The Political Economy of the Brazilian 1994 Stabilization: the role of the exchange rate regime

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I wish to start by thanking the University of Stanford Center for Research and Development on Policy Reform for the opportunity of being here as a visiting scholar and especially Professor Anna Krueger whose teachings on the workings of markets and on market oriented reforms have been important for several generations of Brazilian economists, some of them now in the position of effectively conducting these reforms thus vindicating ideas that have been maturing for quite some time.

The subject of this lecture is the very rich and mixed record of policy reform in Brazil, which has everything to do with themes and ideas discussed by Professor Krueger over the years. There has been indeed a considerable delay before Brazil entered into true reform, which happened during the few years following the Real Plan in 1994. One peculiar aspect of this reform experience of these last few years was the key role played by the Central Bank; this is by no means common in reform experiences.

Central banks are usually conservative institutions, agents of the *status quo*, only displaying courage, and less often creativity, when fighting against inflation. Yet, as in the Brazilian case inflation turned out to become the key expression of fundamental economic dislocations plaguing economic development, it followed that the stabilization program was placed at the forefront of the reform effort; it was the *sine qua non* for every other initiative on any other field.

One step back is necessary to understand why inflation had become so important an obstacle to economic development in Brazil; especially if we remember the theories of how inflation could *help* development or at least to serve as an inevitable by-product to growth.

1. The Brazilian hyperinflation

Brazil was living a hyperinflation in the early 1990s, a pathology that has been seen no more than a dozen times in History, and always in the presence of revolutions, civil wars, and the like. Hyperinflation had always been a creature of chaos, and Brazil is perhaps a rare case of a hyperinflation in peacetime, and with no connection to natural disasters or anything along these lines.

In a his classic 1956 study on hyperinflations, Philip Cagan used a 50 percent monthly rate of inflation as a threshold to define hyperinflation, and his number became a standard for all cases registered after 1956. Looking at Brazil in the last years, it is rare to see, however, the 50 percent rate, though few observers would hesitate to apply the hyperinflation concept to what Brazil has been through in the last few years before 1994. It would seem that the number was less important than the virulence, or the nature of the process. Indeed, many Brazilian economists challenged the idea of a simple *ad hoc* 50% monthly rate threshold to define hyperinflations and sought broader definitions. Cagan himself, in his hyperinflation entry in the new edition of the Palgrave Dictionary wisely replaced the 50% threshold by a more qualitative “extremely rapid” designation. Others simply proposed different numbers. Michael Bruno, for instance, once chief economist at the World Bank and Governor of the Israeli Central Bank, argued that 30 percent was a more meaningful figure for the simple reason that this level is more or less the moment in an inflationary process when people stop looking at the annual inflation rates and start working with the monthly inflation rate. This is a “discontinuity” that goes beyond a mere change in “units of measurement” as it affect velocity of response, i. e. the intensity of indexation, so that it may well characterize the onset of the hyperinflation process. Indeed, according to this criterion, Brazil had *seven years of continuous hyperinflation before July 1994 when the Real Plan started*.

During these seven years, there were several attempts to fight inflation. Most of them with price freezes that did not work because, as widely agreed today, they did not address what has been described as “the fundamental sources of inflation”. The exact definition of these “fundamental sources” was less clear. They seemed larger and more complex than something to be solved simply by “stop printing money”, the usual superficial advice from occasional travelers to Brazil. Those more acquainted to the realities of the Brazilian democracy knew that the monetary authorities could not stop financing government. And the budget deficit seemed also something huge and difficult to address, given legal and even constitutional determinations but mostly in view of an apparent inconsistency between aspirations, i. e. spending, and possibilities opened by taxation Brazilian society was willing to withstand.

Another common interpretation of what these fundamentals should be had to do with the consensus view that the development model in Brazil had been exhausted at some point in the mid-’80s. The import substitution model that Brazil successfully employed for a long while was a regime based on a forced mobilization of resources commanded by the State, financed by inflation and firmly based on protectionism. This model was successful for many years. In terms of economic growth, Brazil was second only to Japan in the 100 years before 1982; this was not a bad record for a model that sounds like heresy today.

But the interesting feature of the decay of import substitution was that acceleration of inflation was the way through which the model was gradually loosing its magic. This could be seen on at least two instances. The first was on the fiscal situation directly. When Brazil became a democracy in the mid 1980s, the social demands on government for more spending on social concerns grew very large as if to offset the long years in which military governments left social issues at a secondary place. The problem was, however, that it was impossible to meet these demands and at the same time sustain the levels of spending necessary to keep the state as the center of the investment process in Brazil as it always had been. It would take a tax burden of 50 percent of GDP or more to allow the State to remain a “Development Oriented State” and also become a “Welfare Sate”. In practical terms there was simply too much pressure on the spending side of the economy, and inflation accelerated continuously as society would not deliver the taxes necessary for the State to meet its new obligations. The alternative was to obtain these additional resources through the old formula: inflation.

Yet, the effectiveness of the inflation tax was decreasing as indexation mechanisms were perfected and offered better conditions for people to defend their incomes and wealth from inflation, also as a consequence of Democracy, while the need of more revenue was becoming more and more urgent.

On the other hand, taxing the poor through inflation for so many years had made Brazil a country full of tensions and conflicts associated with inequality. Inflation had always been instrumental to frustrate aspirations to greater wage earnings. The struggle for nominal wage increases *and* for some additional indexation protection was continuous. Some progress was always accomplished but sadly, inflation could always accelerate one notch to erode real wage gains and to debase the newly built indexation protection.

But in addition to the public finances urge in keeping public expenditure high, which maintained the necessity to rely on the collection of the inflation tax, inflation also found a friendly environment to grow within the protectionist policies typical of the imports substitution approach to economic development. In fact, evidence shows that, over time and controlling for cyclical influences, protection led to the stagnation of the rate of productivity growth. In this connection, the deterioration of competitiveness became more serious through the 1980s, as productivity growth declined markedly. It was clear then that Brazil needed a more and more undervalued currency to offset the lack of *real* competitiveness coming from the inability to produce more goods from the same quantity of factors devoted to production. Subsidies and currency undervaluation seemed the only means to produce some competitiveness in a context of an economy in which the struggle to survive the hyperinflation hurricane was the only concern thus rendering secondary efficiency and productivity concerns.

Even though inflation was fueled both by public finance motives and the need to undervalue the currency to secure some competitiveness, it did not display an explosive behavior, as one could see in Germany in the summer of 1923, or in 1946 Hungary, for instance. Explosive inflations are, in fact, exceptions rather than the rule. In most hyperinflation cases inflation rates exhibited more or less the same pattern: a trend to crawl upwards and a significant sensitivity towards shocks. Brazil was no different.

As things were getting worse, and plan after plan failed to stop the process, the country was both politically and conceptually paralyzed thinking about how to come out of this situation. In fact, decision paralysis had been always a key element in other hyperinflations. Political systems often lacked the means to forge consensus or to engineer emergency solutions, especially under democratic regimes subject to some political fragmentation.

But an interesting and alternative way to summarize the ways Brazil was paralyzed by this situation is to propose the questions that Brazilians were unable to answer at that point.

The first one was that stabilization was scarcely ever presented as an issue on its own right – except in the very last few years prior to the Real Plan – but as an instrument to resume economic development. Thus the question was how could it be possible to restore growth if the recommended course of policy was to cut public investment spending, or to balance the budget, something going all the way against the Keynesian wisdom, or at least its local interpretations, learned during this high development decades. It was counter-intuitive. People would not consider a sensible course of action to propose spending cuts as a way to economic growth. If budget balancing was only to accomplish stabilization, then it would only bring recession and it would be no solution. There were just too many years during which "orthodox" wisdom was rejected, especially at the political realm, as a way to improve the trade-off between inflation and growth.

The second issue was that, through the years and especially after the consolidation of democracy, it became imperative to improve income distribution and real wages, but this endeavor had too often been presented as inconsistent with growth and competitiveness. It was typical of the military years to hear that Brazil needed to "grow first, distribute later"; it was no longer acceptable in the late 1980s. But in practical terms, how exactly economic policy could improve the trade off between growth (competitiveness) and distribution? Can there be a better income distribution under policies to increase competitiveness?

These were the two questions to address when we started working in May 1993. Inflation was 35 percent a month, and there was great concern with the possibility of yet another stabilization plan like the others, whose consequences seemed worse than the disease they were trying to fight. Chances did not seem particularly good at that point. The President of the Republic was Mr. Itamar Franco, as we speak, governor of the state of Minas Gerais and now a major opposition leader. He was the Vice President elected in the same ticket as Fernando Collor de Mello, who was impeached in 1992. It is true that one could hardly think of two characters more different from each other. Itamar Franco is a representative example of an old parochially minded populist politician that tends to be successful only on a regional scale and hardly gains much national notoriety. It was really an accident that he was chosen Vice President in the Collor ticket; he had no sympathy to Collor's modernization ideas and could only offer his popularity in Minas Gerais as a boost to their campaign. A second "accident", Collor's impeachment, made him President.

Itamar Franco started his administration in a very unsettling way: three finance ministers in less than one year, with every economic indicator getting worse. When Fernando Henrique Cardoso was named Itamar Franco's fourth finance minister, everything seemed to point towards repeating the end of the José Sarney presidency in 1989, the last month of which (March 1990) saw the record high inflation rate in Brazil ever: 85 percent in one single month. Yet, an unusual set of circumstances turned out to open a window of opportunity for a successful stabilization. Itarmar Franco did not seem much interested in economic policy in general, and on hyperinflation in particular, and Congress was immobilized by the hearings on yet another budget scandal. Meanwhile, Cardoso assembled a small group of experienced economists with a very clear view on what should be done to accomplish a successful stabilization and a realistic perception on how difficult it was.

2. Building stabilization in adverse conditions

We envisaged the stabilization program composed of five key elements. First, we had an incredibly important opportunity in the fact that, at that time, the Constitutional Revision was open, and we could pass constitutional amendments with one single majority vote in Congress. Indications were, however, that the Constitutional Revision would terminate very soon, so that we could propose probably no more than one amendment, just one, that could give us a good jump start in the stabilization program in the field of fiscal policy. We designed an amendment focusing on the execution of the budget. The mechanism built would allow us to do what the IMF calls *fiscal repression*, or to increase our ability *not* to execute the budget and to control spending at the National Treasury, thus disregarding the existence of a budget allocation. The key to the mechanism was the weakening the earmarking of revenues in Brazil. By succeeding with that, we could recover the ability to do fiscal policy, though in a very precarious way. In the future we should be able to replace these mechanisms by more permanent methods or to rebuild fiscal balance or safer grounds, but at that moment, it was enough.

The second element was the monetary reform. Given its technical complexities, I will not get into detail here. It was in many ways similar to the German 1923 *Rentenmark* and the 1922 Russian *Chervonetz* episodes: it was a matter of replicating the experience of a "stable value currency" issued in a small scale during the hyperinflation process, and then turning this "second" currency the sole national currency. The Real Plan used the same concept but in a sequence: first it created a "unit of account currency", or a "money of account", that would become a "full" currency after a while, when it was issued as a means of payment and defined as the national currency. During its first four months of existence, when the Real was only a "unit of account", it was called URV (*Unidade Real de Valor*). During this "preparatory" period, we allowed a voluntary, or a market-based transition or redenomination of all contracts and obligations into the new unit of account. This was a way to unify all indexation provisions in all contracts in such a way that, when the URV was issued as a "full" currency, and had its name changed to Real, all contracts would be deindexed.

As it turned out, this process of rewriting contracts and obligations in the new unit of account worked like a broad experiment on incomes policies, or a surrogate for a "social pact" in the sense that it provided for a broad "coordination" effort in setting nominal values and relative prices that, in other plans, was exactly the role played by the price freeze. For Brazilians this was the first time that a stabilization plan was offered as a "public good" to the provision of which you could either join or not on a voluntary basis, on the basis of your own self-interest or your own self-perceived benefits from migrating away from hyperinflation adopting a superior currency.

The process of adoption of the new "unit of account", the URV, was surprisingly smooth. As most contracts, prices and nominal expressions of value were denominated in URVs, the next step was, as mentioned, to "issue" URVs as a "full" currency, that is, a currency that was "unit of account" as the URV had become, and also "means of payment". On July 1st. 1994 the process was completed and the newly issued currency, as prescribed in the Monetary Reform Act originally issued in February, had its name changed to Real. The stabilization plan was then given a full name: *Plano Real.*

In the very moment the monetary reform has completed its mission, the third and forth elements in the plan should come into play: tight money and flexible exchange rates. This policy mix was seen only in the very beginning of the first Collor Plan in 1990; no other stabilization plan before has explicitly planned to launch monetary and exchange rate "anchors", possibly in view of the absence of the enabling fundamentals. This time there was no hesitation and, as a result, the carefully constructed and newly issued currency experienced a nominal appreciation with respect to the dollar. It was the first time ever that, within a regime of floating exchange rates the national currency strengthened with respect to the dollar.

Finally, the fifth element was another surprise: instead of price controls the opposite behavior, deregulation – even the demobilization of the price control agency – and a massive attack on trade barriers—tariffs and administrative measures. The idea was to produce a "cultural shock" simultaneous to the Real Plan: changes in the market structure in order to convince market participants to engage in new conducts, especially as regards price fixing. The new reality was that Brazil was set to become a market oriented and open economy, a gigantic breakthrough if carried to its ultimate consequences.

The threat of imports was not really effective on the short term, as the lack of distribution channels would preclude a rapid response in any one market in which local oligopolies were "abusing" consumers. Yet, local oligopolies knew that if imports were to reach their markets there would be no way back. Price fixing rings were rapidly destroyed, and this was seen as a true revolution. But the crucial element turning the imports threat a serious one was the exchange rate appreciation. We knew that it work just like a generalized tariff reduction, though with the attractive feature of by-passing what would be a myriad of sector by sector negotiations bound to take forever. To summarize, as regards trade liberalization and its role to stabilization, we definitively adopted a "big bang" strategy.

We knew from past experience that stabilization would take true reform and that the most dangerous enemy of true reform was the appeal of gradualism. It always sounds wise to propose big changes in a slow and carefully planned fashion. But that was exactly how other reform attempts failed; if it takes long for reforms to make themselves felt, it is like there is little credibility as to their going ahead. It follows that to maximize credibility you must be able to deliver true reform without the usual lip service paid to gradualism and prudence. Rewards, in the form of enhanced credibility, are on strong views on how to go about reforms and delivering it with no second thoughts.

Another major enemy of stabilization, and one that was especially dangerous in the plan's early phases, was complacency. We had to find ways to prevent politicians to declare victory on inflation too soon; if they were allowed to do it and earn the political dividends out of that, no further effort would be put into the unpopular measures necessary to make stabilization sustainable. The economists knew from past plans that the moment the technocrats were most powerful was the day before stabilization was launched. Right next, when the results are visible to the public and press conferences are held every hour, economists lose control of the process. They then start to be commended by politicians, who forget promises made on the measures to sustain stabilization. We knew we had to innovate in building a plan to be seen as successful by the public but, on the other hand, would be regarded as precarious in the eyes of the politicians. In these circumstances, politicians would feel constantly forced to deliver the reforms that would make stabilization sustainable.

In this connection, the stabilization plan was presented, from its very beginning, as an ambitious initiative towards structural reform, namely, a plan that could only survive if a number of fundamental changes were engineered, so that stabilization could not be separated from reforms. This would keep politicians busy for a long while before they could take stabilization for granted.

We knew, on the other hand, that there were several technical questions on how to combine stabilization, for instance, with trade liberalization. From our point of view, it was easy to see that both inflation and protection were like two halves of the same process of "privatization of the state", a regulatory expression of which being the private appropriation of regulation and the misconduct of trade and industrial policy. In the realm of fiscal policy, the private appropriation of public policies through the budget was leading to uncontrolled budget deficits and inflation. It follows that inflation and rent-seeking regulation could not be seen as two expressions of the same disease. We had to advance simultaneously on these two issues.

We knew from theory, however, and surely from professor Krueger's old writings, that, in normal conditions, you should offset trade liberalization with a devaluation in order to keep external balance. Yet, we were at an advantage in this regard because we started from a very atypical situation: an undervalued currency and a current account surplus, conditions typical of a hyperinflation but not to be maintained in a healthy emerging economy. During hyperinflations, the typical balance of payments configuration was of a current account surplus in order to "transfer out "capital flights these being the driving force of inflation itself. Under these conditions, it made a lot of sense to assume that we had to appreciate the currency on macroeconomic grounds, as capital flights would most likely revert direction; and it made sense also microeconomic grounds because again, if we had to undertake trade liberalization sector by sector, dealing individually with each sub-chapter of the tariff schedule and each particular variety of non-tariff barriers, it would be just impossible to advance much. We knew that the bureaucracy is never in line with the reform process. Quite to the contrary, we should never expect the foreign trade bureaucrats – and we had plenty - to help advancing a project designed to extinguish their jobs.

Import liberalization, combined with tight money, fiscal policy under control, and a stronger currency, provided a powerful combination to help stabilization. In fact, it worked so well, so quickly, that Minister Cardoso decided to run for president. The first numbers he got in the polls were not good, two percent at most, but within 60 days after July 1st, he was in the position to win in the first round, that is, with more than 50% of valid ballots.

The extraordinary success of the stabilization program for the man in the street, or for the silent majority, was a surprise to many people that fail to grasp the extent to which the inflation tax was a cruel process affecting the poor in Brazil. Yet, the fact was that exchange rate policies were the center of the stabilization success, which produced Cardoso's political victory, resulted in the politicization of exchange rate policies, a problem that we had to deal with over time. The election of Cardoso in the first round obviously had to do with the impact of stabilization. How to measure such impact? Well, consider, for example, the size of the "inflation tax rebate" produced by stabilization, which we can estimate by seigniorage revenues foregone: it was something like three percent of GDP and affected very specifically the poor, the ones that did not have access to banks and indexed instruments to protect their incomes and wealth. According to PNAD (The National Household Panel Research conducted by IBGE, The National Institute of Geography and Statistics), about seven million people were lifted above the poverty line because of stabilization; seven million that, by and large, voted for stabilization.

3. The record of reforms during the first Cardoso Administration (1994-98)

It is very important to observe that, as a result of the Real Plan and Cardoso's success, a semi-outsider from the political establishment was elected President, and with terms of reference that seemed very clear: to defend the currency and to do whatever was necessary to preserve stabilization. So Cardoso was obliged to define his program, so to speak, *the other way around*: to give economists the main voice on what was to be done, what fundamentals had to be attacked, what reforms were necessary to make stabilization work. It follows that, in view of the "message" given by the election results, the economists succeeded in our original endeavor of setting the agenda for the post-stabilization period in order to secure its sustainability.

The record of reforms during the first Cardoso administration was no less than remarkable. First of all, of course, inflation was won: it went from 40 percent per month on average for the first semester of 1993—that makes 5,500 percent annual inflation rate—to international levels in 1998. That is, two percent per year on the CPI, wholesale price increases being slightly negative. Given the fact that high inflation had been an important feature of the Brazilian economy for several decades, and for the seven years prior to the Real Plan Brazil was under hyperinflation, one should underestimate the extent to which stabilization would affect every aspect of economic life.

Second, privatization was re-launched very aggressively. Privatization revenues reached $88 billion at the end of 1999. This is approximately twice as much as Lady Thatcher's program, the largest to date, so ours became the largest privatization program ever, and it is by no means complete. We sold several petrochemicals and steel companies, we sold telecommunications entirely, in several licenses and "baby companies" spun-off from Telebrás; almost all electricity distribution companies, concessions for exploitation of gas, oil, ports, highways and public transportation, and also several banks. Only now we will be entering electricity generation, which is very large, and into sectors like water and sewage, in which companies belong to states and municipalities.

The third big accomplishment of the first four years is, as suggested above, trade liberalization. Measured by import penetration ratios, openness in Brazilian manufacturing increased to 19,3% in 1998 from 4,5% in 1989, which was near autarky. Still, there is some way to go: import penetration rates in manufacturing for a country like the USA, also of continental dimensions, are over 30 percent. Export propensities have risen from 8.8 percent to 15 percent in the same period, so it is fair to say industry in Brazil has become much more integrated to the global economy than one could possibly conceive during the import substitution years.

A fourth major accomplishment was the return of foreign direct investment (FDI). In 1993, net FDI into Brazil was zero; a shame for a country that historically claimed something like five percent of world FDI, more or less the share of Brazil in world manufacturing value added. Macroeconomic instability was certainly to blame. So much that after the Real Plan we recovered the five percent share. In 1995, the Central Bank conducted a survey on approximately 6,500 foreign companies established in Brazil, foreign ownership defined as a voting share higher than 10% owned by nonresidents. The total book value of equity owned by nonresidents in these companies was of about $45 billion. This was the book value of the stock of FDI in Brazil during all its history. These 6,500 companies had assets of about $250 billion, sales of about $200 billion. They were responsible for 28 percent of income tax collection, 47 percent of exports. This was the universe of foreign companies in Brazil in 1995. In the four years that followed up to the first quarter of 2000, $100 billion in FDI entered into Brazil, twice as much as the stock we had in 1995 in less than five years! We are receiving $25 billion in FDI every year now, and no more than a third of these flows on average have been connected to privatization; therefore, Brazil is back into the map of globalization.

Reforms have changed Brazil's economy in many important ways. If we could choose one number to summarize the way it changed, one single number that tells the whole story, it would be productivity growth, that is, the extent to which society produces more goods with less resources. Labor productivity in industry, between 1991 and 1998, has been growing at 7.5 percent per year. Total factor productivity has been growing at 3.5 percent per year, thanks to trade liberalization, FDI and privatization. It is remarkable that productivity is growing so fast under very low rates of investment. In contrast to past experience, productivity is not growing out of technical progress that comes into imported capital good but as a result of reorganization of the working space, better management and better use of resources.

The association between trade liberalization and increased productivity offered a new angle through which one could perhaps answer the question that Brazilians could not answer in the '80s, namely how to produce competitiveness and a better income distribution at the same time. In fact, productivity growth is the only way to perform the miracle of increasing wages and decreasing prices at the same time. One hour of work in manufacturing in 1999 produced 68% more goods than in 1990. That, evidently, changes a lot the nature of the tensions and of the discussion on income distribution. It was seen as somewhat of a paradox that, after all, it was with the "neo-liberal" reforms that the key issue for the opposition – income distribution – was finally addressed in a meaningful way.

The bright side of reforms, as described above, had to do with the private sector, that reacted vigorously to the new environment; the dark side of it, however, was related to the public sector, within which reforms clearly lagged behind. The fiscal situation, to start with, was only partially addressed. Progress was very slow and fiscal numbers are very clear on that respect: the size of the public deficit on average for the years 1991-1993, while Brazil was under hyperinflation, was 30 percent of GDP. That corresponds to the public sector borrowing requirements (PSBR, as it is known), with no tricks and methodological adjustments, that is, exactly as it is measured in other countries. It is true that hyperinflation distorted that number very considerably, mostly in view of the effects of the spending produced by the indexation of the public debt. In 1994-1996, it was lowered to 16 percent by and large in view of the declining level of inflation. In 1997, when inflation impacts on PSBR had ceased to be important, it was 5.9 percent, which was the lowest point we got to date. Progress had been significant, but six percent was not yet a number consistent with price stability. Brazil needed an extra effort to go from 6 to 3 percent, a number under which public debt would cease to increase even under moderate rates of GDP growth and secure the sustainability of stabilization.

But while the PSBR was at 6 or more, the economy was in a typical crowding out situation: while the Central Bank refused to print money to finance the government budget deficit, the Treasury had to seek financing through debt at whatever rates markets would ask. That produced a pressure on interest rates, that precluded its falling below 19 percent during the years I was at the Central Bank. The lack of fiscal adjustment, therefore, meant that Brazil had to live with a rate of interest that was exceedingly high, which attracted too much foreign capital so that we had to fight that, avoiding exchange rate appreciation by buying reserves and sterilizing them, selling domestic debt, or imposing obstacles to capital inflows. The Central Bank position during these years was similar to the one faced by Federal Reserve under Paul Volker's position during the Reagan years. Expansionary fiscal policy under a monetary anchor results in a macroeconomic inconsistency reflected into high interest rates and a trend toward the appreciation of the currency. This was a textbook case of crowding out under flexible exchange rates and capital mobility that we fought back with sterilized intervention and selective constraints on capital mobility.

Another angle to see the crowding out problem and its impact on growth was the following: if the government had a deficit of 6 percent of GDP and invested very little, it dis-saved 6 percent of GDP. If you had "foreign savings" in the form of the current account deficit of 3 percent of GDP, and if the private sector saved 20 percent of GDP, which, by the way, was not bad, we could have investment rates of like 16 or 17 percent of GDP. These were not too good but it was an improvement over the '80s during which capital formation in Brazil was around 12 or 13 percent of GDP. If we could switch government dis-savings of 6 percent of GDP into like 2 percent savings, which should not be that difficult, combined with a 4 percent of GDP current account deficit, Brazil could have an investment rate of like 25 percent of GDP and grow 7 or 8 percent consistently.

According to the above reasoning, a reduction in government consumption could increase economic growth as we could *crowd in* private investment and increase investment rates. This reasoning was a very "neo-classical", or "anti-Keynesian", and it was very hard to fit into conventional economic policy wisdom, or into the Brazilian culture of an active role of the state to economic development. Fiscal adjustment, therefore, faced conceptual difficulties and, as a result, we faced a paradox: the defenders of the development oriented State, inasmuch as they made fiscal adjustment slower, the more they made the State be seen as an obstacle to economic growth. The policy mix was such as putting the "old guard" of development thinkers in Brazil into a defensive posture: past recipes seem now to be detrimental to growth, the world was turning upside down, or Keynesian-structuralist-inflationist policies had been carried way too far.

4. Reforms and political tensions

During these years of aggressive reforms, Brazil was very clearly divided: on the one hand, the groups favored by reforms, namely, those rescued from the poverty line by stabilization, middle classes in general, and on the corporate sector, the privatized companies, the new wave of FDI, the companies that adjusted to liberalization and made their ways toward better productivity, the new services companies spun off from adjusting manufacturing firms, labor intensive industries that moved to the Northeast in order to be competitive. All these groups formed a new pro-reform constituency that had to confront the old industrial establishment and the highly organized political support that these groups had built over time.

The center of the political organization of industry in Brazil is the so-called "S" system: entities known as SESI, SENAI, SEBRAE and SENAC, managed by regional industrial federations (such as FIESP from São Paulo, the most powerful of them) which, on their turn, form a National Confederation of Industry (CNI). These entities live out of earmarked tax revenues: approximately 2,5% of wage bills of all companies is directed to the "S" system. The four "S" entities mentioned above devote their resources mostly to small businesses and labor training; their operation form a vast a nationwide network of corporate unions that breeds a number of congress representatives at a local, state and federal level. This system, for obvious reasons, is the cornerstone of political representation of industry in several instances, as it constitutes highly efficient and decentralized system of industrial clientelism. Seen as group, there are, of course, regional cleavages and a variety of views on the reform process. By and large, however, it is fair to say that the "S" system is dominated by an ideology that has strong protectionist overtones, in addition to biases pro government's subsidized credit, and in favor of tri-partite regulatory councils. Industrial federations are, therefore, rich and influential, even though their economic strength is diminishing. They are certainly over-represented within the political establishment, at least as opposed to the segments that favor reforms, and their influence tends to be disproportional to their importance.

Visible tensions between constituencies for and against reforms have been surprisingly mild. Perhaps mostly because the "new Brazil" is taking care of their own business and not especially interested in public policy except and to the extent of which their businesses are affected. While the constituencies pro reforms are not especially well connected to political organizations and Congress, the opposite occurs to the "old Brazil". So while government would conduct policies to the "silent majorities" and with very high approval rates on polls, the impression one would gather in Brasilia was that there were only complaints against official policies. Interestingly, and unfortunately, the Central Bank was right at the center of this tension because of its refusal to print money to accommodate the budget deficit. The commitment to a strong currency, on the other hand, avoided what "the old Brazil" wanted -- an undervalued currency that would fulfill its historical role of sheltering widespread inefficiencies especially in manufacturing. So the Central Bank became the agency prompting the agenda towards budget balance and towards reform, for the simple reason it took its mission to defend the currency seriously enough. As it turned out, in the absence of cooperation from the Monetary Authorities to accommodate distributive conflicts, political tensions would build up and mostly targeting the external agent precluding the accommodation of interests through inflation, namely, the Central Bank.

Interestingly the most frequent questioning raised against the Central Bank during these years was not related to the exchange rate, but to the interest rate. This was the issue always raised with the President by interest groups, and it is fair to say that a substantial part of the complaints against exchange rates was motivated by the belief that a devaluation, or a float, would allow interest rates to be lower.

There were two theories on the why interest rates in Brazil were so high. Ours, as explained above, was based on public finances and on the existence of a crowding out situation. The other was that we had an overvalued currency and the policy to devalue gradually (by 8% per year) would result in a floor to domestic rates that was exactly 8% higher than otherwise, or the baseline of US rates plus country spread. It is easy to see that both these theories were correct, this meaning that we had two obstacles to the reduction of interest rates - one fiscal, another the exchange rate crawl – both adding to the US Treasury rate plus country spread norm. Yet, different political constituencies defended their preferred half of the same truth, and favored different approaches to the issue.

The Central Bank's position on the issue was that both problems should be addressed over time. The maintenance of the "crawling band" system, with a nearly pre-fixed devaluation of around 8% per year could be seen as a recognition that the exchange rate anchor, although essential to stabilization, had appreciated the currency too much. There were many discussions as to how much, and for how much longer the crawl should be maintained. By the time the January 1999 devaluation was allowed, the vast majority of opinions were that the Real was overvalued by a percentage between 8% and 15%. It followed that, by most accounts, the continuation of the on going crawl would eliminate overvaluation within a year or two at most. Meanwhile, the government's position was to argue that interest rates could be lowered quicker if reforms were passed, given their impact on the fiscal accounts and on the public debt. There seemed to be no question that this helped political efforts to vote reforms.

Those skeptical on the seriousness of the fiscal problem would assign little importance to the crowding out phenomenon and argue that a one-shot devaluation would rapidly remove the overvaluation overhang and allow an equally rapid reduction in interest rates. These were popular ideas among politicians and "heterodox" economists, because they would offer a reason why *not* to address the fiscal problem, and an *alternative* to the conventional or "orthodox" view espoused by the authorities. Economists in government would object to that arguing that even if the crawl has been suspended, the fiscal situation would preclude the reduction of interest rates. The rolling over of domestic debt plus the financing of a high PSBR would simply require a high remuneration to capture private savings to the extent necessary.

On paper, one could think of rapid solutions for both impediments to lower interest rates: a fiscal shock, bringing the PSBR number to something under 3% of GDP, accompanied by a currency devaluation (or a very fast crawl). But government efforts to address the fiscal problem in a "big bang" fashion failed to find political support in the years preceding the agreement with the IMF. Under a high budget deficit, very few economists could be found proposing a large one-shot devaluation.

In recognition of obstacles to fiscal adjustment, the Central Bank continued with the gradual devaluations always placing the fiscal issue at the forefront of the political agenda. Pressure was constant on the political authorities to move ahead with fiscal reforms: the faster politicians moved with fiscal balance, the quicker the easing in monetary policy. Simplistic as it may look, this was a powerful formula to mobilize society for reform to an extent difficult to conceive otherwise. This is surely one of the explanations why reforms moved so fast during the first four years of the Cardoso administration even though the President's party – PSDB – had only approximately 100 seats in a Parliament of more than 500 and constitutional amendments took 308 to be approved in four different sessions.

While the international situation was friendly, we succeeded with a policy mix creating tension between the Executive, and more precisely the Central Bank, and the Legislative on the issue of reforms. That required a certain degree of Central Bank independence without which political pressure would easily force changes in the Central Bank's resolve. The Brazilian Central Bank is not technically independent, this meaning that members of its board do not have a mandate. They can all be dismissed *ad* *nutum* by the President. Yet, Cardoso had accepted that the Brazilian Central Bank would work just *as if* it was independent, as a prelude and as demonstration of how it could work. The President agreed that legislation introducing Central Bank independence would eventually come, and indeed in 1997 the Executive submitted a bill to the Chamber of Deputies to initiate the process.

5. The Asian crisis tests the policy mix

In any event, stabilization was not yet fully consolidated in mid 1997, and the focus on the reform agenda was only natural given the dangers of an inflationary backlash and the promises of easy money in the future. But, when the Asian crisis struck, the exchange rate policy and the fiscal fragilities came to the forefront of the political debate. The opposition would like to take the Asian Crisis as the ultimate proof of the "artificial" nature of the Real Plan, and "denounced" an irresponsible increase in "external vulnerability" and also the exchange rate overvaluation. More dangerous and less obvious than that criticism was the fact that some groups within government purposed to use the crisis to interrupt the reform cycle in order to relief political tension, and secure support from the political establishment to the President's reelection.

The economic team, on the other hand, wanted to construct a textbook response to an external shock; we wanted to seize the Asian Crisis as an opportunity to advance with the reform agenda based on the argument that Brazil was vulnerable *because it was late with reforms* and that there was no reason to depart from the gradual devaluation of the Real. The purported response to the Asian crisis comprised, more visibly, the Central Bank's actions on key financial markets through which the crisis was being transmitted. Action was especially rough on foreign exchange markets – spot and derivatives – and on Brady bonds' markets. Contagion from a foreign financial crisis through these channels was not specially novel, but the form, at least when it comes to leveraging and the role of complex off balance sheet financial derivatives, was entirely new.

The basic Central Bank move in such circumstances was a hike in interest rates; again nothing new. Yet, at that time we told the President that one thing was the Central Bank fulfilling its constitutional role of defending the currency under tough pressure. Markets' perceptions was entirely different, however, when the fiscal issues everyone knew were key to Brazil were addressed with a sense of urgency yet unseen. Considering that Congress would support the effort, one could say that it was not only the Central Bank, but also the Nation that was defending itself from the crisis.

The thesis was a good enough to convince the President to implement what was considered a gigantic fiscal effort, involving 51 different measures (hence the denomination "Pacote 51") producing an estimated PSBR impact of about 2.5 percent of GDP by the time our deficit was 5.9. The package's full implementation *ceteris paribus* would bring Brazil to a 3.5 percent of GDP fiscal deficit, almost a European number. The declared intention was to abbreviate the adjustment process and move straight to a fiscal position to be reached only a couple of years ahead.

Market reaction to the fiscal measures was very positive, and rapidly it looked as if Brazil had won the war. We had lost $11 billion in reserves in the last four months of 1997, but we recovered $22 billion in the first four months of 1998. Already in the first quarter of 1998, the Central Bank was reducing interest rates and putting back the restrictions to short term capital inflows. The atmosphere was very good; the problem was, however, that the victory over the Asian Crisis was so flamboyant that it produced something we feared right from the beginning: fiscal complacency. This was even more serious in view of the fact that the fiscal package attacked the old anti-reform establishment very directly, or at least more than they were already prepared to withstand. Political tension increased very considerably; we were right at the beginning of an election year and the early polls did not look especially favorable.

In retrospect and with hindsight, it seems to me that the successful reaction to the Asian Crisis had an unexpected effect on the President: apparently the episode, or at least its "political reading", may have been instrumental in convincing him that risks of external crises were too high and that his second term should be different from the first. The latter, as argued, was devoted to the so-called new liberal reforms deemed necessary to allow the Central Bank to sustain the "anchors". The political establishment saw this political agenda as heavy, painful the placing the President always in a defensive position. The fact Cardoso had more than 60% approval rates, and was bound to be re-elected, was simply ignored. In the second term, so the theory goes, things should be different, development should be the priority, and the economy should no longer be the key element in setting the government's agenda. The President should, instead, actively pursue economic growth and social spending in his second term, but along "more conventional" lines, that is, with less emphasis on reforms and so-called "orthodox policies", consequently, with less political tension.

Late in the first quarter of 1998, as the presidential campaign started, we suspected that some substantial change in economy policy could be underway. The economic theses exhibited in the campaign had little to do with policies effectively being practiced. An outsider would easily conclude that government was in opposition to its own policies. It was awkward, and the only possible interpretation was that some change was planned. On the other hand, it was true that we have seen it before, in the previous election. This time again the President told his economists not to worry, that campaign rhetoric is always based on the same old clichés and when it was over we would put aside the propaganda material and keep on with the right policies. That turned out to be true in 1995, but not in 1999.

Indeed, we found concrete evidence for the theory that a change was coming on the fact that, despite the 2.5 percent of GDP fiscal effort, the fiscal deficit numbers were going the other way. Instead of the 3.5 percent of GDP deficit promised for mid 1998, we were moving towards 8 percent and, most importantly, the causes of this movement seemed unclear to us. We were very alarmed by the fact that the fiscal control mechanisms were so weak and that our vigilance could be by-passed so easily. Also, the negative evolution of the deficit indicated that the true decision instance on fiscal affairs was at the Presidential office and not with the Treasury.

But markets were in a moment of euphoria, while the Central Bank was reducing interest rates very aggressively, putting obstacles into capital inflows, in order to prevent excessive reserve accumulation. Indeed, reserves reached $74 billion in March, an incredible number, but from our standpoint the sensation was that we were in danger, as we were living a "free lunch"; the promises of fiscal adjustment of the "Pacote 51" were simply not being fulfilled. Markets, for a while barely noticed the problem, and when government openly admitted the "unexpectedly bad" fiscal results it was argued that after the reelection the new government would be in a position of strength and ready and willing to finish the job of balancing the fiscal situation. Some fiscal loosening was, after all, a bit natural in an election year. In view of the high probability of reelection and maintenance of the basic policy lines then followed, foremost among which the fight for fiscal equilibrium, markets did not react negatively to the disclosure of the bad fiscal numbers. This reaction gave us the sensation that we could possibly get away with it, and deal with the problem later. But the Russian Crisis changed everything.

6. The Russian Crisis and its consequences

The Russian crisis caught us indeed in this very awkward moment. The successful response to the Asian Crisis was based on a "fundamentalist" approach, which was expressed in a courageous fiscal package that, however, not only was enforced only partially, but also resulted in *much worse* fiscal numbers. What could possibly be the response to a new external shock that, as a matter of fact, was much more serious than the previous one?

The impact of the Russian moratorium on Brazil was much stronger than the one of the Asian events. The G-7's silent support to the Russian decision - that was engineered to be consistent to the IMF staff's fiscal projections for the Russian program - was rightly taken by international banks as a powerful indication that risks in emerging markets had increased very substantially. The popular notion that Russia would not be allowed to enter difficulties in view of its military might was bluntly trashed. The fact that the G-7 was concerned with "moral hazard", and had chosen the non-help to Russia to convey this message, was a perceived as a substantial and permanent change in the outlook for investments in emerging markets.

The global reassessment of risks in emerging markets financial instruments, and the loss of confidence in the Brazilian policy resolve, made the transmission of the Russian crisis to Brazil very quick and its impact very strong. This time it was impossible to repeat the strategy that we implemented during the Asian crisis because we failed to deliver the fiscal package which was the key part of the package. We did increase interest rates in September, 1998; it was three weeks before the presidential election, and even so, we lost $22 billion in reserves in September, the same $22 billion that we have gained in the first four months of the year. It was a rather impressive loss but we had prepared ourselves for turbulent times through the election: even after these huge losses, there were still more than $50 billion dollars left. The problem at this point, however, was not the level of reserves, but credibility to implement sustainable fiscal policies. All the attempts to launch new initiatives to improve the fiscal situation were received with considerable skepticism; there was nothing new to do in the fiscal domain except enforcing measures already taken and showing results.

In August we decided to seek help from the IMF. Different schools of thought within government agreed this was the best course of action. Those against existing policies thought that the Fund would necessarily require a radicalization of fiscal actions and of reforms that will tend to multiply tensions and weaken the "orthodox" within government. The latter sought the Fund in order to get enforcement of policies and reforms that government was not willing or capable to deliver. According to our view, it was not that we needed to borrow dollars to replenish international reserves; we needed to borrow credibility to implement sound fiscal policies. We had to find a way to convince markets that we were going to deliver fiscal balance. As a matter of fact, it was a shame that we had to enter into an international agreement in order to make us do something that we could have done on our own. On the other hand, when we started our conversations with the Fund, our points were very well received, mostly because the Clinton Administration seemed willing to innovate as regards emerging markets financial turbulence episodes: crisis prevention, or to contain contagion, were concepts that should materialize into the notion of a "preventive program", an important new feature of what was seen as the construction of a new international financial architecture. Many new ideas were thrown around at this point, and there was considerable willingness to experiment new approaches. For Brazil more specifically the idea was that the Fund would develop a new type of program with Brazil *with the purpose of preventing* a "negative event" – a major devaluation, or a moratorium - that would initiate a crisis. The notion of a "preventive program" was entirely new to the Fund; serious consideration was given to the creation of a new "facility" – "Contingent Reserve Facility" was the initial denomination – but the decision was to use the "Supplementary Reserve Facility" (SRF), that was created to accommodate the lending done during the Asian Crisis, in conjunction with the usual "Stand By Facility". The conventional denomination notwithstanding the program would call for new approaches, as discussed below.

Second, the Fund agreed with us that the program had to have a fiscal focus, and almost only a fiscal focus. In fact, the Fund felt comfortable that little else was to be changed in Brazil's program, especially our schedule of reforms, which was ambitious enough. The latter was seen as important not only to the Fund but to the 20 countries that matched the amounts put up by the Fund and created a credit facility under the BIS (Bank of International Settlements) parallel to the SRF part of the Fund's loan. Overall, $41,5 billion were offered to Brazil by the Fund and by the BIS facility.

It seemed clear to the Brazilian negotiators that we had a window of opportunity created by the fear of the impacts of the Russian moratorium and devaluation and its consequences not only to some Wall Street firms – as the LTCM episode later on would aptly demonstrate – but also to countries with a good track record on reforms, like Brazil and surely the other Latin American countries. No doubt, the decision on Russia had consequences that seemed much worse than previously anticipated. To the extent that the Fund and the G-7 saw that the decision on Russia hit "innocent by-standers" very hard, they felt compelled to help. Of course it was questionable that Brazil, or any other country, was totally "innocent", especially in view of the results of the "Pacote 51". But the argument that Brazil was hit exceedingly hard by the Russian Crisis and deserved some help was already well established when the Brazilian negotiators started to work.

On the domestic front, the President had the political insight that going to the Fund two weeks before the election was not much of a political problem, and he was right. The man in the streets was really not concerned with the Fund as such, since policies to be adopted under the Fund's guidance were seen as very much the same under way. Going to the Fund, in these circumstances, was seen as to secure the continuity of the existing policy stance and this was exactly what one could read from the results of the election. The old issue of sovereignty loss did not have much echo this time. The Brazilian authorities agreed with the program, which was approved by the Fund Board on December 2nd, 1998 and was bound to be approved by the Brazilian Senate two weeks later.

At this point, the sensation was that we had succeeded again in defending the currency against turbulence created by an external crisis. There was very little pressure on the exchange rate early in December: reserve losses were interrupted and in one very sensitive area – exchange rate derivates' markets – there was no build up of short positions against the Real. Yet, through December some bad news changed this landscape a bit. The direct impact of such news was not as serious as the doubts they introduced on the government's political resolve. Three events should be mentioned. Firstly, Itamar Franco, at this point elected governor of the state of Minas Gerais, declared a moratorium on its debts to the federal government. The financial impact was negligible in view of the federal government's ability to lay a first claim on federal tax revenues to be transferred to Minas Gerais. It was very clearly a political initiative that, for a while, appeared to seduce some other governors from the opposition camp. Secondly, the government had a bill on social security defeated in Congress; the direct fiscal impact was not very significant, especially if the same bill was approved within the first semester of 1999. And thirdly, the once powerful Federation of Industries of São Paulo sponsored a demonstration—a rare initiative for an industrial federation, always influential but at the background —against interest rates, focused against the Central Bank with a highly politicized pledge towards changing policies because existing ones were "detrimental to development".

At this point, my personal feeling was that the best response to events that had much more symbolic value that effective economic impact was to reassure the policy stance either by a strong presidential statement or by, for instance, an increase in interest rates, much more as a gesture than a device to interfere in financial arbitrage equations. The Central Bank had been reducing interest rates since the signing of the agreement with the Fund. In December the pace of the fall had been preset, and more or less simultaneous to the news mentioned above the Central Bank changed the trajectory to a more conservative one. There was some adverse political reaction to the move, which only served to highlight the fact that, if there were concrete political restrictions to monetary policy, the Central Bank would be deprived from its most important instruments. The crisis was nearly over but there were some question marks as to the political support to the continuation of the existing policy stance. It was curious that such doubts could subsist as we had just signed an agreement with the Fund in which the policy stance was only reinforced. While markets seemed relatively calm, despite the episodic impact of the bad news in December, there seemed to be some unusual action on political quarters. At the Central Bank the intention was to respond to the question marks remaining with a mild movement in interest rates in order to signal that no change was on the horizon and also that the Federation of Industries of São Paulo did not have control of the macroeconomic policies in Brazil.

But when I raised the issue with the Finance Minister, I felt that things had changed. Actually, at this point, it became clear to me that the President sympathized with the complaints on high interest rates and more specifically with the claims that foreign exchange policies had to be changed in order to allow interest rates to be lowered. It is quite debatable, to my point of view, whether the President was subject to strong political pressure to undertake a major policy change. It was true that São Paulo industrialists, some PSDB ministers and politicians wanted a change. But on the other hand, the President had just been reelected with a mandate to preserve the Real Plan and its basic lines. He had just signed an agreement, involving the IMF and also twenty countries within the BIS facility, in which the basic policy stance was to be maintained. Markets were under control, and the December news had their impacts exhausted by the end of the year. Very few agents in the marketplace believed that Brazil could surprise the whole world with something different from what was disclosed as the IMF program's content.

Meanwhile, within government, there were different views on the reasons why the President had been reelected, and on what he should do in his second term. Was it because he promised development in his campaign, following the advice of campaign professionals, or was it because it was implicit that he would defend the Real along the same lines he was doing the last four years, and avoid what the opposition was proposing, namely, a devaluation?

Apparently, everybody around the President, with the exception of the Central Bank Governor and the Finance Minister, believed that the President was elected because he promised development, jobs and lower interest rates. According to these views policies at the Central Bank had to be changed more or less in line with what was proposed by the opposition, that, let us emphasize, had just been defeated in the presidential elections. As these intentions were disclosed to me, I offered my resignation on the thirteenth day into the new administration. On that same morning, the new Central Bank governor – Dr, Francisco Lopes - introduced a new exchange rate policy, that he termed “the endogenous diagonal band”. It is the end of era of stability and successful reforms.

7. The devaluation and its consequences

The announcement of the new scheme had the worst possible repercussions, and reserves losses on that very day were huge. A true attack seemed to be gain strength for the next days as every certainty that existed on the policy directions, on reforms and on ideas appeared to be shaken. On the morning of the third day after the change (January 16th), the build up of positions against the Real seemed so large and confidence seemed so low, that the Central Bank was forced into floating the currency. The exchange rate exploded and there followed several weeks of absolute turmoil in all financial markets in Brazil with the most varied consequences. All of a sudden everything seemed to be falling apart. After five years of policy consistency, clear targets and concepts on how to proceed, policy was entering into unknown territory. At its worst, the Real devalued by astonishing 74 percent.

The scenario unfolding after January 13th was unthinkable for the Fund and for the authorities of the 20 countries that lent support to our program. No advanced notice of the change had been given, and no consultation was ever started. Who could possibly imagine that, three weeks after the first drawing under the program, Brazil would take the initiative that it promised it would not take in any circumstance? It was very difficult to explain it by reference to markets circumstances, even though some claims along these lines were attempted.

Even more difficult was to explain the change to the domestic public that 13 days into the new administration, the President decided to do exactly what he was *not elected for*, that is, he decided to do exactly what the opposition wanted to do and Brazilians refused to support. Naturally, the loss of popularity of the President and the government, with these two publics was nothing less that astonishing. To the domestic public it is relevant to note that the President went from being reelected in the first round, with a 60 percent approval rate in December, to a 60 percent rejection rate in less than two months. In the following months polls only got worse and to everybody's surprise, the second Cardoso administration, even before completing six months, was judged as bad as Sarney's and Collor's administrations in their worst moments. It was like the second administration was over, and there was still three and a half years to go.

Taking a political point of view of the episode, the devaluation was not a complete disaster: it was something between a partial disaster and a crude mistake. Why? First because the measure of "success" was the extent to which the forecasts pointing towards catastrophe were proved wrong; that is, "success" was only to avoid the meltdown. This is especially true when we consider the impacts of the devaluation on inflation. Everybody's first reaction to the devaluation was that it would bring hyperinflation back with full force. The first month following the devaluation showed a monthly inflation rate of 4.5 percent. People were scared, but then came the good surprise: contrary to historical experience and most people's expectations, inflation receded. In retrospect, we were all happy to see that Brazil had become a market economy to an extent most people did not realize, so that the devaluation did not reverberate in the old-fashioned way to inflation, through the indexation channel. In fact, we had broken the inflationary propagation mechanism, with deindexation, deregulation, and increased openness. Under these conditions, and also, and very importantly, with interest rates increased to 45%, and GDP growth forecast for the year of *minus* 3%, inflation was tamed.

The disaster was averted but not completely as some "repressed inflation", remained for a long while. Wholesale prices' inflation kept running at about 25 percent per year, while consumer prices remained at one-digit levels for the remainder of 1999. The discrepancy between wholesale and retail prices could be seen as a measure of relative prices tensions, which had a lot to do with the level of the exchange rate. When the latter went from 1.25 to 2.26 to the dollar, tensions were at their peek. Observers described the situation as one of "distributive tensions" or "inflation pregnancy". When the dollar came back to 1.60 around May, the tension was reduced, as real exchange rate levels were not that distant from the ones we had at the beginning, so the inflationary pressure was not seen to be that great.

But tensions started to climb again when fears related to Argentina, Venezuela, and Ecuador grew by mid year, and the exchange rate moved up to about 1.95, again raising wholesale prices' inflation and concerns that it would be transmitted to the retail, where inflation targets had been introduced. Meanwhile, interest rates had been falling quite rapidly, so much that in the month of October, right when retailers start their orders for Christmas, wholesalers felt pressured by the dollar while retailers seemed little constrained by demand. The perspective of an inflationary Christmas prompted the Central Bank to interrupt the reduction in interest rates, thus maintaining the 19% level. The impact on demand was significant, and also on the exchange rate, that moved back to the vicinity of 1,75. Wholesale prices' inflation shrunk rapidly and converged to retail prices' inflation in the second quarter of 2000, when the Central Bank started to reduce interest rates again.

Depending on the way real exchange rates are measured, different views on the results of the devaluation can be constructed. On the one extreme, using retail prices as deflators the real devaluation was larger than 30%, especially when measured with respect to the dollar. Using wholesale prices, the real devaluation remains between 18% with respect to the dollar and approximately 12% with respect to a basket of currencies.

On the other extreme, taking exporters' prices and wages as in an index of "profitability", as computed by FUNCEX (a think tank funded by exporters), the real devaluation with respect to December 1998 barely reached 8%. In the case of this latter index, and also when it comes to other concepts of real effective rates, the impact of the devaluation is considerably reduced not only by the Euro's devaluation but also by the loss in terms of trade and trade lines provoked by the devaluation.

The significant differences between these measures indicate violent swings in relative prices that beg the question of their distributive impact and political implications. Apparently the pass-through was very high to exporters' prices and wages, and the lowest between the exchange rate and the prices of non-tradable goods within the CPIs. Thus, except for workers in export activities, that appropriated part of the gains of the devaluation, other wages were quite severely hit by the devaluation. No wonder the devaluation was a major factor in worsening the President's approval rates.

In any event, with such a variety of numbers for the real exchange rate, indicating a high degree of heterogeneity on the effects of the devaluation, one should not nourish flamboyant expectations as regards the balance of trade. In fact, the trade balance moved to a deficit of $1.2 billion in 1999 from a deficit of about $6.5 billion in 1998. How to explain such a mediocre turnaround in the trade accounts after such a large devaluation?

Several important details come into play. First of all, terms of trade got worse and the loss in export revenues attributable to lower dollar prices was estimated at some $ 6 or $7 billion. Few people realized that, however, there was no accident on that; terms of trade reacted negatively to a devaluation as it was only normal that, following the devaluation, exporters felt compelled to give discounts to their clients. This seemed natural in manufacturing, where importers were not price-takers, but it also happened in commodities markets by force of expectations of supply increases in response to the devaluation.

Second, people underestimated the extent to which exports' import content had grown over the last few years by virtue of trade liberalization. This is one of the reasons why the net impact of the devaluation on the profitability of exports seemed smaller than anticipated. Third, there was an incredibly important loss of trade financing lines on the export side, while the opposite occurred on the import side. Thus while cheap financing lacked for exporters to enjoy favorable exchange rates, importers could partly offset their loss in competitiveness by extending more favorable financing terms to their clients. Four, the 1999 maxi-devaluation was the first ever that did not come together with a wave of administrative restrictions of imports; truly. It was the first time we could see the price elasticity of imports on a pure fashion. Observed import price elasticity seemed incredibly low and the explanation appeared connected to sunk costs. Import liberalization after so many years of semi-autarky allowed importers to increase import penetration very significantly and very fast. They have incurred significant costs in getting established in Brazil, so that they would not leave in the presence of a 20 or 25 percent loss in margins that might be seen as temporary. Importers held on, so that imports fell only 16 percent in 1999, while exports fell 8 percent. The result is that the improvement in the trade balance was small, and the current account deficit was also reduced very little, to $26 billion in 1999 from $33 billion in 1998. Given that dollar GDP has fallen, the current account deficit as a percentage of GDP barely changed, a dismal result after a devaluation so poorly engineered and causing so much confusion.

On the bright side, it was remarkable that FDI inflows did not weaken, so that the same $25 billion received in 1998, which covered 75 percent of the current account deficit, in 1999 could cover almost all the deficit. It may be that, passing the effects of the confuse transition to floating rates, and considering that trade financing returns to levels close to the ones prior to the maxi-devaluation, exports growth could react more vigorously. In the year 2000 indications are indeed that the export outlook is much better. Yet, given the strong growth in imports, forecast for the trade balance in 2000 are pointing towards a small deficit.

On the fiscal side, there is much less doubt that the impacts of the devaluation were devastating. The fact that the government had about 25% of GDP in dollar indexed domestic debt, plus external public debt of some additional 10% of GDP, made the fiscal costs of the devaluation very sizeable. Eleven percent of GDP was the instant addition to the total public debt, or about 100 billion reals, according to the revised Memorandum of Economic Policy signed with the Fund. As our trade balance improved by some $5 billion, it means that, for every such billion of improvement, there was an extra 20 billion reals in public debt. The comparison suggests a cost-benefit calculation that was brutally unfavorable.

8. Final thoughts

There is little question that the transition to the floating exchange rate regime that we have today was the worst possible, and that the devaluation worked poorly to a great extent because the transition was conducted in a very confused way. Yet, Brazilian authorities were capable of maintaining the agreement with the Fund, an "orthodox" orientation at the Central Bank and the commitment to reforms. This as become particularly transparent after Dr. Arminio Fraga replaced Dr. Francisco Lopes at the Central Bank. In fact, the "heterodox" attempt to seize control of economic policies has been as competent and well planned as the "endogenous diagonal band", and exactly for that reason it was a complete failure. In consequence, "heterodox" ministers and politicians lost influence over the President as quickly as the "diagonal band" proved a hoax. The exchange rate regime that we have today is not that different from the one we were moving to. It is a float within which the Central Bank preserves the ability to intervene directly and indirectly to prevent excessive volatility. It is a matter of judgment whether we have some undervaluation, as it would make little sense that, with the much stronger economy that we have now, the real exchange rate remains close to levels of the first semester of 1993, when Brazil was deep into hyperinflation. But external conditions deteriorated markedly after January 1999, capital markets have been badly hit by the successive crises in emerging markets. But in any event, the big casualty from the attempted adventure to change the policy mix in the second Cardoso administration was that the government lost its personality as it became neatly divided into the "orthodox" and the "heterodox" camps, each one taking care of their own business, avoiding confrontation but gathering steam for the presidential dispute in 2002. Presiding over this insurmountable division, government lost its ability to conduct reforms, which had the most adverse consequences over the medium run.

As a matter of exchange regimes, the Brazilian experience does not seem to support the now popular theory that emerging economies should have either a currency board or a pure float, as argued at some length elsewhere[1]. The Brazilian record is mixed at best, and the key lesson is that circumstances are king. A pure float was introduced in July 1994 when the Real Plan started, and the result was a marked appreciation of the currency from which complaints lasted for years. The new currency started at 97 cents to the dollar, and when it was 83 cents there was a very solid consensus that the Central Bank should intervene and prevent further appreciation. The Central Bank established a floor to the rates and started to buy reserves. Six months later came the Mexican crisis and then the demand was the other way around, namely, for the Central Bank to prevent a significant depreciation that could very easily destroy stabilization. Having accepted such imperatives, we found ourselves operating an European style target zones system *á la Mr. Jourdain*, Moliere's famous bourgeoisie, prompted by circumstances. Later, the Central Bank introduced a drift in the intervention points so that the regime earned the denomination of "crawling bands", though with a constant, but modest, enlargement on its fluctuation range. We were coming back to a float, but always with the idea that for an economy facing too many shocks, floating would always be a dangerous proposition. Brazil would tend to adopt a float, at we have today, with safeguards to be activated in case of need.

In light of the above, one should not be tempted to discuss the ideal exchange regime for Brazil in abstract circumstances. In fact, experience shows exactly that different regimes served different circumstances. At first, or during the first Cardoso administration, it was a matter of having the right regime while in the presence of: (i) an absolute priority given to terminating hyperinflation; (ii) a buoyant international atmosphere; and (iii) a large fiscal disequilibrium and the need to get reforms started.

The regime that best served the country under these very special circumstances may not be the one to live with forever. At that moment, "rigidities" helped building an "anchor" to prices and the external situation allowed Brazil to appreciate the currency without much consequence. Yet, if an unsustainable deficit was to remain indefinitely, the choice of exchange rate regime would be a matter of damage control, or only a choice among different ways of going wrong with the exchange rate. The definition of the regime had to consider what system best helped the efforts to address the fiscal problem and to initiate reforms, and as it turned out, a regime with "rigidities" helped a lot, as argued above, to frame congressional agendas towards reforms.

When circumstances changed, one had to be able to adapt the existing regime to new realities. In fact, the awareness that circumstances *could* change was key to avoid ideas towards the adoption of a currency board in 1993. A process of *flexibilization* of the regime, giving a drift to the "target zone" was a recognition that trade liberalization implied that *ceteris paribus* the current account would deteriorate and that some offsetting mechanism should be put in operation. The move towards a more flexible regime had been gradual, while stabilization was consolidating and external environment remained friendly after the Mexican crisis early in 1995 at least until de Asian Crisis in the end of 1997. But external conditions changed very fast after the Russian crisis.

In retrospect, it appears easy to see that, after the agreement with the IMF and the unfolding of the Russian Crisis, the three elements mentioned above to justify "rigidities" in the exchange rate regime were changed: (i) external instability seemed to be there for some time to come; (ii) the agreement with the Fund finally secured enforceability to fiscal balance thus placing Brazil on a sound fiscal situation for the first time since the beginning of the Real Plan; and (iii) with almost five years of the introduction of the new currency, stabilization appeared consolidated.

Under these new circumstances, it made much more sense to use the exchange rate to target the balance of payments, through a float, and let fiscal policy, whether or not adorned with "inflation targets", to serve as "anchor" to domestic prices. Doubts remained as to the velocity with which to make the move, or the extent to which stabilization would indeed resist a faster crawl or a sizeable devaluation. The movement towards a float would make a lot of sense, and was being done on a gradual way. If only government could resist the temptation to do it under pressure, and avoid being lured by transcending innovations such as the "endogenous diagonal band", the severe dislocations experienced in 1999 could have been avoided.

Yet, the new regime of floating (with indirect interventions using dollar indexed bonds), plus inflation targets, performed no magic as regards growth. It may be that the new regime delivers lower interest rates *under the existing circumstances*, but the lack of confidence on the government fiscal resolve acted as a deterrent to the reduction of interest rates and the advancement of capital formation. In these conditions, confidence on fiscal fundamentals and on the progress of reforms will be key. Therefore, we are back again to the issue of reforms. Growth has to do with removing obstacles to development with institutional change, so its possibilities depend crucially on the continuation of the modernization process conducted very aggressively in the first Cardoso administration. It is unfortunate, however, that the turmoil initiated by the "endogenous diagonal band" resulted in watering down the reform agenda to a state of near paralysis.

We have already spent the first half of this new administration, run by the first re-elected president in our history thanks to the very aggressive stance adopted towards reforms in the his first mandate. Very little was accomplished so far. The only bright side of that, is that the "heterodox" adventure failed very quickly, so much that it destroyed the illusion that there is a solution to the Brazilian growth problem away from advancing market oriented reforms. So there has been no progress in the second Cardoso administration but lots of lessons; we are much wiser now as a nation in knowing that there are no shortcuts in this business of economic development. There are two more years to go in the Cardoso Administration, but the window for progress is not very large; it spans from the day after the completion of the mayoral elections in October 2000 to mid 2001, when the country will most likely stop for the presidential succession. In light of current political conditions, there may be some more privatizations and a couple of other pieces of ordinary legislation approved, but hardly a brilliant reform performance compared to the first four years. The exchange rate regime lost its political importance.

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[1] See Gustavo H. B. Franco (2000) "The Real Plan and the Exchange Rate" Essays in International Finance n. 217, International Finance Section, Princeton University.