



The Illusion of Stability: The Brazilian Economy Under Cardoso

EDMUND AMANN
University of Oxford, UK

and

WERNER BAER *
University of Illinois, Urbana, USA

Summary. — This paper begins with a description of the main characteristics of Brazil’s *Real* stabilization program and its initial success in eliminating inflation. It then examines the use of the exchange rate to keep inflation in check and the problems which overvaluation created. It also focuses on the structural disequilibria it faced and the various artifices that were used to deal with them but which ultimately led to a set of contradictions that brought about its collapse. © 2000 Elsevier Science Ltd. All rights reserved.

Key words — banking, exchange rate, inflation, privatization, stabilization

1. INTRODUCTION

An endemic problem of Brazilian governance, with the exception of the initial years of the military regime, has been its inability to make explicit decisions about which social/economic group would bear the burden of financing government programs and/or fiscal stabilization. The traditional way out was through inflationary finance.¹ This method, however, became unfeasible once economic agents in the formal sector succeeded in being indexed against inflation, and the net result was an unsustainable hyperinflation. Another way out was through borrowing, both from abroad and from domestic sources. This became feasible with the introduction of the *Real Plan* (Plano Real). Its initial success brought the government enough credibility to try that route. This credibility, however, rested on the assumption among investors that fiscal adjustment would be achieved over a relatively short period. When the latter was not achieved, this second way out of the distribution dilemma became unfeasible and the *Real Plan* came to an end. This second exit route is the story which we shall deal with in this paper.

We begin by describing the *Real Plan*, how it was introduced and administered. We then

concentrate on the structural disequilibria that it faced and the various artifices that were used to deal with them but which ultimately led to a set of contradictions that brought about its collapse. We also examine the impact these events have had on the real side of the economy.

2. THE PLANO REAL

Since the re-democratization process began in 1985, with the civilian government taking over the presidency, there have been a number of unsuccessful attempts to control the inflationary process which had been under way since the 1970s.² All of them failed because they did not contain an element of strong fiscal adjustment, and ultimately government deficits were financed by the Central Bank leading to continued inflation which reached the four-digit level by 1994.

After going through a number of different finance ministers, President Itamar Franco

* We wish to thank Hadi Esfahani, Marcos Holanda, and an anonymous referee for many useful suggestions. Final revision accepted: 7 February 2000.

appointed Senator Fernando Henrique Cardoso as Finance Minister in May 1993. With the help of a number of talented economists, Cardoso embarked on a novel type of stabilization program. In June he presented an austerity plan, called the "immediate action plan". Its centrepiece was a US\$6 bn cut in government spending (amounting to 9% of federal spending and 2.5% of the spending at all levels of government). The plan also called for the tightening of tax collection and for resolving the financial relationships with state governments. The latter owed the federal government US\$36 bn in 1993 and were about US\$2 bn in arrears. Cardoso stated that the federal loan guarantees would be withheld from the states until these arrears were cleared and that state governments would be required to allocate 9% of their revenues to clear their debts with the federal government. A campaign was also begun in mid-1993 to fight tax evasion, which had grown directly over the previous decade. It was claimed that the government was losing between US\$40 and 60 bn a year due to evasion.

In December Cardoso proposed a new stabilization program that was supposed to avoid some of the weaknesses of the previous plans. In particular, one of the major weaknesses of the previous plans had been to end inflation suddenly through price freezes whose effects were only very transitory. Unlike the previous plans, the new program was at first presented as a "proposal" that was to be discussed in Congress and implemented gradually. The program had two basic thrusts: first, a fiscal adjustment; second, a new indexing system that would gradually lead to a new currency.³

The principal fiscal adjustment measures consisted of: (a) an across-the board tax increase of 5%; (b) a newly created Social Emergency Fund, which received 15% of all tax receipts and would help in making a fiscal adjustment on a temporary basis; (c) spending cuts on government investments, personnel and state companies of about US\$7 bn. As the Fund was only a temporary measure, the government announced long-term plans for constitutional amendments that would transfer to state governments and municipalities responsibilities in health, education, social services, housing, basic sanitation and irrigation. The amendments would also decrease the automatic transfer of federal tax receipts to state and local governments as contained in the 1988 constitution.

The new indexing system was introduced at the end of February 1994. It consisted of an indexor called the Unit of Real Value (Unidade Real de Valor – URV), which was tied to the US dollar on a one to one basis.⁴ According to the prevailing inflation, the URV's quotation in Cruzeiros Reais rose daily, accompanying the exchange rate. Official prices, contracts, and taxes were denominated in URV, and the government encouraged its use on a voluntary basis by private economic agents. Gradually, an increasing number of prices were stated in URVs although transaction occurred in Cruzeiros Reais.⁵

In the middle of 1994 the government decided to introduce a new currency whose unit was equal to the URV. This was done on 1 July with the introduction of the Real equal to one URV, or one US dollar, equal to 2750 old Cruzeiros Reais. At the time of the conversion of prices from the old currency into the Real there occurred a wave of price increases in many supermarkets and stores as many businesses took advantage of the initial confusion by the public about relative prices in the new currency. In addition, many executives also expected the introduction of a price freeze, which had been customary in previous stabilization attempts. The government refrained from any freezes, however, using its public relations network to suggest that the public to minimize its purchases of necessities. As the public was now in possession of a currency that it believed would retain its purchasing power, consumers were in a position to "bargain," that is, to wait and not pay for goods at the recently increased prices. In fact, very soon some prices began to decline, and the first results were felt by a decline in weekly inflation rates. Along with the introduction of the new currency, the government adopted a restrictive monetary policy. It consisted of a short-term limit on loans to finance exports, a 100% reserve requirement on new deposits, and a limit on the expansion of the monetary base of R\$9.5 bn until the end of March 1995.⁶ For the quarter to July–September 1994, the expansion had been limited to R\$7.5 bn. By August 1994, however, the government was forced to revise that number, admitting to an increase of R\$9 bn by September. This had some impact on inflationary expectations, although most of the overshooting of the planned expansion could be attributed to an increase in the demand for money.

The monetary authorities also kept interest rates high in order to control an overly strong increase in consumption and to discourage speculative stockpiling. As a complimentary measure to discourage large capital inflows which high interest rates might attract, the authorities fixed the sale price of the Real to be equal to one US dollar while they allowed the buying price of the Real to appreciate according to market forces. With the substantial capital inflows and continued trade surpluses, the *Real* indeed appreciated, reaching R\$0.85 to the US dollar in November 1994.

3. THE INITIAL IMPACT OF THE REAL

The initial results of the plan were positive. Inflation was brought down from a monthly rate of 50.7% in June 1994 to 0.96% in September; in October and November it was 3.54% and 3.01%, respectively and in December it was 2.37%. In 1995 its highest monthly rate was 5.15% in June and its lowest 1.50% in October. The cumulative price increase in 1994 was 1340% while in 1995 it was down to 46.18%.

The rate of growth of the economy, which was already substantial in the first two quarters prior to the introduction of the Real averaging 4.3% per year in the first half of 1994, and rose to a yearly average of 5.1% in the second half of 1994, 7.3% in March 1995, 7.8% in June 1995 and 6.5% in September 1995. The leading sector was industry whose annualized output growth in March 1995 was 9.2% and in June 9.7%, and industrial capacity utilization which was 80% in July 1994 and rose to 83% in October and 86% in April 1995. The rate of investment which had been low for over a decade picked up. For all of 1994 it amounted to 16.3% of GDP, dropping to 16% in March but then rising to 16.7% in June 1995 and 16.8% in September.⁷ From the second quarter of 1994 to the second quarter of 1995, consumption rose by 16.3%. Rising sales reflected mainly the purchasing power of lower income groups whose real incomes rose by the fact that their monthly losses from quasi hyperinflation had disappeared. In addition, as nominal salaries were also rising in the second half of 1994, real salaries were 18.9% higher in the first two months of 1995 than a year earlier.

The *Plano Real* also had a positive impact on the balance sheet of enterprises. For instance, a sample survey of 72 enterprises undertaken by the magazine *Exame*, found that these had a

profit of US\$5.5 bn in 1994, compared to only US\$867 m in the previous year; the rate of return on assets rose from 3.1% in 1993 to 9.8% in 1994.⁸

4. THE EXCHANGE RATE BECOMES THE KEY POLICY INSTRUMENT

With the initial and very limited fiscal adjustment completed, and the de-indexation of the economy at an end, policy makers became largely reliant on the use of a high exchange rate to maintain price stability. The high exchange rate as a means of controlling inflation depended explicitly on the increasingly open nature of the Brazilian economy. This opening had been initiated in the first months of the Collor administration. During 1990–94 average tariffs on imported products had declined from 32.2% to 14.2%.⁹ As import prices in local currency terms fell, price increases among domestic producers, by necessity, became increasingly moderate. While the operation of this mechanism proved effective in the short-term, in the longer term, if the restraint on inflation were to become permanent and sustainable, a more fundamental fiscal adjustment was required. But since such an adjustment required some basic and politically controversial constitutional changes,¹⁰ these could not be achieved in the short run. Hence, the emphasis on the exchange rate anchor was reinforced. As Table 1 indicates the maintenance of very high interest rates then became necessary both to attract large volumes of foreign capital to underpin exchange rate stability finance and in order to meet the large public sector deficit.

While the high exchange rate served to control inflationary forces, it also had the effect of bringing about a marked deterioration of the trade balance. The latter had been in surplus for over 10 years but from January 1995 onward, it swung into a deficit (see Table 2) which would last until the effective abandonment of the exchange rate anchor four years later (see Table 3). This deterioration arose from a combination of surging imports and a deceleration in export growth. In an attempt to contain the worryingly rapid expansion of the trade deficit, the government “temporarily” raised some of its tariffs, especially those applying to the automotive sector. The over-valued exchange rates did not serve to accelerate the growth of exports, which had been

Table 1. *Average monthly interest rates interest rates and exchange rates^a*

	TR interest rate ^b	Overnight rate	CDB prefixed 30-day interest rate	Exchange rate R\$ per US\$
1985		10.36		
1986		3.86		
1987		13.52	13.54	
1988		21.73	19.89	
1989		31.68	30.62	
1990		25.40	28.19	
1991		16.99	17.95	
1992	23.49	26.32	22.20	
1993	31.15	33.41	32.90	0.03
1994	23.37	25.22	25.34	0.64
1995	2.32	3.61	3.19	0.92
1996 ^c	0.87	1.80	1.52	1.12
1997 ^c	1.31	2.97	2.62	1.20
1998 ^c	0.74	2.40	2.01	1.26
1999 ^d	0.3	1.38	1.37	1.95

^a *Source*: Conjuntura Economica, Banco Central do Brasil, Bolifin, various issues.

^b Taxa Referencial Interest Rate.

^c Rates in December.

^d Rates in October.

Table 2. *Balance of payments items, 1985–98 (billions US\$)^a*

	Exports	Imports	Trade balance	Service balance	Profit remittances	Interest	Current account balance
1985	25.6	13.1	12.5	-12.9	-1.1	-9.7	-0.2
1986	22.3	14.0	8.3	-13.7	-1.4	-9.3	-5.3
1987	26.2	15.0	11.2	-12.7	-0.9	-8.8	-1.4
1988	33.8	14.6	19.2	-15.1	-1.5	-9.8	4.2
1989	34.3	18.3	16.0	-15.3	-2.4	-9.6	1.0
1990	31.4	20.7	10.7	-15.4	-1.4	-9.7	-3.8
1991	31.6	21.0	10.6	-13.5	-0.7	-8.6	-1.4
1992	35.8	20.5	15.3	-11.3	-0.6	-7.2	6.1
1993	38.6	25.3	13.3	-15.6	-1.8	-8.3	-0.6
1994	43.5	33.1	10.4	-14.7	-2.5	-6.3	-1.7
1995	46.5	49.9	-3.4	-18.6	-2.6	-8.2	-18.0
1996	47.7	53.3	-5.6	-21.7	-2.4	-9.8	-24.3
1997	53.0	61.4	-8.4	-27.3	-5.6	-10.4	-33.4
1998	51.1	57.8	-6.7	-29.5	-7.9	-12.1	-34.4
1999 ^b	48.0	49.2	-1.2	-25.6	-3.7	-15.8	-25.2

^a *Source*: Conjuntura Economica, February 1999; Credit Suisse First Boston Garantia.

^b Estimate.

falling behind the growth of world trade. As a result, Brazil's share in world exports declined from about 1.5% in the early 1980s to 0.8% in the late 1990s.¹¹

The Mexican crisis of 1994–1995 threatened to derail the Real Plan, but the Brazilian authorities reacted in March 1995 by effectively devaluing the Real over the next three months: it declined from an average of R\$0.84 in February to R\$0.89 in March and R\$0.91 in June. At the same time interest rates were raised yet again. Between February and April,

the TR benchmark interest rate rose from a monthly rate of 1.8% to 3.5%. With the swift resolution of the Mexican crisis, speculative pressure on the Real abated and the policy of a high exchange rate remained in place through the end of 1998.

5. THE UNRESOLVED FISCAL DILEMMA

During 1995–98 price stability continued to prevail (see Tables 4 and 5) in spite of the

Table 3. *Monthly exchange rate (R\$ per US\$), 1994–99^a*

	1994	1995	1996	1997	1998	1999
January	0.14	0.85	0.97	1.04	1.12	1.98
February	0.20	0.84	0.98	1.05	1.13	2.06
March	0.28	0.89	0.99	1.06	1.13	1.72
April	0.40	0.91	0.99	1.06	1.14	1.66
May	0.58	0.90	0.99	1.07	1.15	1.72
June	0.83	0.91	1.00	1.07	1.15	1.77
July	0.93	0.93	1.01	1.08	1.16	1.79
August	0.90	0.94	1.01	1.09	1.17	1.91
September	0.87	0.95	1.02	1.09	1.18	1.92
October	0.84	0.96	1.02	1.10	1.19	1.95
November	0.84	0.96	1.03	1.11	1.19	1.92
December	0.85	0.97	1.04	1.11	1.21	1.85

^a Source: Banco Central.

Table 4. *Annual rates of inflation 1990–99^a*

1990	2739
1991	415
1992	991
1993	2104
1994	2407
1995	68
1996	9.3
1997	7.5
1998	1.7
1999 ^b	8.9

^a Source: Conjuntura Economica.

^b Estimate.

continuing absence of substantive fiscal adjustment, but, the fiscal situation of the government deteriorated. As can be seen in Table 6 the operational budget balance (which includes the impact of *real* interest repayments on debt) moved from a surplus of 0.5% of GDP in 1994 to a deficit of -8.4% of GDP in January–November 1998. The primary balance also deteriorated, moving from a surplus of 4.3% of GDP in 1994 to a deficit of 0.1% of GDP in January–November 1998. Underlying the deterioration in the primary balance was a failure to check the rise in expenditures at every level of government, despite rapidly rising revenues.¹² In particular, the growing political obstacles faced by President Cardoso's administration meant that it was unable to implement badly needed reductions in expenditures on personnel with the result that numbers of public employees remained stubbornly high and their real wages continued to climb.

Consequently, the public sector payroll mounted substantially. At the beginning of 1993 total personnel expenditures of the public

sector stood at R\$30 bn on an accrual basis.¹³ By the end of 1994, on the same basis, these expenditures had risen to R\$40 bn while, by mid-1998 they had reached almost R\$50 bn. The failure to rapidly implement reform of the civil service pension system meant that pensions costs rose particularly rapidly as a proportion of total public sector personnel costs. Pension expenditures in the late 1990s represented around 43% of total public sector personnel expenditures having risen from around 35% at the end of 1992.¹⁴ Influencing this rise was the increase in the minimum wage in 1995, which rose by 43% in nominal terms while inflation was only 15%; this was applied to the benefits paid in the government's pension system.¹⁵ At state level in particular, a growing proportion of expenditures came to be accounted for by employment costs. By early 1999, such expenditures accounted for as much as 92.5% of total receipts in the state of Alagoas. In the larger states of Sao Paulo, Minas Gerais and Rio de Janeiro the proportion of receipts accounted for by personnel costs stood at 63.6%, 76.7% and 78.7%, respectively.¹⁶

Given this situation, the overall public sector primary surplus continued to shrink (see Tables 6–8) making it ever more difficult to check the expansion of the operational deficit. Other contributory factors to the weakening of the primary balance were the continued deficit in the social security system (which rose from 4.9% of GDP in 1994 to 6% in 1998) and the necessity of the federal government to constantly transfer substantial resources to the states (which rose from 2.55% of GDP in 1994 to 3.02% of GDP in 1998).¹⁷ These transfers were not wholly constitutionally mandated in

Table 5. *Monthly rates of inflation 1994-99^a*

	1994	1995	1996	1997	1998	1999
January	42.2	1.4	1.8	1.6	0.9	1.1
February	42.4	1.2	0.8	0.4	0.0	4.4
March	44.8	1.8	0.2	1.2	0.2	2.0
April	42.5	2.3	0.7	0.6	-0.1	0.0
May	41.0	0.4	1.7	0.3	0.2	-0.3
June	46.6	2.6	1.2	0.7	0.3	1.0
July	24.7	2.2	1.1	0.1	-0.4	1.6
August	3.3	1.3	0.0	0.0	-0.2	1.4
September	1.5	-1.1	0.1	0.6	0.0	1.5
October	2.5	0.2	0.2	0.3	0.0	1.9
November	2.5	1.3	0.3	0.8	-0.2	2.5
December	0.6	0.3	0.9	0.7	1.1	1.2

^a Source: Conjuntura Economica.

Table 6. *Public sector account balances (% of GDP), 1985-99^a*

	Primary budget		Operational budget public		Debt
	Total	Federal	Total	Federal	
1990	2.4	1.6	1.6	2.8	
1991	3.0	0.8	1.5	0.3	
1992	2.3	1.3	-2.2	-0.8	
1993	2.6	1.4	0.3	+0.0	31.0
1994	4.3	3.0	0.5	1.6	
1995	0.3	0.6	-4.8	-1.6	
1996	-0.7	0.4	-3.9	-1.7	31.4
1997	0.9	0.3	-4.3	-1.8	34.5
1998	-0.0	0.5	-8.4 ^a	-5.3 ^a	42.6
1999 ^b	3.77	4.15	11.4	8.0 ^a	51.0

^a Source: Banco Central; Credit Suisse First Boston Garantia.

^a Estimate.

^b January to September.

Table 7. *Selected budget items: state and municipal governments^a*

	1994	1995	1996	1997	1998
Primary surplus ^b	0.77	-0.18	-0.54	-0.73	-0.21
Nominal interest	12.84	3.39	2.16	2.30	1.83
Nominal deficit	12.07	3.57	2.70	3.03	2.04

^a Source: Alem and Gambiagi (1999, p. 97).

^b (-) = deficit.

Table 8. *Selected budget items: federal government^a*

	1994	1995	1996	1997	1998
Transfer to states & municipios	2.55	2.83	2.74	2.78	3.02
Active public servants	2.82	2.95	2.66	2.36	2.40
Inactive public servants	1.99	2.32	2.33	2.20	2.46
Retirement benefits	4.85	5.04	5.30	5.43	5.96
Nominal interest payments	13.41	2.90	2.93	2.31	6.03

^a Source: Alem and Gambiagi (1999, p. 97).

nature but also resulted from the need to rescue bankrupt state banks. In particular, the government, in order to prevent a crisis of confidence in the financial system, found itself obliged to institute a costly bail-out program for the state banking system termed the Proer.

The failure of the government to secure rapidly badly needed fiscal reforms that would have curtailed the growth of the operational deficits in part resulted from deep divisions within Congress. Discipline among pro-government parties was weak while the exercise of local as opposed to national interests over members of Congress remained strong. Partly for this reason, during President Cardoso's first term of office, Congress in general proved very reluctant to accede to thoroughgoing fiscal reform, especially that which would have restricted the fiscal autonomy of the states and municipalities or would have adversely affected conditions of employment in the public sector.¹⁸

Failure in the area of fiscal reform was also strongly influenced by President Cardoso's relentless pursuit of the constitutional re-election amendment that allowed him to run successfully for a second term of office in October 1998. Determined to secure the amendment, President Cardoso granted concessions to Congress which, in turn, was able to exercise increasing leverage over the timing and scale of fiscal reform. The results of this changing political balance of power were realized in the form of increasingly severe Congressional defeats for the government. For example, in the very same month (June 1997) that the re-election amendment received its final approval, the government suffered a serious defeat in Congress, failing to secure passage of a crucial law which would have set a wage ceiling for civil servants in states and municipalities.¹⁹

Given the slow pace of fiscal reform in his first term, President Cardoso was increasingly forced to rely on temporary decrees (*medidas provisórias*) in order to exercise a measure of influence over the widening public sector deficit.²⁰ These proved unable to effect a meaningful fiscal adjustment, however, and served only to underline the need for more basic, longer term structural reform. Only with the advent of economic crisis and an accompanying International Monetary Fund (IMF) adjustment package in November 1998 did Congress finally make substantial progress in approving more basic fiscal reforms. In the absence of

such strong external pressure, it seems unlikely that President Cardoso would have been able to generate the political momentum necessary to achieve the substantial fiscal adjustment so badly needed.

The expanding operational deficit resulting from delays in the fiscal reform program was not financed in an inflationary manner by relying on borrowing from the Central Bank but given the credibility acquired through the initial success of the Plano Real it was possible for the government to finance it by borrowing in the domestic and international financial markets. Thus, the public debt as a proportion of GDP rose from 31% to 41% during 1993-98.

The financing of expanding public sector deficits was made possible by the maintenance of very high interest rates whose real value increased as inflation fell. Given this situation, and with the continuing obstacles to basic fiscal reforms even in the absence of external events, the operational deficit would have relentlessly risen. The Asian crisis of 1997 and the Russian crisis of 1998 led to a dramatic rise in interest rate spreads as the government desperately tried to finance its deficit and hold the exchange rate anchor in place. This, in turn, led to even greater expansionary pressure being exerted on the operational deficit, whose value increased from 3.9% of GDP in 1996 to 8.4% in January to November 1998.

Thus, the government found itself in a vicious circle: to maintain the exchange rate and to finance its deficit it had to borrow at a rising interest rate, which in turn worsened the fiscal situation and, by extension further undermined investor confidence. Table 9 shows that interest on government bonds rose from 7.1% of government expenditures in 1994 to 13.6% in January to November 1998. In addition, interest on loans rose from 4.6% of government expenditure in 1994 to 5.5% in January to November 1998. Thus the sum of government spending on loan interest, bond interest and amortization rose from 14.7% of government expenditures to 24.4% over the same period. Without corresponding rises in the primary surplus the operational deficit had no direction to go except upward. As this occurred, public sector indebtedness inevitably rose, with the external component of that debt increasing at an especially fast rate between the beginning of 1996 and the end of 1998 (see Table 10).

Given this fiscal deterioration and the continued adherence to the exchange rate

Table 9. *Selected government expenditures (% of total federal government expenditures)*^a

	Transfers to state and municipal governments	Interest on loans	Interest on government bonds	Amortisation
1994	18.0	4.6	7.1	3.0
1995	19.0	5.2	7.8	5.7
1996	18.3	4.9	10.2	5.0
1997	19.3	6.4	8.4	8.2
1998 ^b	19.0	5.5	13.6	5.3

^a Source: Banco Central.^b January to November.Table 10. *Evolution of public sector indebtedness (% of GDP), 1990–99^a*

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999 ^b
Total internal debt	16.5	15.9	18.9	18.5	20.3	24.5	30.2	30.2	36.6	38.6
Central bank and federal gov.	1.6	-2.5	0.8	1.8	6.2	9.6	14.8	16.8	21.6	22.3
States and municipalities	6.4	7.0	8.4	8.3	9.2	10.1	11.5	12.5	13.7	14.9
Public enterprises	8.5	11.4	9.7	8.4	4.9	4.8	4.0	0.9	1.3	1.4
Total external debt	20.1	27.6	19.2	14.4	8.2	5.4	4.0	4.4	6.3	11.0
Central bank and federal gov.	12.4	17.0	11.6	7.8	6.0	3.4	1.6	2.0	4.3	8.3
States and municipalities	1.0	1.3	1.1	1.0	0.3	0.3	0.4	0.5	0.7	1.0
Public enterprises	6.7	9.3	6.5	5.6	1.9	1.7	2.0	1.9	1.3	1.7
Total debt	36.6	43.5	38.1	32.9	28.5	29.9	34.4	34.6	40.9	49.6

^a Source: Cysne (2000, p. 81); Banco Central do Brasil, Boletim.^b September.

anchor policy (that is, to very small adjustments in the nominal exchange rate), the government began a serious drive to have Congress pass the constitutional amendments necessary to achieve a fiscal adjustment. This, of course, followed a period in which progress on fiscal reform and social security reform had proven much slower than anticipated by the government (see Table 11). Fortunately, progress in the other key area of structural reform—market liberalization—proved more rapid (see Table 11). But despite growing external pressure toward the end of 1998, the government only proved partially successful in securing passage of key fiscal reform measures as a reluctant Congress turned down such crucial amendments as instituting a tax on retired government employees.

The government also relied to a large extent on the privatization process to deal with its fiscal problems. This process had already begun under President Collor, but had been restricted mainly to the steel and petrochemicals sectors. Under President Cardoso it broadened

dramatically as it included public utilities. During 1995–98 annual receipts from privatization rose from under US\$2 bn per year to over US\$35 bn²¹ as the privatization process was expanded to include public utilities (such as telecommunications, power generation and distribution) and minerals.

6. CAPITAL FLOWS

The mounting current account deficit (see Tables 2 and 12) was financed by a substantial inflow of foreign capital. It will be noted that there was a substantial reliance on net portfolio investment which rose from a yearly average of US\$0.62 bn during 1990–92 to US\$4.5 bn during 1995–97. With the Asia/Russia crisis in 1998, however, it became negative, falling to US\$-4.5 bn as investors withdrew funds in large quantities expecting that the exchange rate could not be obtained much longer at its overvalued rate. Net direct investment began to contribute substantially from 1995 on. During

Table 11. *A chronology of key economic reforms and events, 1994–99^a*

Date	Reform
July 1994	The <i>Real</i> is introduced successfully as Brazil's new currency
January 1995	President Fernando Henrique Cardoso takes office
January 1995	The Mercosul Common External Tariff comes into force, liberalising trade further
February 1995	Law 8987 is passed, regulating the granting of concessions to private companies to run public utilities. This legislation sets the scene for a new wave of privatizations
November 1995	Constitutional amendment No. 9 is approved, opening up oil exploration and production to domestic and international private capital
Mid-1995	Presentation of Constitutional amendment no. 175 to Congress aimed at simplifying taxation system. This initiates a new round of Congressional negotiation over tax reform, especially of indirect tax
February 1996	Complementary Law 85 approved, establishing COFINS, a tax aimed at improving the financial state of the social security system
April 1997	Law 9630 passed, setting new rates of social insurance contributions for active and inactive public servants
March 1998	A constitutional amendment is approved tightening employment conditions for public service workers. To be effective, enabling legislation needs to be passed and, as of January 2000, this is still under debate in Congress
October 1998	President Fernando Henrique Cardoso is elected for a second term
October 1998	Legislation partially approved setting tougher conditions for social security contributions. For nonpublic sector workers contributing to the INSS social insurance scheme minimum contribution periods and retirement ages are set
November 1998	Following a period of sustained downward pressure on the Real and a haemorrhaging of reserves, the IMF launches a rescue package. An emergency fiscal stabilization plan is approved by Congress with the emphasis on tax rises and spending cuts
January 1999	The <i>Real's</i> peg with the US dollar is finally abandoned and the Brazilian currency subsequently devalues sharply
January 1999	Legislation is passed obliging retired civil servants to make social security contributions. This measure was ruled unconstitutional by the Supreme Court in September 1999, forcing the government to introduce a new constitutional amendment (which as of January 2000 has not yet been approved) and emergency tax rises
November 1999	Legislation is passed introducing actuarial rules in the calculation of INSS benefits to private sector workers. The effect of this legislation is to introduce greater correspondance between social security benefits and contributions
January 2000	Crucial legislation affecting tax reform, fiscal arrangements at state and municipal level (i.e. The Law of Fiscal Responsibility) and public sector employment conditions is still before Congress. Rapid passage of this legislation appears unlikely

^a Source: Own elaboration.

1990–92 it averaged US\$0.3 bn a year while during 1996–98 it rose to US\$16.3 bn. This was related to both multinational investments in new production facilities (possibly to serve not only the large domestic market but also a future enlarged Mercosul). It should be noted that in this period Brazil relied to a much smaller extent than it had in the 1980s on international bank lending. For instance, in 1994, 68% of capital inflows represented international bank lending; this fell to 16% in 1998. Foreign direct investment, by contrast, played a more significant role in financing the current account deficit over the period rising from 19% of net capital inflows in 1995 to 27% in 1998.

As capital inflows increased, so did the weight of external indebtedness associated with

them. During 1996–98, total external indebtedness rose from US\$179.9 bn to US\$235 bn. Interestingly, over the course of this period, private sector external debt rose at a faster rate than that of the public sector increasing from US\$86 bn in 1996 to US\$140 bn in 1998. The main components of public sector external debt, however, only rose moderately, increasing from a total of US\$98.9 bn in 1996 to US\$99.2 bn in 1998. Public sector internal debt, by contrast, rose more rapidly, increasing from R\$237 bn in 1996 to over R\$320 bn in 1998. It should be remembered that a large proportion of domestic debt was, in fact, owned by foreign investment groups, seeking to take advantage of the combination of the country's high interest rate with a high and stable exchange rate.

Table 12. *Capital flows, debt and reserves, 1985–98 (billions US\$)*^a

	Net direct investment	Net portfolio investment	Amortisation	Gross external debt	Net reserves
1985	0.13	-0.01	-8.49	84.25	11.61
1986	-0.41	-0.02	-11.55	95.00	6.76
1987	0.05	+0.06	-13.50	100.06	7.46
1988	-0.03	+0.19	-15.23	93.41	9.14
1989	-0.34	-0.06	-34.00	89.61	9.68
1990	0.28	0.10	-8.66	86.57	9.97
1991	0.50	0.06	-7.83	83.59	9.41
1992	0.12	1.70	-8.57	87.08	23.75
1993	0.37	6.65	-9.98	82.06	32.21
1994	1.74	7.28	-5.04	80.86	38.81
1995	3.61	2.29	-11.02	77.47	51.84
1996	9.12	6.04	-14.42	83.98	60.11
1997	17.1	5.30	-28.70	193	52.17
1998	26.1	-1.8	-33.6	234	44.56
1999	28.3		57.6	230	36.40

^a Source: Conjuntura Economica, February 1999; Banco Central do Brasil, Boletim, monthly issues.

7. THE PERFORMANCE OF THE REAL ECONOMY

As mentioned above the *Plano Real* began with a spectacular growth performance. The 5.9% growth rate in 1994 and the 4.2% growth rate in 1995 were related to the consumption boom associated with the immediate impact of stable prices. The subsequent decline in the growth rate (see Tables 13 and 14) is associated with the dampening effect of high interest rates and slow export performance. As the crisis worsened in 1998, growth diminished to 0.2%, which reflected negative monthly growth rates which characterized the second half of that

year. On a sectoral basis it can be seen in Tables 13 and 14 that manufacturing was the weakest link, again reflecting the impact of interest rates. On the positive side, it can be seen that capital formation improved during 1994–98 (see Table 15). This reflects the increased direct investment activities of multinationals and also investment activities of domestic and foreign groups which were taking over privatised enterprises.

With the opening of the Brazilian economy subjecting various sectors to increased foreign competition great efforts were made by both domestic and foreign firms to upgrade their technology. The net result was a substantial

Table 13. *The evolution of Brazil's GDP, 1985–99^a*

	GDP at 1998 prices (billions of R\$)	Real growth rate (%)	Per capita GDP at 1998 prices (R\$)	GDP in US\$ (current prices)
1985	662	7.8	5017	211
1986	712	7.5	5285	258
1987	737	3.5	5368	282
1988	736	-0.1	5266	306
1989	760	3.2	5338	416
1990	727	-4.4	5042	469
1991	734	1.0	5014	406
1992	730	-0.5	4910	387
1993	766	4.9	5075	430
1994	811	5.9	5295	543
1995	845	4.2	5441	705
1996	868	2.8	5514	775
1997	900	3.6	5640	802
1998	901	0.1	5571	775
1999	905	0.5	5599	519

^a Source: Banco Central do Brasil, Relatório 1998; authors' estimates based on Boletim Conjuntural, October 1999, Brazil Country Report, EIU 4th Quarter 1999.

Table 14. *Brazil: sectoral GDP growth rates*^a

	1993	1994	1995	1996	1997	1998	1999
GDP	4.2 (4.92)	5.8 (5.85)	4.2 (4.22)	2.8 (2.76)	3.7	0.1	0.5
Agriculture	-1.0 (-0.07)	8.1 (5.45)	4.1 (4.08)	4.1 (4.06)	2.7	0.2	6.6
Industry	6.9 (7.01)	6.9 (6.73)	1.9 (1.91)	3.7 (3.73)	5.5	-0.9	-1.7
Mining	0.6	4.7	3.7	6.7	6.8	9.2	9.7
Manufacturing	8.1	7.7	2.0	2.8	4.2	-3.3	-1.8
Construction	4.8	6.1	-0.4	5.2	8.5	1.9	-3.5
Services	3.5 (3.21)	4.1 (4.73)	4.5 (4.48)	1.9 (1.87)	1.2	0.7	1.2
Finance	-2.2	-2.8	-7.4	-7.7	-2.7	0.1	0.5
Commerce	3.5	4.1	8.5	2.4	3.9	-3.4	-0.9

^a *Source:* Banco Central do Brasil, Relatório 1998 and monthly Boletim. Figures in parentheses are revised estimates calculated by the IBGE and presented in Conjuntura Economica, December 1998.

Table 15. *Brazil: capital formation/GDP ratio (%)*^a

	Current prices	1980 Prices
1985	18.0	16.4
1986	20.0	18.8
1987	23.2	17.9
1988	24.3	17.0
1989	26.9	16.7
1990	20.7	15.5
1991	18.1	14.6
1992	18.4	13.6
1993	19.3	14.0
1994	20.7	15.0
1995	20.5	15.4
1996	19.1	18.7
1997	19.6	18.1
1998	19.8	

^a *Source:* Banco Central do Brasil, 1997, Boletim Conjuntural, Janeiro 1999.

increase in yearly growth rate of labor productivity (see Table 16). This was perhaps a factor that convinced some of the country's policy makers to refrain from an accelerated devaluation. A greater foreign competition would be met by lowering domestic production costs through increased productivity. This faith in relying on greater productivity was not necessarily optimistic when one considers studies such as that of the international consulting firm Mc Kinsey. A massive study by the Mc Kinsey Global Institute, which was released in March 1998 found that

with the exception of steel, the productivity of all the sectors in Brazil is less than half the productivity in the US, with both food processing and food retailing less than 20% of the US. Even the modern sectors of airlines, telecoms, retail banking and auto assembly are below 50%.²²

At the beginning of the *Plano Real* it seemed that its success in taming inflation was also

Table 16. *Labor productivity in the manufacturing sector (% per year), selected periods*^a

1971-73	5.6
1974-80	1.0
1981-85	0.3
1986-89	0.2
1991-97	8.7
1996-98	3.3

^a *Source:* Bonelli and Fonseca (1998).

resolving Brazil's structural problem of extreme income concentration. As the groups that were hardest hit by the hyperinflation were the wage earners in the lower income groups (with a close to 50% per month inflation in mid-1994, their real purchasing power was rapidly eroded), they were also the ones who greatly benefited from the sudden stability in their real earnings. This increase in the real income of the lower income groups resulted in substantial increases in their purchases of consumer durables and explains the substantial rise in manufacturing output in the first months of the *Plano Real*. The consumption spurt of these groups continued for a considerable period of time as, in addition to the higher real salaries, large groups of wage earners also bought on credit. Their increased indebtedness exposed them to the negative impact of the higher interest rates which the government used to defend its international position. In fact, in 1998 defaults on consumer debts were at a record high.

8. THE BANKING CRISIS

The disappearance of inflation and high rates of interest had a considerable impact on the banking system. As the *Plano Real* progressed,

the rising level of interest rates meant that many firms and individuals faced severe difficulties in repaying their debts. The consequence was a substantial rise in non-performing loans. The latter rose from 7% of total loans to the private in December 1993 to almost 21% in December 1995. In addition, the banking system was severely affected by “a mismatch... between the cost of banks’ liabilities—usually very short run time deposits—and the earnings they were getting from their assets—which often had a longer maturity than their liabilities.”²³

The rise in non-performing loans was especially destabilizing for public banks. Since the traditional role of state banks in Brazil was to bridge state treasuries’ credit shortfalls, these banks did not develop the skills of sound banking and credit and risk management, and were not motivated to do so for political reasons. Instead, they practiced rolling over their state’s non-performing loans and accumulating non-performing assets. They had extended credit carelessly in good times and were hit hard when the consumption boom ended. The portfolio of these banks deteriorated significantly as the private sector found it increasingly difficult to make payments on loans taken out from state banks.²⁴

To deal with private banks the government founded a Credit Guarantee Fund (FGC), to which all financial institutions were required to contribute 0.024% of all balances in accounts covered by FGC. Between the introduction of the *Plano Real* and the end of 1997, the Central bank liquidated, intervened in, or put under a Temporary Special Administrative Regime (RAET) system 43 financial institutions. In addition, in order to fortify the banking system through the injection of fresh capital, the government opened the banking system to direct foreign participation.

The tool of merger and acquisitions was advanced through PROER,²⁵ which was created in November 1995. It offered a system of tax incentives and credit facilities to encourage the rapid consolidation of the banking sector. The acquiring bank was given a sufficient line of credit at below the market interest rate to acquire the new bank. The acquiring bank was permitted to absorb the financial losses of the acquired bank on its balance sheet through tax write-offs.

These facilities were used by Unibanco (the sixth largest Brazilian bank) to acquire Banco Nacional (the seventh largest bank); by Excel

bank to acquire the Banco Econômico; and five other large private banks.²⁶

In the case of state banks, the government introduced PROES,²⁷ whose aim it was to reduce the role of the public sector in the financial system. It could acquire state financial institutions by using public securities as the transaction currency; it could help transform state banks into nonfinancial institutions or development agencies; it could finance the restructuring of state banks with the sole purpose of subsequent privatization; or it could finance up to 50% of the cost of restructuring of a state bank that is recapitalized by the state government. In practice, the federal government persuaded states to allow for the “federalization” of their ailing banks by offering to reschedule state governments’ debts.

During 1995–98, the government’s interventions in both the private and public banks resulted in a clear downsizing trend. The number of private banks that relied solely on domestic capital shrank from 144 to 108 banks and the number of public banks declined from 30 to 24. There was a pronounced decline in the number of persons employed in banks (from 1995 to March 1996 bank employment declined from 704,000 to 636,000, and the share of state-owned banks in total deposits declined from 19.3% in 1996 to 6.5% by mid-1998.²⁸

Although the efficiency of the banking system increased and the participation of the public sector decreased, one should not forget the past equity goals which was an important mission of public banks in the past. That mission resulted in their having a lower income base and a more labor-intensive customer base. Social responsibility also led to overbranching, as many poorer and less densely populated regions could only be served by public banks. Although public banks were abused for political purposes and although their disappearance helped to clean up the financial distortions inherited from inflationary times, the question lingers about which institution will attend to the tasks for which they were originally established, i.e. to provide credit for areas, population groups and economic sectors which are not attractive to private banks.

9. THE CRISIS 1998–99

The explosion of the Asian crisis in 1997 followed by the advent of the Russian crisis in

August 1998 brought the contradictions of the *Plano Real* to a head. This manifested itself in the dramatic decline in Brazil's reserves from US\$75 bn in August 1998 to less than US\$35 bn in January 1999. For the first time in the 1990s, net portfolio investment flows became negative as investors withdrew substantial amounts of capital (see Table 8). Desperate attempts were made by the government to stem the flow by dramatically increasing interest rates which reached levels of close to 50% in annualized real terms in September 1998. After the election of October 1998 the government desperately tried to get Congress to pass amendments to the constitution which would raise taxes on retiree's pension contributions and to make a special tax on financial transactions permanent and at a higher level. The international community also became preoccupied with the possibility of a Brazilian collapse similar to that of Russia and Asia. In November 1998 a package was put together by the IMF, the World Bank and the US government to make available US\$41.5 bn in order to underpin the embattled Real.²⁹ At first the government achieved a measure of success in its attempts to comply with the new program. By mid-December 1998, Congress had approved approximately 60% of the fiscal adjustment demanded under the terms of the program. In the course of that month, however, the government suffered a serious congressional defeat with the rejection of its pension reform proposals. Following this setback, capital outflows began to accelerate once more with an accompanying depletion in international reserves.

To add to the severity of the expanding crisis, there occurred a rebellion by some of the newly elected governors of opposition parties, led by Governor Itamar Franco of Minas Gerais, the former President. This rebellion consisted of a moratorium on the service payments on the debt owed by the states, the most important being Minas Gerais, Rio Grande do Sul and Rio de Janeiro. This severely undermined the credibility of Brazil's commitment to fiscal adjustment and made it difficult to stem the outflow of capital.

By mid-January 1999 when it became obvious that the high interest rates could not stem the outflow of capital and were producing a massive economic recession, the government yielded by allowing the exchange rate to float freely. In the next two months it subsequently devalued by 40%. Thus the illusion of the *Plano*

Real came to an end. The maxi-devaluation of the Real has brought on a challenge to the survival of Mercosul. Suddenly, Argentina was flooded with Brazilian goods, while its exports to Brazil dramatically declined (Brazil accounted for almost one-third of Argentina's exports). Argentina has tried to counter the impact of the Brazilian devaluation by instituting special taxes on imports. Thus this devaluation placed into bold relief the necessity for Mercosul's members to coordinate their exchange rate and macroeconomic policies if the customs union was going to survive.

The impact of the January devaluation on the country's inflation rate was relatively mild. It will be noted in Table 5) that after an initial jump in the first two months after the devaluation, the rate declined again throughout most of 1999. This was due to the substantial excess productive capacity and high unemployment rates, which placed pressures on many sectors from passing on cost increases related to higher import prices. In addition, the Central Bank authorities kept interest rates at extremely high levels in order to discourage negative speculation against the *Real* (the monthly overnight rate rose to 3.33% in March and the 30-day CD rate to 3.17%), only gradually bringing them down in the second half of 1999. By the end of 1999 inflation had risen to 8.9% for the year.

Throughout 1999 the government took several measures to produce the type of primary budget surplus which the IMF required in return for the loan extended to Brazil during the crisis of 1998. The government signed a commitment to achieve a primary budget surplus of 3.1% of GDP. To achieve this the Congress passed increased tax rates for higher income brackets. The above mentioned attempts to increase taxes on active public workers and to impose taxes on inactive public workers was declared unconstitutional by the Supreme Court, which interpreted these levies as confiscation of salaries and trampled on "acquired rights."³⁰ To compensate, other stringent measures were taken to cut expenditures and raise other taxes, which resulted in a primary surplus amounting to 3.8% of GDP, which was substantially above the IMF target.³¹ In combination with earlier high interest rates, however, these measures contributed to a continued low growth rate throughout most of 1999, although the prediction of a GDP decline of 4% did not occur.

10. CONCLUSIONS

As we mentioned at the beginning of this paper a perennial problem that Brazil has been faced in the past half century has been to achieve a consensus on which socioeconomic groups the burden of financing the public sector should fall. The impasse has for many generations been resolved by inflationary finance. The various heterodox schemes ranging from the Cruzado Plan of 1986 to numerous subsequent plans to deal with the country's hyperinflation all failed because of the lack of a fiscal adjustment, allowing inflationary pressures to return with a vengeance. The ingenious way in which the *Plano Real* was introduced and brought on domestic and international credibility, made it possible for the economy to function in a stable manner for a long period of time. This was due to the fact that the credibility facilitated the non-central bank financing

for the government deficit. Fiscal adjustments could be postponed for a long time. But, as the debt of the government mounted, and fiscal adjustment was constantly postponed, the credibility of the government gradually vanished, and the international crisis of 1997–98 simply accelerated the endgame of the *Plano Real*.

It thus seems that at the end of the millennium Brazil will be forced to find an explicit mechanism to allocate the burden of financing public expenditures. This is likely to be a politically highly contentious and long drawn-out process but one which is essential if Brazil is to embark on a path of sustainable, non-inflationary growth. Another challenge which the end of the *Plano Real* brings about is whether Brazil (and other Latin American countries) would be willing to give up some sovereignty over economic policy making for the sake of regional economic integration.³²

NOTES

1. See Baer (1991).
2. For details see Baer (1995).
3. For a detailed review of how the Plan was formulated see: Bacha (1995) and Franco (1995).
4. For details on the creation of the URV see *Conjuntura Economica* (April 1994, pp. 5–7).
5. The idea of beginning a stabilization program with the introduction of an indexed currency was first proposed by two Brazilian economists in 1985. See: Arida and Resende (1985). Arida and Resende were among the group of advisors who helped formulate the *Plano Real*.
6. For details see *Conjuntura Economica* (August 1994, pp. 172–173).
7. *Boletim Conjuntural* (October 1996).
8. *Exame* (5 July 1995, p. 27).
9. Fritsch and Franco (1991, p. 20).
10. For instance, reduced transfers to the states and municipalities and adjustments in the social security system.
11. Delfim Netto (1998, p. 731).
12. This was highlighted by Paulo Rabello de Castro who talks in terms of the Brazilian government's "addiction to overspending." *The Wall Street Journal* (November 6, 1998, p. A. 15).
13. Parente (1999, p. 20).
14. Parente (1999, p. 20).
15. Castelar Pinheiro, Gambiagi and Gorst Korzewicz (1999, p. 18). These authors also point to substantial increases of expenditures of various federal government entities, appearing under the budget item "other current and capital expenditures."
16. *Veja* (January 20 1999, p. 46).
17. Alem and Gambiagi (1999, pp. 96, 97).
18. Monteiro (1997).
19. *Brazil Financial Wire* (11 June 1997).
20. Monteiro (1997, p. 254).
21. Source: BNDES (1999).
22. McKinsey (1998, p. 2).

23. Da Fonseca (1998, p. 637).
24. Baer and Nazmi (2000, p. 12).
25. Program of Incentives for the Restructuring and Strengthening of the National Financial system.
26. Baer and Nazmi (2000, p. 15).
27. Program of Incentives for the Restructuring of the State Public Financial System.
28. Baer and Nazmi (2000, p. 17).
29. The R\$28 bn package included the following obligations on the part of the Brazilian government: (a) increasing the tax on financial transactions from 0.3% to 0.37%; (b) increasing pension contributions from the salaries of active public servants; (c) having retired civil servants paying a tax on their pensions; (d) raising the retirement age.
30. Congress subsequently passed a new formula for benefits for private pensioners, stimulating them to work longer (beyond the average age of 52 and 33 years of service). Job security also has been broken and some austerity measures curtailing expenditures were passed.
31. During 1999 the government was also threatened by the possible elimination of the tax on financial transactions, the CPMF. This tax was first introduced in 1996 and scheduled to last until 1999. In March the government got congress to extend the tax for another three years. The elimination of the CPMF would substantially lower government revenues. According to court cases, the government used the wrong term in the bill to extend the tax: it should have said it would renew (*renovar*) rather than grant a stay (*prorrogar*) for the CPMF. (Latin American Economy & Business, October 1999, p. 2).
32. Bevilacqua (1997).

REFERENCES

- Alem, A. C., & Gambiagi, F. (1999). O ajuste do governo central; além das reformas. In F. Gambiagi, & Mauricio Mesquita, Moreira, *A Economia Brasileira nos Anos 90*. Rio de Janeiro: Banco Nacional de Desenvolvimento Economico e Social.
- Arida, P., & Resende, A. L. (1985). Inertial inflation and monetary reform. In J., Williamson, *Inflation and indexation: Argentina, Brazil and Israel*. Washington, D.C.: Institute for International Economics.
- Bacha, E. L. (1995). Plano Real: Uma avaliação preliminar. *Revista do BNDES*, 3, June, 3–26.
- Baer, W. (1991). Social aspects of Latin American inflation. *Quarterly Review of Economics and Finance*, 31(3), 45–57.
- Baer, W. (1995). *The Brazilian economy: growth and development*. Westport, CT: Praeger.
- Baer, W., & Nazmi, N. (2000). Privatization and restructuring of banks in Brazil. *Quarterly Review of Economics and Finance*.
- Bevilacqua, A. S. (1997). *Macroeconomic coordination and commercial integration in Mercosul*. Texto para Discussão, no. 378. (Rio de Janeiro, Departamento de Economia, PUC/Rio), October.
- BNDES (1999). *Privatizacoes no Brasil 1991/1999*. Rio de Janeiro: BNDES.
- Brazil Financial Wire (1997). June 11.
- Castelar Pinheiro, A., Gambiagi, F., & Gostkowitz, J. (1999). O desempenho macroeconômico do Brasil nos Anos 90. In F., Gambiagi, & M.M., Moreira. *A Economia Brasileira nos Anos 90*. Rio de Janeiro: Banco Nacional de Desenvolvimento Economico e Social.
- Conjuntura Economica (1994). April.
- Cysne, R. P. (2000). Aspectos macro e microeconômicos das reformas. In R., Baumann, *Brasil: uma década em transição*. Rio de Janeiro: Editora Campus.
- Da Fonseca, M. A. R. (1998). Brazil's Real Plan. *Journal of Latin American Studies*, 30(3), 619–640.
- Delfim Netto, A. (1998). Brasil a bola da vez?. *Economia Aplicada*, 2(4), 727–738.
- EIU (1999). *Brazil country report 4th quarter 1999*. London: Economist Intelligence Unit.
- Franco, G. (1995). *O plano real e outros ensaios*. Rio de Janeiro: Editora Francisco Alves.
- Fritsch, W., & Franco, G. (1991). *Foreign direct investment in Brazil: its impact on industrial restructuring*. Paris: OECD.
- McKinsey & Company, Inc.: McKinsey Brazil Office (1998). *Productivity – the key to an accelerated development path for Brazil*. São Paulo, Washington, March.
- Monteiro, J. (1997). *Economia & politica: instituições de estabilização econômica no Brasil*. Rio de Janeiro: Fundação Getúlio Vargas.
- Parente, P. (1999). *Brazil's macroeconomic outlook*. Brasília: Presidência da República.