Has the financial crisis corrected the exchange rate in Brazil?

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Previous international financial crises have in general caused a severe devaluation of the currency in emerging economies like Brazil. The currency crises had very negative consequences for the entire economy, always expressed as an increase in the domestic interest rate and a fall in gross domestic product. However, during the crisis that started in August 2007 there was no significant devaluation of the real until mid-2008. The Brazilian currency followed a clear path of appreciation from late 2002 until June 2008, when the trend reversed with a nominal devaluation of about 50% in only seven months, from August 2008 to February 2009. Not only have interest rates fallen but the Brazilian currency even recovered value between March and April 2009.

In real effective terms — adjusting for inflation and taking into account a basket of currencies relevant for Brazil’s foreign trade — the exchange rate devalued between 6% and 9.5% in August 2007 and February 2009. Having appreciated by 15% between August 2007 and August 2008, however, in the second phase of the crisis, after August 2008, the Brazilian currency underwent a severe real effective devaluation of 22%.

In sum, the 50% nominal devaluation represented only about 22% in terms of real effective devaluation, because many other currencies — such as the Mexican peso, the Russian ruble, and the pound sterling — also devalued. For this reason, our currency was devalued by close to 26% in nominal effective terms — much less than the 50% nominal devaluation, without a currency basket. In other words, our currency devalues as the currencies of other countries devalue.

Is such a currency devaluation, whether nominal or real and effective, enough to bring the Brazilian exchange rate to some sort of long-term equilibrium? Or could it be that the international financial crisis has made the job of the Brazilian Central Bank easier by correcting the distortion of exchange rate parity that prevailed for such a long period in Brazil?

Equilibrium

The major problem here, of course, is to determine the long-term equilibrium of the exchange rate, because when
Economists usually say whether a currency is devalued or not, but they do not establish the long-term equilibrium rate of foreign currency reserves. In other words, until mid-2008 the deficits in current transactions were temporarily consistent with the country’s net international investment position.

The chart demonstrates the initial evolution of the nominal rate, which closely tracked the evolution of the real currency. After January 2003,
Exchange rate misalignment seems to have been a recurrent issue in Brazil since domestic inflation started to converge to international levels however, the exchange rate fell faster than the nominal rate, probably due to the accelerated decline of inflation in Brazil. Also interesting are the weights adopted for calculating the effective exchange rate at about that time. Since 1980, it is important to emphasize, the weights of the main Brazilian trade partners have changed along with the many changes in their shares of trade with Brazil. In 1980, for instance, Brazilian exports to the United States accounted for 17.5% of total exports; then, as the Brazilian external account underwent a macroeconomic adjustment, the US share rose to 28% in 1986. However, by 2008 it had fallen to 16%. Meanwhile, trade with the euro area dropped from 26.5% in 1980 to 22% in 2008; with China it rose from 0.35% in 1980 to almost 7% in 2008, and the rest of South America\(^1\) also grew in importance from 8% early in the 1980s to over 16% at the end of 2000.

The chart also shows the difference between the real and the nominal exchange rates. In nominal terms, the exchange rate, even after appreciating significantly, had by June 2008 still not reached the average values for 1994–98 when the exchange rate was fixed: by mid-2008, the nominal rate was still about 20% devalued compared to the fixed rate period. However, the real and effective exchange rate in June 2008 reached the average values registered during the period when the exchange rate was maintained at relatively appreciated values. Since the real effective exchange rate is more relevant for assessing a country’s competitiveness, one might justifiably wonder whether the mid-2008 levels might threaten Brazil’s external equilibrium.

**External balance**

When growth of exports is compared to growth of imports, the fall in the trade balance becomes increasingly clear. On the other hand, by examining investment flows, one could say that the external sector of the Brazilian economy could sustain a long period without any risk of a balance of payments crisis. The accumulation of foreign reserves seemed to indicate that an exchange rate below 1.6 reais per US dollar did not represent a macroeconomic threat — even though it represented a tragedy for some sectors of Brazilian industry.

Note, too, that the appreciation of the real effective exchange rate from the beginning of 2003 to mid-2008 had already reached the average for the fixed exchange rate period. However, that cannot be said of the nominal exchange rate. Because this is a period when domestic prices plunged compared to international prices, it is not unreasonable to conclude that by mid-2008 the fall in the nominal foreign exchange rate was much more significant than the drop in general domestic prices.

A very simplified way to assess the possible imbalance in the exchange rate is the Big Mac index calculated by *The Economist* based on the price of a McDonald’s Big Mac sandwich in different countries\(^2\). According to the Big
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The Mac index, an exchange rate of about 1.60 reais per US dollar — the June 30, 2008 rate — was appreciated by about 21%.

Lucinda, Holland, and Gala studied Brazilian exchange rate misalignment controlling for the Balassa-Samuelson effect, (i.e., differential productivity effect), estimating the relationship between relative prices and per capita income as a proxy for the productivity of a series of countries. According to their calculations, the Brazilian currency was relatively appreciated by 1.8%–5.6% in 2005. As the real and effective exchange rate appreciated by 14% from 2005 to mid-2008, it is quite plausible that by mid-2008 the exchange rate misalignment surpassed by a large margin the percentages of 5.6%–11.8%.

In conclusion, the recent exchange rate devaluation leading the nominal exchange rate to about 2.35 reais per dollar (February and March 2009 average) would still not be sufficient to correct the misalignment, given historical data from 1980 or if cross-section estimates for a significant number of countries are taken into account. That means that if the financial crisis persists, the Brazilian currency might have to devalue further. Such additional devaluations are directly associated with corrections in terms of trade (commodity prices) as well as with a rise in the risk of default on domestic debt.

In view of the estimates suggesting exchange rate overvaluation presented here, we are witnessing something surprising for an emerging country like Brazil: Almost 20 months after its onset, a severe and prolonged international financial crisis has not triggered excessive devaluation of the domestic currency. It may be that the crisis has yet to hit the country in full, as history shows us; but it may also be that something unusual is happening in the world of international finance.

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1 Here South America comprises Argentina, Bolivia, Chile, Colombia, Paraguay, Peru, Uruguay, and Venezuela.

2 However, this well-publicized index has severe limitations, including domestic consumption composition compared to that of Americans, the weight of the product in question in the basket of goods consumed domestically, and differences in per capita income in each country. Furthermore, the approach ignores transport costs in general, and by exclusively adopting the bilateral exchange rate instead of a multilateral effective exchange rate, it does not take into consideration the remaining Brazilian trade partners.