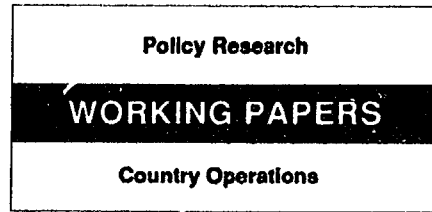


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Public Sector “Debt Distress” in Argentina, 1988-89

Paul Beckerman

Efforts to control Argentina’s inflation in 1988 and 1989 failed, generating episodes of hyperinflation, largely because the stabilization programs drove the public sector into debt “distress.”

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Copies of this paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Alexandra Blackhurst, room I6-018, extension 37897 (May 1992, 53 pages). An earlier version of this paper — a product of the Country Operations Division, Country Department IV, Latin America and the Caribbean Region — was published as the Region's Internal Discussion Paper 66, "Public Sector 'Debt Distress' in Argentina's Recent Stabilization Efforts."

Under the August 1988 "Primavera" Plan and the July 1989 "Bunge y Born" Plan stabilization programs, the Argentine authorities sought to anchor the price level through an appreciated real exchange rate, which they sustained through policies that maintained high domestic interest rates. The public sector's domestic debt was substantial, however, and the high interest rates drove the public sector's interest bill considerably above its non-interest surplus. The public sector could therefore cover its interest bill only by taking on additional debt. Because the interest bill was so large, domestic debt grew rapidly. Hyperinflation resulted when the outstanding debt became larger than domestic financial markets could be persuaded to hold.

The Central Bank played a focal role in these processes. It issued interest-bearing debt in the forms of remunerated bank reserves, "inaccessible deposits," and Central Bank bills, to absorb money. The interest bill on these liabilities generated mounting "quasi-fiscal" borrowing requirements, which the Central Bank financed through additional debt issues. This debt was held mainly by commercial banks who financed themselves through high-yielding short-term deposits. Hyperinflationary pressure developed when depositors, perceiving that the Central Bank's debt accumulation was becoming excessive, withdrew and moved rapidly into foreign exchange, engendering heavy devaluation pressure.

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by
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1. Introduction.

1.1. On July 9, 1989, the day after Carlos Menem succeeded Raul Alfonsin as Argentina's President, the new authorities announced a program intended to stop the hyperinflation that had run since February 1989, when the previous stabilization program, the August 1988 "Primavera Plan," collapsed. The Menem Government was assuming office five months before the constitutional date, because the outgoing Government of Raul Alfonsin had plainly lost the capacity to manage the economy. Although elected as a Peronist on a populist platform, the new President had drawn his economy team from the executive ranks of the Argentine multinational firm Bunge y Born. The program reflected the firm's macroeconomic analysis, and the Buenos Aires press therefore called it the "BB Plan." Its initial measures were a devaluation of the official exchange rate well beyond what was then the parallel exchange rate, from 303 to 655 australes per dollar; massive increases in such public-service prices as fuel charges, electricity rates, transport fares, and telephone rates; and an agreement by the largest industrial enterprises to freeze output prices as long as the exchange rate and public-service prices remained unchanged. The devaluation was intended to persuade exporters to surrender foreign exchange, and -- no less important -- pay export taxes, toward the overall objective of reducing the public sector's overall deficit.

1.2. The Government's strategy was then to run tight monetary policy to hold the parallel and official exchange rates equal and fixed, thus to buy time by establishing a kind of artificial stability and so fostering a degree of financial market confidence. The authorities submitted three pieces of legislation to the Congress. (i) The Economic Emergency Law would empower the authorities to suspend or cut subsidies and expenditure programs. (ii) The Public Sector Reform Law would provide the legal basis for reorganizing, closing, and privatizing public enterprises -- notably the national telecommunications monopoly (ENTel), the railways, and the national airline. Finally, (iii) a new tax reform was intended to close important tax loopholes and extend the base of the value-added tax. The Congress passed the first two of these measures by September, and completed the tax-reform law by December.

1.3. Like other recent heterodox stabilization plans in Argentina and Brazil, the BB Plan worked at first. Inflation eased to single-digit monthly rates. For about four months the parallel and fixed official exchange rates remained unchanged and equal. The Central Bank's depleted international reserves recovered rapidly. Interest rates on seven- and fourteen-day commercial-bank time deposits -- to which the rates on most of the public-sector debt were linked -- fell gradually from 15 per cent per month at the outset of the program to about 4 per cent in early October. In September 1989, domestic macroeconomic

conditions were sufficiently favorable to enable the Government to negotiate a stand-by program with the International Monetary Fund: the IMF made an initial US\$233-million disbursement in November following its Board's approval.

1.4. In mid-October, however, the parallel exchange-rate premium began to drift upward. Expectations of further devaluation induced bank-deposit withdrawals. Interest rates rebounded as banks struggled to retain time deposits. Financial-market turbulence deepened through November. The Central Bank sold foreign exchange, but could not reverse the gathering tide against the exchange rate. By early December, with the parallel premium ranging between 35 and 50 per cent and monthly interest rates back up to 15 per cent, the program had clearly become untenable. On December 10 the authorities admitted defeat: they devalued the official rate from A\$655 to A\$1010 per dollar, raised public-service prices an average of 65 per cent, raised export taxes, and raised public-sector wages. When financial markets reopened after a day's holiday, however, interest rates remained high, and the same percentage parallel exchange-rate gap reemerged. The Bunge y Born economic team accordingly resigned.

1.5. A new economic team took office on December 18. It immediately floated the exchange rate, removed all price controls, and rescinded the export-tax increases. These measures failed again to secure stability, however. Interest rates continued to rise and the austral continued to sink. The price level roughly doubled over December; over New Year's weekend the austral depreciated almost fifty per cent against the U.S. dollar.

1.6. On New Year's Day, 1990 Argentina's Economy Minister announced dramatic measures to halt the developing hyperinflation. The principal action was the forced conversion of commercial-bank time deposits into ten-year dollar-denominated National Treasury "External Bonds" ("BONEX"). Approximately US\$500 of each deposit account were exempted from conversion and were to be made available in cash. Because the BONEX traded in domestic financial markets at a heavy discount, this "BONEX Plan" constituted a substantial confiscation of private asset holdings. Compulsory and voluntary holdings of Central Bank and National Treasury obligations, yielding interest at rates closely linked to the deposit rates, made up an unusually large proportion of the commercial banks' assets. The Treasury purchased these obligations with BONEX, and the commercial banks then used the BONEX to make the conversion. The point of the measure was not merely to erase liquidity, but, more important, to end the massive public-sector borrowing requirement deriving from the interest on the Central Bank and Treasury obligations to the banking system. The conversion was the authorities' response to their perception that the public sector had slipped into acute "debt distress."

1.7. The reasons why the BB Plan failed -- and indeed why Argentine stabilization efforts foundered during the 1980s -- remain highly controversial. Observers attribute varying degrees of importance to persisting non-financial public sector deficits, to wage pressure, to Central Bank policies, to devaluation and the consequent external trade surpluses, and to sudden crises of confidence in the markets where interest rates and exchange rates are determined. These factors all contributed to reviving inflationary pressure during the latter part of 1989. Nevertheless, to understand why the BB Plan collapsed, it is more helpful to consider them as events linked in a dynamic inflationary process, rather than as independent contributing factors. This essay argues that the dynamic process was inherent in the framework of the BB Plan, and that it was also inherent in the Alfonsin Government's August 1988 "Primavera (Spring) Plan."

1.8. The essential argument is as follows. Like the Primavera Plan -- and like other recent heterodox stabilization programs, such as Argentina's June 1985 Austral Plan, Brazil's June 1987 Bresser Plan, and Brazil's January 1989 Summer Plan ("Plano do Verao") -- the BB Plan began with a substantial, presumably corrective, devaluation. The idea was then to use the fixed exchange rate temporarily as a price-level "anchor," to set a context of price stability within which to carry out profound public-sector reforms and so set a basis for lasting price stability. In the short term, exchange-rate stability was to ensure price stability by (i) "anchoring" prime cost, not only by setting the price of importable inputs but by setting a referent for wages and financial rates of return; (ii) reducing competitive pressure on tradeables prices generally; and (iii) reducing devaluation expectations, thereby strengthening people's willingness to hold assets denominated in australes rather than U.S. dollars.

1.9. The problem with this approach was that, in combination, (i) the public sector's continuing credit demand, (ii) persisting exchange-rate uncertainty, and (iii) financial markets' perception of Argentina as risky implied that domestic interest rates would have to remain exorbitantly high to sustain the fixed exchange rate. High interest rates placed economic policy in a no-win situation, however. Even after the February-July 1989 hyperinflation, the domestic debt stock of the combined public sector -- essentially, the Treasury and the Central Bank -- remained substantial. High interest rates on a large debt stock implied a high public sector interest bill: the debt was almost entirely at floating interest rates with terms of one to two weeks.

1.10. Moreover, to keep interest rates high, the monetary authority itself had to place interest-bearing debt in domestic financial markets -- that is, to sterilize money created through (i) purchase of the trade-surplus foreign-exchange proceeds at the (devalued) exchange rate and (ii) the monetary authority's

financing of its own interest payments. The interest bill substantially exceeded the public sector's primary (non-interest) surplus. This meant the public sector could pay the interest only by capitalizing it into its domestic obligations -- that is, into the austral-denominated assets. The austral-denominated asset stock grew rapidly through such interest capitalization. As austral-denominated assets became increasingly abundant relative to dollar-denominated assets, the austral came under pressure to depreciate in the parallel market. In sum, the public sector could not afford the interest rates required to maintain a high austral value. It tried, nevertheless, to pay them by borrowing; but this failed once private-sector portfolios became saturated with austral-denominated debt.

1.11. The only way to forestall the growth of public debt would have been for the public sector actually to pay the interest on its debt in cash rather than by borrowing through capitalization. This would have required the public sector either (i) to issue money or (ii) to run a non-interest cash surplus sufficient to cover the interest bill. The incoming authorities understood the problem in these terms. The initial public-service price increases were intended to increase the non-interest budget surplus. Part of the point of the price-freeze agreement, and the resulting decline in the inflation rate, was to produce a favorable Olivera-Tanzi effect, raising tax receipts as a proportion of GDP. Indeed, as the sharp devaluation encouraged exporters to surrender export proceeds, it not only helped rebuild international reserves but also restored the export-tax base. These measures reduced the public sector's non-interest deficit, and with several further measures, the Treasury secured a non-interest surplus by September 1989. The surplus remained insufficient, however, to cover the interest bill, particularly after interest rates rebounded in October. By that point the authorities were in a losing race, struggling to increase the non-interest surplus to overtake the surging interest bill. Once the financial markets concluded that the public sector was in distress, the exchange rate surged, and the program failed.

1.12. The two following sections describe the historical and institutional background of the 1989 hyperinflation episodes. Section 2 summarizes the reasons why inflationary pressure mounted through the 1980s despite stabilization efforts, and Section 3 focuses on the unusual intermediation role that the Central Bank of the Argentine Republic (BCRA) had come to play in the macroeconomy. Section 4 reviews the August 1988 Primavera Plan and macroeconomic events in late 1988 and early 1989. Section 5 describes the BB Plan and macroeconomic events between July 9 and December 28 in somewhat more detail. Section 6 briefly discusses some of the similarities of the Primavera and BB Plans. Section 7 briefly discusses the measures taken in the early part of 1990, including the BONEX conversion. Section 8 offers some concluding observations.

2. Argentine inflation in the 1970s and 1980s.

2.1. The macroeconomic mechanisms that powered the 1989 hyperinflation episodes developed with the chronic inflation that has plagued Argentina for decades. Some of these mechanisms -- notably, dollarization and the various money-creation mechanisms described in the section following -- were means that public and private institutions developed to cope with and defend themselves from inflation. In addition, chronic inflation, with the concomitant price-level uncertainty and price-system disarray, debilitated the real economy. From 1980 through 1989, real GDP fell at an annual average rate of 0.9 per cent; annual industrial output fell at an annual average rate of 1.5 per cent (although annual industrial growth rates varied sharply). Real per-capita GDP fell at an average annual rate of 2.4 per cent and overall per-capita real consumption diminished at an average annual rate of 2.2 per cent. Capital formation followed a clear downward trend as a proportion of real GDP, from 24.6 per cent in 1980 to 13 per cent in 1988 and 9.4 per cent in 1989. Inadequate capital formation has contributed to declining productivity, inevitably affecting Argentina's international competitiveness.

2.2. Argentina had a brush with hyperinflation in the mid-1970s: consumer prices quintupled between March 1975 and March 1976 (see Table 5), partly as a result of a massive devaluation in August 1975. The armed forces took power from a weakening Peronist regime in March 1976. Through the remainder of the 1970s, the military governments allowed external debt to grow. Both the private and public sectors were able to secure credit from international financial markets at what were then low real interest rates. Since the military regime intended to promote economic liberalization and private-sector growth, it had no qualms about permitting the private sector to borrow overseas.

2.3. The public-sector borrowing requirement remained high because the authorities found it easier to borrow than to raise taxes or open the political conflicts a thorough public-sector reform would have entailed. The armed forces, who were engaged in a violent struggle against their political opposition, proved unwilling or unable to design nor carry out profound economic reforms. Their economic policy consisted of simple liberalization of domestic and external financial activity. They made few efforts to improve public-sector efficiency. Their laissez-faire approach to economic policy included fairly permissive financial-sector supervision. The 1977 Financial Entities Law allowed banks full freedom to set interest rates, although it reinstated a system of Central Bank deposit insurance. A deliberate policy of maintaining a high real effective exchange rate in the late 1970s (see Table 6) -- the pre-announced "tablita" (schedule) -- set an incentive for a substantial resource transfer: in 1979, 1980 and 1981 non-factor imports less

exports were 0.5, 6.9 and 4.8 per cent of GDP. By this means the build-up of private and public external debt was transferred as real goods and services into the economy: from 1978 to 1981, disbursements less repayments were, respectively, US\$1.4, US\$2.2, US\$2.8 and US\$6.4 billion. This permitted capital formation rates of 22, 22.8, and 20.1 percent in 1979, 1980 and 1981.

2.4. Heavy external borrowing left the economy vulnerable when international credit markets tightened and interest rates surged in the early 1980s. As the interest bill on term debt soared from US\$1.3 billion in 1980 to US\$2 billion in 1981 and US\$2.4 billion in 1982, and Argentina lost access to "voluntary" external financing, the authorities devalued heavily to increase the trade surplus and so effect the negative resource transfer, which reached 3.3, 4.8, 4, and 7.6 per cent of GDP in the years 1982-1985. Devaluation also increased the domestic-currency equivalent of the public and private sectors' external interest bill, however. Devaluation also gave a powerful impetus to inflation. Precisely because of the higher external interest bill, devaluation worsened the public-sector deficit, and worked against the authorities' attempts to offset the inflationary effects of the devaluation with better control of public finances. Although the external accounts surpluses rose dramatically, this did not translate into improvement of the public sector accounts, since Argentina's public sector (like Brazil, unlike Chile or Mexico) had no significant source of foreign exchange earnings. As a result, the public sector's demand for external and domestic financing continued to grow.

2.5. These problems were intensified by a banking-sector crisis brought on by high interest rates, excessive overseas borrowing, rapid lending growth and inadequate bank supervision. (See Balino 1987.) The crisis began in March 1980 with the failure of a large, overextended bank, and continued over the next two years with the failure of 70 other private financial institutions. This crisis also had inflationary consequences. Judicial and administrative delays stretched the liquidation processes over years; since the monetary authority guaranteed bank deposits and could not rapidly liquidate the banks, it had to create money to pay depositors. The macroeconomy slipped out of control through 1982 in a spiral of devaluation, inflation, mounting external debt, and corporate debt distress. Capital flight, encouraged by expectations of devaluation, high world interest rates, and diminished domestic prospects, became a significant problem in the early 1980s. The conflict with Great Britain that began in April 1982, which forced a sharp increase in public expenditure, and the eruption of the international debt crisis in August 1982 aggravated the crisis.

2.6. During 1982 the BCRA effectively assumed the private sector's external debt service by agreeing to "insure" against further devaluation. At the same time the authorities addressed the growing domestic corporate-distress problem by requiring

commercial banks to reschedule outstanding debt for terms of 60 months at a monthly interest rate of 4 per cent, well below the expected inflation rate. To forestall commercial-bank decapitalization the authorities imposed controls on deposit rates for the first time since 1977. These measures, together with further doses of devaluation and inflation, diluted the debt stocks and relieved the private sector's distress problem, but at the cost of diminishing the financial system.

2.7. After the defeat in the conflict, a transitional military regime took power in mid-1982 to prepare elections. In December 1983 Raul Alfonsin took office at the head of an elected constitutional government, inheriting an unprecedented combination of external indebtedness, inflation, and economic stagnation. Inflation worsened over 1983, 1984 and the first half of 1985 as the authorities struggled simultaneously to revive real growth and to recover policy control. At the same time they had a series of confrontations with Argentina's commercial-bank creditors: on two occasions they made interest payments only at the last possible moment before triggering the U.S. regulators' non-accrual rules, and then only on the basis of funds advanced by other Latin American nations and the U.S. Treasury. Toward the end of 1984, however, Argentina secured a concerted new-money and rescheduling agreement with foreign commercial banks, after agreeing to an IMF program. The round of devaluations and negative per-capita GDP growth in 1982 and 1983 turned the trade balance from negative to positive and even reduced the current-account deficit, in spite of the higher interest bill (see Table 2). The diminished current-account deficit relieved external-debt growth, but the negative resource transfer reduced domestic capital formation and deepened inflationary pressure.

2.8. Over the first half of the 1980s, public-sector saving fell and borrowing requirements soared as declining tax revenues and rising interest expenditures overwhelmed expenditure cuts. Tax revenues fell because the economy stagnated and because tax administration deteriorated. Subsidies, principally the costly regional "industrial-promotion" program, increased. With external finance reduced, domestic debt increased and the public domestic interest bill rose. Meanwhile, state-owned non-financial enterprises, which operated such basic industries as international air transport, rail transport, petroleum production, and telecommunications, developed heavy operating losses over extended time periods, through the combined consequences of policies regarding output prices, employment and investable-fund allocation.

2.9. Argentina's state-owned term-financing institutions -- the housing bank and the development bank -- ran losses, partly because of excessive operating costs and over-ambitious lending programs, but also because macroeconomic instability made term financial operations inherently unprofitable. In the financial system generally, price-level and exchange-rate uncertainty shrank deposit terms to weeks and even days; moreover, financial

institutions had to pay high real interest rates to compensate savers for possible, not merely expected, inflation and devaluation. At the same time relative-price dispersion and income volatility affected financial institutions' asset quality. In these conditions private financial institutions withdrew from term lending, but certain public institutions carried on, partly with BCRA financing, and inevitably incurred losses. The commercial banks owned by Argentina's provincial governments also tended to have high operating costs and troubled asset portfolios, partly because they are called upon to finance activities -- notably agriculture -- that private banks have avoided. Some provincial banks were required to purchase soured loans from private banks. Many provided financing to their governments, sometimes using BCRA rediscounts to finance themselves. Finally, the BCRA itself came to run substantial losses. As discussed below, the BCRA's losses played a pivotal role in the 1989 hyperinflation.

2.10. As a consequence of their lengthy experience of inflation and financial volatility, private Argentines' willingness to hold money and other public-sector obligations diminished markedly over the 1980s. The narrow money supply fell from 7.5 per cent of GDP in 1980 to only 3.2 per cent GDP in 1988, while the broad money supply -- including interest-bearing commercial-bank savings and time deposits -- fell from 28.4 per cent of GDP in 1980 to only 14.7 per cent of GDP in 1988 (Giorgio 1989). Anticipated devaluation took on increasing importance as residents came routinely to compare domestic and overseas rates of return.

2.11. The economy's diminishing financial base worked against stabilization policy. First, any given public-sector borrowing requirement became harder to finance and so caused larger macroeconomic problems. If the public sector borrows at competitive interest rates, then, the smaller the domestically available savings stock, the higher the interest rates must be -- hence the higher subsequent public-sector borrowing requirements will be and the smaller the quantity of financial resources available for the private sector will be. If the public sector finances itself by issuing (non-interest-bearing) money, then, the smaller the demand for money, the higher the resulting inflation will be. (For economies like Argentina it may therefore be more meaningful to gauge the public-sector borrowing requirement against the broad money supply rather than GDP.) Second, similarly, following a devaluation, the additional money creation resulting from the sale of foreign exchange to the central bank had a larger percentage impact on the money supply, because of the small money supply.

2.12. Third, monetary control measures required to offset any monetization of public deficits and devaluation proceeds tended to crowd out the banking system's supply of private-sector credit. Finally, narrow willingness to hold money and other public obligations reduced the margin for error in any stabili-

zation program. For example, suppose a stabilization program is premised on a monthly reserve inflow of US\$50 million, but the inflow turns out instead to be US\$100 million; the monetary consequences could be marginal if the total money supply were (say) US\$10 billion but devastating if the money supply were US\$1 billion.

2.13. The brusque shifts in month-over-month inflation rates shown in Table 5 trace out the Alfonsin Government's heterodox stabilization efforts. Over the first fourteen months of Alfonsin's term the price level accelerated, reaching monthly rates between 25 and 30 per cent in the second quarter of 1985. In early 1985, a new economy team took office and prepared the an ambitious stabilizing shock program. The "Austral" Plan, which the President announced in a television address in mid-June, was a stabilizing "shock" combining (i) a wage and price freeze; (ii) devaluation and establishment of a fixed exchange rate; (iii) creation of a new currency (contracts denominated in the old currency coming due over the rest of 1985 were converted to the new currency according to a schedule that removed their presumed inflationary-expectations component); and (iv) promises of fiscal reform, including an undertaking that the BCRA would henceforth not issue money to finance Treasury deficits. It was the first of a series of heterodox stabilization "shocks" in Argentina and several other nations, including Israel, Brazil, and Mexico.

2.14. The Austral Plan dramatically lowered the inflation rate for the remainder of 1985: prices rose about 2-3 per cent per month over the rest of the year, one tenth the monthly rates in the first half of the year. The authorities reduced non-interest public-sector expenditures remarkably and maintained tight monetary policy, as indicated by the sharply higher real interest rates. The balance of payments strengthened, with the current account moving into surplus over the second half of 1985. Industrial growth resumed toward the end of 1985 and there was a round of wage increases in the private sector, which permitted some recovery in sharply diminished real-wage levels.

2.15. Inflation remained relatively low well into 1986, since most prices were covered by the freeze, but sufficiently high that by April 1986 price adjustments were necessary to correct relative prices frozen into place in June 1985. In particular, public-sector prices had to rise to ensure public enterprises' financial soundness. The authorities also devalued to catch up with the inflation that had accumulated since June 1985. As a result the monthly inflation rate edged up to around 5-6 per cent. The monetary authority made a strenuous effort to restrain monetary growth over 1986 and early 1987, but after the corrective measures of mid-1986 it had to contend with declining in money demand. In September 1986 the authorities tightened monetary policy again and renewed price controls.

2.16. The price level drifted upward at increasing rates through early 1987. Legislative and gubernatorial elections in September of that year generated heavy spending pressures in the second and third quarters. Meanwhile, the terms of trade -- which had been falling secularly since the beginning of the 1980s -- fell sharply and reduced the trade balance. Widespread dissatisfaction with the economy produced a substantial election setback for the Government. Soon after the elections were past, the Government announced a sharp devaluation, liberalization of interest rates, and fiscal-reform measures. Again, however, the effects of these measures were short-lived: inflationary pressures reemerged early in 1988, and by mid-1988 hyperinflation threatened yet again.

2.17. In early August 1988, the Government announced yet another heterodox stabilization program, the Primavera ("Spring") Plan. This program is discussed in Section 4. The section following digresses to discuss the complex of relationships centered on the Central Bank, among the Treasury, publicly-owned banks, commercial banks, and the wealth-holding public that characterized the late 1980s, and through which the stabilization and hyperinflation of 1988 and 1989 played themselves out.

2.18. It may help here to summarize the broad argument about the origins of Argentina's inflation problem in the early 1980s. Over the latter part of the 1970s, the authorities permitted private financial institutions rapidly to expand their activities at free interest rates, and permitted the public deficit to remain relatively large. With credit available at low, albeit adjustable, interest rates from international sources, the public and private sectors borrowed easily. Easy availability of low-cost external credit made improved public-sector efficiency less urgent. To facilitate the resource transfer, the Government maintained the exchange rate at a relatively high value. In the early 1980s, however, a domestic financial crisis sharply increased domestic interest rates. Meanwhile, surging international interest rates and tightened credit conditions simultaneously increased the external interest bill and made it difficult to finance. The authorities devalued to reverse the external transfer; not only was this inflationary, it increased both the public and private sectors' borrowing requirements. Prospects of further devaluation discouraged holdings of domestic assets, contributing to capital flight. The public sector nevertheless assumed the private sector's debt, and then controlled domestic interest rates, in order to limit the banking system's and private firms' debt distress. This diminished people's propensity to hold banking-system and public-sector obligations, which contributed to further inflation and further complicated policy management.

3. The role of Argentina's Central Bank.

3.1. To understand how Argentina slipped into hyperinflation during 1989, it is essential to understand the relationships prevailing during 1988 and 1989 among Argentina's Treasury, Central Bank (BCRA), publicly-owned banks, commercial banks, and wealth-holding public. The Treasury and the BCRA taken together owed the domestic financial system amounts varying between US\$5 and US\$8 billion in interest-bearing debt. (GDP was between US\$60 and US\$72 billion a year, depending on the exchange rate used, or US\$5 and US\$6 billion a month.) Of this debt, about three quarters -- between US\$4 and US\$6 billion -- was interest-bearing debt of the BCRA to commercial banks. This debt comprised (i) remunerated bank reserves, (ii) so-called "inaccessible" commercial-bank deposits at the BCRA, and (iii) marketable BCRA bills. In addition, the BCRA required conventional unremunerated bank reserves of 88.5 per cent against ordinary checking accounts. Understandably, given the inflationary circumstances, the Argentine public held only the barest minimum in checking accounts for transactions purposes. Meanwhile, the bulk of the BCRA's own asset position was illiquid or -- in reality though not in its accounts -- value-impaired. The BCRA's assets included unrecoverable credit to publicly-owned and liquidated banks and, after 1988, matured National Treasury obligations, which the BCRA had amortized because the Treasury could not.

3.2. In effect, the commercial banks financed their holdings of BCRA and Treasury debt by taking deposits -- mainly interest-bearing time deposits -- from the private sector. In October 1987 commercial banks' liability interest rates were set fully free. In turn, the BCRA paid interest on its obligations to commercial banks at rates equal to the rates on a representative sample of commercial-bank time deposits plus a small spread. The BCRA's interest rates were therefore based on the freely-determined commercial-bank time-deposit rates. The commercial banks paid whatever interest rates they had to pay to maintain their time deposits, which depositors might otherwise have placed in dollars, passing the cost plus a spread back to the BCRA.

3.3. In principle, the BCRA could finance the resulting interest bill by (i) creating money; (ii) using the proceeds from interest or amortization paid on BCRA assets; or (iii) borrowing, either issuing new debt or capitalizing interest due into the debt on which the interest was paid. The first option would have been inflationary, and would have generated depreciation pressure in the parallel exchange market. The second option was limited by the reality that a large part of the BCRA's assets -- obligations of banks undergoing liquidation, of publicly-owned banks, or of the Treasury -- paid no interest, let alone amortization, in cash. The BCRA's tended therefore to finance its interest bill by borrowing.

3.4. The system had two additional important characteristics: first, the BCRA insured the banking system's deposits and second, the superintendency of banks, run by the BCRA, was ineffectual. Commercial banks have paid a fee for the deposit-insurance service (amounting to 3 per 10,000 australes of deposits per month). In effect, the BCRA insured the deposits, and the interest capitalized into them, through its capacity to create money. The weakness of supervision compounded the problem because the authorities could not detect commercial-bank deficiencies before they required intervention. Throughout the 1980s, BCRA intervention was tantamount to liquidation, because depositors withdrew rapidly; since liquidation was a lengthy legal process, the BCRA tended rapidly to create money to pay depositors, providing "rediscount" credit to the failing institutions in the process.

3.5. Table 7 shows the 1988 and 1989 month-end stocks of interest-bearing Treasury and BCRA debt to the domestic economy, including the commercial banks. (This total probably constituted more than 90 per cent of the public-sector debt to the domestic economy at any moment, although compiled data on other categories of public-sector debt -- including state-enterprise commercial debt and obligations of provincial and municipal governments -- are unavailable.) The table indicates that the stock of Treasury and BCRA debt to the private sector has run at about 8-10 per cent of GDP, a relatively low figure by comparison with other nations. (The comparable Brazilian figure in the 1980s has been around 35 to 40 per cent, for example.) Nevertheless, Argentine financial markets have been reluctant to hold even this small public debt stock. It therefore carried exorbitantly high real interest rates.

3.6. The monetary base -- currency in circulation and unremunerated bank reserves -- fell from 5.2 per cent of GDP in 1986 to 3.4 per cent in 1988. In addition, savings and time deposits at commercial banks -- M3 less M1 in the Argentine definitions -- were between 8 and 11 per cent of GDP in 1988 and 1989 (see Table 8). The BCRA required commercial banks to maintain a high but considerably lower ratio of remunerated reserves against these deposits: over 1988 and 1989, the ratio was between 22 and 25 per cent. With high reserve requirements, remuneration was intended to ensure that banks' earnings on their assets were sufficiently high to prevent their charging high rates for private credit.

3.7. The BCRA began to use "inaccessible deposits" (sometimes called "forced investments") in early 1985. Inaccessible deposits were remunerated bank reserves with the special characteristic that commercial banks could not withdraw them even when the banks' own deposits fell. (There was a partial exception to this rule: after August 1988 banks could maintain one kind of "inaccessible deposit" as a daily average balance over each month.) Moreover, interest paid by the BCRA on the inaccessible deposits could not be withdrawn, but had to be capitalized into

the deposit balance. Beginning in 1985, the BCRA required commercial banks to constitute inaccessible deposits from time to time, announcing them in "Comunicados" that set deadlines for the banks to do so, typically as proportions of the banks' time deposits as of a certain recent date.

3.8. Inaccessible deposits were the BCRA's solution to two problems that arose with high and remunerated conventional bank reserves. The first was that the yield on remunerated reserves was less than commercial banks could earn on alternative lending operations. An incentive to disintermediation arose: financial groups tended to allow their commercial banks' deposits to diminish and channeled the resources they received into Argentina's active interfirm financial market. The second problem was that interest payments by the BCRA on its reserve liabilities were, in themselves, a source of monetary expansion. To pay interest on conventional bank reserves, the BCRA credited the interest to the commercial banks' reserve accounts, thereby directly increasing the monetary base. The inaccessible-deposits system solved this problem partially by capitalizing the interest inaccessibly into the deposit balance, rather than making it available to the banks as high-powered money.

3.9. The third form of interest-bearing BCRA obligation was BCRA bills, marketable seven-day obligations sold at a discount in daily auctions. These instruments were known as "Certificates of Participation" (CEDEPs), because they were presumably participations in the BCRA's holdings of Treasury obligations, and also as "Telephone Bonds" because the BCRA generally sold them in telephone "go-around" auctions.

3.10. On its asset side, the BCRA held a mix of obligations of private commercial banks, financial institutions in liquidation, publicly-owned banks, and the Treasury. A common characteristic of these assets was that the BCRA could not use them to absorb liquidity. They were not marketable, and so could not be used to absorb money in open-market operations. Moreover, many were in reality non-performing, so that while the BCRA recorded accrued interest (under accounting standards that prohibited the BCRA from placing public obligations on non-accrual status), it received very little in cash. Even the BCRA's Treasury-bond holdings were mostly unusable in open-market operations: beginning in early 1988, as Treasury bonds issued in 1987 came due, the Economy Ministry instructed the BCRA to amortize them; since the bonds had matured, they were unmarketable. The BCRA received some interest in cash from "rediscount" credit to commercial banks, particularly on operations associated with exports, but it could collect no interest in cash from banks in liquidation nor from the public-sector banks engaged in longer-term operations -- the National Housing Bank (BHN) and the National Development Bank (BANADE).

3.11. Table 9 gives the average stocks of the BCRA's interest-bearing asset and liability stocks during the two years 1988

and 1989, as a proportion of GDP. Argentina's Central Bank has undergone progressive decapitalization, in at least two senses. First, a central bank needs to hold a quantity of assets sufficient to back its monetary obligations. Precisely because the BCRA possessed insufficient assets to use in open-market operations, and received only limited flows of cash payments, it could absorb money only by issuing debt. Unlike absorption through receipt of interest in cash, however, absorption through debt issue committed the BCRA to pay interest. Second, the BCRA has been decapitalized in the sense that its accruing interest expenses have generally exceeded its accruing interest receipts. The measure of the flow rate of decapitalization would be the BCRA's losses on an accrual basis. (The appendix discusses the analytical issues involved in this measurement. See also Barbone and Beckerman 1989.) Table 9 also gives an indicator of this aspect of the BCRA's decapitalization, the domestic "quasi-fiscal deficit" as defined for use in Argentine IMF programs. This is the difference between interest paid on the BCRA's interest-bearing liabilities and interest received on the BCRA's interest-bearing assets, less the profit received by the BCRA to the extent inflation reduces the real value of its net interest-bearing liabilities.

3.12. Since the liberalizing reform of October 1987, Argentine interest rates on commercial-bank time deposits have been freely determined -- although the deposits, and the interest accruing on them, were fully insured by the BCRA. Argentine residents have easy access to U.S. dollar assets. Discrepancies between debt-stock and balance-of-payments estimates suggest that Argentine residents have accumulated flight capital on the order of magnitude of the nation's US\$60 billion external debt. They are estimated to hold between US\$5 and US\$7 billion in dollar currency within Argentina (more than double the narrow money supply); and they hold substantial quantities in foreign accounts. Because dollars are easily available, anticipated devaluation rapidly pressures commercial banks to raise their deposit rates. At the same time, by encouraging people to hold austral-denominated assets, higher interest rates tended to reduce the pressure on the austral to depreciate in the parallel exchange market. The basic problem, however, was that it was the BCRA that was ultimately committed to pay these higher interest rates.

3.13. To understand how Argentina's monetary system evolved into this structure, a brief summary account of developments from the mid-1970s may help. The Peronist government of the mid-1970s had attempted to centralize banking intermediation. It effectively nationalized the banking system's deposits by means of a 100 per cent reserve requirement: commercial banks were directed to pass deposit proceeds to the BCRA and to provide credit on the basis of BCRA rediscount allocations, all at regulated interest rates. The Government intended to use the BCRA to manage financial mobilization and allocation. This approach proved unworkable, because the credit allocation had no

rational price basis and because the authorities developed no means of administering it.

3.14. In 1977 the military regime carried out a liberalizing reform, embodied in a new "Financial Entities Law." Banking returned to a conventional fractional reserve system, interest rates were freed in the formal financial system, and barriers to entry were removed. The authorities reduced the required reserve ratio only to 45 per cent at first, fearing that a lower ratio would prove immediately inflationary. At this time the BCRA began the practice of paying interest on bank reserves, to enable banks to maintain relatively low spreads between lending and deposit rates, and so ensure that they were competitive with non-bank financial institutions not subject to reserve requirements. It funded this interest by collecting a monthly fee equal to one per cent of banks' "loanable capacity," calculated from their deposit base and reserve holdings. The BCRA accumulated the fee proceeds in a fund called the "Monetary Regulation Account," and paid the interest out of this fund.

3.15. For about three years this system, which was intended to be temporary, worked well enough. The authorities reduced reserve requirements to 10 per cent by 1980, and the Monetary Regulation Account remained in surplus. Banking-system operations expanded in response to the liberalized environment. The private sector took on growing volumes of internal and external debt. Unfortunately, the macroeconomic policies at this time, centered on maintenance of an appreciated exchange rate, required high domestic interest rate levels to attract and hold foreign capital. When this policy proved unsustainable, as described above, devaluation, inflation, and recession combined to thrust the commercial banks into profound crisis, beginning with a wave of failures in 1980.

3.16. To cope with the crisis, the authorities reluctantly took policy measures that reversed the 1977 liberalizing reforms. The BCRA increased bank reserve ratios and relieved the banks from having to pay the fee that funded the Monetary Regulation Account, although a substantial part of their reserves continued to yield interest. During 1982 the BCRA assumed the private sector's external debt, announced a blanket rescheduling of private-sector loans to domestic commercial banks, and reintroduced controls on deposit interest rates. These measures permitted the private sector to recover financially, and headed off complete banking-system decapitalization. The cost, however, was that the financial system was reconstituted on a repressed basis. Unable to attract significant deposits, the private banking system had to narrow its lending activities. Disintermediation resulted, in the form of a revitalized interfirm financial market. While the interfirm market relieved the credit scarcity, it was essentially unregulated, and it could provide credit only to large, well-established enterprises. (See Balino 1987.)

3.17. The Alfonsín Government intended to resume financial liberalization following the Austral Plan. Through 1986 and 1987 the authorities planned liberalizing reforms, but these plans remained in abeyance while the BCRA maintained tight monetary policy to keep inflation from reviving. In October 1987, the authorities freed interest rates completely, as part of the package of devaluation and stabilization measures following the mid-term legislative and gubernatorial elections. Unfortunately, public-sector credit needs remained substantial, and the stabilization burden continued to fall on the monetary authority. With interest rates free to rise, high bank reserve requirements, remuneration of reserves and tight monetary policy proved self-defeating, because the BCRA's own debt to the commercial banks accumulated so rapidly. Since the Monetary Regulation Account now had no income, but paid interest on remunerated bank reserves and inaccessible deposits, it became a standing source of money creation. The BCRA could "sterilize" only by issuing more interest-bearing debt to commercial banks, in a self-perpetuating debt-creation spiral. Meanwhile, although the Austral Plan prohibited the BCRA from creating money to finance the Treasury, it could lend international reserves to the Treasury, and moreover provided "rediscount" credit to the BHN, the BANADE and some provincial banks, many of whom provided financing to provincial governments.

3.18. In early 1988, despite their intentions to reduce bank reserves and inaccessible-deposit requirements, the authorities chose to maintain and even increase these requirements to fight inflation. In mid-1988 was that the balance of payments suddenly became a source of inflationary pressure: unusually hot summer weather had damaged U.S. grain and soybean production, and the authorities had to sterilize significant international-reserve inflows resulting from high prices and export volumes. By July 1988, tightened monetary policy notwithstanding, the authorities found themselves once again facing the prospect of hyperinflation.

3.19. The essential characteristics of Argentina's peculiar macro-financial system were in place before the Primavera Plan. Demand for both narrow (unremunerated) and for broad (remunerated) money, which competed with readily-available dollar-denominated assets, was low. Broad money could compete with dollars only by offering high interest rates. Broad money, however, was BCRA debt, intermediated at one remove by the commercial banks. The BCRA had no means of paying interest, save through creation of debt that the economy was unwilling to hold except at high interest rates. When the BCRA chose debt creation rather than money creation, it committed itself to future expansion of the broad money supply. Tight monetary policy therefore became perversely inflationary.

4. The Primavera Plan.

4.1. In August 1988 Argentina's economic authorities, alarmed by accelerating prices over the first seven months of 1988, attempted to renew their heterodox stabilization strategy through what came to be known as the "Primavera Plan." The core of the Plan was a "reverse" multiple exchange-rate system through which the BCRA would earn an operating profit from foreign-exchange transactions at unfavorable rates for both importers and exporters. Following an initial devaluation, the official exchange rate would be devalued at a pre-announced four-per-cent monthly rate. Monetary policy would be calibrated to set domestic interest rates at whatever level was necessary to hold the parallel rate -- the importers' rate -- between 20 and 25 per cent above the official rate -- the rate for most exporters. This profit, expected to be on the order of 1.5 per cent of GDP, was meant to reduce overall domestic credit creation. At the same time, public-enterprise prices were adjusted upward to bolster the firms' operating revenues. Different public-enterprise prices would then be raised each month to forestall inflationary erosion.

4.2. The Government buttressed the program by securing agreements with industrialists to limit monthly price increases and with labor unions to moderate wage demands. Industrialists went along in the hope of diminishing the Peronists' chances in the May 1989 presidential elections. The Peronist labor unions cooperated informally to avoid the charge of having irresponsibly blocked a stabilization effort. Deceleration of prices was expected to generate a favorable Olivera-Tanzi effect on public revenues. The probable real effective revaluation of the austral, which seemed justified in view of the terms-of-trade gain resulting from the United States drought conditions, would presumably diminish inflationary pressure.

4.3. These measures were intended to provide a few weeks of breathing space for deeper reforms, including a tax reform. The authorities limited their publicly-stated ambitions to maintenance of single-digit monthly inflation for the coming months. They felt that deeper success required reforms the Congress would probably not approve in the months leading up to the May 1989 presidential elections. In addition, it was clear that substantial monetary pressures would persist. The devaluation itself would have an inflationary effect, and, in addition, the BCRA was amortizing maturing Treasury bonds that had been issued during 1987.

4.4. The main reason the Primavera Plan ran into trouble was that Argentine financial markets insisted on monthly interest rates of 1 to 2 percentage points above the inflation rate and 3 to 4 percentage points over the devaluation rate to hold the parallel exchange rate at its targeted values. The resulting interest bill kept the combined Treasury and BCRA deficit high. Structural reforms promised for the non-financial public sector

came slowly. The tax reform approved in December 1988 incorporated so many compromises that -- although it made a number of advances from the standpoint of efficiency -- it failed adequately to increase tax revenues. Meanwhile, partly because interest rates remained so high, the BCRA's scheme to profit on foreign-exchange sales fell short. High interest rates contributed to the economy's slide into recession, reducing imports, and, moreover, discouraged would-be importers from borrowing or withdrawing funds to purchase foreign exchange.

4.5. Through November, December and January the BCRA sought to limit liquidity growth and support the exchange rate by imposing additional inaccessible deposits on commercial banks. Interest rates rose as a result, and the BCRA's rising interest bill itself became a significant source of BCRA-liability creation. As the stock of BCRA liabilities swelled relative to the dollar stock, the parallel exchange rate came under pressure. In January the BCRA tried to relieve this pressure by selling dollars. Once the markets perceived that the BCRA was spending reserves, however, the stabilization effort became untenable. Commercial banks faced heavy withdrawal demand as depositors sought to convert their deposits and capitalized interest safely into dollars before the austral collapsed. Some of the exchange-rate pressure was seasonal: January is a summer month, and overseas travellers always swell foreign-exchange demand. Seasonally lower economic activity also reduces money demand. The uncertainties created by the mid-May presidential election provided further motivation for deposit withdrawals. It is doubtful, however, that seasonal developments or political uncertainties were the preponderant sources of the withdrawal pressure, compared with the relentless growth of the BCRA's liabilities.

4.6. Early in February 1989 the authorities bowed to the inevitable and devalued. Over subsequent weeks, the economy tumbled into hyperinflation. As the commercial banks' illiquidity became increasingly acute, the BCRA had to (i) release bank reserves, then (ii) release inaccessible deposits and (iii) provide rediscounts, and finally (iv) permit widespread reserve deficiencies and even (v) allow informal overdrafts by commercial banks on their BCRA reserve accounts. In April, to permit a larger transfer of resources to the commercial banks, the BCRA made an upward revision in its method of calculating the interest it owed on their inaccessible deposits, credited the increment to the banks' inaccessible-deposit accounts, and then released a larger proportion of the deposits. Meanwhile, the authorities revised the exchange-rate policy several times, briefly attempting a floating exchange rate before returning to something like a crawling peg. By May, however, there was full-blown hyperinflation, fuelled by the BCRA's provision of base money to the commercial banks so that withdrawals would not force them out of business. Largely because of the hyperinflation, the Peronists won the May 1989 elections.

5. The BB Plan.

5.1. As described above, when the new authorities took office in July 1989 they lost no time in enacting a new stabilization program, comprising a massive devaluation followed by a fixed exchange rate; massive public-service price increases; and an agreement with industrial enterprises to hold their output prices as long the exchange rate and public-service prices remained unchanged. The authorities also requested legislation to broaden their powers to reduce public expenditure, privatize public enterprises, and increase tax collection.

5.2. Until the non-interest surplus rose sufficiently to cover Treasury and BCRA interest, however, stability depended on monetary policy. The immediate problem was that the hyperinflation had so reduced money holding that the money creation induced by the devaluation and the consequent surrender of export proceeds generated proportionally high monetary growth. Some increase in money holding was likely as a result of more favorable inflationary expectations, but it was too optimistic to suppose that remonetization could absorb all, or even a significant part of, the increase. (In any case, with prices frozen, the measured real money stock overstated the economy's true willingness to hold money.) The new BCRA President made it clear that he would use voluntary open-market sales of CEDEPs, not compulsory inaccessible deposits, to control liquidity growth.

5.3. After attempting initially through the CEDEP auctions to set a monthly deposit rate of about 5 per cent, which generated time-deposit withdrawals and parallel exchange market pressure, the BCRA restored the CEDEP rate to about 15 per cent. Although this was what was necessary to secure the parallel exchange rate, the authorities understood that stability was beyond reach if the BCRA continued to pay rates so high. The Treasury and the BCRA had emerged from the hyperinflation with about US\$6 billion in domestic debt; since GDP was running at about US\$5 to US\$6 billion a month, the interest bill would still be around 10 to 15 per cent of GDP, well above any conceivable public-sector non-interest surplus. Accordingly, the authorities sought to reduce interest rates by slowly generating market confidence. By publicizing the structural reforms the new Government planned, by securing international support, and by managing monetary policy gradually and delicately, the authorities hoped to reduce domestic interest rates to magnitudes they stood some chance of paying.

5.4. From mid-July to mid-October, the Government appeared to make steady progress in this effort. The BCRA gradually reduced monthly interest rates from 15 to 4 per cent, while increasing the stock of CEDEPs outstanding from next to nothing to almost US\$3 billion, with no significant increase in the gap between the parallel and (fixed) official exchange rates. Some-

what ironically, the CEDEPs were purchased almost entirely by private commercial banks. The banks bought them voluntarily because, with the exchange rate fixed, CEDEP yields exceeded any conceivable alternative -- in particular, lending to the private sector, which had virtually ceased -- and they were able to fund their positions from returning private-sector deposits. The encouraging decline in interest rates was helped when Congress passed the Economic Emergency Law in August and the Public Sector Reform Law in September -- although compromises on provisions regarding regional industrial subsidies and other matters caused some concern in the financial press. Successful negotiation of a stand-by IMF program in September further helped market confidence.

5.5. In mid-October, however, this progress reversed suddenly, as described above. Pressure emerged in the parallel exchange market when the monthly deposit rates fell to 4 per cent. The BCRA quickly forced up the rates by selling CEDEPs, but then it had to raise them again as anxious depositors sought withdrawals. Commercial bankers found the withdrawal pressure hardly less dangerous when their deposits were backed by marketable assets rather than inaccessible deposits. If they tried to sell their CEDEPs to recover liquidity and pay depositors, they would have generated a sharp decline in the assets' value, hence further pressure on interest rates.

5.6. It is unclear why the situation deteriorated at precisely this moment. It seems probable, however, that the financial markets fully understood the policy-makers' trap. The BCRA had driven interest rates too low to compete with dollar assets, but with the domestic debt now swollen to US\$7 billion, the public sector's debt service would soar uncontrollably if it paid competitive interest rates. As in the Primavera Plan, once the private sector bid interest rates up, the stabilization effort became unsustainable. The authorities could not reverse the drift, particularly when they found they had saturated the market and received few or no bids in the CEDEP auctions. Even the announcement of emergency taxation measures in mid-November -- including heavy taxes on the profits banks had earned in the previous hyperinflation -- failed to mitigate the crisis. The effectiveness of the taxation measures may, in fact, have been offset to the extent people reduced private saving rather than consumption or investment expenditure to pay taxes; diminished saving might have added to the pressure on interest rates, leaving the higher tax receipts offset by a larger interest bill.

5.7. Through the first week of December, the parallel exchange rate rose to the 35-40 per-cent range, while deposit rates, driven by banks' competing to hold deposits, surged. On Sunday, December 10 the authorities announced a package of corrective policy measures, including devaluation of the official exchange rate from A\$655 to A\$1,000, and increases in export-tax rates. The measures also included a two-year rescheduling of amortization due on most outstanding Treasury bond issues. Many

observers believe this rescheduling to have been a serious mistake, because it damaged financial-market confidence at the most critical moment. Nevertheless, the authorities hoped that these measures, combined with the emergency taxes announced in November, would permit a new equilibrium. A bank holiday was declared for Monday. When financial markets reopened the next day, however, they rapidly reestablished the same percentage parallel exchange rate premium, and interest rates came under renewed pressure. By the end of the week the Bunge y Born ministerial team resigned.

5.8. These processes can be traced in the figures provided in Tables 7 and 8. Table 8 shows that the broad liquidity aggregate, which includes time deposits, grew both in dollar terms and as a proportion of GDP from the third quarter of 1988 into the first quarter of 1989. This was because the real interest rates on such time deposits (see Table 1) grew steadily over the period, not only encouraging deposit holding but also increasing the broad-liquidity stock through capitalization -- at least until February 1989 when the exchange crisis occurred, causing the dollar value of the broad liquidity stock to plunge precipitously into the second quarter of 1989. With the BB Plan broad liquidity resumed its growth, although from a lower level, into the fourth quarter of 1989. Table 8 also shows the sources of monetary-base growth. Here the significant points to observe include (i) the money creation resulting from BCRA interest payments throughout 1988 and 1989; (ii) the contribution to monetary contraction of inaccessible deposits in the fourth quarter of 1988 and of primary open-market operations in the third quarter of 1989; and (iii) the expansionary contributions of the external sector throughout the period, notably in the periods immediately following the sharp devaluations carried out with the announcements of the programs.

5.9. Table 9 shows the main components of the BCRA's losses and borrowing requirements over this period. (The Appendix discusses relevant technical issues.) The significant points to note are (i) the sharp increase in the stock of inaccessible deposits and in the interest paid on them between the third quarter of 1988 and the first quarter of 1989, (ii) the sharp increase in the stock of BCRA bills and in the interest paid on them between the second and fourth quarters of 1989, and (iii) the high nominal interest payments accrued by the BCRA. The only asset categories on which the BCRA received debt service in cash were the dollar-linked rediscounts -- mainly export credit -- and illiquidity rediscounts, which were relatively small in magnitude.

5.10. The BCRA's own borrowing requirement exceeded its total losses, and indeed was just about equal to its total interest payments. This point was especially important in the third quarter of 1989, when the BCRA's nominal interest bill remained substantial even as it ran a surplus on an accrual basis. This surplus resulted from the lagged indexation of some of its

assets -- assets on which it accrued income but received no cash payment. The indexation was so substantial that the BCRA's accrued asset stock actually came to exceed the liability stock in the third quarter of 1989. The BCRA's interest payments amounted to their nominal value plus the gain from the inflationary erosion of the corresponding liabilities. Particularly in the fourth quarters of 1988 and of 1989, however, the BCRA's nominal interest payments due substantially exceeded the gain through inflationary erosion of liabilities.

6. Common characteristics of the Primavera and BB Plans.

6.1. Many observers noted the parallels with the Primavera Plan even at the outset of the BB Plan, and there are evident retrospective parallels. Both failed because they sought to stabilize a macroeconomy burdened with excessive, and excessively expensive, public-sector debt by having the public sector take on more debt. The architects of both plans were fully aware of the contradiction: they felt their only hope of averting public-sector bankruptcy was to borrow time at high interest rates, win sufficient confidence to bring down the interest rates, and then carry out structural reforms quickly enough to enable the public sector to pay the interest and, ultimately, the principal.

6.2. The orders of magnitude of the aggregates involved made this approach dauntingly difficult. With monthly interest rates on the order of 5 per cent, domestic debt totalling US\$7 billion, and monthly GDP running at US\$5 to \$6 billion, the monthly interest bill of US\$350 million was 6 to 7 per cent of GDP. Even after the massive devaluation and public-sector price increases of July 1989, the non-interest public-sector surplus was barely positive at best. It may have reached 2 or 3 per cent of GDP in November 1989. An additional increase of 3 or 4 percentage points in the non-interest surplus -- whether through expenditure reductions or tax increases -- would have strained the economy severely at a moment when it was emerging from the disarray induced by the hyperinflation. Even if successfully implemented, such fiscal improvements might have had short-term contractionary consequences so sharp that they might have diminished private saving, which might in turn have increased domestic interest rates. (The peculiar hydraulics of Argentina's macroeconomy made this possible: demand for broad money depended positively on interest rates and the public sector itself was heavily indebted at high interest rates.)

6.3. Interest-rate determination in the Primavera and BB Plan contexts clearly operated rather differently from usual. In conventional settings, borrowers and lenders presumably come to market with real "reservation" interest rates based on their propensities to borrow and lend, then negotiate nominal reservation interest rates by taking account of exogenous anticipated inflation. In a financial system as open as Argentina's, lend-

ers' opportunity cost is governed by anticipated devaluation and external interest rates. High interest rates induce private lenders to ration, because high rates make borrowers more likely to default. Where the public sector owes the debt, however, the nature of the market changes. A public sector can promise any nominal interest rate as long as it has unquestioned capacity to inflate. Knowing this, private lenders can demand any interest rate from the public sector they collectively wish. The public sector can place debt at any interest rate the market demands, effectively financing the interest by placing additional debt.

6.4. As Argentina's public sector borrowed from the private sector, a perverse distress cycle resulted. The public sector rolled over its loans and borrowed increasing amounts from the private sector to pay the private sector its interest; the public sector then borrowed still more to service still more debt. A regressive transfer resulted, from inflation- and conventional-tax payers to lenders. The process finally broke down because the capitalization of interest rapidly increased lenders' portfolio holdings of austral-denominated assets: once they elected to balance their portfolios by acquiring more foreign exchange, they bid down the value of the austral and bid up interest rates. At this point, higher interest rates could only increase anticipated exchange-rate depreciation. In such circumstances, financial-market participants, observing higher interest rates, are apt to conclude that the Government will sooner or later have to inflate to pay the interest, that everyone else's inflation expectations are rising on similar reasoning, and that hers or his should therefore rise as well.

6.5. It may help to consider this from a game-theory perspective. Imagine the macroeconomy as comprising two players: (i) a government and (ii) a financial market. Suppose, first, that the market is fully confident that the government will honor its commitments. Government debt should then carry a relatively low interest rate, incorporating a low risk premium; the government is therefore more likely to meet its obligations. Suppose, on the other hand, that the financial market believes the government is likely to default. Government debt will then carry a relatively high interest rate, incorporating a high risk premium; the government is therefore more likely to default. This is why governments in such circumstances concentrate heavily on emitting "signals," reaffirming their intention to honor commitments. A government incapable of persuading the markets of its intention not to default may prove incapable of avoiding default. The problem is complicated, moreover, by the reality that the "financial market" comprises many decision makers, each of whom are guided not only by their perception of the government's intentions, but also by their perception of other market participants' perceptions. A single market participant might, for example, be persuaded that the authorities intend to honor government obligations, but might also believe that other market participants remain unpersuaded. This person,

and others similarly situated, might therefore reason that the government remains likely to default.

7. Stabilization measures of December 1989 and January 1990.

7.1. Following the Bunge y Born team's resignation, a new economic team took office, and immediately announced a new set of measures. On December 18 it unified and floated the exchange rate, announced the virtual elimination of all price controls, and reversed the December 10 export-tax increases. The previous week's devaluation had put an end to the wage- and price-freeze understandings, and the new authorities raised public-sector wages as well. The new BCRA President announced that he would permit no money creation, although Argentine financial markets clearly understood that a significant part of the monetary base creation -- in particular, the interest payments on BCRA obligations -- was automatic. The exchange rate fluctuated between A\$1,400 and A\$1,900 over the remainder of that week, while real interest rates remained high, partly on account of seasonal pressures. Prices rose sharply; the price level would roughly double between November 30 to December 31. The new authorities hoped the floating exchange rate would move into equilibrium and that interest rates and inflation would then decline. Unfortunately, instability continued to deepen. After the Christmas holiday, the exchange rate depreciated rapidly, reaching A\$2,500 on December 28. Interest rates soared as anxious depositors requested withdrawals. Over the closing weekend of 1990, the floating exchange rate depreciated precipitously to A\$4,000 and monthly interest rates rose to between 500 and 600 per cent.

7.2. There was widespread speculation that the authorities would dollarize the economy, devaluing heavily, demonetizing the austral, and setting a short deadline for conversion to dollars. Instead, however, they announced the BONEX conversion: the bulk of banks' time deposits were to be converted into BONEX yielding LIBOR plus a small spread maturing in ten years with two years' grace. Commercial-bank time deposits were temporarily suspended. The authorities thereby eliminated the flow of BCRA losses through interest due to commercial banks. Since the BONEX traded at a discount, and since the discount was bound to deepen as the outstanding BONEX stock increased, the conversion constituted a substantial unilateral write-down of the public sector's obligations to the private sector.

7.3. It was evident at the time that the BONEX conversion had four consequences, two stabilizing and two destabilizing. The stabilizing consequences were (i) the direct elimination of the BCRA's domestic borrowing requirement and (ii) the extinction of roughly half the economy's broad liquidity stock. The destabilizing consequences were (iii) a further blow to financial market confidence; and (iv) a sharp reduction in commercial banks' solvency and profitability. Moreover, the measure was taken hastily, and it took two months for the authorities to

decide essential details of the conversion, which generated additional uncertainty. Not surprisingly, the willingness to hold money sank to unprecedentedly low levels. The measure is best understood as a declaration of insolvency by a public sector caught in acute distress. Although the authorities were, of course, heavily criticized, they undoubtedly took the better choice of declaring bankruptcy rather than allow turmoil to turn to chaos, which would have ended in any case in a larger bankruptcy.

7.4. Over the first two months of 1990 the exchange rate and the price level remained extremely volatile, rising at average monthly rates of 70 to 80 per cent. In early March, however, following a month of extremely tight monetary policy, announcement of substantial fiscal measures caused the nominal exchange rate to settle down, and the monthly inflation rate moderated to about 10 to 15 per cent. Over March and April the exchange rate appreciated sharply in real effective terms even as the monetary authority purchased more than US\$1 billion in foreign exchange. The Treasury ran a surplus sufficient to purchase only about one fifth of this. For several months thereafter, while monthly inflation persisted at 10 to 15 per cent, the nominal exchange rate remained between A\$5,000 and A\$5,800. The BCRA continued to purchase the proceeds of the trade surplus, which reached almost 10 per cent of GDP for the year, so that even after meeting some external debt service commitments (including, after April, partial payments of interest due to commercial banks), foreign-exchange reserves grew. The Treasury maintained a primary surplus, as it had since September 1989, buttressed during 1990 by several rounds of tax increase. Nevertheless, with money demand still very low and the real economy severely depressed, Argentina's macroeconomy remained highly unstable.

8. Concluding observations.

8.1. When a public sector slips into debt distress, the available policy options are disagreeable -- essentially, to continue the cycle of debt accumulation until it can somehow get together a sufficient non-interest surplus to stop it, or to default on commitments. As long as the cycle continues, policy-makers lose their capacity to carry on normal policy activity. On the other hand, if they default, given the government's role as the economy's principal debtor, they set a troubling precedent and make future public-sector borrowing more difficult.

8.2. If in July 1989 the incoming authorities' emergency measures had been even more drastic than they were, they might have secured a non-interest public-sector surplus sufficient to pay the combined Treasury and BCRA interest bill, thus achieving overall public-sector balance. They would then have avoided further debt accumulation. They clearly attempted as much as they believed politically and economically feasible. It cannot

be assumed a priori, however, that rapid achievement of an operating surplus so large was within the authorities' reach. Over any time period, there is some maximum feasible improvement in any public sector's non-interest surplus, particularly for an economy setting out from depressed circumstances. It is at least possible that the BB Plan strategy was simply impossible -- i.e., that the interest due far exceeded the public sector's capacity to pay it. It is at least possible that Argentina's public sector was, in this sense, truly bankrupt.

8.3. One of the striking lessons from Argentina's experience is that contractionary monetary policy can be peculiarly counterproductive in an economy where structural problems persist, where money pays interest (and where money demand and money creation are both positive functions of short-term interest rates), and where the public sector itself has a high interest bill. Over the latter half of the 1980s, Argentine policy-makers applied vigorous contractionary monetary policy, forcing interest rates to levels no private sector activity could pay in any context, let alone in the Argentine economy's depressed conditions. One consequence was that the formal banking system stopped lending to the private sector. The scarcity of working-capital credit -- let alone of investment credit for new enterprises -- has become a standing obstacle to economic progress. The second consequence was that the public sector itself became heavily indebted, evidently to the point of distress.

8.4. There is a widespread view that governments, unlike private entities, cannot go bankrupt. It appears to have been Argentina's unhappy lot to have provided a counter-example to this view. The January 1990 BONEX conversion amounted to the Argentine Government's declaration of bankruptcy. If indeed the nation had become bankrupt -- and there is, at a minimum, a strong case that it had -- then the authorities would appear to have had little choice. Having taken this difficult and regrettable step, however, there are grounds for hope that this fundamentally resource-rich nation can return to economic progress, if it can maintain fiscal austerity, if it can gradually restore private-sector confidence and credit flows, and if it can secure a realistic arrangement with its overseas creditors.

9. APPENDIX. SOME TECHNICAL ISSUES REGARDING CENTRAL-BANK LOSSES AND BORROWING REQUIREMENTS.

9.1. Over the 1980s Argentina's Central Bank underwent progressive decapitalization, in the form of deepening indebtedness and progressive losses on assets. As a consequence of its decapitalization -- that is, as a consequence of its loss of an independent net asset position -- the Central Bank lost the capacity to carry out effective monetary policy. Having no marketable assets, it could not absorb money except by borrowing at high interest. Its interest-bearing domestic indebtedness became so severe that it slipped into distress, with its interest bill running ahead of its capacity to place new debt except at higher and higher interest rates. This became a core cause -- arguably the core cause -- of the hyperinflationary pressure that emerged twice over the course of 1989.

9.2. This appendix discusses certain conceptual issues regarding central bank losses and deficits. The expression "quasi-fiscal deficit" has been used interchangeably to refer both to the Central Bank's losses and to its borrowing requirement. Nevertheless, it is helpful -- indeed, important -- to maintain a clear distinction.

9.3. Like any other financial enterprise, a central bank may earn interest on some of its assets and pay interest on some of its liabilities. (A central bank that has access to seignorage -- the capacity to borrow at zero interest by issuing an obligation that people hold for its liquidity characteristics -- should not need to borrow at interest.) In addition, central bank assets may take capital gains and losses, or may revalue through currency fluctuations, or losses on account of non-payment. Such events give rise to profits or losses. In any time interval over which the central bank distributes no dividends nor receives additional capitalization, the flow of losses (profits) equals the flow decrease (increase) in the central bank's net capital position.

9.4. To discuss central-bank losses and borrowing requirements more precisely, it helps to set out several definitions and distinctions: (i) operating and non-operating losses; (ii) external and domestic components of central-bank losses; (iii) accrual and cash bases for measuring central-bank losses; (iv) nominal and real bases for measuring central-bank losses; and (v) the distinction between central-bank losses and borrowing requirements.

9.5. (i) Operating and non-operating central bank losses. In Argentina, the principal source of central-bank operating losses was the excess of interest paid on obligations over interest received on assets. (A "classical" central bank whose liabilities were restricted to issues of non-interest-bearing base money would have no significant interest expenses, and

should therefore generate no operating loss through interest flows.) Additional, but less significant, operating losses might arise through the central bank's own administrative and payroll expenditures. In some nations central banks carry on subsidy operations or multiple exchange-rate practices that may also give rise to losses. The important point about operating expenditures -- and net operating losses -- is that they require the central bank to issue debt or money as they are incurred; that is, the central bank must capitalize interest due into a debt stock or pay -- i.e., issue -- money to cover it. (Vice versa for operating receipts; the central bank either capitalizes them into assets or receives -- i.e., absorbs -- money in payment.)

9.6. Central bank non-operating losses include such things as increases in the domestic currency values of net dollar denominated liabilities resulting from currency devaluation; reductions in recorded values of assets through recognition of value impairment; and reductions in market valuations of (capital losses on) longer-term marketable (but sound) assets. In themselves, non-operating expenditures and losses reduce the central bank's capital position, but do not directly require the central bank to take on increased net indebtedness -- in particular, to create money.

9.7. Operating and non-operating losses both diminish a central bank's capital position. In principle, the distinction between the two is that, unlike non-operating losses, operating losses must be financed directly, as incurred, through increased central-bank net indebtedness. The flow increase in the central bank's net indebtedness equals the flow increase in the central bank's total debt -- currency in circulation, debt to commercial banks, debt to the non-financial private sector, debt to the private sector (deposits of public entities, if any), and external debt -- less the flow increase in central bank assets -- including international reserves and commercial bank, private- and public-sector obligations to the central bank.

9.8. While non-operating losses do not force a central bank to contract additional net debt, over time the reductions they entail in the central bank's capital position may affect its capacity to act. Value impairment of, capital losses on, or adverse currency shifts involving central-bank assets diminish the central bank's subsequent capacity to absorb money.

9.9. (ii) External and domestic sources of central bank losses. A central bank may take operating and non-operating losses on both external and domestic activities. Operating external losses consist principally of the difference between interest flows on external liabilities and assets. Non-operating external losses consist mainly of the flow increase in the domestic currency value of external liabilities resulting from exchange-rate depreciation, if external liabilities exceed external assets; if external assets exceed external liabilities,

exchange-rate depreciation gives rise to non-operating profits. Value impairment of, or capital losses on, external assets may also give rise to non-operating external losses. Profits or losses may also arise through multiple exchange rates. A central bank that purchases foreign exchange at a high (local currency per dollar) rate and sells at a low rate -- presumably, to set differential incentives favoring importers over exporters -- would tend to run an operating loss.

9.10. (iii) Accrual and cash bases for central bank operating losses. For simplicity, suppose a central bank runs losses through interest due on a single obligation. Over any time interval, this interest might be paid in cash, capitalization into the obligation stock or a combination of the two. The losses measured on a cash basis would be the interest actually paid out in cash, or, equivalently, the total interest accrued less the interest capitalized into the obligation stock. Income on assets can be treated similarly. Thus,

Central bank operating losses, accrual basis
= Central bank operating losses, cash basis
+ Interest due to be paid by the central bank accrued into liability stocks
- Interest due to be paid to the central bank accrued into asset stocks,

or,

Central bank operating losses, cash basis
= Central bank operating losses, accrual basis
- Interest due to be paid by the central bank accrued into liability stocks
+ Interest due to be paid to the central bank accrued into asset stocks.

The base money issued in the process of "financing" the central bank's operating losses constitutes the flow "monetary impact" of the central bank's losses. (Non-operating central bank losses can have no direct monetary impact.)

9.11. (iv) Nominal and real bases for measuring domestic central bank losses. Where inflation is significant, the central bank generates a profit to the extent its liabilities denominated in local currency exceed its assets denominated in local currency (or takes a loss to the extent its assets exceed its liabilities), because the inflationary erosion of the liabilities exceeds that of assets. Over any time interval in which prices rise x per cent, each domestic currency unit loses $[x/(100+x)]$ per cent of its purchasing power. (If one peso is held over a period in which the price level rises by x per cent, its purchasing power value at the end of the period will be $[100/(100+x)]$ times its initial purchasing power value, a loss of $[x/(100+x)]$ per cent.) Accordingly, a given "nominal" central-bank loss may be placed on a "real basis" by adding a flow equal to $[x/(100+x)]$ per cent of the difference between the cen-

tral bank's domestic currency-denominated liabilities and assets. For this calculation, all of a central bank's liabilities -- in particular, the non-interest-bearing monetary base -- and assets should be taken into account. (The definition of the quasi-fiscal deficit used by the Argentine authorities did not take account of the narrow monetary base, and to this extent overstated the BCRA's real decapitalization. Barbone and Beckerman 1989 discusses this point.)

9.12. (v) Central bank losses and the central bank's borrowing requirement. For some purposes, the borrowing requirement resulting from the central bank's own activities may be a more useful indicator of the macroeconomic pressure exerted by these activities than the losses arising from them. The point here is that, where a central bank has an asset position on which it accrues interest income but does not receive it in cash, the central bank's own operational flow may nevertheless imply a substantial borrowing requirement, even if the operational flow shows a profit on an accrual basis. In a macroeconomic context, the borrowing requirements, not the central-bank decapitalization per se, measure the burden the central bank's activities place on domestic financial markets.

9.13. The central bank's own borrowing requirement may be measured as the sum of (a) its losses on an accrual basis and (b) interest receipts capitalized into the asset stocks rather than received in cash. (Note that the central bank borrowing requirement as defined here includes only what the central bank borrows to finance its own losses.) The central bank's losses will be less than the central bank's borrowing requirement to the extent the central bank is only accruing, not actually receiving cash payments of, interest on its assets.

9.14. To discuss these points in analytical terms, define the following variables, all as period-end stock values (the notation convention is that a prime indicates domestic-currency stocks and an asterisk indicates U.S.-dollar values):

- F' = net obligations of the non-financial public-sector to the central bank;
- H' = obligations of the banking system to the central bank, including rediscount credit;
- e = exchange rate (domestic currency per U.S. dollar);
- A* = net external assets of the central bank;
- R' = commercial-bank reserves;
- B' = the monetary base (i.e., B'-R' represents currency in circulation);
- U' = non-monetary financial obligations of the central bank; and
- v' = the central bank's capitalization.

9.15. The central bank's balance sheet, accordingly, has the following structure:

F'	R'
H'	B' - R'
A' = eA*	U'
	V'

9.16. Let the respective nominal rates of return on the assets and liabilities be given by f' , h' , a^* , r' , and u' (there is presumably no return on $B' - R'$). (The notation convention is that an apostrophe indicates a nominal domestic-currency rate and an asterisk a nominal U.S.-dollar rate.) Over a given short time period -- taken here to be one accounting accrual period -- the central bank's operating profit in nominal terms is given by

$$J' = (f'_{-1} F'_{-1} + h'_{-1} H'_{-1} + e a^*_{-1} A^*_{-1}) - (r'_{-1} R'_{-1} + u'_{-1} U'_{-1}). \quad [1]$$

(The central bank's own operating costs -- wages, supplies, etc. -- are ignored.)

9.17. (The asset and liability stocks and their corresponding interest rates may be thought of as vectors. Thus, for example, f' and F' would be vectors incorporating rates of return on and stocks of different kinds of government obligation held by the central bank.)

9.18. The central bank's non-operating profit, again in nominal terms, is given by

$$N' = (e - e_{-1}) A^* - d H'_{-1}, \quad [2]$$

where "d" represents the proportion written off the stock outstanding at the end of the preceding period of commercial-bank obligations to the central bank. The first term in this expression represents the appreciation in local-currency terms of the net international-reserve position as a result of currency devaluation.

9.19. For simplicity, assume that the central bank receives no additional capitalization nor pays out any dividends, so the central bank's capital position simply increases by the overall profit:

$$V' - V'_{-1} = J' + N'. \quad [3]$$

9.20. The "real" part of this profit flow is calculated by subtracting the "inflation adjustment" of assets and liabilities. Let "x" represent the inflation rate (now in decimal terms) over any given period. Then the inflation profit over the period on inflation on assets and liabilities is given by

$$-[x/(1+x)] [F'_{-1} + H'_{-1} + e_{-1}A*_{-1} - B'_{-1} - U'_{-1}], \quad [4]$$

which may be added to the nominal profit flow to give the corresponding real-basis profit. Also, note that the real-basis profit is not the same as the deflated value of the profit flow. Note that this last expression takes account of all central-bank assets and liabilities, including the monetary base.

9.21. The central bank's loss flow is the negative of Formula (3). The inflation-adjusted loss flow, which measures the change in the central bank's real capital position, is given by

$$Z = Z'$$

$$-[x/(1+x)] [F'_{-1} + H'_{-1} + eA*_{-1} - B'_{-1} - U'_{-1}], \quad [5]$$

where

$$Z' = -(V' - V'_{-1}).$$

9.22. The monetary impact of the central bank's operating loss may be defined by the expression

$$\begin{aligned} \Delta B^J &= (m^r r'_{-1} R'_{-1} + m^u u'_{-1} U'_{-1}) \\ &+ (m^f f'_{-1} F'_{-1} + m^h h'_{-1} H'_{-1}) \\ &+ m^a e a*_{-1} A*_{-1}), \end{aligned} \quad [6]$$

where m^r and m^u are the respective proportions of the central bank's interest payments on liabilities actually paid in money, while m^f , m^h and m^a are the proportions of the central bank's interest receipts on its net assets actually paid in money; ΔB^J is then the change in the monetary base directly resulting from J' , the central bank's operating loss. Since the proportions $(1-m^r)$ and $(1-m^u)$ of interest paid by the central bank are not paid in cash, and the proportions $(1-m^f)$, $(1-m^h)$ and $(1-m^a)$ are not absorbed in cash but instead are capitalized into the respective assets or liabilities:

$$\Delta R^J = c^r r'_{-1} R'_{-1} \quad [7]$$

$$\Delta U^J = c^u u'_{-1} U'_{-1} \quad [8]$$

$$\Delta F^J = c^f f'_{-1} F'_{-1} \quad [9]$$

$$\Delta H^J = c^h h'_{-1} H'_{-1} \quad [10]$$

and $\Delta A^J = c^a e a^*_{-1} A^*_{-1} \quad [11]$

where $c^r = (1 - m^r),$

$$c^u = (1 - m^u),$$

$$c^f = (1 - m^f),$$

$$c^h = (1 - m^h),$$

and $c^a = (1 - m^a);$

The coefficients m^i may be called the "monetization" rates, and the coefficients c^i the corresponding "capitalization" rates.

9.23. In addition to the growth in each asset and liability that takes place through the capitalization described by the formulas above, each asset and liability grows or diminishes through monetary events and policy: bank reserves change as commercial banks receive or lose deposits; non-monetary obligations change as the central bank creates or absorbs them; credit to commercial banks and to the public sector, or international reserves, change as the economy evolves. Let $\Delta F'^I$ represent the growth in F' resulting from causes other than interest capitalization, and so on for the other assets and liabilities. The overall change in each asset or liability is then given by

$$\Delta R' = \Delta R'^I = \Delta R'^J, \quad [12]$$

$$\Delta U' = \Delta U'^I = \Delta U'^J, \quad [13]$$

$$\Delta F' = \Delta F'^I = \Delta F'^J, \quad [14]$$

$$\Delta H' = \Delta H'^I = \Delta H'^J, \quad [15]$$

and, in domestic-currency terms,

$$\Delta A' = \Delta A'^I = \Delta A'^J. \quad [16]$$

The overall change in the monetary base is given then by

$$\Delta B' = \Delta B'^I + \Delta B'^J,$$

where

$$\Delta B'^I = \Delta F'^I + \Delta H'^I + \Delta A'^I - \Delta U'^I \quad [17]$$

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TABLE 1. ARGENTINA: MONTHLY INFLATION, EXCHANGE-RATE, INTEREST-RATE, REAL-WAGE AND MONETARY DATA.

Inflation rates:		Exchange rates:		Monthly interest rates:				Real public-	Real wage rates in		Monetary aggregates			
Wholesale prices	Consumer prices	Official (A\$/US\$; pd. avg.; rate)	"Free" (per cent premium over official rate)	Real-effective (1988 = 100; + = deprec.)	Bank lending rates	Bank time deposit rates	Interfirm liability rates	prices	Monthly	Hourly	(per cent growth over preceding period):			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	Monetary base (M0)	Narrow aggregate (M1)	Broad aggregate (M4)	
1987 6	6.7%	8.0%	7.3%	21.9%	100.2	7.5%	6.5%	8.1%	99.0	107.2	100.8	1.7%	7.7%	9.6%
1987 7	9.4%	10.1%	10.8%	26.4%	100.4	9.0%	7.5%	10.7%	99.0	105.1	95.7	11.0%	2.3%	10.5%
1987 8	14.6%	13.7%	11.6%	38.8%	98.7	11.3%	9.8%	12.5%	97.7	98.9	94.5	9.5%	1.6%	9.6%
1987 9	16.6%	11.7%	15.6%	41.5%	101.9	12.5%	11.0%	15.9%	95.4	105.3	94.8	5.1%	0.5%	13.3%
1987 10	30.5%	19.5%	32.6%	23.3%	109.3	11.5%	10.0%	12.1%	107.0	107.3	98.0	22.2%	19.9%	14.0%
1987 11	4.3%	10.3%	8.2%	16.3%	113.6	11.1%	8.9%	9.0%	105.3	102.2	98.5	1.1%	12.3%	9.6%
1987 12	2.2%	3.4%	0.4%	28.8%	112.1	13.7%	12.4%	14.0%	101.8	94.7	99.0	12.7%	28.9%	11.7%
1988 1	12.1%	9.2%	11.2%	38.8%	112.9	15.5%	13.3%	13.0%	100.4	87.9	101.8	6.3%	-3.5%	13.7%
1988 2	13.5%	10.3%	10.6%	33.8%	111.0	15.6%	13.3%	13.1%	105.5	73.4	95.6	-5.5%	1.1%	12.6%
1988 3	16.3%	14.7%	15.6%	29.1%	110.4	17.3%	15.7%	15.1%	110.3	101.0	92.9	14.8%	7.5%	16.8%
1988 4	16.8%	17.3%	16.3%	20.7%	111.6	17.6%	16.2%	16.1%	114.3	94.0	91.5	10.3%	8.7%	12.1%
1988 5	23.2%	15.6%	15.9%	24.6%	108.2	19.5%	17.3%	16.0%	125.8	102.2	93.3	18.7%	14.5%	15.5%
1988 6	24.1%	18.1%	21.4%	27.1%	107.6	21.9%	19.6%	17.8%	123.6	91.9	87.5	15.0%	22.9%	20.2%
1988 7	25.0%	25.6%	19.6%	26.5%	101.6	25.1%	22.9%	22.9%	122.8	88.4	83.8	34.2%	5.8%	25.0%
1988 8	32.0%	27.6%	24.3%	16.3%	97.1	13.5%	10.7%	8.3%	126.7	96.1	86.9	18.5%	22.4%	20.5%
1988 9	6.4%	11.7%	0.0%	19.7%	88.5	12.1%	9.1%	6.9%	115.0	75.3	91.2	22.2%	22.2%	14.1%
1988 10	4.6%	9.0%	1.9%	22.6%	86.0	12.0%	9.3%	7.4%	109.3	78.8	97.1	5.5%	10.8%	8.9%
1988 11	3.9%	5.7%	3.8%	21.7%	87.0	12.7%	10.2%	8.2%	109.7	107.2	99.8	17.5%	9.5%	13.1%
1988 12	5.7%	6.8%	3.8%	20.1%	85.2	14.9%	12.2%	10.3%	107.1	102.6	107.2	23.7%	42.2%	15.9%
1989 1	6.9%	8.9%	4.1%	23.0%	81.8	14.8%	12.1%	9.6%	104.2	90.2	103.7	-1.4%	-1.0%	14.6%
1989 2	8.4%	9.6%	6.7%	72.6%	79.8	20.3%	18.9%	17.6%	102.1	79.4	98.2	5.4%	1.5%	18.3%
1989 3	18.9%	17.0%	5.6%	164.7%	70.5	24.8%	21.6%	20.0%	95.7	88.4	85.9	184.7%	16.8%	23.6%
1989 4	58.0%	33.4%	321.0%	0.0%	206.6	39.9%	45.3%	46.6%	85.2	72.9	69.7	28.0%	16.8%	33.1%
1989 5	104.3%	78.3%	93.4%	6.6%	207.1	106.8%	117.9%	146.2%	76.0	53.3	33.9	60.6%	98.0%	70.6%
1989 6	133.5%	114.5%	68.1%	94.6%	154.9	130.0%	137.2%	126.7%	58.3	39.8	41.1	64.1%	78.2%	99.9%
1989 7	209.1%	196.6%	170.2%	14.2%	140.0	43.3%	27.1%	36.1%	123.4	58.3	59.0	148.4%	107.0%	97.8%
1989 8	8.5%	37.9%	15.4%	2.0%	132.0	18.1%	12.7%	11.6%	125.9	63.0	63.9	30.9%	32.0%	29.1%
1989 9	2.5%	9.4%	0.0%	-0.2%	125.0	11.2%	7.3%	6.2%	115.1	67.8	67.4	30.9%	33.3%	19.6%
1989 10	1.5%	5.6%	0.0%	7.5%	123.4	9.1%	6.3%	5.3%	109.0	75.7	74.3	10.4%	19.2%	13.2%
1989 11	1.8%	6.5%	0.0%	35.4%	119.8	12.8%	9.7%	8.5%	102.3	77.6	74.7	12.7%	21.7%	-1.1%
1989 12	48.6%	40.1%	124.2%	-7.7%	190.3	38.5%	40.5%	40.8%	101.5	62.4	63.1	23.9%	41.8%	-31.6%
1990 1	61.6%	79.2%	17.2%	0.0%	135.0	73.7%	35.4%	36.3%	81.4	52.1	60.9	21.8%	38.4%	51.8%
1990 2	87.7%	61.6%	108.8%	0.0%	163.7	58.3%	34.9%	186.0%	85.1	39.3	53.6	18.8%	16.6%	89.5%
1990 3	71.3%	95.5%	34.7%	0.0%	121.5	79.3%	44.5%	151.1%	86.2	57.3	60.4	30.6%	42.0%	12.6%

Sources: (1)-(3), (5), (12)-(14) calculated from IMF International Financial Statistics.
 (6)-(11) calculated from CEPAL data.
 (4) calculated from Cronista Comercial tables.

TABLE 2. ARGENTINA: BALANCE-OF-PAYMENTS, INTERNATIONAL-RESERVE AND EXTERNAL-DEBT DATA.

Balance of payments (US\$ million):		Gross international reserves:											External debt (US\$ billion; year-end)												
Current account:		Capital and reserves:							Total				Total												
Surplus		Merchandise trade:		Net non-factor services		Net financial services		Net capital account		Errors and omissions		Total (gold at world price; US\$mm.)		Foreign exchange (US\$mm.)		Gold (Mn. Troy ozs.)		Public, guaranteed		Non-guaranteed		IMF		Short-term	
(1)	(2)	Exports	Imports	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	
1981	1	-2000.1	-624.1	1989.9	-2614.0	-700.0	-756.0	2293.1	30.0	-2966.0	2182.1	8444.6	6.4												
1981	2	-900.9	226.1	2048.2	-2622.1	-78.0	-1057.0	1072.9	75.0	69.0	2015.9	6719.5	6.4												
1981	3	-216.5	519.5	2719.2	-2199.7	71.0	-807.0	236.5	-49.0	-7.0	1940.1	3756.1	4.4												
1981	4	-1486.1	-400.1	1586.3	-1994.4	2.0	-1080.0	1452.1	-265.0	-535.0	1792.9	3817.9	4.4	35457	10570	12166	0	12921							
1982	1	-308.3	686.7	2170.4	-1483.7	-72.0	-923.0	368.3	55.0	-28.0	1443.9	3815.2	4.4												
1982	2	-319.2	1012.0	2346.1	-1333.3	-24.0	-1306.0	351.2	-328.0	-295.0	1377.1	3268.4	4.4												
1982	3	-623.6	407.4	1624.3	-1216.9	101.0	-1132.0	643.6	-21.0	41.0	1911.9	3228.1	4.4												
1982	4	-1142.3	100.7	1463.7	-1303.0	37.0	-1368.0	1136.3	-106.0	-475.0	1943.4	2937.9	4.4	43634	15886	11227	0	16521							
1983	1	-407.3	956.7	1933.8	-977.1	-130.0	-1434.0	616.3	3.0	859.0	1834.9	2978.4	4.4												
1983	2	-484.9	922.1	2106.0	-1184.7	-69.0	-1338.0	475.9	-39.0	-172.0	1804.9	2506.4	4.4												
1983	3	-802.5	782.5	2002.6	-1220.1	-121.0	-1464.0	782.5	-75.0	-844.0	1798.9	3365.8	4.4												
1983	4	-591.6	660.6	1793.0	-1132.4	-80.0	-1172.0	-634.6	-214.0	81.0	1697.8	3177.3	4.4	45919	25440	10393	1173	8913							
1984	1	-199.7	1294.3	2159.4	-863.1	-143.0	-1531.0	208.7	-73.0	308.0	1723.7	2350.0	4.4												
1984	2	-136.9	1349.1	2448.6	-1099.5	-38.0	-1448.0	147.9	-9.0	292.0	1631.2	1172.4	4.4												
1984	3	-749.9	755.1	2081.1	-1326.0	-33.0	-1472.0	781.9	28.0	-419.0	1490.5	1472.1	4.4												
1984	4	-1307.0	124.0	1418.3	-1294.3	10.0	-1441.0	1275.0	-39.0	-107.0	1399.7	1740.2	4.4	48836	26700	10340	1098	10718							
1985	1	-777.1	826.9	1803.4	-976.5	-163.0	-1441.0	792.1	-37.0	-426.0	1328.8	1352.5	4.4												
1985	2	194.6	1642.6	2569.8	-927.2	-20.0	-1428.0	-195.6	-57.0	877.0	1389.7	1242.6	4.4												
1985	3	108.5	1330.5	2310.0	-979.5	0.0	-1222.0	-109.5	10.0	1354.0	1411.2	813.3	4.4												
1985	4	-470.1	781.9	1712.9	-931.0	-39.0	-1213.0	467.1	17.0	212.0	1406.6	1713.3	4.4	50944	37327	4575	2312	6730							
1986	1	-803.0	592.0	1512.5	-920.5	-240.0	-1147.0	718.0	13.0	-565.0	1511.4	2919.8	4.4												
1986	2	-455.7	813.3	1967.9	-1154.6	-75.0	-1196.0	396.7	-65.0	1505.0	1496.4	3273.0	4.4												
1986	3	-510.8	541.2	1896.9	-1355.7	-110.0	-934.0	419.8	-124.0	-388.0	1032.2	2701.5	4.4												
1986	4	-1091.0	181.2	1474.6	-1293.4	-134.0	-1139.0	1057.8	-4.0	-1113.0	1709.5	4198.7	4.4	52450	40958	4341	2741	4410							
1987	1	-1012.0	241.2	1441.1	-1199.9	-212.0	-1042.0	895.0	27.0	-84.0	1786.2	3775.4	4.4												
1987	2	-795.9	361.1	1740.6	-1379.5	0.0	-1157.0	784.9	-16.0	-1150.0	1966.1	2718.0	4.4												
1987	3	-1093.9	-14.9	1617.8	-1632.7	-37.0	-1044.0	1101.9	-279.0	-432.0	2015.1	2594.4	4.4												
1987	4	-1319.0	-46.0	1560.7	-1466.7	-31.0	-1242.0	1271.0	46.0	560.0	2126.3	1490.5	4.4	58429	49187	1853	3838	3531							
1988	1	-831.3	553.7	1718.7	-1163.0	-169.0	-1216.0	852.3	154.0	-150.0	1938.0	1030.5	4.4												
1988	2	-430.4	891.6	2296.6	-1405.0	22.0	-1344.0	443.4	-200.0	418.0	1973.8	1617.0	4.4												
1988	3	20.4	1220.4	2677.4	-1457.0	-30.0	-1170.0	-15.4	-12.0	1249.0	1807.8	1467.7	4.4												
1988	4	-346.6	1146.4	2441.4	-1295.0	-98.0	-1395.0	334.6	-30.0	267.0	1834.2	1857.8	4.4	58706	47314	1800	3678	5714							
1989	1	-841.5	949.5	2117.5	-1168.0	-410.0	-1381.0	856.5	10.0	-1649.0	1704.6	3040.1	4.4												
1989	2	-65.2	1512.0	2545.8	-1033.0	103.0	-1681.0	75.2	87.0	-677.0	1607.4	3363.5	4.4												
1989	3	290.7	1785.7	2812.2	-1026.5	72.0	-1567.0	-291.7	-197.0	1396.0	1382.1	1610.4	4.4												
1989	4	-733.5	1043.5	2013.2	-971.7	-14.0	-1763.0	714.5	55.0	-771.0	1791.7	936.0	4.4	64745	51429	1800	3100	8416							
1990	1	NA	NA	2765.4	NA	-172.0	-1451.0	NA	13.0	-151.0	1717.3	2267.0	4.4												

Sources: (1)-(9) calculated from CEPAL data.

(10)-(13) calculated from IMF International Financial Statistics..

(14)-(17) calculated from IBSD World Debt Tables.

TABLE 3. ARGENTINA: NATIONAL ACCOUNTS AND INDICATORS OF ECONOMIC ACTIVITY.

Gross domestic product:		National-income accounts (per cent of GDP):						Manufacturing:			Unem-	Open sub-			
In	Real	Implicit	Consump-	Gross domestic investment:			Exports	Imports	Gross	Hours	Workers	(semester)	employment		
1970	growth	GDP	tion	Total	Fixed	Inventory	of goods,	of goods,	domestic	worked	employed	(semester)	(semester)		
australes	rate	deflator			investment	change	non-	non-	saving						
(1988 =	(over pre-						factor	factor		(1970=100)	(1970=100)				
100)	vious year)						services	services		(11)	(12)	(13)	(14)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)						
1981	1	100.9	-0.6X	0.001	93.5X	18.4X	20.4X	-2.0X	10.2X	-22.1X	6.5X	NA	81.9		
1981	2	101.8	-1.7X	0.001	84.3X	19.4X	19.4X	0.0X	15.0X	-18.6X	15.7X	NA	77.7	4.2X	4.2X
1981	3	95.4	-11.4X	0.002	81.0X	18.6X	20.8X	-2.0X	16.2X	-16.1X	19.0X	NA	74.9		
1981	4	98.3	-11.9X	0.002	82.5X	21.2X	19.9X	1.2X	10.4X	-14.0X	17.5X	NA	74.0	5.3X	5.3X
1982	1	93.3	-7.5X	0.003	85.1X	14.0X	15.9X	-1.9X	13.5X	-12.5X	14.9X	NA	76.2		
1982	2	91.1	-10.5X	0.003	77.9X	16.0X	15.4X	0.6X	16.5X	-10.5X	22.1X	NA	72.0	6.0X	6.0X
1982	3	92.6	-3.0X	0.005	78.0X	17.8X	15.6X	2.1X	14.3X	-10.1X	22.0X	NA	71.0		
1982	4	99.8	1.5X	0.008	80.1X	17.8X	14.5X	3.3X	12.1X	-10.0X	19.9X	NA	72.9	4.6X	4.6X
1983	1	94.3	1.0X	0.011	83.3X	11.1X	12.8X	-1.8X	15.1X	-9.7X	16.5X	NA	76.7		
1983	2	95.2	4.5X	0.015	79.5X	14.6X	14.8X	-0.2X	16.0X	-10.1X	20.5X	NA	75.7	5.5X	5.5X
1983	3	96.7	4.4X	0.022	78.6X	16.6X	15.3X	1.3X	15.2X	-10.6X	21.2X	NA	73.7		
1983	4	102.0	2.2X	0.037	82.1X	14.6X	13.5X	1.1X	12.6X	-9.3X	17.9X	NA	75.6	5.9X	5.9X
1984	1	96.1	1.9X	0.062	84.7X	9.1X	11.7X	-2.6X	15.7X	-9.5X	15.3X	NA	77.9		
1984	2	99.3	4.5X	0.102	80.7X	13.1X	12.7X	0.4X	16.0X	-9.9X	19.3X	NA	77.1	4.7X	4.7X
1984	3	97.8	1.2X	0.173	84.9X	11.8X	13.3X	-1.6X	14.6X	-11.3X	15.1X	NA	76.8		
1984	4	105.0	2.9X	0.297	84.5X	15.0X	12.3X	2.7X	10.8X	-10.3X	15.5X	NA	76.4	4.4X	4.4X
1985	1	95.3	-0.8X	0.349	83.2X	10.5X	10.8X	-0.3X	15.0X	-10.7X	14.8X	NA	81.9		
1985	2	94.7	-4.6X	1.167	77.4X	11.1X	11.5X	-0.3X	20.3X	-8.9X	22.6X	NA	74.6	6.3X	6.3X
1985	3	89.4	-8.7X	1.629	80.9X	8.9X	13.0X	-4.1X	19.5X	-9.3X	19.1X	NA	70.7		
1985	4	101.7	-3.1X	1.706	84.8X	10.6X	11.0X	-0.4X	12.6X	-8.0X	15.2X	NA	71.9	5.9X	5.9X
1986	1	96.0	0.7X	1.790	84.9X	11.3X	10.5X	0.8X	13.7X	-9.9X	15.1X	67.7	74.8		
1986	2	100.7	6.3X	1.976	81.1X	11.9X	11.7X	0.2X	16.7X	-9.7X	18.9X	74.0	69.8	5.9X	5.9X
1986	3	100.0	11.9X	2.363	84.7X	10.5X	13.7X	-3.2X	16.4X	-11.0X	15.8X	78.8	39.9		
1986	4	105.7	3.9X	2.815	85.9X	12.1X	11.7X	0.5X	12.3X	-10.3X	14.1X	76.4	72.1	5.2X	5.2X
1987	1	98.9	3.0X	3.354	87.7X	10.1X	11.3X	-1.3X	13.4X	-11.2X	12.3X	67.8	74.0		
1987	2	103.7	3.0X	3.906	79.2X	15.2X	14.3X	0.9X	15.4X	-9.8X	20.8X	74.9	69.8	6.0X	6.0X
1987	3	100.8	0.7X	5.207	82.8X	13.8X	15.4X	-1.6X	14.4X	-11.1X	17.2X	76.4	69.1		
1987	4	107.8	1.9X	7.849	83.3X	13.3X	12.2X	1.2X	13.9X	-10.5X	16.7X	72.8	71.0	5.7X	5.7X
1988	1	101.7	2.8X	10.696	84.4X	10.8X	11.6X	-0.8X	14.5X	-9.8X	15.6X	71.1	74.9		
1988	2	103.0	-0.7X	17.158	75.4X	16.5X	12.1X	4.3X	17.3X	-9.2X	24.6X	78.8	72.4	6.5X	6.5X
1988	3	94.9	-3.8X	31.713	76.7X	11.3X	12.6X	-3.2X	22.3X	-10.3X	23.3X	76.9	69.4		
1988	4	100.4	-6.8X	41.184	82.5X	9.4X	9.7X	-0.3X	17.6X	-9.5X	17.5X	73.6	69.9	6.1X	6.1X
1989	1	97.8	-3.9X	50.180	84.2X	9.7X	9.6X	0.1X	16.4X	-10.3X	15.8X	67.2	71.1		
1989	2	93.3	-9.4X	168.521	75.8X	9.2X	8.7X	-0.5X	22.4X	-7.7X	24.1X	72.3	66.3	8.4X	8.4X
1989	3	89.6	-5.6X	1262.488	77.1X	7.3X	9.3X	-1.9X	25.4X	-8.0X	22.9X	65.8	61.3		
1989	4	101.8	1.4X	1685.595	82.6X	8.6X	7.6X	1.0X	16.2X	-7.4X	17.4X	66.6	64.8	7.1X	7.1X
1990	1	92.8	-5.1X	10271.401	81.5X	5.1X	6.4X	-1.3X	22.0X	-8.6X	18.5X	60.6	66.4		

Sources: (1)-(10) calculated from national-accounts data (Central Bank).
 (11)-(14) calculated from CEPAL data.

TABLE 4A. ARGENTINA: PUBLIC-SECTOR ACCOUNTS
(GENERAL GOVERNMENT, STATE ENTERPRISES).

	1980	1981	1982	1983	1984	1985	1986	1987
(Per cent of GDP)								
Non-financial public-sector savings:								
General government saving:								
General government revenues:								
Tax	23.26X	20.35X	18.71X	18.48X	18.18X	22.03X	22.34X	21.81X
Non-tax	4.22X	4.80X	4.15X	4.93X	4.51X	5.65X	4.16X	3.03X
General government expenditures:								
Personnel	-10.02X	-9.38X	-7.66X	-9.76X	-10.58X	-9.69X	-8.38X	-9.91X
Transfers to Social Security	-3.68X	-6.12X	-4.84X	-3.10X	-4.95X	-3.59X	-5.52X	-5.07X
Interest:								
External	-0.30X	-1.13X	-2.42X	-3.04X	-2.44X	-2.78X	-2.07X	-1.44X
Domestic	-1.53X	-2.75X	-3.86X	-0.46X	-0.49X	-0.23X	-0.30X	-0.49X
Other current expenditure	-6.76X	-7.63X	-7.25X	-8.10X	-7.13X	-7.10X	-7.72X	-7.72X
Public enterprise saving:								
Saving net of interest	0.34X	1.62X	0.22X	-0.11X	0.58X	1.01X	1.94X	1.84X
Interest:								
External	-0.49X	-1.10X	-2.24X	-1.98X	-1.72X	-1.97X	-1.42X	-1.60X
Domestic	-1.09X	-2.42X	-1.85X	-0.48X	-0.30X	-0.55X	-0.87X	-0.05X
"Economic Emergency" financing								
Non-financial public-sector investment:								
Capital formation:								
General government	-3.45X	-3.00X	-4.65X	-3.15X	-3.80X	-3.70X	-4.29X	-3.83X
State enterprises	-3.42X	-3.17X	-3.29X	-3.61X	-3.34X	-2.82X	-2.59X	-3.16X
Other (net)	-0.33X	-1.15X	-0.13X	-0.69X	-0.44X	-0.29X	-0.39X	-0.54X
Public-sector borrowing requirements:								
Net external borrowing	1.08X	4.31X	1.32X	0.55X	-0.89X	0.93X	1.05X	3.16X
Net domestic borrowing:								
Central Bank	3.59X	3.32X	7.29X	16.60X	6.19X	2.35X	0.00X	0.00X
Other borrowing	1.53X	3.97X	3.07X	-1.89X	-0.58X	-0.30X	-1.00X	0.28X
Residual								

"General government" includes national adminis-,
tration, provinces, Buenos Aires Municipality
and Social Security.

Source: CEPAL.

TABLE 48. ARGENTINA: PUBLIC-SECTOR ACCOUNTS
(NATIONAL GOVERNMENT, STATE ENTERPRISES).

	1985	1986	1987	1988	1989	1990
(Per cent of GDP)						
Non-financial national public-sector saving:						
National government saving:						
National government revenue:						
Tax:	18.65%	18.51%	17.85%	16.79%	17.15%	16.84%
Social Security	3.63%	3.95%	3.86%	4.71%	3.27%	5.06%
Other						
Non-tax	3.72%	2.54%	2.07%	1.58%	1.49%	1.75%
National government expenditure:						
Personnel	-4.11%	-3.60%	-4.10%	-4.12%	-3.65%	-4.02%
Transfers to Social Security	-5.59%	-5.52%	-5.07%	-5.22%	-3.58%	-5.54%
Transfers to provinces, Buenos Aires munic.	-6.06%	-6.65%	-6.60%	-6.83%	-6.10%	-5.78%
Interest:						
External	-2.70%	-2.06%	-1.42%	-0.83%	-2.49%	-1.80%
Domestic	-0.18%	-0.26%	-0.49%	-0.37%	-0.46%	-0.22%
Other current expenditure	-4.04%	-3.94%	-4.14%	-4.10%	-4.73%	-3.45%
Public enterprise saving:						
Saving net of interest	1.01%	1.94%	1.84%	1.00%	0.89%	NA
Interest:						
External	-1.97%	-1.42%	-1.60%	-1.53%	-2.20%	NA
Domestic	-0.55%	-0.07%	-0.05%	-0.06%	-0.07%	NA
"Economic Emergency" financing	0.64%	0.34%	0.11%	0.76%	0.07%	0.00%
Non-financial national public-sector investment:						
Capital formation:						
National government	-1.28%	-1.33%	-1.51%	-1.33%	-1.20%	-0.87%
State enterprises	-2.82%	-2.59%	-3.16%	-4.24%	-2.55%	-2.37%
Other (net)	-0.16%	-0.23%	-0.46%	-0.06%	0.27%	0.97%
National public-sector borrowing requirement:						
Net external borrowing	0.94%	1.03%	3.16%	2.13%	-2.83%	0.26%
Net domestic borrowing:						
Central Bank	2.33%	0.80%	0.00%	0.00%	0.00%	0.00%
Other borrowing	-0.21%	-0.99%	0.39%	0.23%	0.27%	-1.00%
Residual						

National government includes national administration and Social Security.

Source: CEPAL.

TABLE 6. ARGENTINA: REAL EFFECTIVE EXCHANGE RATE, 1970 I - 1989 IV

(Geometric averages of Argentina's bilateral exchange rates with 24 trading partners constituting 84 percent of total trade, weighted according to trade over the sample period, based at 1988=100.)

Quarter	1970		1971		1972		1973		1974		1975		1976		1977		1978		1979		1980		1981		1982		1983		1984		1985		1986		1987		1988		1989	
	Real Effective Exchange Rate	Parallel Exchange Rate Premium	Real Effective Exchange Rate	Parallel Exchange Rate Premium	Real Effective Exchange Rate	Parallel Exchange Rate Premium	Real Effective Exchange Rate	Parallel Exchange Rate Premium	Real Effective Exchange Rate	Parallel Exchange Rate Premium	Real Effective Exchange Rate	Parallel Exchange Rate Premium	Real Effective Exchange Rate	Parallel Exchange Rate Premium	Real Effective Exchange Rate	Parallel Exchange Rate Premium	Real Effective Exchange Rate	Parallel Exchange Rate Premium	Real Effective Exchange Rate	Parallel Exchange Rate Premium	Real Effective Exchange Rate	Parallel Exchange Rate Premium	Real Effective Exchange Rate	Parallel Exchange Rate Premium	Real Effective Exchange Rate	Parallel Exchange Rate Premium	Real Effective Exchange Rate	Parallel Exchange Rate Premium	Real Effective Exchange Rate	Parallel Exchange Rate Premium	Real Effective Exchange Rate	Parallel Exchange Rate Premium	Real Effective Exchange Rate	Parallel Exchange Rate Premium	Real Effective Exchange Rate	Parallel Exchange Rate Premium				
1970 1	83.6	NA	1980 1	52.1	NA	1981 1	45.9	NA	1982 1	72.7	NA	1983 1	97.9	NA	1984 1	89.2	43.1X	1985 1	86.3	27.4X	1986 1	96.5	11.5X	1987 1	99.7	26.2X	1988 1	111.4	33.8X	1989 1	77.2	77.6X								
2	84.5	NA	2	49.2	NA	2	56.7	NA	2	80.4	NA	2	97.4	NA	2	78.6	53.3X	2	90.8	18.0X	2	94.5	6.7X	2	101.0	28.2X	2	109.1	24.1X	2	107.9	27.6X								
3	89.4	NA	3	47.6	NA	3	57.9	NA	3	141.4	NA	3	88.3	NA	3	75.0	38.4X	3	100.6	18.5X	3	93.4	10.1X	3	100.3	35.4X	3	95.6	20.8X	3	132.2	5.2X								
4	82.1	NA	4	43.7	NA	4	61.0	NA	4	104.9	NA	4	87.5	NA	4	82.9	18.6X	4	96.8	11.6X	4	93.8	18.9X	4	111.6	22.3X	4	86.1	21.5X	4	141.2	10.4X								
1971 1	76.8	NA	1981 1	45.9	NA	1982 1	72.7	NA	1983 1	97.9	NA	1984 1	89.2	43.1X	1985 1	86.3	27.4X	1986 1	96.5	11.5X	1987 1	99.7	26.2X	1988 1	111.4	33.8X	1989 1	77.2	77.6X											
2	76.4	NA	2	56.7	NA	2	80.4	NA	2	141.4	NA	2	97.4	NA	2	78.6	53.3X	2	90.8	18.0X	2	94.5	6.7X	2	101.0	28.2X	2	109.1	24.1X	2	107.9	27.6X								
3	81.7	NA	3	57.9	NA	3	141.4	NA	3	104.9	NA	3	88.3	NA	3	75.0	38.4X	3	100.6	18.5X	3	93.4	10.1X	3	100.3	35.4X	3	95.6	20.8X	3	132.2	5.2X								
4	79.1	NA	4	61.0	NA	4	104.9	NA	4	87.5	NA	4	87.5	NA	4	82.9	18.6X	4	96.8	11.6X	4	93.8	18.9X	4	111.6	22.3X	4	86.1	21.5X	4	141.2	10.4X								
1972 1	66.5	NA	1982 1	72.7	NA	1983 1	97.9	NA	1984 1	89.2	43.1X	1985 1	86.3	27.4X	1986 1	96.5	11.5X	1987 1	99.7	26.2X	1988 1	111.4	33.8X	1989 1	77.2	77.6X														
2	59.1	NA	2	80.4	NA	2	97.4	NA	2	141.4	NA	2	97.4	NA	2	78.6	53.3X	2	90.8	18.0X	2	94.5	6.7X	2	101.0	28.2X	2	109.1	24.1X	2	107.9	27.6X								
3	53.7	NA	3	141.4	NA	3	141.4	NA	3	104.9	NA	3	88.3	NA	3	75.0	38.4X	3	100.6	18.5X	3	93.4	10.1X	3	100.3	35.4X	3	95.6	20.8X	3	132.2	5.2X								
4	48.9	NA	4	104.9	NA	4	104.9	NA	4	87.5	NA	4	87.5	NA	4	82.9	18.6X	4	96.8	11.6X	4	93.8	18.9X	4	111.6	22.3X	4	86.1	21.5X	4	141.2	10.4X								
1973 1	43.8	NA	1983 1	97.9	NA	1984 1	89.2	43.1X	1985 1	86.3	27.4X	1986 1	96.5	11.5X	1987 1	99.7	26.2X	1988 1	111.4	33.8X	1989 1	77.2	77.6X																	
2	40.2	NA	2	97.4	NA	2	97.4	NA	2	141.4	NA	2	97.4	NA	2	78.6	53.3X	2	90.8	18.0X	2	94.5	6.7X	2	101.0	28.2X	2	109.1	24.1X	2	107.9	27.6X								
3	41.4	NA	3	88.3	NA	3	88.3	NA	3	104.9	NA	3	88.3	NA	3	75.0	38.4X	3	100.6	18.5X	3	93.4	10.1X	3	100.3	35.4X	3	95.6	20.8X	3	132.2	5.2X								
4	40.8	NA	4	87.5	NA	4	87.5	NA	4	87.5	NA	4	87.5	NA	4	82.9	18.6X	4	96.8	11.6X	4	93.8	18.9X	4	111.6	22.3X	4	86.1	21.5X	4	141.2	10.4X								
1974 1	42.0	NA	1984 1	89.2	43.1X	1985 1	86.3	27.4X	1986 1	96.5	11.5X	1987 1	99.7	26.2X	1988 1	111.4	33.8X	1989 1	77.2	77.6X																				
2	41.7	NA	2	89.2	43.1X	2	89.2	43.1X	2	141.4	NA	2	97.4	NA	2	78.6	53.3X	2	90.8	18.0X	2	94.5	6.7X	2	101.0	28.2X	2	109.1	24.1X	2	107.9	27.6X								
3	39.1	NA	3	75.0	38.4X	3	75.0	38.4X	3	104.9	NA	3	88.3	NA	3	75.0	38.4X	3	100.6	18.5X	3	93.4	10.1X	3	100.3	35.4X	3	95.6	20.8X	3	132.2	5.2X								
4	35.6	NA	4	82.9	18.6X	4	82.9	18.6X	4	87.5	NA	4	87.5	NA	4	82.9	18.6X	4	96.8	11.6X	4	93.8	18.9X	4	111.6	22.3X	4	86.1	21.5X	4	141.2	10.4X								
1975 1	70.4	NA	1985 1	86.3	27.4X	1986 1	96.5	11.5X	1987 1	99.7	26.2X	1988 1	111.4	33.8X	1989 1	77.2	77.6X																							
2	89.0	NA	2	90.8	18.0X	2	90.8	18.0X	2	94.5	6.7X	2	99.7	26.2X	2	90.8	18.0X	2	90.8	18.0X	2	94.5	6.7X	2	101.0	28.2X	2	109.1	24.1X	2	107.9	27.6X								
3	103.1	NA	3	100.6	18.5X	3	100.6	18.5X	3	104.9	NA	3	88.3	NA	3	75.0	38.4X	3	100.6	18.5X	3	93.4	10.1X	3	100.3	35.4X	3	95.6	20.8X	3	132.2	5.2X								
4	131.2	NA	4	96.8	11.6X	4	96.8	11.6X	4	87.5	NA	4	87.5	NA	4	82.9	18.6X	4	96.8	11.6X	4	93.8	18.9X	4	111.6	22.3X	4	86.1	21.5X	4	141.2	10.4X								
1976 1	103.7	NA	1986 1	96.5	11.5X	1987 1	99.7	26.2X	1988 1	111.4	33.8X	1989 1	77.2	77.6X																										
2	78.5	NA	2	94.5	6.7X	2	94.5	6.7X	2	94.5	6.7X	2	99.7	26.2X	2	94.5	6.7X	2	94.5	6.7X	2	94.5	6.7X	2	101.0	28.2X	2	109.1	24.1X	2	107.9	27.6X								
3	68.2	NA	3	93.4	10.1X	3	93.4	10.1X	3	104.9	NA	3	88.3	NA	3	75.0	38.4X	3	100.6	18.5X	3	93.4	10.1X	3	100.3	35.4X	3	95.6	20.8X	3	132.2	5.2X								
4	68.8	NA	4	93.8	18.9X	4	93.8	18.9X	4	87.5	NA	4	87.5	NA	4	82.9	18.6X	4	96.8	11.6X	4	93.8	18.9X	4	111.6	22.3X	4	86.1	21.5X	4	141.2	10.4X								
1977 1	93.0	NA	1987 1	99.7	26.2X	1988 1	111.4	33.8X	1989 1	77.2	77.6X																													
2	97.8	NA	2	101.0	28.2X	2	101.0	28.2X	2	94.5	6.7X	2	99.7	26.2X	2	94.5	6.7X	2	94.5	6.7X	2	94.5	6.7X	2	101.0	28.2X	2	109.1	24.1X	2	107.9	27.6X								
3	92.3	NA	3	100.3	35.4X	3	100.3	35.4X	3	104.9	NA	3	88.3	NA	3	75.0	38.4X	3	100.6	18.5X	3	93.4	10.1X	3	100.3	35.4X	3	95.6	20.8X	3	132.2	5.2X								
4	88.8	NA	4	111.6	22.3X	4	111.6	22.3X	4	87.5	NA	4	87.5	NA	4	82.9	18.6X	4	96.8	11.6X	4	93.8	18.9X	4	111.6	22.3X	4	86.1	21.5X	4	141.2	10.4X								
1978 1	89.1	NA	1988 1	111.4	33.8X	1989 1	77.2	77.6X																																
2	82.9	NA	2	109.1	24.1X	2	109.1	24.1X	2	94.5	6.7X	2	99.7	26.2X	2	94.5	6.7X	2	94.5	6.7X	2	94.5	6.7X	2	101.0	28.2X	2	109.1	24.1X	2	107.9	27.6X								
3	76.3	NA	3	95.6	20.8X	3	95.6	20.8X	3	104.9	NA	3	88.3	NA	3	75.0	38.4X	3	100.6	18.5X	3	93.4	10.1X	3	100.3	35.4X	3	95.6	20.8X	3	132.2	5.2X								
4	70.3	NA	4	86.1	21.5X	4	86.1	21.5X	4	87.5	NA	4	87.5	NA	4	82.9	18.6X	4	96.8	11.6X	4	93.8	18.9X	4	111.6	22.3X	4	86.1	21.5X	4	141.2	10.4X								
1979 1	64.6	NA	1989 1	77.2	77.6X																																			
2	60.1	NA	2	107.9	27.6X	2	107.9	27.6X	2	94.5	6.7X	2	99.7	26.2X	2	94.5	6.7X	2	94.5	6.7X	2	94.5	6.7X	2	101.0	28.2X	2	109.1	24.1X	2	107.9	27.6X								
3	54.9	NA	3	132.2	5.2X	3	132.2	5.2X	3	104.9	NA	3	88.3	NA	3	75.0	38.4X	3	100.6	18.5X	3	93.4	10.1X	3	100.3	35.4X	3	95.6	20.8X	3	132.2	5.2X								
4	53.8	NA	4	141.2	10.4X	4	141.2	10.4X	4	87.5	NA	4	87.5	NA	4	82.9	18.6X	4	96.8	11.6X	4	93.8	18.9X	4	111.6	22.3X	4	86.1	21.5X	4	141.2	10.4X								

Sources: Calculations by the writer based on data published by the IMF (International Financial Statistics, Direction of Trade Statistics).

TABLE 7. ARGENTINA: NATIONAL TREASURY AND CENTRAL BANK DEBT, JAN-DEC 1988.

	Jan-88	Feb-88	Mar-88	Apr-88	May-88	Jun-88	Jul-88	Aug-88	Sep-88	Oct-88	Nov-88	Dec-88
Billions of current Australes; period ends:												
Total:	30.6	35.5	41.9	49.1	58.6	72.9	91.7	114.2	129.1	140.5	152.4	168.6
National Treasury:	13.1	15.3	14.6	17.7	20.4	24.9	30.8	33.8	31.4	33.3	34.1	38.1
Securities	11.1	13.2	12.2	14.0	15.3	18.4	22.7	24.5	21.4	22.6	22.6	23.7
Obligatory Savings	2.0	2.2	2.4	3.7	5.1	6.4	8.1	9.3	10.0	10.7	11.4	14.4
Central Bank	17.5	20.2	27.3	31.4	38.2	48.0	60.9	80.4	97.7	107.1	118.3	130.5
US\$ billion (using average of current and following month's parallel exch. rate):												
Total:	5.5	5.9	6.3	6.5	6.4	6.5	7.0	8.1	8.0	9.3	9.8	10.4
National Treasury:	2.3	2.5	2.2	2.3	2.2	2.2	2.4	2.4	2.1	2.2	2.2	2.3
Securities	2.0	2.2	1.8	1.9	1.7	1.7	1.7	1.7	1.5	1.5	1.5	1.5
Obligatory Savings	0.4	0.4	0.4	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.9
Central Bank	3.1	3.3	4.1	4.2	4.2	4.3	4.7	5.7	6.7	7.1	7.6	8.0
Combined price index	187.3	209.6	242.2	284.1	340.0	410.9	514.7	649.0	727.6	775.6	812.1	862.7
Percentage change over preceding period	10.6%	11.9%	15.5%	17.5%	19.7%	20.8%	25.5%	30.0%	8.8%	6.6%	4.7%	6.2%
Parallel exchange rate (A\$/US\$): (Period average)	5.4	5.8	6.3	6.9	8.3	10.2	12.2	13.9	14.3	14.9	15.4	15.8

Source: Central Bank of the Argentine Republic.

TABLE 7. ARGENTINA: NATIONAL TREASURY AND CENTRAL BANK DEBT, JAN-DEC 1989.

	Jan-89	Feb-89	Mar-89	Apr-89	May-89	Jun-89	Jul-89	Aug-89	Sep-89	Oct-89	Nov-89	Dec-89
Billions of current Australes; period end:												
Totals	196.0	234.2	303.2	400.7	551.7	2130.3	3301.0	4319.3	4858.6	5257.4	5606.7	6857.2
National Treasury:	44.0	63.7	100.2	173.0	247.8	571.5	957.5	1006.1	1091.0	1159.6	1460.0	2379.6
Securities	20.4	45.5	76.5	143.7	208.0	500.9	877.9	912.5	989.7	1053.3	1344.5	2218.0
Obligatory Savings	15.6	18.2	23.7	29.3	39.8	70.6	79.7	93.5	101.3	106.3	115.5	161.4
Central Bank	152.0	170.5	203.0	307.6	703.9	1558.8	2423.4	3313.2	3767.6	4097.8	4146.7	4477.6
US\$ billion (using average of current and following month's parallel exch. rate):												
Totals	9.6	7.4	5.9	5.2	4.1	4.2	5.2	6.6	7.2	6.7	5.1	4.5
National Treasury:	2.1	2.0	2.0	1.9	1.1	1.1	1.5	1.5	1.6	1.5	1.3	1.6
Securities	1.4	1.4	1.5	1.6	0.9	1.0	1.3	1.4	1.5	1.3	1.2	1.5
Obligatory Savings	0.8	0.6	0.5	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Central Bank	7.5	5.4	4.0	3.3	3.0	3.0	3.7	5.0	5.6	5.2	3.8	2.9
Combined price index	932.0	1016.5	1199.0	1740.7	3325.1	7440.4	22530.2	27551.4	29169.7	30202.7	31449.6	45366.6
Percentage change over preceding period	8.1%	9.0%	10.0%	45.2%	91.0%	123.6%	202.6%	22.5%	5.9%	3.5%	4.1%	44.3%
Parallel exchange rate (A\$/US\$) (Period average)	16.8	25.0	40.5	64.4	132.7	407.3	646.0	665.7	651.1	701.6	883.8	1350.2

Source: Central Bank of the Argentine Republic.

TABLE 8. ARGENTINA: PRINCIPAL MONETARY INDICATORS, 1988-1989.

	1988 I	1988 II	1988 III	1988 IV	1989 I	1989 II	1989 III	1989 IV
Period Average; Percent of GDP								
Broad Monetary Base a/	5.4%	4.6%	5.2%	6.1%	6.6%	4.6%	4.1%	5.6%
M1 = currency, demand deposits	4.4%	3.6%	3.2%	3.5%	4.3%	2.6%	2.4%	4.3%
M1p = currency, private demand deposits	4.4%	3.6%	3.2%	3.6%	4.3%	2.5%	2.3%	3.9%
M2 = M1 + savings deposits	6.2%	5.0%	4.5%	4.8%	5.8%	3.2%	3.0%	5.1%
M3 = M2 + time deposits	16.1%	14.8%	13.9%	15.3%	19.2%	11.7%	10.0%	12.6%
M4 = M3 + private CEDEF holdings	16.2%	14.8%	13.9%	15.3%	19.2%	11.7%	7.5%	10.3%
M4p = private M4	6.3%	5.0%	4.6%	4.9%	5.9%	3.7%	3.8%	5.4%
US\$ billion (period average values, using the free exchange rate):								
Broad Monetary Base a/	3.2	3.1	3.9	5.5	4.1	1.8	2.5	3.3
M1	2.6	2.4	2.4	3.2	2.7	1.1	1.5	2.5
M1p	2.6	2.4	2.4	3.2	2.7	1.0	1.4	2.2
M4	9.4	9.8	10.5	13.8	12.0	4.8	4.5	5.8
M4p	3.7	3.3	3.3	4.4	3.7	1.5	2.3	3.1
Liquid International Reserves/M4p								
Deposits in foreign exchange	17.5%	21.1%	45.5%	50.4%	44.9%	27.9%	48.4%	46.4%
Growth rates (period-average values):								
Broad Monetary Base a/		37.8%	108.1%	58.2%	26.8%	156.1%	488.4%	94.1%
M1		34.4%	63.4%	48.9%	41.4%	132.4%	494.5%	143.3%
M1p		31.4%	61.6%	53.1%	41.3%	122.2%	473.1%	137.8%
M4		48.5%	72.4%	50.2%	45.6%	137.2%	300.0%	88.0%
M4p		29.6%	61.5%	51.1%	39.7%	143.2%	355.1%	91.7%
Contribution to Monetary Base Growth: (Period-end over period-end)								
Overall Growth Rate of the Monetary Base:	10.2%	23.0%	28.2%	56.5%	65.5%	185.4%	135.6%	120.1%
External Sector b/	0.8%	15.3%	14.1%	27.2%	-123.4%	18.7%	103.9%	16.1%
National Government c/	15.3%	2.9%	5.6%	7.6%	-11.7%	45.4%	10.2%	0.3%
Credit to Financial Institutions d/	8.5%	1.1%	0.7%	-0.7%	9.3%	21.1%	-0.1%	10.9%
On-Lending Operations	1.8%	0.2%	0.4%	1.9%	9.6%	3.9%	4.1%	1.0%
Central Bank Interest Payments	19.6%	10.2%	4.6%	13.2%	62.8%	51.9%	40.2%	30.3%
Primary Open Market Operations	-13.7%	-2.2%	-2.5%	14.9%	-14.1%	-84.5%	-61.9%	42.2%
Central Bank Bond Sales to Priv. Sector	0.0%	0.0%	0.0%	-0.1%	0.1%	-0.5%	0.0%	-0.9%
Social Security Payments	-0.7%	1.8%	0.2%	10.0%	26.6%	13.0%	4.7%	11.4%
Forced Investments	-21.8%	-7.0%	5.2%	-17.7%	109.7%	116.3%	35.0%	12.8%
Other	0.2%	0.6%	-0.1%	0.3%	-3.3%	0.0%	-0.6%	-4.0%
Memorandum:								
GDP (A\$ million, annualized)	339977	552803	1010523	1382568	1601688	6250228	39201992	53271380

Source: Central Bank of the Argentine Republic.

a/ Currency, bank reserves, and estimated social-security system liabilities to commercial banks, which commercial banks could hold as reserves through Oct 1990.

b/ Includes foreign-exchange credit to the public sector.

c/ Domestic-currency credit only.

d/ Excludes interest accrued but not paid.

TABLE 9. ARGENTINA: CENTRAL BANK SURPLUS, 1988:I-1989:IV.

	1988 I	1988 II	1988 III	1988 IV	1989 I	1989 II	1989 III	1989 IV
Percent of GDP:								
Inflation-Adjusted Quasi-Fiscal Surplus: a/	-2.4%	-0.6%	1.3%	-1.1%	-5.4%	-23.7%	18.8%	-7.9%
Domestic Component:	-2.1%	-0.5%	1.4%	-1.1%	-5.4%	-23.7%	18.8%	-7.9%
Nominal Result:	-0.5%	0.5%	1.0%	-0.7%	-4.5%	-26.7%	16.2%	-2.5%
Exchange Rate Differentials	0.0%	0.0%	0.3%	0.6%	1.4%	-1.0%	0.1%	-2.8%
Internal Interest Flows:	-0.5%	0.5%	0.7%	-1.3%	-5.8%	-25.7%	14.0%	0.4%
Interest Receipts:	11.5%	15.7%	14.4%	10.0%	15.4%	59.9%	30.1%	14.4%
Rediscounes at Regulated Rates	3.8%	3.8%	3.2%	2.3%	4.0%	15.0%	2.3%	2.5%
Index-linked Rediscounes	2.4%	4.8%	6.9%	4.7%	4.3%	8.1%	18.9%	4.0%
Dollar-linked Rediscounes	1.8%	2.6%	1.3%	0.4%	1.6%	5.6%	1.4%	3.9%
Entities in liquidation:	0.1%	1.2%	0.6%	0.2%	0.5%	1.8%	3.3%	0.1%
Income on Gross Debt	8.5%	16.1%	22.0%	4.8%	7.1%	25.9%	44.1%	2.4%
Adjustment for Provisions	-8.5%	-15.0%	-21.4%	-4.5%	-6.5%	-24.0%	-40.7%	-2.2%
Illiquidity	0.0%	0.0%	0.0%	0.0%	0.1%	1.7%	0.0%	0.3%
Government Finance	0.6%	1.4%	1.5%	1.9%	3.6%	22.3%	4.0%	3.6%
Other Interest Receipts	2.9%	1.9%	0.8%	0.3%	1.4%	5.5%	0.1%	0.0%
Interest Payments:	-11.9%	-14.8%	-13.1%	-10.4%	-20.7%	-83.3%	-15.4%	-13.1%
Central Bank Bills	-0.5%	-0.8%	-0.6%	-0.3%	-0.6%	-11.9%	-5.5%	-5.6%
Remunerated Reserves	-9.6%	-7.3%	-2.2%	-0.6%	-1.9%	-7.7%	-1.0%	-0.9%
Inaccessible Deposits	-1.6%	-6.7%	-10.3%	-9.5%	-18.2%	-63.7%	-8.9%	-6.2%
Other Interest Payments	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.5%
Inflation Adjustment:	-1.6%	-1.0%	0.3%	-0.4%	-0.9%	3.1%	4.7%	-5.4%
Inflation Loss on Assets	-10.7%	-14.0%	-13.2%	-5.6%	-12.7%	-32.6%	-13.3%	-14.1%
Inflation Gain on Liabilities	9.1%	13.0%	13.6%	5.2%	11.8%	35.6%	18.0%	8.7%
External Component:	-0.2%	0.0%	-0.1%	0.0%	-0.1%	0.0%	0.0%	0.0%
Net BCRA Interest Payments	-0.2%	0.0%	-0.1%	0.0%	-0.1%	0.0%	0.0%	0.0%
Loss Provisions for BHM b/	-0.5%	-0.6%	-1.1%	-0.6%	-0.4%	-1.6%	-2.7%	-0.1%
Quasi-Fiscal Surplus adjusted for BHM losses	-2.8%	-1.4%	0.2%	-1.7%	-5.9%	-25.3%	16.1%	-8.0%
Interest-Bearing Assets and Liabilities:								
Assets:	31.5%	28.5%	26.8%	33.3%	39.7%	20.2%	19.5%	34.7%
Rediscounes:	24.1%	22.5%	22.0%	27.1%	31.6%	13.9%	12.3%	26.7%
Regulated Rates	7.5%	6.5%	6.9%	6.5%	7.2%	3.8%	3.9%	4.3%
Index-linked	9.6%	9.4%	9.2%	14.8%	18.7%	6.4%	4.5%	16.8%
Dollar-linked	4.8%	4.6%	3.9%	3.4%	3.3%	2.1%	2.3%	2.5%
Illiquidity	0.0%	0.0%	0.0%	0.0%	0.1%	0.3%	0.0%	0.1%
Government Finance	0.3%	2.5%	3.3%	5.4%	7.0%	4.7%	7.0%	7.9%
Liabilities:	26.2%	26.5%	27.5%	30.9%	37.1%	21.5%	25.3%	25.4%
BCRA Bills	0.9%	1.4%	1.4%	0.7%	0.8%	1.8%	10.7%	9.6%
Remunerated Bank Reserves	22.0%	13.4%	2.7%	1.6%	3.5%	2.0%	1.8%	1.9%
Inaccessible Deposits	2.9%	10.0%	21.0%	28.2%	32.7%	16.8%	12.5%	13.0%

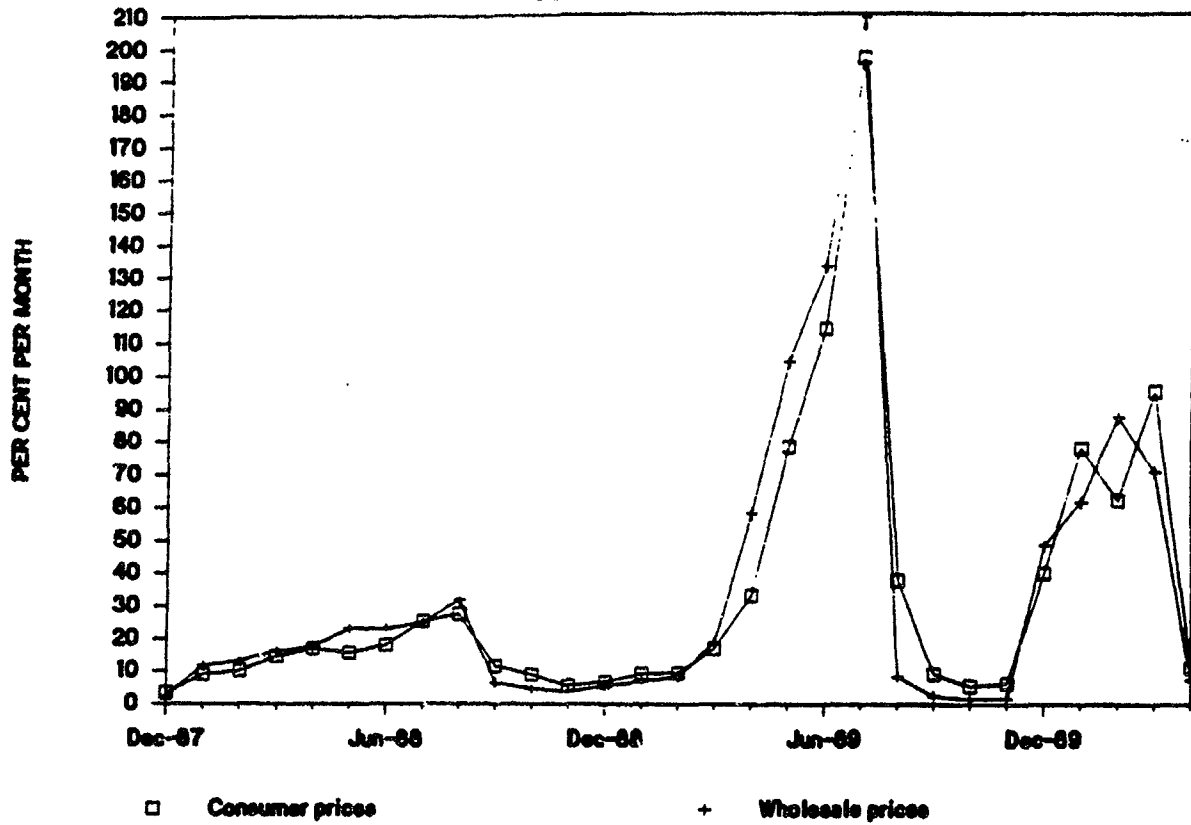
a/ IMF definition.

b/ 43-percent provisions on loans to and income from the BHM.

Source: Central Bank of the Argentine Republic.

ARGENTINA: INFLATION RATE

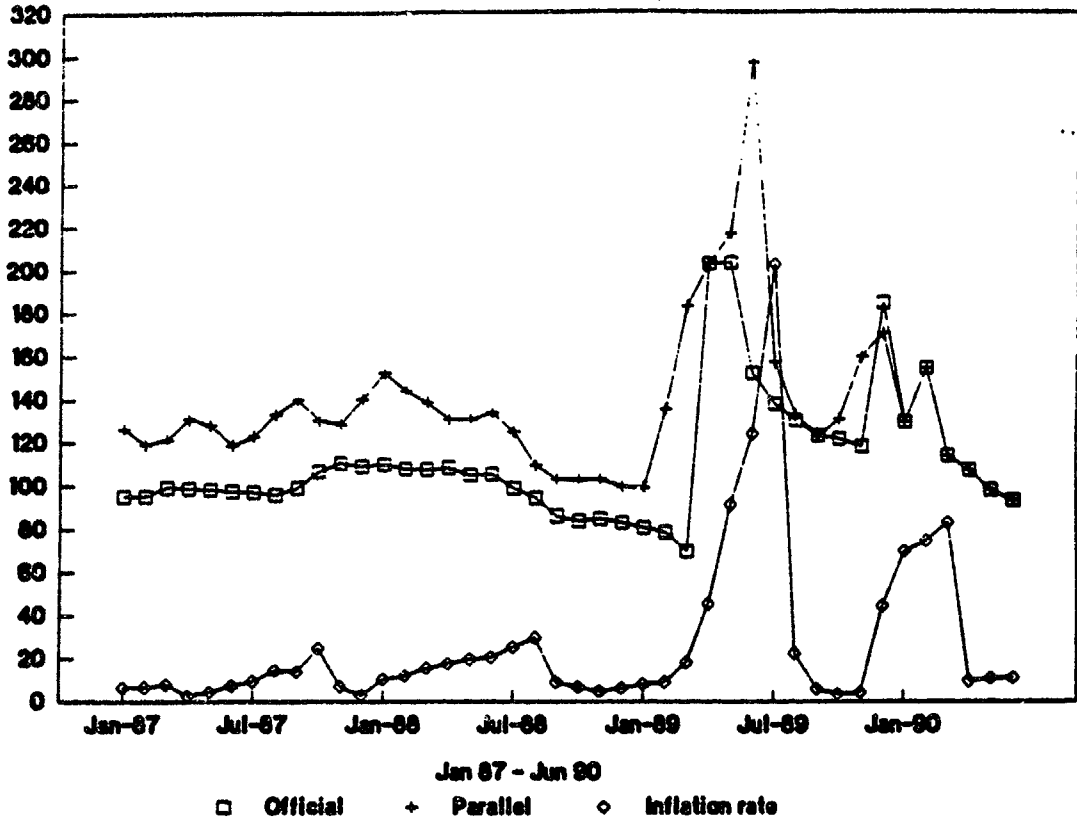
DEC 1987 - APR 1990



ARGENTINA: REAL EFFECTIVE EXCHANGE RATE

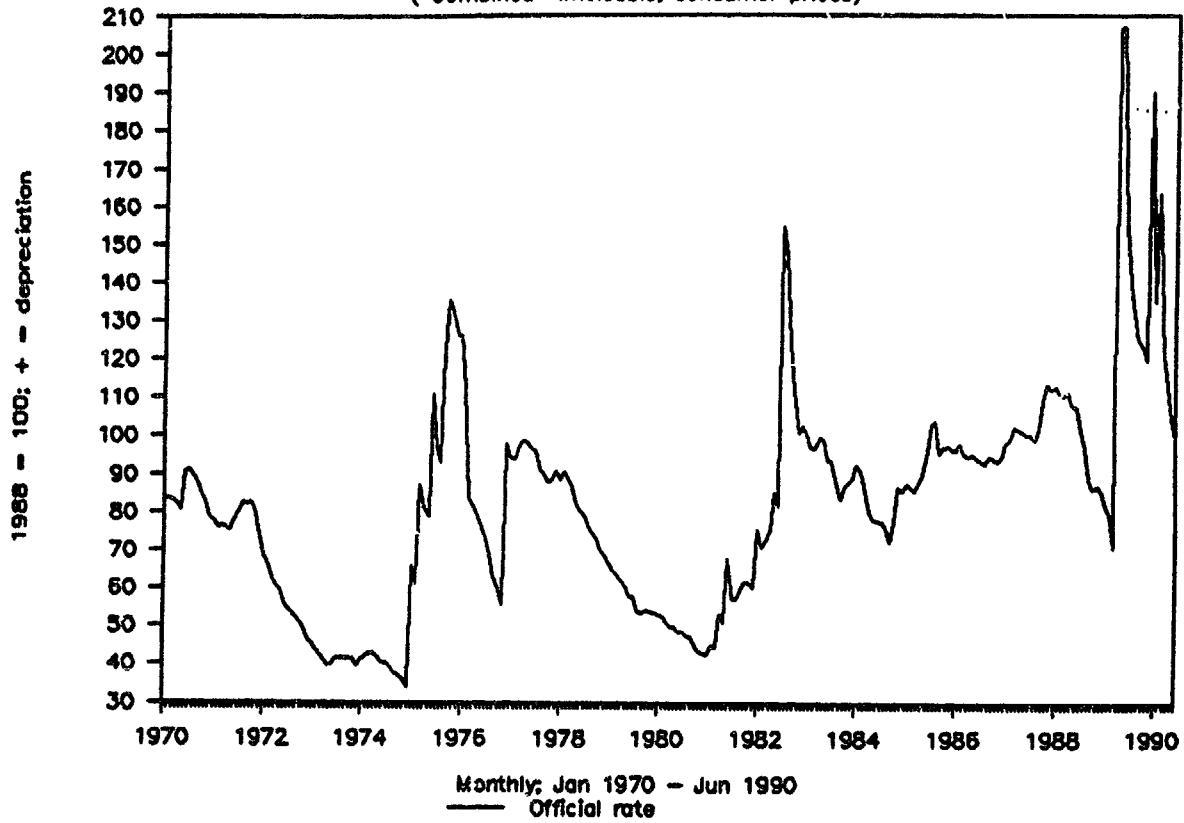
(Combined consumer, wholesale prices)

(1987 = 100: inflation in pct./mo.)



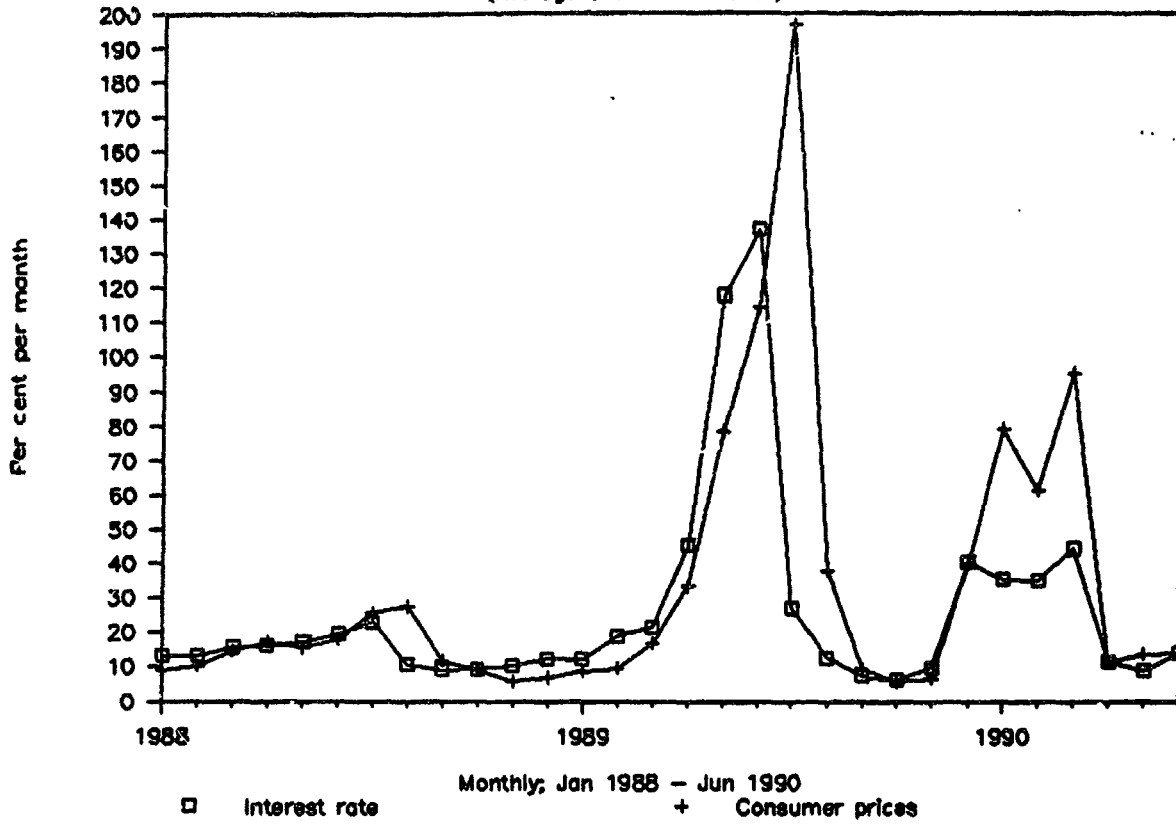
ARGENTINA: REAL EFFECTIVE EXCHANGE RATE

("Combined" wholesale, consumer prices)

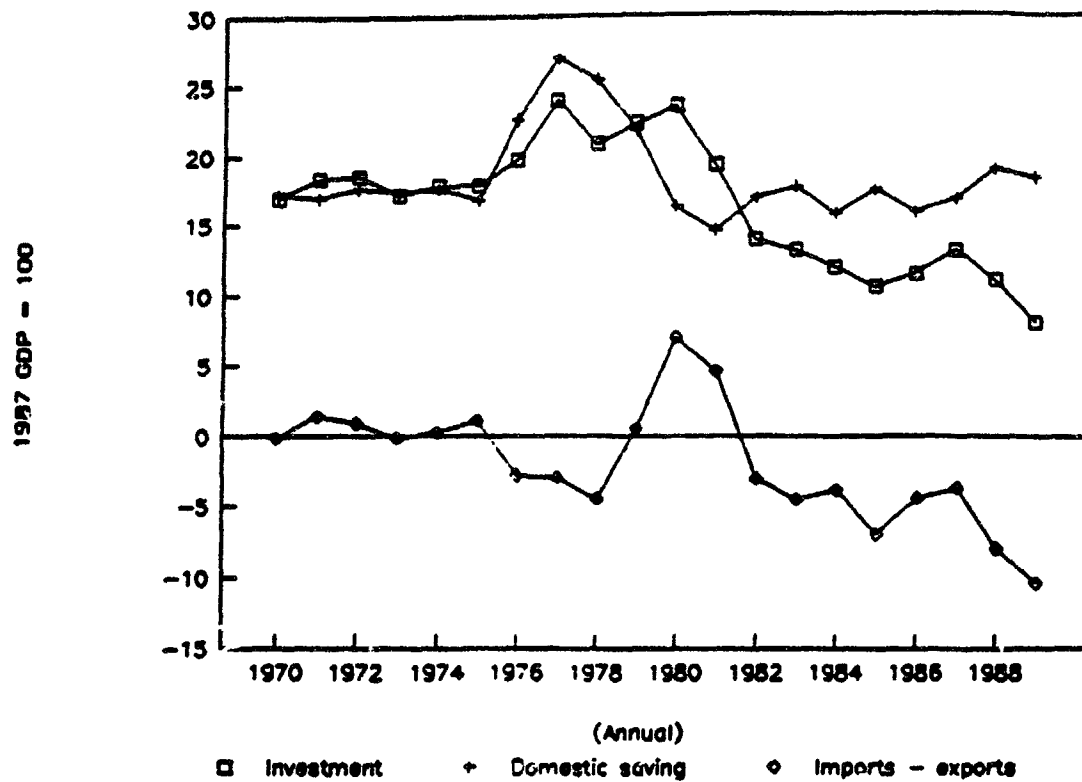


ARGENTINA: BANK TIME-DEPOSIT RATES

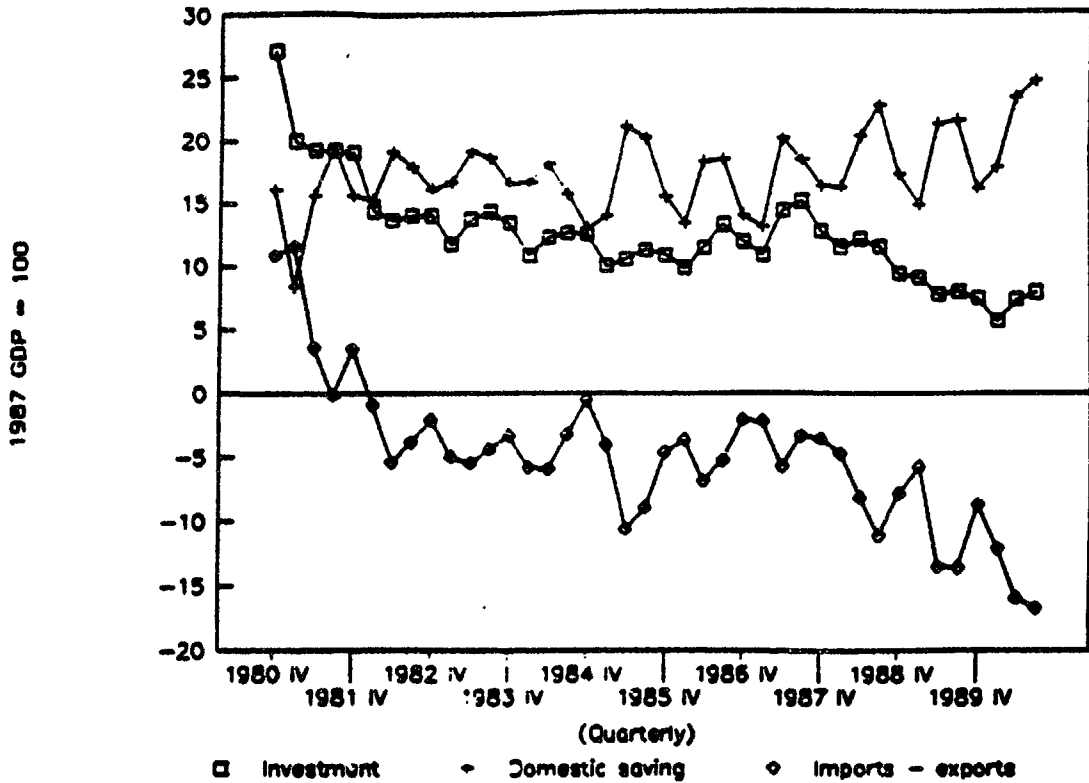
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