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The Transition from Stabilization to Sustained Growth in Bolivia

por
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Introduction

The Bolivian stabilization program of August 1985 is already more than four years old and is the only survivor of the four initiated at around the same time in Latin America. Moreover, price stability has been sturdy enough to withstand very severe external shocks.

But the good results of stabilization have been followed by only a very modest recovery of output growth, and the employment picture is still blurred. Bolivia has not caught up with the GDP losses of the early 1980s nor has it been rewarded as yet, in terms of improvement of living conditions, for the policies it adopted. In the public's perception, as witnessed by press editorials, the crisis unleashed in 1982 is not over yet, although significant progress is acknowledged.

The features of the stabilization program are by now well documented (see, e.g. Sachs 1986, 1987; Bernholz, 1988; Pastor 1988; Morales, 1988a, 1988b). It suffices to remember that the program relies on exchange-rate unification, supported domestically by tight monetary and fiscal policies, and externally by a significant debt alleviation. Also, the program dismantled most price controls. Since Bolivia suffered a true case of hyperinflation between 1984 and 1985, different in many way from the chronic high inflations of its neighbors, the means of control were also different.

A major aim of the paper is to provide a thorough description of the post-stabilization macroeconomy as well as some indications of the unsolved problems. The maintenance of stabilization dominates the attention of Bolivian policy-makers. Other manifestations of macroeconomic disequilibrium, that may imperil price stability in the future, have received somewhat less recognition. In addition, the medium-term problems in the aftermath of

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stabilization have their own characteristics that need to be analyzed in some detail. They have to do with the tradeoffs between: domestic price stability, external competitiveness and level of economic activity; stability of the private financial system and macroeconomic stability; low inflation now and high revenues later. The most important medium-term problem, although not unrelated to the ones mentions above, is the establishment of attractive condition for the resurgence of private investment.

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1. Background: The Results of Stabilization to Date

a. Inflation

The inflation rates measured by the percentage changes in the Consumer Price Index (CPI) and the Wholesale Price Index (WPI) generally exhibit low values starting from the second quarter of 1986. Since then, the inflation rates in almost every quarter have stayed below 5%. The exceptional periods were the second quarters of 1986 and 1988, and the last two quarters of 1989. Changes in the official exchange rates (and in the parallel market for foreign exchange) have a similar pattern, with even lower rates (Table 1, lines A1-A3 and Figure 1).

The program not only ended the hyperinflation but was robust enough the withstand the adverse shocks to the external (and fiscal) accounts produced by the severe drop in Bolivia's export prices (Table 1, line A5) and by the arrears by Argentina on payments for its purchases of natural gas from Bolivia.

Wages in the private sector have been increasing steadily since the third quarter of 1986; their real values show a very strong recovery and they were, in the third quarter of 1989, 72% higher than at the end of 1985 (Table 1, lines A4 and D3). There are no comparable data for wages in the public sector; the comments below are based on fragmentary information. Wages in the main state enterprises have increased as fast or faster than in the private sector; however, wages in the central administration, where most public sector employees work, have very significant lags, with regard to both inflation and wages in other sectors.

Table 1

Financial Indicators after the Stabilization Program

	Mean	1986				1987			
	1986-89	I	II	III	IV	I	II	III	IV
A. Prices, exchange rates and wages (quarterly percentage change rates)									
1. Consumer prices[a]	6.2	43.6	9.1	4.8	1.1	4.4	1.7	1.5	2.6
2. Wholesale prices[b]	6.0	30.0	7.3	4.4	1.2	4.5	3.9	3.0	3.8
3. Exchange rates (Bs per U$)[b]	3.5	12.3	0.4	0.5	0.3	4.1	3.4	1.9	4.7
4. Private sector nominal wages[c]	10.1	33.4	14.1	8.6	4.1	17.4	9.3	10.7	4.7
5. Export prices[d]	-3.0	-23.2	-2.2	0.0	3.2	-10.5	0.3	-0.3	-5.9
a. Natural gas[d]	-4.5	-11.2	-0.9	-0.3	1.4	-18.3	-1.2	-0.3	-10.6
b. Tin[d]	-2.3	-50.3	-4.8	-2.5	8.5	14.4	0.5	-2.3	3.4
B. Money and credit (quarterly percentage change rates)									
1. Base money[b]	11.0	-1.5	24.0	18.1	9.6	21.7	12.9	10.7	20.9
2. M1[b]	7.8	-4.7	27.0	11.6	35.3	-0.2	7.5	12.5	14.7
3. M3[b,f]	11.5	15.8	43.8	28.3	32.5	17.9	10.0	2.0	11.9
C. Dollarized deposits and interest rates (levels at end-of-quarter)									
1. Dollarized deposits (% of total commercial bank deposits)[b]	66.0	34.9	42.6	49.6	54.8	67.4	68.1	66.4	67.9
2. Annual nominal interest rate for dollarized deposits[b]	15.0	12.3	14.9	14.9	15.0	15.1	15.5	16.0	15.6
D. Relative price levels (base 1985.IV=100)									
1. Real exchange rate[e]	90.4	n.a	95.3	n.a	n.a	n.a	84.2	n.a	n.a
2. Private sector real wages[c]		92.9	97.1	100.7	103.7	116.6	125.3	136.5	139.3
E. Consolidated non-financial public sector deficit (as % of GDP)[c,g]	5.2				2.5				7.4
F. Balance-of-Payments current account (as % of GDP)[d,g]	-7.9				-9.6				-10.0

Table 1 (Continued)

Financial Indicators after the Stabilization Program

	Mean	1988				1989			
	1986-89	I	II	III	IV	I	II	III	IV
A. Prices, exchange rates and wages (quarterly percentage change rates)									
1. Consumer prices[a]	2.3	8.4	6.1	3.2	1.9	0.6	7.5	5.9	
2. Wholesale prices[b]	2.7	8.2	5.2	3.9	3.9	1.3	7.9	7.2	
3. Exchange rates (Bs per U$)[b]	3.6	4.4	0.4	2.9	2.4	4.0	8.0	3.9	
4. Private sector nominal wages[c]	16.9	13.6	5.0	2.9	7.4	3.6	3.3	n.a	
5. Export prices[d]	-0.3	-2.3	0.8	-2.2	6.0	5.4	-10.2	n.a	
a. Natural gas[d]	-0.3	-8.0	-5.6	5.8	0.4	11.5	-14.4	n.a	
b. Tin[d]	-2.1	1.9	6.7	0.5	14.5	20.4	-18.1	n.a	
B. Money and credit (quarterly percentage change rates)									
1. Base money[b]	0.1	8.6	12.3	30.4	-8.5	1.1	3.1	20.5	
2. M1[b]	-9.2	8.6	4.4	32.3	-10.5	3.3	-3.4	8.7	
3. M3[b,f]	1.0	10.9	8.3	17.9	-0.3	-1.7	8.8	-10.8	
C. Dollarized deposits and interest rates (levels at end-of-quarter)									
1. Dollarized deposits (% of total commercial bank deposits)[b]	72.7	73.8	73.3	73.9	74.2	74.0	79.2	84.0	
2. Annual nominal interest rate for dollarized deposits[b]	15.8	16.0	15.3	14.9	13.9	14.3	15.6	15.1	
D. Relative price levels (base 1985.IV=100)									
1. Real exchange rate[e]	91.5	91.1	90.3	93.7	95.9	75.5			
2. Private sector real wages[c]	159.1	166.8	165.0	164.4	173.4	178.7	171.8	n.a	
E. Consolidated non-financial public sector deficit (as % of GDP)[c,g]				5.7				n.a	
F. Balance-of-Payments current account (as % of GDP)[d,g]				-4.3				-2.6	

[a] Based on basic data from the National Institute of Statistics
[b] Based on basic data from the Central Bank of Bolivia
[c] Based on basic data from the Unit for Policy Analysis (UDAPE), Ministry of Planning, La Paz
[d] Based on basic data from International Monetary Fund, International Financial Statistic, August 1989
[e] Estimates of the Unit for Policy Analysis (UDAPE), Ministry of Panning, La Paz; declining values indicate appreciation
[f] Includes dollarized and dollar-linked deposits
[g] Yearly values

Figure 1

Prices, Exchange Rates and Wages

b. The Remaining Macroeconomic Disequilibria

Notwithstanding the sharpness of the picture of the inflation rate there are several questions on the nature of Bolivia's stabilization that need further scrutiny.

Relatively High Fiscal Deficits

Despite the emphasis on fiscal correction in the Bolivian program of 1985, the consolidated deficits of the non-financial public sector (NFPS), that includes the deficits of the general government and the public enterprises, after an exceptional first year, remained high (Table 2).[1] Current savings were negative in 1987, and their level for 1988, although positive, was still very low. Remark that the budget deficits of the last three years are of the same order of

[1] Unfortunately, lack of available data precludes consolidation of the NFPS deficit with that of the central bank. Domestic sales of Certificates of Deposit (CDs) by the central bank to the public, to constitute foreign exchange reserves, have been taking place in the last two years. Although the CDs command very high interest rates, the small size of the current stock

magnitude as the ones of the years immediately preceding the high inflation years.

Table 2

Consolidates Non-Financial Public Sector Operations (% of GDP)

	1984	End of Hyperinflation 1985	1986	1987	1988
1. Total revenues	19.7	25.2	27.5	24.5	26.8
2. Total expenditures	43.3	35.0	30.0	31.9	32.4
a. Interest	2.9	7.1	5.5	4.2	2.9
b. Other expenditures	40.4	27.9	24.5	27.7	29.5
3. Current savings	-11.0	-3.6	1.4	-1.7	1.1
4. Primary deficit (2b-.1)	20.6	2.7	-3.0	3.2	2.8
5. Overall deficit (2-1.)	23.5	9.8	2.5	7.4	5.7
6. Financing					
External	2.5	4.4	6.0	2.4	5.6
a. Net disbursements	-0.4	0.1	2.2	2.0	3.1
b. Unpaid interest	0.6	3.0	3.9	2.6	3.0
c. Argentinean arrears	2.3	1.2	-0.1	-2.1	-0.5
Internal	21.1	5.4	-3.4	5.0	0.1
a. Central Bank	20.6	5.2	-4.6	4.3	2.5
b. Floating debt	0.5	0.2	1.1	0.7	-2.4
Memorandum Items:					
Seignorage[a]	15.1	8.4	2.2	2.1	3.1

Source: Based on data of flows the Unit for Policy Analysis (UDAPE), Ministry of Planning, La Paz

[a] Defined as 100*(H - H(1))/GDP, where H = money base

The existence of substantial budget deficits does not mean that efforts to control expenditures and raise tax revenues were weak. On the contrary, ceilings on current expenditures of the government and the public enterprises have been very important, but they could not be reduced sufficiently to match the shortfalls in income, especially those resulting from the fall in sales of goods and services abroad. The 1986 tax reform, at whose core was a value-added tax, has shown some promising first results but it has not yet been fully implemented. Internal and import tariff revenues, excluding transfers from public enterprises to the government, are still below the levels attained in the 1970s, The low level of economic activity, to which we refer below, has also affected fiscal revenues.

(no more than 1.3% of GDP) makes servicing them low. This service is, of course, a source of central bank deficit.

The increase in expenditures in 1987 was due to the once-and-for all severance payments to the discharged workers of the state mining enterprises; that year's deficit is explained thus by a structural adjustment and was perceives as such by the public and the international lending institutions. Expenditures, as a share of GDP, increased again in 1988, to finance a growing investment budget but, in difference with 1987, there was a small contribution of current savings.

The overall deficits of the past three years were financed by-and-large, by additional external indebtness, voluntary and involuntary, and by drawing on foreign-exchange reserves. Viewed from another angle, the primary budget exhibited relatively large deficits in the past three years. This, and low seignorage, imply a net (of foreign-exchange reserves) foreign debt/GDP ratio, growing faster than did the excess of the real interest rate plus real exchange depreciation over the output growth rate. The question is: how long this will continue, given the fact that current investment rates are very low? The potential fragility of the situation may be anticipated by the public, imperiling stabilization relatively soon.[2] As Makinen (1988, p. 351) warns: "The deficit is being covered by foreign credits, not a reassuring development given experience of the last thirty years".

Many countries with similar deficits are currently experiencing significantly higher inflation rates. "Normal" budget deficits in Bolivia, however, tend to be larger than in other countries, because a very high proportion of total investment is public: in some years of the 1980s, over 50% of total fixed investment was public, as shown later (Table 7, section 3c). In general, the recovery of investment is accompanied by some increase in the budget deficit, since current savings are usually not enough to finance public investment. Nonetheless, current savings in the past three years were much too low.

High Deficits in the Current Account of the Balance-of Payments

If one looks at the current account, and especially at the trade account figures in the balance-of-payments, one notices that the external adjustment has been taken place very slowly (Table 3). The trade deficits between 1985 and 1988 are explained not only by the fall in exports but also

[2] My misgivings are supported by the growing literature on intertemporal tradeoffs. See, e.g. Sargent and Wallace, 1981;

by a surge in imports from their low levels of 1984. The causes of the jump in imports have been hypothesized elsewhere (Morales, 1988a). The trade surplus of 1989 is explained by the strong growth of exports of minerals and soybeans.

Table 3

Balance of Payments, 1984 - 1989 (U$ Millions)

	1984	1985	1986	1987	1988	1989[a]
1. Trade Balance	232.9	-69.4	-117.5	-243.4	-117.4	60.5
Exports FOB	724.5	623.6	556.5	523.8	531.2	723.0
Imports CIF	491.6	693.0	674.0	767.2	648.6	622.5
2. Balance of non-factor services	-18.0	-12.6	-25.0	-16.7	-38.2	-26.0
3. Factor services (Net)	-431.2	-362.3	-279.5	-267.7	-252.8	-255.7
4. Net transfers	88.5	80.0	99.0	126.0	137.0	100.3
5. Balance on current account						
a. Non-interest current account	205.0	-54.8	-89.8	-120.7	-31.7	50.9
b. Current account	-127.8	-364.3	-323.0	-401.8	-271.4	-120.9
6. Balance on capital account	-308.9	-230.3	-62.7	226.4	230.4	330.8
7. Exceptional financing	261.8	358.0	359.6	444.7	211.3	103.9
8. Errors and Omissions	27.4	179.7	-84.3	-191.1	-102.3	-231.5
9. Overall balance (5b + 6 + 7 + 8)	-147.5	-56.9	-110.4	78.2	68.0	82.3
Memorandum Item:						
Net foreign exchange reserves	32.7	91.6	216.3	164.9	169.8	18.6

Source: Based on basic data from Central Bank of Bolivia
[a] Preliminary

The current account deficits were finance by renewed access to foreign financing, by repartition of capital, and by unidentifiable sources, in which the dishoarding of domestically held dollar bills and the laundering of drug money (the so-called "coca dollars") my be important. Again, as in the case of budget deficits, it is possible to define a "core" trade deficit in a long-term growth perspective, related to the need counting on net resource transfers from abroad to complement domestic savings (at least until 1997, according to Bolivia, Ministry of Planning, 1989). However, the observed trade deficits of 1986-88 seem to be higher than the core deficit.

Drazen and Helpman, 1988; and Blanchard and Fischer, 1989.

Overvaluation

Before going into the discussion of overvaluation, a short review of the exchange regime my be helpful. The foreign exchange market is regulated by a Dutch auction mechanism in the central bank, called the "bolsín". The central bank sets both a floor price and the quantity to be auctioned in each session. Each bidder whose bid exceeds the floor price must pay his bid price. The official exchange rate results from the weighted average of all accepted bids. Bidders know neither the floor price nor the quantity supplied by the central bank before entering the auction. Their bids (in sealed envelopes and accompanied by banker's checks in Bolivianos) are based on the information provided by the values of those variables in previous auction.

The above description shows that the central bank has several ways of intervening in the "bolsín" while preserving its image of a market mechanism. A few weeks after the system was implemented, the difference between the official exchange rate and the floor price narrowed to almost nothing, except occasionally. In the rare cases of speculative attacks against the Boliviano, the central bank discretely increased the amount supplied in the auction in order to align the bid prices with the floor price. Symmetrically, in even more rare cases, the central bank reduced the amount supplied to the auction, to devalue in discrete steps.

Bernholz (1988) hypothesized that a country following a more expansionary monetary policy than its main trade neighbors will have an undervalued currency was clearly verified in the parallel foreign exchange market during the maturation of the hyperinflation. He adds -from the experience of other stabilizations- that after stabilization the exchange rate should converge to its purchasing power parity. The Bolivian data posit the question in a slightly different perspective: has stabilization achieved more than a return to purchasing power parity? In other words, has stabilization led to overvaluation?

Line D1 in Table 1 seem to provide an affirmative answer to the question above. Significant overvaluation was observed at least until the third quarter of 1988. This assertion is corroborated by the rapid growth in real wages and the CPI of non-tradables in the same period. During 1989, the evolution of the CPI of non-tradables was similar to the one of the CPI of tradables. This leads us to believe that overvaluation in that year was similar to the small one

of the last quarter of 1988. Lack of data prevents us to reach more definite conclusions. Remark that the number for the second quarter of 1989 is clearly an outlier and may be explained more by events in Bolivia's trade partners than by domestic policy developments.[3] The implications of overvaluation are explored in section 3b.

Low Monetization and High Dollarization

It should be remembered that the hyperinflation caused severe de-monetization. Re-monetization after stabilization has been very slow, because the stabilization package depended to a significant extent on a very tight monetary policy. The main instrument of monetary policy is the mandatory deposits of public enterprises with the central bank.

Although the monetary aggregates have grown on average more rapidly than inflation, the pace has not been enough given the initial de-monetization. The general rule, when the stabilization program was launched, was that the money base would grow only with the accumulation of foreign reserves. In fact, that principle was not always followed. Even if the strong seasonal effects are discounted, great fluctuations in the rates of growth are observed (Table 1, lines B1-B3). The expansions and contractions in base money and M1 indicate an active money supply policy, with a reaction function to the inflation rate, with a lag of one period, monetary policy has not been at all accommodating.

The growth in M3, that includes the dollarized deposits, was very strong during 1986 when most of the capital repatriation took place. Ratios of mid-year M1 to GDP were 2.9%, 4.2%, 4.4%, and 5.1% for 1986, 1987, 1988, and 1989, respectively (compare these numbers with an average of 9.8% during the 1970s). Almost as a mirror image of low monetization, dollarization is very significant (Figure 2). By the end of 1989, 84% of bank deposits were in dollars or in dollar-denominated accounts (see line C1 in Table 1). In addition, the quantity of dollar bills in circulation in the domestic economy, although not known with precision, is believed to be very significant.

The domestic banking system offers two main types of dollarized deposits (in the form

[3] The figures in Table 1, line D1 are derived from averages of the official exchange rates and the parallel market exchange rates of the country's trade partners. This procedure is loaded with technical difficulties but the alternatives were even worse.

of certificates of deposit, (CDs): (1) Time deposits in dollars (dollar deposits), and (2) time deposits denominated in Bolivianos but indexed to the official exchange rate (dollar-indexed deposits). Interest on these deposits are paid in the currency of the deposit, although in both cases they are first computed in dollars. Similarly, the principal is returned in the currency of the deposit, after adjustment to the exchange rate in the case of deposits in Bolivianos. Incidentally, some banks also after demand deposits and savings passbooks in dollars. The reserve requirement for dollar deposits and dollar-indexed deposits is currently identical to the one for time deposits in Bolivianos (10%), and lower than for demand deposits and savings passbooks (20%).

Figure 2

The low degree of monetization after stabilization does not necessarily reflect a low demand for M1, at least initially. No debt, the institutional change in the domestic banking system, with the reopening of dollar accounts, reduced the demand for M1. But after discounting this factor, the observed low level of monetization may reflect the short side of a market in disequilibrium rather than any lack of faith in the stabilization program.

In the dollarization process, the effects of repatriation must be distinguished from the effects of portfolio shifts. It should be stressed that the repatriation capital has been placed, almost entirely, in dollar deposits. This is the main explanatory factor in the initial rapid growth of dollarized deposits. Also, after stabilization and the reopening of dollar accounts, some of the dollar bills hoarded by the public inside Bolivia was deposited in the banking system. But since mid-1987, repatriation de-accelerated and dollarization was then essentially caused by portfolio shifts.

In Morales (1989a) a regression equation to explain the fall of the ratio of M1 to M3 was estimated. The logarithm of the ratio M1/M3 was regressed on the expected rate of devaluation, the spread of the borrowing rate of interest in dollars in the domestic market over the LIBOR rate, a dummy variable (equal to 0 for months before July 1987 and 1 afterwards), and a time trend. All variables had coefficients with the expected signs and were significant at the 5% significance level.[4]

High Interest Rates

Extremely high interest rates have been observed since the implementation of the stabilization program (line C2 in Table 1 and Figure 3). For our purposes, the interest rate on dollar transactions will be called the "real" interest rate. Ex-post real interest rates in Bolivianos are also very high, but are not discussed for the sake of simplicity and, more importantly, because most financial transactions are made in dollars anyway.[5]

After a normal jump in real interest rates following stabilization, a further and important increase occurred in mid-1987. Around the same time, the credit market was segmented, with preferential rates for development loans (mostly to pay for imports of capital goods, services, and inputs) and market rates for working capital, trade and consumption loans. The development loans, financed almost entirely with foreign resources, were supposed -but failed- to reduce demand pressure on the overall credit market.

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[4] The expect devaluation rate was estimated by a distributed lag of current and pat rates of devaluation. The coefficients of the distributed lags were assumed to lie on a second degree polynomial with a far end zero restriction. Their sum was found to be significant at the 5% significance level. All the other independent variables were significant at the same significance level.

[5] Strictly speaking the ex-post real interest rates on dollar operations, valued domestically, will be lower than the "real interest

Several questions, to which we now turn, are related to the determinants of the very high real interest rates in the market.

Figure 3

The tight monetary policy alluded to above may be a first explanatory factor. A second explanation is given by a country risk premium in the interest rates, given Bolivia's history of macroeconomic and political instability, its high degree of foreign indebtness, and the memory of the "de-dollarization" measure taken in 1982 (and later repealed). The trouble with this latter argument is that the spread between domestic borrowing rates and international rates increased over time, at least until the first quarter of 1988. The risk premium should not have increased as political and macroeconomic stability became established. Moreover, depositors can -and to- hedge against political risks by keeping very short term deposits. This observation weakens the risk premium explanation.

The dynamic behavior of demand provides in third explanation. The demand for loans exhibits a perverse dynamism of its own, with a microeconomic effect of increasing the risk of defaults by banks. Because of forecast and appreciation errors regarding the pace of economic reactivation and the state of the domestic market, many borrowers who had contracted credits at

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rate" as defined here for convenience, in the presence of exchange rate appreciation.

high interest rates found themselves saddled with heavy debts and the need for new loans. The financing of interest payments with new loans causes a ballooning of outstanding debts, and delinquency rates increased rapidly. The proportion of overdue loans in assets (and total loan portfolios) has been unusually high in the past three years (Table 4).

Table 4

Commercial Bank Portfolios (%, end-of-period)[a]

	1986	1987	1988				1989			
			I	II	III	IV	I	II	III	IV
Overdue Loans/Assets	7.5	8.0	11.4	7.1	10.8	6.3	9.9	7.1	9.8	6.6
Overdue Loans/Total Loans	n.a	13.0	18.7	11.4	16.8	9.8	13.9	10.1	13.9	9.0
Overdue Loans/Capital	83.4	67.3	111.9	78.4	114.1	61.1	68.4	55.4	81.2	61.2
Refinanced Loans/Assets	n.a	18.3	19.6	21.9	22.0	23.9	26.4	28.7	28.7	28.9
Refinanced Loans/Total Loans	n.a	29.2	32.2	35.1	34.1	37.5	36.9	40.8	40.7	39.7
Capital/Assets	8.9	11.9	10.2	9.0	9.5	10.3	14.5	12.8	12.0	10.7
Memorandum Item: Lending interest rate for loans in U$ (%)	22.0	29.3	26.0	23.3	22.0	22.3	21.2	21.7	22.9	22.1

Source: Bulletin of the Superintendence of Banks, 1989

[a] Includes only private commercial banks

The very large spread between the lending and borrowing rates (going back to Figure 3) is also puzzling. The following, not wholly convincing explanations have been advanced:

1. The "de-dollarization" measure of 1982 caused banks to suffer severe capital damage. This, together with the deterioration of their portfolios after stabilization, induced many of them to try to (partially) recoup losses out of their performing loans, by charging high interest rates on them.
2. The hyperinflation produced a heavy financial de-intermediation and an extraordinary expansion of "curb-side markets". Although substantial progress has been accomplished after stabilization, banks have not yet recovered the scale of their operations before the hyperinflation.
3. The end of the hyperinflation left the banks saddled with large operating costs, coming mainly from overstaffing and overextension of branches. Although banks have

significantly trimmed their personnel and closed many branches, they still have to face the costs of maintaining large buildings and other infrastructure in their headquarters. These costs, together with a reduced scale, have been conducive to high unit operating costs.

The large spreads can also be explained by industrial organization arguments. The domestic commercial banking system is comprised of only sixteen banks, and hence competition is weak. There is evidence moreover of colluded interest rate fixing. Before 1982, the active presence of a number of branches of large foreign banks provided a more competitive environment, but the regulations on capital movements during the hyperinflation drove many of them away. With the stabilization program, the capital account of the balance of payments has been fully liberalized, but the foreign banks have not returned.

In the past two years, Bolivia has faced two mild banking crises, the first in mid-1987 and the second in mid-1989. The government of Bolivia felt compelled, in 1988, to negotiate a loan with the World Bank to strengthen the private banking sector. A few months earlier, the government had reestablished an independent Superintendence of Banks and Financial Institutions, hoping that this would serve as a timely warning on bank bankruptcies. This institutional reform and the loan averted a further deterioration of the banking system, but the symptoms of frailty remained. During the months of July and August 1989, the banking system was shaken again: the results of the elections prompted a run by depositors. The central bank had to establish a special line of credit to rescue the banks. Fortunately, normalcy was restored by September 1989 and bank deposits have recovered their pre-crisis levels.

The results of my econometric work (Morales, 1989a) on the determinants of the interest rates lend support to a combination of tight monetary policy and troubles in the banking sector as the main determinants of high interest rates. The spread of the domestic borrowing interest rate over the LIBOR rate was regressed on its lagged value, the logarithm of M1 (expressed in dollars), and a dummy variable (zero for months before July 1987 and one afterwards). All variables were significant at the 5% level, except the dummy variable that was significant at the 11% significance level.

c. Output and Employment

A modest recovery of output has occurred since the second year after stabilization (Table 5). Small but positive rates of growth of GDP were observed in 1987, 1988 and 1989, following negative rates from 1982 to 1986. Observe, however, the strong recovery in manufacturing and mining in the past two years. Figure 4 completes the picture showing the severe deterioration of living standards until 1986 and the evolution afterwards.

It is very hard to come by reliable estimates of unemployment. Numbers initially provided by the Bolivian Ministry of Labor, that showed very high rates of unemployment, and that were reported in my previous work (Morales, 1988a), have been reviewed by the National Institute of Statistic (NIS), that finds significantly lower unemployment rates. The NIS conclusions are based on household data, plagued with technical deficiencies. The numbers in line D1 of Table 5 are based in the original NIS household data, with corrections for consistency, and should be treareds as gross estimates.

Table 5

Output and Employment Indicators after the Stabilization Program

	1986	1987	1988	1989[a]
A. Rates-of-growth[a] (Annual % change rates)				
1. GDP	-2.9	2.1	2.8	2.4
2. Per capita GDP[a]	-5.5	-0.6	0.0	-0.4
3. Per capita private consumption	-2.3	-0.3	-1.5	-0.4
4. Urban labor force	3.7	3.7	4.0	4.0
5. Urban employment	1.7	3.1	4.0	5.5
B. Output Indexes (Base 1985 = 100)[a]				
1. GDP	97	99	102	104
2. GDP per capita	94	94	94	94
3. Mining	74	75	106	134
4. Hydrocarbons	96	97	101	104
5. Manufacturing	102	106	110	113
6. Agriculture and livestock	95	95	96	93
7. Construction	92	91	102	110
8. Electricity, gas and water	104	98	102	107
9. Services	100	104	103	104
C. Export volumes (Base 1985 = 100)[c]	105	97	98	n.a
D. Urban Employment[b]				
1. Unemployed as percent of labor force	12.9	13.4	13.4	12.2
2. Workers affiliated to social security system (thousands)	319	268	n.a	n.a
3. Counterfactual: potential affiliations to social security system (thousands)[d]	356	369	384	399
4. Difference between D3 and D2	37	101	n.a	n.a
5. Difference D4 as % percent of potential affiliations	10.3	27.4	n.a	n.a

E. Per capita private consumption (Base 1985 = 100)	98	97	96	96

[a] Computations based on data provided by the National Institute of Statistics
[b] Author's estimates based on basic data from the household surveys of the National Institute of Statistics
[c] Source International Monetary Fund, International Financial Statistics, December 1989
[d] Estimated as the number of affiliations, had the percentage of affiliations on the labor force of 1985 remained constant
[p] Preliminary

Regardless of the exact unemployment rate, it is interesting to notice that, in the public's perception -as captured by the pollsters of the main leading candidates in the May 1989 elections- unemployment appeared to be the most important issue that worried voters. The recovery of employment was the major theme in the electoral campaign.

More than the aggregate loss of jobs, what is clearly identifiable is a change in their quality. As evidence of this change in quantity, it has been pointed out that the number of workers enjoying social security and medical coverage has decreased from 343 thousand to 268 thousand workers between 1985 and 1987. This difference represented around 6.2% for the urban labor force in 1985.

The loss in jobs (and potential jobs) with social security coverage can be directly attributed to the stabilization program, but even so, there may have been other causes (of a more structural nature) at work, like the fall in the terms of trade, the labor productivity gains in the manufacturing and mining sectors and, more generally, the transition from a distorted position to one relatively less (Makinen, 1988). The case of dismissals in the mining sector provides the best example of unemployment not resulting from anticipation errors but from the need to face reality, if stabilization was to endure. The solution of the long-term structural problems of the mining sector, including substantial overstaffing and decapitalization, became urgent once the collapse of the tin market occurred. The market collapse and the stabilization program precipitated the correction that had been postponed for years.

The arguments citing the tin mining sector can be extended to other sectors. In a society with a large agrarian sector and non-structured (or informal) urban sectors, the unemployment effects of stabilization, based on an analysis of the (expectations augmented) Phillips curve are of limited relevance. Wage employment, where problems of nominal wage rigidity could be present, is relatively small, and even there, labor contracts with very explicit incorporation of expected inflation are not very common. Without denying that some

unemployment resulted from anticipation errors, the most clearly identifiable cause of unemployment in the stabilization package was the discharging of about ten percent of the labor force in the public sector. Many of the dismissed workers could not be rapidly relocated in other sectors of the economy for reasons like age and education.

Figure 4

A very detailed distinction between the unemployment caused by anticipation errors and wage rigidities, on the one hand, and by structural factors on the other hand, does not seem to be very fruitful for policy design. The fact that stabilization had a hard landing in sectors that needed structural adjustment is of concern for current policy, even for aggregate demand policy.

2. Further Thoughts on the Bolivian Stabilization

a. Low Inflation but Above International Levels

Bolivia's inflation, while low for Latin American standards is, however, significantly higher than the inflation rate of the industrialized countries of the West. The Bolivian pattern, after stabilization, has been one of generally low rates broken by sudden outbursts, usually following strong devaluations and/or hikes in the domestic prices of fuels. This pattern can be traced back to the initial strong overvaluation of the Boliviano after stabilization, to the indexation rules for public prices discussed in 3d, and, as important, to external shocks generated in the macroeconomic instability of Bolivia's neighbors (and trade partners).

In an attempt to redress the initial overvaluation the government increased the rate of crawl of the exchange rate during 1987 and until the second quarter of 1988. Moreover, exchange rate correction was called for by the rapid depreciations in the neighboring countries undergoing high inflation. During this exchange rate correction phase, however, the indexation rule for the domestic prices of oil derivatives had not been enforced.

The need to correct the fall in the relative price of fuels became, however, urgent after the warning given by the high budget deficits of 1987 and early 1988. The correction was made in April 1988. This together with the accumulated depreciation induced a round of price adjustments across the economy. Relative price adjustment in Peru and Argentine also drove the Bolivian inflation up. The rate of the crawl reduced in the second half of 1988 to quell inflationary pressures. The slow crawl policy was continued during the first half of 1989, given the added ingredient of an electoral year. The banking crisis, following the elections of May

1989, was accompanied by a speculation against the Boliviano that caused a jump in the exchange rate. This jump was followed by increases in the price of fuels, and a new round in price hikes was started that lasted until the end of 1989.

b. Real Wages in the Private Sector

Real wages in the private sector have shown a surprising dynamism beginning in the second semester of 1986. There factors may explain this:

1. Real wages hit an abnormally low level in the first quarter after the stabilization program was launched. Wages could not be sustained at that level for long-time, without disrupting production in a significant way.
2. Major structural changes also explain the rapid increase in real wages. The work force in the manufacturing sector became leaner, productivity increased, and the workers that stayed obtained important wage hikes. With a lag of about one year, the production in the privately owned mines picked up momentum, with more capital-intensive technologies and a smaller work force than before stabilization, and real wage growth ensued. The substantial wage growth in construction can be explained by the active policy of public works financed by the local municipalities and the Social Emergency Fund. The municipalities are the main beneficiaries of the tax reform of 1986. The Social Emergency Fund is a broad program of poverty alleviation financed with international donations.
3. Some enterprises excepted a stronger recovery in 1987 and thus acquiesced in the demands of their workers for wage increases. In addition, starting in the first months of 1987 and until the first quarter of 1988, devaluation proceeded at a relative fast pace (at least faster than right before) affecting expectations. A significant share of the wage increases can be attributed to expectation errors on both the extent of economic reactivation and of the rate of devaluation.

c. The Role of External Finance

The importance of foreign financing and adequate foreign exchange reserves in the stabilization experiences after hyperinflation has been underscored by several authors like Dornbusch (1988). The Bolivian case constitutes no exception. Indeed, a main objective in the design of the stabilization program was to reestablish relations with official international creditors. As a first measure, the government had to prepare for negotiations with the International Monetary Fund (IMF). It was correctly assumed that the nature of the stabilization program would make it acceptable to the IMF, except for the theory requirement of resumption of payments (eventually, after rescheduling) to the creditor foreign commercial banks.

While negotiations with the IMF were in progress, the only foreign support that Bolivia received took the form of involuntary lending, with the suspension of its external debt service with the commercial creditors. After a while, the Bolivian efforts ar stabilization received full, although slow, support from the official international lending agencies. In June 1986 Bolivia reached a stand-by arrangement with the IMF, the first since 1980, but fully nine months after the stabilization program had begun. The IMF waived its requirement of an agreement with the commercial banks. In 1988, Bolivia obtained another loan from the IMF as Enhanced Structural Adjustment Financing (ESAF). Other official creditors, like the Andean Reserve Fund and the World Bank, followed in the IMF's path, with loans to strengthen foreign exchange reserves. Bolivia also benefitted from medium and long-term development loans from the Inter American Development Bank, the Andean Development Corporation, the World Bank and foreign governments. Assistance to the Social Emergency Fund, much of it in the form of donations, was also very important.

Net disbursements in the period 1986-88 on long -and medium- term loans amounted to U$518 million; net short-term disbursements and net loans from the IMF totaled around U$100 million (see also Table 6). The net debt increase in the past three years significantly differ from the net disbursements because of the important reschedulings in the Paris Club of 1986 and 1988. There was also a debt cancellation in 1988 in the form of a debt buy-back from the private foreign banks for U$407 million. A mutual cancellation of outstanding debts between Argentina and Bolivia was agreed in October 1989. This reduced Bolivia's (gross) debt by U$720.

Net transfers on account of the long -and medium- term loans to the NFPS became positive in 1986, after having been highly negative between 1982 and 1985. There was a substantial positive net resource transfer in 1986. After that, the transfers declined.

The fresh loans and the debt service alleviation helped to rebuild foreign exchange reserves and to finance development projects. Equally important, the resumption of international credits helped to strengthen domestic confidence in the stabilization program.

Repatriation of capital has also been significant since the stabilization plan was announced as mentioned above. Dollar and dollar-linked time deposits in the banking system grew from U$24 million in December 1985 to U$490, million by the end of 1989 (around 10.5% of that year's GDP).

Table 6

External Public Debt Indicators 1985-1988

	1985	1986	1987	1988
A. Long-Term debt (U$ millions)				
1. Stock of debt outstanding & disbursed	3.484	4.064	4.599	4.569
2. Disbursements	133	345	209	258
3. Principal repayments	177	106	74	114
4. Net disbursements (2 - 3)	-44	239	135	144
5. Interest payments	156	100	62	93
6. Total debt service (3 + 5)	333	206	136	207
7. Net transfers (4 - 5)	-200	139	73	51
B. Long-term debt (% of GDP)				
1. Stock of debt outstanding & disbursed	101.4	101.2	107.2	100.0
2. Disbursements	3.9	8.6	4.9	5.6
3. Principal repayments	5.2	2.6	1.7	2.5
4. Net disbursements	-1.3	5.9	3.1	3.2
5. Interest payments	4.5	2.5	1.4	2.0
6. Total debt service	9.7	5.1	3.2	4.5
7. Net resource transfers	-5.8	3.5	1.7	1.1
C. Short-term debt (U$ millions)	650	765	608	681
D. Operations with the IMF (U$ millions)				
1. Use of IMF credit	51	145	141	145
2. Purchases	0	113	0	61
3. Repurchases	19	30	25	49
E. Total (A1 + C + D1) (U$ millions)	4.185	4.974	5.348	5.395
Memorandum item:				
GDP in U$ millions	3.434	4.018	4.289	4.571

Source: Dollar values from World Bank, World Debt Tables 1988-89 and 1989-90 Editions;
Dollar GDP estimates by author based on official accounts.

d. The Political Features of Adjustment

The following delimitation of periods in Bolivia's recent history should help in the discussion. The hyperinflation happened during the presidency of Hernán Siles Zuazo from October 1982 to July 1985. Stabilization began in the last quarter of 1985 and was implemented during Víctor Paz Estenssoro's mandate, that lasted until July 1989. The successor of Paz Estenssoro, Jaime Paz Zamora, inaugurated his presidency in August of 1989. He continues the economic policy of his predecessor.

The Weakening of the Labor Movement

In spite of its low degree of industrialization, Bolivia has traditionally had a very powerful labor movement, with a de facto veto power over many government regulations. The fact that the labor unions courageously opposed the military dictatorships of the 19870s and early 1980s gave them a strong voice during the first government of transition o democracy.

Not unexpectedly the domestic adjustments required by the changes in the external environment in 1982-1983 were resisted by the unions, since they implied large cuts in real wages. The unions federated in the Confederation of Bolivian Workers (COB) objected to every attempt at stabilization. The Siles Zuazo administration, facing unbearable social unrest, repeatedly conceded large nominal wage increases financed with seigniorage. This lenient policy explains why, in the eyes of the public, the wage race was the most important source of money expansion.

The stabilization program of August 1985 was at first opposed by the leadership of the COB, but this did not last. The earlier stabilization attempts and the opposition to them both eroded the strength of the unions and provided information on the costs of stabilization relative to the cost of failing to combat inflation. Also, the unemployment that had been building up since the hyperinflation years reduced the militancy of the unions and lent credibility to the threats of dismissals by the employers. Furthermore, the government took some strong measures to control social unrest, including a short-lived state of emergency and the

confinement of labor leaders in remote villages for 15 days.

The lay off of 23 thousand out of 30 thousand miners -the backbone of the labor movement- administered the coup de grace to militancy. Since then, the COB officials have had huge difficulties in asserting their leadership: their calls for strikes have gone mostly unheard and have not been followed by the rank and file.

The weakening of the labor movement facilitated the adoption of the drastic stabilization program. The Paz Estenssoro government did nor feel, at any time, the need of a social pact or an incomes policy.

The Pact of Democracy

No less instrumental as the taming of the labor movement was the Pact for Democracy signed between the two main political parties, the Nationalist Revolutionary Movement (MNR) of President Paz Estenssoro and Nationalist Democratic Action (ADN) of former president Gral. Hugo Bánzer. The two parties agreed to carry on the stabilization program proposed by the MNR. In consequence, crucial legislation in support of the program, like the tax reform and the budgets, was readily passed in Congress. Also, the Executive, in the hands of the MNR, was freed from the oversight of Congress and, in fact, received full powers.

The Pact of Democracy was also helpful in gathering support for the program in the press, as most Bolivian newspapers, radio and TV stations are owned or controlled by members of ADN.

The stabilization program has gained broad and persistent support in the public, in spite of its admitted cost. In the last elections (May 1989), almost four years after the stabilization program went into effect, the three major parties proposed to continue it. They obtained 65.4% of the popular vote and absolute control of Congress.

e. The Signals to Establish Credibility

Adherence to the announced stabilization policies, external adversities notwithstanding, was the banner of the Paz Estenssoro government and the most important source of credibility. The tenacity of purpose in maintaining stabilization seems, in an ex-post analysis, to have been duly appreciated by the public and the market.

Commitments on the growth of monetary emission initially provided the nominal anchor in the stabilization program. A drastic reduction in the growth rate of the money base was clearly identifiable and credible initial move in the purpose of government to stop hyperinflation as pointed out by Kiguel and Liviatan (1988). Moreover, a tight rein on money issuance, at the beginning of the program, when virtually all prices in the private sector were fully flexible and the central reserves were almost nil (U$30 million), was tantamount to fixing the nominal exchange rate in the parallel market and also the official policy tenet.[6] The situation changed four months after the beginning of the stabilization program, with the constitution of foreign exchange reserves. At that moment, the government anchored inflation more explicitly on the exchange rate. The exchange rate regime, initially presented to the public as flexible, then became heavily administered.

The tight money policy needed a complemental fiscal policy signal. The government found such a signal in a very strong stance with regard to nominal wage increases in the public sector. The government's skirmishes with the public sector labor unions over nominal wage increases were perhaps the most important signal (certainly more important than tax reform) to the general public on its commitment to maintain stabilization.

Other institutional factors also helped credibility. For instance, the non-market mechanisms of protection against inflation in Bolivia are relatively underdeveloped. Wage indexation arrangements are nonexistent and, in the financial markets, dollarization of assets works differently than the incorporation of expected inflation in the interest rate. This made it easy for the government not to try to cheat the public indexation arrangements, for example, to correct relative prices. In addition, the government could not use inflation to liquidate public debt, since virtually all of it is external.[7]

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[6] It seems that, at that moment, the conditions (as discussed, e.g., by Helpman and Leiderman, 1988) for the equivalence for exchange-rate management and monetary policy were met.

[7] The ratio of external debt to GDP can be reduced, however, with very high inflation that causes lags in the real exchange rate, as may happen in advanced cases of hyperinflation. But, in general, external indebtness allays fears of using inflation for the purpose of debt liquidation. However, expectations of disruptions in net resource transfers from abroad evoked, on

3. The Resumption of Growth

a. The Measures of Structural Adjustment

The stabilization program of August 1985 included, or was followed by, measures of: (1) ample liberalization of the markets for goods and credit; (2) deregulation of the labor market; and (3) reduction of the size of the state in the economy.

Liberalization of foreign trade has, however, been somewhat hesitant. Between 1985 and 1989 at least four major changes in the tariff schedule have taken place. Tariffs currently have two rates, 17% for most imports and 10% for a list of capital goods. In fact, the tariff status is still very unstable.

Abrupt trade liberalization played a non-negligible role in the immediate aftermath of the stabilization program. As Pastor (1988, p. 24) observes: "import competition, coupled with exchange rate stability, essentially played the role price controls served in the heterodox program of Bolivia's neighbors: domestic producers were constrained from raising prices beyond the exchange rate times relevant dollar price".

But trade liberalization in the post-stabilization phase, together with other elements in current economic policy has created other, more structural, problems. Competition from imports has made the price of tradables lag behind those of other goods and services. For

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occasion, the possibility of rapid exchange rate depreciation and, hence, inflation.

instance, it is shown in Morales (1989b) that the consumer prices of tradable foodstuffs trail behind the prices of non-tradable foodstuffs and the over-all consumer price index. The clearest case is that of agro-industrial prices and prices of produce from large agricultural estates in eastern Bolivia that fell substantially relative to other prices. Also, imports that compete with these products registered significant volume increases.

The income losses brought about by liberalization (coupled initially with overvaluation) have created strong pressures on the government by associations of large agricultural producers and industrialists for more protection. The government yielded to some of their demands, for instance, import quotas for sugar and edible oils have been reestablished.

The stabilization program recovered the principle of free contracting in the labor market. This deregulation reduced the employers costs and administrative hurdles to discharging un-needed workers. In another deregulation move, the backward wage indexation mechanism in force between 1982 and 1985 was completely dismantled. Also, the wage regime was reformed and simplified by consolidating to a basic yearly wage a myriad of bonuses, most of which had been granted during the high inflation years.[8]

Free contracting has not eliminated all rigidities in the labor market. The significant increases in real wages discussed in 2b can be given as a proof of this assertion.

The previous administration and the new one announced their intention to disinvest but no significant privatization has yet taken place. Reductions in the size of the state have meant essentially substantial reductions in the public sector payroll.

b. Short-Term Policies to Restore Growth

The Consolidation of Stabilization

The viewpoint of the past two government is that the preservation of stabilization is a necessary condition for the restoration of growth. A further lowering of the inflation rate is also deemed

[8] The only bonus that remained was the Christmas bonus. The consolidation, although not crucial for the stabilization package, was more than a cosmetic move, in the sense that it smoothed out the seasonality of cash outlays by the government and private enterprises. Seasonal effects, coupled with an indexation mechanism for the exchange rate and

necessary. Stabilization in a broad sense, that is, with no significant distortions in relative prices, should increase the marginal efficiency of the required new investments. With the current policies, the government aims at a annual GDP growth of 4 - 4.5% for the next four years, with a relatively modest (gross) fixed investment/GDP rate of 14%.[9]

The Bolivian government has also been emphasizing that the reduction in uncertainty, brought about by stabilization, will help private investment. The resurgence of the manufacturing sector after stabilization is cited as a proof of this assertion. Stability is also seen as a necessary condition for attracting crucial direct foreign investment.

The emphasis on stabilization as a means to achieve growth does not, however, seem obvious. There are frequent proposals in the press, and even in academic circles, for more expansionary domestic demand policies.

The Strengthening of Public Finances

Fiscal equilibrium has top priority on the government's agenda, and fear of inflation is not be only explanation. Public sector current savings are essential for the constitution of local counterpart funds necessary for the disbursement of contracted foreign loans.

Full implementation of the ongoing tax reform is a one of the pillars of fiscal policy. The other pillar has to do with the maintenance of the real value revenues from the public sector's domestic sale of foreign exchange and goods and services. On the other hand, savings that are brought about by lags in wages of civil servants and slashing spending on education and health are unsustainable. Not only does government efficiency suffer, but, worse, this type of policy may negatively affect private investment.

The level and changes in the exchange rate have significant revenue implications, since the public sector is a net supplier of foreign exchange to the rest of the economy. The current indexation arrangements of the exchange rate and public prices present some interesting aspects. Bolivia has been following, loosely, a crawling peg exchange rate and policy of indexing the price of oil derivatives (and of other publicly provided goods) to the exchange rate

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public prices, could give more persistence to inflation than desired.

of the previous month.[10] With these indexation rules, inflationary shocks (like a step-wise increase in wages, in the exchange rate or in foreign prices) do have an impact but the effect on the persistence and fluctuations of inflation are rather limited. However, as the initial impact on inflation was sometimes large, the authorities tented to skip indexation for long periods. But then, as lags accumulated in the exchange rate and public prices, the authorities resorted to overindexation until the next shock. Overindexation can take on a precise meaning as in Morales (1989a). For our purposes, let us simply state that overindexation exists when the factors of indexation are much higher than 100%.

In the presence of overindexation, even if the inflation rate ultimately converges to the international inflation rate (which is not always the case), its persistence may eventually lead to wage indexation or, worse, to disorderly escalating wage increases, that will probably be financed by money creation in the public sector. At that point inflation would accelerate. Clearly, this sets limits to the indexation rules.

Last but not least, given the limits of taxation and of revenues from the sale of goods and services, it appears that the big push to reach a sustainable expenditure program and to restore liquidity in the public sector has to come from vigorous moves toward privatization.

Overvaluation Revisited

Although overvaluation by the end of 1989 did not seem to be very important, its implications for Bolivia's activity levels and economic recovery are worth analyzing.

First is the question of how disruptive overvaluation is for trade flows. Bolivia exports mainly natural gas and minerals, whose prices are either fixed in foreign exchange in international markets (minerals) or result from negotiations within the limits of a bilateral monopoly (natural gas sales to Argentina). Exchange rate overvaluation, unless absurdly high, has a minor impact on the profitability and the level of activity of firms in these sectors. But non traditional exports and the import-competing industries can be severely hurt. For instance, the substantial increase in the supply of smuggled goods is evidence of the impact of

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[9] See Bolivia, Ministry of Planning (1989).

overvaluation on the import-competing industries.

Second, it is well known that overvaluation increases speculative demand for foreign exchange and capital flight. But it is also true that capital movements are not independent of the way in which the exchange rate is corrected. A step-wise devaluation of sufficient magnitude can stop speculative movements. But step-wise devaluations are dangerous, especially in view of the experience of the hyperinflation years, when many of them took place. Moreover, with a discrete devaluation, the "bolsín", that has worked reasonably well in exchange rate unification, may lose credibility. A more rapid crawl of the Boliviano in the "bolsín" has its own shortcomings, as it has been argued above.

Third, although there is no conclusive empirical evidence, theoretical considerations suggest that the tight monetary policy referred to before, in face of relatively high budget deficits, gives rise to continuous (but how large?) real appreciation of the exchange rate. Also, rapid capital repatriation, prompted by the high interest rates, may have been behind overvaluation in the first two years after stabilization began.

c. The Behavior of Investment

The crisis of the 1980s has produced a very substantial decline in investment rates (Table 7). The investment rates in the private sector were particularly low in the past four years.

Low investment rates in the private sector are conventionally explained by the prevailing macroeconomic disequilibria. But as important seems to be the effect of credibility, not on stabilization, but on long-term developments. Fears of a future reversal of policies still prevail in the private sector. In this context, the persistent weakness of public finances may awaken fears of future confiscatory measures against the private sector through exchange rate manipulations, punitive taxes, or outright expropriation. Underinvestment and lack of maintenance of social overhead also contribute to the shyness in private investment.

To reactivate the economy and a fortiori to resume growth, while at the same time maintaining stabilization, seems significantly more difficult than it was to stop inflation. Even if stabilization, with all its components including real interest rates convergent to the

[10] The rules for indexation of public prices were set out in the stabilization decree SD 21060, August 1985.

international ones, is established, it will not suffice in the words of Dornbusch (1989b) "to provide an automatic mechanism of crowding in significant growth". Many other factors are needed, some of which have been discussed above. A generous inflow of foreign resources, full reassurances to domestic private investors that foreign aid will be forthcoming, the creation of a social infrastructure, and the strengthening of the judiciary to avoid uncertainties on the full enjoyment of property rights are, inter alia, the required ingredients for the formation of an optimistic environment for private investment and, ultimately, growth.

Given both Bolivia's natural resource endowments and its structural obstacles, foreign investment is expected primarily in mining and hydrocarbons. A substantial influx of private foreign capital could create the climate in which investment by Bolivians in all sectors of the economy, financed with capital repatriation, booms. This scenario actually happened in the 1960s, in the medium-term aftermath of the successful stabilization of December 1956.

Table 7

Fixed Investment, 1980-1988
(% of GDP in current Bolivianos)

	Private	Public	Total
1980	7.3	6.9	14.2
1981	4.5	9.5	14.0
1982	5.6	7.4	13.0
1983	3.3	8.4	11.7
1984	3.8	8.4	12.2
1985	2.7	8.1	10.8
1986	2.9	3.2	6.1
1987	2.8	3.1	5.9
1988*	2.5	3.2	5.7

Source: World Bank of Bolivia: Country Economic Memorandum, September 1989
* Estimated

5. Concluding Remarks

The Bolivian experience quite clearly shows that in the post-stabilization period following hyperinflation, the combination of heavy doctoring of the exchange rate, tight monetary policy and limits on the rate of growth of fiscal expenditures on non-traded goods and services, can indeed sustain price stability. Price stability obtained in this way is also more resilient that believed at first. Let us add that the strong political alliances supporting the program and the renewed access to foreign lending significantly contributed to the maintenance of stability.

While price stability is a fact, the recovery of the Bolivian economy still has a long way to go. Of all the obstacles, the low investment rates, especially those of the private sector, are the most worrisome for the medium-term outlook. It seems that one way that the pessimistic equilibrium, with low investment, can be broken is by actively attracting direct foreign investment into mining and hydrocarbons. These moves could then be followed by investment by Bolivians financed with repatriated capital.

Another key element for recovery is the formation of savings and the restoration of liquidity in the public sector. Fiscal equilibrium has proved more elusive a goal than originally believed. The maintenance of a remunerative exchange rate and the continuous alignment of public and other prices is essential, together with continuation of the ongoing tax reform, to

redress the situation. Privatization may give the needed big push toward a sustainable fiscal equilibrium. On the other hand, the maintenance of fiscal equilibrium indiscriminately slashing spending on social services is unsustainable in the medium-run.

A part of the persistence of the domestic inflation rate over the international level can be explained by the casual way of applying indexation to the exchange rate and the public prices. While substantial progress has been obtained in correcting the initial overvaluation, the question resides now on how stable is the satiation. There is also the additional problem that current activist exchange rare policy has increased undesirable dollarization.

The interest rate problem is almost as difficult to tackle as the fiscal weakness. It is also as urgent since a significant share of the instability in the banking system can be attributed to the high interest rates prevailing now. The recurrent banking crises could devastate macroeconomic stability.

References

Bernholz, Peter. 1988. "Hyperinflation and Currency Reform in Bolivia: Studied from a General Perspective". Journal of Institutional and Theoretical Economics (JITE) 144, (Tubingen), (December): 747-771

Bolivia, Ministry of Planning. 1989. Estrategia de Desarrollo Económico y Social, 1989-200. [Economic and Social Development Strategy, 1989-200]

Blanchard, Oliver Jean and Stanley Fischer. 1989. Lectures on Macroeconomics. Cambridge, MA: The MIT Press

Drazen, Allan and Elhanan Helpman. 1988. "Inflationary Consequences of Anticipated Macroeconomic Policies". Unpublished manuscript. Tel Aviv University

Dornbusch, Rudiger. 1988. "Note on Credibility and Stabilization". Cambridge, MA: NBER Working, Paper No. 2790

----------. 1989a. "Credibility, Debt and Unemployment: Ireland's Failed Stabilization". Economic Policy, 8, (April): 174-201

----------. 1989b. "Short Term Macroeconomic Policies for Stabilization and Growth". Unpublished manuscript. MIT. (July)

Helpman, Elhanan and Leonardo Leiderman. 1988. "Stabilization in High Inflation Countries: Analytical Foundations and Recent Experience". Carnegie-Rochester Series on Public Policy, 28: 9-84

Kiguel, Miguel A. and Nissan Liviatan. 1988. "Inflationary Rigidities and Orthodox Stabilization Policies: Lessons from Latin America". The World Bank Economic Review, 2, No. 3. (September): 273-298

Makinen, Gail E. 1988. "Inflation Stabilization in Bolivia: Comment", in M. Bruno, G. di Tella, R. Dornbusch and S. Fischer (eds). Inflation Stabilization: The Experience of Israel, Argentina, Brazil, Bolivia and Mexico. Cambridge, MA: MIT Press, pp. 347-352

Morales, Juan Antonio. 1988a. "Inflation Stabilization in Bolivia", in Inflation Stabilization: The Experience of Israel, Argentina, Brazil, Bolivia and Mexico. Cambridge, MA: MIT Press, pp. 307-360

----------. 1988b. "The End of the Bolivian Hyperinflation". Vierteljhares Berichte, 144: 385-402. Bonn

----------. 1989a. "The Post-Stabilization Problems in Bolivia". Universidad Católica Boliviana, Instituto de Investigaciones Socio-Económicas, DT 06/89 (July)

----------. 1989b. "Impacto de los Ajustes Estructurales en la Agricultura Campesina Boliviana". [The Impact of Structural Adjustments on the Bolivian Peasant Economy]. Unpublished manuscript. La Paz: Oficina de la Cooperación Técnica Suiza, COTESU (December). Available upon request from J.A. Morales

Pastor, Manuel Jr. 1988. "Bolivia: Hyperinflation, Stabilization and Beyond". unpublished manuscript. Occidental College. (November)

Sachs, Jeffrey. 1986. "The Bolivian Hyperinflation and Stabilization". Cambridge, MA: NBER Working Paper No. 2073

----------. 1987. "The Bolivian Hyperinflation and Stabilization". American Economic Review, 77, No. 2: 279-283

Sargent, Thomas and Wallace, Neil. 1981. "Some Unpleasant Monetarist Arithmetic". Federal Reserve Bank of Minneapolis, Quarterly Review