

## Economics Group

### Special Commentary

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# The Brazilian Exchange Rate Conundrum

It has been more than 12 years since the Brazilian economy went through a rough period in which it had to abandon its—at that time—cherished crawling peg exchange rate and institute a freely floating exchange rate.<sup>1</sup> The objective of this report is to look at what has transpired since the abandonment of the crawling peg, how the new freely floating rate is working for the economy and where the country's economy is heading.

### A Brief Recap

In 1994 the Brazilian finance minister under President Itamar Franco, Fernando Henrique Cardoso, designed a plan to stop the country's hyperinflationary process in its tracks with the creation of a plan called the Plano Real, or the Real Plan. It was a plan that included the introduction of a new currency, first a transitional cruzeiro-real and then the real, not completely fixed to the U.S. dollar as was the case in Argentina with that its Convertibility Law.<sup>2</sup> In the Brazilian case, the exchange rate system was a managed peg, or what is normally called a crawling peg. That is, the country moved the value of the new currency by a target amount, estimated at 8 percent per year, and kept the currency within a limited band where the currency was allowed to move up and down every day. If the currency was about to surpass the band then the central bank would intervene in the foreign exchange rate market to keep the currency from surpassing the band.

The crawling peg was very successful over time in bringing down the rate of inflation; inflation went from 2,076 percent, on average, in 1994 to 3.2 percent in 1998, just before the abandonment of the crawling peg system. But as inflation subsided, the real problems of the economy started to surface. One of the biggest problems that these types of plans have is that inflation takes a long time to come down but the exchange rate is fixed immediately at some specified value.<sup>3</sup> Thus, while the nominal exchange rate has been fixed at some specified value, the rate of inflation continues to be elevated and the real exchange rate of the country, that is, the real purchasing power of that exchange rate, starts to appreciate, hurting the country's competitiveness and making exports noncompetitive in the world market.

This appreciation of the currency brings about another problem: an increase in the current account deficit. That is, due to the real appreciation of the domestic currency, domestically produced goods become more expensive in relative terms and foreign-produced goods, that is,

***Brazil's crawling peg was very successful in bringing down the rate of inflation.***

<sup>1</sup> A crawling peg is an exchange rate that is managed by the country's central bank by adjusting it every month or every specified period. In the case of Brazil, the exchange rate was supposed to adjust, i.e. depreciate, by 8 percent per year or by 0.67 percent per month.

<sup>2</sup> The success of the Plano Real, plus his fame as one of the best sociologists in the country, catapulted Fernando Enrique Cardoso to the presidency of Brazil in 1995.

<sup>3</sup> As a professor of mine used to say, the exchange rate takes the elevator while the rate of inflation takes the stairs. That is, the rate of adjustment of both of these variables is very different, with the exchange rate adjusting immediately and the rate of inflation adjusting over time. Thus, the more time it takes inflation to slow down the higher will be the real appreciation of the currency.



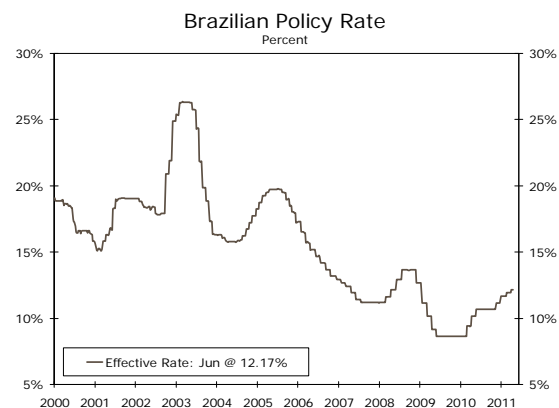
***The foreign capital required to finance Brazil's current account deficit served to further strengthen the real.***

imported goods, become relatively cheaper. This means that the difference between what is produced in Brazil and what is consumed by Brazilians (which includes imports) increases and thus the current account deficit rises over time. This larger current account has to be financed with foreign savings as domestic savings are difficult to come by; that is, it needs to be financed by capital inflows into the country.<sup>4</sup> Under normal circumstances and to a degree, current account deficits can be financed without any problem by attracting short- and long-term financing in the form of portfolio and foreign direct investments, respectively. Furthermore, this influx of new capital into the economy makes the real appreciation of the currency even more pronounced as capital inflows tend to strengthen the currency. Thus, the process works well when risks and risk aversion are very low and the world is awash in cash to invest. However, when you have a currency that is appreciating in real terms, an almost pegged nominal currency, and increased uncertainty regarding capital inflows into the country, etc., then developing countries could face a perfect storm with what some authors have called a “sudden stop,” or a situation by which capital dries up and countries highly reliant on capital inflows to finance their current account deficit face a sudden balance of payments crisis.<sup>5</sup>

**Figure 1**



**Figure 2**



**Source: Bloomberg LP, IHS Global Insight and Wells Fargo Securities, LLC**

Added to this problem is the fact that Brazil was coming out of a hyperinflationary process, with inflation surging to almost 5,000 percent per year by June of 1994. Whenever this happens, governments as well as private economic agents, face serious issues as inflation starts to come down and firms and government budgets have to be adjusted fast and furiously to avoid fiscal issues for government actors and solvency issues for private agents. If this is a difficult task for any economy in normal circumstances, the problems for Brazil were even more difficult due to the nature of the Brazilian political system. The Brazilian political system is highly decentralized, with state and local governments maintaining important levels of autonomy that make it difficult for the central government to cut expenditures as fast as it would like. Furthermore, Brazil has one of the most entangled tax systems in the world with layers upon layer of tax laws at the local, state and federal levels that make adjustments very difficult.

This adjustment problem, or the different adjustment speeds between spending and resource allocation, came to crisis levels in 1998 and early 1999, producing a financial crisis that toppled the crawling peg system and introduced a more flexible exchange rate system. By January 1999, the Brazilian fiscal deficit was close to 6 percent of GDP with interest rate payments on the country's debt close to 10 percent of GDP, making its debt profile unsustainable, a very similar situation to what is happening in Greece today. Meanwhile, the country's current account deficit

***The Brazilian political system is highly decentralized, with state and local governments retaining large levels of autonomy.***

<sup>4</sup> This is one of the main differences between China and Brazil; China has plenty of domestic savings to grow its economy while Brazil depends on ever increasing, and volatile, foreign savings for growth.

<sup>5</sup> Guillermo A. Calvo, Alejandro Izquierdo and Ernesto Talvi, “Sudden Stops, the Real Exchange Rate, and Fiscal Sustainability: Argentina's Lessons,” National Bureau of Economic Research, Working Paper 9828.

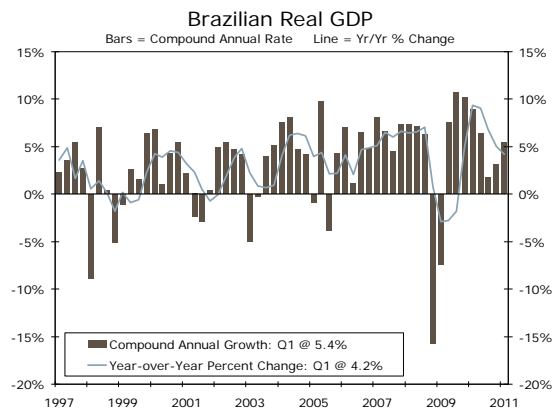
was not very large, close to 1.5 percent of GDP, but nevertheless concerning at a time when investors were being picky about the country's fiscal issues.

At the time of the abandonment of the crawling peg system, in January 1999, the Brazilian currency was quoted at 1.21 reals per U.S. dollar. By October of 2002, the Brazilian currency had depreciated to 3.81 reals per U.S. dollar or a nominal depreciation of 68.4 percent. Meanwhile, inflation, which was 1.6 percent year-over-year in January 1999, was at 12.5 percent by December of 2002 and rising.

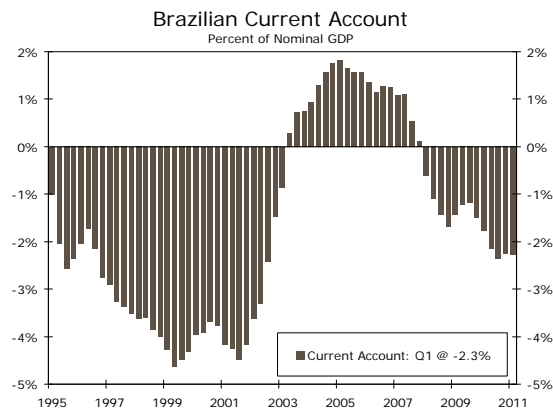
Furthermore, the Brazilian economy's growth performance was meager just before the January 1999 devaluation of the currency. The Brazilian economy didn't grow at all in 1998 and only managed to grow by 0.2 percent in 1999 and on a quarterly GDP basis the economy was in recession in both of those years. While the reasons for this performance were many, some of the most important factors were a very weak world economic performance in 1998 and very depressed commodity prices. Recall that the East Asian economies went into a freefall in 1997 with their own financial and currency crises while Russia defaulted on its external debt in 1998. Meanwhile, oil prices dropped to almost \$10 per barrel in 1998 and overall commodity prices were depressed well before that period and remained low up until 2001. Furthermore, at that time 6 to 7 percent growth rates in China were not enough to pull commodity prices out of the slump and/or worldwide economic growth out of its entrenched weakness.

***A global economic slowdown coupled with low commodity prices hurt Brazilian growth prior to the devaluation.***

**Figure 3**



**Figure 4**



**Source: Bloomberg LP, IHS Global Insight and Wells Fargo Securities, LLC**

In brief, this was the environment that the Brazilian economy had to deal with during one of the most difficult financial periods in the country's recent history. Now, we will analyze how the new exchange rate system has worked for Brazil since January of 1999.

**From a Crawling Peg to a Dirty Float Exchange Rate**

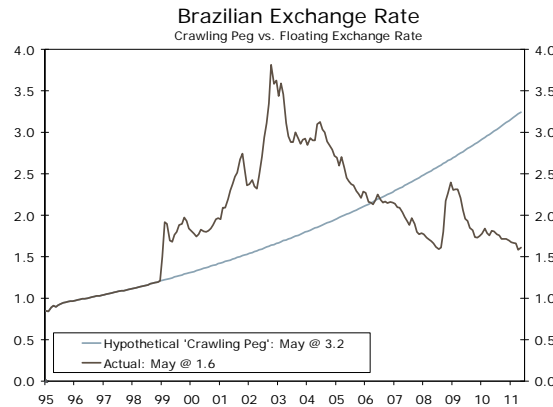
As we mentioned earlier, Brazilian policymakers instituted a new exchange rate system in January 1999 after trying to fight the markets that considered the crawling peg system a hindrance to the country's ability to prosper. Thus, the choice of the new system was basically imposed by the circumstances rather than chosen independently of them. Then, it is clear that while the new exchange rate system has given the country more opportunities to prosper, central bankers and economic policymakers are still having issues with the new system, even more than 12 years after its adoption. The reason for this is that the Brazilian currency has been appreciating since 2003 and while it served its purpose during the worldwide financial crisis as the currency adjusted to a lower level, i.e. depreciated, during that period, the appreciating trend continued as the world economy recovered.

***What would have happened if Brazil had stuck to the crawling peg?***

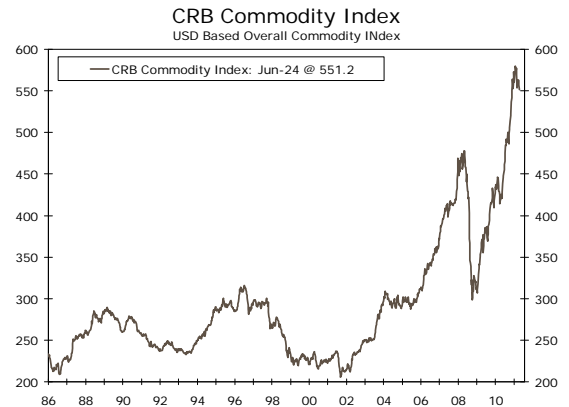
Let's pose this question: What would have happened if the country had stuck with the crawling peg exchange rate system back in January of 1999? If the crawling peg exchange rate had survived the crisis in late 1998 and early 1999 and assuming the government kept the currency

depreciating at an 8 percent annual rate as it was doing then, the Brazilian real today would have been worth 3.24 reais per dollar.<sup>6,7</sup> However, today's Brazilian real is only 1.58 reais per U.S. dollar, an impressive performance from a currency that at the peak of its depreciation episode in 2002 stood at 3.81 reais per dollar, a more than 68 percent depreciation from its value in 1999. Thus, the new exchange rate system has produced a very strong domestic currency, both in nominal and real terms.

**Figure 5**



**Figure 6**



**Source: Bloomberg LP, IHS Global Insight and Wells Fargo Securities, LLC**

**Lack of Savings, Excessive Reliance on Capital Inflows**

Before continuing the discussion on the characteristics of the new exchange rate system implemented during the 1999 crisis, let's look at other problems faced by the Brazilian currency over the years. These problems have to do with the tendency of the currency to appreciate in real terms and nominal terms due to the country's high reliance on capital inflows.

Thus, another big problem when it comes to a freer exchange rate system is the fact that Brazil desperately needs foreign savings to supplement its low national saving rate. Although the country's gross national savings have improved compared to earlier in the century, it is still below other emerging market countries that have higher rates of economic growth. Thus, the country's ability to grow becomes highly unsustainable if its capital flows revert or turn around and leave the country. Brazil's gross national savings were 16.5 percent of GDP during 2010, up from a 14.0 percent rate in 2000 but well below other emerging markets. Of course, we do not expect Brazil to post national savings that could compare to China's, which are above 50 percent of GDP, however, the country needs to increase its domestic savings compared to foreign savings if it expects to grow at a higher rate and on a sustainable basis.

This complicates things for the Brazilian government and the central bank because a high reliance on foreign savings tends to contribute to the appreciation of the exchange rate. As capital comes in to finance economic growth, these capital inflows push the currency higher, i.e., appreciates the nominal exchange rate, and this puts further pressure on the real exchange rate, whose value appreciates further.

If this was not enough, foreign capital inflows not only come in and appreciate the domestic currency but they, many times, do not contribute to economic growth.<sup>8</sup> Why? Because these

<sup>6</sup> This is just an assumption used to make our point. If the crawling peg was successful over the years the rate of depreciation per year would have probably come down as the rate of inflation decelerated over time. Thus, the value of reais per dollar would have been lower than the 3.24 assumed in this example.

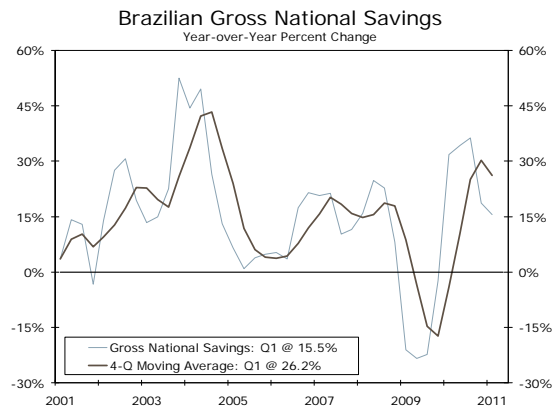
<sup>7</sup> Reais is the plural of real in Portuguese.

<sup>8</sup> BRESSER-PEREIRA, Luiz Carlos and GALA, Paulo. Por que a poupança externa não promove crescimento. Rev. Econ. Polit. [online]. 2007, vol.27, n.1 [cited 2011-06-27], pp. 3-19. Available from: <[http://www.scielo.br/scielo.php?script=sci\\_arttext&pid=S0101-31572007000100001&lng=en&nrm=iso](http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0101-31572007000100001&lng=en&nrm=iso)>. ISSN 0101-3157. doi: 10.1590/S0101-31572007000100001.

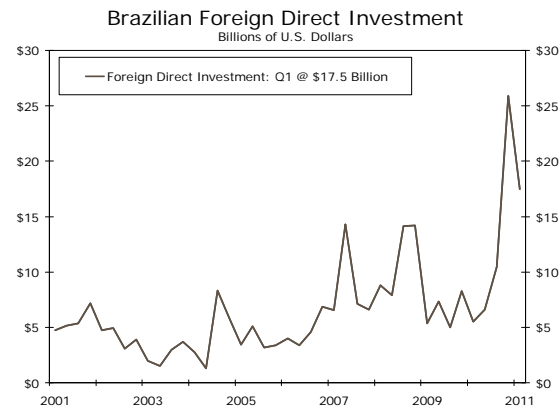
***Brazil's low saving rate means it is highly dependent on capital inflows.***

capital inflows are fundamentally financing consumption rather than helping the economy build production facilities or invest in new productive infrastructure. Thus, not only do capital inflows come into the country, appreciate the currency and make imports cheaper relative to domestically produced goods, but all this capital is wasted in excess consumption by domestic consumers rather than being used to build the productive capacity of the country. Furthermore, the future for domestic savings is not any brighter according to some, and will not improve meaningfully because of Brazil's "generous" pension system, which discourages private savings.<sup>9</sup>

**Figure 5**



**Figure 6**



**Source: IHS Global Insight and Wells Fargo Securities, LLC**

Adding to this intricate play between capital inflows and exchange rate appreciation is the fact that Brazil continues to be prone to rising inflation as soon as the country starts growing more than 3 to 4 percent per year as supply constraints push prices higher. To slow down economic growth and to control inflation the central bank has to tighten monetary policy by jacking up interest rates and in the current worldwide, low interest rate environment, this has the effect of attracting even more capital into the Brazilian economy, but especially short term capital inflows or what are called portfolio capital inflows. Thus, the government has been taking measure to try to minimize these portfolio capital inflows over the past several years as the central bank continues to increase interest rates to bring down inflation and inflationary expectations.

In order to minimize the recent appreciation of the currency the Brazilian government has instituted a financial transaction tax (Financial Operations Tax, IOF) on short-term capital inflows and has increased that tax already several times in the past several years in order to stem these inflows of capital. While the IOF affects short-term capital flows, i.e. portfolio investment, the increase in long term investment, i.e. foreign direct investment, have also increased and will continue to affect the value of the currency going forward. Thus, there is probably not much more the Brazilian government can do with capital inflows as the country's low savings rate prevents it from financing infrastructure investments desperately needed to grow the economy and to successfully host the FIFA Soccer World Cup in 2014 as well as the Olympics in 2016. As we have said many times, productive infrastructure, or the lack of it, has been and still is one of the country's Achilles' heels.

***Brazil is prone to accelerating inflation when economic growth rises above 3 to 4 percent, which forces the central bank to raise rates.***

**From Nominal to Real Exchange Rate**

From the above discussion it is clear that the relationship between the nominal and the real exchange rate is a serious issue for this new exchange rate system. At the time of the devaluation in January 1999, one of the arguments made in favor of the abandonment of the crawling peg system was that the real exchange rate had appreciated so much that Brazilian competitiveness in world markets was being limited by this real appreciation. Thus, allowing the Brazilian currency to be more flexible would allow, so the story went, the currency to depreciate and Brazil to be

<sup>9</sup> The IBRE Letter, "The Inevitable Foreign Savings" in "The Brazilian Economy: Economy, Politics and Policy Issues," December 2009, vol. 1, number 11, Publication of Getulio Vargas Foundation.

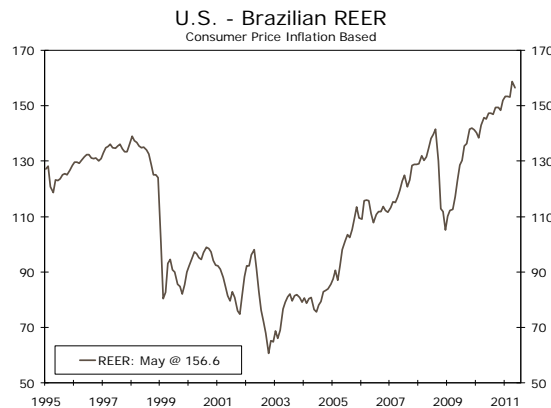
more competitive in world markets. If you recall, this real appreciation of the currency had to do with the different speeds of adjustment between the nominal exchange rate and the rate of inflation as the Brazilian economy came out of the 1994, hyperinflationary period. When the Real Plan was established in July 1994 the new currency was pegged to the value of the dollar for a brief period of time and then allowed to depreciate by approximately 8 percent per year. The actual value of the real in July 1994, the year the Plano Real was implemented, was 0.91 reais per dollar.<sup>10</sup>

The value of the real today is 1.58 reais per U.S. dollar, which means that the devaluation compared to January 1999 has been of 23.4 percent as the currency has recovered from the peak of the devaluation when it hit 3.81 reais per dollar in October of 2002. However, while the nominal exchange rate has depreciated by 23.4 percent compared to January 1999 the cumulative inflation that has occurred since January 1999 is 82.5 percent. In the United States, however, the cumulative inflation during the same period was only 37 percent. This means that the Brazilian currency is much stronger today than what it was in January 1999, when the country abandoned its crawling peg system and “decided” to go with a more flexible exchange rate system.

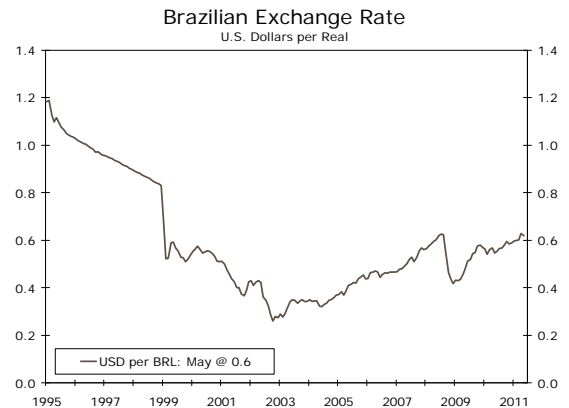
Today, Brazil does not face the other problems that were prevalent when it abandoned the crawling peg exchange rate regime in January 1999. The country’s fiscal deficit was 1.69 percent of GDP for the first four months of this year, while the fiscal deficit over the same period in 2010 was 1.83 percent of GDP. The primary surplus for the first four months of this year was 4.5 percent of GDP compared to a 3.5 percent of GDP surplus over the same period in 2010.

***The real today is much stronger than it was in January 1999.***

**Figure 7**



**Figure 8**



**Source: OECD, IHS Global Insight and Wells Fargo Securities, LLC**

Furthermore, global growth has remained relatively strong even though it is down from the robust performance it showed in 2010, while commodity prices are still very high. Thus, even if the Brazilian currency is stronger today than when it abandoned its crawling peg system, the conditions for sustained economic growth have improved considerably since the end of previous century. However, the risks are enormous for growth sustainability, especially if commodity prices collapse and world economic growth slows down further. The biggest risk today for Brazil is that another worldwide crisis or a collapse in commodity prices coupled with a strong decline in worldwide economic growth could produce a large depreciation of the exchange rate that will probably be welcomed by Brazilian exporters. However, this will make the work of the central bank more difficult as inflation will start to pick up again.

**Conclusion**

While we are still positive on the prospects for the Brazilian economy, the challenges for the authorities cannot be underestimated. Brazil needs to continue to reform its economy and

<sup>10</sup> The Brazilian government created a transitional currency first called the URV (Unidad Real de Valor or Real Unity of Value) and the Cruzeiro-Real and on July 1<sup>st</sup> it created the Real, which was pegged at 1 Real = 2,750 Cruzeiros Reais.

institutions to make them more efficient across the board so that capital, domestic and foreign, can be allocated to the best uses. Until then, the country will continue to experience booms and busts of different degrees.

Today, the country is blessed with a strong commodity price environment it did not have in the late 1900s and early 2000s. Thus, the current, stronger real exchange rate, which was a severe hindrance to economic growth back in 1998 and 1999, is still manageable today even though it is getting to a point that is also becoming a problem even in this, high commodity price environment. This is so much so that the government is trying to reduce its effects by imposing short-term capital controls. However, if commodity prices collapse then the country would suffer a slowdown in growth or a recession and deterioration in the government's ability to continue to help the neediest of the country. Meanwhile, the exchange rate would depreciate as the economy weakens and this would help smooth out the slowdown in economic activity. However, in this case the central bank would have to be very careful to keep a lid on rising inflation if it wants to keep the economy growing steadily.

***Higher commodity prices have muted the detrimental effects of a stronger real.***

The surge in commodity prices has given the government enough degrees of freedom over the past decade to better the conditions of the neediest as well as continue with the slow pace of infrastructure investment. However, in order to take off, the country needs to solve many issues that limit its growth, such as accelerating investment in productive infrastructure, government reform in order to reduce the presence of the state in the economy, etc. Today, the Brazilian government consumes about 40 percent of GDP and this creates serious issues for the tax system and the efficiency of the Brazilian economy.<sup>11</sup> During the 1990s the Brazilian government was very successful in privatizing state-owned enterprises and this has produced industries that have become leaders in their respective markets and across the world. Thus, Brazil knows the road to a more efficient economy by relying more on the private sector.

This seems to be the path that it has recently chosen to accelerate the needed investments to build infrastructure for the FIFA World Cup in 2014 and for the Olympics in 2016. Thus, if privatization has worked before then the government should put more emphasis in this path to modernization than wanting to be involved in everything within the economy. It is clear that the Brazilian government is overstretched and this will reduce the pressure on government resources and on the ability of the state to tax to finance this presence in the economy.

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<sup>11</sup> **The IBRE Letter, "From the Editor" in "The Brazilian Economy: Economy, Politics and Policy Issues," December 2009, vol. 1, number 11, Publication of Getulio Vargas Foundation.**

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