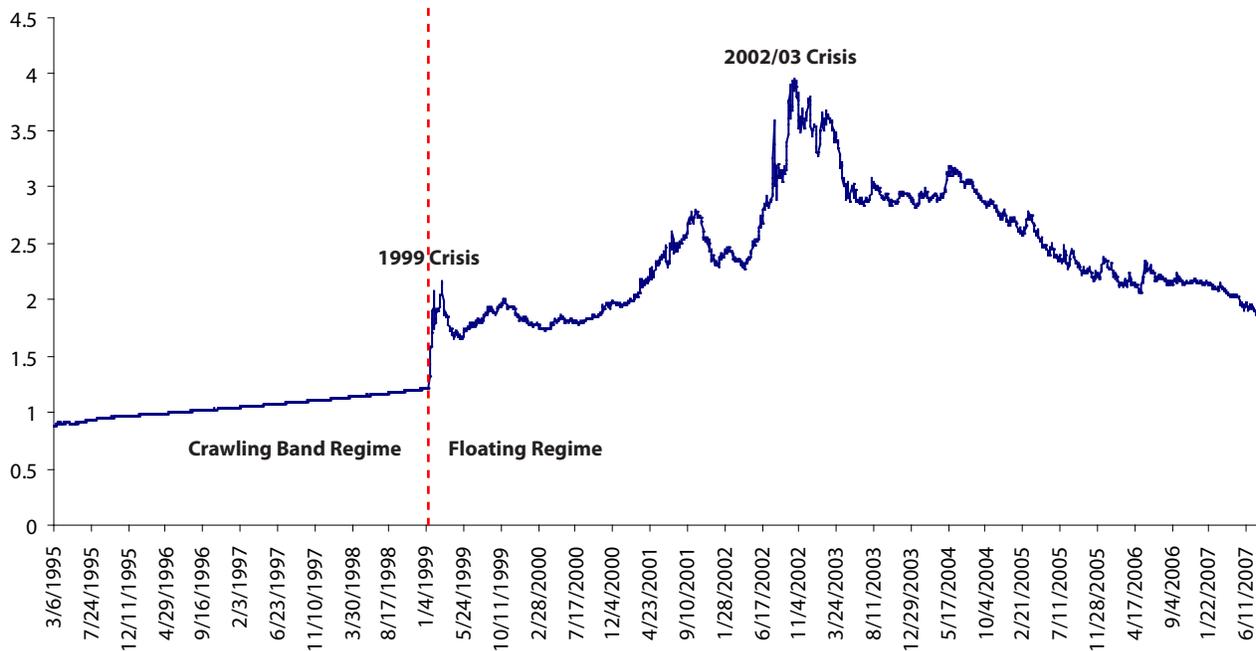
Source: Thomson Reuters Datastream

As can be seen from the graph, the floating exchange rate regime has been characterised by substantial volatility. After a period of depreciation until the beginning of 2003, fuelled by a political crisis and concerns about Brazil's capacity to repay its external debt, the exchange rate was subject to a trend of appreciation. This was due to an improving current account, but also speculative capital inflows capitalizing on the sustained exchange rate appreciation and very high domestic real interest rates. A series of statistical tests that we conducted corroborate the above observations.

In order to test for the presence of noise trading under the floating exchange rate regime, we have assumed such trading to have the characteristic of simple positive feedback. Such feedback should exhibit itself in periodic positive serial correlation in exchange rate returns (in which currency values tend to be correlated with their preceding values). Our results suggest that the floating exchange rate regime has been subject to multiple equilibria, in which periods of no serial correlation alternate with periods of significant positive correlation in returns.

Also, it is important to note that while serial correlation is positive during the floating exchange rate regime, it is negative during the managed exchange rate regime. This finding tends to support the hypothesis of a contrast between destabilising 'noise' trading under the floating regime (in which the rate moves progressively away, for a while, from an 'equilibrium' value) and the 'mean-reverting' behaviour of the rate under the target zones of the managed regime.

It is important to stress, however, that the trends cited above provide only suggestive, not conclusive, evidence of the increased or decreased importance of 'noise' traders. Other factors, such as intervention by the central bank, could have been at work, for example. In our future empirical work, we plan to conduct tests of such factors and hope to incorporate macroeconomic fundamentals into our analysis.

Notwithstanding these shortcomings, we believe that the suggestive evidence of high volatility and multiple equilibria under the Brazilian floating exchange rate regime and more stabilizing, 'mean-reverting' behaviour under the managed exchange rate regime supports our basic argument that managed regimes should be the preferred option for most emerging-market economies. One of the advantages of such regimes is that they tend to stabilize exchange rate dynamics through altering the expectations and behaviour of participants in the exchange rate market.

Reference:
Annina Kaltenbrunner and Machiko Nissanke (2009). "The Case for an Intermediate Exchange Rate Regime with Endogenising Market Structures and Capital Mobility: An Empirical Study of Brazil". Forthcoming, UNU/WIDER Research Paper, Summer 2009.