

ANNEX 3

Brazil

Introduction

This annex provides detailed background for assessing the role of the IMF in anticipating and resolving Brazil's capital account crisis of 1998–99. It first investigates the effectiveness of IMF surveillance in the precrisis period. The following section discusses program design issues, including (1) support for the crawling peg, (2) fiscal policy and debt sustainability, (3) monetary policy, (4) structural measures, (5) official financing and private sector involvement, and (6) program projections. It examines both the initial IMF-supported program that was agreed in the fall of 1998, and the program as revised in March 1999. It also touches upon the successor program agreed in August 2001, which was canceled in September 2002. The current program, beginning in September 2002, is outside the scope of our enquiry. The final section presents conclusions.

Precrisis Surveillance

This section assesses the role of the IMF in major areas of precrisis surveillance, including fiscal policy, exchange rate policy, banking sector issues, capital account developments and vulnerability indicators, and the impact of surveillance.

Background

Many of the central issues of the precrisis period had their origins in the policies adopted in the aftermath of the Real Plan, the stabilization program launched in 1994 (Box A3.1). The IMF chose not to support the Real Plan with a program because, in its view, the proposed fiscal adjustment was insufficient to secure disinflation in a durable way.¹ Instead, a monitoring arrangement, involving twice-yearly

staff visits, was established, in part as a face-saving measure.² Not agreeing on a program adversely affected the relationship between the IMF and the Brazilian authorities, and weakened the impact of IMF advice on Brazil's policy formulation during the precrisis period.

The IMF's skepticism about the ability of the Real Plan to reduce inflation appears ill founded in retrospect. The anti-inflationary gains were achieved and sustained over an extended period, albeit with a much greater fiscal deterioration than the IMF had feared. However, the IMF was correct in recognizing that weaknesses in the plan would pose challenges in consolidating these gains. As early as the first half of 1995, concerns emerged over the widening current account deficit, which prompted the authorities to tighten monetary policy in an attempt to contain the surge in consumption. Over a longer time horizon, there were questions about the eventual exit strategy from an appreciated real exchange rate, and the risk that the exit would reignite inflation.

Unlike East Asia, where the crisis took the IMF by surprise, the vulnerabilities of Brazil were well identified by surveillance, perhaps because they were mainly macroeconomic in nature. As early as September 1995, a briefing paper expressed concern that the external current account deficit did not seem sustainable and that its financing was highly vulnerable to shifts in market confidence. A prescient management comment on a briefing paper in October 1997 noted that "the current strategy [was] a risky one, and one thing far worse than a fiscal contraction a year before an election [was] a foreign exchange crisis a week before an election." Staff reports for Article IV consultations were typically less frank, but carried a reminder that a relatively large current account deficit and heavy amortization commitments left Brazil vulnerable to shifts in investor sentiment. Even so, the IMF was generally more optimistic than the private sector. For example, in mid-1997, management instructed the

¹A program was being sought not for balance of payments reasons but in the context of a debt restructuring deal with international banks. See IEO (2002) for a discussion of the broadening rationale for IMF-supported programs, the shifting of the boundary between programs and surveillance, and its possible consequences.

²Originally, a formal staff-monitored program appears to have been envisaged, but ultimately the closer monitoring relationship established was informal. Staff reports to the Executive Board were only prepared after the annual Article IV consultation missions.

Box A3.1. Brazil: The Real Plan

The Real Plan was a two-stage procedure of substituting the old currency, first by a unit of real value (URV) and second by a means of payment, the real, which was initially set equal to one U.S. dollar. The URV was a device designed to eliminate the backward-looking indexation by virtue of the fact that the URV itself was a price index. It was only after all contracts had been converted into multiples of the URV that the new unit of account was issued. All the steps were announced to the public, with no surprises or shocks (Franco, 2000; Bacha, 2001). Unlike some of the previous stabilization plans, no price or wage freeze was attempted; thus the Real Plan generated wide popular support. On March 1, 1994, the URV was introduced and, after four months of contract conversion, the real was issued by the Central Bank of Brazil (BCB) on July 1, 1994, with 30-days advance notice.

The IMF, however, was reluctant to support the Real Plan (and the 1994 Brady debt restructuring program) with a financing arrangement. According to internal documents, there was skepticism in the IMF that the Real Plan would succeed in reducing inflation in a durable way. The IMF did not believe that the proposed fiscal stance was sufficient to produce the envisaged reduction in inflation in 1994, and doubted its sustainability after 1994. The response of government revenues to lower inflation was highly uncertain, and there were doubts over planned structural fiscal reforms, which depended in part on approval by Congress in a constitutional review.

Following its introduction in July 1994, the real was allowed to appreciate by about 15 percent in nominal terms. Inflation fell from a monthly rate of over 40 percent in the first half of 1994 to between 1 percent and 3 percent a month by the end of the year, but was still greater than in Brazil's major trading partners. According to contemporary IMF staff estimates, the real effective exchange rate appreciated 33 percent in terms of the general price index between June 1994 and February 1995.

imminent mission “to consider why some in the markets appear[ed] more skeptical about the Brazilian economy” than the IMF’s own analysis.”³

Public warnings of these vulnerabilities were rare, although the 1997 *World Economic Outlook* noted, in a likely veiled reference to Brazil, that countries with insufficient fiscal consolidation, and therefore with “excessive reliance on short-term interest rates to restrain domestic demand,” might be “more vulnerable to changes in market sentiment.” In June 1998, the *International Capital Markets* report noted a risk that “the re-evaluation of emerging market vulnerabilities [had] not run its course” and that the terms and conditions of external financing could worsen further, leading to a broadening of the crisis to emerging markets outside Asia. Nevertheless, the staff appraisal in the capital markets report implicitly downplayed the risks to Brazil, noting that “many Latin American economies” had strengthened their financial systems, permitting the use of aggressive and credible interest rate defenses against contagion from Asia.

³Market views were by no means monolithic but, given the appreciated real exchange rate, some private sector observers foresaw increasing strains on the exchange rate regime over the medium term, particularly if international capital market conditions became less buoyant. There was also growing market concern about fiscal sustainability and the prospects for fiscal consolidation and structural reforms. See, for example, IIF (1997a).

Fiscal policy

Brazil’s fiscal position weakened substantially in 1995, owing in part to large increases in public sector wages, public sector price freezes, and the loss of control mechanisms that had previously relied on high inflation to erode the real value of budgeted expenditures (Table A3.1). The staff consistently called for efforts to strengthen the fiscal stance, primarily in order to reduce the burden on monetary policy and permit a decline in interest rates and, as a consequence, some real depreciation of the currency. Given the high overall tax burden, staff consistently took the position that fiscal adjustment should be carried out mainly through expenditure restraint.

From 1996, concerns about public debt sustainability were also cited as reasons for a tighter fiscal stance. Staff projections in successive reports nevertheless consistently showed public debt on a downward path from progressively higher bases, implying that the debt at each stage was “sustainable,” if an adequate primary surplus could be achieved in the future. For example, projections in the staff report for the 1995 Article IV consultation showed net debt declining to 15 percent of GDP by 2000. For 1996, these projections assumed a primary surplus amounting to 3.3 percent of GDP and a reduction in real interest payments equivalent to 2 percent of GDP, whereas the actual outcome was a primary deficit of

Table A3.1. Brazil: Fiscal Developments*(In percent of GDP)*

	1994	1995	1996	1997	1998	1999	2000	2001	2002
Public sector borrowing requirement ¹	44.3 ²	7.1	5.9	6.1	7.9	10.0	4.6	5.2	4.4
Operational balance ³	0.5	-4.8	-3.9	-4.3	-7.4	-3.4	...	...	...
Federal government + Central Bank ⁴	1.6	-1.6	-1.6	-1.8	-5.1	-3.2	...	...	...
States + municipalities	-1.0	-2.3	-1.8	-2.3	-1.8	-0.5	...	...	...
Public enterprises	-0.1	-0.8	-0.3	-0.3	-0.5	0.3	...	...	...
Primary balance	4.3	0.3	-0.1	-1.0	0.0	3.2	3.5	3.7	3.9
Federal government + Central Bank ⁴	3.0	0.6	0.4	-0.3	0.6	2.4	1.9	1.9	2.4
States + municipalities	0.4	-0.2	-0.6	-0.7	-0.2	0.2	0.6	0.9	0.8
Public enterprises	0.9	-0.1	0.1	0.1	-0.4	0.7	1.1	1.0	0.4
Net public debt to GDP ratio	30.0	30.6	33.3	34.4	41.7	48.7	48.9	52.6	56.5

Source: Data provided by the Central Bank of Brazil.

¹The coverage of the consolidated public sector in Brazil is very comprehensive.²The 1994 PSBR is high because of the very high nominal interest payments in the first half of the year, reflecting an inflation rate of over 40 percent a month.³The operational fiscal balance is defined as the primary balance less the "real" component of interest payments.⁴Comprises central administration, the Central Bank, and the social security system.

0.1 percent of GDP, and real interest payments lower by just 1 percent of GDP.

The persistently weak fiscal position and high real interest rates led instead to a rapid expansion in the ratio of public debt to GDP, despite the start of a far-reaching program of privatizations and sales of other assets. The stock of net public debt rose to 33 percent of GDP at the end of 1996, from 30 percent in 1995, as neither of the assumptions (on the primary surplus and real interest payments) was fulfilled. The projections in the staff report for the 1996 Article IV consultation were not so optimistic, but they still showed the ratio declining to 28.3 percent of GDP by 2001, on the assumption of a medium-term primary surplus of 2 percent of GDP and substantially lower real interest rates.⁴ The report did not directly analyze why earlier projections had not been realized.

The authorities typically accepted in principle the IMF's advice that fiscal adjustment was necessary but they were generally less ambitious in their efforts than the IMF recommended. Even the modest fiscal adjustment targeted by the authorities was rarely achieved and little progress was made in practice on fiscal consolidation between 1995 and 1998, with the fiscal accounts at best in primary balance. The authorities faced strong constitutional and institutional constraints in implementing such a consolidation, in part because of heavy earmarking of tax revenues and political pressures, including competing priorities for the congressional agenda.⁵

⁴The real interest rate was assumed to fall from 17.3 percent in 1996 to 6 percent in 2000.

⁵For example, the Constitution stipulated that income tax changes could take effect only in the year after their approval.

From time to time, the IMF identified specific policy measures to achieve adjustment, or to bring the fiscal balance back on track.⁶ However, instead of addressing immediate fiscal adjustment, the authorities accorded a higher priority to overcoming fiscal constraints in the medium term by establishing mechanisms to increase the flexibility of public expenditure, exercise control over state and local finances, and reform the pension and social security systems. The authorities were reluctant to seek congressional approval of revenue measures when constitutional reforms were under consideration by Congress. This does not mean that the Brazilian authorities never took tough fiscal measures. For example, faced with a major international turbulence in November 1997, they announced a package of fiscal measures ("the Package of 51"), estimated to yield over 2.5 percentage points of GDP.⁷ Its implementation, however, faltered in the face of electoral pressures in 1998.

The IMF was generally realistic about the political constraints, including risks to implementing agreed measures. In internal papers, for example, staff judged

⁶For example, in mid-1997, the staff suggested the elimination of tax exemptions that were determined administratively, increases in wholesale tax rates by decree, stronger efforts to collect tax arrears and cuts in budgeted appropriations, as well as efforts to reduce payroll spending within existing constitutional constraints.

⁷The package included a surcharge on upper-bracket personal income tax, increases in taxes on fixed income investments, and increases in public sector tariffs. Regional tax incentives were reduced. Discretionary federal government spending was fixed in real terms, and the planned increase in the wage bill was substantially reduced. Limits on bank financing for state and municipal governments were tightened. Public enterprise spending, particularly on investment, was curtailed. Social security benefits were restricted.

that the November 1997 package would deliver the projected savings if implemented in full, but correctly pointed out the risk that spending pressures would build during the election year 1998 “particularly if external constraints ease”; the limitations faced by the federal government in controlling the states; and possible slippage in securing congressional approval for fiscal measures. The Article IV consultation report in January 1998 presented the implementation risks less starkly than did internal documents, although it did note that steady implementation of the fiscal package would be essential to reduce Brazil’s vulnerability.

While progress was slow, enough groundwork on fiscal reform appears to have been done by the Brazilian authorities to facilitate fiscal adjustment under the 1999 program. Importantly, this included measures to control fiscal relations between the federal government and states and municipalities, which were linked to debt restructuring agreements. In this context, several Brazilian officials interviewed noted the useful contribution of IMF technical assistance in this area, including public debt policy and management. The experience of 1999 shows that it was indeed possible to tighten fiscal policy, given sufficient political will.

Exchange rate policy

The case of Brazil posed a number of challenges to the IMF’s approach to exchange rate policy. The Articles of Agreement have been interpreted as mandating that the IMF should take the exchange rate regime preferred by the authorities as given and try to ensure that other macroeconomic policies are consistent with it. Surveillance guidelines, however, state that Article IV consultation discussions and reports should include an accurate description of a country’s exchange rate regime, a candid appraisal of its appropriateness and consistency with underlying policies, as well as a forthright assessment of the exchange rate level.

Throughout the precrisis period, the IMF remained concerned about substantial real exchange rate appreciation and its adverse impact on Brazil’s external competitiveness, especially given the country’s poor export performance. However, implicit in its policy advice was the judgment that a gradual real depreciation could resolve the overvaluations, as long as this was supported by fiscal adjustment. Earlier in 1995, particularly in the aftermath of the Mexican crisis, there was greater skepticism—and much internal debate—as to whether the exchange rate system could be sustained (Box A3.2). Even then, internal papers reveal that the IMF favored a gradual exchange rate adjustment, combined with a major tightening of both fiscal and credit policy, rather than a step devaluation to counter current account problems.

Typically, the IMF’s policy advice was to accelerate the rate of depreciation within the de facto crawling peg system. Staff feared that floating the currency carried a substantial risk of overshooting. As time went on, concerns about overvaluation were downplayed, and the staff increasingly accepted the authorities’ arguments minimizing the size of any overvaluation, particularly in view of buoyant capital inflows that more than financed the current account deficit. Although at times the authorities indicated that they were open to accelerating the rate of crawl, they generally took the position that this would not noticeably benefit the current account and risked destabilizing market expectations and confidence.

The IMF was prepared to advise more drastic action *in extremis*, including a step devaluation or floating the currency. For example, at the time of the Asian crisis in mid-November 1997, IMF staff proposed that if there was a strong attack on the real, the exchange rate regime should not be defended. Management, however, advised against recommending a free float unless the band became totally untenable. The authorities reiterated their opposition to a discrete devaluation or a float, because of likely overshooting. In the event, Brazil weathered strong market pressure by raising interest rates sharply, announcing fiscal measures, and intervening heavily in the foreign exchange market.

Executive Directors generally supported the staff’s advice for a gradual acceleration of the crawl, though some believed even such an acceleration would be unnecessary or inadvisable. But there were exceptions. For example, in the discussion of the Article IV consultation in March 1997, one Executive Director argued that consideration should be given to allowing the exchange rate to float, so as to avoid an exchange rate crisis if investor confidence were to weaken. Most Directors, however, were of the view that, in the prevailing unsettled market conditions, any significant change in policy could lead to a loss of confidence. Some Directors encouraged the authorities to introduce greater flexibility into exchange rate policy, once market conditions had stabilized. At a meeting of the Executive Board on the Article IV consultation report in February 1998, staff orally disclosed that they had discussed a number of options with the authorities, including a discrete currency devaluation, more flexible exchange rate management, an acceleration of the rate of crawl, and the possibility of using a currency basket as a reference currency. One Executive Director, however, expressed displeasure over the absence of a clear discussion of exchange rate options in the papers prepared for the Board by staff.

While it was generally agreed that the currency was overvalued, there was considerable disagreement about the extent of the overvaluation (Figure A3.1).

Box A3.2. Brazil: The Evolution of Exchange Rate Policy

In the period immediately preceding the introduction of the real, the exchange rate was allowed to depreciate in line with contemporaneous inflation.

The real was introduced on *July 1, 1994*, with the unit of real value (URV) converted into the real at parity with the U.S. dollar. An exchange rate band of R\$0.93 to R\$1 = US\$1 was initially established, but the exchange rate was ultimately allowed to appreciate in nominal terms to R\$0.83 to US\$1 in late 1994, with the floor of parity with the U.S. dollar maintained. The exchange rate was maintained at about R\$0.84 per U.S. dollar until March 1995.

Exchange rate policy was altered on *March 6, 1995* to a system of more depreciated adjustable bands, with a preannounced substantial further widening of the band from May 1995. This followed a rapid loss of reserves, reflecting a sharply widening current account deficit and weaker capital inflows following the Mexican crisis. However, in part owing to a lack of clarity about how the arrangement would operate and renewed pressures on the exchange rate, the policy was altered again on *March 8, 1995*, only two days later, with the adoption of a band of R\$0.88 to R\$0.93 per U.S. dollar. An inner band was established within this framework, which began to be operated as a de facto crawling peg, depreciating at an (unannounced) rate of about 0.6 percent a month. The outer band was periodically adjusted (approximately annually) to accommodate this rate of crawl, but had little operational significance.

In *April 1998*, the authorities introduced a marginal change in exchange rate policy by announcing a progressive widening of the inner band, initially just 0.4 percent wide, by 0.1 percent a month for the following three years.

On *January 13, 1999*, the inner band was abolished and the outer band became the operational band. It was initially established at R\$1.20 to R\$1.32 per U.S. dollar. It was announced that the band would evolve under a complex “endogenous diagonal band system” under which the rate of depreciation of the upper limit of the band would be faster when the actual rate was close to the lower limit of the band and vice versa. As the exchange rate fell immediately to the more depreciated boundary of the band, this involved a depreciation of about 9 percent.

On *January 15, 1999*, the exchange rate was allowed to float freely. This decision was confirmed on January 18, 1999, after consultations in Washington with IMF management. The program left some scope for Central Bank intervention in foreign exchange markets, although it was understood that this would not involve defending any specific exchange rate.

The IMF staff initially noted a strong real appreciation when the Real Plan was launched. In February 1995, the staff put the real appreciation since June 1994 at 33 percent in terms of the general price index. By late 1996, however, there was a tendency to downplay these figures, possibly in response to the views of the Brazilian authorities who used a wide range of arguments to suggest that any overvaluation was at most moderate (see Franco, 2000).⁸ The staff argued that the currency had been undervalued at the outset of the Real Plan and the subsequent significant real appreci-

ation had been offset to some extent by productivity increases which were not fully reflected in prices. It also indicated that a pickup in export growth during 1997 weakened their arguments in favor of accelerating the rate of depreciation, although export volume growth of 10 percent in 1997 in fact was no greater than the increase in world trade volume.⁹

The net result was that, in late 1998, staff believed that the exchange rate was overvalued by 15–20 percent. The behavior of the exchange rate, after it was allowed to float in 1999, as well as comparison with outside assessments, suggests that staff likely underestimated the degree of overvaluation. Recent Central

⁸The authorities’ argument was threefold. First, average-on-average price indices overstated inflation in the month of transition to the new currency. Second, some of the change in relative prices between tradables and nontradables was an equilibrium phenomenon typical of sudden disinflation and not a measure of real exchange rate misalignment. Finally, the substantial productivity gains should have been taken into account over and above their effects on price indices, as increased competitiveness of domestic producers might be reflected in higher profit margins rather than lower domestic prices.

⁹In this context, an important presentational change was made by the staff in late 1997, whereby the real effective exchange rate began to be calculated relative to the 1994 average, instead of the earlier use of the level prevailing prior to the introduction of the real. This presentational change represented an upward adjustment of almost 12 percent in terms of the base period, and may have reinforced the perception that any overvaluation was manageable.

Bank estimates indicates that, measured by relative consumer prices, the real effective exchange rate had appreciated by 45 percent between June 1994 and December 1997, although this had fallen to 33 percent by December 1998. Contemporary analyses by the World Bank estimated the real to be overvalued by about 30 percent. The real effective exchange rate depreciated by some 35 percent in 1999 after the currency was floated. The exchange rate has fluctuated since then—and no doubt overshot at times—but peak levels of the real effective exchange rate have remained some 27 percent below the level of December 1998.

In retrospect, the IMF should have encouraged an earlier exit from the crawling peg regime at an opportune moment. This would have been consistent with the messages emerging from the IMF's own cross-country policy analysis of exit strategies from exchange rate-based stabilizations.¹⁰ Indeed, there were windows of opportunity to exit from a position of strength in late 1996 or early 1997, and again in the first half of 1998. The limited pass-through to inflation of the eventual float in 1999 suggests that, if well handled, carefully timed and supported by appropriate policies, floating the currency would have been possible without reigniting rapid inflation. Of course, at that time it was not clear that such a step would not lead to high inflation, although by then price stability had been established for some time.¹¹ The immediate output impact of a float would likely have been greater than occurred in 1999 because the private sector was less hedged at that time. By the same token, the adverse impact on public debt would have been correspondingly smaller.

Banking sector issues

In the post–Real Plan period, some private sector institutions encountered difficulties and three major banks failed as they lost income from the “float” after

Figure A3.1. Brazil: Real Effective Exchange Rate¹
(June 1994 = 100)



Sources: Central Bank of Brazil; and IEO staff calculations.
¹Based on INPC consumer price index.

inflation fell. The Brazilian authorities established two restructuring programs, which incorporated incentives to encourage the acquisition of weak private banks and privatization of weak state banks, resulting in a consolidation in the banking system. With strong encouragement from management, staff closely monitored these banking sector issues. The staff report for the 1996 Article IV consultation noted that the risk of a systemic problem had been effectively reduced through improvements in supervision, recapitalization, mergers, and the entry of foreign banks. The banking system, however, remained vulnerable to macroeconomic shocks and staff noted the desirability of further strengthening bank supervision.

By the time of the crisis, the IMF had analyzed in detail the risks to the financial system and rightly concluded that it was sound, with little foreign exchange risk and little systemic exposure to credit risks. The background Recent Economic Developments paper for the 1997 Article IV consultation included a detailed assessment of risks in the Brazilian financial system. The supporting papers for the 1998 SBA request included an annex on the soundness of the banking system. In relation to credit risk, staff concluded that, given low levels of lending, high capitalization, and strength of ownership, a further deterioration in asset quality was unlikely to cause strains. Currency risk in the financial sector was also small as a result of hedging through currency futures and dollar-indexed government securities.¹²

¹⁰For example, the 1997 *International Capital Markets* report noted that, while a significant part of the favorable capital market conditions was likely to prove permanent, “a lack of flexibility in foreign exchange arrangements [put] individual emerging market countries at increasing risk of being tested through a speculative attack on their exchange rate, combined with a potentially abrupt loss of access, whenever there [were] uncertainties regarding the sustainability of macroeconomic policies and structural weaknesses.” At the Executive Board discussion of the report, many Directors called for further analysis and recommendations on appropriate exit policies. A paper on this subject was prepared by December 1997, which stressed, inter alia, the importance of exiting “from a position of strength.”

¹¹Cross-country historical data suggest that the pass-through of an exchange rate devaluation to the price level is likely to be smaller if the initial real misalignment is substantial, and the devaluation is supported by fiscal and monetary restraint. However, Brazil's unusual history of devaluation and pervasive indexation meant that the relevance of cross-country evidence was questionable.

¹²It is not clear whether the financial system was so well-hedged earlier in 1998, when many financial institutions engaged in the “carry-trade” by borrowing in dollars on the assumption that the crawling peg would be sustained until the election.

Problems in the state government-owned banking sector and in federally owned banks (Banco do Brasil and Caixa Economica Federal) were more intractable. Directed loans and prolonged regulatory forbearance had resulted in undercapitalized institutions with low-quality portfolios and operational inefficiencies. The IMF argued for the privatization or closure of “state” banks as a means of enforcing fiscal discipline at the state level. A restructuring scheme allowed states to deal with institutions under their control through privatization, liquidation, transformation into a nonfinancial institution, or an approved restructuring plan. By the time of the 1998 program, staff judged that the government had dealt comprehensively with the “stock” problem of the financial system in the states, and the risk that problems would reemerge had been reduced by placing state banks under the same regulatory framework as private banks.

Capital account developments and vulnerability indicators

Developments in capital flows, including the authorities’ efforts to influence such flows with changes in taxes and regulations, were covered in surveillance, but these issues were not a central focus of the analysis. In response to comments from review departments, the staff appraisal of the 1996 Article IV consultation did note that much current account financing was in the form of capital flows that were highly susceptible to changes in investor sentiment. But elsewhere, the report downplayed these issues, taking comfort instead in an improvement in the “quality” of capital flows, noting that “volatile short-term flows” declined sharply, although the stock of short-term debt was still growing.¹³

Capital flow issues received greater focus in 1998, following the East Asian crisis. Management comments on a briefing paper in 1998 noted the importance of closely monitoring capital flows, and their potential as a source of vulnerability, notwithstanding the then strong foreign exchange reserve position. However, IMF staff was not fully informed of certain important indicators of vulnerability, including the composition of reserves, the extent of futures market intervention, and the size and composition of short-term debt. In part, this reflected deficiencies in the coverage of official data on short-term debt.

By early 1998, the IMF staff had become aware that official estimates likely excluded certain categories of short-term inflows, so that the stock of

short-term debt was being underestimated.¹⁴ It turned out that much of the capital outflows that affected Brazil between August and December 1998 were from sources that may not have been adequately reflected in official short-term debt figures:

- “Leads and lags” in trade finance had built up strongly in previous years, encouraged by arbitrage between low international and high domestic interest rates, but this buildup was not reflected in the official short-term debt figure. Reversals in “leads and lags” between August and December 1998 amounted to some US\$10 billion.
- After strong inflows in the first half of the year, there were outflows of US\$6.5 billion from fixed income funds, one of the weak areas of official figures already identified by staff.
- Another factor relates to “CC5 accounts,” that is, bank accounts denominated in local currency but freely convertible to foreign currency. They were formally only available to nonresidents, but banks also offered their resident customers legal transactions through these accounts in order to take money out of Brazil. According to Central Bank reports, outflows of unregistered fixed income investments of *nonresidents* through CC5 accounts were likely a significant component of outflows (Franco, 2000). Since the accounts were held by nonresidents, the balances in these accounts should strictly have been included in external debt. To the extent that CC5 accounts were primarily a channel for outflows of *resident capital*, a broad assessment of vulnerability should have noted the extensive outflows that had occurred through these channels in previous years.

In September 1998, the staff noted that a reliable assessment of the pressures on reserves was hampered by gaps in information on short-term liabilities, leading to an intensive dialogue and investigation on these issues. Unlike Korea, however, these informational weaknesses did not have a critical impact on assessing the likelihood that a crisis would occur. In part, this reflected the relatively large cushion of remaining usable reserves (Figure A3.2).

There were also problems relating to the quality of reserves, some of which staff only became fully aware of during the intensive preprogram negotiations. These included:

- As of September 1998, some US\$6.8 billion of Brazil’s US\$45.8 billion in reserves consisted of

¹³There were numerous inconsistencies in the figures on short-term flows in the report, reflecting a lack of clarity in the data. For example, in medium-term projections, the stock of external short-term debt was shown as *declining* by US\$6 billion in 1996 when in fact it had grown strongly.

¹⁴In 1995, there was major discrepancy between short-term capital inflows in the balance of payment (US\$18 billion) and the increase in short-term external debt (US\$1.9 billion), which could have alerted the IMF to these shortcomings early.

holdings of Brazil's own Brady bonds, valued at their purchase price. Not only did these not constitute claims on nonresidents, but their market value was lower and there were doubts about their liquidity, particularly in a crisis when they might be needed.

- Some US\$5.8 billion of the reserves were held as deposits in overseas branches of Brazilian banks, notably Banco do Brasil. Some of this was on-lent to exporters on greater-than-overnight maturities and so was not available for the authorities' use.
- The Central Bank's futures position stood at about R\$35 billion in September 1998. A large futures market position had been initiated a year earlier, in September 1997, as the Central Bank intervened extensively, indirectly through the Banco do Brasil, to counter exchange rate pressures.¹⁵ From market sources, IMF staff quickly became aware of the possibility that the Brazilian authorities might be intervening in the futures market through the Banco do Brasil, but for a long time did not know the size of this position. After being run down in the first half of 1998, the position was substantially rebuilt in August and September 1998. The size of the position was an important factor in assessing the potential impact of a sharp exchange rate depreciation on public debt, on the one hand, and on the financial and corporate sector, on the other. A further important consideration was the extent to which it posed a potential drain on reserves. These considerations were analyzed in a staff paper at the time of the 1998 program, which concluded that as counterparties were almost all residents hedging existing exposures, the unwinding of the Central Bank's futures book did not pose a threat to official reserves different from that posed by domestic liquidity in general.

However, in contrast to Korea, there was no disclosure of information that might have destabilized market expectations.

Given the importance of informational issues in other capital account crisis cases, it is surprising that greater efforts were not made to obtain such information earlier in surveillance. An initial effort by the IMF following the Mexican crisis to improve access to Brazilian data was not sustained. In part, this is the result of the IMF's lack of authority

¹⁵One source of this pressure was the need for the offshore operations of Brazilian financial institutions to meet margin calls on aggressively leveraged positions in international assets, including Brazilian Brady bonds.

Figure A3.2. Brazil: Foreign Exchange Reserves¹
(In billions of U.S. dollars)



Sources: IMF database; Central Bank of Brazil; and IEO staff estimates.
¹Net of IMF and BIS-coordinated credit.

to compel disclosure of information, particularly when there was no program. The authorities were reluctant to disclose market-sensitive information to the IMF because of the fears that it might quickly lead to its dissemination to the market. While Brazil published a good deal of detailed data, it was one of the few major emerging market economies that did not subscribe to the IMF's Special Data Dissemination Standard (SDDS). For much of the precrisis period, data on foreign exchange reserves were only published with a lag of about seven weeks.

In this respect, recent initiatives may be beneficial in closing gaps in the information available to the IMF and to the markets, particularly concerning foreign exchange reserves, provided that the SDDS is voluntarily complied with. The comprehensive "template" on foreign exchange reserves and potential drains on reserves, which was added to the SDDS in 1999, and to which Brazil now subscribes, would have required the dissemination of comprehensive detailed data on the composition and disposition of reserves, and the futures market position, after only a short lag.

The situation is less clear for short-term debt, given the inherent difficulty of collecting such data comprehensively in a timely manner. From March 2003, the SDDS requires the disclosure of data on short-term debt, and IMF guidelines for Article IV consultations also note that there should be a discussion of any known shortcomings in the coverage of official data. Moreover, a new Guide has been prepared by an IMF-chaired group of international agencies, providing comprehensive guidelines for measuring and presenting external debt

statistics.¹⁶ These steps should contribute to the publication of more timely and comprehensive data on short-term debt in the future. However, the operation of the SDDS to date suggests that a country is likely to be formally treated as in compliance if it publishes timely short-term debt data, even if its coverage or quality is lacking in some respects.

Impact of surveillance

The key themes of IMF policy advice during the precrisis period were the urgency of fiscal adjustment and the need to boost competitiveness, typically through more rapid depreciation of the crawling peg. The extent to which these recommendations had an impact on policy implementation was limited. In practice, little was achieved in fiscal consolidation, with the consolidated public sector remaining in approximate primary balance—or running a small primary deficit—between 1995 and 1998. Moreover, the modest exchange rate depreciation of 7 percent a year was kept unchanged from March 1995 until at least early 1998.

There were at least three reasons why the impact of IMF policy advice was limited. First, one explanation was the lack of effective dialogue between the IMF and the Brazilian authorities, particularly those at the Central Bank. Some participants interviewed by the evaluation team attributed this, at least in part, to the fact that the IMF did not back the Real Plan with a program, which made some of the architects of the Real Plan less receptive to IMF advice. According to staff, relations were satisfactory at the working level, but a lack of endorsement from senior levels inhibited the flow of information from the Central Bank, where the staff had limited direct access to sector experts.

On the central issue of exchange rate policy, the authorities were generally unreceptive to outside advice. Tensions within the Brazilian economic team over exchange rate policy, in the early stages of the Real Plan, led to the resignation of a Central Bank Governor in early 1995. Subsequently, according to some senior officials interviewed, discussion within the authorities of alternative exchange rate policies was infrequent and limited. In this context, the IMF clearly faced significant challenges in influencing exchange rate policy.

The IMF made efforts to improve relations with the Brazilian authorities from the mid-1990s, in part through providing technical assistance, and there is some evidence that the quality of dialogue—at least with the Finance Ministry—improved from about

1997 onward. Back-to-office reports in 1997 and 1998 describe the dialogue with the authorities as “open and candid.” However, it also appears that there was some tendency to tailor advice at the margins to build trust with the authorities, for example, in assessing exchange rate overvaluation. According to some IMF staff members interviewed, the IMF was inclined to give the Brazilian authorities the benefit of the doubt, in part because it had earlier been too skeptical about the Real Plan.

Although IMF missions and contacts typically focused on their direct counterparts in the Ministry of Finance and the Central Bank, there were some efforts to reach out to other parts of the government. Owing to the centrality of state and municipal finances to the key fiscal questions, surveillance missions visited state and local governments. There was also some limited interaction with key members of Congress with expertise in economic and financial issues. Broader and more formal interaction with Congress was viewed by the authorities as potentially counterproductive. Missions were aware of private sector perspectives through market contacts in Brazil, and at times derived important information from them, for example, on government intervention in futures markets.

Second, another reason why the impact of IMF advice on economic policy was limited was the lack of transparency in these matters. Little or none of the IMF’s analysis of developments in Brazil was made public, apart from references in the *World Economic Outlook* and *International Capital Markets* reports.

Virtually no analytical work on Brazil was published, given the sensitivity of the authorities, including the Brazilian Executive Director, to open discussion of policy issues involving Brazil. A higher-than-general degree of secrecy applied to Executive Board papers on Brazil, so that even staff reports for Article IV consultations were individually numbered and named to inhibit copying and leakage. There was also a high degree of sensitivity on the part of the authorities regarding the content of staff papers that, according to staff, inhibited the candid written expression of staff views, including to the Executive Board.

The IMF’s subsequent transparency initiatives have enabled some progress to be made in this area. Even with these initiatives, however, explicit authorization from the authorities is required before the staff’s detailed assessment and argumentation as expressed, for example, in staff reports for the Article IV consultations may be released to the public. Although Brazil has agreed to the publication of PINs and Technical Memorandums of Understanding, it has not yet agreed to the publication of staff reports or the Financial Sector Stability Assessment.

Finally, a third reason why the IMF’s policy advice had limited impact was the buoyant international cap-

¹⁶The Inter-Agency Task Force on Finance Statistics, *External Debt Statistics: Guide for Compilers and Users* (Washington: International Monetary Fund, 2002).

ital market conditions between mid-1995 and late 1997. Private lenders and investors were willing to finance the large current account deficit, irrespective of the IMF's concerns on particular policy issues. Spreads on Brazilian bonds declined in line with global liquidity conditions, to around 400 basis points in October 1997 from around 1,000 basis points at the start of 1996, although there was little evidence of improved macroeconomic fundamentals that would have warranted this reduction (Figure A3.3).

Program Design

This section discusses major issues of program design in the IMF-supported program, as agreed in November 1998 and revised in March 1999 in light of the change in the exchange rate regime in January.

Support for the crawling peg

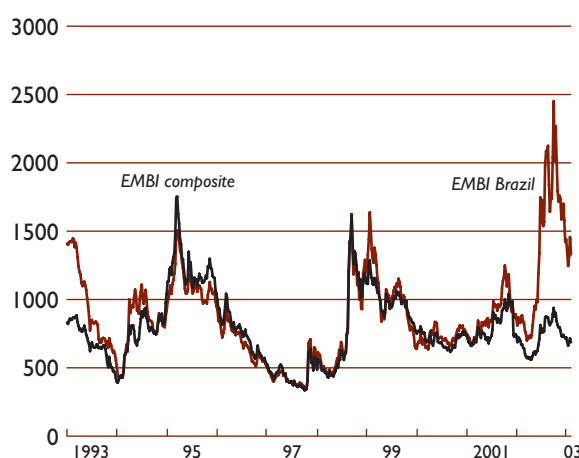
A central issue in program design was the decision to proceed with a program in October–December 1998, without substantial modifications to the exchange rate system (while allowing for possible modifications at the time of reviews). At an early stage in formulating a possible program, management requested the staff to prepare a paper on the options for exchange rate policy. In this paper, staff recognized that the authorities would take all feasible steps to prevent a devaluation in advance of the presidential election, but believed that they might afterwards consider a modification within the context of an IMF-supported program. This and other papers indicate that staff viewed greater depreciation as an essential component of a program and initially favored a combination of a faster crawl and a significant widening of the band. Subsequently, program negotiations centered on whether or not to accelerate the rate of crawl. From an early stage, staff preferred to avoid a discrete devaluation (or float) for fear that it would result in reindexation and reigniting high inflation. In contrast, in the staff's view, a faster rate of crawl could improve competitiveness substantially, with less risk of rekindling inflation.

A preliminary understanding was reached during the 1998 Annual Meetings, immediately after the presidential election, that the existing exchange rate regime could be maintained and that neither an upfront devaluation nor a float would be required, provided that reserves did not fall too low.¹⁷ A joint public statement issued on October 8, 1998 empha-

¹⁷In the event of unsustainable reserve pressure, the staff's initial tentative preference was for a discrete adjustment of the exchange rate level, perhaps to the average 1994 level, followed by a renewed crawl with a wider band.

Figure A3.3. Brazil and Emerging Markets Bond Index Spreads

(In basis points)



Sources: JP Morgan Chase; and Datastream.

sized the authorities' "firm commitment to their current exchange rate regime" and IMF management's full support for that position. Nevertheless, IMF staff and management continued to press the authorities for a faster monthly rate of crawl, a wider band, or both, to achieve at least a 10 percent real depreciation against the U.S. dollar in the first year of the program. The authorities strongly resisted accelerating the rate of crawl, on the grounds that this would only yield a marginal improvement in the already expected real depreciation and risked both destabilizing market expectations and dissipating domestic support for fiscal adjustment. Ultimately, the program announced on November 13 did not specify any change in the rate of crawl.

There was considerable internal debate on exchange rate policy within the IMF. RES suggested, in early October, that management should consider the circumstances in which Brazil should be encouraged to abandon the existing exchange rate policy. Some other review departments favored the option of maintaining the rate of crawl initially, but possibly accelerating it after a short delay when market conditions might be more favorable. These included PDR, which supported the authorities' view that any change to the existing policy would likely be counterproductive in the aftermath of the Russian devaluation. A pure float risked overshooting and could lead to a devaluation-inflation spiral. The markets would be likely to judge any "acceptable" step devaluation to be insufficient, and this would trigger further capital outflows.

The unstable global market conditions in August–December 1998 also had an impact on the decision

to maintain the peg. Staff interviews and internal documents suggest that there were three main aspects. First, there was a view that an exit from the peg under such circumstances would likely lead to greater exchange rate overshooting, and hence a greater risk of returning to high inflation, than an exit in calmer circumstances. Second, there were systemic concerns about global liquidity following the Russian crisis and the Long-Term Capital Management problems. In this context, maintenance of Brazil's exchange rate peg became identified with international stability. Finally, there was concern that an exit from the peg under pressure could have a regional knock-on effect, particularly on Argentina.

The decision to support the peg was influenced by the judgment that any overvaluation of the real was moderate, and could be offset by further real depreciation over a 9–18-month period, if the pace of the crawl was accelerated. At a press conference following agreement on the program, management publicly criticized the view that the exchange rate was overvalued by as much as 25 percent. Internal papers noted that the 10 percent real depreciation the staff was seeking over the first year of the program would bring the real effective exchange rate “close to its average 1994 level.”

The IMF's major shareholders were briefed on the status of negotiations with Brazil during the Annual Meetings. The views of major shareholders on the sustainability of the peg diverged markedly. According to staff interviews, the U.S. authorities, who in particular kept close contact with IMF management and staff, took the view that the Brazilian authorities should not be forced to change the rate of crawl, although it would have been better to engage the support strategy around an exit from the peg if Brazil had been prepared to move. A number of other shareholder governments were in principle opposed to supporting the peg. Although they were prepared to approve the program when it was formally discussed, some Executive Directors expressed their frustration at the lack of a discussion in the Executive Board on exchange rate issues before the key features of the program were determined.

The strategy to support the crawling peg was known at the time of adoption to be subject to considerable risk, although staff interviewed believed at the time that the exchange rate regime probably could be sustained for a period, given strong implementation of the program. Ultimately, it was decided to give the Brazilian authorities the benefit of the doubt. The criteria for evaluating the decision therefore should be: Did the decision have a reasonable probability of success at the time? Were the conditions required for the success of the strategy correctly identified and discussed frankly in the Executive Board? In this context, did the IMF correctly

assess the ownership of the program, not only by the counterparts with whom it was directly negotiating, but also by the wider political system? What were the consequences of the failed attempt to support the exchange rate anchor, compared with the alternative of a more immediate move to a flexible exchange rate regime in October or November 1998?

In our view, the probability of sustaining the crawling peg was lower than IMF staff and management implicitly suggested to the Executive Board and the wider public. In particular, the staff report supporting the request for the SBA was not fully frank about the risks that the program—and exchange rate policy, in particular—faced,¹⁸ although the Board discussion did highlight certain risks, particularly to implementing the fiscal program. As discussed below, the financing assumptions of the program were also overoptimistic, even allowing for the fact that they assumed that confidence would be restored rapidly.

The market's initial reaction to the announcement of the program was favorable, although considerable skepticism remained about the medium-term credibility of the peg. The speed with which the program went off track, however, resulted from a number of adverse shocks. The staff paper for the program review in March 1999 identified these as delays in congressional approval of key components of the fiscal package, doubts about the commitment of the states to meet their obligations to the federal government, and a premature and rapid reduction of interest rates.

These adverse developments resulted in part from the lack of broad ownership of the required supporting measures by the wider political system and the country as a whole. For example, the failure of the Central Bank to follow a sufficiently supportive monetary policy seems to have resulted from a lack of ownership of the monetary program at senior levels in the Central Bank, however strong its ownership of the crawling peg was. Reportedly, contrary to an understanding with the IMF, senior Central Bank officials did not feel bound to consult with the IMF on interest rate decisions. Concerns that interest rates were being reduced too fast were apparent from the time the Executive Board approved the program.

It is not clear if the IMF correctly judged the changing priorities and commitment at the highest political levels to maintaining the exchange rate regime. Initially, the ownership of the fiscal program was underlined by a high-profile speech by the President on September 23, 1998, just before the presidential election, in which he outlined the tough fiscal

¹⁸For example, RES comments on the draft report noted that the tone was too glowing to be fully credible and the staff faced difficulties in “squarely addressing the issue of the appropriate level of the real exchange rate.”

measures that would need to be undertaken early in the second term. The President also expressed to IMF management his commitment to the peg. Nevertheless, the President's commitment was subject to various political considerations. Powerful industrial circles were pressing for a faster reduction of interest rates, abandonment of the exchange rate regime, and a more "developmentalist" policy approach. According to some interviewed for the evaluation, a move to a more flexible exchange rate policy, linked with a change in the composition of the economic team, had originally been planned for early in the President's second term. No mention is made of these political tensions in internal papers seen by the evaluation team, or papers for the Executive Board, until the staff's note on recent developments for an informal Executive Board session in mid-December 1998.

The credibility of the IMF was clearly damaged by the rapid failure of a central element of the program. Some have argued that IMF support for the peg was justifiable, even if it only postponed the collapse of the peg, including during the period of program negotiations. International financial markets were exceptionally nervous at the time in the aftermath of the Russian default and the Long-Term Capital Management crisis, and devaluation in Brazil would have triggered major systemic effects. These considerations appear plausible and it is difficult to pronounce definitively on this issue. In retrospect, in view of what actually happened, the IMF likely overestimated the adverse impact of an earlier exit. Our assessment is that an orderly exit, as part of an IMF-supported program, from a peg, which was widely believed to be unsustainable, would have had limited systemic impact. It is more difficult to say, however, what would have happened if Brazil had insisted on maintaining the peg without the IMF support.

Some commentators have criticized the IMF-supported program for helping to "bail out" the Brazilian private sector by allowing it to build a government-provided "hedge" against exchange rate depreciation, with serious consequences for the public sector debt position. To the contrary, IMF staff and management were consistently critical of the authorities' provision of such a "hedge." Moreover, as noted, most of the exchange rate hedge, in the form of exchange rate-indexed government securities and futures market intervention, was in place before the program was agreed in November 1998. Between October and December, the authorities substantially reduced their futures market position (briefly to zero in early December), and the proportion of securities linked to the exchange rate fell slightly. With renewed pressure on the real, however, the Central Bank then rebuilt open futures positions to US\$10.5 billion (incurring a final loss of R\$8 billion) and used net reserves of US\$13.7 billion to defend the peg. The additional hedge that

was provided under the IMF-supported program was substantial, but it was made mainly during the final days of the peg and against the spirit of the program.

Fiscal policy and debt sustainability

Fiscal developments

The key fiscal issue in program design centered on the sustainability of Brazil's public debt. The initial 1998 program stated that the *main* objective of the government's fiscal adjustment program was to stabilize the ratio of net public debt to GDP at 47 percent in the calendar year 2000, declining thereafter (Figure A3.4). This was to be achieved through higher primary surpluses. Program projections, which assumed that domestic interest rates would decline to 17 percent by 2000 from an average 29 percent in 1998, made allowance for substantial revenue from privatization to reduce net public debt, as well as an allowance to recognize debt that had not previously been securitized.¹⁹

The revised program in March 1999 reaffirmed that the main aim of fiscal policy was to ensure the medium-term sustainability of the public debt. The sharp depreciation of the real in early 1999 had, however, substantially boosted the net public debt to GDP ratio to 52.2 percent in February 1999 from 42.6 percent at end-1998. This reflected the revaluation of external debt and foreign exchange-indexed domestic debt, as well as the Central Bank's losses on its open position in the futures market. As a result, the target for the primary surplus was raised to 3.1 percent from 2.6 percent of GDP in the original program in 1999, with 3.25 percent in 2000, and 3.35 percent in 2001.

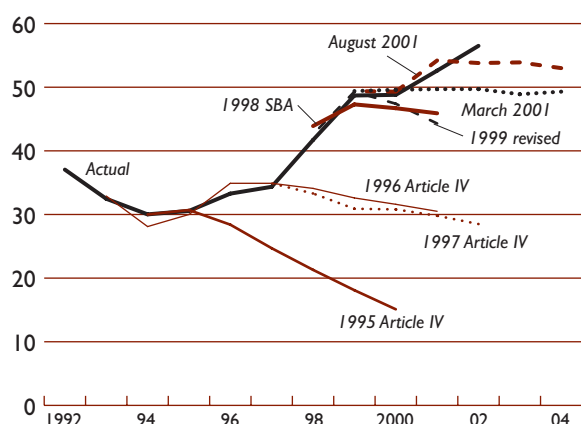
The IMF-supported programs were critical in coalescing support for a substantial and lasting improvement in the fiscal stance. Program targets for a substantial primary surplus were achieved in every year under the program, although the ratio of public debt to GDP increased markedly, from 34 percent of GDP in 1997 to a peak of 62.5 percent in September 2002, before falling back to 56.5 percent by the end of 2002. Indicative targets for the net public debt stock were frequently missed.

The root of the problem lay in the composition of Brazil's public debt, which now consists mainly of debt indexed to the short-term interest rate or the ex-

¹⁹ These so-called "skeletons" typically had their origins in imperfectly transparent fiscal practices or in the suspension of indexation mechanisms under various historical stabilization plans. They included the recognition of losses related to the recapitalization of the workers severance payment fund (FGTS) and the housing mortgage insurance/subsidy fund (FCVS). It was assumed that recognition of debt skeletons would be equivalent to 1.7 percent of GDP in 1999 and 0.7 percent of GDP in 2000.

Figure A3.4. Brazil: Debt Sustainability Projections

(Net public debt as a percentage of GDP)



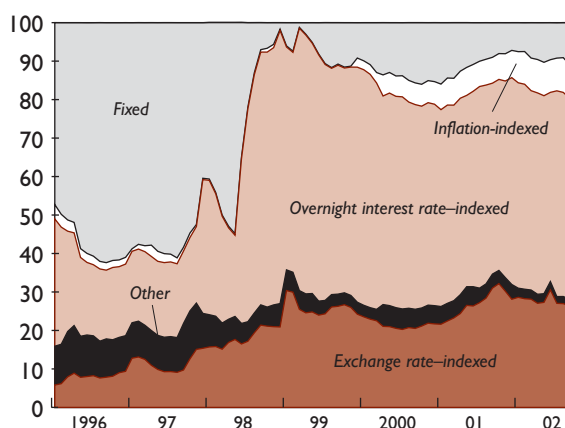
Sources: IMF database; and Central Bank of Brazil.

change rate (Figure A3.5). Following the Russian crisis, issuance of fixed-interest debt virtually stopped as the yields rose substantially, and was replaced by issuance of interest rate-indexed debt as a way of lengthening maturity and thus to reduce the rollover risk.²⁰ This, however, made the stock of public debt highly vulnerable to interest rate hikes. Moreover, the subsequent depreciation of the real increased the domestic currency value of domestic debt indexed to the exchange rate, issuance of which rose substantially following the Asian crisis as the markets began to anticipate a devaluation of the real. Selling exchange rate-linked debt also had the effect of mitigating direct pressures on the exchange rate. In 2002, the growing debt burden, and increasing market concerns over whether it could be sustained, also led to an increase in the “Brazil premium,” related to the risk of potential default, although domestic debt was not affected as external debt was.

After the sharp impact in early 1999 resulting from the floating of the real, exchange rate depreciation had only a moderate impact on the growth of the public debt stock in 2000 and 2001 (Table A3.2). There was a much greater impact in 2002, as the sharp exchange rate depreciation increased the net public debt stock by 9.5 percent of GDP. The effect of exchange rate changes on the debt stock was approximately evenly divided between external debt and domestic debt indexed to the exchange rate. Pri-

²⁰ In terms of achieving these objectives, interest rate-indexed debt was equivalent to exchange rate-indexed debt.

Figure A3.5. Brazil: Composition of Federal Domestic Securities¹



Source: Central Bank of Brazil.

¹Held outside the Central Bank.

vatization receipts also fell below projected levels. These receipts were equivalent to just 0.9 percent of GDP in 1999, well short of the 2.9 percent of GDP projected at the time of the 1999 program revision.

Conditionality

The original program included a performance criterion on PSBR and an indicative target on the primary surplus of the consolidated public sector. In the revised program, it was the primary surplus—the fiscal variable that was under the greatest control of the authorities—that was instead subjected to a performance criterion. Indicative targets on the net debt of the consolidated public sector were also introduced.²¹ It was intended to take into account deviations from these indicative targets in finalizing performance criteria on the primary balance.

IMF staff pressed the authorities to reduce the proportion of domestic debt linked to the U.S. dollar, for example, by rolling over a limited percentage of maturing securities. Rather than introducing a performance criterion, however, the IMF relied on specific, but informal, assurances from the authorities. The IMF was concerned that specifying a performance cri-

²¹ There was a performance criterion in the original 1998 program, which specified a minimum level for the recognition of previously unregistered liabilities, net of privatization receipts. From the March 1999 program revision, the indicative target for the net debt of the consolidated public sector was automatically adjusted to the extent that debt recognition varied from the assumptions underlying the program.

Table A3.2. Brazil: Factors Affecting Net Public Debt*(In percentage of valorized GDP)¹*

	2000	2001	2002
Primary surplus	-3.4	-3.5	-3.4
Nominal interest	6.8	6.9	7.3
Exchange rate adjustment	1.6	3.0	9.5
Indexed domestic debt	0.8	1.5	4.9
External debt	0.8	1.5	4.5
Debt recognition	0.8	1.5	0.9
Privatization	-1.8	-0.1	-0.2
Memorandum item: Net debt to GDP	48.8	52.6	56.5

Source: Central Bank of Brazil.

¹These ratios are expressed as a ratio of "valorized" GDP, that is, in prices of December of each year.

terion for reducing the foreign exchange-indexed debt, coupled with a binding floor on NIR, could excessively tie the hands of the Central Bank with respect to the markets and make things worse if a lack of compliance with this target under unfavorable market conditions also forced an interruption in IMF disbursements. The authorities did at times make some progress, as in the first half of 2000, but resorted to the sale of dollar-linked securities when market conditions became more difficult, and failed to achieve these informal targets. At times, little alternative was available to ensure the rollover of the domestic debt. At other times, however, a trade-off existed between the cost of selling fixed rate securities—buying "insurance" against the risk of future exchange rate depreciation—and that of selling dollar-linked securities, with a lower immediate interest rate cost, but with the public sector bearing the risk of future depreciation. While a definitive conclusion can only be based on the ex ante assessment of this trade-off involving probabilistic events, in the light of what actually happened ex post, the IMF-supported program would have been more successful in achieving its declared aim of reducing the debt-to-GDP ratio, thereby reducing the economy's vulnerabilities, if it had included stronger incentives (e.g., through stronger conditionality) for reducing dollar-indexed debt, particularly during periods of favorable external conditions.

The primary surplus targets set in successive reviews were satisfied, often with some ease. However, in some respects, these targets were unambitious and left insufficient leeway for the impact of shocks. In particular, given the greater-than-expected strength of economic activity in 1999 and 2000, the fiscal targets proved to be less demanding

than was originally intended, and there was scope to achieve a larger surplus. In 1999, 2000, and 2001, fiscal targets were exceeded in the early part of the year, but that was not sustained for the year as whole. Seasonal factors played a part, but there was also a discretionary easing of expenditure restraint toward the end of the year, once it became clear that the fiscal targets would be satisfied. Although the consolidated net public debt deviated from the indicative targets at times and this triggered more ambitious targets for the primary surplus, this process was not automatic. Substantially more ambitious targets would have been required to have a decisive impact on debt dynamics.

Sensitivity analysis

Staff papers for the 1998 SBA and its successor included analyses of debt sustainability and related sensitivity analysis. In many respects, these analyses were more thorough than was common practice in the IMF at the time. Even so, they were not effective in pinpointing underlying vulnerabilities, owing to two key factors. First, the analyses had a tendency to underestimate the degree of exchange rate depreciation required to produce a given degree of adjustment in the external accounts. Second, there was a tendency to investigate only small deviations from the baseline assumptions, rather than the larger deviations that in practice would have the potential fundamentally to alter the prospects for sustainability.

Recent proposals within the IMF to improve the assessment of sustainability through more demanding "stress-testing" offer some promise of redressing such shortcomings in the future.²² In the case of Brazil, however, it is unlikely that more demanding stress testing would have led to major differences in program design. Even without such formal analysis, staff and the authorities were clearly aware that the composition of debt carried significant risks for debt dynamics.

The original debt sustainability projections in both sets of programs were somewhat overoptimistic, in particular about the likely extent of exchange rate depreciation and its impact. Nevertheless, despite the later recurrence of more intense concerns over debt sustainability, public debt sustainability problems were not sufficiently severe at this stage to require a restructuring of public debt although, according to some market participants interviewed, there were expectations of such action for some time following the floating of the real. Such a measure would have had severe consequences for Brazil's financial sector, and for future access to in-

²²See, for example, "Assessing Sustainability," SM/02/166, May 2002.

ternational capital markets. In our view, these debt sustainability concerns could have been better addressed by more prudent debt management policies and possibly more ambitious fiscal adjustment.

Monetary policy

The initial program

Monetary policy in the initial program was intended primarily to be supportive of exchange rate policy. The monetary program incorporated a mechanism through which a fall in international reserves beyond the programmed level would be sterilized only partially, and progressively less than proportionately so. There was also an understanding that the authorities and staff would consult ahead of interest rate decisions or if there were a rapid loss of net international reserves.

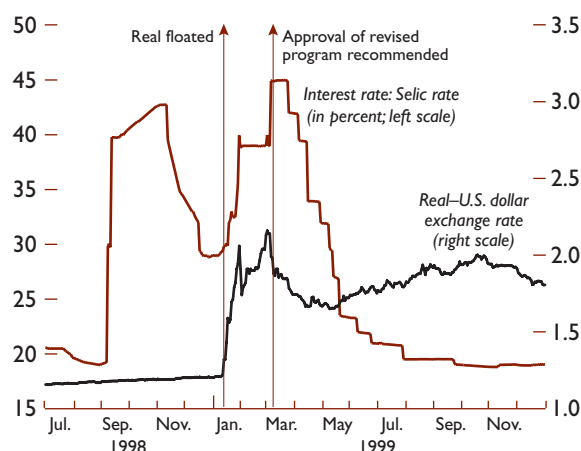
The detailed specification of the monetary program was somewhat unusual, owing to the narrow monetary base in Brazil (at the time just 4 percent of GDP) and strong day-to-day and seasonal fluctuations. The NDA targets were specified as an average of daily closing balances for each month, while NIR targets were specified as end-month balances. These targets would be adjusted to make allowance for uncertainty about how far the demand for base money would respond to the changes in the financial transactions tax (CPMF).

In the event, the program's performance criterion for the end-December 1998 level of NDA of the Central Bank was exceeded by a substantial margin. The program envisaged some gradual easing of interest rates as confidence returned, but from the time the program was approved there was concern that interest rates were being prematurely and excessively eased. At the same time, there were also concerns that high rates would not be sustainable because of the impact on public debt. The loosening of monetary policy (as reflected in lower interest rates) may have contributed to the timing—if not the eventuality—of the collapse of the crawling peg.

With the loss of the exchange rate anchor, monetary policy needed to be reformulated as the authorities, in consultation with the IMF, sought to prevent exchange rate depreciation from setting off an inflationary spiral. The interest rate increases that accompanied and immediately followed the floating of the real in January 1999 were moderate and tentative, and the exchange rate depreciated rapidly amid market concerns that a debt restructuring might be forthcoming (Figure A3.6).

IMF staff and management gave some consideration to the option of a currency board arrangement (CBA) in January 1999 and also discussed the possibility with the authorities. The authorities showed

Figure A3.6. Short-Term Interest Rate and Real-U.S. Dollar Exchange Rate



Source: Datastream.

little enthusiasm, and IMF management did not push the option, seeing strong country ownership as a necessary condition for a credible CBA.

Inflation targeting under the revised program

It was agreed to adopt an inflation-targeting framework for the medium term. In the interim, an informal approach was adopted, with the ultimate aim of rapidly returning inflation to single digits. The IMF encouraged the Central Bank to raise interest rates sharply to arrest and reverse the depreciating trend in the very near term. An increase in interest rates to nearly 40 percent at the start of February led to an appreciation, but this proved only temporary. The exchange rate only stabilized decisively after the Central Bank under the new Governor increased the overnight rate to 45 percent in March 1999 and the expectations of a debt restructuring dissipated.

The revised program approved in March, 1999 pioneered the use of inflation targeting as the basis for conditionality in IMF-supported programs, eventually introducing consultation mechanisms with staff, and ultimately the Executive Board, in the event that the rate of inflation went outside the Central Bank's target bands (Fraga, 2000; Blejer and others, 2001). To assist Brazil's transition to a new monetary regime, the IMF organized a conference in Brazil to discuss the experiences of other countries that had introduced inflation targeting and invited high-level central bank officials from a number of countries. Brazilian officials interviewed indicated that the IMF had played a positive role in facilitating Brazil's transition to inflation targeting.

The transition was somewhat controversial, however. How to accommodate inflation targeting in an IMF-supported program was a subject of considerable debate within the IMF. The conventional NDA and NIR targets pose potential conflicts with the inflation-targeting approach, but some viewed them as useful as a disciplining and monitoring device and a trigger for consultation. Others viewed them as unhelpful to the credibility and transparency of monetary policy, because of the potential conflicts and the need, under inflation targeting, to maintain flexibility to respond to price developments.

In the event, NDA targets were maintained as performance criteria in the early part of the 1999 program, while the IMF relied informally on the credibility of the management team at the Central Bank while details were worked out. There were concerns, however, that the NDA framework might not be too helpful in an environment characterized, as in Brazil, by a small and volatile monetary base. Over time, uncertainties over inflation expectations and the impact of changes in CPMF created a willingness to revise the NDA framework in the course of program reviews.²³ Eventually, when the new framework became fully operational, NDA targets were downgraded to an indicative target in the fourth review, a few months after the inflation targets had been announced.

The inflation-targeting regime was successful in reducing inflation to just 8.9 percent during 1999, well below initial expectations (see “Program projections” below). A further reduction to 6 percent was achieved for 2000, although energy-market developments and the pass-through from exchange rate depreciation later caused inflation to rise and exceed the target bands by a substantial margin. Even so, the approach has been an effective mechanism for continued consultation between IMF staff and the monetary authorities, which represents a marked improvement over a simple discussion of whether NDA targets had or had not been met.

However, using measured 12-month inflation relative to target as a trigger for such consultations was probably too backward-looking. The arrangement would likely have been more effective if a more forward-looking mechanism (such as projected inflation) had been adopted. In January 2000, the Executive Board endorsed a review-based approach to conditionality where inflation-targeting was in operation, which incorporated a forward-looking element of this sort. This approach was not implemented in Brazil, in part because of a lack of agreement on the methodology for forecasting inflation and the potential resource costs.

With a rapid stabilization of the exchange rate and early signs of relative price stability, high interest rates did not have to be sustained for long and, given the relatively low level of corporate and household leverage, did not produce the recession that had widely been expected. As a result of the rapid increase in the proportion of floating rate public debt, the major balance sheet impact of the high interest rates was borne instead by the public sector, which also bore the brunt of the balance sheet impact of exchange rate depreciation.

Structural measures

The structural content of both the initial program and its revision was modest. Policy measures were almost entirely drawn from the authorities’ existing policy agenda, and conditionality was limited to macro-critical areas (see Appendix A3.1). This was in strong contrast to the broad structural conditionality found in the East Asian programs, and in line with the principles of streamlining conditionality and focus on the importance of ownership that were adopted following the experience in East Asia. The relatively modest structural conditionality also reflected the fact that many of the distortions relevant in Asia did not exist in Brazil, at least to the same extent. Progress in structural reform, however, was mixed under the programs.

The initial program comprised a range of structural measures, including a Fiscal Responsibility Law, structural tax reform, labor market reform, social security and pension reform, and improvements in financial sector regulation. Formal structural conditionality in the program, as revised in March 1999, was more limited in scope, although the authorities’ agenda of structural reform was largely unchanged. In particular, although tax reform and labor market reform remained on the agenda and were mentioned in the Memorandum of Economic Policies, they were not subject to formal conditionality, in the form of performance criteria, structural benchmarks, or specific conditions for completing reviews.²⁴ Improvements in financial regulation, including progress on resolving state banks, remained an important area for structural conditionality throughout the program and there was significant progress. Structural conditions included requirements for statistical improvements, as well as for better provision of data to IMF staff.

Implementation of structural reforms was mixed, even when this process was subject to formal conditionality. In successive program reviews, only about one-half of the program’s structural benchmarks

²³The monetary base ultimately increased by 23.6 percent during 1999.

²⁴A draft tax reform law was submitted to Congress in December 1998, satisfying the conditionality of the original program.

were met, often because of difficulty in securing congressional approval. For example, passage of the final implementing legislation for the administrative reform was originally established as a structural benchmark in November 1999, with a target date of February 2000. After a long delay, Congress passed a law in June 2001 to complete the administrative reform, but this was not signed into law by the President.

The most critical structural measure under the IMF-supported program was the Fiscal Responsibility Law, which played an important role in achieving the program's targets for primary fiscal surpluses. The law established a general framework to guide budgetary planning and execution, with disciplinary mechanisms for any failure to observe its targets and procedures. The Fiscal Responsibility Law established prudential criteria for public indebtedness, defined strict guidelines for control of public expenditure, and established standing rules to limit budget deficits. It also forbade further refinancing by the federal government of state and municipal debt. A revised draft was submitted to Congress in April 1999. After some delay, the law was finally approved in May 2000. Other structural fiscal reforms were also subject to delays, as the authorities sought congressional approval for program measures and, in some cases, encountered judicial problems.

Progress on pension reform to link the level of pension benefits to the age and contribution history of workers was also slow. For example, there was considerable delay in the planned establishment of complementary pension funds for new civil servants to allow the capping of their pension benefits and the introduction of social security contributions for retired civil servants.

From an early stage, the authorities saw reform of the system of indirect taxation as the most difficult of the pending reforms. The aim was to limit the scope for "fiscal wars" among the states, reduce evasion, and minimize the distortions caused by "cascading" taxes, by streamlining a variety of existing federal, state, and municipal indirect taxes into a national VAT, to be shared by the various levels of government, complemented by a low retail sales tax and selected excise taxes. The legislation ran into difficulty in Congress and little progress was made, although successive IMF missions continued to press the authorities on the issue. It is unlikely that making the tax reform a structural benchmark would have led to substantially greater progress on the issue.

In our view, the concentration of structural conditionality on a limited number of macro-critical measures was appropriate. The limited progress in structural reform largely reflects the limits on Brazil's political implementation capacity, rather than shortcomings in program design. However, at the margin, slightly more ambitious structural conditionality

(possibly including central bank independence) would likely have reduced Brazil's vulnerability to confidence shocks.

Official financing and private sector involvement

Official financing

Calculations in October 1998 estimated the financing gap for the remainder of 1998 and 1999 to be some US\$27 billion, even if there were a 100 percent rollover of short-term debt, no further disinvestment by nonresidents, and no further capital flight. The gap could be double that size, if short-term debt was only partially rolled over and other drains occurred. RES, however, argued that some US\$100 billion in usable resources (including remaining reserves) was needed to deter capital flight and to prevent the program from failing. This would imply substantial additional financing from bilateral official sources or new money to be raised by the private sector, in addition to the rollover of existing exposure. RES further argued that the program was not sufficiently financed to restore confidence.

In the event, the original program assumed that the overall capital account balance for 1999 was US\$33 billion (Table A3.3). The package thus provided the IMF's own resources of US\$18 billion, supplemented by a further US\$15 billion in bilateral loans arranged through the BIS and a bilateral loan from Japan, and support packages from the World Bank and the IDB totaling about US\$4.5 billion each.²⁵ Brazil drew on both the IMF and BIS lines at an early stage in December 1998, in part to demonstrate that the announced bilateral support was indeed available, and not subject to the problems that bedeviled the "second line of defense" for Korea.²⁶

The financing assumptions of the original program proved to be much too optimistic about how the program and the support package would affect market confidence and private capital flows. The eventual capital account balance for 1999 was US\$15 billion, even though FDI was underestimated by some US\$11 billion. There was an eventual net outflow of US\$7 billion in 1999 in "other" medium- and long-term capital compared with a program projection of zero, in part because medium-term amorti-

²⁵Of this total, SDR 3.9 billion was from the credit tranches, with the remainder made available under the SRF. An innovative feature of the original program was that all SRF drawings after the first could be brought forward within a given quarter, subject to a separate Executive Board review, but this feature was not retained in the revised program.

²⁶There were, however, some doubts over the continued availability of Japanese bilateral assistance at the time of the program revision in March 1999.

Table A3.3. Brazil: Financing Assumptions and Outturns*(In billions of U.S. dollars)*

	1997	1998		1999		
	Outturn	Program	Outturn	Program	Revised program	Outturn
Current account balance	-33.3	-32.9	-33.6	-26.0	-16.5	-25.1
Capital account balance	25.4	19.7	15.9	33.0	5.5	14.5
Investments	20.8	19.7	20.6	22.3	18.6	30.0
Of which						
Foreign direct investment	16.9	23.9	25.9	18.8	17.0	30.0
Long-term capital	18.6	31.8	35.8	5.8	-6.8	-4.1
Multilateral agencies	1.6	2.6	2.7	5.2	5.8	3.0
Other	17.0	29.2	33.1	0.6	-12.6	-7.1
Other	-14.0	-31.9	-40.6	5.0	-6.3	-11.4
Of which						
Brazilian lending abroad	-1.8	-2.6	-2.8	0.0	-0.2	-0.7
Short-term bank lines	-14.9	-7.5	-2.8	8.0	-2.0	-0.5
CC5 accounts	{2.8}	-24.4	-24.8	-12.0	{-4.1}	-10.4
Other		2.6	-4.7	9.0		-0.7
IMF + bilateral support	0.0	10.2	9.3	11.7	15.5	3.0
Change in reserves (- = increase)	7.9	3.0	8.4	-4.6	-4.5	7.5

Source: IMF database.

zation due for 1999 was underestimated by about US\$10 billion.²⁷ Short-term bank flows were unrealistically assumed to be substantially positive. Moreover, some US\$9 billion of positive flows (excluding CC5 outflows) had to be assumed in the residual “other flows” category, in order to complete the financing picture.

The revised program in March 1999 incorporated a substantially less optimistic external financing picture than the original program. Overall, these projections proved to be too pessimistic, because they again substantially underestimated FDI. Other components of the financing projections, showing moderate net outflows of both short-term and medium-term capital, turned out to be broadly accurate.

The staff shared the view of the Brazilian authorities that new capital controls on outflows—such as limits on purchases of foreign exchange in the so-called “floating market”—should not be used, since

they were unlikely to be effective for more than a short time in a financial system as sophisticated as Brazil’s, and would have implications not only for Brazil’s future market access, but also for other countries in the region. Moreover, they feared that the imposition of extensive capital controls by Brazil could have adverse systemic consequences. There was some brief discussion within the Central Bank of imposing capital controls as the exchange rate came under pressure in December 1998 and January 1999, but this option was not seriously pursued (see Lopes, 2000).

The support package was not at first successful on its own in catalyzing private sector flows, although it probably contributed to some diminution in the pace of private outflows. However, once a more credible revised program was in place, private flows recovered and permitted emergency support to be repaid ahead of schedule. One feature that helped the support package eventually succeed was the assurance of market participants that the support was ready to be used, with NIR floors set so as to permit the use of some of the support for intervention. In arguing for such floors, management noted that, in view of the authorities’ insistence on maintaining the existing exchange rate policy and markets’ apparent doubts about its viability, it would be necessary to reassure potential lenders that their money would not be wasted in an all-out defense of the exchange rate.

²⁷By the time of the revised program in March 1999, amortizations of medium- and long-term debt for 1999 had been revised up to US\$45.7 billion from US\$34.7 billion in the original program. Some of the medium-term debt flows that surged in the first half of 1998 had a maturity of just over one year in order to meet new Central Bank restrictions on minimum borrowing periods. At the time of the original program, official data on the debt stock, and hence the amortization schedule, had not been updated to include them. Staff papers in the first half of 1998 emphasized the strength of medium-term flows, and thus drew too sharp a distinction between short-term and medium-term capital flows.

Private sector involvement

The original program included limited voluntary PSI. Even before the agreement was concluded, the IMF staff believed that it would be desirable to convince major creditor banks to maintain their exposure, possibly through concerted moral suasion by the Central Bank of Brazil and the authorities of creditor countries. The possibility of using some of the support package to catalyze “new money” was also considered. The Brazilian authorities, however, resisted pressure from some shareholder governments to incorporate mandatory PSI in the program. They believed that mandatory rollovers were unnecessary and rumors of such arrangements could increase uncertainty and cause creditors to retreat. They feared that the implementation of a mandatory rollover would have a long-lasting adverse impact on Brazil’s ability to borrow. Nevertheless, they agreed to visit a number of financial centers to approach creditor banks for voluntary commitments to maintain trade and interbank lines for Brazil. A number of Executive Directors, particularly those representing some of the European shareholder governments, indicated that their continued support for the program at the time of later reviews would depend on the achievement of an adequate rollover rate for private lending.

The IMF quickly helped establish a monitoring system based on the Central Bank’s existing information systems. The coverage of the monitoring system was limited primarily to interbank lines, with direct loans to corporations typically not covered. Initially, only the largest borrowing banks were included. Moreover, although bank lending was an important component of Brazil’s stock of short-term debt, there remained many other potential drains on Brazil’s reserves.

Although capital outflows did ease for a while, the impact of these “road shows” was limited, largely because of market concerns over the credibility of the program, and continuing fears that a more coercive approach to PSI might be introduced subsequently. Rollover rates for interbank credits varied between 65 percent and 71 percent between December 1998 and February 1999.

In March 1999, the revised program incorporated a renewed effort to obtain voluntary commitments from creditor banks to support Brazil, with the authorities again reluctant to impose a Korean-style rollover. In the event, major commercial bank creditors agreed to maintain their trade and interbank exposure at the level of the end of February 1999 through the end of August 1999. Although the commitment remained voluntary, greater official and peer pressure was invoked than had been the case in November 1998. Four senior international bankers were appointed to coordinate the private sector’s re-

sponse to the request. Representatives of the official sector were present at a series of meetings in major financial centers in early March 1999, where the commitments were made. The IMF facilitated by monitoring developments and providing information and technical support. It also put some pressure on creditors to agree, with the Managing Director publicly announcing that the effort to secure voluntary commitments “would be a key factor in the consideration of the program by the Executive Board.”

The agreement on the voluntary commitments stabilized markets, and expectations of a potential debt restructuring dissipated. In part, this was achieved by demonstrating to investors that bankers believed the revised program to be credible. The relatively light touch employed both by the authorities and the official sector, including the IMF, minimized any negative impact on future lending to Brazil. The agreement was not extended after it expired at the end of August 1999, but this did not result in a renewed reduction in exposure.

The voluntary approach to PSI was effective and broadly appropriate in the case of Brazil, and liquidity problems were rapidly overcome. In March 2000, the authorities indicated that, in view of the improved external position and outlook, they would repay in advance the purchases made under the SRF, along with the outstanding amounts received under the BIS-Japan facility, and would treat the IMF arrangement as precautionary.

Before the program could be completed, however, concerns over the external environment, including developments in Argentina, led the authorities to draw again on the arrangement and to agree on a further SBA. This arrangement was canceled in mid-2002 and replaced by a new arrangement, as worries over policy continuity after the approaching elections led to a large increase in spreads on Brazil’s external debt and an interruption in private capital flows. The success of the earlier voluntary approach encouraged a private-sector-driven effort to maintain lines in mid-2002, which helped mitigate capital account pressures for a time.

Program projections

Staff projections turned out to be too pessimistic in both the original 1998 program and, to a greater degree, the March 1999 program, notably in terms of growth projections (Table A3.4). This was a marked contrast to the experience with the crisis countries in East Asia. Criticism of overoptimistic projections in East Asia influenced the projections adopted for Brazil. Even so, errors in the projections for both East Asia and Brazil reflect similar weaknesses in methodology. Staff noted, however, the difficulties posed for GDP projections by weaknesses in the na-

tional accounts available at the time, which made reconciliation of external developments with demand and output forecasts highly uncertain.²⁸

In the original program, output was expected to contract by 1 percent in 1999, owing to front-loaded fiscal adjustment and high interest rates, before recovering. Staff drew attention to factors that were likely to operate in favor of a strong output performance, particularly the relatively sound banking system and low corporate leverage, as well as expectations of strong FDI. Inflation was expected to remain low. Import volume was projected to fall, because of weak demand and some real exchange rate depreciation. This would result in a narrower current account deficit of US\$26 billion.

Macroeconomic projections were altered substantially when the program was revised. The forecast for real GDP was brought down to an average decline of 3.8 percent for the year, owing to weaker external financing than was expected, which would require a substantial narrowing of the current account deficit. The depreciation was also expected to affect corporations' balance sheets, but little was known about the extent to which these were hedged against exchange rate risk. The Western Hemisphere Department (WHD) viewed the forecast as deliberately cautious, in order to convince the markets that the targeted fiscal path was consistent with sustainable debt dynamics, even if output developments were adverse.

Many observers, both within the IMF and outside, including a number of Executive Directors, nevertheless regarded the growth projections as optimistic, possibly reflecting the experience from East Asia. Internal comments from review departments, as well as some Executive Directors, also stressed that overoptimistic projections risked the program's credibility. The IMF's projection was broadly in line with those of the Brazilian private sector, but some international analysts were even more pessimistic.

In the event, the IMF projections proved overly cautious, and real GDP grew by 0.8 percent in 1999. Stronger-than-expected capital inflows resulted in a lower current account adjustment, and hence higher activity. An important reason for this outcome was that there was no financial crisis and the corporate sector was not dependent on debt finance. Because financial institutions were likely overhedged, the depreciation of the exchange rate and temporarily elevated interest rates had a limited (and possibly even benefi-

Table A3.4. Brazil: Macroeconomic Projections
(In percent change; in billions of U.S. dollars)

	1998	1999	2000	2001
Real GDP				
1998 SBA	0.5	-1.0	3.0	4.0
Revised 1999	0.2	-3.8	3.7	4.5
Outturn	0.2	0.8	4.4	1.4
Current account balance				
1998 SBA	-32.9	-26.0	-25.7	-24.7
Revised 1999	-34.9	-16.5	-16.7	-17.3
Outturn	-33.6	-25.4	-24.6	-23.2
Gross fixed investment				
1998 SBA	0.7	-9.5	7.3	10.7
Revised 1999	-0.7	-18.2	7.4	10.9
Outturn	-0.7	-7.6	9.6	-0.2
CPI				
1998 SBA (end-period)	2.7	2.2	2.2	2.2
Outturn (end-period)	1.7	8.9	6.0	7.7
Revised 1999 (average)	3.8	8.6	7.8	5.2
Outturn (average)	3.8	4.8	6.2	6.8

Sources: IMF database; Central Bank of Brazil; and IEO staff estimates.

Note: The documentation for the first and second program reviews provides projections for consumer price inflation only in terms of "period averages" rather than end-period comparisons, as in the original program.

cial) impact on private sector balance sheets, albeit at the cost of a substantial increase in public debt. Growth was projected to recover strongly in 2000 and 2001, as confidence strengthened and external financing constraints eased. Although growth accelerated to 4.4 percent in 2000, this was not sustained. Growth declined to just 1.4 percent in 2001, owing to energy shortages resulting from drought.

The outcome in terms of inflation was unexpectedly good. In the revised program, the IMF projected an "average" rate of inflation of 8.6 percent measured by the consumer price index, and some 11–12 percent measured by the general price index.²⁹ This was consistent with inflation of 17 percent December-on-December, measured by the latter index. In contrast, RES had argued in light of the Mexican experience that inflation could reach 50 percent and warned that an inflation forecast of less than 25 percent would lack credibility. Outside the IMF, in February 1999, many international analysts expected inflation of over 50 percent, with local banks typically expecting about 30 percent.

Consumer price inflation, at just 4.8 percent on average, was much lower than the 8.6 percent projected in the program.³⁰ However, the general price index rose 20 percent during the year, slightly more than projected, because of higher price increases for nontradables. Several reasons have been suggested

²⁸Quarterly national accounts broken down by expenditure categories were not available. Moreover, constant price data on aggregate demand components were based on 1985 prices, which probably substantially overestimated the weight of the foreign balance in real GDP. In addition, no historical series were available on the functional distribution of income, or the distribution of income between households and the corporate sector.

²⁹The IGP-DI of the Getulio Vargas Foundation.

³⁰Measured by the INPC index. The 4.8 percent average was equivalent to 8.4 percent, December-on-December.

for this lower-than-expected inflation, including depressed domestic demand, the beneficial impact of a good harvest, and the relatively closed Brazilian economy. Whatever the reason, the stabilization of the exchange rate and limited immediate pass-through prevented inflation from reaching a threshold that would have prompted reindexation.

Conclusions

This section summarizes our assessment of the role of the IMF in Brazil's capital account crisis of 1998–99 by highlighting the major findings in precrisis surveillance, program design issues relating to the initial program of November 1998 (principally, the core strategy of supporting the crawling peg), and those relating to the revised program of March 1999.

Precrisis surveillance

The IMF's diagnosis of the policy stance, particularly the mismatch between loose fiscal policy and tight monetary policy, was broadly correct, but there were important shortcomings. Despite the persistent large current account deficit, early concern about the extent of overvaluation was increasingly downplayed, as the IMF accepted the authorities' views on productivity gains and other mitigating factors. The IMF's policy advice should have placed greater emphasis on the need for the authorities to move quickly to a more flexible exchange rate regime, when the environment was favorable for such an exit.

Insufficient attention was paid to the buildup of short-term debt, as inflows were attracted by the difference between high domestic and low international interest rates. There were also some weaknesses in the IMF's knowledge base with regard to indicators of vulnerability prior to the crisis. This was due in part to limited transparency on the part of the authorities, but staff might also have pursued data limitations further. In the case of Brazil, however, such deficiencies were probably not critical, either in precipitating a crisis or in adversely affecting program design in response to the crisis.

The IMF paid considerable attention to banking sector issues, although it played little role in the restructuring process. By the time of the crisis, it had analyzed in detail the risks to the financial system and rightly concluded that it was sound, with little foreign exchange risk or systemic exposure to credit risks.

The impact of surveillance on policy implementation was limited and the policy dialogue between the IMF and the authorities was ineffective. In this respect, the IMF got the worst of both worlds. It had little influence as a confidential advisor, while at the

same time having little ability to influence the wider debate by publishing its views. Greater transparency, for example in publishing staff reports, would have contributed to a more open public debate and greater leverage for the IMF's policy advice, notwithstanding the generally buoyant international capital market conditions.

The initial program

The decision to maintain the crawling peg was the single most important element of the original program. In the event, the peg soon failed, resulting in some loss of credibility to large-access IMF-supported programs. In our view, the probability of sustaining the crawling peg was lower than IMF staff and management implicitly suggested to the Executive Board. A number of adverse shocks did contribute to the speed with which the program went off-track, including setbacks in securing congressional approval for some of the programmed fiscal measures and the failure to implement supportive monetary policy as envisaged in the program. More fundamentally, the failure of the central element of the program reflected limited ownership by the wider political system.

As the program lacked credibility in the markets, rollover rates on short-term debt remained modest despite a limited attempt at voluntary PSI. Under these circumstances, tighter monetary policy would probably not have been sufficient to counter pressures on the exchange rate regime. The IMF staff and management should have placed greater weight on concerns about wider ownership and signaled these risks more clearly to the Executive Board. It would have been better if there had been more transparent discussion in the Board before determining key features of the program, including exchange rate policy.

The decision to support the crawling peg in the initial program only postponed the exit from the peg. The fear that devaluation might rekindle inflation was widely held at that time, and it was not unreasonable for the IMF to share that view. It has also been argued that, in the very uncertain international climate at the time, this delay may have led to a less turbulent exit than might otherwise have occurred. With the benefit of hindsight, however, our assessment is that the IMF overestimated the adverse consequences of abandoning the exchange rate peg. An earlier exit from a peg that was widely believed to be unsustainable would likely not have had major systemic effects, particularly if the exit was made in an orderly fashion as part of the IMF-supported program.

A government-provided "hedge" largely protected the Brazilian private sector from the effects of exchange rate depreciation but had serious consequences for the public sector debt position. In prac-

tice, this exchange rate hedge had been in place before the IMF-supported program was approved, and IMF staff and management were consistently critical of it. Following the approval of the program, however, additional hedge was provided as the authorities rebuilt futures positions in an attempt to defend the peg. The additional hedge provided under the IMF-supported program was substantial, but it was made largely during the final days of the peg and against the spirit of the program.

The revised program

The revised 1999 program played a significant role in coalescing support for a substantial and lasting improvement in the primary surplus. This fiscal retrenchment was crucial to the success of the later transition to a regime based on inflation targeting and floating exchange rates. Nevertheless, the ratio of net public debt to GDP rose substantially by 2002, rather than declining as was the central declared aim of the programs. This was largely due to the debt composition and greater-than-anticipated exchange rate depreciation. The IMF encouraged the authorities to take advantage of favorable circumstances to reduce exchange rate-linked debt, including through informal agreements to limit rollovers. It would have been better to use stronger conditionality to generate greater incentives for the authorities to reduce the share of exchange rate-linked debt, particularly when the external environment was favorable.

Stress-testing of the debt projections was more thorough than was common practice at the time, but did not foreshadow the deterioration in the debt-to-GDP ratio that occurred in practice. Even so, more demanding stress-testing probably would not have led to major changes in program design, given the existing awareness of the risks that the debt composition posed for debt dynamics. More ambitious targets for primary surpluses would have contributed at the margin to more favorable debt dynamics, but the required tightening would have needed to be substantially more ambitious to have a decisive impact.

The voluntary approach to PSI was broadly appropriate. The voluntary approach encouraged a rapid return to international capital market access, which contributed to the repayment of much of the large official support package after a little more than a year. Factors affecting the initial success of the revised program included the flexibility to use some of the official support package to intervene in foreign exchange markets, and the abandonment of the exchange rate peg while foreign exchange reserves were still relatively high.

After the exit from the peg, substantially higher interest rates accompanied by judicious interven-

tion were effective in arresting and reversing the exchange rate depreciation. There was little adverse effect on the private sector, which was not highly leveraged, although there was some impact on the public debt position. In any event, interest rates were quickly eased once the exchange rate stabilized. The transition to inflation targeting was flexibly and successfully handled. However, the maintenance of NDA targets in the transition to a formal inflation-targeting framework added little to the credibility of policy, while compromising its transparency, because such targets were inconsistent with the authorities' own policy formulation process.

Implementation of the program was generally good, although there was some slippage on structural benchmarks, particularly during 2000 and early 2001, and some informal understandings were not fully implemented. Structural conditionality of the program was appropriately limited to a small number of macro-critical areas, with much of the authorities' agenda of structural reform not subject to formal conditionality. The Fiscal Responsibility Law, eventually passed in the spring of 2000, made a considerable contribution to achieving fiscal discipline. Progress on pension reform was more modest. Progress in structural reform outside the scope of IMF conditionality was limited under both the 1998 and the 2001 programs. In particular, little progress was made in reforming the tax system, and central bank independence was not established. The limited progress in structural reform largely reflects the limits on Brazil's political implementation capacity, rather than shortcomings in program design.

Program projections were too pessimistic with respect to output. The staff identified many of the factors that had contributed to the better-than-projected outcome, including limited leverage and the strength of the financial system but, in the light of experience in the earlier Asian programs, projections were overly influenced by concerns that they would lack credibility if they were seen to be as too optimistic. Weaknesses in methodology also contributed to this excessive pessimism.

Under the revised program, the IMF facilitated Brazil's transition to a more disciplined fiscal regime and a new monetary regime based on inflation targeting. However, fiscal adjustment turned out to be insufficient to achieve the debt management objectives. With a composition of public debt that was highly vulnerable to exchange rate and interest rate risks, Brazil remained vulnerable to external and domestic shocks that affected market sentiment. Underlying vulnerabilities were never eradicated, and concerns over the sustainability of Brazil's public debt burden led to renewed difficulties in 2002.

Appendix A3.1

Brazil: Selected Conditionality Under IMF-Supported Programs, 1998–2000

1998 Stand-By Arrangement

1. Quantitative performance criteria:
 - Ceilings on the cumulative public sector borrowing requirement.
 - Ceilings on external debt of nonfinancial public sector.
 - Ceilings on new publicly guaranteed external debt.
 - Floors on net international reserves (NIR) of the Central Bank.
 - Ceilings on net domestic assets (NDA) of the Central Bank.

2. Indicative targets:

- Floor on cumulative recognition of nonregistered public debt, net of privatization proceeds.
- Floor on the cumulative primary surplus of the federal government.
- Indicative ceilings on total (public and private) short-term external debt.

3. Prior actions:

For approval.

- An increase in the rate of the Financial Transactions Tax (CPMF) to 0.38 percent to be under consideration in Congress by end-November 1998.

For completion of first review (i.e., no later than February 28 1999).

- Enactment of revenue and expenditure measures sufficient to give confidence that fiscal targets for 1999 were likely to be met.
- Enactment of a constitutional amendment for social security reform, for both the private sector social security system and federal public sector social security system.

4. Structural benchmarks:

The program included a number of structural benchmarks. There were no structural performance criteria. The benchmarks included:

By end-December 1998:

- Submission to Congress of draft legislation for the Fiscal Responsibility Law.

By end-March 1999:

- Submission of draft legislation for labor market reform.
- Submission to Congress of draft constitutional amendments for the structural tax reform.

By end-May 1999:

- Submission to Congress of draft legislation to regulate the social security reform.

By end-August 1999:

- Submission to Congress of multiyear budget plan.
- Implementation of administrative reforms in the social security system.

By end-December 1999:

- Enactment of the Fiscal Responsibility Law, structural tax reform, and complementary legislation for the social security reform.
- Resolution of most state-owned banks.
- Regulation of banks' market risk, based on Basel core principles.
- Implementation of a forward-looking loan classification scheme.

By end-December 2000:

- Full compliance with Basel core principles, especially in relation to provision of resources for supervision by the Central Bank.

Daily data on international reserves would be provided to IMF staff.

Revised Program (First and Second Reviews), March 1999

There were a number of changes in the quantitative performance criteria in the revised program. The ceiling on the cumulative borrowing requirement of the consolidated public sector was replaced by a floor on its primary balance. The indicative target on the primary surplus of the federal government was eliminated and an indicative ceiling on net public sector debt was included. The performance criteria on the floor on net international reserves of the Central Bank was replaced by a monthly ceiling on sales of foreign exchange. The indicative target on short-term external debt was modified to cover only public sector debt. Conditionality was also introduced requiring the central bank to refrain from new operations in foreign exchange futures or forward markets. The revised list of quantitative conditionality thus covered:

5. Quantitative performance criteria:

- Floors on cumulative primary surplus of the consolidated public sector.
- Ceiling on external debt of nonfinancial public sector.
- Ceiling on new publicly guaranteed external debt.
- Ceiling on short-term external debt of nonfinancial public sector.
- Ceiling on Central Bank foreign exchange sales.
- Central Bank exposure in foreign exchange futures market.
- Central Bank exposure in foreign exchange forward market.
- Ceiling on NDA of the Central Bank.

6. Indicative targets:

- Ceiling on net debt of the consolidated public sector.

7. Structural benchmarks:

The revised program incorporated “an accelerated and broadened structural reform and privatization effort.” Formal conditionality on structural reforms was little changed, however, with much of the authorities' plans for structural reform remaining outside its scope. There were only moderate alterations in the coverage of structural benchmarks and no structural performance criteria were introduced. Labor market reform and reform of the tax system were no longer included as structural benchmarks. In the case of the tax reform, this was because a proposal was submitted to Congress in November 1998. Submission of laws on pension reform were introduced as benchmarks. Requirements for improvements in bank regulation were maintained essentially unchanged, apart from minor timing questions.

Brazil: Selected Conditionality Under IMF-Supported Programs, 1998–2000 (concluded)

By end-May 1999:

- Submission to Congress of a law on the complementary private pension scheme.
- Submission to Congress of an ordinary law on pension system for private sector workers.
- Presentation to Congress of the Fiscal Responsibility Law.

By end-August 1999:

- New regulation on foreign exchange exposure of banks.
- Acceptance of obligations under Article VIII, with a timetable for removing any remaining restrictions.
- Action plan for statistical improvements to permit SDDS subscription.
- Implementation of administrative improvements in social security system.
- Submission of a multiyear plan to incorporate improvements in the budgetary process.

By end-November 1999:

- Submission of an ordinary law on the pension system for the public sector.
- Resolution of state-owned banks.
- Implementation of a forward-looking loan classification scheme.
- Implementation of a capital charge related to market risks, based on Basel Committee recommendations.

8. Provision of data:

The list of specific high frequency data to be provided to the IMF was extended to include: gross and net reserves and their composition; the Central Bank's foreign exchange futures position; the maturity composition of federal debt; individual bank data on balance sheets and foreign-currency and off-balance-sheet exposure for the 50 largest banks; and results of debt auctions.

Third Review, July 1999

9. Quantitative conditionality:

A performance criterion on NIR was introduced (US\$3 billion below the baseline path) replacing the earlier ceiling on Central Bank foreign exchange sales.

10. Other:

Authorities agreed to regular weekly consultations with management and staff on the conduct of interest rate policy; and on the interest rate response to a loss of NIR.

Fourth Review, November 1999

11. Quantitative conditionality:

Reflecting the implementation of the inflation targeting regime, a consultation mechanism was introduced in the event of deviations of inflation from its targeted path. Excesses beyond the inner band (+ 1 percent) would trigger consultations with IMF staff about the proposed policy response; excesses over the outer band would suspend drawings until the Executive Board had reviewed the authorities' proposed policy response. In consequence, it

was decided to make the end-December 1999 target for NDA an indicative target, rather than a performance criterion. The consultation mechanism would continue to be supplemented by indicative targets for NDA for the first half of 2000.

12. Structural benchmarks:

The following benchmarks were introduced for 2000:

By end-February 2000:

- Removal of Article VIII restrictions by lowering financial operations tax on credit card purchases abroad to less than 2 percent.
- Begin implementation of INSS reform with new formula for calculating pension benefits.
- Complete enactment and start implementation of regulatory legislation for administrative reform.
- Enact Fiscal Responsibility Law.
- Ensure enforcement of regulation on capital charge.
- Develop implementation plan and schedule for global consolidated inspections (GCIs) of commercial banks and savings banks.
- Complete audits of federal banks; make progress in preparing a comprehensive strategy to strengthen these banks.

By end-June 2000:

- Make progress in resolution of state-owned banks; conclude privatization of BANESPA.
- Make substantial progress in implementing the privatization plan, including privatizations of electrical and reinsurance companies, and sales of some minority shareholdings.
- Issue regulations to implement a capital charge related to equity and commodity risks.
- Define a comprehensive strategy for timely strengthening of federal banks.

By end-July 2000:

- Enact a system to tax oil products to offset revenue impact of scheduled liberalization of oil market.

By end-December 2000:

- First GCIs under way or completed for most financial institutions.
- Complete resolution of most state banks, including privatizing BEM, BEG, BEC, BEA, BEP, and BANESTADO.

In addition, a number of statistical benchmarks for publication of weekly data on reserves; publication of quarterly national accounts; and fiscal and debt statistics were introduced for end-June 2000.

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13. Quantitative conditionality:

The indicative targets on ceilings on NDA were discontinued from June 2000.

14. Structural benchmarks:

Some of the structural benchmarks were postponed, reflecting delays in the congressional approval of reform legislation. In the remainder of the program, structural benchmarks were concentrated on financial sector reforms.

Appendix A3.2

Brazil: Timeline of Major Events

Date	
10/28/97	Asian crisis sparks sharp fall in equity prices and pressure on currency.
10/31/97	Interest rates are doubled to 40 percent.
11/13/97	Fiscal package is announced.
2/9/98	Brazil reaccesses international bond market after Asian crisis.
7/1/98	Pension system reform postponed after congressional setbacks.
7/20/98	First press reports of Long-Term Capital Management difficulties.
8/17/98	Russian default and devaluation.
8/24/98	Measures taken to encourage foreign capital inflows.
9/3/98	Special "Regional Surveillance" meeting of Western Hemisphere Finance Ministers and Central Bank Governors with IMF, World Bank, and IDB concludes in Washington.
9/4/98	Moody's downgrades Brazil's sovereign credit rating from B1 to B2.
9/17/98	Brazilian government confirms discussions with the IMF.
9/23/98	President Cardoso makes speech affirming need for major fiscal adjustment.
10/4/98	President Cardoso reelected in first round.
10/8/98	Joint statement by IMF and Brazilian authorities that discussions would continue on a detailed program of macroeconomic and structural policies.
10/20/98	Joint statement by IMF and Brazilian authorities, announcing agreement on fiscal targets for primary surpluses.
11/11/98	Informal Executive Board meeting on structural elements of program.
11/13/98	Agreement on a Stand-By Arrangement announced. Letter of intent published.
11/16/98	Meeting in New York of Brazilian authorities, including presentation by IMF management, with U.S. bankers who indicate a willingness voluntarily to maintain exposure if program is firmly implemented.
12/02/98	IMF Executive Board approves US\$18.1 billion Stand-By Arrangement.
	Congress rejects increases in tax on pensions and in pension contributions.
12/18/98	US\$4.7 billion from the IMF, and US\$4.5 billion from BIS and Japan disbursed.
12/30/98	The Ministry of Finance announces tax package to compensate for delays in approving the CPMF and higher civil service pension contributions.
01/06/99	Governor of Minas Gerais declares 90-day moratorium on the service of his state's debt to the federal government.
01/13/99	Central Bank Governor is replaced. Narrow band replaced by "endogenous diagonal band." Exchange rate depreciates by 9 percent as it falls to the bottom of the new band amid heavy reserve losses, which continue on 1/14/99.
01/15/99	Real allowed to float.
01/16–17/99	Finance Minister and new Central Bank Governor meet in Washington with IMF management and staff.
01/18/99	Exchange rate float confirmed.
01/19/99	Interest rate increased to 32 percent.
01/28/99	Interest rate increased to 35.5 percent.
01/29/99	Interest rate increased to 37 percent.
02/02/99	Interest rate increased to 39 percent.
02/02/99	Central Bank Governor resigns and a new Governor is appointed.
02/04/99	Announcement by IMF of agreement in principle on key elements of the policy framework for the rest of 1999 and over the medium term. Policies include a formal inflation-targeting system for the medium term, and transitional arrangements using monetary policy to reduce inflation to a single-digit annualized rate by the end of 1999.
02/10/99	Federal government pays installment on Eurobond issued by the state of Minas Gerais.
02/26/99	New Central Bank Governor confirmed by the Senate committee.
03/08/99	IMF Managing Director recommends approval of revised program; Memorandum of Understanding published.
03/30/99	IMF Executive Board approves disbursement.
07/02/99	Revised Technical Memorandum of Understanding published; Managing Director recommends approval.
07/08/99	Government issues US\$700 million in Eurobonds.
09/14/99	Standard & Poor's upgrades Brazil's credit rating to BB–.
3/1/00	Standard & Poor's upgrades Brazil's credit rating from BB– to BB.
4/12/00	Brazil repays borrowing under the IMF Supplemental Reserve Facility and the BIS and Japan loan facilities in full and partly ahead of schedule.
5/4/00	Fiscal Responsibility Law signed into force.
7/5/01	Central Bank announces steady "linear" intervention in the foreign exchange market.
8/3/01	IMF Managing Director recommends approval of a new US\$15 billion Stand-By Arrangement for Brazil through December 2002. The authorities indicate that they intend to treat the arrangement as precautionary.
8/7/02	Agreement announced on a new 15-month Stand-By Arrangement with financing of an additional US\$30 billion.

Sources: Bloomberg, Reuters, and IMF.