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**FINANCIAL REFORMS IN LATIN AMERICA: THE CASES OF
ARGENTINA, CHILE AND URUGUAY**

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0-THE MAIN LESSONS

0.1 INTRODUCTION

The three countries under study went through significant structural changes in the decade of the 1970's. In particular these changes involved the definitive (so far) liberalization of interest rates and exchange rate controls. The economies were initially opened to international trade both in goods and to capital flows; trade in goods was occasionally subject to additional restrictions in all of them. All three countries experienced significant inflows of foreign capital during the late 1970's that were suddenly reversed during the regional crisis of 1982.

The crisis of 1982 hit hard all three countries. In Argentina the crisis is yet to be resolved as the fall in per-capita GDP that started then has not yet been reversed. In 1989, per-capita GDP stayed 23% below the level reached in 1980. The country stopped servicing her foreign debt, melted the domestic one and experienced several hyperinflationary outbursts since 1989.

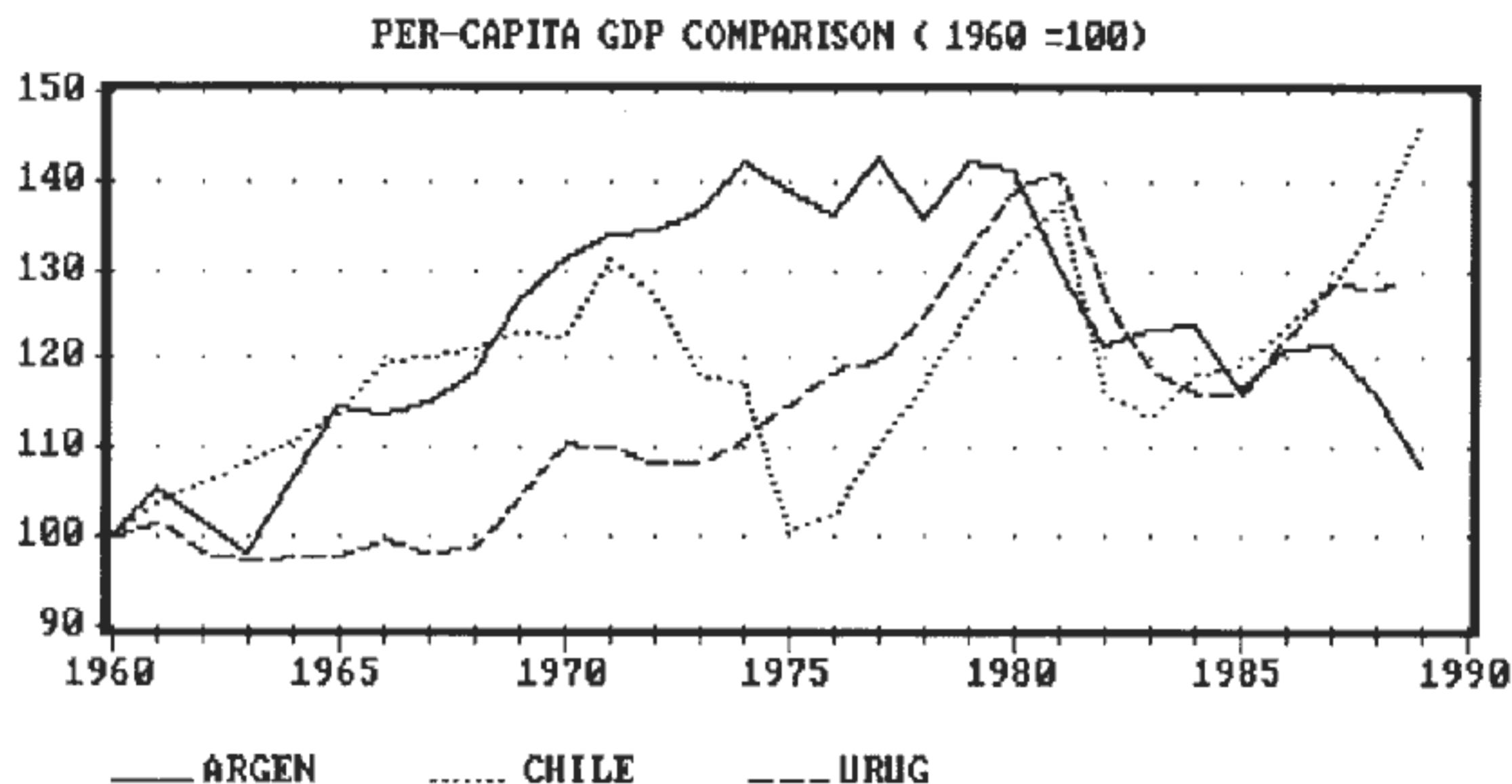
Uruguay, after going through a close to 20% fall in per-capita GDP is starting to recover, although the level of economic activity is far from the one reached in the boom year of 1981. Contrary to Argentina, the sounder fiscal policies being followed did not force the country into hyperinflation or to suspending the service on the external debt.

By far, Chile has been the economy that faced best the 1982 crisis. A strong economic recovery initiated in 1985, after a fall of 16% respect of the 1981 level, allowed per-capita GDP to be already 6% above the 1980 level. Further real growth is still expected for 1990.

Figure 1 shows the per-capita GDP of the three countries with base 1960=100. The magnitude of the 1982 crisis can be easily appreciated as well as the fact that both Chile and Uruguay are on the way out of it whereas Argentina was still experiencing negative real growth as late as 1989 (seven years after the crisis).

There are several reasons attesting for the differential performance of the three countries, not only for the whole period following the financial liberalization but also for the shorter period after the regional crisis of 1982. Those reasons are in the basic structural adjustment measures taken during the liberalization episodes as well as to the short run policies that were implemented, particularly with regards to the financial sector. Foremost among the factors differentiating the good from the bad performances was the degree of achievement of fiscal balance.

FIGURE 1



0.2 INVESTMENT AND THE CAPITAL INFLOWS OF THE 70'S

The GDP per-capita performance is followed quite closely by another indicator: gross investment as a fraction of GDP (shown in Figure 2

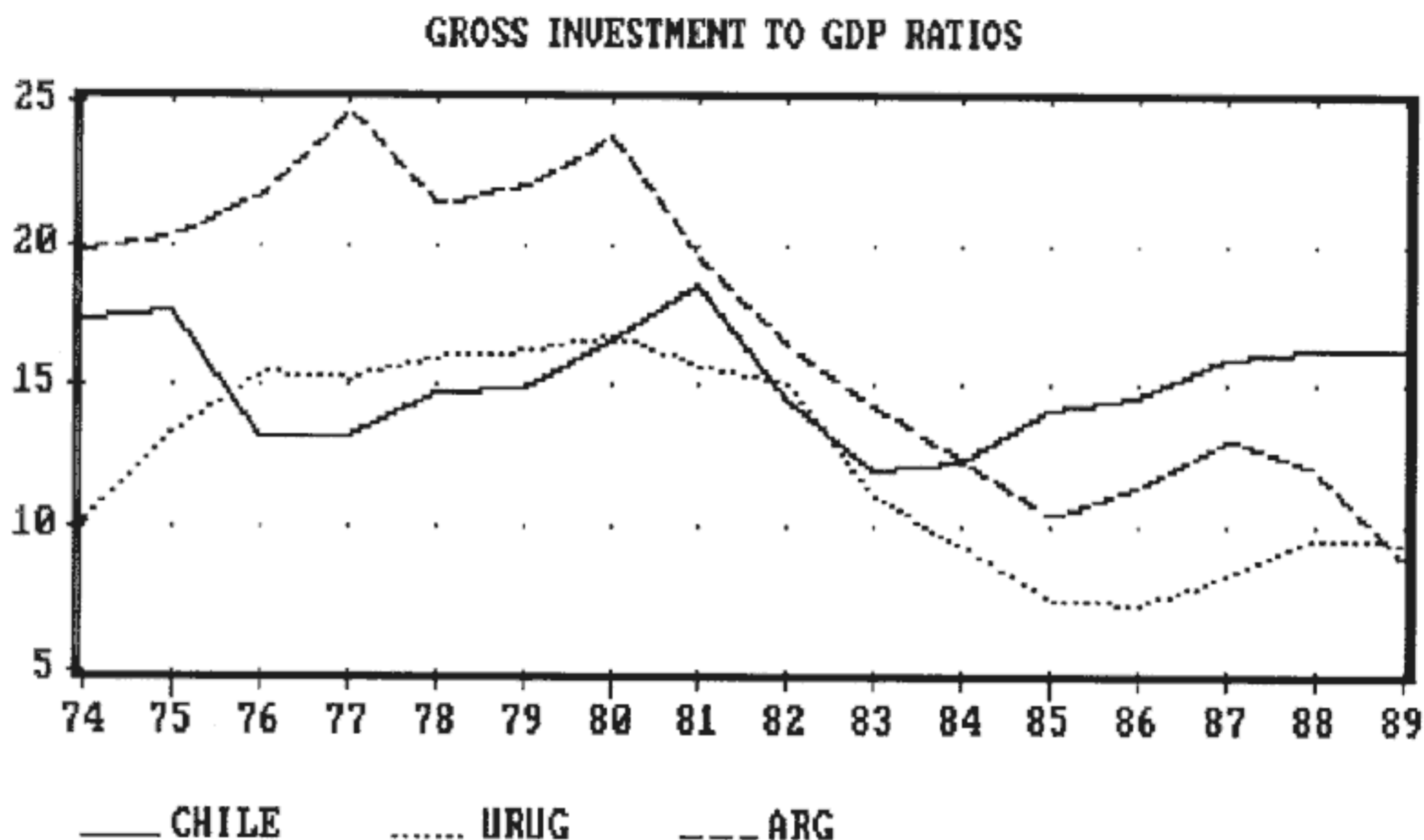
In all three countries investment peaked either in 1980 or 1981, mostly thanks to the additional resources provided by the capital inflows. In the case of Argentina, capital outflows started already in late 1980 and investment peaks in that same year.

The capital inflows of the late 70's helped boost investment in Chile from about 13% of GDP in 1976 to 18% in 1981. Following the 1982 reversal of capital inflows, investment in Chile falls to 12% of GDP and thereafter quickly recovers to the historical

average of 17% and still is growing.

The performance of investment is quite different for Argentina and Uruguay as compared with Chile. In both countries investment grew comparatively little in response to the capital inflows of the 70's. After the crisis in 1982, investment in both countries started a steep fall. In Argentina the gross investment ratio falls from 24% in 1980 to only 9% in 1989. In Uruguay the ratio falls from 17% in 1981 to also 9% in 1989. While in Uruguay the time trend of the investment ratio shows some timid signs of reversing, this is not the case for Argentina for which unofficial figures indicate that the investment ratio may have taken an additional fall in 1990.

FIGURE 2



The basic differential performance with respect to the capital inflows is due basically to the use given to the amounts borrowed: in Chile the borrowings were conducted mostly by the private sector and the debt so created still remains in their hands and being served. The debt was used to finance trade deficits that in turn contributed resources for the increased investment. In Uruguay the debt was mostly due to government borrowing and went to finance fiscal deficits. After the crisis the government took charge of most of the remaining private external debt. The government, however, has continued the regular service of the external debt.

Argentina is a different story. There is no comparison between the capital inflows computed for balance of payments purposes and the reported increases in the country's external debt. The external debt of Argentina did not finance a resource transfer from abroad (for either consumption or investment) but rather just financed capital outflows. Most of the gross external debt of Argentina has as a counterpart holdings of foreign assets by Argentines. The problem is that after 1982 the government assumed all of the private external debt at practically ridiculous prices. In consequence the government ended up with the external debt and the private sector with the foreign assets. This factor contributed significantly to the financial bankruptcy of the government that was experienced in the late 1980's.

We conclude that in the cases of Chile and Uruguay there was a foreign resource transfer as a counterpart of the external debt (more for Chile than for Uruguay where there was also some capital outflows), whereas in Argentina the counterpart was the acquisition by the private sector of foreign assets while the debt was transferred to the government.

Independently from the use given to the capital inflows up to 1982, all countries feared equally at the time of the adjustment. In all cases we observe a significant reversal in the foreign resource transfer (measured by the Trade Deficit). Comparing 1980, the last boom year before the crisis for the three countries with the average post-crisis for 1983-87 we see that the Trade Surplus improved by 11.8 points of GDP, Chile improved this ratio by 6.7 points and Uruguay by 10.2 points (Table 1).

TABLE 1

GROSS INVESTMENT AND TRADE SURPLUS AS RATIOS TO GDP

	ARGENTINA		CHILE		URUGUAY	
	TS	INV	TS	INV	TS	INV
1980	-6.9	23.7	-4.2	21.0	-6.0	16.7
1983/87	4.9	12.3	2.5	13.7	4.2	8.7
Change	+11.8	-11.4	+6.7	-7.3	+10.2	-8.0

It is clear from the Table 1 that the burden of the generation of a Trade Balance Surplus since 1982, resulting from the reversal of capital inflows plus the need to pay for the service of the external debt, fell mostly on Investment in all three countries, from where we conclude there was no change in the domestic savings ratio, particularly in Argentina and Chile where the increase in the Trade Surplus was almost exactly matched by the fall in the investment ratio. In the case of Uruguay the increase in the Trade Surplus exceeded slightly the fall in investment indicating a small increase in the savings ratio.

0.3 PUBLIC FINANCES AND ECONOMIC PERFORMANCE

The achievement of fiscal balance has been a foremost priority in Chile since 1974 and continues being so. The new Central Bank Charter explicitly forbids any direct or indirect financing of the Treasury by the Central Bank. In fact, since 1990 the Treasury will start making payments to the Central Bank on account of a Treasury Bond that was given to the Bank in order to capitalize it after the substantial losses due to the salvage operation of 1983-85. The Central Government has achieved a current account surplus since 1986 and that overall balance is just equilibrated as of 1988.

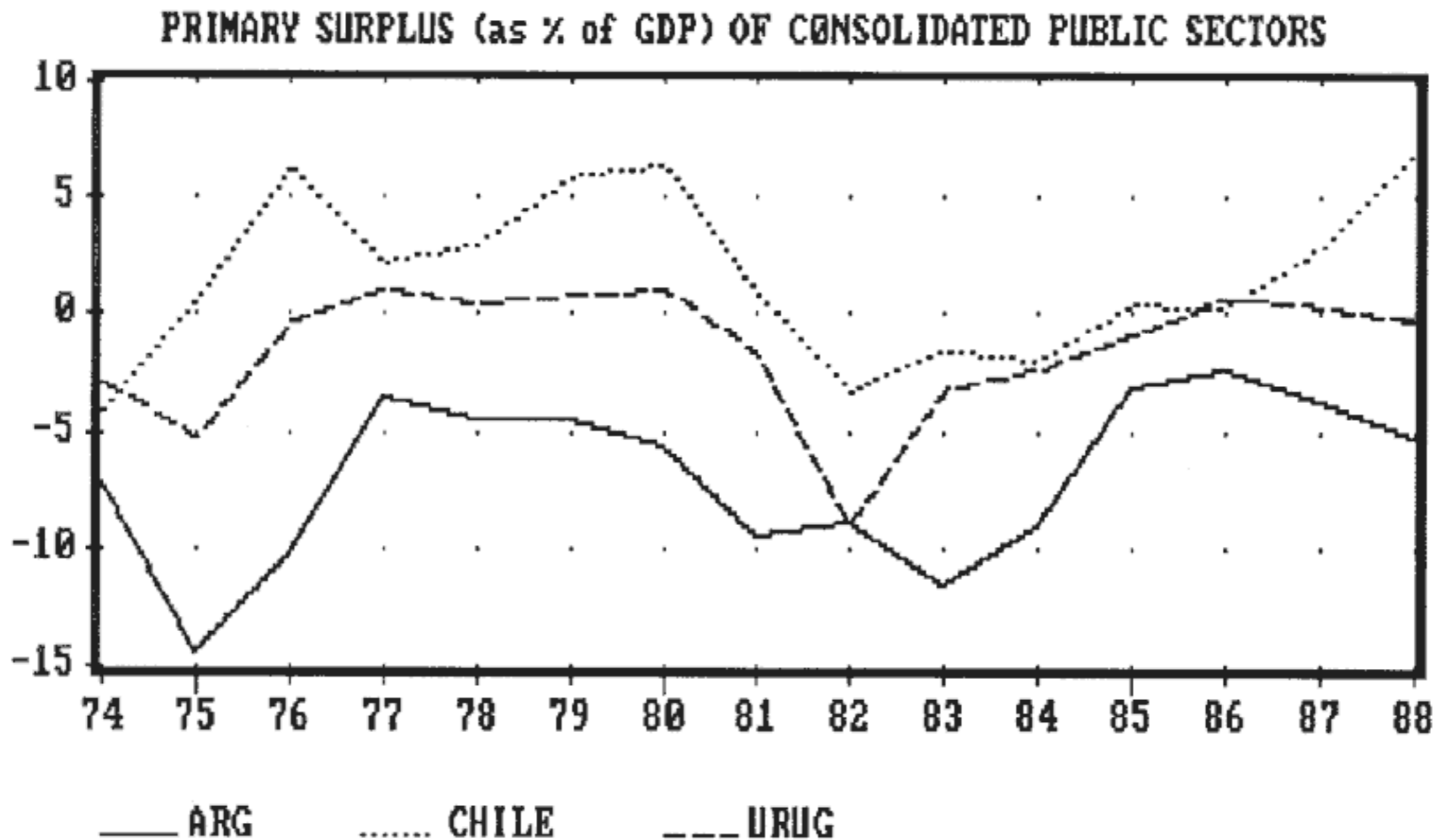
In the case of Uruguay, fiscal performance has not been as good as Chile's but nonetheless there has been some degree of fiscal prudence that resulted in the country not having inflation rates in excess of 80% since mid-1970's. The Treasury normally does not seek Central Bank financing directly but the Bank does accommodate the Treasury's borrowing operations in the financial market. Nevertheless, as Table III.4 shows, most of the deficit in Uruguay is located at the Central Bank directly as the parafiscal deficit derived from the many subsidy losses as well as the service of its own debt.

As it has been also the case with Chile, the government of Uruguay has good access to the local capital market and borrows at international rates, both in local currency and in dollars. Dollar borrowings is done with Treasury Bonds and Bills that pay just LIBO rate and have a very good market, even among Argentines avid to earn interest on their dollar holdings while keeping their savings close by.

Regarding public finances, Argentina differs substantially from her two neighbors. **The government has run, at least since 1960 and up to 1989, primary deficits in every year.** Those deficits were financed either by printing money or issuing external and internal debt. This behavior resulted in a systematic tendency for inflation and tight capital markets. The increased pressure of the domestic government borrowings become larger after the economy was closed to capital inflows in 1982. As the government tried to increase its borrowing to finance the primary deficits and the interest on the outstanding stock of debt, real interest rates rose far above the marginal productivity of investment or the growth rate of the economy.

Figure 3 shows the Primary Surplus as a fraction of GDP for the Consolidated Non-Financial Public Sectors of the three countries. **In every single year since 1975 and up to 1988 we have a sequential ordering where Chile has a better fiscal result than Uruguay who in turn has a better result than Argentina.** While Chile has had mostly primary surpluses, Uruguay has oscillated between surpluses and deficits while Argentina has systematically had primary deficits.

FIGURE 3



The ordering regarding fiscal performance is exactly matched with the growth in GDP per capita and (inverrsely) with the average inflation rate. Table 2 shows the average indicators of Primary Surplus, Inflation and GDP per-capita growth during the period 1976-88. Chile, with a primary surplus has the highest growth rate and the lowest inflation rate of the post liberalization period. Argentina, with the highest primary deficit has also the highest inflation rate and the lowest growth rate (negative for the 12 year average). Uruguay with with a small primary deficit placed between the surplus of Chile and the big deficit of Argentina, also has the inflation and growth rates in between those of the two partners.

TABLE 2

AVERAGE INDICATORS FOR 1976-1988

	CHILE	URUGUAY	ARGENTINA
PRIMARY FISCAL SURPLUS (as % of GDP)	2.07%	-1.12%	-6.28%
GDP per capita (compound annual rate)	2.39%	0.6%	-1.32%
INFLATION (compound annual rate)	27.3%	59.6%	217.3%

The evidence from Table 3 is even more suggestive when we consider that during the period of comparison all three countries had already liberalized their financial markets, had opened their economies to capital inflows and had made attempts at opening their economies to trade. Since the structural adjustments that were made were roughly of the same tenor, we may conclude that the differences in economic performance regarding growth and inflation were most affected by that factor in which the three countries differed the most: fiscal balance. Fiscal imbalance has costs that go beyond the costs of financing: sustained fiscal imbalance decreases the credibility in in the ongoing economic policies, including the measures of structural adjustment that could be taken.

In Argentina, the fiscal imbalance has been blamed for the overvaluation of the currency at the time that the economy was opened to trade in 1979-80. The market expected the adjustment plan would fail because of the overvaluation and in consequence few resources were invested in the export sector. At the same time, the firms that did not have a comparative advantage with the open economy resorted to indebtedness rather than closing under the assumption the policies will be reverted as soon as the current Minister left. As it turns out, all those expectations were correct. The peso overvaluation due to the continuing deficit forced the Minister out and the economy was closed again afterwards: in 1990 Argentina imported less than 4% of GDP.

0.4 PUBLIC DEBT AND THE FINANCIAL MARKETS

Following the financial liberalization of 1976, the government of Argentina financed its deficits externally up to 1982. Since then it had to resort to internal financing travelling the risky and narrow road between high real interest rates and hyperinflation. As the government debt continued growing due to the combination of primary deficits and positive real interest rates the government resorted more often to surprise meltdowns of its debt through surprise devaluations. Internal debt that was at \$18 billion dollars as of March 1989 (22% of GDP) was melted down to \$7.2 billion dollars after the May-June hyperinflation. The high real rate of interest required by the market to roll-over the remaining stock induced the government, in January 1990, to mandatorily exchange the remaining debt for a 10 year government bond paying LIBO rate (some additional melt down was done because the exchange rate used to do the domestic debt conversion was higher than the market rate; the new bond also started quoting at less than 20% of par in the market; since then its parity has risen to 66%).

It is fair to say that the first favored by the financial liberalization in Argentina was the government, who was the first one to take advantage of the additional savings generated in the financial sector. Financial liberalization did not favor investment in Argentina as the government used the resources to finance its primary deficits. Investment fell from 23.7% of GDP in 1980 to only 9% in 1988 as a consequence of high interest rates and political and institutional instability.

The debacle of Argentina is a combination of a high rate of government borrowing coupled with instability in the financial markets, mostly generated by the same government in the attempts to secure a market for its paper.

Chile and Uruguay also resorted to debt financing although in much more reasonable amounts and in the context of much stable financial markets. The placing of government debt was facilitated in Chile by the rapid monetization of the economy and the increased demand for paper coming from the newly allowed private retirement funds. The government of Uruguay has been quite successful in placing dollar denominated paper, principally among residents and also Argentines. The government of Uruguay has had a long tradition of servicing its debts. It has also resorted to surprise devaluations (mostly in 1982) and this decreased the confidence in all kinds of peso denominated paper but not in those denominated in dollars.

Contrary to Argentina where the government abused in any conceivable way the financial markets in order to capture additional funds, Chile and Uruguay followed very prudent attitudes in this respect. The Central Bank of Chile provided a good deal of stability in the markets since 1983 by issuing paper at a target real interest rate that on average was 2.2% annual. Since they also issued paper at a fixed nominal interest rate, this provided the market with an indication of the government's expected rate of inflation. Never the government abused its power to affect the market's expectations of inflation, a fact that added credibility to the financial policy of the monetary authorities. Of course, this policy was facilitated by the fact that the Treasury did not need any financing from the Central Bank and the fact that the targeted real interest rate was never set at unreasonable levels.

Much of the need for internal debt financing in Chile came from the salvage operation run by the Central Bank (on behalf of the Treasury) during 1983-85. During this period the Central Bank exchanged about \$3 billion (about 10% of GDP) in non-performing assets of commercial banks and replaced them with Central Bank paper paying competitive interest. Another source of internal debt creation was the result of the significant external debt repurchases instrumented by the Central Bank who provided the financing for the local debtors by issuing its own paper.

As of 1988 the Central Bank of Chile had issued \$7 billion dollars in interest earning paper, an amount equal to 23% of GDP and equal in size to the wide monetary aggregate M3 (currency plus demand and interest earning deposits). Data for July 1990 show the financial system holding Central Bank paper for a total amount of \$6.4 billion dollars and Treasury paper for a mere \$40 million which clearly suggests that up to then the Central Bank carried most of the internal public debt. This situation must change after the new Charter was approved in early 1990 since the Central Bank is no longer allowed to lend to the Treasury, either directly or indirectly.

The government in Uruguay has also tapped the local capital market for funds. As of 1989 the stock of outstanding Treasury Bills and Bonds, stood at \$1797 million dollars. To this we may add \$682 million dollars in Central Bank internal debt (bills and deposits of the Banco Republica) to get a total of \$2480 million dollars, equivalent to 30% of GDP. Except for \$424 million of debt of the Central Bank denominated in pesos, all the rest of the Uruguayan internal debt is denominated in dollars. This is just one more manifestation of the everpresent dollarization phenomenon to which we will refer later.

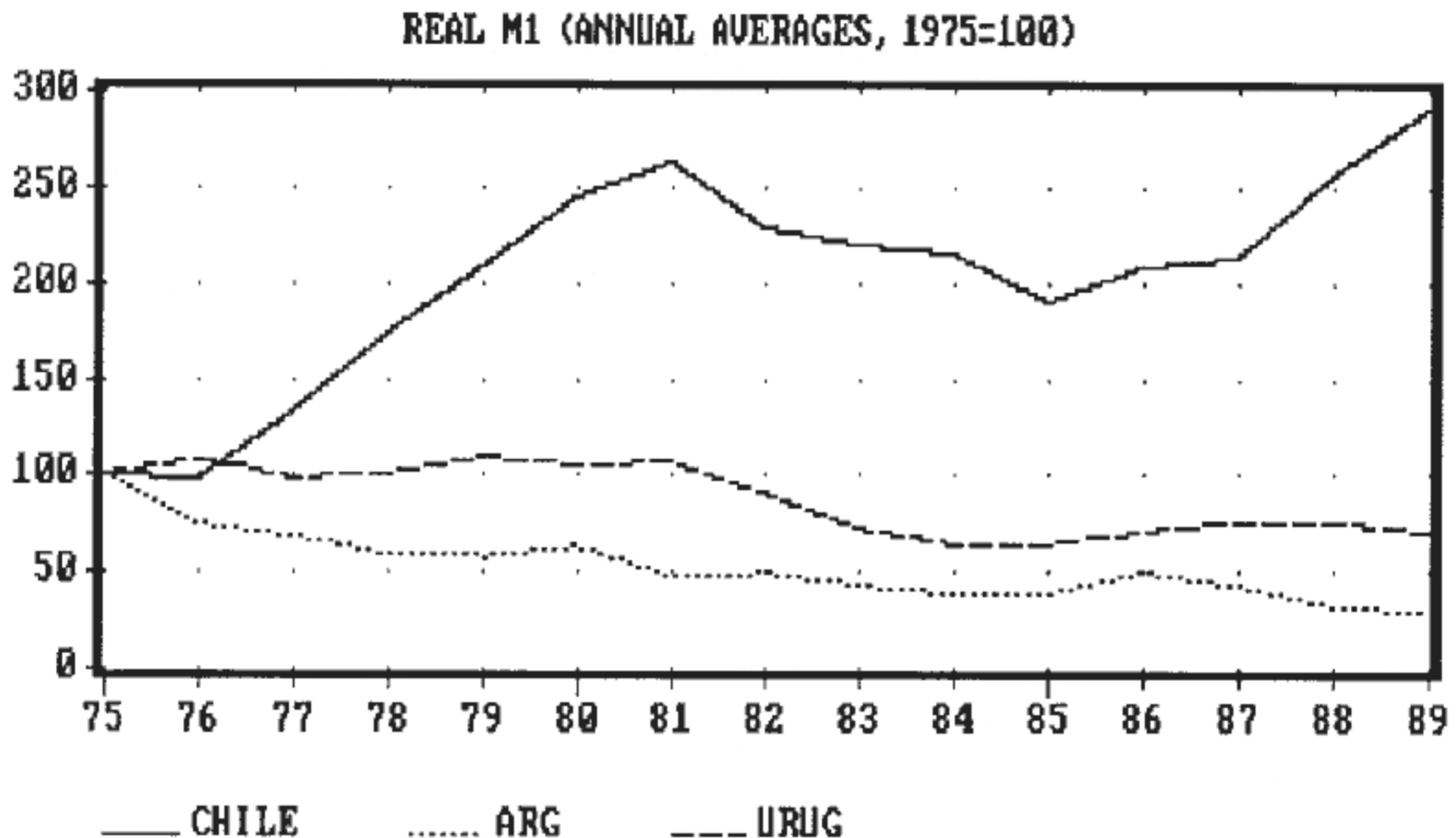
To summarize, we may say that the level of internal public debt as a fraction of GDP oscillated around the 20-30% band for the three countries as of the end of the decade of the 80's. The country with the worst functioning capital market, Argentina, reached at the maximum a level of internal public debt of 22% of GDP (in March 1990) just when the stabilization plan exploded and hyperinflation started. On the other hand, small but highly dollarized Uruguay has kept the higher ratio of 30% for internal public debt (with most of it denominated in dollars). In Chile, mostly through instruments indexed to the price level, the Central Bank managed a stock of internal public debt of the order of 23% of GDP as of 1988.

We do find a suggestive correlation between the inability of Argentina to attain a high level of internal public debt (contrary to the wishes of the government) and the comparatively higher level of debt reached in Uruguay. We feel this phenomenon may have to do with two facts: first is the degree of monetization in the economy as a measure of the ability of the market to absorb the public debt: Uruguay, with a much stable financial market has a much higher degree of monetization than Argentina when dollar deposits are included. Second, much of the internal public debt of Uruguay has been dollar denominated and therefore not subject to devaluatory meltdowns. In Argentina all of the internal public debt has been denominated in the local currency. An attempt to issue Central Bank bills denominated in dollars in 1989 ended up in the suspension of the service of the already issued 90 days paper after only 60 days of their being sold to the public!.

0.5 MONETIZATION, INDEXATION AND DOLLARIZATION

The most significant difference regarding the behavior of financial variables between the three countries is with respect to the degree of monetization in their respective domestic currencies. During the period 1975-89 Chile almost tripled real M1 (currency plus demand deposits, non-interest earning money) whereas Argentina reduced real M1 from 100 to just 28 during the same period. Uruguay also experienced a reduction in real M1 of 30% during the same 14 year period.

FIGURE 4



In explaining the different performance for the real money demands there are several factors to take into consideration. First of all we have the differential behavior of real GDP during the period that may have affected money demand. In Chile per-capita GDP rose by 45% during the period under consideration (1975-89) while in Argentina per-capita GDP fell by 21%. We do have, however, a differential growth factor of about 10 to 1 between M1 real in Chile and Argentina that cannot be explained by growth alone (population growth also affects real M1 but roughly speaking both countries experienced about the same population increase).

Inflation is the most obvious factor explaining the different rates of monetization between Chile and Argentina. While inflation at a compounded annual rate in Chile was 45%, it was at 220% for Argentina!. Not only was the inflation rate in Argentina higher but it also was more variable: during the 14 year period, the coefficient of variation of inflation was % for Chile and % for Argentina.

Other facts that may explain the different behavior for monetization is the prevalence of financial indexation in Chile versus the increasing rate of dollarization and frequent meltdowns in Argentina. Indexation coupled with sound fiscal behavior provided a stable frame within which real growth and monetization could take place in Chile. The fiscal irresponsiveness in Argentina forced the governments to consider the financial system, not as a provider of useful services, but as a base for taxation. Not only did the government tax the liabilities of the financial system with the inflation tax, but it also took for itself most of the credit availability that the system could provide. This was done through the use of very high reserve requirements or the placing of Central Bank paper in the commercial banks. **In essence, in Argentina the financial system provided very expensive monetary services (the inflation tax was high) and little or no credit intermediation services (as most credit went to the government).**

The end result of the frequent use of surprise devaluations as a way to provide resources to the government was that Argentina become informally highly dollarized economy. Holdings of dollars by Argentines have been estimated at above \$30 billion, an amount several times that of their holdings of Austral denominated assets. Dollarization has been informal to the extent that the monetary authorities never intended to provide a legal frame where dollar deposits could equally compete with the Austral. If the dollar were to displace the Austral (or rather whatever was left of it) there would be no longer a base for the inflation tax.

A timid experiment was made in Argentina the late 80's to allow banks to capture dollar interest earning deposits. The banks had to redeposit those dollars at the Central Bank. This measure can be interpreted as a last effort to produce dollars for the Central Bank's reserves rather than an attempt to provide other alternatives to the financial market. The convertibility of those deposits was suspended during the hyperinflation and since then most have been returned to the public. Since 1990, the new political authorities allowed for interest earning dollar deposits at the bank's own risk and cost. Since then those deposits are booming and already represent one half of the amount of Austral M2.

The new Convertibility Law in Argentina, in an attempt to restore credit in the financial system, allows for financial operations to be made and settled in dollars as if it were the legal tender. This capability is not extended to other type of contracts such as wages, rents, etc. Here again, we see dollarization used only as a last alternative in order to solve an otherwise unsolvable problem. In Argentina credit for longer than 7 days had been inexistent since 1982. Allowing for credit to be stipulated in dollars under the full protection of the Law was seen as a way to restore at least some of the credit potential of the country. Dollar denominated demand deposits were never allowed in Argentina and a tax of 0.7% is placed on the gross value of any Austral denominated check issued. Not surprisingly, most important transactions in the country are settled with cash dollars (since on top of that there is no credit, buying a property implies actually moving hundreds of thousands of dollar in dollar bills to the place designated by the seller).

Uruguay is a different story. There authorities have promoted dollarization (or at least have not put obstacles to it) since the early 70's. Since 1974 the currency has been fully convertible into foreign exchange and there have been no restriction whatsoever on capital flows. A 1976 Law allowed for all types of contracts to be stipulated and settled in whatever specie the partners wanted. Dollar denominated demand and time deposits are legally allowed and an offshore market has also been instrumented serving mostly the Argentines. The end result has been a stagnant real M1 since 1984, a fall in the amount of real peso interest earning deposits in the system and a raising real value of dollar denominated time and demand deposits held by residents. Total real liquidity of residents (real value of peso plus dollar holdings) has tripled in the period 74-89 (Figure III.6).

In synthesis, Uruguay continued taxing the peso in order to finance the parafiscal deficit of the Central Bank, but allowed for other sources of liquidity to develop through **legal dollarization**. While this probably reduced the base for the peso inflation tax, it allowed for the survival of the financial market and some healthy degree of monetization. Chile did not promote dollarization nor did impose serious obstacles to it (dollar accounts are legal in Chile). Rather the monetary authorities competed with the dollar by instrumenting a sophisticated system of indexation of peso financial assets that actually displaced the dollar as the alternative in the Chilean's portfolios. Argentina tried to stick to a financial system based on non-indexed pesos in order to collect the inflation tax without competition and the end result was the virtual destruction of the financial system.

0.6 THE PARAFISCAL DEFICITS

It has become customary in high inflation countries for the monetary authorities to first seek for apparently non-inflationary new ways of financing the fiscal deficits by raising the level of reserve requirements on banks. This measure raises the demand for Base money and therefore provides for a temporary way of non-inflationary financing. However, the intermediation costs of banks are now higher and in consequence they are forced to raise the spread between the borrowing and lending rates. The fiscal deficit is therefore initially financed with the equivalent of a tax on financial intermediation, thanks to the higher reserve requirements. However, the higher intermediation costs tend to generate pressures that eventually end with the Central Bank remunerating all or part of the Reserve Requirements. At this stage we cannot distinguish between a remunerated Reserve Requirement and any other type of remunerated public debt. There are however two distinguishing features:

(i) Contrary to Public Debt, Reserve Requirements are compulsory investments and,

(ii) In the event of a fall in demand for bank deposits (a currency run) the Central Bank is forced to print notes to recover those forced investments at par value and therefore to feed the run.

In some instances, Central Banks resort to issue voluntary interest earning debt that is placed mostly with the Commercial Banks. At other times, forced investments, not linked to deposits levels, are imposed on Commercial Banks. Either voluntary or mandatory, proportional or independent from deposit levels, these investments are to be considered as Central Bank debt and not as standard Monetary Base for the purposes of computing the revenue from money creation. They can be viewed as potential sources of money creation if the Central Bank is forced to print money (base) in order to pay for them. The fact is, however, that usually the interest on the interest earning liabilities of the Central Banks are paid by rolling over those liabilities.

In both Argentina and Uruguay, at times, most of the local currency deposits of the public at commercial banks had as counterpart Central Bank debt that was served by issuing more of such debt. To the extent that there is no real assets counterpart to these deposits, the system is technically bankrupt but able to be kept alive if all depositors are willing to roll-over the principal plus interest on their deposits. Such a system is highly unstable because it is bound to collapse in the face of even minor deposits withdrawals. When that happens the Central Bank is forced to rescue its debt with newly printed money and the up to then repressed inflation takes place. Recent measures taken in 1990 in Argentina and Brazil regarding the forced refinancing of banks deposits had the aim of breaking this mechanism. The break of confidence that this forced meltdowns or debt exchanges produce, however, are also likely to severely restrict the restoration of normal functioning in the capital markets.

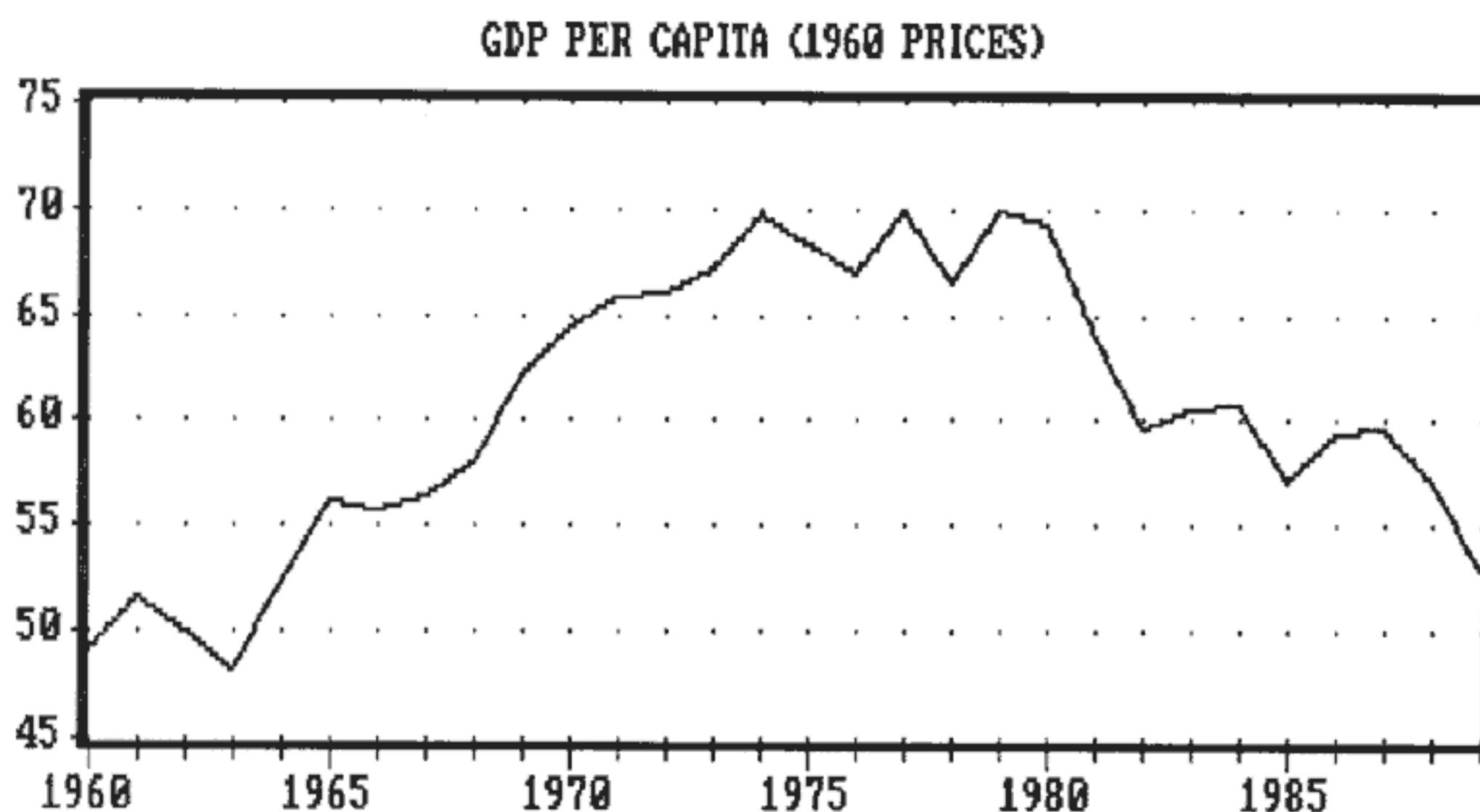
Primary deficits of the Treasury are at the root of the parafiscal deficit problem. Financing those deficits forces the-Central Bank to get into debt and then servicing the interest on that debt adds to the gross financing needs. However, the "parafiscal" deficit is not the source of the inflation but the consequence of it. If the parafiscal deficit is eliminated thanks to a debt meltdown, the continuing primary deficits will start creating another parafiscal deficit very soon. The structural solution to the problem requires two steps:(i) produce a sustainable primary surplus through serious structural adjustment in the public sector and (ii) having done the first step, refinance the outstanding public debt"at the expense of the Treasury with the proceeds generated by the fiscal adjustment. We also recommend that Central Banks do not be allowed to get in debt on behalf of the Treasury as this subtracts confidence in the stability of the currency and of the financial system.

I-ARGENTINA

I.1 MACROECONOMIC DEVELOPMENTS

Argentina has had a highly negative economic performance in recent decades, particularly during the 1980's. The 1990 real per-capita GDP stays at a level similar to that of the early 1960's. Per-capita GDP reached a historical high level in 1974 and has never again been able to surpass this level in spite of reaching it again in 1977 and 1979. In 1980 GDP per capita started a sharp declining trend that so far has resulted in an accumulated fall of 23.6% in the eleven year period 1979-90. During the same period, the price level increased by a factor of 48.5 million, equivalent to an annual compound rate of inflation of 400%.

FIGURE I.1



The financial reform of 1977 freed interest rates and allowed for competition among financial institutions under the protection of a highly generous deposits insurance system. Exchange rate controls were lifted and the economy was opened to capital movements. At this point the country starts accumulating a substantial foreign debt that does not have the counterpart of Current Account deficits: the new gross debt, therefore, is used to finance capital outflows. Only in early 1979 measures are taken to gradually open up the Trade Account by removing quantity restrictions on imports and announcing a gradual scheme of tariff reductions.

The substantial capital inflows coupled with the difficulty to import resulted in a significant fall in the real exchange rate as it can be appreciated in Figure I.2. As a result of the opening to international trade, imports boomed in 1980, helped by the already depressed real exchange rate, as shown in Figure I.3. By 1981 the real exchange rate was at an historical low level, imports were at the historical high and two of the major private banks had already collapsed in early 1980 (due to irresponsible management and poor Central Bank supervision) starting a bank run and doubts about the continuity of the ongoing economic policy. Since mid-1980 currency runs were at the order of the day.

In March 1981, the new economic authorities tried to maintain some continuity with the previous policies but quickly fell into a series of macrodevaluations and reintroduced measures to close the economy again. In 1982 the government adopted measures that in fact implied taking charge of most of the outstanding private external debt and also introduced controls on interest rates. This set of measures initiated a long period of 2 digits monthly inflation rates that, except for the intermission of the Austral Plan in 1985-86, culminated with the hyperinflation of 1989.

Figure I.2

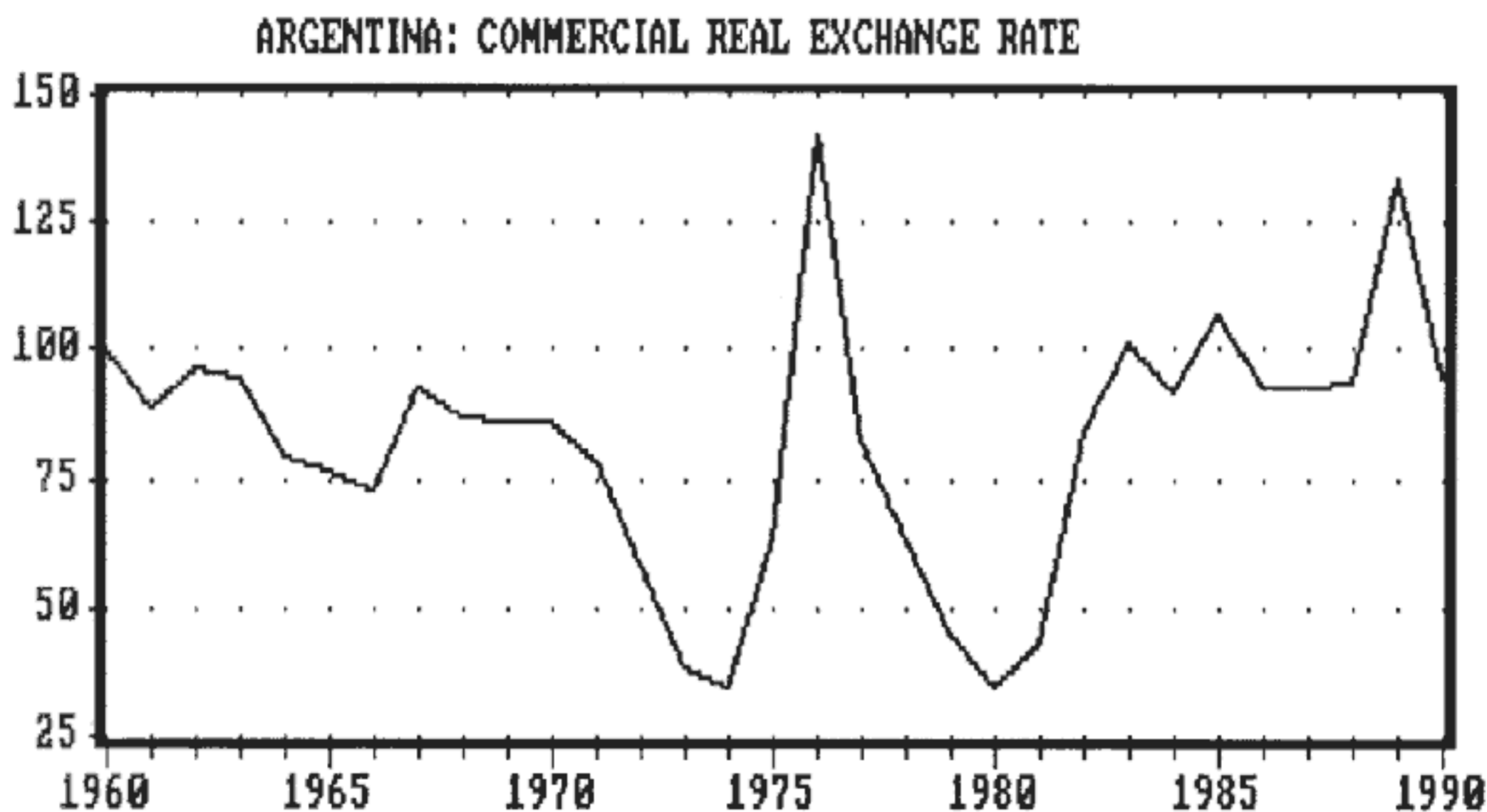
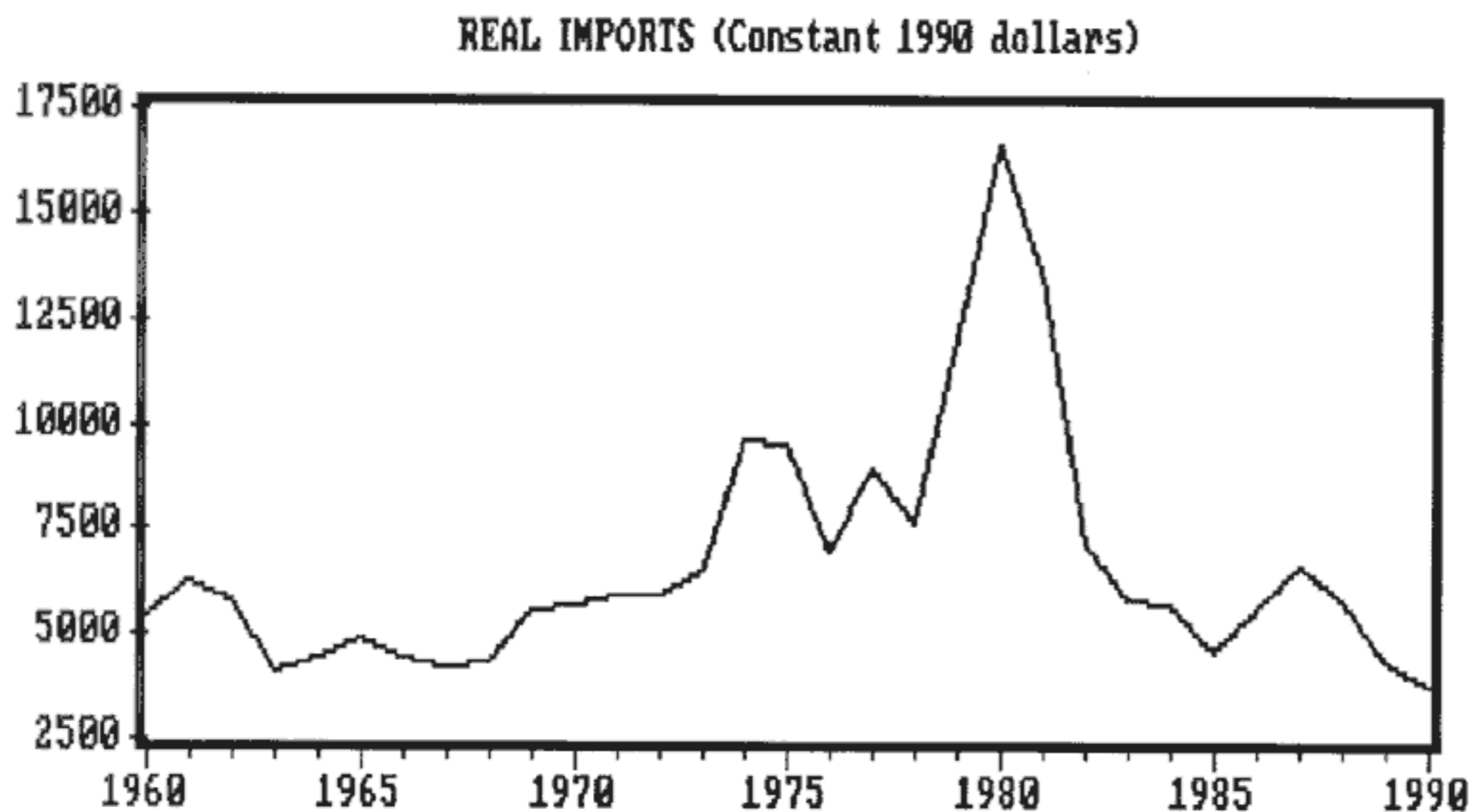


Figure I.3

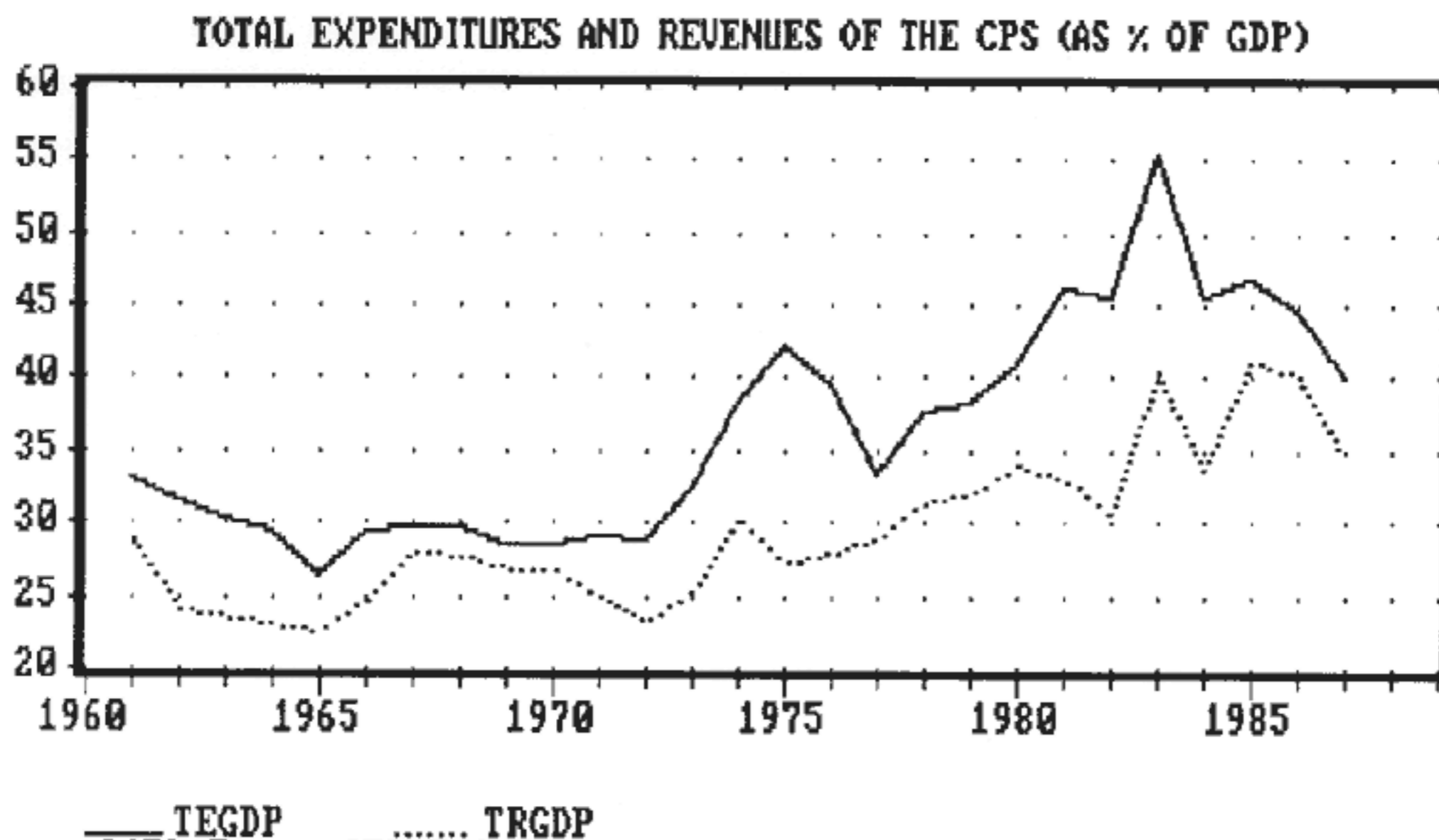


The failure of the 1977-81 experience was just one more result of the inability of Argentines to deal with the structural and institutional disadjustments in their government sector.

Government has a very significant role in Argentine economic life. It taxes, spends, produces a wide variety of goods and services, regulates financial markets and supplies financial services, has systematically resorted to incomes policies and regulated foreign trade. While the regulatory aspects of government action defy any possible quantitative measure, we can get a feeling about the size of government in economic activity by looking at the relative participation of government spending and taxation in GDP.

Figure I.4 shows the share in GDP of revenues and expenditures of the Consolidated Non-Financial Public Sector (CPS). It follows from there that government spending has systematically tended to grow faster than GDP until the final crisis of the Argentine economy started to develop around 1982. Since then government spending has started to fall, more as a consequence of a resource constraint than as a consequence of a deliberate political action. Notice that in spite of a practically stagnant economy, the share of government spending in GDP doubled between the mid-1960's and 1984.

FIGURE I.4



The fall in the relative size of government spending, however, came too late to avoid a crisis that was already well into the working and that brought the country into a state of hyperinflation in 1989, when the inflation rate approached 5000% and GDP fell by about 7%. The inflation rate in Argentina defies being graphed because of the significant levels reached by this variable in the late 1980's.

The monthly values of the rate of inflation in the CPI are shown in Table I.1. It is clear that inflation has been an ever present phenomenon in recent decades and that it has followed an exploding path, of which the hyperinflation of 1989 does not necessarily appear to be the end of the story. In fact, after the peak of 195% monthly inflation rate in July 1989, inflation went back to the one-digit monthly level until December 1989. Then a new hyperinflation started, reaching a peak of 95% in March 1990 and apparently ending in April 1990 with a monthly rate of "only" 11.5%. This last time the inflationary explosion was contained at the cost of the forced conversion of all interest earning deposits in the financial system into a 10 year dollar denominated government bond. The damages done to the capital market by this forced conversion are still to be assessed.

TABLE I.1
MONTHLY INFLATION RATES IN THE ARGENTINE CPI

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
JAN	11.9	16.0	12.5	25.1	3.0	7.6	9.1	8.9	79.2	6.0
FEB	5.3	13.0	17.0	20.7	1.7	6.5	10.4	9.6	61.6	27.0
MAR	4.7	11.3	20.3	26.5	4.6	8.2	14.7	17.0	95.5	11.0
APR	4.2	10.3	18.5	29.5	4.7	3.4	17.2	33.4	11.4	5.4
MAY	3.1	9.1	17.1	25.1	4.0	4.2	15.7	78.5	13.6	5.0
JUN	7.9	15.8	17.9	30.5	4.5	8.0	18.0	114.5	13.9	
JUL	16.3	12.5	18.3	6.2	6.8	10.1	25.6	196.6	10.8	
AUG	14.7	17.2	22.8	3.1	8.8	13.7	27.6	37.9	15.3	
SET	17.1	21.4	27.5	2.0	7.2	11.7	11.7	9.4	15.7	
OCT	12.7	17.0	19.3	1.9	6.1	19.5	9.0	5.6	7.7	
NOV	11.3	19.2	15.0	2.4	5.3	10.3	5.7	6.5	6.2	
DEC	10.6	17.7	19.7	3.2	4.7	3.4	6.8	40.1	4.7	

=====
 In March 1991, a new stabilization plan was launched based on the setting of the exchange rate by Law and the restriction, also by Law, that the Central Bank should keep a 100% backing of international reserves on the Monetary Base. As of June 1991, however, the real value of M2 stands at only 55% of the value it had on December 1989, the month prior to the forced conversion of time deposits. The Convertibility Plan, as it is called, also instrumented measures to eliminate import QR's and lowered duties at a time when there is also a clear overvaluation of the currency. While the main policy instruments seem to be similar to those of the failed experience of 1977-80 (pre-fixed exchange rate and open economy with financial freedom) there is a crucial difference: this time the fiscal deficit is under much more control and there are no capital inflows to pump up aggregate demand and boost inflation (however, there is the possibility of argentines bringing back their foreign exchange funds and generating the same effect as the foreign lending of the 70's).

Deep at the hart of the financial problems of Argentina is the fact that the government has run a primary deficit (not including any interest payments) for every single year since at least 1961 and up to 1989 (data for 1990 is still not available but it will probably show a slight primary surplus thanks to the strict cash management imposed by the Treasury). This means that for every year of the last 29 years, after paying for the current and capital spending the government has not had any genuine resource left to service any interest on its debt, be it internal or external. In consequence the government has resorted systematically to issuing money and interest earning debt not only to cover primary expenses but also to service the nominal interest on all outstanding debt. This deficit policy resulted in a systematic tendency of the economy to run high inflation and high real interest rates as a consequence of the pressure in the credit markets of the incremental government borrowing.

For an economy that has not grown and faced a positive real rate of interest, running a positive primary deficit implies an ever growing stock of public debt in relation to GDP. Actually, the real stock of government debt did not grow continuously because every once in a while the existing stock of debt was melted down by outbursts of inflation in excess of nominal interest rates fueled by large devaluations in the face of foreign exchange crisis.

The tendency to melt down the existing stock of debt by means of implementing unexpected devaluations was eventually discounted by the market and in the later years of the decade the market demanded, and obtained, an increasing degree of indexation of the public debt to either the price level or the price of foreign exchange, at the same time that extremely high real interest rates were required in order to induce the rollover of the existing stocks of public debt.

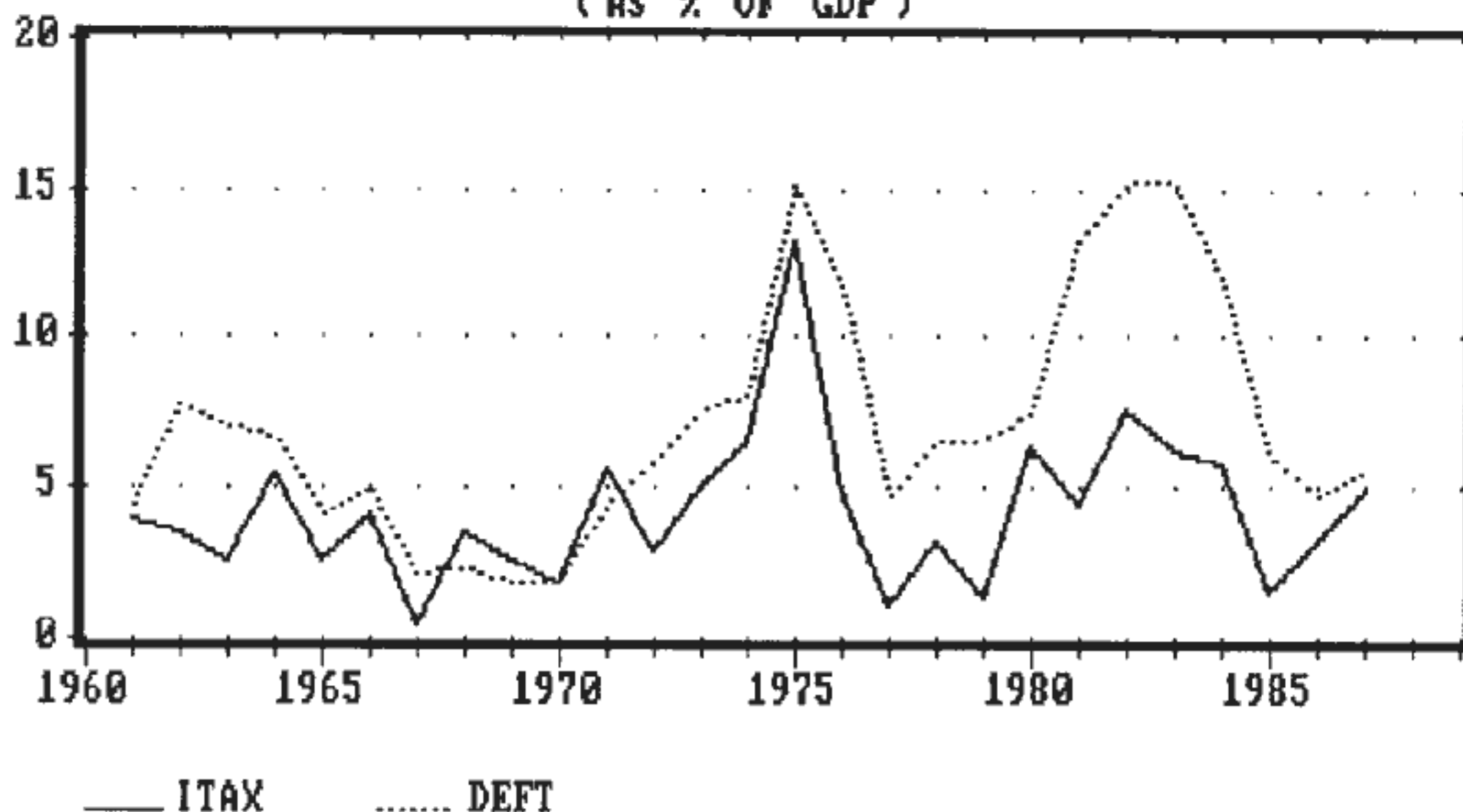
The system finally exploded when the country entered into hyperinflation in May 1989. The hyperinflation however, was not able to completely melt down the stock of interest-earning debt of the government, as much of it was placed with a maturity of between 1 and 7 days and interest rates actually had a tendency to anticipate devaluations. In January 1990 the government mandatorily canceled all interest earning obligations in the financial system (government debt plus all interest-earning deposits) with an issue of dollar-denominated government paper paying LIBO rate and with a 10 year maturity.

We can get a closer feeling of the financing difficulties of the government by comparing the series of the Deficit of the Consolidated Public Sector(CPS) and the actual revenue from the creation of money (computed as the revenue from the creation of non-interest earning monetary base, net from Reserve changes). Both series are shown in Figure I.5 that describes quite closely the events, insofar as the actual ways of deficit financing that took place over recent years.

It can be seen that from 1964 through 1975 the deficit of the CPS did not exceed significantly the revenue from money creation. This means that the fiscal deficit was mainly financed through monetary creation rather than issuing debt. The situation changed from 1976 onwards when debt financing apparently become a significant part of the total financing sources. This change coincides with the fall of the Peronist Government and the initiation of the military regime.

Figure I.5

REVENUE FROM MONEY CREATION AND TOTAL DEFICIT OF THE CPS
(AS % OF GDP)



In 1977 there was a significant financial liberalization that for the first time in decades completely liberalized interest rates and opened the domestic financial market to foreign investors. The period 1977-79 was signed by foreign borrowing and the revenue from money creation fell well below historical levels. A banking crisis in early 1980, followed by the collapse of the "prefixed" exchange rate regime in early 1981, set the end to this stage of foreign financing of the deficit and opened the way for the next stage of internal debt financing that lasted up to 1985. From 1985 onwards starts a serious effort of reduction of the total deficit of the CPS. The use of the inflation tax, however, did not fall proportionately to the deficit of the CPS because of the increased financing pressures put by the service of the outstanding internal debt that was concentrated mostly at the Central Bank.

I-2 THE STRUCTURE OF FINANCIAL MARKETS

The Financial Liberalization of 1977, Deposit Insurance and State Banking

As it could be expected in an economy subject to frequent shocks as Argentina, the financial markets are highly volatile and cannot be easily described by a simple set of instruments. The financial reform of 1977 freed interest rates and allowed banks to capture interest earning deposits called "Plazos Fijos" under the safety net of a Central Bank guarantee on practically all deposits made in the local currency.\1/. Previous to the 1977 reform, interest rates were set by the Central Bank and credit was normally rationed as the interest rates tended to be negative in real terms.

The need for the deposit insurance granted by the Central Bank has been usually explained by the implicit guarantee enjoyed by the significantly large sector of state banks. Private banks, it was argued, would be unable to compete with otherwise safer deposits at either foreign or state banks. At the time of the reform the insurance covered 100% of the principal for small deposits up to around U\$S2500 and 90% for all other deposits in excess of that minimum denomination.

State banking is an important institution in Argentina as a significant piece of the corporative system being practiced. No serious attempt has ever been made to globally affront the problematic of this sector. As of December 1988 there were 31 state banks with a total of 1852 branches. These state banks belonged either to the Federal, Provincial or Municipal levels. The whole group of state banks absorbed 45% of the deposits in the financial system and granted more than 70% of the loans. The excess of loans over deposits was made possible thanks to Central Bank rediscounts that were predominantly granted to this sector at the expense of the private banks.

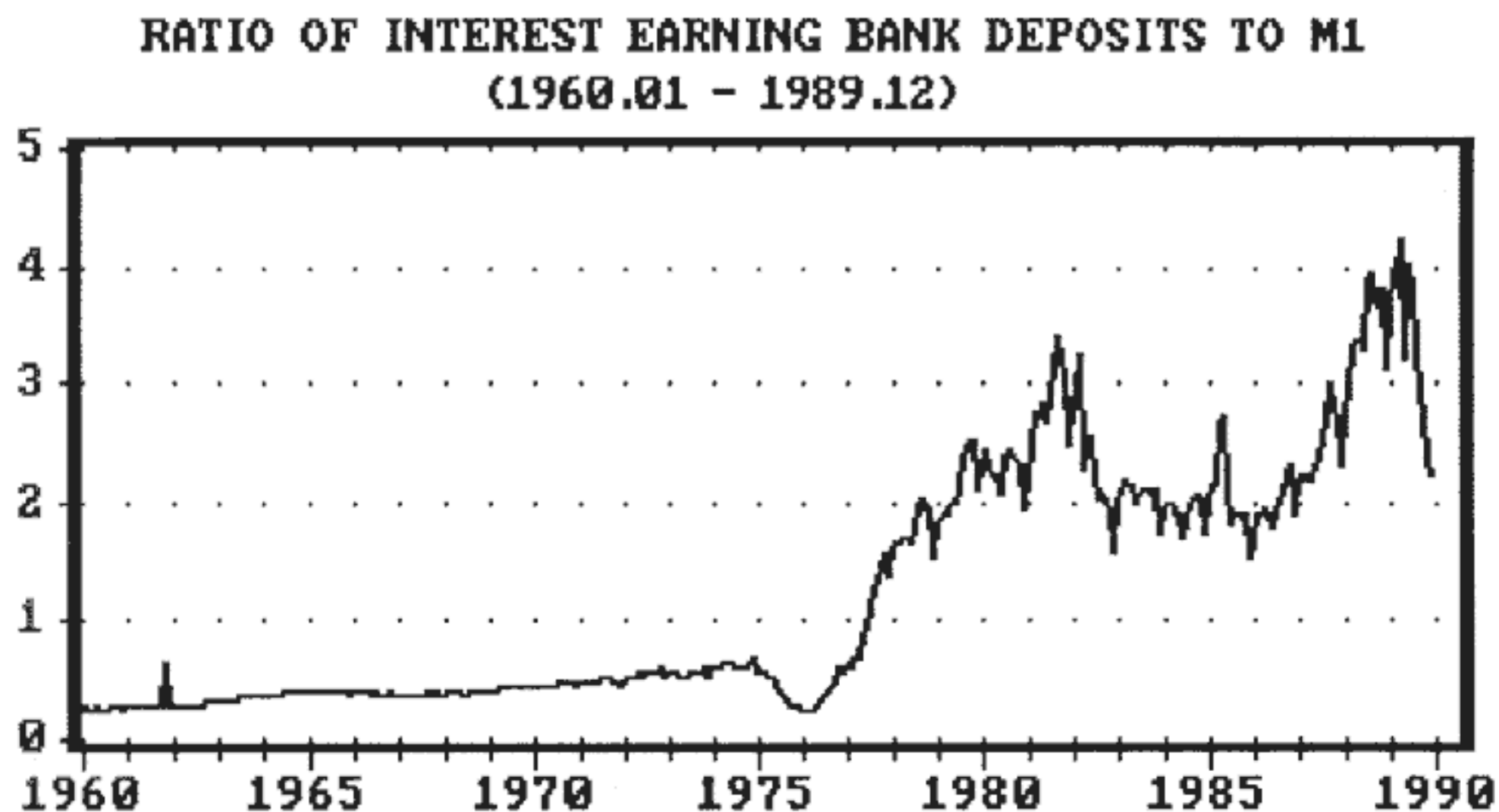
=====
\1/ The financial liberalization was but one of the many policy instruments of what came to be known as the Stabilization Plan of December 1978. The plan started being instrumented after the military coup of March 1976; the financial opening of 1977 was followed by the Tabla Cambiaria (prefixed exchange rate path) and the trade reform of 1978. The Plan was abandoned after March 1981 in the middle of a set of serious disadjustments, among them currency overvaluation, persistence of inflation and the external debt problem. The lack of fiscal adjustment has been blamed as the main reason for the failure of this stabilization attempt that aimed at making structural adjustment the centerpiece of the policies being followed.

The combination of practically unlimited government insurance on deposits and freedom to determine interest rates proved to be explosive for the newborn financial system. Central Bank supervision could not avoid a situation where many banks started raising funds at whatever cost for the purposes of careless lending. The public would not care about the quality of the bank's portfolio as the deposits were government guaranteed. During 1980, the real interest rate charged on prime customers by banks stayed at about 32% annual, a level quite inconsistent with the productivity of investment.

In March 1980, two of the major private banks collapsed and were intervened by the Central Bank in the context of a generalized bank run. The crisis induces the partial abandonment of the deposit insurance system by extending it only to small deposits. Large denomination time deposits have remained without insurance since then.

In spite of all its forthcoming, the result of the financial reform was an unprecedented increase in the demand interest earning Time Deposits and a fall in the demand for the non remunerated M1. Figure I.6 shows that the increase in the ratio of interest earning deposits to M1 started in 1977 and was approximately completed by mid-1981. Since then this ratio has oscillated in response to the relative returns to both assets.

FIGURE I.6: RATIO OF INTEREST EARNING DEPOSITS TO M1



I-3 Financial Holdings

The financial holdings of Argentines since the reform of 1977 and up to the massive confiscation of 1990 can tentatively be divided between five main groups of assets:

- 1- Currency plus demand deposits, or the aggregate M1.
- 2- Time Deposits (Plazos Fijos) denominated in local currency.
- 3- Dollar denominated bonds of the Government called BONEX.
- 4- Foreign financial assets, mostly denominated in U.S. currency.
- 5- A whole variety of local-currency-denominated Government paper including at times Treasury Bills and Central Bank CD's.

In general terms we can say that the Argentine economy has experienced a sustained process of demonetization (dollarization?) in recent decades. The real amount of M1 (non-interest bearing money) has systematically decreased since 1970 as shown in Figure I.7 (the apparent real increase in M1 during 1973-75 was really due to the price freeze imposed during the period that resulted in the inflationary explosion known as "Rodrigazo" in mid-1975). The time path of real M2 (M1 plus time deposits, shown in Figure I.8) has depended more on the evolution of interest rates paid on time deposits.

In turn, the evolution of interest rates since the 1980 bank crisis depended crucially on the debt policy of the government, the reason being that the government gradually became the "borrower of first resort" of the economy and as a consequence most of the financial assets of the private sector were either directly or indirectly the result of loans to the public sector (except, of course, the holdings of foreign exchange).

FIGURE I.7

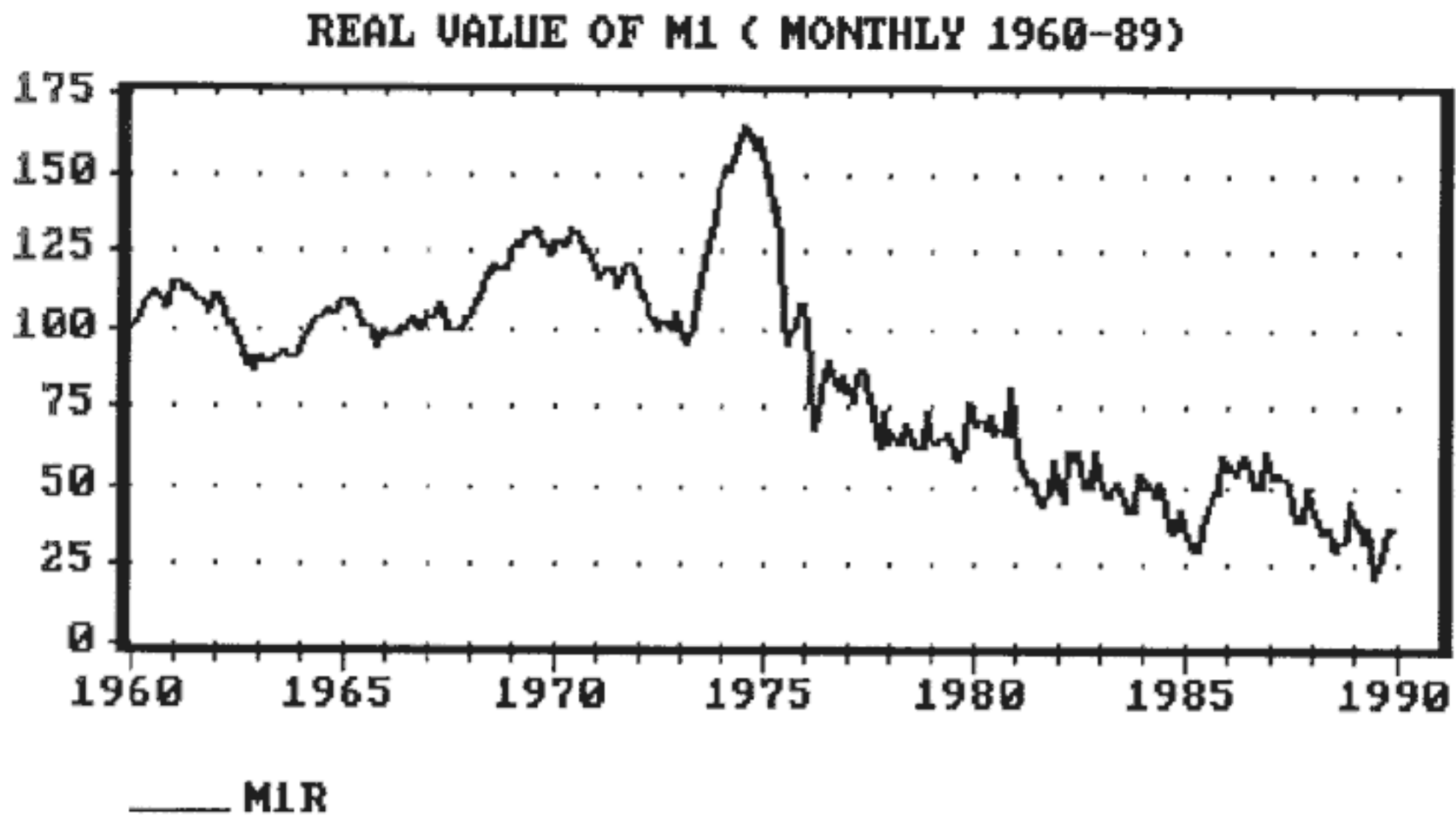


FIGURE I.8

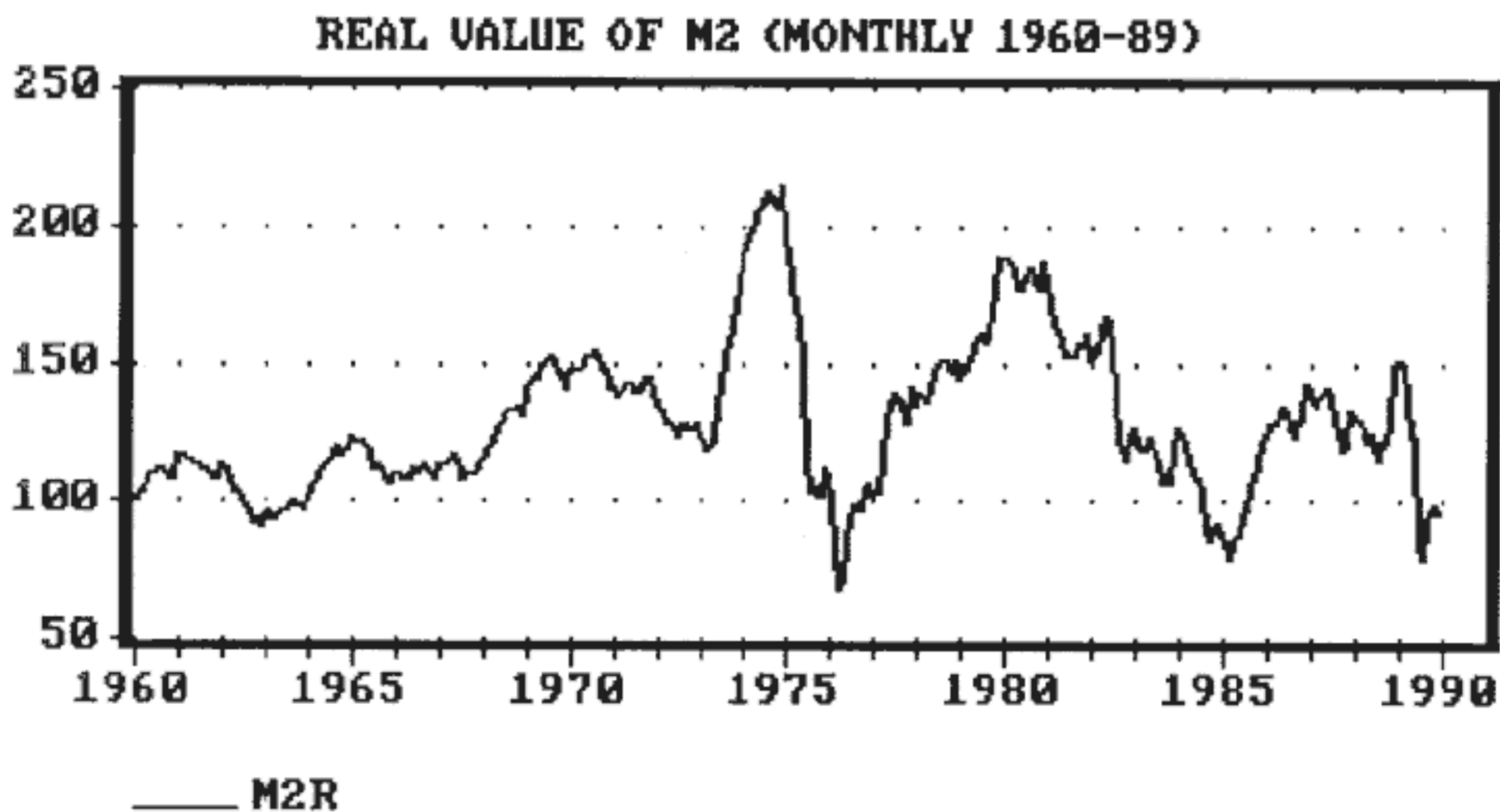


Table I.2 provides estimates of the domestic interest earning debt of the Treasury and the Central Bank during the later part of the 1980's. Practically all of the Central Bank debt was directly held by commercial banks under the form of compulsory reserve requirements ("depositos indisponibles") or, at times, under voluntary holdings of Central Bank's CD's. The commercial banks, in turn, obtained their funds by raising interest earning deposits from the public.

It should be noticed the significant increase in public debt that took place from June 1988 to March 1990: the stock rose from about \$8 billion dollars to \$18 billion (the increase represented about 13% of GDP) in only 9 months. This was the result of the stabilization plan called Primavera designed to keep an overvalued currency (and low inflation) at whatever cost up through the presidential elections to be held in April 1990. The instrument chosen was high interest rates instrumented through increases in public debt. The plan exploded before the elections and the country entered into hyperinflation.

In practice, during the late 1980's, the Argentine financial system was one in which most of the public's deposits at commercial banks were lent to the Central Bank and used to finance the fiscal deficit. Part of the deposits of the public could be lent to the private sector, but that amount was gradually displaced in favor of lending to the Central Bank as it can be appreciated from data in Table I.3. It follows from the Table that most of the lending capability generated by the public's demand for M2 was absorbed in the form of domestic liabilities of the Central Bank.

TABLE I.2 INTEREST EARNING INTERNAL DEBT OF THE PUBLIC SECTOR
(Millions of US\$ at the Commercial Rate)

Date	TREASURY DEBT	CENTRAL BANK DEBT	TOTAL DEBT
DE85	389	4278	4668
MA86	383	5360	5742
JN86	343	5768	6111
SE86	307	5950	6257
DE86	1069	5831	6900
MA87	1563	5450	7014
JN87	1941	5741	7682
SE87	2337	4826	7163
DE87	2579	4740	7319
MA88	2510	5619	8129
JN88	2301	5941	8242
SE88	1783	8145	9928
DE88	1802	9943	11745
MA89	4999	13248	18247
JN89	2382	7411	9792
SE89	1511	5752	7263
NO89	2186	5716	7902

The pressure put on the financial markets by the government debt is best captured by evaluating this debt at the commercial exchange rate. Normally authorities have tried to stabilize the economy by fixing this exchange rate. As credibility in the plan decreases, interest rates raise and the stock of government debt tends to raise in terms of dollars. When the stock of debt, particularly the short term debt of the Central Bank, gets out of line with the available Reserves, pressures mount against the currency and a devaluation eventually follow. Normally devaluations are successful in reducing the dollar value of the government debt denominated in local currency but not so much in reducing the dollar equivalent interest rates that have to be paid on the remaining stock. As a consequence, immediately after the devaluation the remaining stock of debt continues raising at rates far beyond the level consistent with a fixed exchange rate and a new crisis starts to develop.

The Primavera Plan started in August 1988 with a stock of internal debt of 8.6 billion dollars and brought it up to 18 billion dollars after 8 months, in March 1989. Since GDP was around 70 billion dollars, it is clear that a rate of debt accumulation on the part of the Public Sector of 13% of GDP in only 8 months was unsustainable and a foreign exchange crisis was called for. The collapse of the Primavera Plan in February started a series of devaluations that melted down the debt to 5.7 billion by July 1989. Then the Bunge and Born Plan (the BB Plan) started with a big devaluation and the announcement of a fixed exchange rate for ever since. In the next four months the level of domestic debt rose to 7.9 billion dollars (evaluated at the new exchange rate) mostly on account of the interest service of the inherited debt. This time the market was aware of the final effects of rapid rates of debt accumulation and did not wait for debt to reach levels similar to those of the prior stabilization attempt. A new crisis took place in December that forced the abandonment of the BB Plan and the conversion of all Time Deposits (and the Reserve Requirements that backed them) into a 10 year BONEX on January 1, 1990. As a counterpart of the conversion of the liabilities of commercial banks into Bonex, all government debt with the banks was also turned into BONEX, as well as most of the government paper in the hands of the public (exemptions were cash, demand deposits, time deposits up to about 300 dollars and the already existing stock of BONEX from previous years).

Table I.3 shows the evolution of the total domestic liabilities of the Central Bank and the total value of M2 (Currency plus Demand and Time deposits). The ratio between both concepts has oscillated between 60% and 86% depending on the degree of the absorption by the Central Bank of the credit availability of the Commercial Banks. The data in Table I.3 confirms the description of **the Central bank as the "borrower of first resort"** in the financial system as it absorbed most of the credit availability of the commercial banks. It should be noted that a significant fraction of whatever remaining credit available may have been absorbed directly by borrowings from the provincial and municipal governments (mostly by borrowing directly from their own banks) and also by state owned enterprises.

TABLE I.3

	DOMESTIC LIABILITIES OF THE CENTRAL BANK =====	TOTAL STOCK OF DOMESTIC MONEY (m2) =====	RATIO (1) / (2) =====
	(1)	(2)	
DE85	8581	10033	0.86
MA86	9443	11517	0.82
JN86	10863	13840	0.78
SE86	12532	15876	0.79
DE86	14015	20120	0.70
MA87	15593	23011	0.68
JN87	18082	27679	0.65
SE87	21568	34314	0.63
DE87	30274	48075	0.63
MA88	42924	65494	0.66
JN88	71448	102730	0.70
SE88	143378	175167	0.82
DE88	200514	259270	0.77
MA89	277949	368864	0.75
JN89	787375	1118727	0.71
SE89	2982983	4650007	0.64
DI89	4977955	7215093	0.69

(*) Millions of Current Australes. End of month data.

Source: M2 data from FIEL; Remunerated CB liabilities from IBRD; Non Remunerated Monetary Base from IFS. From June 89 onwards data are monthly averages from Carta Economica.

I-4 PUBLIC DEBT AND INTEREST RATE DETERMINATION

Traditionally there have been two financial markets in Argentina, the formal market and the informal one. The informal market consists of the "mercado interempresario" (interfirm financial market) where firms borrow and lend among themselves through a set of institutions called "money-market desks". No record on the volume of these transactions exists although newspapers do quote the interest rates at which transactions are settled in this market. There is no accepted estimate as to the size of this market and most of the transactions are normally done on a one to seven days basis.

The formal financial market is concentrated in the commercial banks and financieras, both subject to Central Bank regulation, which included the right to the deposit guarantee (after 1980 available only for small deposits) and the obligation to establish reserve requirements. The competitive instrument on the borrowing side of the banks and financieras has been the interest earning Time Deposit. From time to time a variety of other instruments have been offered to the public, including a wide range of indexed deposits (indexed to the dollar, CPI or some of the components of the price index). After the compulsory exchange of Time Deposits for a government bond in 1990, Savings Accounts become the most widely used instrument for a few months. Since then Time Deposits have come back as the favorite instrument. Time deposits are sold to the public and traditionally bear a maturity ranging from 7 to 30 days. The average maturity for the deposits of the system has rarely exceeded 14 days and in recent years has been close to seven days. During 1989, following several episodes of long weekends coupled by forced bank holidays it has been not uncommon to have days in which 90% of the Time Deposits of the system came due on a single day.

Banks and other financial institutions (mainly Financieras, that are only allowed to offer Time Deposits) used their deposits to grant credit to the private sector or to acquire a variety of Central Bank assets (some compulsorily and some voluntarily). For example, in 1989 about 80% of all assets of the commercial banks consisted of liabilities of the Central Bank. The remuneration of those Central Bank liabilities has changed through time but on average we can say that these liabilities have paid an interest rate equal to the average cost to the commercial banks of raising the funds plus a spread. We found that in some instances Banks were interested in having their liquid funds absorbed by the Central Bank through increases in remunerated reserve requirements. In a country subject to the uncertainties of Argentina, it may have been safer to lend to the one entity that regulates the industry (the Central Bank), particularly when such lending is done at the cost of obtaining the funds plus an acceptable spread.

It was the case, therefore, that during most of the 1980's for all practical purposes commercial banks raised deposits in order to lend them back to the Central Bank. The result of such operations was a grossly distorted financial system in which about 2500 bank branches with 140000 employees administered an amount of \$4700 million dollars of deposits as of December 1989 (or \$33600 dollars per employee). After the forced debt conversion January 1990, approximately the same number of employees were trying to retain their jobs when the amount of bank deposits was reduced to only \$1384 million dollars meaning about \$9885 dollars of deposits per bank employee!.

In such a system it is very difficult to ascertain what is the mechanism through which the interest rate on deposits is determined. One could say that the marginal 20% of private borrowers will generate a tendency for real interest rates to approximate the productivity of investment but this was not so. Most of the private creditors were either rolling-over debts they definitely could not pay back and few were borrowing on a daily basis to finance temporary financial disequilibria through the use of overdraft on their checking accounts and not for investment purposes.

We have found a significant relation between the stock of time deposits outstanding and the level of the real interest rate that these deposits yield. The general rule for banks in determining interest rates was to set them at the level required for all deposits (principal plus interest) to be rolled over unless the Central Bank intervened by providing the required cash for the banks to reduce the outstanding level of deposits.

This inherently unstable system implies wide oscillations in real interest rates and the real exchange rate as depositors try to anticipate sudden devaluations (the preferred instrument for the melting down of the quasifiscal deficits) by exchanging their deposits for cash with which to buy dollars in the black market. If the government tries to stop the portfolio shift it must resort to higher interest rates in order to force the roll over of the deposits. This mechanism reduces the short run pressures on the currency but increases the rate of growth of the monetary base and therefore generates expectations of even larger devaluations. The run feeds on itself until authorities give up to pressures and devalue.

In the system we have described above, the real interest rate on time deposits of the institutionalized financial system depends on a delicate equilibrium between expectations of melt downs and the need of the government to refinance its debt with the financial system that is the counterpart of most of the interest earning deposits at the commercial banks.

If we assume that the government controls the rate of devaluation and can always outsmart the market by devaluing by more than what was expected, we arrive to the conclusion that to a certain extent the government determines the ex-post real rate of interest. The ex-post real interest rate in the financial system is basically determined by the only significant creditor of the system: the Central Bank. This is certainly not done on a monthly basis but it is actually obtained through the inevitable melt-downs that systematically take place.

Why did depositors agree to remain into such risky assets?. Partly because they were systematically tempted with attractive ex-ante real interest rates. Devaluations always happen, but they are usually done by the newly appointed Minister, the previous Minister having been just fired because of his now obvious policy mistakes!. Why do people believe in the new Minister and accept from the beginning the roll-over of the remaining deposits in spite of having been just melted down remains unexplained. The fact is that credibility in new Ministers is decreasing over time as the same experiment is repeated over and over again.

Consider for example the nominal interest rates that prevailed immediately after the last few most known stabilization plans, all of which were based on a large devaluation promised to be the last ever. The Austral Plan (June 1985) devalued by 40% and the interest rate immediately after the devaluation was around 7% per month. The Primavera Plan (August 1988) devalued by 24% and the resulting interest rate was around 10%. The Bunge Born I plan devalued by 200% and the initial interest rate was set at 17%. The Bunge and Born Plan II (December 1989) devalued by 54% and the initial interest rate after the devaluation was around 60% per month. Finally, in January 1989, the Erman Plan converted mandatorily all Time Deposits into a 10 year dollar denominated government bond (that started trading at about 30-40% of par value) and the monthly interest rate in the initial days was around 100%. In the days prior to the announcement of the Erman Plan, monthly interest rates reached levels of 600% per month for large depositors because of the expectations of a forthcoming meltdown. After the meltdown, that took place on January 2 1990, interest rates only fell to 100% per month, which is an indicator of how little confidence the market still had in the success of this new plan.

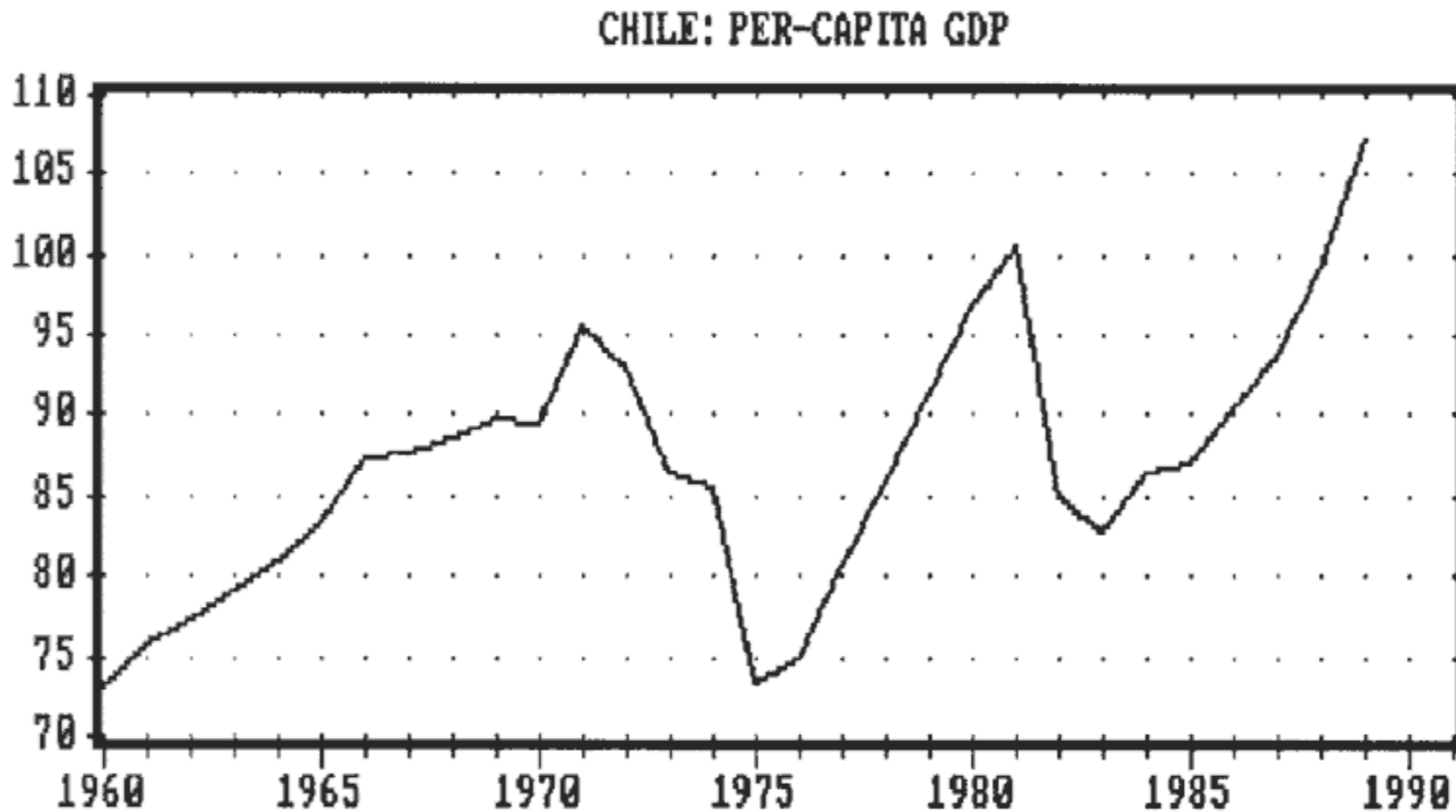
II-CHILE

II-1 MACROECONOMIC DEVELOPMENTS

Chile has undergone sharp structural changes in the last two decades. A mixed economy system that prevailed for several decades, was replaced in democratic elections by socialism in 1971 and then, after a military coup in 1973, the economy was put into a relatively open-market oriented economic system. The new elected authorities in 1990 have vowed to continue with the implementation of the free market, capitalist economy. All of these changes resulted in two severe downturns in the level of economic activity, the first during 1973-75 and the second in 1982-85. Since 1985 the economy has resumed a path of steady growth and consolidation of the structural changes started in 1974. Foremost among those structural changes were the reliance on market allocation mechanisms, the opening of the economy, financial liberalization, the consolidation of fiscal discipline and a policy of repayment of the country's external debt.

Figure II.1 shows the behaviour of GDP per-capita, from where it is clear to get the significance of the magnitude of the two economic downturns mentioned before. It is surprising the strength of the recovery of GDP after each of the two downturns, possibly indicating the underlying health of the basic economic institutions.

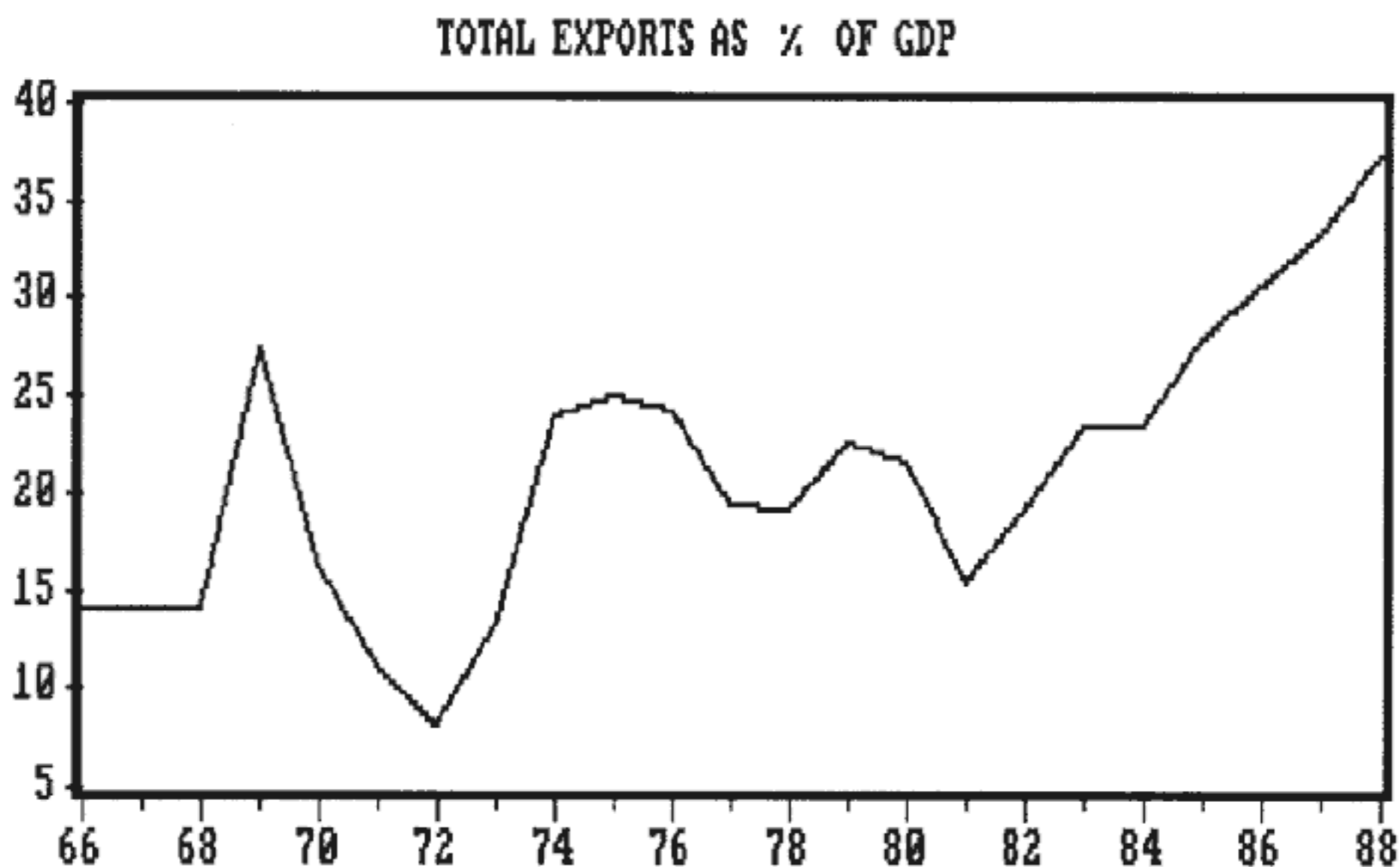
FIGURE II.1



One of the first measures of structural adjustment adopted after 1973 was the opening of the economy to trade flows through elimination of quantity restrictions and reduction and unification of nominal tariffs at a level of 10%.

Figure II.2 shows the behavior of the exports to GDP ratio since 1966. It is clear that exports presented an erratic behavior in the period 1966-81, mostly as the result of the changes being implemented in the economic system. Starting in 1982, the export/GDP ratio starts a steady path of increase that brings its level from an initial value of 17% in 1981 to a level of 38% in 1988. The compound annual growth rate of dollar exports in the period 1985-88 was of 22.6%. This process of consolidation of export growth obtained in spite of a gradual and persistent decline in the significance of copper exports in the total of the country's exports.

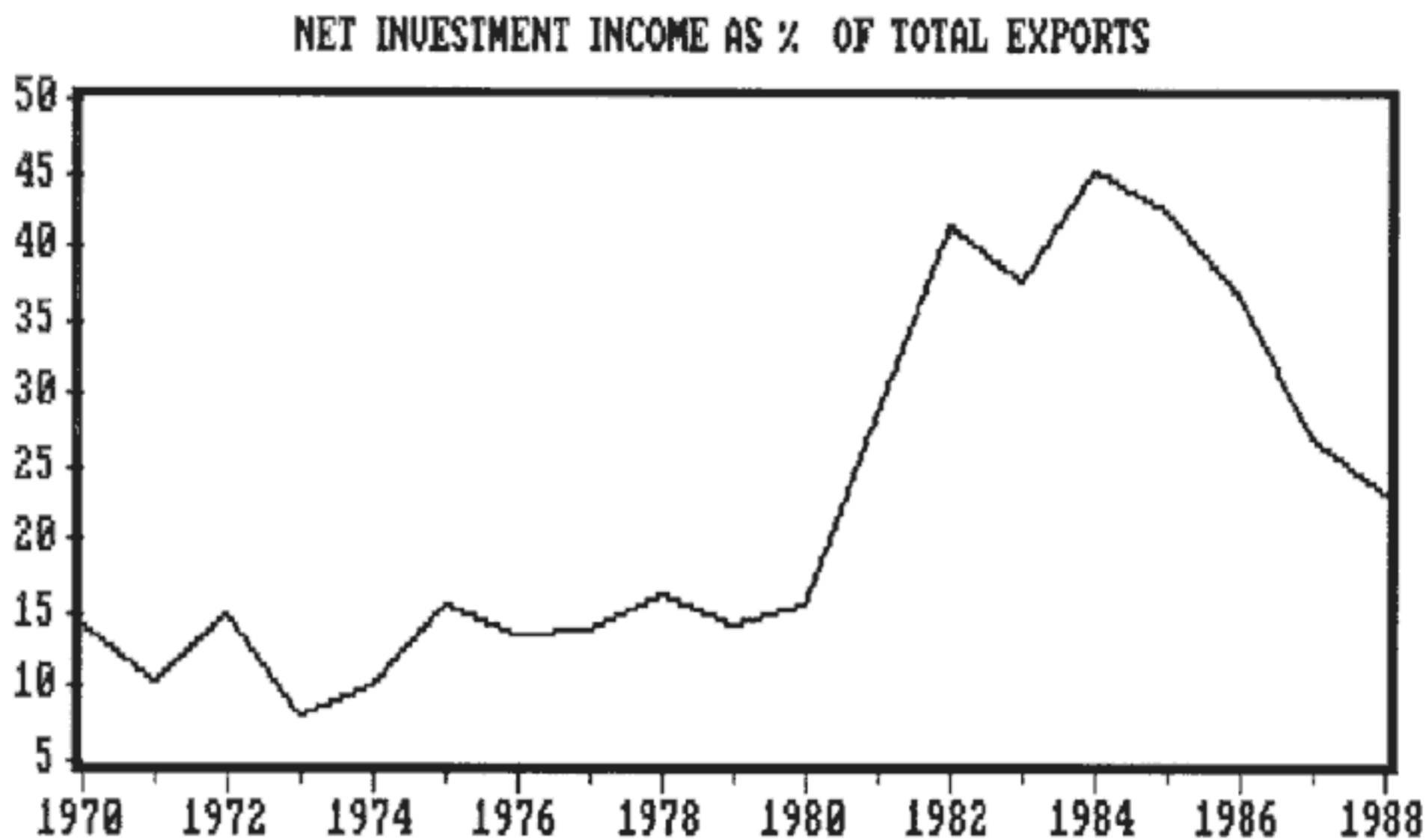
FIGURE II.2



The second most significant external factor affecting the Chilean economy is the stock of external debt and its service. Like most other Latin-American countries, Chile also experienced significant rates of external borrowing starting in the late 1970's that suddenly reversed from about 1982. Contrary to most of its neighbors, Chile followed a policy of announcing full payment of the interest service on the external debt and was able to successfully restructure most of its outstanding short term debt.

Figure II.3 shows the ratio of interest service on Chile's external debt (net investment income is used as a realistic proxy) as percentage of total exports. The ratio spiraled from a low value of 16% in 1980 to 45% in 1984. Starting in 1985, however, the debt service ratio starts a process of steady decline that brought it to a level of 23% as of 1988.

FIGURE II.3



Three factors worked toward a significant reduction in the relative weight of debt service as percentage of exports experienced since 1985. First, dollar exports grew by 84% in 1984-88 as a result of the maintenance of a relatively open economy and a realistic and stable real exchange policy (Figure II.4). Second, external interest rates fell significantly during the period, LIBOR falling from about 10.4% in 1984 to 8.4% in 1988. Third factor is the policy of debt repurchases instrumented since 1985 that resulted in a cumulative amount of repurchases of 6.6 billion dollars in the period 1985 through March 1989.

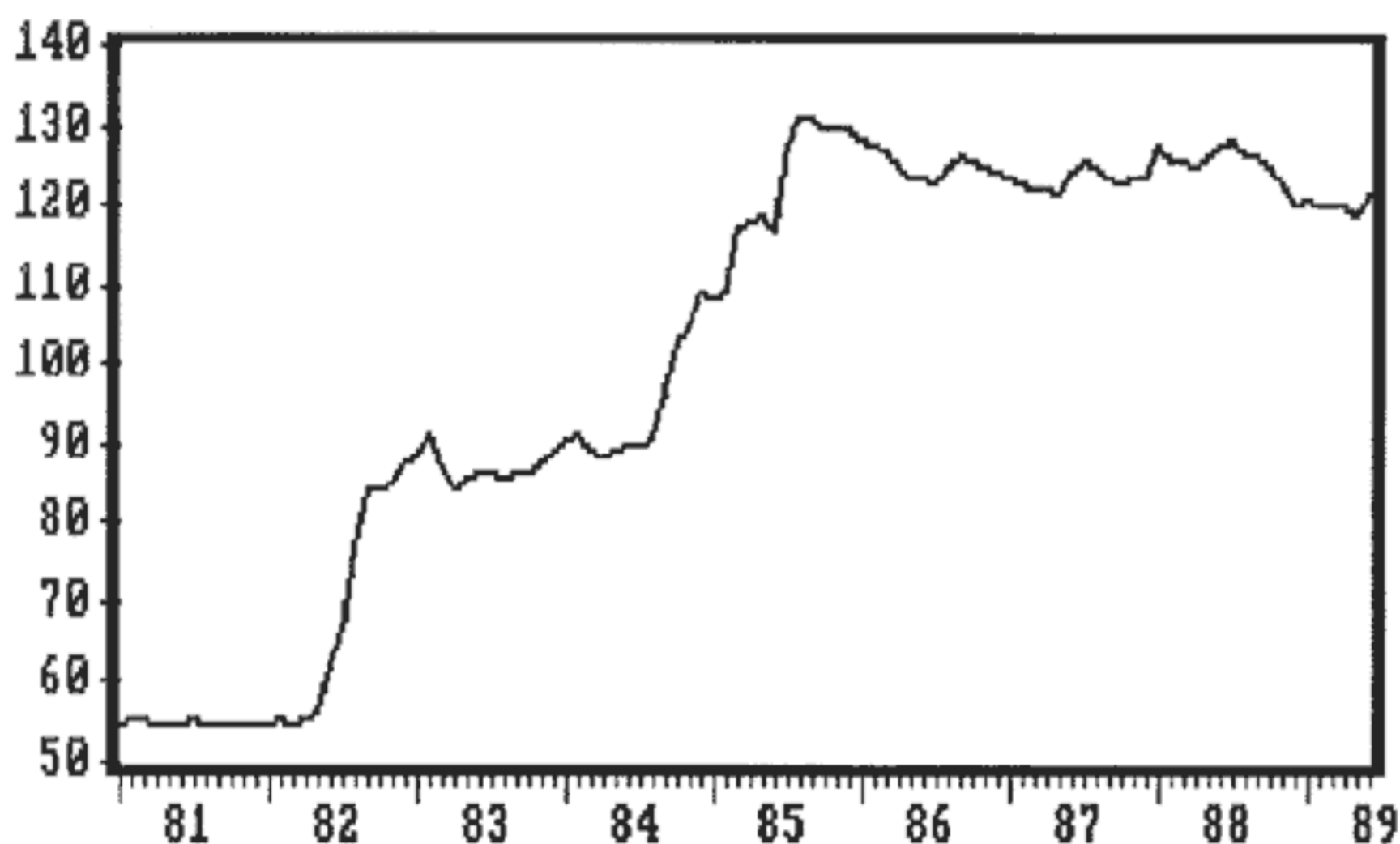
Exchange rate policy

The Central Bank of Chile has traditionally pegged the price of foreign exchange. In last decade, nominal exchange rate policy has been aimed at the maintenance of an acceptable stable level of the real exchange rate versus the U.S. dollar. As it can be appreciated in Figure II.4, there were two important real devaluations in Chile in the decade of the 1980's. The first one took place in 1982 when the Real Exchange Rate (RER) was raised from an average level of 55 to around 90 and the second in 1984-85 when this level was

increased again to 130. Since then the RER has been fairly stable, ranging in value from 120 to 130. The significant dollar devaluation in international markets during the second half of the 1980's implied that the RER of Chile has also been devalued versus other major currencies, a fact that may also help in explaining the important growth in exports that has been experienced in recent years.

FIGURE II.4

REAL EXCHANGE RATE (with USA)



II-2 FINANCIAL DEVELOPMENTS

Following the sequential opening of the trade account and of the capital account, Chile received substantial amounts of capital inflows. During the years 1978-81 Chile received a net capital inflow averaging \$3 billion dollars per year, equivalent to almost 10% of the 1980 GDP of \$32 billion. Such inflows helped Chile to continue regularly servicing her foreign debt and also financing the significant trade deficits that came together with the strong recovery of the economy after 1977.

As it was the case in Argentina, not all of the financial reform was for good: in this case large industrial groups took control of banks and directed significant amounts of credits to their own use, in many instances rather carelessly. The fragile situation of several of the large banks because of the dubious value of their investments was further complicated by the pressures on liquidity due to the sharp reduction in capital inflows after the regional 1982 liquidity crisis.

During 1982, as recession hit, real GDP fell by 14% and unemployment reached 19%. The economic package that followed included measures aiming at solving the basic insolvency of the financial system. This was mainly done through the intervention of the Central Bank. During 1983-85, the Central Bank took charge of instrumenting a rescue operation for the troubled financial institutions and major debtors. This operation was primarily conducted using the Bank's resources. The financial system was recapitalized primarily with credit subsidies provided by the Central Bank that were financed by issuing different types of interest earning liabilities (CBCH IOU's). In consequence, the stock of outstanding IOU's of the Central Bank grew from 10.1% of GDP in 1984 to 26.6% in 1988 as it can be appreciated from Table II.1 that summarizes the major financial developments during the period 1984-88.

It follows from the data presented in Table II.1 that the increased financial debt of the Central Bank resulted from the need to finance the salvage operation of private commercial banks conducted on behalf of the Treasury. The Treasury's debt at the Central Bank increased by roughly 3 billion dollars in 1984-88, an amount similar to the increase in the CBCH outstanding stock of IOU's. There were no significant problems for the Central Bank of placing such an amount of extra financial debt since most of it was placed at financial institutions at a time when the public's demand for financial assets was steadily growing.

A comprehensive measure of the public's demand for financial assets, M3 grew during the period by 3 billion dollars. We therefore observe that the banks borrowed an extra 3 billion from the private sector that was used to purchase debt from the Central Bank. This debt was then spent, on behalf of the Treasury, in financing the losses of rescuing the most troubled debtors of the financial system. All of this operation was facilitated by the important monetization experienced during the period that allowed M3 to grow from 21.5% to 32.7% of GDP. Additional revenues were obtained through the use of the conventional inflation tax, used in this case not to finance the Treasury, but to finance the quasi-fiscal deficit of the Central Bank.

We have been told that part of the significant increase in IOU's of the Central Bank that allowed for the refinancing of the bank's losses was actually sold to the newly allowed private retirement funds (either directly or through the intermediation of commercial banks). If this were to be the case we would find that in a fundamental sense the non-performing assets previously held by private banks would now be backing the private retirement funds, certainly not a comfortable situation.

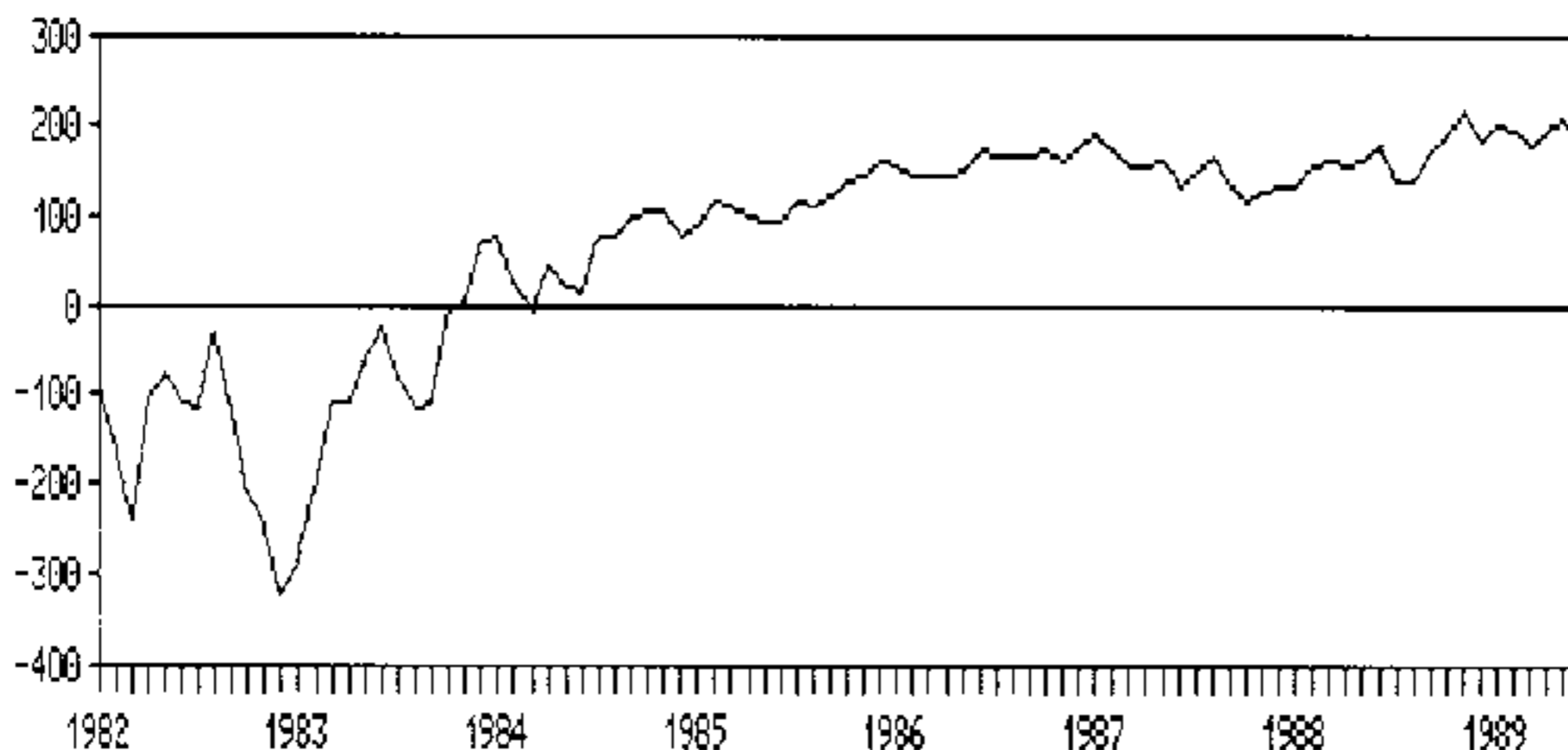
TABLE II.1

MONETARY AND DEBT POLICY OF THE CENTRAL BANK
(Million of U\$S Dollars)

	1984	1985	1986	1987	1988
Central Bank IOU's	3991	6012	6953	6982	7038
Monetary Base	690	603	723	732	985
M3	4125	3912	4635	5782	7213
Treasury Debt at the CBCH(*)	2887	5346	6020	6197	5829
Assets with Agreement to Repurchase	988	2629	3192	3398	3312

Figure II.5 shows the accumulated twelve month revenues derived from increases in the Monetary Base. Each monthly increase was converted into pesos of December 1988 and then into dollars by using the rate of 249.7 prevailing at that date. The resulting amount was multiplied by a fraction of 0.8 under the assumption that the rest amounted to the issuing of interest bearing Monetary Base on account of remunerated reserve requirements (0.8 was about the ratio that prevailed as of 1989).

FIGURE II.5
REVENUE FROM MONEY CREATION
Million of Dec. 1988 Dollars



Following the large reserve losses of 1982 , resulting from the significant capital outflows of the period, the measure of the revenue from money creation quickly converged and apparently stabilized at a rate of about 180 million dollars per year. As of June 1989, the twelve months accumulated revenue was at about 200 million dollars.

=====

TABLE II.2

ANNUAL REVENUES FROM ISSUING NON-INTEREST EARNING MONETARY BASE
(in constant 1988 dollars)

YEAR	REVENUE
1982	-288.0
1983	77.3
1984	89.7
1985	157.7
1986	191.7
1987	136.2
1988	201.9
1989 (6 months)	102.5

=====

A significant downward shift in the demand for money did apparently take place starting in 1983. Such shift was first identified in the study of Matta and Rojas on the demand for money in Chile (Cuadernos de Economia, No.78, agosto 1989). In their estimations, covering the period 1978-86, such a shift takes the form of a change in the interest rate slope of the demand for money. They used quarterly regressions and captured the shift by means of a dummy variable that took the values of 1 for 1983 onward and zero otherwise. The change in the slope was obtained by including as explanatory variable the product of the dummy variable and the interest rate.

The reasons for the structural change taking place in 1983 still have to be explained. The fact is that starting in 1983 the Central Bank started managing short term interest rates so that they remained closely in line with inflation. Interest rates, therefore, become a much more important variable for measuring the opportunity cost of holding money than they were before. In consequence, the demand for money become more dependent on the interest rate. Figure II.6 shows the ex-post real interest rate paid by the Central Bank on its short term paper.

It is evident from Figure II.6 that starting 1983 the ex-post real interest rate has been fairly constant. This evidence is supported by a simple linear regression of the Fisher Equation:

$$\text{Nominal Interest Rate} = \text{Real Rate} + \text{Inflation}$$

Using quarterly data from 1984.I to 1989.II we get the following result:

$$\begin{array}{l} \text{Nominal Int. Rate} = 0.222 + 1.011 * \text{Inflation} \\ \text{T-Values} \qquad \qquad \qquad (3.13) \quad (23.1) \end{array}$$

R2Adj.: 0.94

Rho: -0.46

It is apparent from the above that the Fisher equation is almost an identity in the case of short term interest rates and that the Real Interest rate that the monetary authorities have targeted is of the order of 0.22% per month (2.67% per year).

The interest rate policy being followed by the Central Bank since 1983 has helped insofar as improving the functioning of the financial markets but not in its ability to raise revenue from money creation because not only made the demand for money lower but also more elastic.

Following the financial crisis of 1982-83, the Chilean economy has resumed a steady path of remonetization. The process has been helped by the resumption of real growth in GDP started in 1987 and the CBCH policy of aiming at the maintenance of positive real interest rates on deposits. As a consequence, real M3 grew from a low 21.5% of GDP in 1984 to 32.7% of GDP in 1988. The growth in the monetary base was much less spectacular since Chile has relatively low reserve requirements on bank's deposits. The real monetary base was 3.6% of GDP in 1984 and stands at 4.5% as of the end of 1988.

The important increase in the monetary liabilities of the financial system (M3) was accompanied by an equally significant increase in liabilities (IOU's) of the Central Bank. Both increased by about three billion dollars in the period 1984-88. The high participation of CBCH papers in the asset portfolio of the private financial institutions implies limits to the ability to sterilize a big portfolio shift with further issuance of such paper.

The conventional instrument to deal with a shift in favor of foreign exchange is to raise interest rates. Such a policy will be dangerous under the actual circumstances because of the high level already achieved by the stock of financial debt of the Central Bank. Since the Central Bank is already a net debtor, higher interest rates could further complicate the financial situation of the institution.

The fact is, however, that not all of a potential run against the peso will need to show in an increase in the demand for foreign assets as the Chilean financial system also has a system of dollar indexed deposits and loans. As of December 1988, dollar deposits were about 12% of total deposits of the Financial System.

In 1988 the new Banking Law allowed for the possibility of incorporating private deposits into the capital of commercial banks in case of a serious currency run. This alternative, if ever used, may prove an efficient one to deal with a currency run since it will imply a de facto suspension of the convertibility of bank's deposits by converting depositors into de-facto stockholders of the banks.

Currency runs are usually fostered by fears of devaluations in the face of fixed interest earning deposits in the financial system. The Chilean financial system is, however, highly indexed, and therefore depositors have already the financial instruments, in local currency, to hedge against devaluations. In December 1988, out of a total stock of 2456 billion pesos of Deposits and "Captaciones" of the financial system, 295 billion were denominated in foreign exchange and 1063 were deposits indexed to the price level (denominated in UF). For the indexed deposits, it is only the fear of an increase in the real exchange rate that could induce a shift away from them in favor of foreign currency. Given the possibility of shifting to indexed deposits, expectations of devaluation are likely to produce a shift from non-indexed to indexed deposits rather than a general shift toward foreign currency.

II-3 Recent Institutional Changes

The Charter of the Central Bank of Chile was reformed in 1990 along lines that provide for a larger degree of independence to the Bank from the political authorities. From our perspective, the relevance of the Reform lies in Article 27 that establishes that the CBCH can provide financing exclusively to financial institutions and that it is precluded from financing "directly or indirectly" any type of public spending or loans. Basically, what this means is that the inflation tax cannot be used to finance any deficit from the Treasury or public enterprises. It is difficult to assess how binding will be the clause about indirect financing to the Treasury given that the Treasury may borrow directly from the capital market and the CBCH may accommodate such borrowing by issuing rediscounts on the ground that it is stabilizing interest rates.

In conclusion, the new Charter of the Central Bank only imposes a limited restriction on how can the revenues from money creation be spent, but no limit on the ability of the Central Bank as to how much revenue it can raise.

II-4 Indexation in Financial Markets

Indexation is legally allowed in financial contracts made by financial institutions, provided the index used is authorized by the Central Bank^{\1/}. For such purpose, the CBCH produces a daily index called the Unidad Financiera (UF). The nominal value of the UF is adjusted by the previous month average daily rate rate of inflation. Since the rate of inflation is published on the 9 of each month, the daily rate of increase of the UF is constant (and equal to the inflation of the previous month) and changes value on the 10 of each month.

\1/Article 35 pa.3 of the Organic Charter of the Central Bank stipulates that it is in the powers of the Bank to " Authorize the indexation schemes to be used in credit operations in domestic money by banks, finance companies and cooperatives. The use of an indexation scheme not authorized will not be legally valid." Later on, the same article 35 establishes that if an index is not allowed any longer by the Central Bank, it will continue being valid for the contracts made up to that date and the Bank must continue publishing the index for a period of 10 more years.

Another index authorized by the Central Bank is the "Indice de Valor Promedio", equal to a six month moving average of past CPI's. The advantage of the IVP is that it is less sensitive to short run price shocks than the UF. Depending on the trend of actual inflation, however, it may result in adjustments substantially different than those derived from the use of the UF or the actual price index. However, the IVP has little acceptability in the market and it is only used in a few long run credit operations between private parts. There are no financial instruments issued in IVP's.

Practically 42% of the total amount of deposits in the financial system are indexed to prices (UF or IVP) as of July 1990. Of the remaining 58% , non-indexed peso deposits represented about 43% and dollar denominated deposits (another form of indexation) accounted for 15%. These ratios do not differ significantly from the ones prevailing six years before (in Dec.1984 the ratio of indexed deposits was 40.9%, non-indexed deposits was 52% and dollar deposits was 6.5%).

The Central Bank of Chile is no exemption to the preference for indexation shown by the private sector. Most of the domestic financial liabilities of the CBCH are indexed to UF or to dollars. The non-interest earning Monetary Base (Emission) represents less than 8% of the total stock of domestic financial liabilities of the Central Bank (see the CBCH balansheet in Table 1).

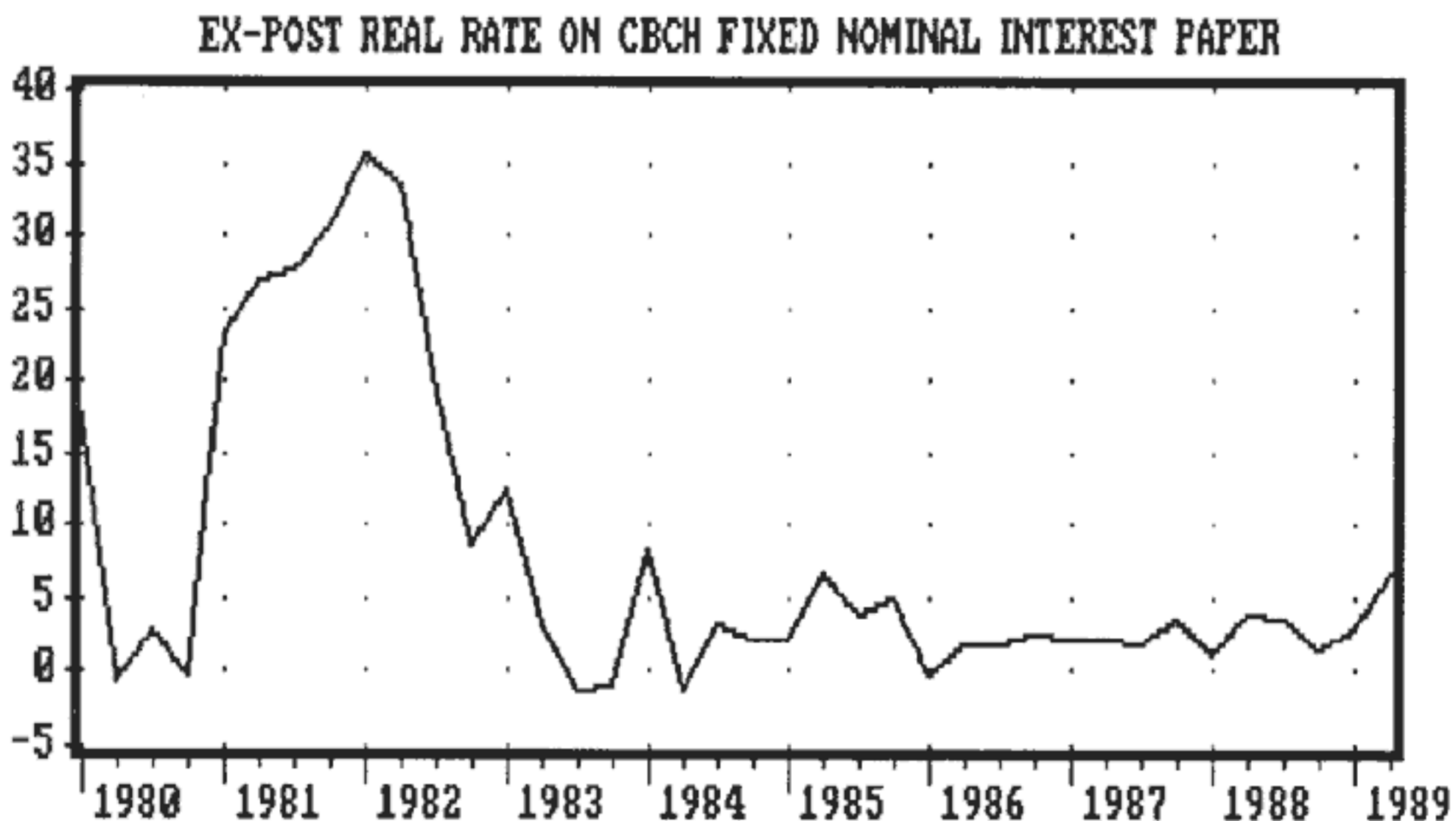
TABLE II.3: ASSETS AND LIABILITIES OF THE CENTRAL BANK
(September 30, 1990. U\$S1 = \$323.9)
(millions of U\$S dollars)

ASSETS	24192.2
=====	=====
NET INTERNATIONAL RESERVES	4292.2
DOMESTIC CREDIT	19900.0
LIABILITIES	24192.2
=====	=====
EXTERNAL DEBT	2631.4
MONETARY BASE	951.7
DOMESTIC FINANCIAL LIABILITIES	13273.2
NET WORTH, PROVISIONS AND RETAINED EARNINGS	7335.9

Most of the Open Market Operations of the Central Bank are done with two instruments, both indexed to the UF: the PRC with maturity of 10 years and the PRBC with maturity ranging from 90 days up to one year. The stock of PRC as of September 1990 was 2593 million dollars and the stock of PRBC was 1020 million dollars.

The Central Bank issues the PRC and the PRBC on demand at a preannounced real interest rate. The CBCH also issues short term instruments (30-90 days) at a nominal interest rate that, since 1983 has been fixed at a level equal to the equivalent real rate of the PRBC plus the Bank's expectation of inflation for the current month. The market considers the nominal short term rate announced by the Central Bank as the best indicator of the expected inflation rate for the month. **The CBCH has helped in maintaining the informational content of its nominal interest rate by never managing it in order to create false expectations about what the actual inflation rate will be.**

FIGURE II.6



In addition to the interest variables, the CBCH also determines the real exchange rate by following a crawling peg rule that devalues the nominal exchange rate by the difference between the domestic and foreign inflation rates. The CBCH also offers short term paper denominated in dollars at a dollar interest rate that stays arbitrated by the peso nominal rate and the devaluation rate that follows from the crawling peg rule.

It is clear that from a formal point of view, the Central Bank of Chile may be generating a macroeconomic inconsistency by trying to control two real variables: the real exchange rate, and the peso real interest rate. By so doing the CBCH loses control on the size of its liabilities (and assets) and therefore, it cannot control permanently the size of the monetary base.

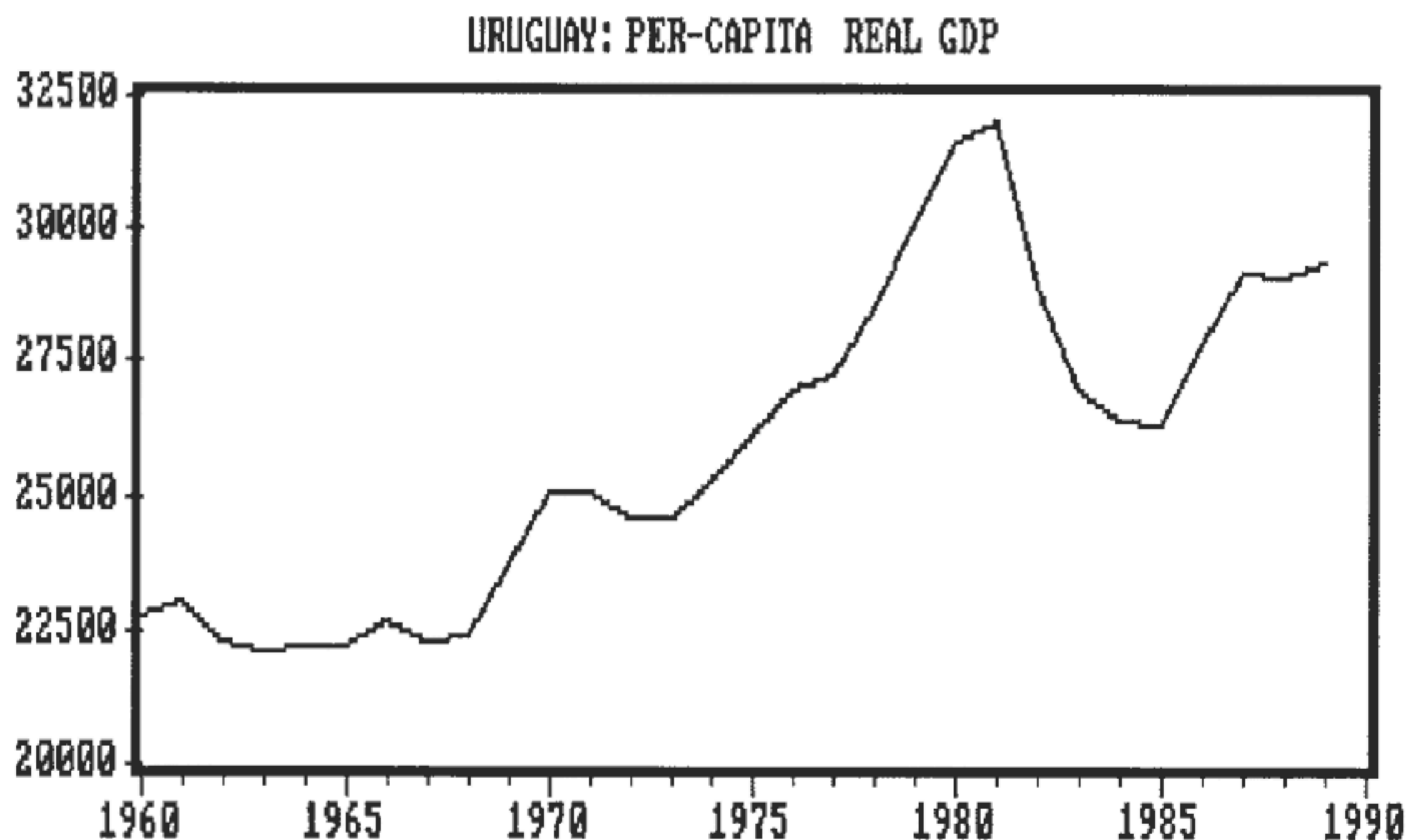
We feel, however, that the indexation of the exchange rate and the interest rate may not be too disturbing if there is a reasonable fiscal environment and the real levels of the pegs are corrected in order to adjust them gradually to their equilibrium values. The problem is when the fiscal side gets well out of line. When that happens, the fiscal imbalance coupled with financial and exchange rate indexation may prove to be an explosive combination. Fortunately, such a situation has not shown up in Chile so far, as authorities are well aware of the need of achieving fiscal balance and endeavour to do so.

III-URUGUAY

III.1 MACROECONOMIC DEVELOPMENTS

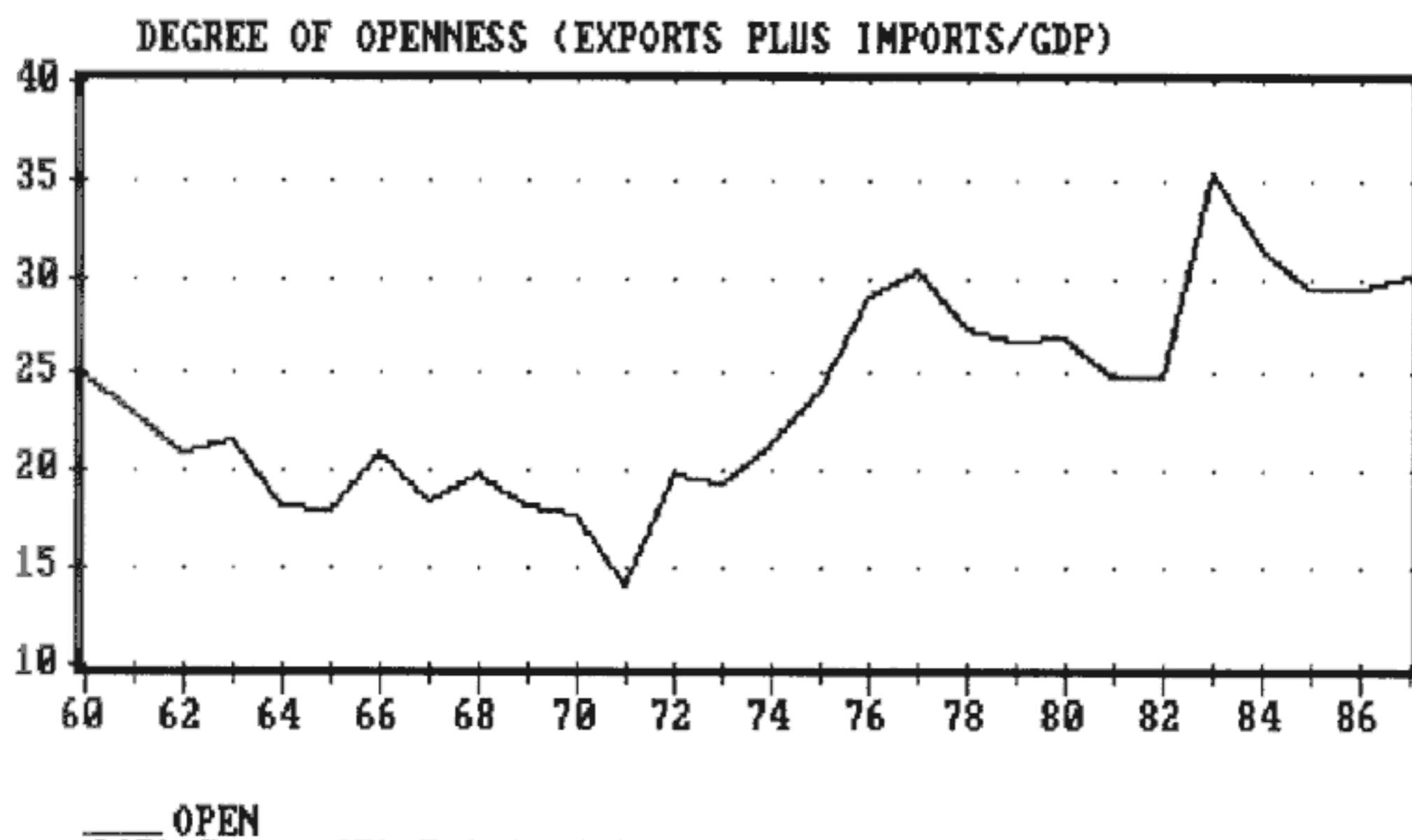
With a per-capita GDP of around 1500 dollars as of 1989, Uruguay has been a fairly stagnant economy in the last three decades. The compound growth rate of per-capita GDP has been a mere 0.9% annual in the 29 years ranging from 1960 through 1989. Like many other Latin-American neighbors, Uruguay experienced during the 1970's a process of Trade and Financial liberalization. While some positive aspects remain from those experiences, much of their effects were washed out by the regional crisis of 1982, that was quite damaging for Uruguay as the economy was heavily dependent on foreign savings and was therefore hardly hit by the reversal in the direction of capital inflows.

FIGURE III.1



The magnitude of the crisis that started in 1982 can be appreciated by the fact that GDP per-capita in 1989 is at the same level as that of a decade earlier. The Trade and Financial liberalization efforts started in 1974 were not followed by further structural adjustment and the economy has reversed into a state of low investment and high government intervention that seriously hampers future growth prospects.

FIGURE III.2



Uruguay is highly dependent on its two bigger neighbors, Argentina and Brazil, both for Trade and Financial flows, legal and illegal. Contrary to them, however, it has not been subject to the huge macroeconomic and social fluctuations that they experienced in the decade of the 80's. Uruguay has not been at the verge of hyperinflation or social unrest and has managed smoothly the political transition from military to civilian government. The currency is totally convertible, the economy is highly dollarized and there is a well functioning offshore currency market that attracts the funds from the unstable neighbors. The Trade Liberalization effort started in 1974 increased significantly the level of trade as a fraction of GDP, from less than 20% in 1973 up to a maximum of 30% in 1977. Since then it has remained around the 30% level (Figure III.2).

The presence of the Government in all levels of economic activity is, however, overwhelming. Financial markets are dominated by Banco de la Republica, that absorbed 46% of all the peso denominated deposits as of mid-1989, sets reference values for the exchange rate and interest rates, collects taxes on foreign trade, virtually controls the level of domestic credit and finally, runs a system of reference prices for imports that in effects acts as a system of quantity restrictions.

Congress also has tended to intervene in economic activity. By a Law of 1985, commercial banks were forced to refinance their loans to the private sector, a factor that has seriously affected the market's credibility about the possibility of future enforcement of property rights and is blamed for contributing to the low level of domestic credit and investment in the private markets.

* The result has been a low investment ratio, that in the last decade probably has barely covered depreciation, moderately high inflation (in the order of 60 to 80% per year), an increasing level of unsatisfied social demands, emigration and reliance on public employment and social security as principal means of survival for the middle and lower classes. Unofficial data indicate that out of a population of 3 million, there are about 650000 recipients of the Social Security System and 250000 Public Sector employees (compared also with a labor force of around 1-1.2 million).

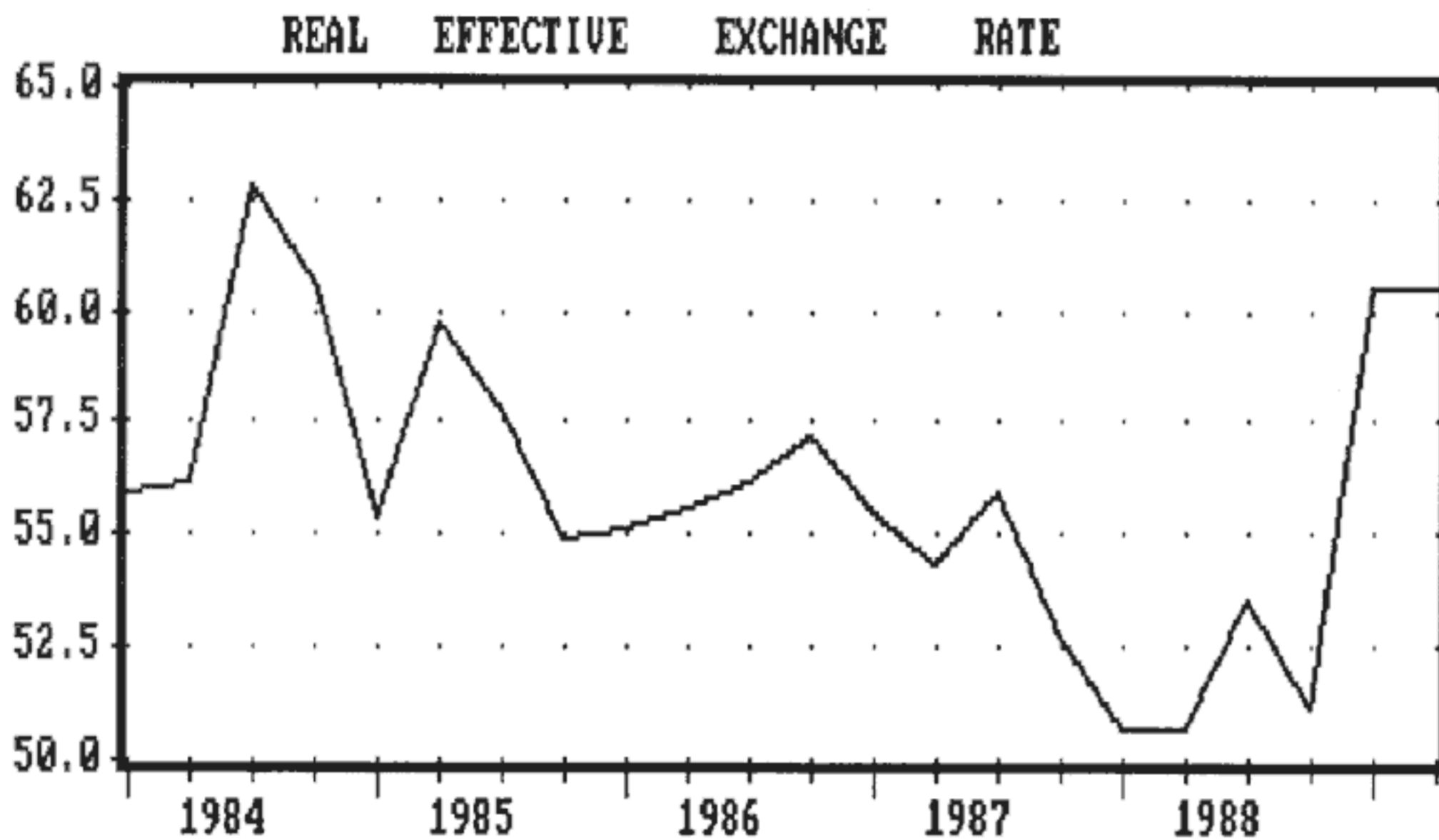
All of the above negative results have taken place in the context of a relatively stable macroeconomic environment, at least for Latinamerican standards. First of all, Uruguay has regularly served its foreign debt, contrary to most of its neighbors. The currency has remained freely convertible since 1974, and the exchange rate policy has been conducted so that there has been no significant swings in the Real Exchange Rate that has oscillated between a minimum value of 50 and a maximum of 60 (base 1982=100). Proof of the current macroeconomic stability of the economy is that the Government sells short term debt denominated in dollars at about LIBO rate (Letras de Tesoreria).

The main problem with the low investment level in Uruguay seems to be related to the lack of financing, i.e. low domestic savings and lack of foreign investors. The uncertainty about property rights mentioned before may be a relevant factor for the apparent unwillingness of residents and foreigners to finance productive investment in Uruguay. There is an important amount of foreign funds invested in the financial market, mainly by Argentines, but this funds are mostly in foreign banks and are actually intermediated offshore and not lent in Uruguay.

III.2 Exchange Rate Policy and Inflation

Since 1974 Uruguay has a convertible currency. The value of the peso is determined in terms of the U.S. dollar. Actual intervention is done by the state owned Banco de la Republica, following directions from the Central Bank. In practice, authorities follow a crawling peg rule aiming at keeping the real parity of the peso against a currency basket.

Figure III.3

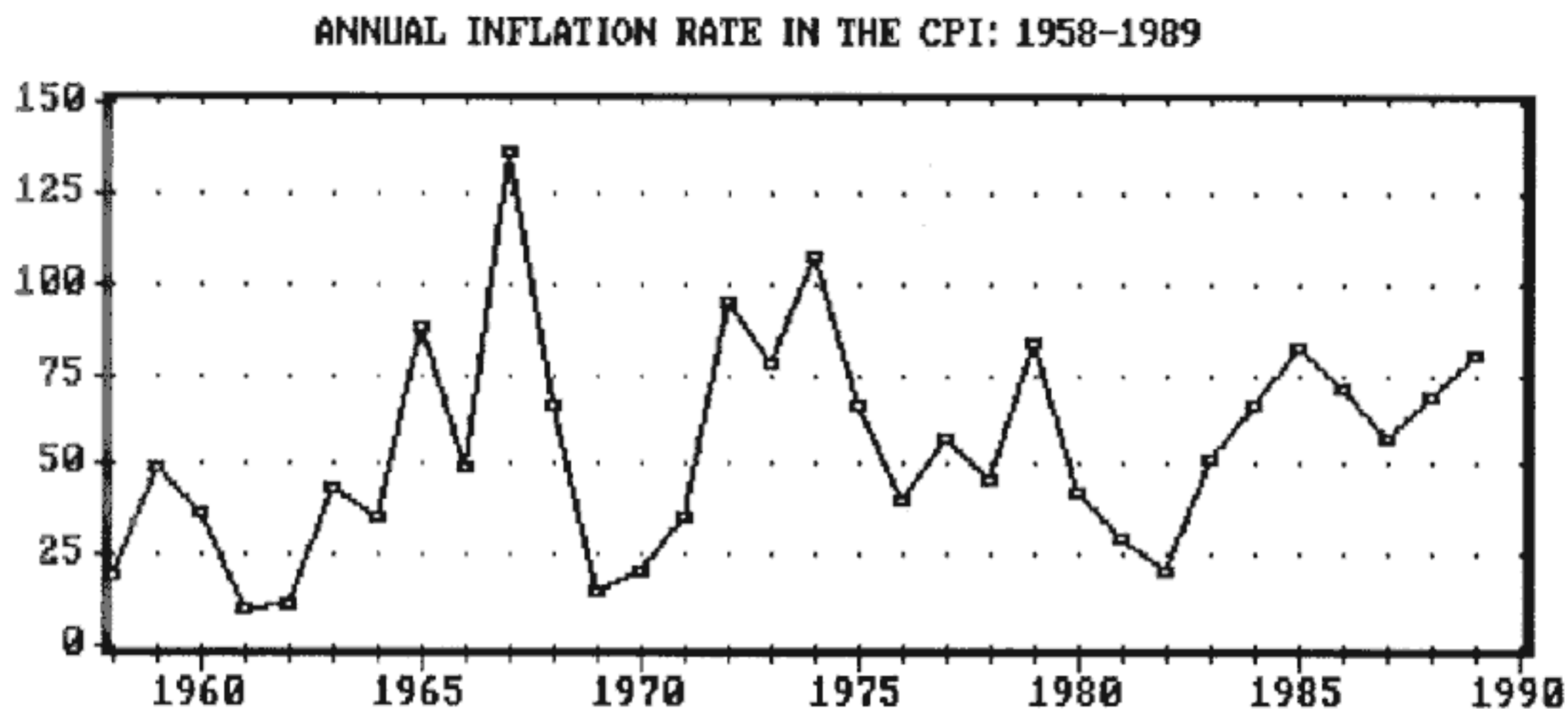


Authorities have been consistent in avoiding adjusting the exchange rate in response to the frequent changes in the exchange rates of the neighbors Argentina and Brazil, particularly in their black market parities that are relevant for the widespread frontier smuggling and tourist flows.

Uruguay has a long history of inflation. The average compound growth rate in the CPI for the period 1950-89 was of 42.8% per year (Figure III.4). Levels below the two digits were attained in only three of those years, all of them in the 1950's. On the other hand, inflation levels in the three digits were attained only in 1967 and 1974. After the implementation of the Trade and Financial Reform package by the then Minister Alejandro Vegh Villegas, inflation fell substantially during the first two years and then reversed to levels similar to those of previous years. Since 1983 inflation has

exceeded 50% per year, a number that even though it seems small when compared with the record of the larger neighbors Argentina and Brazil, it is still too large to be sustainable for an economy that aspires at maintaining a relatively open financial market coupled with currency convertibility.

FIGURE III.4



III.3 Dollarization and the Structure of Financial Markets

Since 1974 the country has experienced a system of freely convertible currency (initially for financial transactions and then unification took place in 1978) coupled with a financial system where deposits can be made in either domestic or foreign currency at market determined interest rates. Interest rates were set freely by the market, although substantial intervention on the part of the official Banco de la Republica has been systematically experienced in both the financial and foreign exchange markets. In 1976, by Law 14500, foreign exchange received the status of legal tender, by allowing commercial and financial transactions to be set and settled in terms of foreign exchange, and there have been no restrictions since then insofar as setting prices or any other type of contract in terms of foreign exchange.

Figure III.5 shows the time path of the share of peso monetary assets (M2: Currency plus peso demand and time deposits) of the public in their total monetary assets (M2T:M2 plus deposits denominated in dollars). As of 1975 the share of peso assets was close to 90% and fell to 58% as of the end of 1977. The process of gradual appreciation of the peso that starts in 1978 generated a positive interest differential in favor of peso denominated deposits that temporarily reversed the dollarization process started in 1974. The ratio of peso assets starts raising in 1978 and climbs up to 78% by Dec.1980. Since then, as the "Tablita" regime approached an end, demand for peso denominated assets started to fall again, a process that accelerated as the Tablita was abandoned in November 1982 and continues up to 1989. From the level of 78% reached in Dec.1980, the ratio of peso assets stayed at 37% as of June 1990.

The persistent fall in the share of peso denominated monetary assets has not been matched by a fall in the real value of total monetary assets (M2T: peso plus dollar assets). In fact, the real value of M2T has increased steadily since 1975 as it can be appreciated in Figure III.6. Real M2T has tripled in the period of 15 years since 1974. While there has been some slowdown in the growth rate since the crisis of 1982, the trend is still positive and certainly larger than the growth rate of the overall economy. What has been observed, therefore, is a gradual process of substitution of foreign money for the highly taxed domestic money.

Figure III.7 may help in understanding the nature of the currency substitution process that has been going on since 1974. The real level of M1, mostly associated with current transactions and the one that is hurt most by inflation remained relatively stable in the initial stages of the dollarization process (1975-1981). It then takes a sharp fall of about 33% during 1982-83, never to recover again. Since the demand for M1 is closely associated to the currency in which transactions are denominated, this apparent once and for all shift in demand for M1 can be interpreted as the result of a permanent shift in the currency composition of transactions rather than as an increase in the velocity of circulation of money broadly defined to include foreign currency holdings.

During most of the 1970's, the financial system was roughly divided between the Banco de la Republica and a group of domestic and foreign banks. Following the financial crisis of 1982 the government declared a moratorium on all banks debt collections that seriously affected bank's profitability and eventually lead to the Central Bank having to intervene the only remaining three national private banks (Comercial, Caja Obrera and Italia). Since 1987 the banking system in Uruguay has one state bank and several foreign banks. **No private national bank remains in operation.**

The high and variable inflation rate coupled with the lack of financial and monetary restrictions has generated a gradual process of currency substitution, away from the domestic currency into foreign exchange, mostly the US Dollar. The availability of substitutes for the domestic currency must have worked toward reducing the welfare costs of the high inflation rate, but at the same time, by reducing the demand for the local currency, it increases the amount of inflation required to finance any given deficit of the public sector.

FIGURE 111.5

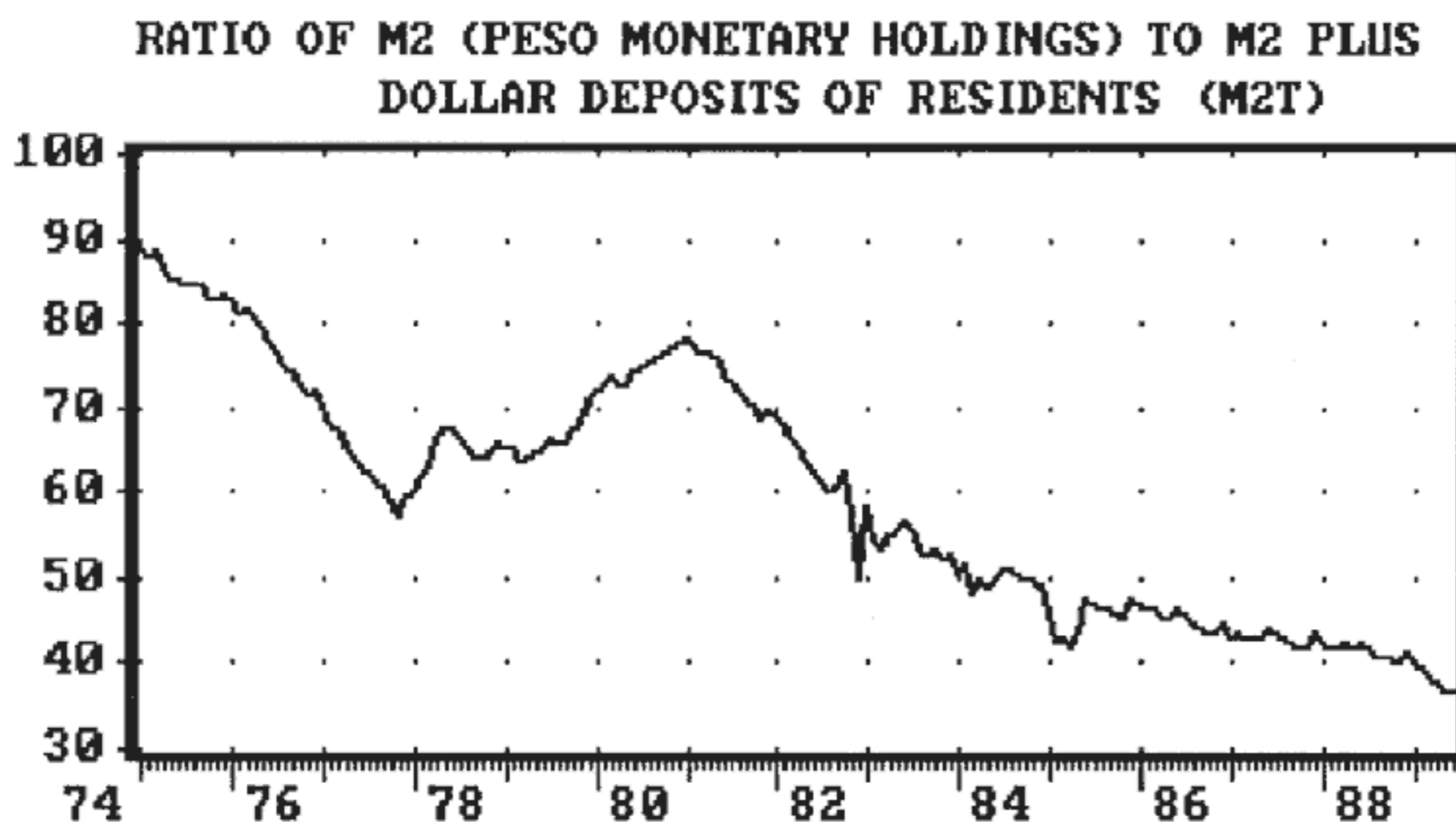


FIGURE III.6

REAL VALUE OF TOTAL MONETARY HOLDINGS OF RESIDENTS
(M2T/CPI)

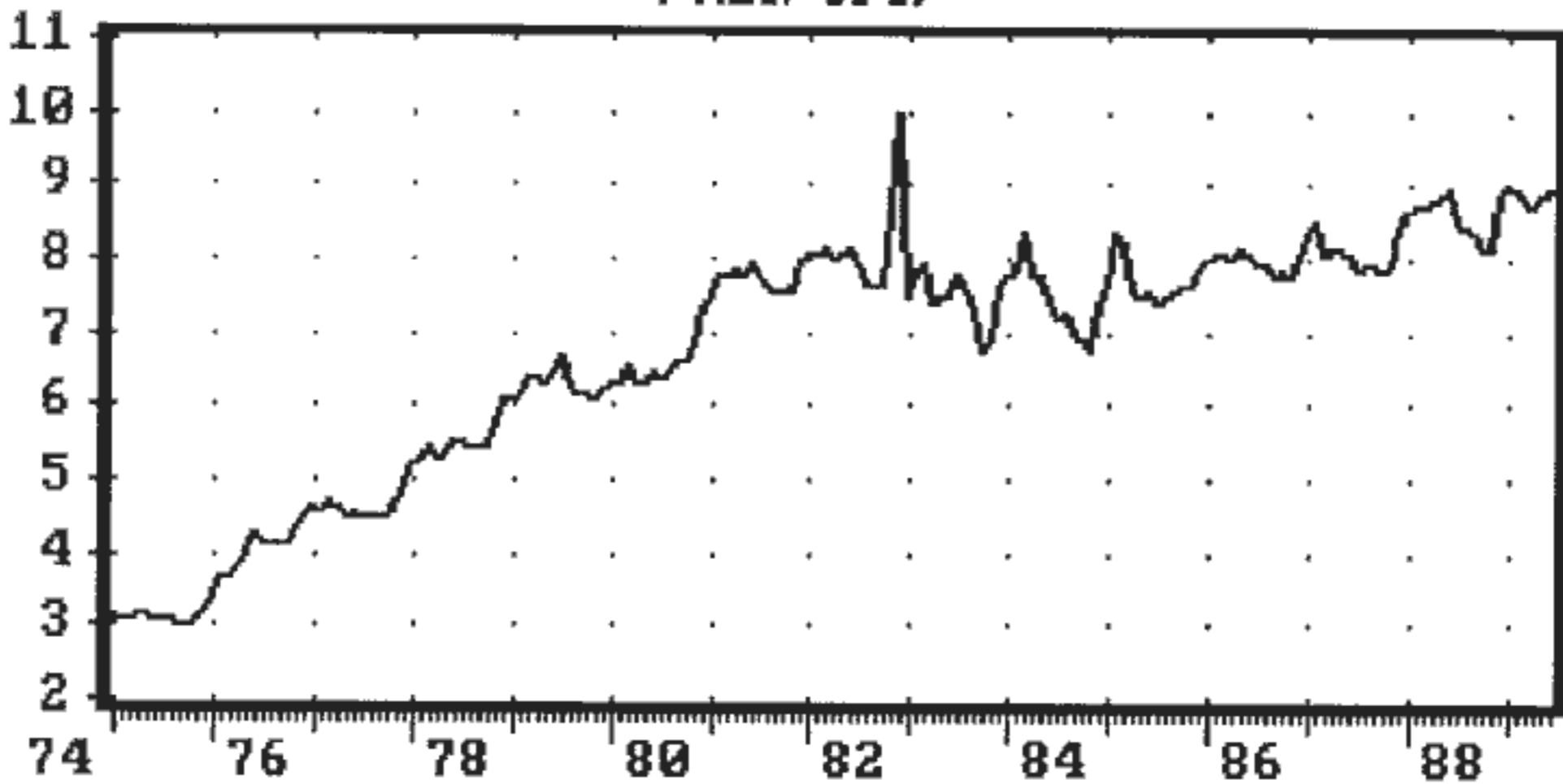
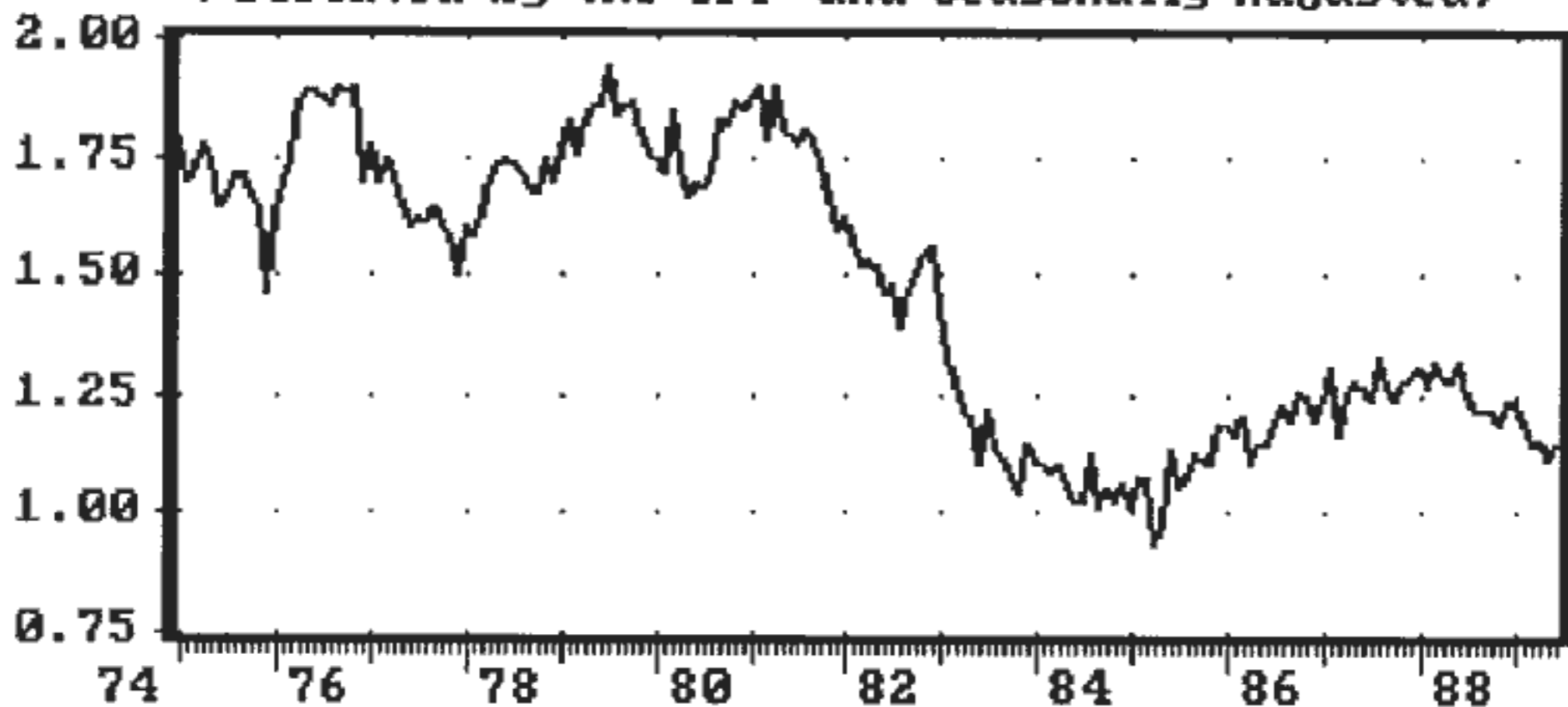


FIGURE III.7

REAL M1 (CURRENCY PLUS DEMAND DEPOSITS ONLY IN N\$)
(Deflated by the CPI and Seasonally Adjusted)

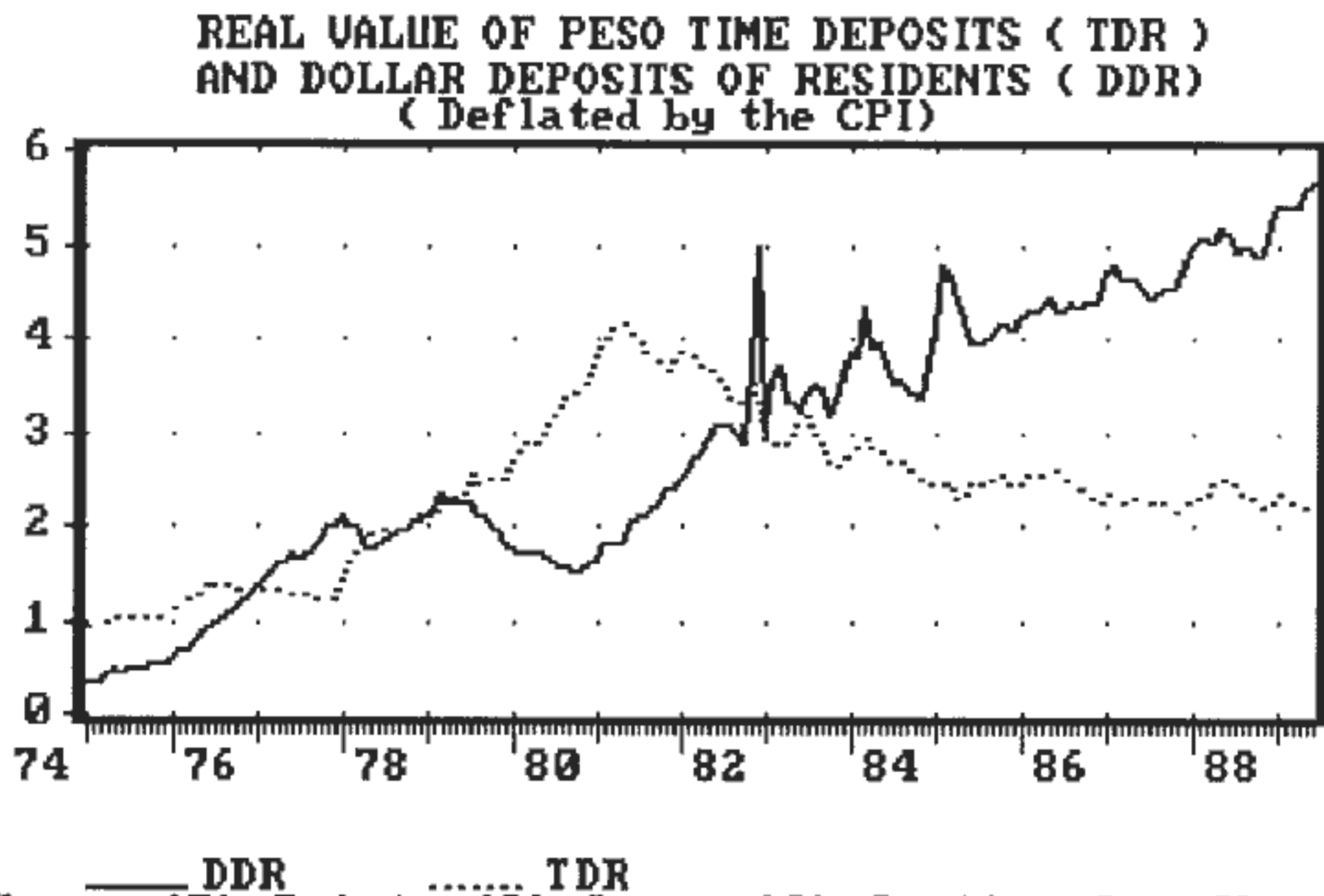


— SM1R

Econometric estimates confirm the existence of a significant downward shift in the demand for M1 starting in 1983, after the abandonment of the Tablita regime.

Figure III.8 shows the behavior of the real stocks of interest earning deposits of residents, denominated in either pesos (TDR) or dollars(DDR). It is apparent that from 1975 up to 1978 both types of deposits grew at about similar rates. From the beginning of the Tablita regime, peso deposits started yielding a more attractive equivalent dollar rate with small risk of devaluation and a process of reverse dollarization started as the public converted dollar deposits into peso deposits. By 1981 the sustainability of the Tablita regime was already under questioning and interest earning dollar deposits started growing again at the expense of peso deposits. This process has not stopped since then as the real value of peso deposits has been systematically falling since 1982 at a compound annual rate of -7.7% while dollar deposits of residents have grown at an annual rate of 11.6% (the period used is-Dec.1981-June 1989).

FIGURE III.8

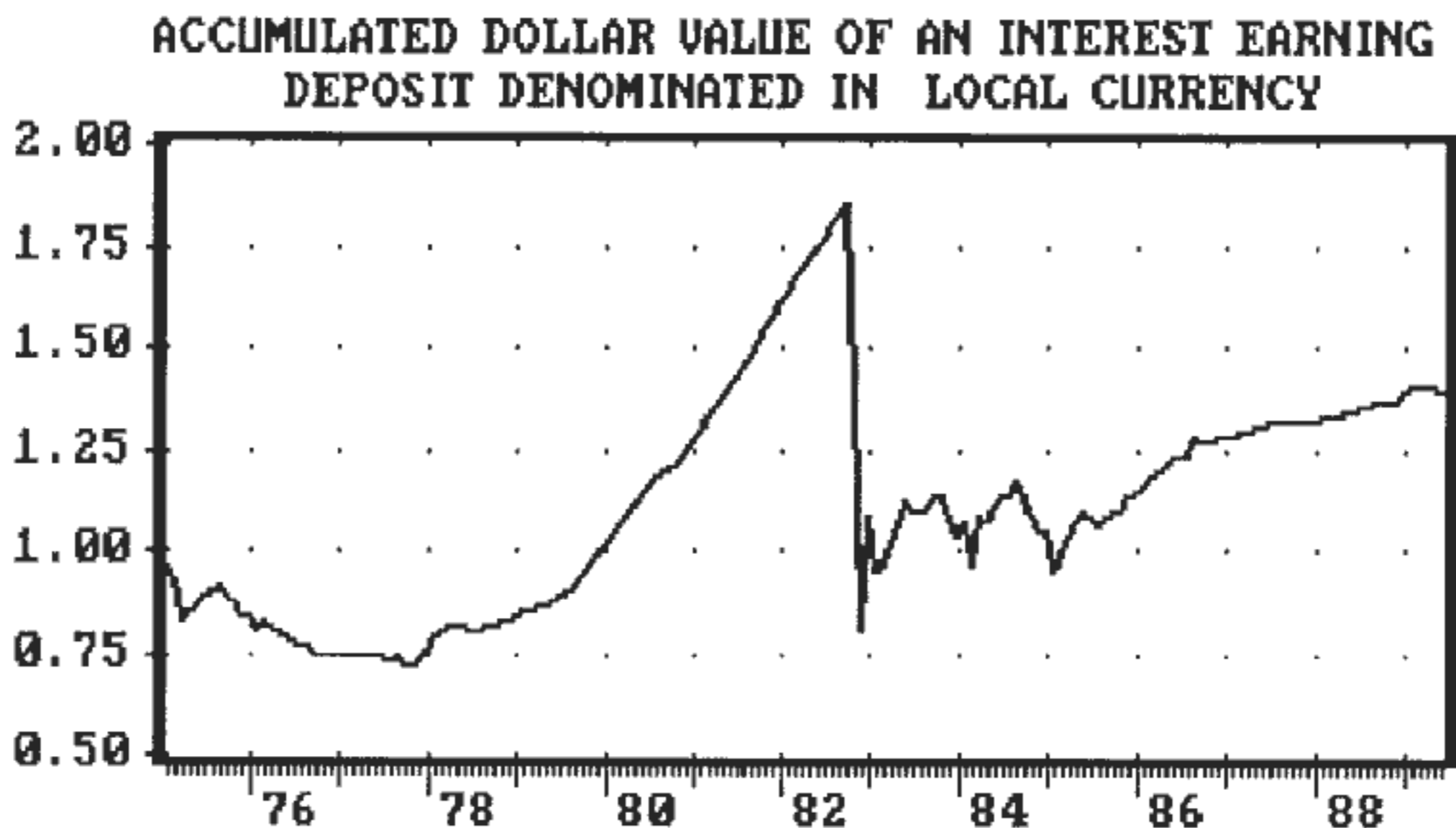


The evidence suggests that Uruguay is experiencing a gradual process of dollarization that starts around 1974 when the legal tenancy of dollars was allowed as well as dollar denominated bank deposits, all in the framework of free interest rates. The dollarization process was further reinforced by the 1976 Law granting foreign exchange the status of legal tender.

The high and variable inflation rate experienced, of course, does not help stop the shift toward the dollar, but the question remains whether this dollarization process would stop at any inflation rate for the peso, or at least until the peso shows signs of being a better currency than the dollar. The public's confidence in the peso was hit hard by the events in 1982. The fall of the Tablita regime implied a large devaluation that wiped out all of the interest earned by peso depositors during the previous years.

An interest earning deposit denominated in pesos made in January 1978 grew from a value equivalent to one dollar to 2.33 dollars by October 1982. In December 1982 that same deposit was worth 1.05 dollar after the sharp devaluations of November and December. The sharp capital loss inflicted by the devaluations of 1982 decreased sharply the public's confidence in the domestic currency and induced a shift away from the peso that was not to find any institutional impediment as the financial freedom remained in place.

FIGURE III.9



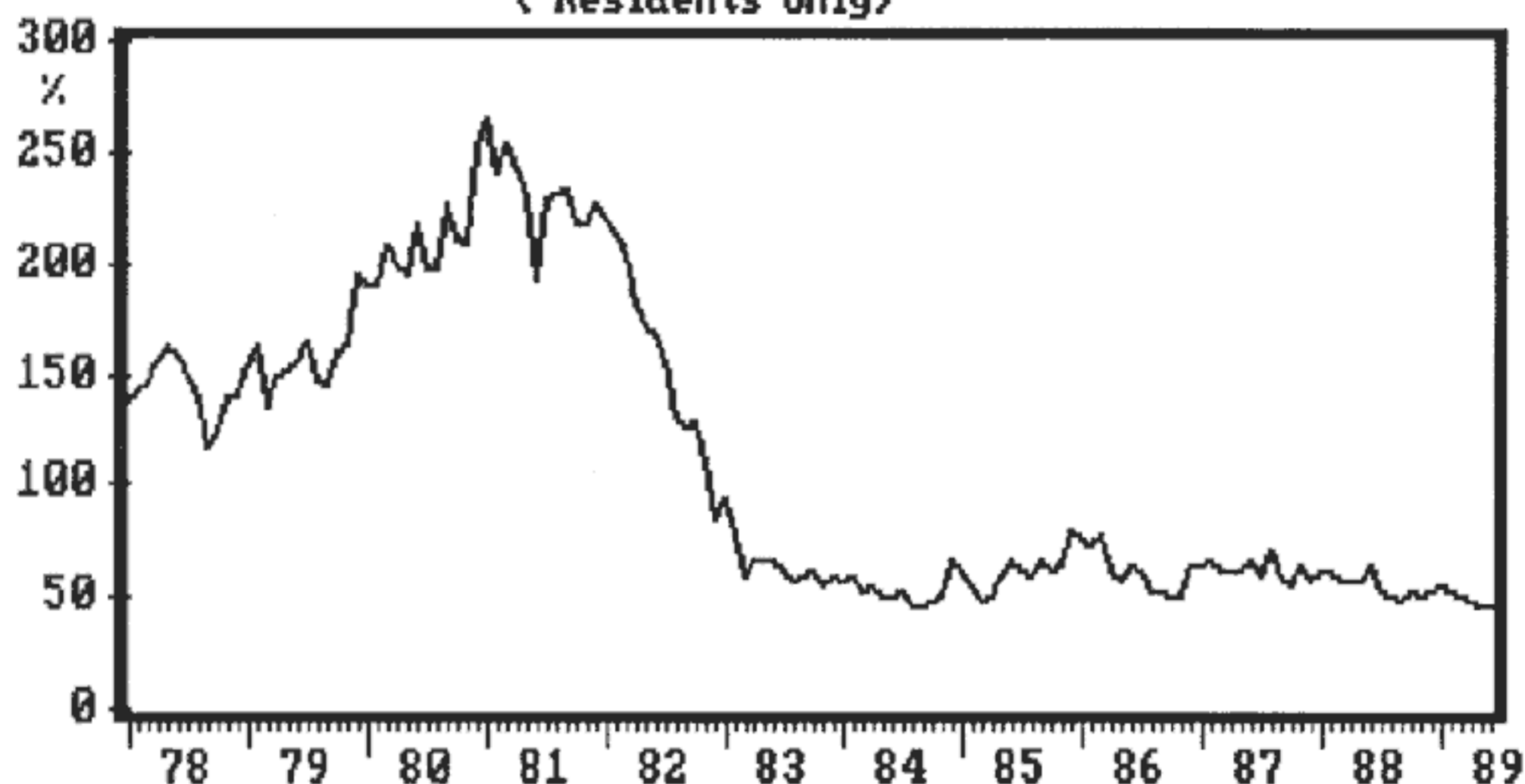
Another indication of the diminished role of the peso for the carrying on of transactions is given by the significant reduction experienced in the ratio of peso to dollar demand deposits. These deposits are clearly associated to transactions motives rather than being held as stores of wealth, since neither pays interest and interest earning accounts are available in either currency. A reduction in the volume of peso checking accounts in favor of dollar accounts is therefore taken as an indication that more transactions are being set and actually paid in dollars.

Figure III.10 shows the behavior of the ratio of demand deposits of individual residents in pesos to dollar demand deposits of residents. This ratio has fallen from a maximum 2.3 in mid-1981 to a low 0.46 in mid-1989. This last value means that only one third of all demand deposits are denominated in pesos, the rest being denominated in dollars.

Given the previous evidence, a meaningful survival of the peso (other than providing for small change) is likely to require the implementation of conditions yielding an inflation rate similar or even smaller than that of the competing international currencies, at present represented by the US dollar. Such an objective could only be obtained through severe controls on the rate of creation of new monetary base as well as on the rate of monetary substitutes such as remunerated Central Bank liabilities.

FIGURE III.10

**RATIO OF DEMAND DEPOSITS IN PESOS TO DEMAND DEPOSITS IN DOLLARS
(Residents only)**



The alternative to the implementation of conditions necessary for the competitive survival of the peso would be the reinstatement of inconvertibility and financial regulations, a step highly dangerous given the actual levels of dollarization of the financial markets, both inshore and offshore, as well as the significant size of the country's external debt. A step towards more financial regulations would surely generate currency runs that could hardly be stopped given the actual financial market structure and Reserve levels.

III.4 Intermediation of Government Debt through the Financial Markets

A-Fiscal Deficits

The fiscal deficit remains as the main determining factor in the inflationary process in Uruguay. The deficit sets inflation and dollarization in motion and then the initial shock is compounded by the indexation schemes and the parafiscal deficit resulting from the higher nominal interest service on the public debt.

Table III.4 reports the annual figures for the deficits of the Non-Financial Public Sector (NFPS) and the estimated Parafiscal Deficit (PFD). The PFD includes all interest expenses of the BCU except interest paid on the deposits of the BROU under the assumption that these deposits are automatically rolled over. No adjustment is made for the amortization component of interest service when there is inflation (local or foreign).

TABLE III.4
DEFICIT AS % OF GDP

	NFPS	PARAFISCAL	TOTAL	GDP
1966	1.30	1.91	3.22	99.63
1967	3.18	2.35	5.53	169.78
1968	0.48	2.11	2.59	374.53
1969	2.51	1.77	4.28	506.07
1970	1.76	1.31	3.08	601
1971	5.82	1.11	6.93	722
1972	2.58	3.62	6.20	1242
1973	1.41	1.09	2.50	2561
1974	4.44	0.68	5.12	4546
1975	4.45	1.11	5.56	8166
1976	2.58	2.91	5.49	12638
1977	1.21	2.10	3.31	19915
1978	1.30	1.74	3.04	30930
1979	-0.21	0.06	-0.15	57625
1980	0.40	1.17	1.57	92204
1981	0.86	2.34	3.20	122453
1982	9.06	5.53	14.59	128696
1983	4.04	3.45	7.50	185006
1984	4.67	3.38	8.06	294359
1985	2.89	2.99	5.88	528152
1986	1.15	2.72	3.87	981097
1987	1.26	2.62	3.87	1753861
1988	1.89	2.39	4.28	2855324
1989	3.20	3.20	6.40	5187000

Source: "Es el Deficit Fiscal Inflacionario?" by Ariel Banda, unpublished paper, Research department, BCU, 1989.

The end result of the continuing deficits is that in recent years the government has resorted to debt financing at rates likely to be unsustainable. Table III.5 shows the evolution of the stock of internal public debt (IPD), a measure of the stock of interest earning debt of the Treasury and the Central Bank that is formed by the sum of the following items:

- (i) Treasury Bonds denominated in dollars,
- (ii) Treasury Bills denominated in dollars,
- (iii) Letras de Regulacion Monetaria denominated in N\$,
- (iv) Interest Earning deposits of BROU at BCU denominated in dollars,
- (v) Interest earning deposits of BROU at BCU denominated in N\$.

The most outstanding fact from Table III.5 is that the stock of internal debt has tripled in the six year period 1983-89, a period during which GDP has remained practically stable and investment has plummeted.

TABLE III.5
COMPOSITION OF THE STOCK OF INTERNAL DEBT
(In millions of dollars)

	Treasury Bonds (U\$S)	Treasury Bills (U\$S)	Let.Reg. Monetaria (N\$)	Deposits BROU (N\$)	Deposits BROU (U\$S)	TOTAL DEBT
1983:12	407	276	6	69	65	824
1984:12	544	401	79	106	59	1190
1985:12	620	510	41	167	50	1388
1986:12	710	574	110	156	60	1611
1987:12	714	738	106	222	127	1907
1988:12	802	912	139	273	187	2312
1989:11	844	953	119	305	258	2480

Source: Statistical Bulletin, BCU.

The fiscal deficit appears as the single most important factor in the determination of the inflation rate. The empirical relation is somehow obscured because in the short run deficits are also financed with debt (denominated in either N\$ or dollars) rather than with money creation. The money creation only takes place later at the time of serving the interest of the debt and shows up in the para-fiscal deficit. The link between the fiscal deficit and the actual money creation is therefore much obscured by the complexities of the uruguayan financial system. Nevertheless, a significant statistical relationship does show up, as discussed in the paper by Banda cited above.

B-The Relation Between the Central Bank and the BROU

The principal channel through which the Central Bank (BCU) borrows from the financial system is through its operations with the Banco de la Republica (BROU). Legally speaking, the BROU and the BCU are not part of government but autarkic institutions and as such one cannot regulate the other. In practice this means that the BROU does not have to comply with the regulations regarding mandatory reserve requirements. However, BROU keeps significant deposits at the BCU, both in pesos and in dollars, all of which are voluntarily paid by the Central Bank a competitive interest rate.

What has actually been happening, is that the BCU used the BROU to conduct the equivalent of open market operations on its behalf: in order to restrict liquidity from the system, the BROU raises deposits from the public and sterilizes them by depositing them at the Central Bank. The same result would have been obtained if the BROU had relent the money and the BCU had floated a new bond for the same amount. This coordinated behavior between BCU and BROU makes difficult to predict the value of the money multiplier since the ratio of reserves to deposits for one of the largest participants, the BROU, really becomes a policy variable and not a predetermined policy variable like it is for the rest of private banks.

Interest earning peso deposits of BROU at BCU are not the only instruments used to sterilize issues of high powered money. In addition the BCU resorts to issuing Letras de Regulacion Monetaria (Monetary Regulation Bills) as a direct mechanism for regulating the stock of liquidity.

Table III.6 shows the composition of the Monetary Liabilities of the Central Bank as of November 1989. Out of the total peso liabilities, only 42.1% are not remunerated and could be considered as High Powered Money for the purposes of computation of the revenue from money creation. The other 58% of peso liabilities may be considered as BCU interest earning debt. Such debt is mostly held by the BROU and represents potential money creation in the case of a run against the bank's deposits. The service of interest on this debt should be considered as part of the operational losses of the BCU and incorporated into the deficit of the Consolidated Public Sector. The fact is, however, that the service of the Monetary Regulation Bills is included in the computation of the "parafiscal" deficit but not the interest accrued on BROU deposits. A uniformity of criteria in this respect would provide a more clear meaning to the concept of "parafiscal" expenditures. The fact that a debt may be more or less automatically rolled over is not enough argument to ignore its existence as it has actually been done with the accrued interest on the BROU deposits at the BCU during the 1980's.

TABLE III.6

BCU: COMPOSITION OF MONETARY LIABILITIES DENOMINATED IN PESOS

	MONETARY BASE		INTEREST EARNING		TOTAL	Share of Base in Total
	Currency	Deposits	Bills	Deposits BROU		
	=====	=====	=====	=====	=====	=====
1984	16.90	1.24	2.03	7.86	28.0	64.7%
1985	29.60	3.75	4.26	20.87	58.5	57.0%
1986	61.10	2.24	19.16	28.11	110.6	57.3%
1987	104.90	5.24	29.26	61.90	201.3	54.7%
1988	158.60	11.17	62.04	122.70	354.5	47.9%
1989*	218.90	17.32	91.40	233.90	561.5	42.1%

Billions of N\$, end of year data.

* As of the end of November 1989.

Source: BCU Bulletin.

The data of Table III.6 also show that the amount of interest earning liabilities of the BCU is growing as a fraction of its total peso liabilities. As time passes, less of the peso system is based on non-interest earning high powered money and more on remunerated Central Bank debt. As the ratio of BCU interest earning liabilities grows, the ability of the BCU to collect inflation tax is reduced. **In the limit, as all of the peso liabilities of the Central Bank end up paying interest, the economy will converge to a system of interest earning money, one where there could be inflation but where there is no room for the inflation tax.** In such a system, the interest paid on money would be paid by issuing more money and the rate of money creation, and inflation, would be undetermined. The data in Table III.6 show that Uruguay is rapidly converging to such a system with the additional complication that the demand for pesos is also falling as dollarization proceeds.

The Velocity of circulation of the non-interest earning monetary base has sistematically increased during the last 15 years, and as of 1989 it has a value of 26 meaning that the monetary base is barely 3.8% of GDP.

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TABLE III.7
INCOME VELOCITY OF THE MONETARY BASE

1975	15.79
1976	13.63
1977	14.97
1978	14.55
1979	19.38
1980	18.84
1981	17.70
1982	17.67
1983	17.34
1984	21.67
1985	20.95
1986	21.68
1987	23.24
1988	23.49
1989	26.09

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The Uruguayan capital markets were extremely disturbed by the events in 1982 and have not recovered since. Other later developments, like the Law of mandatory refinancing of bank loans in 1985, or the official intervention of the only three remaining national banks did not help in the recovery. It is our hypothesis that the fall in money demand and all other forms of financial intermediation in pesos has more to do with a gradual and irreversible dollarization process rather than with an increase in the standard measures of the opportunity cost of holding pesos (nominal interest rates or inflation rates). Our empirical estimates indicate a fall in demand for M1 held by the private sector of around 20% since 1983 that is not accounted for by changes in interest rates or level of economic activity, supporting the hypothesis of the existence of an exogenous shift against the peso.

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