Macroeconomic Policy, Growth and Income Distribution in the Brazilian Economy in the 2000s

Franklin Serrano and Ricardo Summa

June 2011

Center for Economic and Policy Research
1611 Connecticut Avenue, NW, Suite 400
Washington, D.C. 20009
202-293-5380
www.cepr.net

Contents

Acknowledgements

This paper is based on different presentations made by one or both authors in Italy, in 2010, at the Centro Sraffa of Uniroma3 in June, and Fundazione Italianieuropei in Rome, and at the faculty of Political Science of the university of Siena in December. The authors would like to thank all organizers and participants of those events, Luiz Eduardo Melin for very useful discussions, and Mark Weisbrot for helpful comments and editing.

About the Authors

Franklin Serrano is an Associate Professor at the Institute for Economics at the Federal University of Rio de Janeiro, Brazil and a Research Associate at the Center for Economic and Policy Research. Ricardo Summa is an Adjunct Professor at the Institute for Economics at the Federal University of Rio de Janeiro, Brazil.

Executive Summary

The Brazilian economy grew by 4.2 percent annually from 2004-2010, more than double its annual growth from 1999-2003 or indeed its growth rate over the prior quarter century. This growth was accompanied by a significant reduction in poverty and extreme poverty, especially after 2005, as well as reduced inequality. This paper looks at the combination of external changes and changes in macroeconomic policy that contributed to these results.

The overall policy framework since 1999 has consisted of a "tripod" of explicit inflation targets, a (very "dirty") floating exchange rate regime, and specific (and quite large) targets for the primary budget surplus. The Brazilian inflation-targeting system requires that the monetary authority pursue a single objective, the control of inflation, which must remain inside a pre-defined range within a calendar year. Although the inflation target was not achieved in the years 2001 to 2003, since 2004 the government was successful in keeping inflation within the target range every single year, even in the turbulent year of 2008.

This paper shows that the Central Bank was able to meet its inflation target after 2004 through a continual appreciation of the exchange rate. It is argued by the Brazilian monetary authorities, and commonly believed in media and policy circles, that inflation is driven by changes in aggregate demand. The commonly accepted story is that when the Central Bank raises policy interest rates, it causes a reduction in aggregate demand and therefore lowers inflation. However, as the authors demonstrate, inflation in Brazil is driven by cost-push pressures and not by changes in aggregate demand; and so it is the reduction in import and export prices, due to appreciation of the Brazilian Real, that has allowed Brazil to maintain its inflation target during these years. When the Central Bank raises policy rates, this attracts capital inflows, thus appreciating the currency and reducing inflation by reducing import and export prices. Therefore, the Brazilian inflation-targeting system, in which the interest rate is used to control inflation, actually works directly through the exchange-rate cost channel.

There was more policy space for Brazil after 2003 because of more favorable external conditions. The improved current account, and the resumption of large capital inflows allowed the government to quickly repay in full – and get rid of – IMF loans and conditionalities in late 2005, reduce the overall external debt, and accumulate a massive amount of reserves. The ratio of short-term external debt to foreign exchange reserves, which had reached more than 90% on the eve of the 1999 exchange-rate crisis, fell to about 20% by 2008.

Brazil's expansion was initially led by a boom in exports and GDP growth was not very fast; but from 2006 on, export growth lost steam and the internal market began to grow faster, thanks to a more expansionary macroeconomic policy. This was especially important when the economy was hit by the world crisis in late 2008; it had three quarters of negative growth but recovered quickly in late 2009 so that annual GDP fell only 0.65 percent in 2009.

The lower interest rates in the high-income countries, and reduced interest-rate spread between "emerging market" and high-income countries also had the favorable effect of allowing the Brazilian central bank to achieve its inflation target with lower real interest rates previously. There was also an increase in public investment since 2006, from very low levels.

Inequality has dropped continuously over the decade, but prior to 2004 this was accompanied by an actual decline in share of wages in income. It appears that up to 2004 the reduction of inequality was coming at least as much from a fall in higher-wage incomes as from an increase in the wages of poorer workers. Average household incomes started to grow after 2005, not only because of faster growth of the economy and of formal employment, but also because by then the real minimum wage grew even faster and the wage share started to grow also. So, although the Gini index continued to fall after 2005, it is perhaps not surprising that poverty reduction also seemed to occur faster in this period.

The official poverty rate fell from 35.8 percent in 2003 to 21.4 percent in 2009, and extreme poverty fell from 15.2 percent to 7.3 percent during the same period. The appreciation of the real exchange rate during these years also contribute to poverty reduction, by increasing real wages.

One important harmful effect of the large real (inflation-adjusted) exchange rate appreciation over the past seven years was its effect on industrial and manufacturing competitiveness, especially in higher-technology industries. Another harmful effect has been the rapid deterioration of the current account balance. Some analysts discount the risks posed by ever-rising current account deficits because of the massive amount of foreign exchange reserves; and the widespread hope that Brazil in a few years could become a major exporter of oil (exploiting the recently found, deep sea "pre-salt" oil reserve). But the fact is that since late 2009 inward foreign direct investment has not been enough to offset the current account deficit, and the continuing accumulation of reserves has depended on short-term external capital inflows.

Some economists argue that the Brazilian authorities should cut public expenditures, thus reducing aggregate demand and "allowing" the central bank to lower policy rates, and thereby stem the appreciation of the currency, or even depreciate it. The authors argue against this contractionary policy on the grounds that it would reduce growth and shrink real wages, without any direct and systematic impact on inflation, since inflation is driven by "cost-push" pressures. This paper also warns that a large real exchange rate depreciation, however it is accomplished, would have negative effects on real wages and income distribution.

The authors put forth a number of possible policy changes that would allow for continued growth and progress in poverty reduction and income inequality, while keeping inflation under control. In order to avoid reliance on exchange rate appreciation to fight inflation, it would make sense to reduce the degree of indexation and/or excessive profit margins of privatized public utilities and to make more use of fiscal instruments to fight external commodity cost-push inflation. The latter can be done by temporarily lowering taxes or tariffs on imports of basic goods whose prices are very volatile and are visibly rising too much, as Brazil has done quite successfully with diesel and gasoline and with wheat prices in 2008. At the same time the exports of some basic goods could also be taxed more when their dollar prices increase too much in a short period in order to prevent these increases to be passed onto domestic prices of these products.

If a relatively large nominal depreciation of the real is deemed necessary to restore external competitiveness, the selective lowering of taxes on imports and increased taxes on exports would have to be larger. This would also have the positive effect of mitigating the negative impact of the currency depreciation on real wages. Ideally it should happen together with a reduction of mark-ups and lower indexation of monitored prices, so that even if real wages in the end decline a bit in terms of tradable goods, this can be compensated by increases in terms of non-tradable services.

High export taxes for some commodities would also prevent the devaluation from increasing even more the relative profitability of the commodities export sector. This would help change the structure of exports away from excessive reliance on commodities.

A real exchange-rate depreciation, however useful, is certainly not enough to restore industrial competitiveness. Brazil needs to have more public investment in infrastructure to improve the logistics and reduce the costs of exports, and to practice a more substantial industrial policy of technological upgrading in some sectors, ideally using government purchasing policy (procurement) to guarantee results. Brazilian industry is badly in need of promoting some import substitution in the more advanced technological sectors, in order to reduce the trend of increasing import penetration coefficients. These policies appear to have more positive externalities in terms of improving the overall competitiveness and productivity of the economy than mere tax incentives and/or tax burden reduction to firms that are favored by those who propose large fiscal cuts

Introduction

In terms of its essential features the overall macroeconomic policy framework adopted in Brazil has been basically the same since 1999.[1] This framework, the so-called tripod of economic policy, consists of a policy of explicit inflation targets, a (very "dirty") floating exchange rate regime and specific (and quite large) targets for the primary budget surplus. Yet, despite this element of continuity of the macroeconomic policy framework, the performance of the Brazilian economy in the first half of the decade was not impressive but did improve considerably from 2006 on.

The purpose of this paper is to show that the interaction between large changes in the external conditions facing the economy since 2003 and smaller changes in the orientation of domestic economic policy after 2005 explain the improved control of inflation, the recovery of more satisfactory rates of economic (GDP) growth and the stronger improvement in income distribution and poverty reduction in the second half of the decade. The change in the orientation of economic policy explains the relatively moderate contraction and quick and strong recovery of the economy after the peak of the world crisis hit Brazil in late 2008.

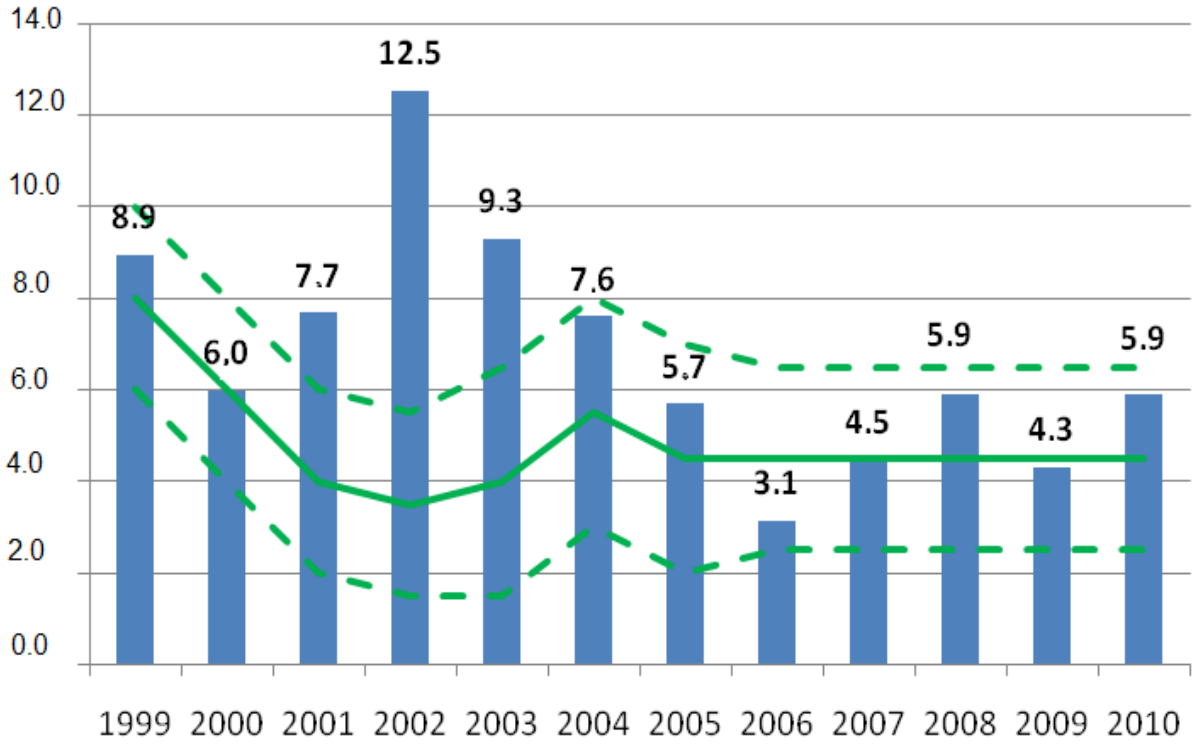
In the next three sections we discuss briefly and respectively: the performance of the Brazilian inflation-targeting system; the economy's growth record; and the changes in income distribution and poverty reduction. Afterward, there is a discussion about the difficulties that the Brazilian economy is facing in the 2010s, followed by a quick discussion of policy alternatives and final remarks.

1 This was the year when the second Fernando Henrique Cardoso administration started. President Lula took office for his first term in January 2003, and his second term started in January 2007. His first Finance Minister was replaced in late March 2006, but no change happened in the central bank over the two terms. President Dilma Rousseff took office in January 2010, having been Chief of Staff to the President since late June 2005.

The Interest Rate, the Exchange Rate and the Brazilian Inflation-targeting System

The Brazilian inflation-targeting system was instituted in mid-1999 and requires that the monetary authority pursue a single objective, the control of inflation, which must remain inside a pre-defined range within a calendar year. In Brazil, the inflation target was not achieved during the years 2001 to 2003, as shown in **Figure 1**.[2] But since 2004 the government has been successful in keeping inflation within the target range every single year, even in the turbulent year of 2008, when inflation got very close to the upper limit of the acceptable range.

FIGURE 1
Rate of Inflation and Inflation Targeting



Source: Instituto Brasileiro de Geografía e Estatístic and the Central Bank of Brazil.

In order to analyze the actual performance of the Brazilian inflation-targeting system it is necessary to understand that, for a number of reasons, the overall level of the rate of inflation in Brazil does not appear to have a definite regular relationship with aggregate demand pressure and the trend of inflation seems to be entirely due to cost factors.[3] Let us quickly go over four complementary reasons for that.

2 In 1999, the target was only barely achieved, and then only after the National Monetary Council revised the target range in the course of the year.

3 Note that we are saying that even the *level* of inflation is not much affected by demand pressure let alone the *acceleration* of inflation. Over this period in Brazil the estimated inertia and/or expected inflation coefficients normally do not

First of all, there is a large number of "monitored" prices for private and publicly owned public utility and service prices, many of which, in spite of being non-tradable, were formally indexed to a particular price index which is strongly affected by the exchange rate. Second, in the case of tradable goods, Brazil is an increasingly open economy in which producers are mostly price-takers in relation to world dollar prices, which are exogenous relative to the level of activity of the Brazilian economy.

Third, the growth of average and industrial nominal wages has been quite moderate since 1999 and seems to be mildly pro cyclical, while productivity growth appears to be strongly pro-cyclical. This means that overall nominal unit labor costs tend not to be pro-cyclical and their trend has generally grown less than inflation, at least in the industrial sector.

Fourth, there is also evidence of counter-cyclical mark-ups that seem to increase when interest rates go up, as financial and opportunity costs of capital increase.[4] For all these reasons inflation in Brazil is not much directly affected by the degree of capacity utilization or by the unemployment rate, at least in a reliable manner.[5]

This then means that, no matter what kind of theory is in the mind of analysts, or even of policy makers, and whatever may be their (debatable) success in predicting and controlling the growth of demand relative to capacity output, in the end the actual trend of the inflation rate in Brazil depends very much on the cost-push pressures of import and export prices in dollars, on the nominal exchange rate, changes in the rules concerning monitored prices, and on the impact of fast rising nominal and real minimum wages on the prices of some non-tradable and labor-intensive service sectors, and not much else.[6]

When we look at the evolution of the nominal exchange rate in Brazil (**Figure 2**), we see that there was a tendency for devaluation from 1999 up to 2003 and a tendency for almost continuous appreciation from then on up to 2011. This trend was only briefly interrupted by the sharp nominal devaluation in the turbulent year of 2008, but this devaluation was quickly more than completely reversed afterwards.

---

add up to one (unless they are forced to) so that even if demand pressure is found to have some effect in particular occasions it would be a level instead of a rate of change effect, as required by the neutrality assumptions. See Serrano (2007) for a simple theoretical analysis of the main properties of Phillips curves and the critical survey of Summa (2010b) for the evidence of non-neutrality in the Brazilian econometric literature. New evidence of non-neutrality can be found in Macrini & Summa (2011).

4 This interpretation and evidence is summarized in Serrano (2010) and Serrano & Ferreira (2010). The formal theoretical model is found in Summa (2010a). Braga (2010) confirmed these results econometrically for the period up to mid-2008. Macrini & Summa (2011) have extended the sample to late 2010 and have used neural network method of estimation to account for possible nonlinearities. They have confirmed the results of the model and showed its robustness. Braga (2010) and Bastos & Braga (2010) however, curiously dismiss their own result of a significant effect of interest rates on profit markups and then argue that demand does have a small significant effect on Brazilian inflation, when they found none. This seems to have misled Amico &Fiorito (2010) in their otherwise excellent paper to incorrectly affirm that there is no effect of interest rates on profit markups in Brazil.

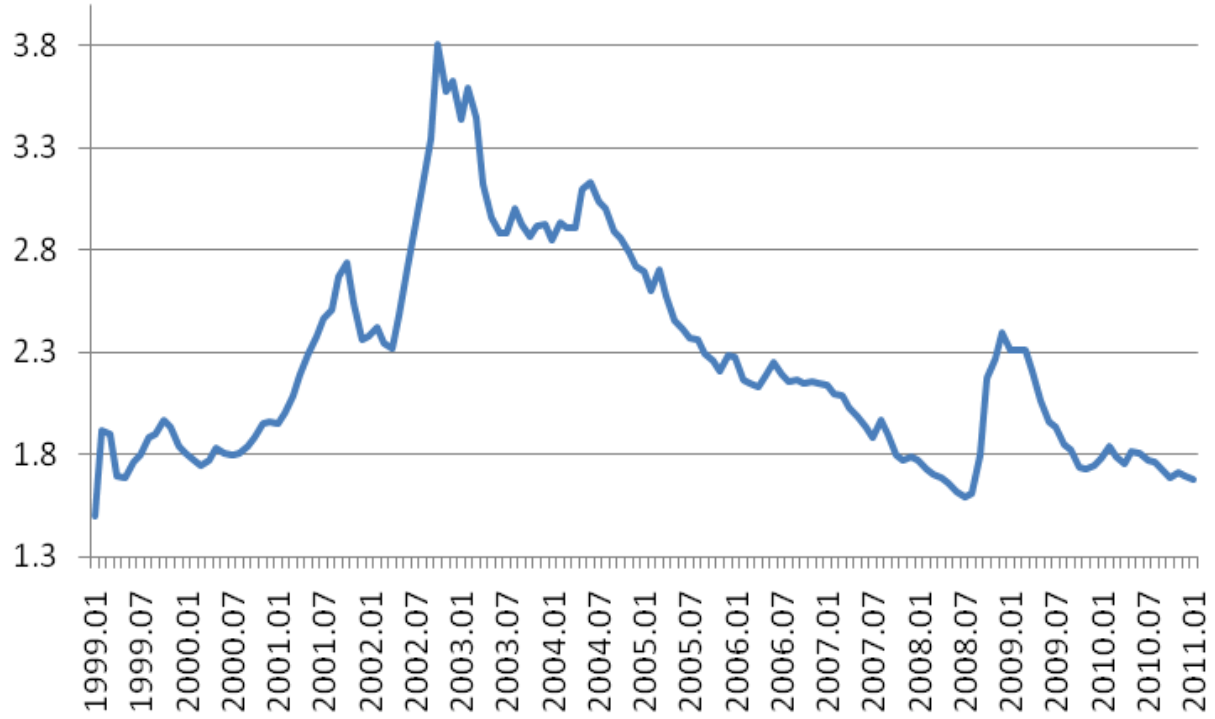
5 One of the possible reasons for the non-significance of demand pressure on inflation may be that in the 2000s there were neither lasting episodes of extremely high, nor of extremely low levels of the degree of capacity utilization (and/or the unemployment rate). There may be nonlinearities in the sense that if the degree of capacity utilization ever actually becomes permanently very high (i.e. persistently beyond the range observed recently) markups will eventually turn pro cyclical beyond that point. In the same fashion, very high (or low) unemployment rates may change the bargaining power of workers and reduce (increase) the growth of money wages by much more than it has been observed recently and this could turn unit labor costs pro cyclical.

6 For the latter effect see Martinez & Cerqueira (2010) and Serrano (2010)

Comparing Figures 1 and 2 we can see that in almost every year in which the inflation target was met (2000, 2005, 2006, 2007, 2009, 2010 and 2011) there was a nominal appreciation of the Brazilian Real.[7]

Levels of Brazil's import and export prices in dollars are strongly affected by the evolution of international dollar prices for commodities, since Brazil is both a large importer and large exporter of commodities. Thus Brazilian import and export dollar prices tended to fall from 1999 up to 2003, and to increase quite fast after that, peaking in mid-2008. These prices have fallen sharply after that, and bottomed out in early 2009, and after that started increasing again.

FIGURE 2
Nominal Exchange Rate (Reais per US$)

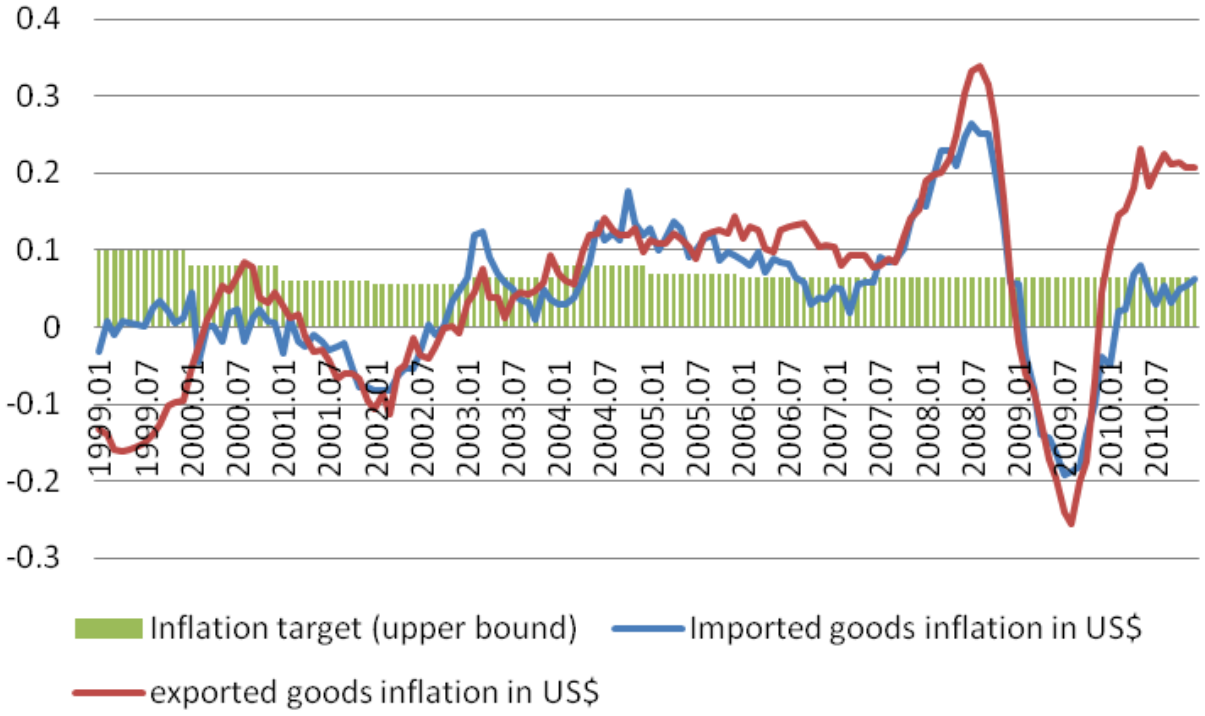


Source: Ipeadata.

It seems that the sharp fall in international commodity prices after mid-2008, which held down the increase of the Real prices of Brazilian imports and exports despite the sharp devaluation, helped the inflation rate to remain within the target range in that calendar year.

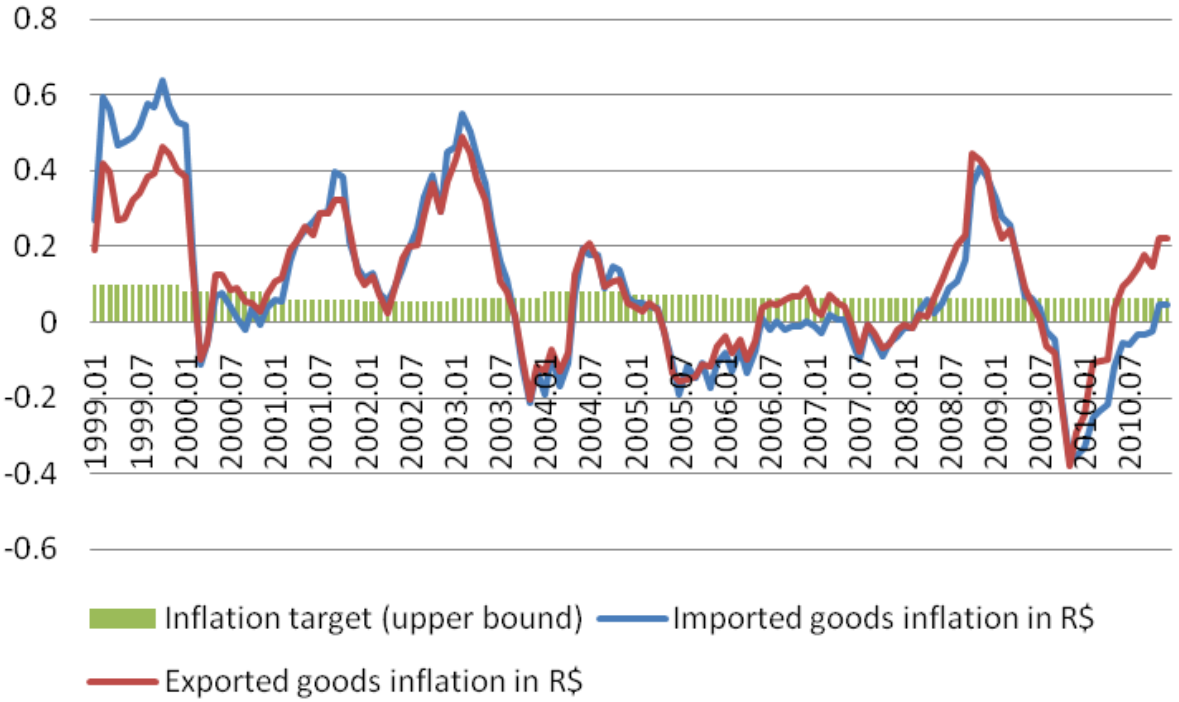
7 We like to call this proposition "Barbosa's Law" (see Barbosa-Filho, 2007). The exceptions to Barbosa's Law so far are the years of 1999 (but the system was implemented in the middle of a year which started with a major devaluation) and the turbulent year of 2008.

FIGURE 3a
Inflation (monthly percent, year over year) of Imported and Exported Goods and Inflation Target in US$



Source: Ipeadata.

FIGURE 3b
Inflation (monthly percent, year over year) of Imported and Exported Goods and Inflation Target in Reais



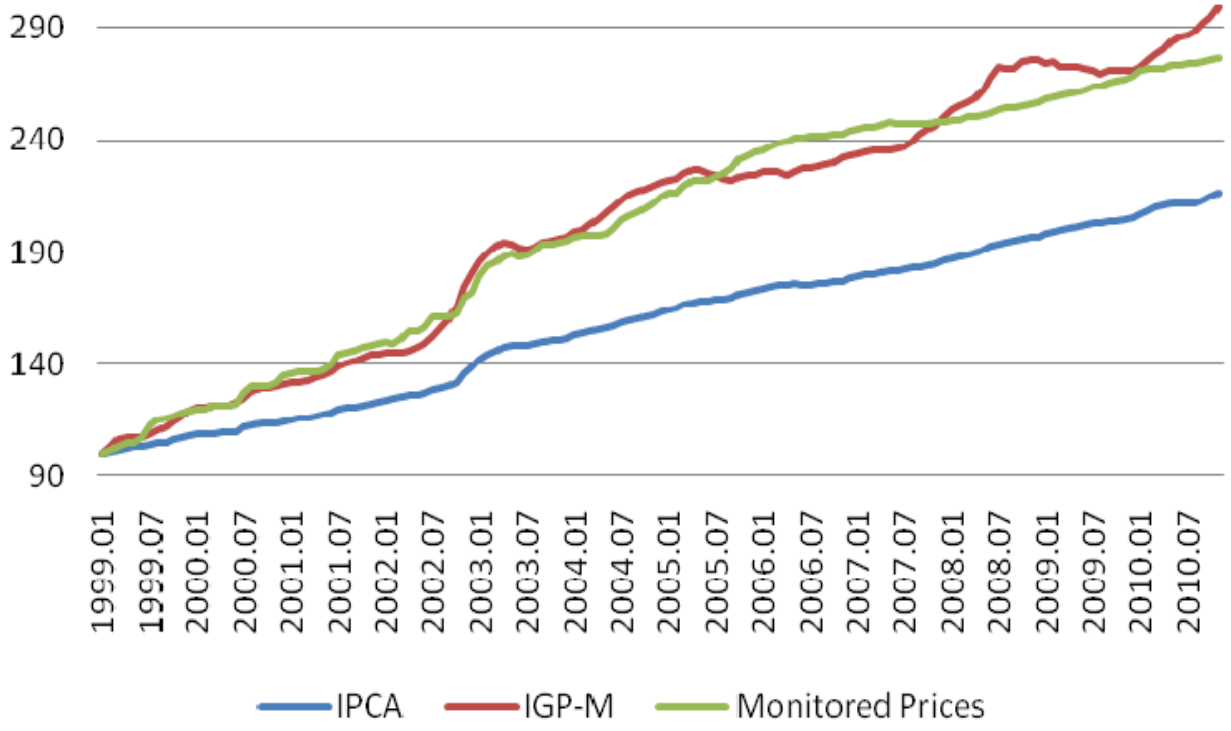
Source: Ipeadata.
Note: The vertical axis represents the percent change monthly, year over year.

Over the whole period of the sharply rising trend of international dollar commodity prices after 2003, it seems clear that the trend of continuous nominal appreciation of the exchange rate has been crucial for the functioning of the Brazilian inflation-target system. As can be seen in **Figures 3a and 3b**, which show the evolution of the inflation of import and export goods measured in US$ and in Brazilian local currency, the nominal appreciation of the Brazilian Real (R$) transformed a series of negative dollar supply shocks after 2003 into a sequence of mostly positive supply shocks in local currency until 2008. Note that negative cost shocks – either because of a nominal devaluation or an increase in dollar prices of imports and exports – happened in every single year in which the inflation target was not met (or was barely met, as in 1999 and 2008).

In **Figure 4** we see the evolution of the levels of three price indexes since the beginning of 1999: the Extended National Consumer Price Index (IPCA), which is the consumer-price index targeted by the Central Bank, the monitored prices index and the Market General Price Index (IGP-M), which is used to index many of the monitored prices. In the graph we can see that, up to mid-2005, monitored prices seemed in the aggregate to track the IGP-M index very closely (this index is strongly affected by the wholesale or producer price index and hence by tradable prices) and rise faster than the IPCA, amplifying the inflationary effects of the fluctuation of international commodity dollar prices and the nominal exchange-rate.

Note also that after mid-2005 there is clearly a relative delinking of the two latter indexes: first the monitored prices run faster than IGP-M for a while (until mid-2006); and then the monitored price index begins to increase more slowly than IGP-M after that.

FIGURE 4
Brazilian Price Indexes



Source: Ipeadata.

These trends seem to be the result of a number of changes that occurred in 2005 and 2006 in the indexing mechanisms of some administered or monitored prices. On the one hand, Petrobras held to a policy of stabilizing nominal domestic prices of oil fuels initially on its own; and then when it was not possible to keep prices from increasing due to the ongoing huge international oil dollar price increases in 2008, the Treasury helped to moderate the domestic price increases by temporarily lowering indirect tax rates on oil.[8] There was also a major overhaul of the regulatory framework in the electric power generation and distribution in 2004. The longer term effects of these changes have been lower mark-ups for private electricity generators and distributors and a shift, since the end of 2004, from indexing rates by the IGP-M to the IPCA. Both changes naturally have contributed to slowing down the increases in nominal electricity prices.[9] In 2006, new contracts regulating the pricing of private telephone companies' private telephone call rates began to shift to a new price index related to the actual costs of this sector (with a variable "x per cent" reduction factor to take account of productivity growth).[10]

All these changes initially had the unfortunate temporary effect of preventing the monitored prices from falling together with the IGP-M index when the exchange-rate started revaluing quickly. In the longer run, however, this was to be more than compensated for by much lower growth of monitored prices during the turbulent year of 2008, which combined a strong run-up of dollar import prices in the first semester with a massive exchange-rate devaluation in the second semester of the year. So it is clear that after 2006 the degree of indexation of monitored prices in general, and of import prices in particular, has been reduced and the monopoly profit mark-ups of these sectors seem to have decreased (or at least stopped growing).

The behavior of both dollar import and export prices and of the Brazilian nominal exchange-rate was much affected by the resumption of fast growth in the world economy after 2003. The ensuing fast expansion of international trade; the recovery of international dollar commodity prices; the increase of capital flows to "emerging" markets; and a marked decrease in emergent country interest rate spreads, all contributed to creating a situation in which the balance of payments of a large number of developing countries were substantially improved, relative to the difficult period of repeated crises and instability from the mid-nineties to 2002.[11]

In Brazil, domestic policies and politics interacted with the international situation in 2002 to determine the exchange rate. In 2002, just after the Argentine default, all "emerging" market countries which had substantial external debts faced diminishing external credit lines, as well as higher spreads, as international lenders sought to reduce exposure. Brazil however was more than proportionally affected, which most analysts attribute exclusively to market fears of external and internal default in case candidate Lula won the elections in October, in spite of his repeated assurances to the contrary. But the Brazilian Central Bank should take some deserved credit for the climate of instability and for inducing capital flight by suddenly imposing a "mark-to-market rule" for funds that previously treated public debt as "capital-certain", thereby generating losses to investors. The Central Bank also surprisingly did not try to stem the ongoing capital outflow and

8 See Ferreira & Serrano (2010). Barbosa-Filho & Sousa (2010) also mention that during 2008 the Treasury reduced indirect taxes on wheat and their byproducts, to soften the impact of the huge increase in international dollar prices of food during 2008.

9 The Brazilian Energy Minister in 2004 was Dilma Rousseff.

10 On the impact of these changes in monitored prices see Martinez & Cerqueira (2010).

11 On these changes see Serrano (2008), Frenkel (2010).

massive devaluation of the currency by increasing nominal interest rates until the second round of the election was over.[12]

In any case, the combined effect of the restoration of a large positive interest-rate differential and a sharp fiscal contraction that led to a recession in the beginning of 2003, and the lagged positive effect of the major devaluation on net exports quickly improved Brazilian external accounts, although at a great cost in terms of real wages and output. These policies, together with the acceleration of the growth of the world economy and world trade, and the lower international interest rates and emerging-market spreads in general, made the conditions for both solvency and liquidity of external obligations of the Brazilian economy improve substantially.

In **Figure 5** we see that the current-account deficit that reached a peak of almost 100% of export earnings on the eve of the early 1999 exchange rate crisis quickly turned into a sizable current account surplus in late 2003 and this surplus was eroded only a few years later through the combined effect of fast domestic economic growth and continuing real appreciation of the R$ exchange rate.[13]

The improved conditions of the current account and the resumption of large capital inflows allowed the government to quickly repay in full – and get rid of – the International Monetary Fund (IMF) loans and conditionalities in late 2005, reduce the overall external debt, and accumulate a massive amount of reserves afterwards.

The policy of accumulation of reserves allowed the authorities, even in a process in which a large amount of speculative short-term capital inflows were being attracted, to improve the country's international liquidity position. Indeed, there was a drastic decrease in the ratio of short-term external debt to foreign exchange reserves. The ratio reached more than 90% on the eve of the 1999 exchange-rate crisis, and was down to around 20% by 2008.[14]

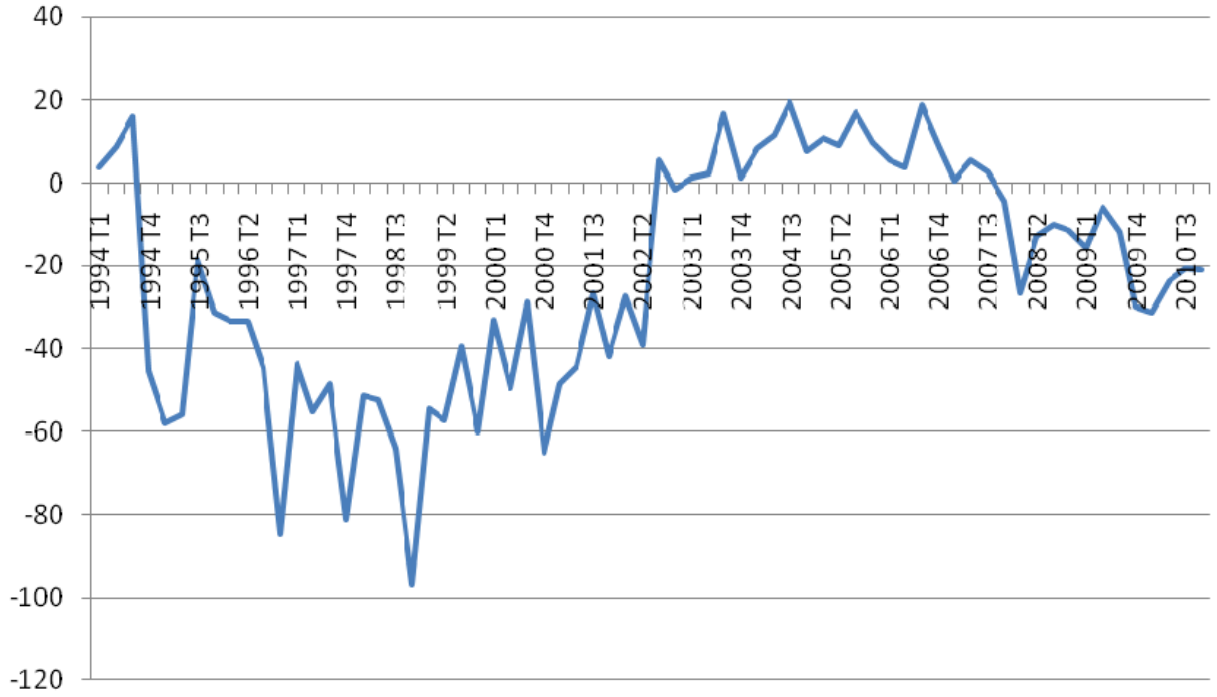
---

12 Lula won anyway, but in June 22, 2002 he released the notorious "Letter to the Brazilian People" in which not only he reassured markets that he would honour property and contracts and keep a tight fiscal and monetary policy, but also would implement neoliberal pension and labor law reforms (fortunately, the former reform was very limited and the latter never came into effect). Note that in the letter itself, candidate Lula mentions that the "Central Bank made a series of mistakes that caused financial losses" to investors and helped speculators. Moreover, in Figure 8, below, we can see this is the only period in many years in which the Central Bank kept the interest differential negative. Finally, note that as soon as interest rates were sharply increased, immediately after the second round of the election, the exchange-rate devaluation stopped.

13 Note that we do not use the usual current account to GDP ratio for two reasons. First, because this ratio is affected by the real exchange rate and may misleadingly seem to be low when the real exchange rate is appreciating, as it makes the GDP unusually large when measured in dollars. Second, because the sustainability of the balance of payments should be a function of the external-debt-to-exports ratio, and not of the external debt /GDP ratio, since the foreign exchange to pay external obligations is obtained through exports, not through the level of domestic output as such (see Medeiros & Serrano, 2004).

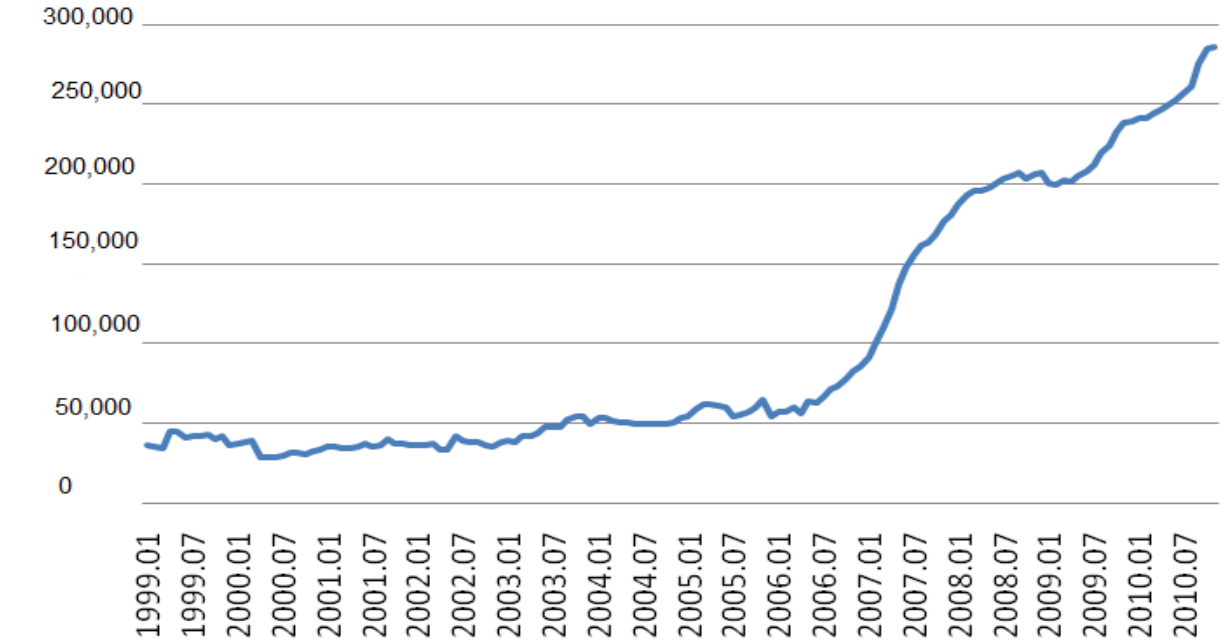
14 Other analysts, such as Prates (2010), use other foreign liability liquidity indexes that also include, besides short-term external debt, all other types of short term capital inflows such as bonds and shares by non-residents. Those indicators did not improve much and would actually tell a very different story. However, in a floating exchange-rate regime it makes a lot of difference whether capital inflows are denominated and must be paid in full in terms of foreign currency (debt) or not (portfolio flows). In the latter case, it is the nonresidents that take the exchange-rate risk, so the dollar value of these liabilities can always be eroded by an exchange-rate devaluation. Moreover, it does not seem useful to us to think that the stock of portfolio external liabilities is a good indicator of how much money could possibly be pulled from the country and pressure the exchange rate (or our reserves), since under free capital

FIGURE 5
Current Account Balance/Exports Ratio (Percent)



Source: Ipeadata.
Note: The vertical axis represents the percent of exports.

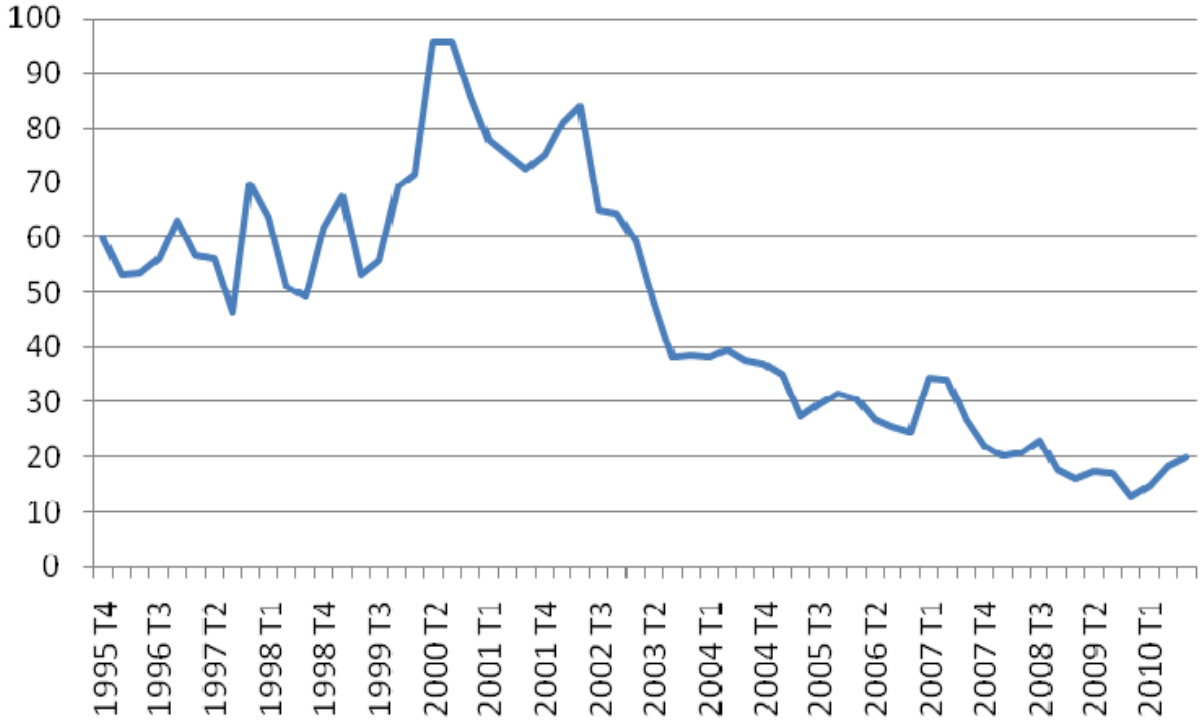
FIGURE 6
International Reserves (US$ in Millions)



Source: Ipeadata.

mobility nothing prevents capital flight by residents. Under this kind of regime, local banks and agents can easily create (if need be) and send money abroad whenever it appears profitable to do so.

FIGURE 7
Short-term Debt as a Percent of International Reserves



Source: Ipeadata.

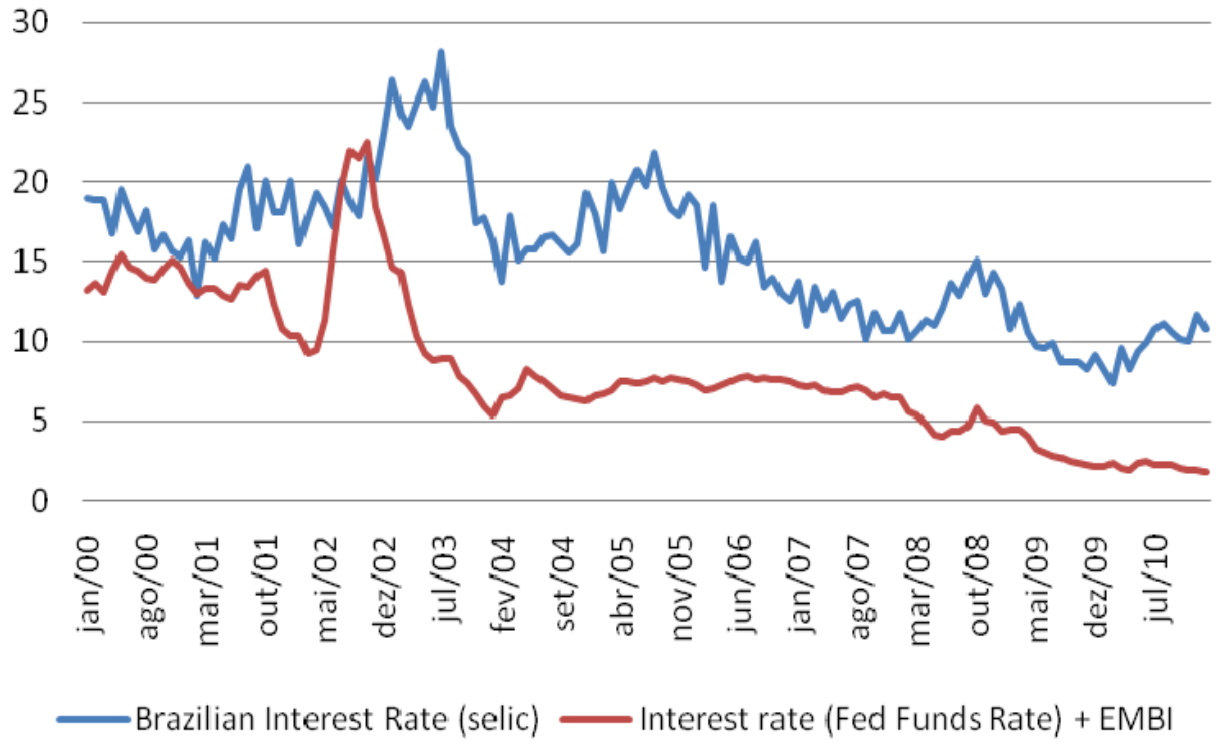
Though officially Brazil operates a floating exchange-rate system, it is obvious just by looking at the massive accumulation of foreign reserves and also at the interest-rate policy of the central bank that the floating is extremely "dirty" and that the process of almost continuous nominal exchange-rate appreciation has been strongly affected by the large interest rate differentials[15] maintained by the Brazilian Central Bank.[16]

Therefore, the inflation-targeting system in Brazil in practice operates likes this: whenever inflation is expected to go above the target range, for instance because of a faster increase in international commodity prices that puts cost pressure on domestic prices, the Central Bank increases the interest rate, declaring that it sees evidence of "excess demand" and/or "deterioration of inflationary expectations". Whether they are really seeing it, or believing in it, is immaterial. What matters is that the Central Bank then increases the nominal interest rate. The higher interest rate increases the interest rate differential and speeds up the tendency of nominal appreciation of the currency, thereby transforming what was, in fact, a negative supply shock in U.S. dollars into a positive one in Brazilian R$.

15 Comparing the interest rate differential and the evolution of the exchange rate it is clear that a given positive interest differential tends to cause a positive rate of growth of the nominal exchange rate, i.e., a continuous revaluation, instead of just a one-time for all revaluation (for a discussion of this effect see Summa, 2010a). Note that the data in Figure 8 (kindly provided by our colleague Carlos Pinkusfeld Bastos, whom we thank profusely) refers to gross interest rate differentials, without taking into account any taxes or fees.

16 In Dib (2010) we also find econometric evidence that, not surprisingly, the government´s exchange rate market interventions to moderate appreciation tend to be much weaker and halfhearted when inflation is running above the target.

FIGURE 8
Interest Rate Differential



Source: Bastos (2010).

More generally, whatever was the cause of the initial increase in inflation, such as domestic bad crops, or an increase in the rate of an indirect tax, having a higher interest rate would quickly lead to an appreciation of the currency and thus to a countervailing anti-inflationary cost (or "supply") shock.

Note that, quite contrary to the empirical evidence, there is an overwhelming consensus in Brazil around the idea that the increase in the interest rate after a foreign or domestic inflationary supply shock produces a negative demand shock that prevents firms from passing the increased costs to prices. This all-too-common interpretation cannot be correct for three reasons.

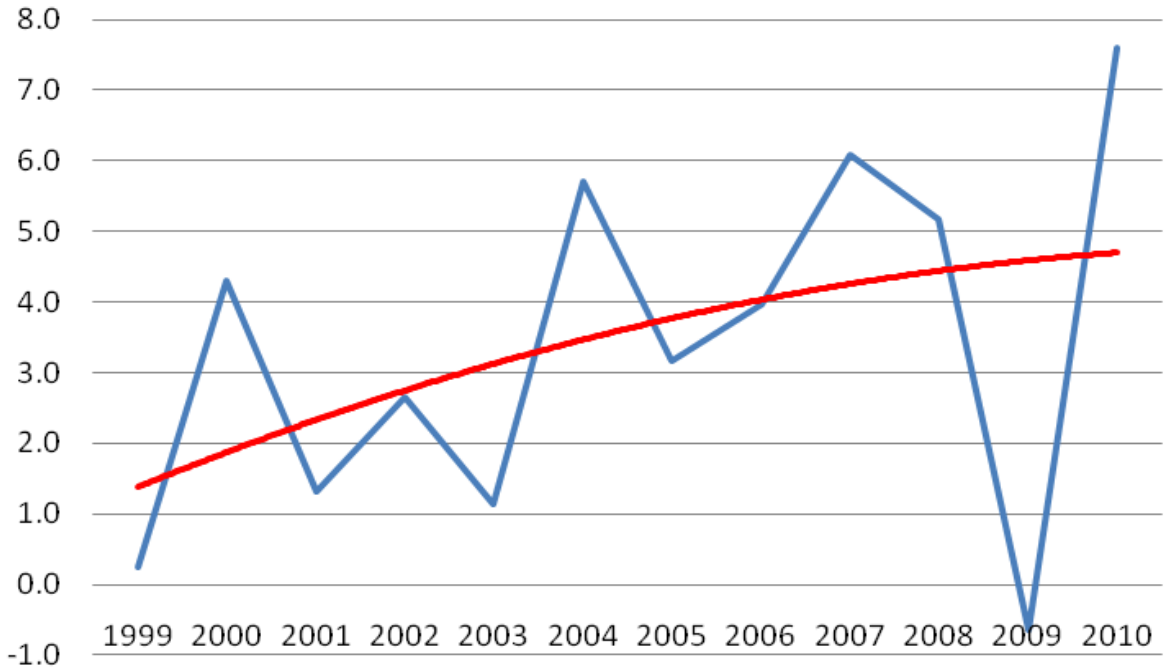
First, in the case of external shocks, the impact of the interest rate on the exchange rate usually reverses the shock itself so that, in the end, there is no negative shock to pass onto prices. Second, in the case of a domestic shock, such as a bad harvest or indirect tax rate increase, again the ensuing exchange-rate appreciation after an interest rate hike will produce a simultaneous positive inflationary shock, lowering the price of tradable goods in domestic currency. Again, in the end there is no net shock to be moderated by the demand contraction. Finally, even when for some other exogenous reason the increase in the interest rate does not cause an appreciation of the local currency, the idea of moderating the pass-through of supply shocks requires a crucial link to work. For the cost pass-through to be contained it is obvious that unit labor costs and/or profit margins must be sufficiently pro-cyclical, which is exactly the condition that we do *not* find in the Brazilian data. It is thus perhaps not a coincidence that whenever the increase in the Brazilian interest rate was not accompanied by a nominal revaluation of the currency (e.g. because of a sharp reduction in international capital flows to emerging markets), it has not been possible to achieve the inflation

target. Therefore, the Brazilian inflation-targeting system, in which the interest rate is used to control inflation, actually works directly through the exchange-rate cost channel.[17]

Macroeconomic Policy and Economic Growth

When we look at how the economy has grown in the 2000s, we see clearly that up to and including 2003 growth rates were very low, and that afterwards they gradually picked up. Initially, the expansion led by the boom in exports and GDP growth rates did not increase so much;[18] but then beginning in 2006 export growth loses steam and the internal market began to grow faster, thanks to a more expansionary stance in macroeconomic policy. The economy was hit by the world crisis in late 2008 and had three-quarters of negative growth, but it recovered quickly in late 2009, so that annual GDP fell by only 0.65 percent in 2009. Fast growth throughout 2010 resulted in a growth rate of 7.5% for that year. This would give Brazil an average GDP growth rate of 4.2% in the 2004-2010 period, more than double the mere 1.9 % average for the 1999-2003 period. So we see that not only the inflation targets were met every year from 2004 onwards, but also – and in spite of the sharp contraction due to the 2008 world crisis – GDP grew much faster in the second period.

FIGURE 9
Brazil GDP Growth Rates and Trend



Source: Ipeadata.

17 Note that under the exchange rate-demand channel of monetary policy a high interest rate revalues the currency and decreases net exports and aggregate demand. In Brazil this specific channel does not work since the distributive effect of the appreciated exchange rate has been to increase real wages and consumption by much more than the reduction in net exports, so much so that aggregate demand *increases* when the real exchange rate appreciates.

18 The inability of the Brazilian economy to grow fast when pulled only by fast export growth is well documented in Freitas & Dweck (2010) and Carneiro (2010).

In **Figure 9** we can see that growth slowed down sharply in 2005. At this time the Brazilian Central Bank, fearing an acceleration of inflation, started raising interest rates again. In 2005, many analysts inside and outside the government argued that Brazilian potential or capacity output was basically exogenous and could not possibly grow faster than 3-3.5% a year.[19] Based on that belief, some policy makers and analysts also suggested that the more comfortable international situation should not be used to accelerate growth but rather to switch the system to progressively lower target rates of inflation.

It was argued that what was required for faster long-run growth was a sharp increase of the primary fiscal surplus of at least three more percentage points of GDP.[20] This would presumably, by considerably lowering the public debt-to-GDP ratio, lead to permanently lower external debt spreads and much lower real interest rates in the "long run", which would lead to faster growth of private investment.[21] In response to the obvious counter-argument that there was an urgent need to increase the level of public investment, which had fallen to an embarrassing 0.3% of GDP in 2003 for federal government investment, it was argued that the only way to achieve this was to make stronger cuts in government consumption and social transfers (including pensions).[22]

In the end, although the increased inflation was not the result of domestic excess aggregate demand but of fast-growing international commodity dollar prices, the higher interest rates did slow inflation by making the exchange rate appreciate even faster than before. The higher interest rates also slowed the growth of consumer credit and of GDP but, luckily for Brazil, the more radical fiscal proposals were not implemented. Soon afterwards, the view that something must be done to restore the growth of the domestic market finally prevailed.[23]

Because business investment responds strongly to higher rates of capacity utilization and recent growth of final demand,[24] only a sustained expansion of the Brazilian internal market could cause a sustained increase in both actual growth rates and the growth of potential output.[25] As for public

19 The recent debate on potential output in Brazil started with Barbosa-Filho (2005). See also Summa & Lucas (2010).

20 This was known as the "zero nominal (PSBR [Public Sector Borrowing Requirement]) deficit" proposal, put forward by Antonio Delfim Netto (a former Minister of Finance during the period of military rule) in 2005. This proposal for large cuts in government spending was supported by the then Minister of Finance Antonio Pallocci (now Chief of Staff to President Dilma Rousseff). Dilma Rousseff (who at the time was Chief of Staff to President Lula) was one of the main critics of this initiative and helped to scuttle it. In an interview with the press, she referred to the proposal as being crude or "rudimentary".

21 There are many theoretical and empirical problems with this popular chain of reasoning. To make a long story short, let us mention two: 1) in the real world, external-debt country spreads have to do with sustainability of the total external debt of the economy (private and public) in hard currency, including liquidity of reserves and the debt maturity structure, and not with the internal debt of the government denominated in local currency. Thus, the only way a high primary fiscal surplus could really help lower spreads is by slowing overall economic growth and thereby lowering the growth of imports. 2) A large fiscal contraction would reduce business investment since aggregate demand and capacity utilization would fall sharply, and firms do not build new factories when demand for the existing ones is falling. The ensuing fall in private investment would mean lower long-run growth rates of productive capacity, the opposite of what was (and is) claimed by the supporters of the cuts.

22 See Barbosa-Filho & Sousa (2010) for an account of the policy debate in 2005.

23 A major political crisis connected to illegal campaign contributions to the government party and allegations of a payola scheme in exchange for support in Congress seems, in the end, to have helped the growth-acceleration camp. Through a complicated sequence of events, the crisis led Dilma Rousseff to become President Lula's Chief of Staff in June 2005, and led Lula to fire Finance Minister Antonio Pallocci in March 2006.

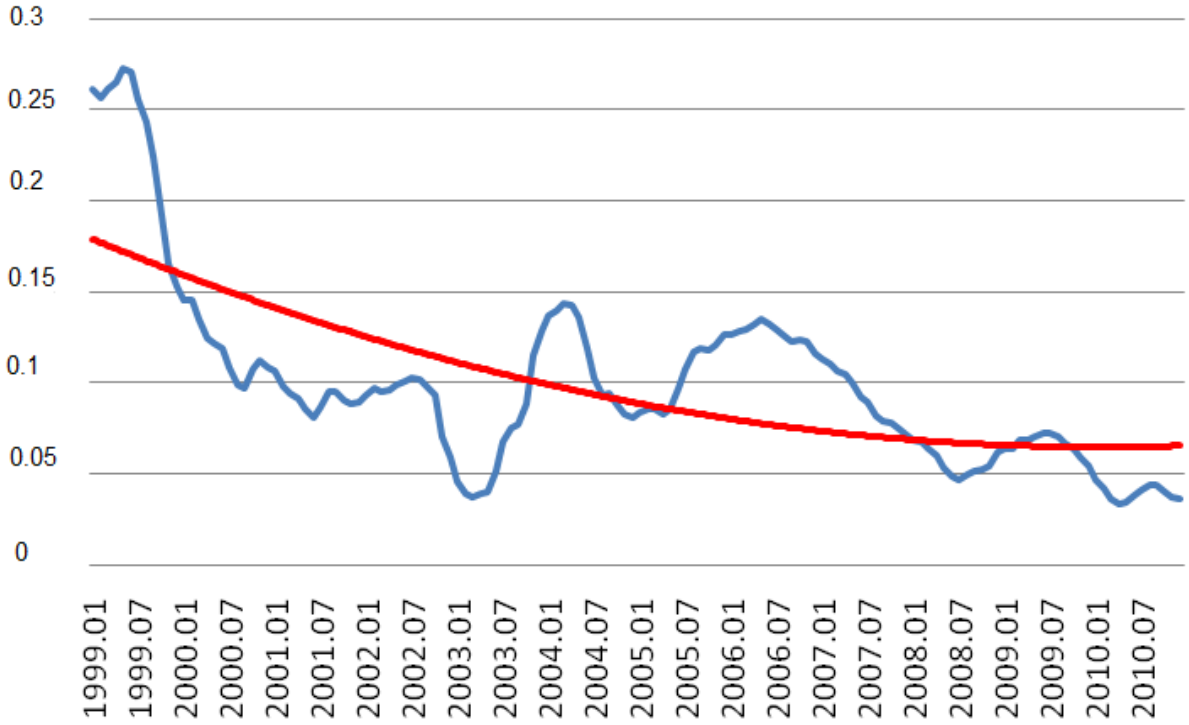
24 See Inhudes & Borça (2008), and Freitas & Dweck (2010).

25 This is a heterodox explanation of the phenomenon known as GDP hysteresis. See Serrano (2007) for a theoretical discussion. In 2005, one of us (Serrano) was present in a lively debate on potential output and hysteresis when

investment, in practice a progressive reduction of primary surplus targets ended up happening in order to make room in the budget for the initially modest recovery of public investment by the government and by state owned enterprises (mainly Petrobras) after 2007.[26] This new priority to promote faster growth was obviously in direct contradiction with the maintenance of the inflation targeting regime in a period of fast-rising international commodity prices, but fortunately the improved external conditions solved the contradiction for the government.

The improvement in international conditions after 2003, in terms of both trade and financial flows, came together with much lower interest rates in the U.S. and significantly lower spreads for "emerging markets" in general and also for Brazil. The upshot was that a very large positive interest-rate differential remained even though domestic real interest rates tended to fall over time, especially after 2006. This can be seen in **Figure 10,** as well as in **Figure 8**.

FIGURE 10
Ex-post Short-term Real Interest Rate and Trend



Source: Ipeadata.

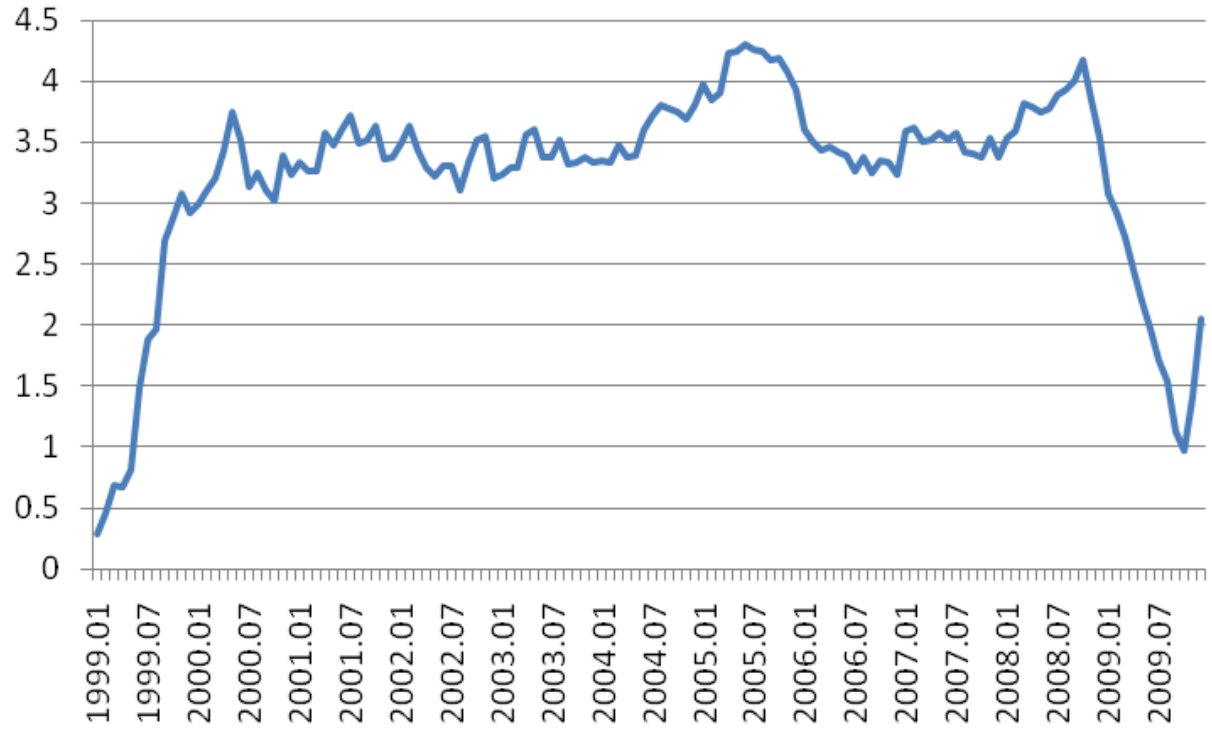
Nelson Barbosa presented his pioneering paper (Barbosa-Filho, 2005) at IPEA, a government economic research center which at the time was a bastion of neoliberal and neoclassical "*penseé unique*". In the very end of the heated discussion session a senior IPEA researcher appeared to have seen the light and said "Nelson, what you are really saying is "give growth a chance!" (the single quoted part was said in English, John Lennon style). Barbosa later went to work in the Ministry of Finance, where he is now vice-minister.

26 The recovery of public investment was the main thrust of the PAC programme (acronym for "growth acceleration program" in Portuguese), launched in early 2007.

Besides lower policy interest rates, a number of measures were taken to increase availability and access to credit: first for consumption and later for residential housing. There was also an important role played by publicly-owned banks in increasing the availability of consumer, mortgage and investment credit in general, and especially in avoiding a more serious credit crunch and a banking crisis in late 2008 and immediately after.

In terms of fiscal policy, the government pursued sizeable primary surpluses for most of the period. After 2007, there was a reduction in the targets in order to allow for the recovery of central-government and publicly-owned enterprise investment, but fast growth of the economy and tax revenues in the first three quarters of 2008 made the primary surplus grow again. With the onset of the world economic crisis, the government finally shifted to a strong counter-cyclical stance and allowed the primary surplus to fall drastically over the next few quarters and partially to recover, along with the economy, in late 2009.

FIGURE 11
Primary Budget Surplus as a Percent of GDP



Source: Ipeadata.

On the other hand, the current primary surplus is not really a good indicator of the fiscal policy stance in terms of assessing the impact of government expenditures and taxes on aggregate demand. Although many economists argue that a positive primary surplus-to-GDP ratio necessarily reduces aggregate demand, because the government spends less than it collects in taxes, the fact is that even when the government has a positive primary surplus, the net effect on aggregate demand and production can sometimes be positive, if the level of primary government expenditure is growing enough and the primary surplus is not too large. This occurs because any increase in government

spending has a full and direct, immediate impact on aggregate demand and increases total income. Increased taxation of all of this higher level of income would simply prevent further expansionary multiplier effects on private consumption. Therefore, if primary spending is increased, and taxation is increased by the full amount of the initial increase in primary spending – or even somewhat more - the net effect on aggregate demand and income can still be positive. Recent estimates show that the impact of the public sector on aggregate demand in Brazil was generally negative or zero until 2005. After 2006, public sector impact on aggregate demand became positive, in spite of the primary surpluses, because the growth of government expenditures and transfers was much faster in this period.[27] One key feature of this faster growth of government expenditures and transfers was the faster rate of increase of the real minimum wage, which had a strong effect on public sector wages and especially on pension benefits in the Brazilian pay-as-you-go system.

The combination of these large primary fiscal surpluses with a trend of declining real interest rates and faster GDP growth over time has reduced the net public sector debt-to-GDP ratio (internal plus external) over time. Note that the reduction went on even while Brazil was accumulating foreign-exchange reserves at a very high fiscal cost, due to the large interest-rate differential between Brazil and the USA (since most reserves are in dollars and have low U.S. yields).

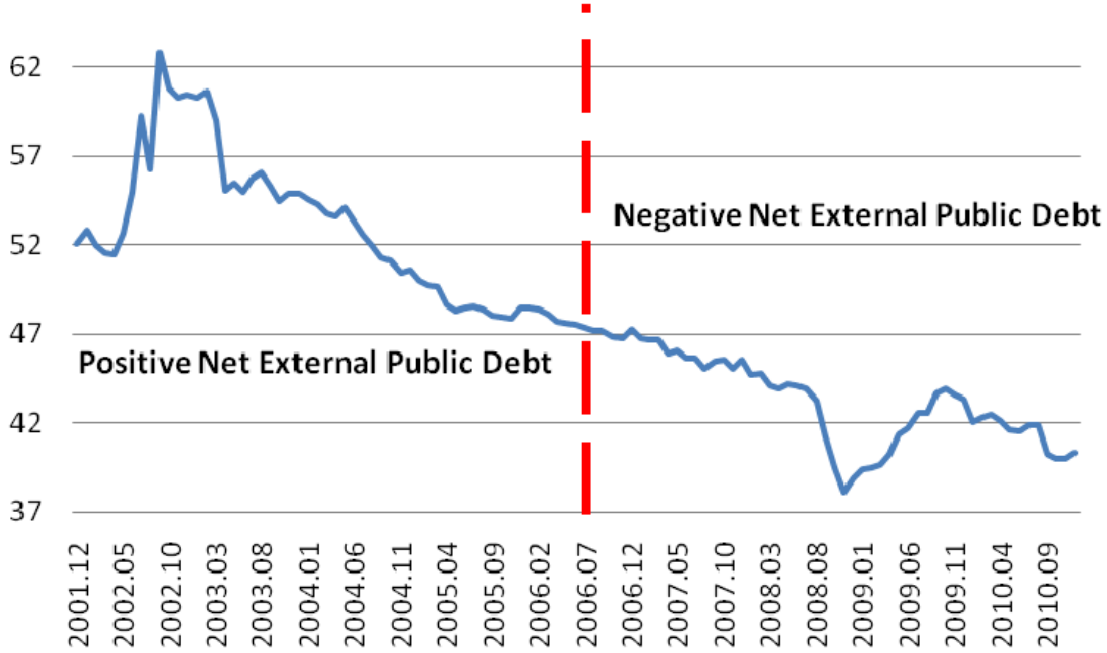
It is also important to note that, since mid-2006, Brazil has a negative net external public debt, as accumulated international reserves exceed the external public debt. Therefore, we can see two different (and large) effects of exchange-rate depreciation: in 2001-2003, the exchange-rate depreciation led to a rise in the net public debt-to-GDP ratio; but in 2008 the exchange-rate depreciation led to a fall in the debt-to-GDP ratio. Thus, the rapid increase in the debt-to-GDP ratio in 2009 is in part due to exchange-rate appreciation.

Besides the impact of increased government expenditures and transfers to aggregate demand, there was a modest but badly needed recovery of public investment, particularly in infrastructure, by both the government and the state-owned enterprises (mainly by Petrobras) since 2007 (**Figure 13**).

These moderate changes in macroeconomic policy explain how the growth rate of the Brazilian economy finally began to increase during the mid-2000s after almost two decades of sluggish growth. Initially GDP growth picked up in 2004, led by the very fast growth of exports, which with a lag led to a recovery of induced consumption and later to induced business investment, mostly connected to the export sectors. After some hesitation, the government finally decided to implement a more expansionary policy stance, beginning in 2006. This allowed for rapid growth of domestic demand in general, and of private consumption in particular, which after a while induced a faster and more sustained private business investment boom.[28]

27 See Rodrigues & Pinkusfeld (2010).
28 See Carneiro (2010).

FIGURE 12
Net Public (External and Internal) Debt/GDP Ratio (Percent)

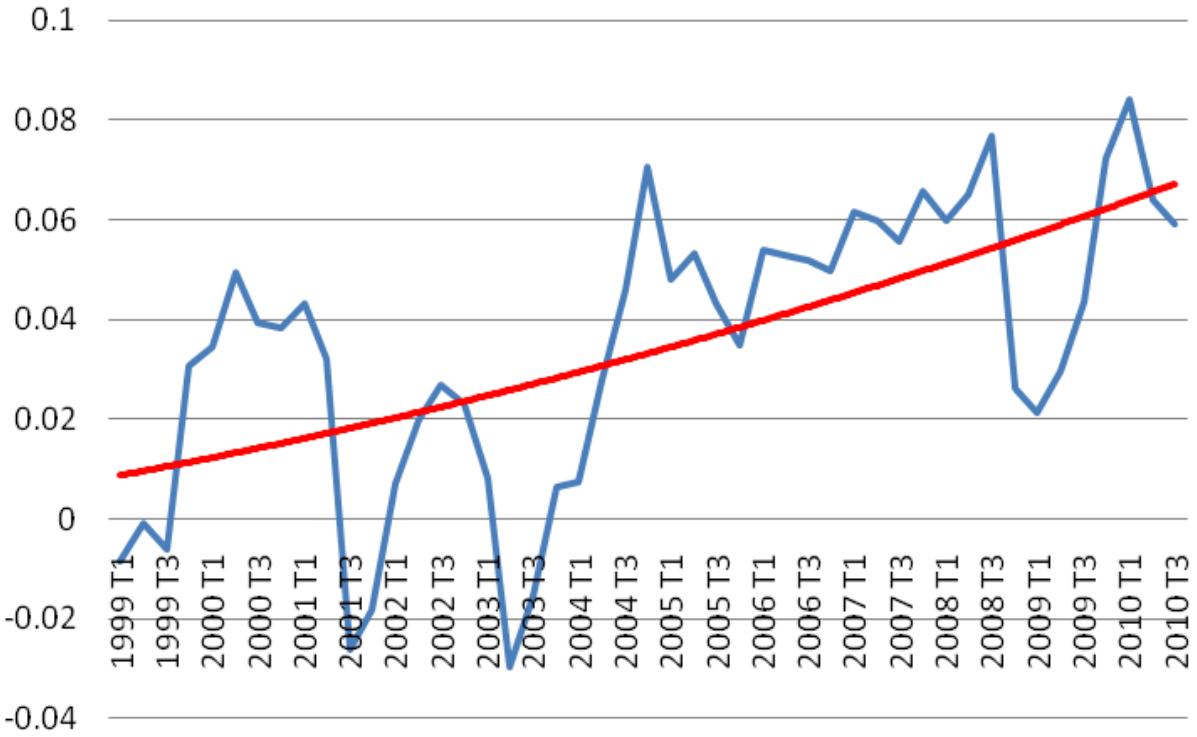


Source: Ipeadata

FIGURE 13
Private and Public Investment Rate (Percent)

Source: Carneiro (2010).
Note: The light blue line represents total investment (left hand scale); the green line represents public investment as a percent of GDP (left hand scale); the dark blue line represents public investment (right hand scale); and the pink line represents investment by state owned enterprises (right hand scale).

FIGURE 14
Private Consumption Growth Rates and Trend



Source: Ipeadata.

This new orientation also appeared as a late but decidedly counter-cyclical response to the world crisis in late 2008.[29] This policy stance helped Brazil to contract relatively less in 2009 and to recover more rapidly than many countries that followed broadly the same general policy regime. The reason why the Brazilian Central Bank did not choke off this expansion was not, however because of any change in its policy mandate; rather it was because of the fact that the fall in international interest rates and spreads allowed the Central Bank to deliver its annual inflation targets with lower nominal and real interest rates, since it made possible for even a falling domestic interest rate to be compatible with a continuing appreciation of the Brazilian Real relative to the U.S. dollar.

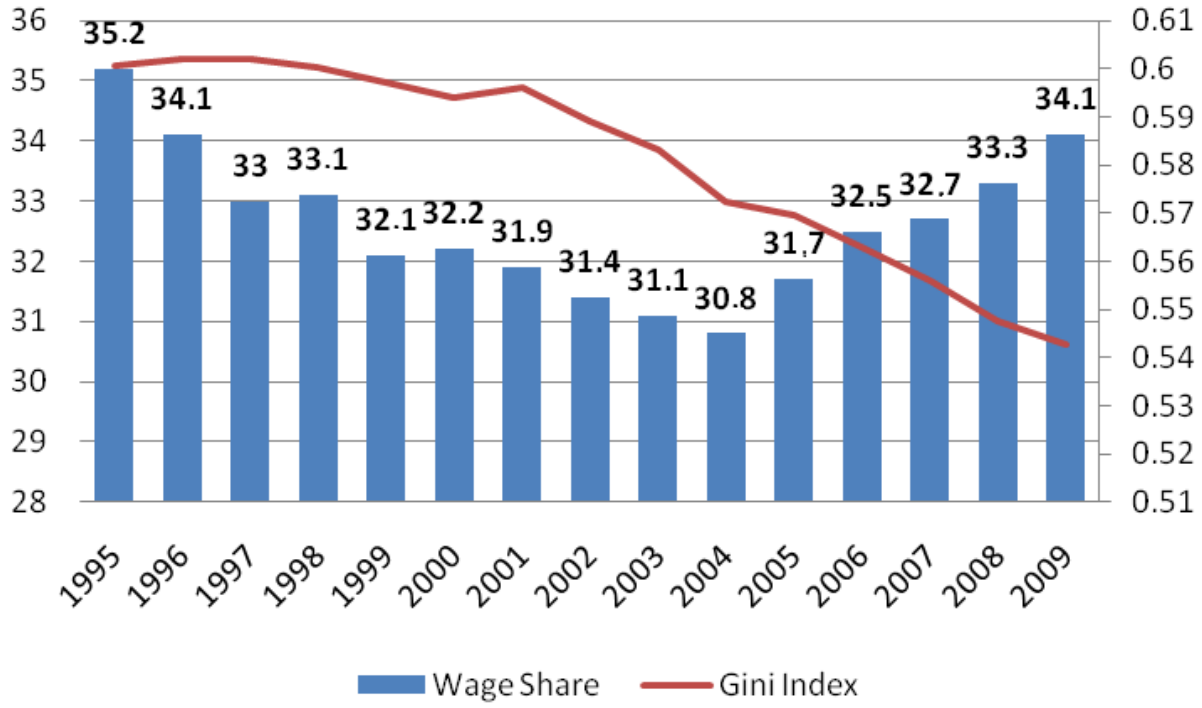
In the same vein, during the period of crisis in late 2008, the counter-cyclical policy was only possible because the sharp and sudden exchange-rate devaluation that occurred in the midst of the crisis (when it was necessary to stem capital outflows) was first counterbalanced in terms of domestic inflation by the simultaneous collapse of international dollar prices of commodities. The devaluation was later quickly reversed when emerging-market spreads went back down to near their pre-crisis levels.

29 This occurred after some initial hesitation, since the Brazilian Central Bank again started increasing interest rates in mid-2008, once more claiming it was domestic excess demand and not the biggest worldwide boom in commodity prices in decades that was triggering inflation (Araujo & Gentil, 2009). The relevant effect on inflation is that the increased interest rates allowed the interest rate differential to remain large, and for the fast nominal revaluation of the currency to continue in a period in which emerging market interest rate spreads began to increase. After the large and sudden devaluation during the crisis, interest rates were lowered but the interest differential actually widened and helped to speed up the subsequent process of exchange-rate revaluation.

Income Distribution and Poverty Reduction

In terms of income distribution, we see a continuous decrease in the Gini index (though starting from a very high level) throughout the whole period. However, the apparent reduction in inequality until 2004 must also be distinguished from what happened afterwards. First of all, notice that while the Gini index decreases over the whole period, the share of wages in income falls until 2004, then slowly recovers afterwards. In order to understand the apparent paradox, we must note that the Gini inequality index is calculated through household surveys which capture practically only labor incomes (both formal and informal); these surveys tend to drastically understate incomes received from property, and ignore the income retained inside the business sector.

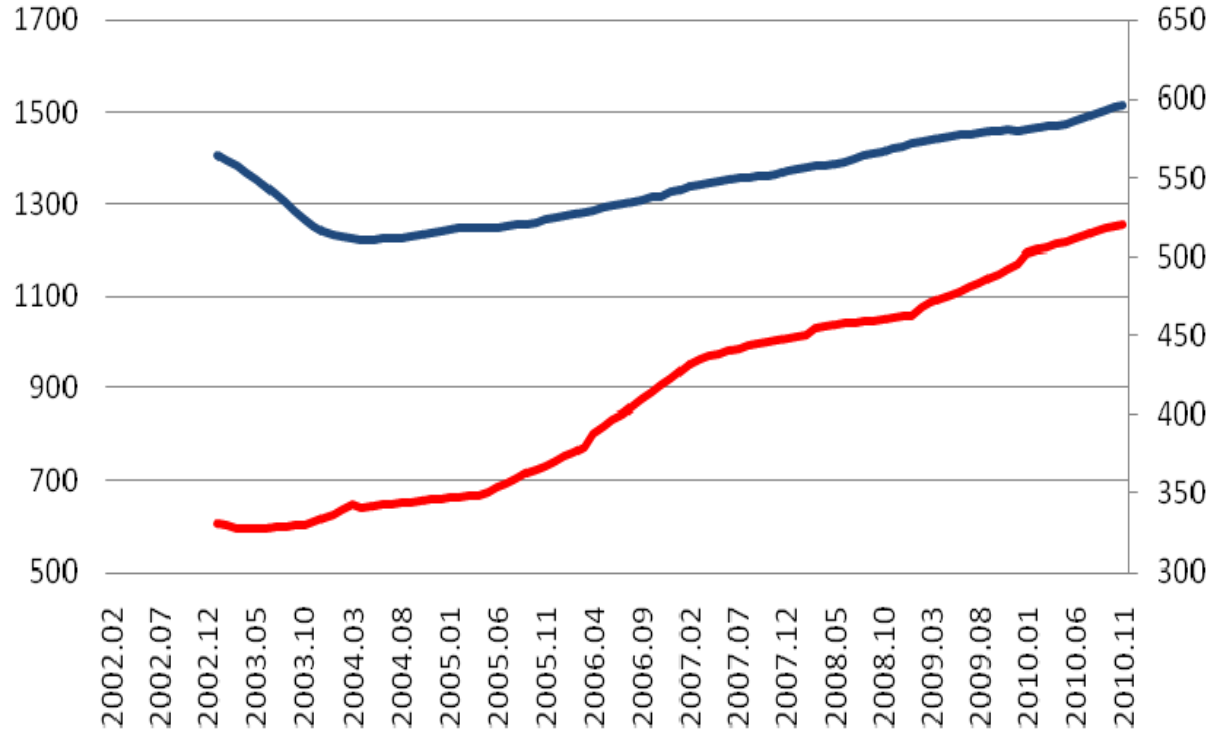
FIGURE 15
Wage Share and Gini Index



Source: Ipeadata.

Thus, at least part of the reduction in the Gini index until 2004 may be explained by the fact that up to 2004, because of the low growth of the economy and of employment, and the declining wage share, the average absolute real income measured by household income was actually falling. On the other hand, the real minimum wage was increasing in this period. Thus, it appears that up to 2004 the reduction of inequality was coming at least as much from a fall in the higher wage income than from an increase in the wages of poorer workers. Average household incomes started to grow after 2005, not only because of faster growth of the economy and of formal employment, but also because by then the real minimum wage grew even faster and the wage share began to grow too. Thus, although the Gini index continued to fall after 2005, it is perhaps not surprising that poverty reduction also seemed to occur faster in this period.

FIGURE 16
Average Real Household Income (blue) and Real Minimum Wage (red) in Constant 2009 Reais

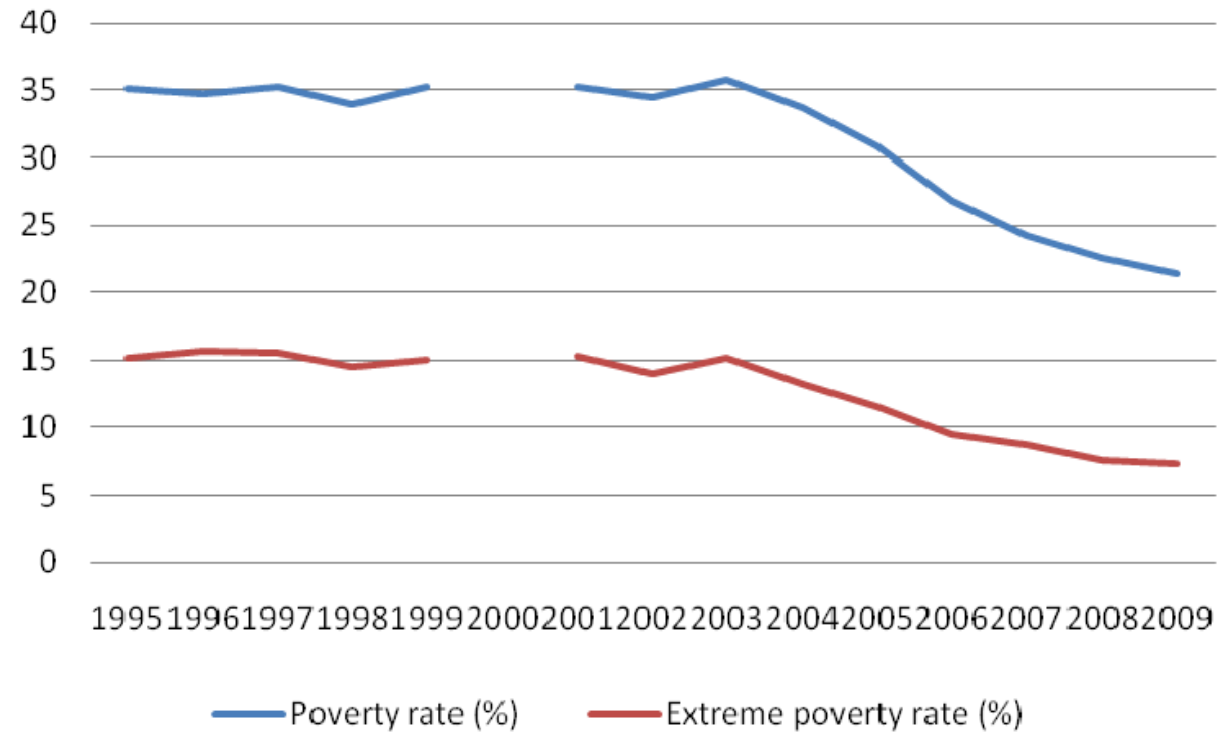


Source: Ipeadata.

Here again we see the key role of the improved international trade and finance conditions. The recovery of real wages and the wage share seem to have been strongly influenced by the appreciated real exchange rate (the increase in real wages in terms of tradable goods) and by the lower real interest rates (that seems to affect profit mark-ups by setting the financial and opportunity costs of capital for firms).

The results in terms of poverty reduction can be seen in **Figure 17**. The available data shows that the percentages of the population that are both poor and extremely poor were almost stable and even increased in the early 2003 recession. Then both shares start falling continuously after 2004, even during the 2009 recession.

FIGURE 17
Poverty Rate (Percent of population)



Source: Ipeadata.

The Return of the External Constraint?

Despite the much-improved results in terms of output growth and income distribution since 2006, the current economic policy framework seems to face structural problems. As we have seen, the improvement in the performance of the Brazilian economy was the combined result of a large improvement in the external conditions facing the country with a small but useful shift towards a more pragmatic expansionary stance of macroeconomic policy. Now, both of these factors are at risk.

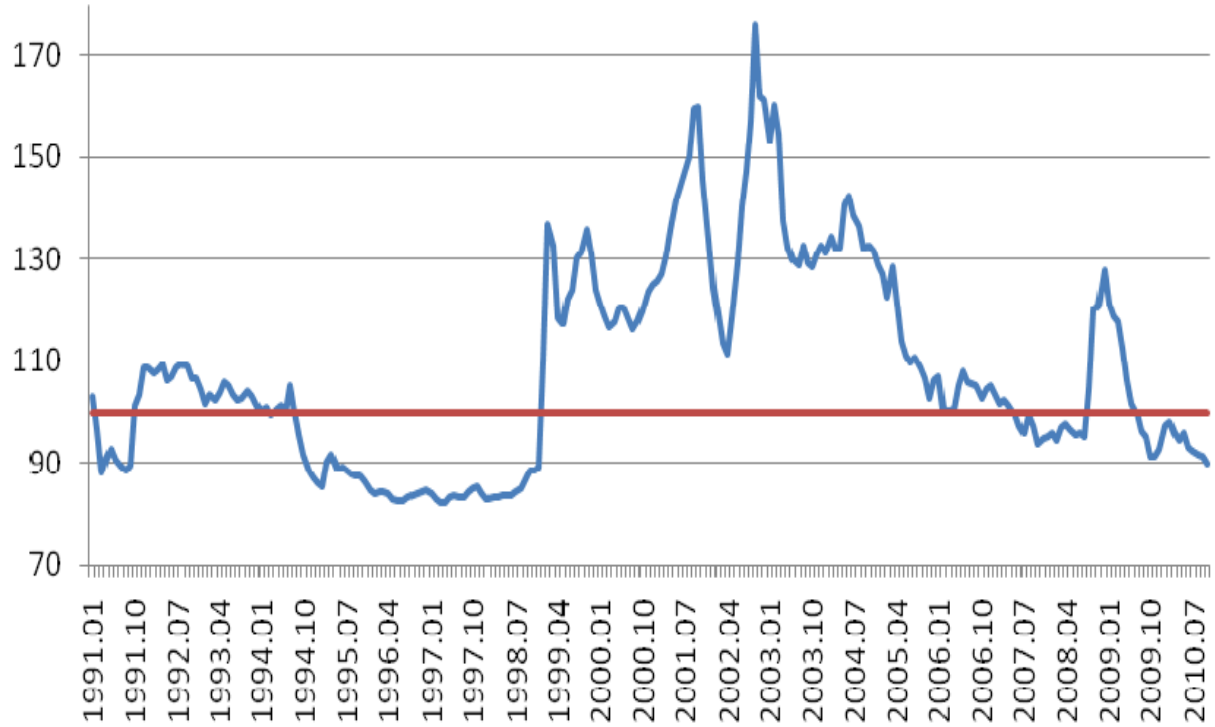
In regard to the external constraint, the main problem stems from the fact that the exchange rate is currently the only instrument to control inflation, via systematic appreciation, and has started to affect the current account and industry competitiveness, especially in sectors with more sophisticated technology. **Figure 18** shows the appreciation of the real exchange rate, which since 2007 (excluding the crisis period) is below the benchmark level of mid-1994, when the Real plan was implemented and historically high inflation finally brought under control.

The results of the exchange-rate appreciation process are a decrease in the trade balance (export growth is slower than it would otherwise be and imports are growing very fast) as well as increased remittance abroad of profits, interest and capital gains, which are leading to a rapid deterioration in the Brazilian current account.

With regard to external competitiveness, estimates show that the import content coefficient increased in manufacturing industry by 8.1 percentage points from 1996 to 2008. Even more dramatic is the case of the most technologically advanced industries, as is the case of "Communications and Electronic Equipment" and "Medical and Hospital Equipment, Industrial Automation and Precision" sectors, where their import content coefficients in the same period rose by 32.7 percentage points and 35.1 percentage points, respectively. The latter, for example, reached a 65% import coefficient in 2008. This shows that Brazilian industry is replacing domestic production of inputs by imports at a very fast rate.[30]

In spite of these trends, Brazilian industry did not face more drastic consequences, not only because the domestic market grew very fast, but also because there was a sharp increase in exports of manufactured goods (including capital goods) to markets of other developing countries such as the Mercosur members; and also of industrial goods from the extractive/mining industry (which also decreased its import content coefficients) to the world market.

FIGURE 18
Real Effective Exchange Rate



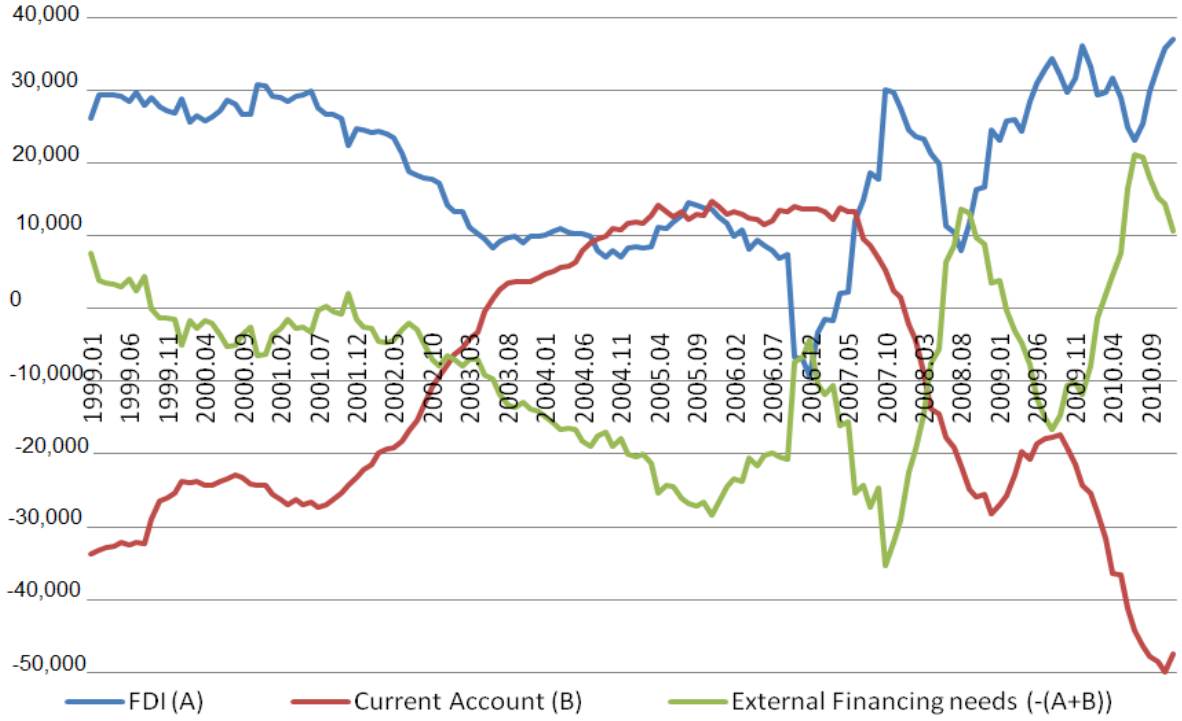
Source: Ipeadata

Some analysts discount the risks posed by ever-rising current account deficits because of the massive amount of foreign exchange reserves; and the widespread hope that Brazil in a few years could become a major exporter of oil (exploiting the recently found, vast deep sea "pre-salt" oil reserve).

30 See Carneiro (2010).

But the fact is that since late 2009, inward foreign direct investment has not been enough to offset the current account deficit, and the continuing accumulation of reserves has depended on short-term external capital inflows.

FIGURE 19
Foreign Direct Investment, Current Account and External Financing Needs
(US$ in Millions, accumulated 12 months)



Source: SOBEET (2010).

Policy Alternatives

Some (but certainly not all) of these competitiveness problems could be mitigated by a large real exchange-rate devaluation. That would have an inflationary impact, at least in the short run, and would lead to a permanent fall in real wages.[31] This negative distributive effect would also have negative consequences for the growth of consumption and effective demand as a whole, in spite of its possible effect on slowing down imports substantially, and some improvement in the export performance of some sectors.

The objective conditions of the worsening external situation are compounded by the state of current public policy debates in Brazil, both inside and outside the new government. Most Brazilian

31 Another feature of the Brazilian economy in the 2000s was the almost complete absence of "real wage resistance", so much so that there was a strong inverse connection between the level of the *nominal* exchange rate (R$ per US$) and average real wages (see Serrano, 2010a).

economists (including most of the ones who call themselves heterodox, Keynesian or even "progressive") are not only prescribing a major devaluation with no concern for its distributive impacts, but also insist that the route to get there is through a fiscal contraction that would lower domestic interest rates; which are required to at least stem the trend of continuous nominal exchange-rate appreciation compatible with the inflation targets. This presumably would allow the government to control the growth of aggregate demand in spite of much lower domestic real interest rates, thus keeping inflation in check.

One problem with this once again popular perception is that, as we have seen, Brazilian inflation is caused essentially by cost-push factors and, in particular, by rising international commodity import and export prices. Fiscal contraction will certainly slow down the growth of aggregate demand, but precisely because it does not by itself tend to make the currency appreciate it has, we must repeat, no direct and systematic impact on the trend of inflation.

In addition, in order to control the growth of aggregate demand it would be more efficient and socially more desirable to control the growth of private, instead of public, expenditures. It is quite easy to quickly change the availability of consumer credit in Brazil by changing the spreads of the publicly owned commercial banks, increasing private banks' compulsory reserve ratios (that act as a tax on the banks and increase their lending rates), and especially by reducing the number of instalments for certain types of credit operations (typically the financing of consumer durables). These measures are socially more acceptable than cutting public investment, old-age pensions, other social transfers or minimum wages (or civil servants' wages in general). And credit controls are in fact much more direct and effective in terms of checking the growth of demand than increasing the interest rate, although the latter is of course much more effective in controlling inflation *precisely* because of its effects on the nominal exchange rate.[32]

The surest way to try to slow the trend towards revaluation of the nominal exchange rate is by lowering the basic interest rate and/or taxing more capital inflows, with the former being simpler and more efficient than the latter. If the government is serious about not relying so much on exchange-rate appreciation to control inflation, it would be far more sensible to make further progress in decreasing the degree of indexation and/or excessive profit margins of privatized public utilities and to make more use of fiscal instruments to fight external commodity cost-push inflation. The latter can be done by temporarily lowering taxes or tariffs on imports of basic goods, the prices of which are very volatile and visibly rising too much, as Brazil has done quite successfully with diesel and gasoline and with wheat prices in 2008. At the same time the exports of some basic goods should also be taxed more when their dollar prices increase too much in a short period in order to prevent these increases from being passed through to domestic prices of these products.

If a relatively large nominal depreciation of the Real is deemed necessary to restore external competitiveness, the selective lowering of taxes on imports and increased taxes on exports mentioned above must be larger. This would have the positive effect of mitigating the negative impact of the currency depreciation on real wages. Ideally, it should happen together with the

32 Indeed, there is evidence that the measures introduced in late October 2009 taxing capital inflows and compulsory deposits on dollar sales in futures markets have, by narrowing the net interest rate differential, helped to slow down considerably the trend of exchange rate appreciation. At the same time, the very success of these measures, in the context of a fast recovery of dollar international commodity prices has also led to much higher inflation during 2010 (note that tax rates on capital inflows were increased again twice in October 2010).

reduction of mark-ups and lower indexation of monitored prices mentioned above, so that even if real wages in the end decline a bit in terms of tradable goods, this can be compensated by increases in terms of non-tradable services. High export taxes for some commodities would also prevent the devaluation from further increasing the relative profitability of the commodities export sector. This would help change the structure of exports away from excessive reliance on commodities and at the same time protect the industrial sector from the currently excessively cheap imports.[33]

A real exchange-rate depreciation, however useful, is certainly not enough to restore industrial competitiveness. Brazil needs to have more public investment in infrastructure to improve the logistics and reduce the costs of exports, and to practice a more substantial industrial policy of technological upgrading in some sectors, ideally using government purchasing policy (procurement) to guarantee results. It turns out that Brazilian industry is badly in need of promoting some import substitution in the more advanced technological sectors, in order to reduce the trend of increasing import penetration coefficients. These policies appear to have more positive externalities in terms of improving the overall competitiveness and productivity of the economy than mere tax incentives and/or tax burden reduction to firms that are favored by those who propose large fiscal cuts.

These policy questions are of course controversial and complex in practice, but our simple sketch of alternatives here has only the more limited purpose of showing that, implicit in the different policy proposals, there are not only different views of how the economy works, but clear differences on matters concerning income distribution.

Conclusion

As we have seen, the external conditions facing the Brazilian economy improved suddenly and drastically from 2004. Brazilian authorities were a bit slow in realizing this and beginning to take advantage of the considerable policy space that was opened by these changes for growth – even in countries where the governments were not prepared to discipline the free movement of short-run capital flows and wanted to keep the standard macroeconomic policy tripod of inflation targeting, floating exchange and large primary fiscal surpluses untouched. But in the end pragmatism prevailed and, after 2006, the economy was allowed to move to a faster growth trend.

The maintenance of this faster growth trend in the context of a fast deterioration of the current account will require a highly pragmatic and selectively interventionist policy stance. The return in the recent Brazilian debate of the policy proposal of drastic fiscal contraction originally made in 2005, and whose ultimate abandonment finally allowed Brazil to resume growth after 2006, is certainly not a good omen.

---

33 A general tax on all exports and equal subsidy on all imports would be equivalent to an exchange rate revaluation. The advantage of devaluing and then taxing or subsidizing a selective choice of specific basic products for which Brazil is a price-taker in international markets is that one can then have the equivalent of multiple exchange rates. This would be a way of dealing with "Dutch Disease" without lowering real wages, which Bresser Pereira (2010) considers "artificially high" in spite of the sharp declining trend of the wage share in Brazil from the early 1990s to the mid-2000s. Administratively, such a scheme could perhaps be managed by the Brazilian sovereign fund so that the quick changes in revenues and expenditures of these operations would not interfere with normal public budget deliberation.

References

Amico, F. and A. Fiorito. (2010). "Exchange Rate Policy, Distributive Conflict and Structural Heterogeneity: The Argentinean and Brazilian Cases." Sraffa Conference. Available at: http://host.uniroma3.it/eventi/sraffaconference2010/html/papers_submission_01.html

Araujo,V. and D. Gentil. (2010). "Avanços, recuos, acertos e erros: uma análise da resposta da política econômica brasileira à crise financeira internacional." XV Encontro Nacional de Economia Política, São Luis do Maranhão.

Banco Central do Brasil. Accessible at: www.bcb.gov.br

Barbosa-Filho, N. H. (2005). "Estimating potential output: an analysis of the alternative methods and their applications to Brazil." Rio de Janeiro: Ipea, (Textos para Discussão).

Barbosa-Filho, N. H. (2007). "Inflation targeting in Brazil: 1999-2006." Available at www.networkideas.org

Barbosa-Filho, N. H. and J.A.P. Souza. (2010). "A inflexão do governo Lula: política econômica, crescimento e distribuição de renda." In: Sader, Emir. and M.A. Garcia.. *Brasil: entre o Passado e o Futuro*. São Paulo, Boitempo.

Bastos, C. and J. Braga. (2010). "Conflito Distributivo e Inflação no Brasil: uma aplicação ao período recente." Anais do XV Encontro Nacional de Economia, São Luis do Maranhão.

Braga, J. O. (2010). "Atual regime de política econômica favorece o desenvolvimento?" Brasília, DF: CEPAL. Escritório no Brasil/IPEA. (Textos para Discussão CEPAL-IPEA, 16).

Bresser-Pereira, L. (2010). *Globalization and Competition Cambridge*. Cambridge: Cambridge University Press.

Carneiro, R. (2010). "Desenvolvimento brasileiro pós-crise financeira: oportunidades e riscos." Text prepared for 7th Economic Forum of FGV-SP. Available at: http://www.iececon.net/foco.htm

Dib, D. (2010). "Onde vivem as intervenções , Macro Visão– terça-feira." June 20, itau-unibanco.

Frenkel, Roberto. (2010). "Lecciones de política macroeconómica para el desarrollo, a la luz de la experiencia de la última década." CEDES, November.

Freitas, F. and E. Dweck. (2010). "Patterns of Economic Growth in the Brazilian Economy 1970-2007: demand led growth under balance payments constraints." Sraffa Conference.

Inhudes, Ardriana and Gilberto Borça Jr. (2010). "Mercado doméstico impulsiona a retomada do investimento." *Visão do Desenvolvimento* nº 78, 24 February. Available at: http://www.bndes.gov.br/SiteBNDES/bndes/bndes_pt/Institucional/Publicacoes/Consulta_Expressa/Setor/Investimentos/201002_78.html

Instituto Brasileiro de Geografía e Estatística (IBGE). Avaiable at: http://www.ibge.gov.br/english/

Ipeadata. Available at: http://www.ipeadata.gov.br/

Martinez, T. and V. Cerqueira. (2010). "Estrutura da inflação brasileira: determinantes e desagregação do IPCA." *Seminários DIMAC*, n. 363, IPEA, October.

Prates, D. (2010). "O regime cambial brasileiro de 1999 a 2008." Brasília, DF: CEPAL. Escritório no Brasil/IPEA. (Textos para Discussão CEPAL-IPEA, 12).

Rodrigues, R. and C. Bastos. "Análise Recente das Finanças Públicas e Política Fiscal no Brasil." Third Encounter of the Brazilian Keynesian Association (*III Encontro da Associação Keynesiana Brasileira*).

Serrano, Frankilin. And C. Medeiros. (2006). "Capital flows to emerging markets: a critical view based on the brazilian experience." In: Matias Vernengo, *Monetary Integration and Dollarization: No Panacea*. Edward Elgar Publishing.

Serrano, Franklin and S. Ferreira. (2010). "Commodities, câmbio e inflação de custos no Brasil: 1994-2009." *Versus acadêmica*, v.4. Available at: http://www.scielo.br/scielo.php?pid=S0101-31572010000100004&script=sci_arttext

Serrano, Franklin. (2007). "Histéresis, dinâmica inflacionaria y el supermultiplicador sraffiano." Seminarios Sraffianos, Universidad Nacional de Lujan-Grupo Luján. Colección Teoría Económica, Ediciones Cooperativas. Available at: http://www.elgermen.com.ar/wordpress/wp-content/uploads/Serrano-F-Hist%C3%A9resis-Din%C3%A1mica-Inflacionaria-y-el-Supermultiplicador-Sraffiano.pdf

Serrano, Franklin. (2008). "A economia americana, o padrão dólar flexível e a expansão mundial nos anos 2000," In Fiori, J.L., Medeiros, C. and Franklin Serrano. *O mito do colapso do poder americano*, Editora Record.

Serrano, Franklin. (2010). "Taxa de juros, taxa de câmbio e o sistema de metas de inflação no Brasil." Revista de Economia Política, v. 30, p. 1.

SOBEET. (2010). Boletim Sobeet, Year VIII - Nº 73, 3 November.

Summa, Ricardo. "Um modelo alternativo ao Novo Consenso para Economia Aberta." Doctoral Thesis, mimeo, IE-UFRJ 2010ª

Summa, Ricardo. (2010b). "Uma avaliação critica das estimativas da curva de Phillips no Brasil." In 15th National Encounter of Political Economy (XV Encontro Nacional de Economia Política), São Luis do Maranhão.

Summa, Ricardo and G. Lucas. (2010). "Estimativa do produto potencial para a economia brasileira: algumas observações críticas." *Versus acadêmica,* v. 5.

Summa, Ricardo and L. Macrini. (2011). "Estimando a curva de Phillips brasileira no período do sistema de metas de inflação por redes neurais." Mimeo, UFRRJ.