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## Guest post: Brazil's DNDFs – a new form of FX intervention?

Jun 11, 2014 5:40pm by guest writer

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By *Márcio Garcia of PUC-Rio and Tony Volpon of Nomura*

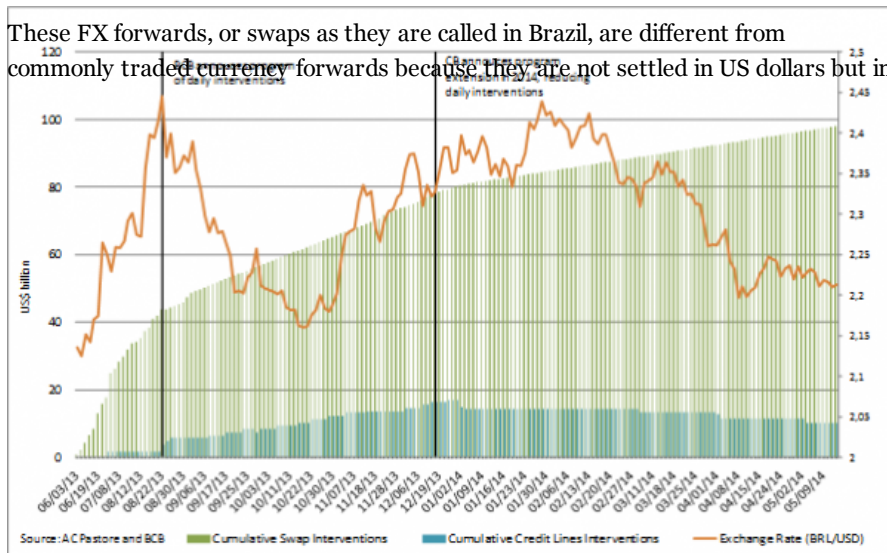
Since the “taper tantrum” of May 2013, emerging markets have been under pressure. While not configuring a 1990’s style “sudden stop”, with most EM FX markets doing better since the beginning of this year, the prospects for eventual

monetary normalization by the US Federal Reserve nevertheless pose challenges for EM economies. Brazil has had specific problems during this period, showing a marked deterioration in macro fundamentals, with falling growth and rising current account deficits. For many investors, this has earned it an unfortunate place among so-called “fragile” countries.

Brazil’s central bank (BCB) has adopted a unique intervention strategy to face these pressures, which we analyse in a recent working paper.

Unlike other central banks, which mostly employ sterilised interventions, the BCB has implemented the largest intervention programme of any emerging market not by selling US dollars to buy Brazilian reals but by selling, to April of this year, \$98.4bn of synthetic US dollars in the form of FX forwards.

These FX forwards, or swaps as they are called in Brazil, are different from commonly traded currency forwards because they are not settled in US dollars but in



Brazilian reals (BRL).

When the BCB sells such a forward, it is offering pay the difference between the BRL/USD exchange rate set at the start of the contract (ie the forward rate) and the actual rate at the end, plus a dollar-linked rate of interest. In return, the BCB receives the cumulative overnight interbank rate (currently a little below 11 per cent a year) for the period of the contract, in BRL. The BCB is providing insurance against depreciation of the BRL (and providing opportunities for speculation), and doing so in a way that satisfies demand for exposure to USD with no USD actually changing hands.

To distinguish these instruments from the better-known non-deliverable forwards, or NDFs, we have dubbed them domestic-non-deliverable forwards, or DNDFs. The first D emphasizes the cash-settlement in domestic, non-convertible currency. Settlement in a currency issued by the BCB, in principle, could further the BCB's capacity to intervene in currency markets. Has Brazil found a new way to intervene? Should other EM central banks copy Brazil's example?

Not necessarily. First, our research shows that the capacity to use these instruments successfully seems tied to the liquidity provided to the local FX market by the BM&FBovespa derivatives exchange. Although DNDFs are over-the-counter instruments and not traded on any exchange, they are registered at the BM&FBovespa, where banks who buy them also typically offer offsetting currency hedges and take short positions on the spot market.

Second, uniquely to Brazil, volume in FX futures is much larger than in spot markets, sometimes over three times larger. This is a legacy of Brazil's restrictive FX regulations, under which only accredited banks may participate in the FX market. Since the 1980s, the derivatives market has developed as an alternative and the first-to-mature futures USD contract is much more traded than the spot.

These factors allow for a ready transmission of DNDFs from the BCB to local and international investors and to corporations, with commercial banks acting as intermediaries. Brazil's particular market structure may be difficult for others to replicate.

When investors buy DNDFs, they become exposed to the risk of BRL appreciation – investors are paying the carry and the BCB is receiving it. The investors will only make a profit if there is a devaluation of the BRL; otherwise, they make a loss. Since the BCB announced daily interventions using DNDFs in August last year, the BRL has appreciated and the loss suffered by investors (and the profit made by the BCB) has been large. In effect, the BCB has offered accident insurance and no accident has happened, so the BCB insurance company has come out ahead.

The key difference between DNDFs and NDFs is that the domestic variety carries convertibility risk. Investors are only willing to buy DNDFs as long as they believe

that they can, at will, access actual greenbacks at the derivatives fixing price (known as the PTAX). Therefore, while using DNDFs may allow the BCB not to sell hard currency from its \$367bn pile of foreign reserves, investors will still look to both the size and the availability of reserves as “collateral” for their DNDFs. Fear of changes in the openness of the FX regime and overall economic stability, as seen during the crisis that developed before the 2002 presidential election, could lead to a run on these instruments as investors sell them to buy USD. Fortunately, so far, despite the large amounts of DNDFs sold by the BCB, measures of convertibility risk have remained low. In the medium term, this current tranquil situation may change if Brazil's current account deficit keeps growing, if GDP growth remains low or if foreign indebtedness increases.

Another important effect of selling DNDFs is to induce commercial banks operating in Brazil to bring spot USD into the country. When the BCB sells the instruments, it becomes cheaper for banks to buy synthetic dollars in the form of DNDFs than to buy real greenbacks (because when the BCB sells DNDFs, it puts downward pressure on the price of dollar forwards). This allows banks to bring spot US dollars to Brazil and sell them for BRL, which they invest in the local money markets, and then hedge their FX risk by holding DNDFs. In effect, selling DNDFs raises onshore dollar rates above funding rates outside Brazil, providing the banks with a near-arbitrage opportunity.

With the country's current account deficit reaching 3.65 per cent of GDP in April, this mechanism has been helpful in bringing much-needed USD to Brazil. In the paper, we provide econometric evidence showing that the BCB's intervention programme has made commercial banks increase their short USD positions as they borrow greenbacks from overseas. Other investors, including corporations, can also take advantage of this opportunity through inter-company loans, which may explain in part the reason that levels of FDI have been surprisingly robust despite Brazil's slower economic growth.

Otherwise, the costs and benefits to the BCB of selling DNDFs are the same as selling dollars from Brazil's foreign reserves – with the exception of the initial spread offered to entice banks to go long DNDFs and short USD. We hope to evaluate this cost, which so far is hard to measure.

While low measures of convertibility risk indicate the BCB is far from reaching a limit to its intervention strategy, we believe the BCB must carefully consider the possible implications for financial stability generated by its intervention strategy if it were to take it to levels much higher than today's.

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