

Economics in Theory and Practice: An Eclectic Approach

Essays in Honor of F. G. Adams

edited by

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CHAPTER 5

COMMODITY PRICE CONTRACTIONS, DEBT AND ECONOMIC GROWTH IN DEVELOPING ECONOMIES: THE VENEZUELAN CASE

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1. INTRODUCTION

One of the consequences of the emergence of the Latin American foreign debt crisis in 1982 has been a growing attention to the problem of the incompatibility between internal economic growth and the honouring of external commitments by heavily indebted countries suffering the effects of a strong deterioration of their terms of trade. The latter problem, in turn, is the result of the collapse of the prices for their main export products, usually a limited gamut of primary commodities, which are particularly subject to extreme price fluctuations.

Venezuela affords a classic case to illustrate this situation. In 1987, hydrocarbon exports (crude oil, refined petroleum products, natural gas, etc.) accounted for 80% of the country's exports of goods and services and nearly 87% of its merchandise exports. This near-total dependence on a single export product makes the country dangerously vulnerable to fluctuations in world prices.

To compound the problem further, there is scarcely a commodity whose prices are more volatile than oil, reflecting a number of factors which vary in an unpredictable fashion – above all for political reasons – and are for the most part beyond the individual exporting country's control.

It is in this context that we propose to examine the options available to a heavily indebted economy such as Venezuela's, following efforts at economic adjustment over the last few years and an acceleration of the decline in the price of its main export product. Our purpose is to attempt to determine the extent to which Venezuela can reasonably expect to continue meeting its foreign debt

obligations and simultaneously achieve an acceptable level of internal economic activity if oil prices continue to slide.

To do so, we have used the "MODVEN VII" macroeconometric model for Venezuela¹ to simulate a variety of oil and debt service scenarios, assuming a near uniform internal economic policy. This simulation yields a number of interesting results, on which our conclusions are based.

The first part of this study consists of a brief historical review of the Venezuelan economy's performance in recent times, which we consider essential to an understanding of its current situation. Thereafter, we proceed to analyse the results of the simulations, followed by the conclusions generated by those results.

2. THE RECENT BEHAVIOUR OF THE VENEZUELAN ECONOMY

The Venezuelan economy has undergone deep changes over the last fifteen years. During that period, it has passed through a series of easily distinguishable and highly contrasting stages.

2.1 The Oil Boom (1974–1977)

This period began with the first large increase in oil prices in late 1973. Its most dramatic feature was the adoption of an ambitious development plan based on the rapid growth of the basic industries and physical infrastructure (aluminium, steel, electrification, etc.) and an improvement and expansion of public services.

In accordance with these ambitious plans, public spending grew copiously throughout the period. But due to the combination of this expansion of spending and the levelling off of revenues after 1975 as oil prices and export volume stabilised, the public sector budget fell into deficit by the end of the period.

The larger public spending had the effect of monetarising a large part of the country's oil income, as well as the inflow of funds obtained through large scale external borrowing from 1976 onwards. The latter funds were used to finance part of the public investment projects as well as the budget and current account deficits that appeared at that time.

As a result of that massive injection of funds into the economy through public spending, combined with the easy credit generated by a stimulative monetary policy, private demand grew as vigorously as public throughout the period. From 1975 to 1977, real private consumption rose at an average of 9.9%, and real gross fixed private investment grew at an annual rate of 24.6%.

Productive activity naturally responded to this expansion of demand. Production in such varied sectors as manufacturing, trade, transportation, and others enjoyed real growth rates of over 10%. Construction, for its part, reflected the extraordinary expansion of demand for non-tradeable goods by growing at a rate of more than 20%.

In spite of this, overall demand still rose much more rapidly than internal supply of goods and services; this incongruity created a growing macroeconomic disequilibrium. Under such circumstances, inflation could be kept under control only by a combination of strict price controls and subsidisation of basic consumer goods, and (more importantly) a very rapid growth of imports to complement the insufficient supply of tradeable goods. Since imports could not alleviate inflationary pressure on non-tradeables, prices for the latter expanded at rates of over 50% in certain years of the period.

As imports continued to grow while oil exports declined slightly and then stabilised, Venezuela's external accounts inevitably suffered. The current account fell from a surplus of US\$ 5.760 billion in 1974 to a deficit of US\$ 3.179 billion in 1977. That is why, at the end of the oil boom in 1977, the Venezuelan economy suffered from multiple disequilibria, not only in the budget and external accounts, but also in the input markets, particularly labour.

In this latter case, excess demand in relation to supply, especially of skilled and semi-skilled labour, resulted in a situation of pervasive absenteeism and high rates of personnel turnover. Labour productivity naturally declined.

2.2 1978–1982: Crisis and Recession

The Venezuelan economy fell into a crisis in 1978. The weakening world oil market depressed prices, thereby aggravating the existing disequilibria in spite of the fiscal and monetary discipline the authorities tried to impose in mid-1977. Those efforts could not prevent the consolidated public sector budget deficit from continuing to grow, while the current account external deficit reached a level of US\$ 5.7 billion, equivalent to no less than 14% of the country's gross domestic product. Under such circumstances, widespread expectations of a devaluation of the currency came into being, and stimulated a massive flight of capital out of the country.

At this critical juncture, the Venezuelan economy was rescued by *the second oil boom of 1979–1980*, provoked by the Iranian revolution and the temporary withdrawal of that country from the world oil market. The new increase of oil

prices corrected some of Venezuela's economic disequilibria, though it did not produce a new bonanza on the scale of the first oil boom. Hydrocarbon export income rose drastically, just as imports began to decline due to the completion of a number of large scale investment projects. The current account came into the black in 1979, and yielded a surplus of US\$ 4.7 billion the following year.

However, in spite of the considerable growth of oil revenues and the central government's persistent efforts to control public spending, the public finances continued in deficit. According to Palma (1985), the principle cause was the continued large scale rise in spending by the decentralised public sector. The state-owned enterprises accounted for the greater part of that increased spending, as new or expanded productive plants built with the massive investments launched during the oil boom came on stream.

Spending expansion by the decentralised public sector was brought under control in 1981, but this time, central government spending rose sharply to stimulate internal economic activity, which had stagnated since 1979 in spite of growing real consolidated public spending. It was financed with the surplus funds held by the oil industry abroad, generated by its increasing export sales in the preceding two years.

Nevertheless, the stimulative effect of rising public spending in the 1979–1981 period was neutralised by a sustained contraction of private demand. Real gross fixed investment fell by an annual average of 21.6%, while real private consumption per capita declined by 2.2% on the average in the same period. Private consumption fell mainly because of the continuous decline in the purchasing power of the population, generated by higher unemployment and a contraction of real wages due to rising inflation.

The collapse of private investment reflected that contraction in consumption, the considerable increase of productive capacity created by the massive investments in plant and equipment during the oil boom years, and the increasingly attractive opportunities for investment of funds abroad as international interest rates reached very high levels.

A large portion of the resources injected into the economy by the rising public spending was transferred abroad, in spite of the disappearance of devaluation expectations after oil prices recovered in 1979. Capital flight reached massive proportions for several months in 1981, when the monetary authorities, in a deliberate attempt to stimulate capital outflow in order to keep the growing public spending from rekindling inflation, reduced local interest rates to levels

below those prevailing abroad.

In August 1979, the economic authorities of the incoming administration of President Herrera Campins decided to remove the strict price controls imposed by the previous government, thereby permitting the inflationary pressures repressed by those controls to materialise. This measure reinforced the effects of an across-the-board wage increase in early 1980 and rising costs of production, both internal and external, to force prices up at the unprecedented rate of 21% that year. The impact of this inflation rate can best be appreciated by comparing it with the moderate rates prevailing during the oil boom of 1974–1977 (averaging slightly more than 8%), and an average of only 1.8% during the 1960s and early 1970s.

The distortion of relative prices created by that surge in internal prices, while the exchange rate remained frozen at Bs/US\$ 4.30, led to a growing overvaluation of the bolivar, as a result of which the purchasing power parity index rose to 117 in 1981, from its base value of 100 in 1979.

This largely explains why imports continued at very high levels in spite of the general stagnation of the economy. Merchandise imports did fall somewhat in 1979, due to the conclusion of investment projects begun during the oil boom. But they began to grow again the following year, and rose at ever increasing rates in 1981 and 1982. As a result, imports of goods and services were equivalent to 32% of gross domestic product throughout this period. This is a very high level, far above those prevailing prior to the oil boom (20% on average in the 1960s and early 1970s).

However, the country could afford to import on this massive scale and to export large amounts of private capital while still conserving substantial international reserves, due to growing oil exports and large foreign borrowing. To illustrate this, at the end of 1981 Venezuela's liquid foreign assets² were close to US\$ 17 billion.

2.3 1982–1983: Weakening of the Oil Market, Capital Flight, and Exchange Control

The situation changed in 1982, when a weakening world oil market depressed Venezuela's oil exports and it became increasingly difficult to obtain foreign loans. The inflow of foreign exchange fell, while the outflow continued to rise as imports reached a historic high and capital flight intensified, no longer due to interest rate incentives (at this time, local rates were higher than external ones),

but due to growing expectations for a devaluation of the bolivar as a result of the new external disequilibrium. However, in spite of this serious deterioration of the country's external accounts, the exchange rate was maintained at Bs./US\$ 4.30, and no exchange restrictions were imposed (see Rodriguez, 1987).

As a result Venezuela's foreign liquid assets suffered a severe contraction, falling from US\$ 16.937 billion at the end of 1981 to US\$ 8.954 billion by the end of 1982. The loss of international reserves intensified still further at the outset of 1983, until the hemorrhage was finally stopped on February 18 by the imposition of exchange controls and a system of multiple exchange rates for commercial operations; financial transactions remained free of regulation, but subject to a floating exchange rate. These measures put an end to the system of free convertibility at a fixed exchange rate in force for almost 20 years.³

Table 1. International Financial Assets (Billion US Dollars).

	1981	1982*	1982**
Central Bank of Venezuela	8.619	7.084	10.039
Venezuelan Investment Fund	2.452	1.521	1.521
Commercial Banks	0.338	0.064	0.064
Subtotal (International Reserves)	11.409	8.669	11.624
PDVSA	5.528	0.285	0.285
Total	16.937	8.954	11.909

Note: Excludes PDVSA's Accounts Receivable

* Gold valued at \$42.22 per Troy ounce

** Gold valued at \$300.00 per Troy ounce

Source: Central Bank of Venezuela, PDVSA, MetroEconomica

Since the Central Bank automatically receives more than 90% of the foreign exchange generated by the country's exports – the State is the major exporter, of oil, aluminium, etc. – the exchange control regime has meant in practice the administration of the foreign exchange earned by the State. Policies have been adopted to limit access to those foreign resources on the part of importers and other private buyers.

The difficulties of obtaining dollars at preferential exchange rates, the large inventories of imported products accumulated in 1982 when imminent devaluation was expected to occur, and a severe recession throughout 1983, permitted imports to contract that year by no less than 52.8%.

2.4 1984–1988: From Adjustment to Recovery with External Crisis

It was widely believed that the low level of imports in 1983 would be unsustainable in the long run, and that imports would necessarily rise again in the years to come, due to the structural dependence of the national economy on foreign inputs. But in fact, imports recovered by 13.3% in 1984, and then stabilised in nominal terms in 1985, contracting once again in real terms.

This reflected the continuation of the economic recession provoked by the austerity policy adopted by President Lusinchi's administration in its first two years (1984–85). That policy, in turn, was a pre-condition for the restructuring of the public foreign debt, even though it was not necessary for Venezuela to reach a formal agreement with the International Monetary Fund.

However, in 1986 and 1987 imports grew only marginally, in spite of a significant real GDP growth in those years, reflecting a fiscal expansion aimed at rescuing the economy from its prolonged recession (beginning in the late seventies, and intensifying in 1983–1984).

In fact, real imports of goods and services, expressed in per capita terms and per unit of GDP, have contracted every year since 1983 except for a slight increase in 1984, and by 1987 they were below their 1973 level. This means that these real imports are smaller now than before the oil boom. (See Figure 1)

Moreover, Venezuela achieved a substantial current account surplus from 1983 to 1985, sufficient to offset the deficit in the capital account and rebuild the international reserves from the very low level to which they had fallen in early 1983. By the end of 1985, those reserves stood at US\$ 15.478 billion⁴, equivalent to more than 25 months of merchandise imports. More than US\$ 3.854 billion had been added to the 1982 year-end reserves.

However, the situation took a drastic turn for the worse in 1986, when the collapse of world oil prices cut Venezuela's oil revenues by more than 43%, while the country made very high net foreign debt service payments (principal and interest less new loans), amounting to over 54% of its hydrocarbon exports and 41% of its total exports of goods and services.⁵ As a result, international reserves contracted by US\$ 3.8 billion in that year, some 25% of the total.

The country's foreign reserves continued to contract throughout 1987, though more slowly than in the previous year. This was due basically to an improvement in oil exports generated by the recovery of world prices and to a reduction in net foreign debt service payments achieved through an important increase in credit lines for imports.

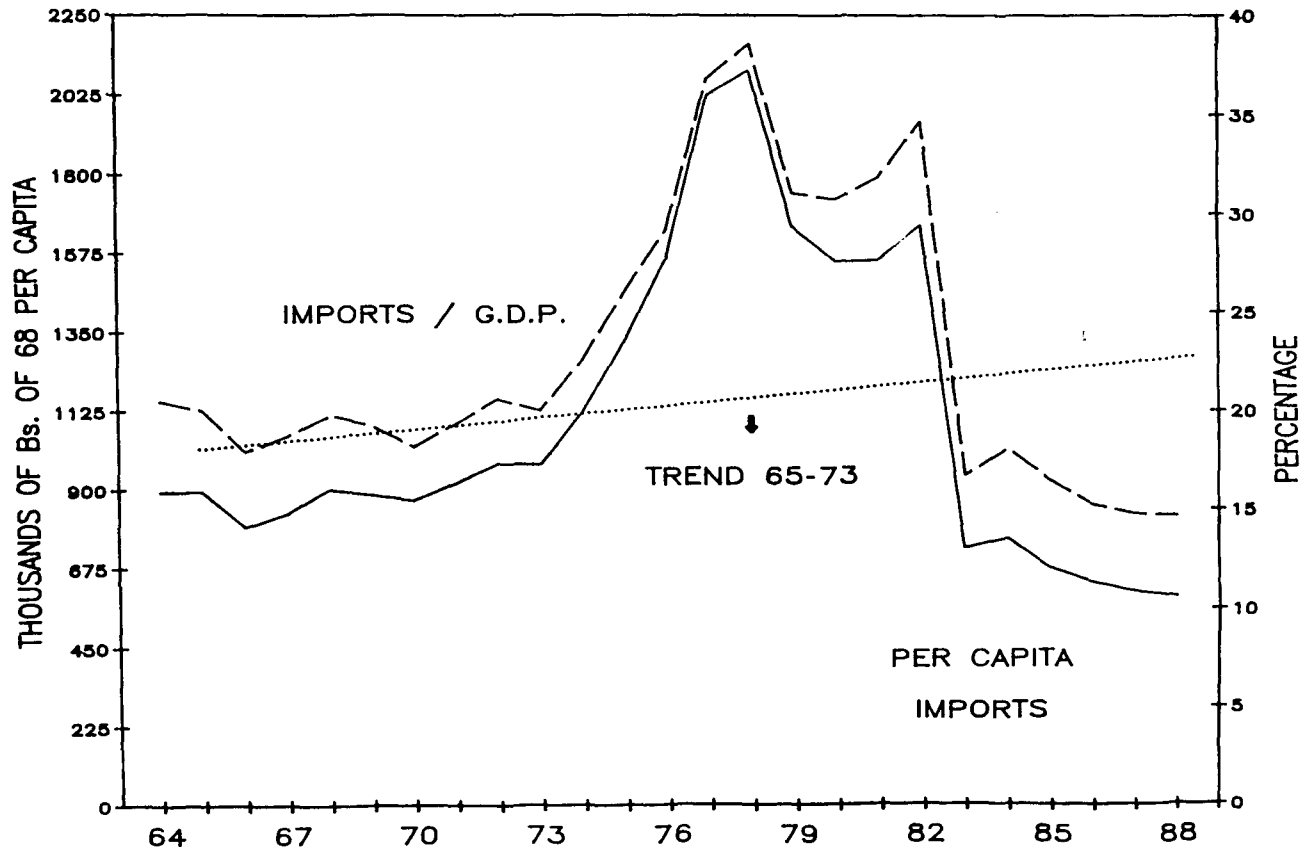


Figure 1. Per Capita Real Imports and Real Imports/Real GDP Ratio

However, the situation worsened again in the early months of 1988, when oil prices fell once again and importers found increasing difficulty in obtaining new credit lines. Liquid international reserves held by the Central Bank and the Venezuelan Investment Fund had fallen by about US\$ 1.2 billion in the first third of the year. As a result, almost 63% of the country's liquid reserves, and 38% of its total international reserves, had been lost in only 28 months (January 1986 to April 1988).

Table 2. International Reserves (Billion US Dollars)

Period	VIF	Central Bank		Total Central Bank + VIF		
	Total	Operat.	Total	Liquid	Others	Total
December 1985	1.748	8.207	13.746	9.955	5.539	15.494
December 1986	1.837	4.273	9.858	6.100	5.585	11.685
December 1987	1.385	3.518	9.376	4.903	5.858	10.761
April 1988	0.693	3.033	8.939	3.726	5.906	9.632
Variation						
April 88—Dec. 85:						
Absolute	-1.055	-5.174	-4.807	-6.229	0.367	-5.862
Percentage	-60.4%	-63.0%	-35.0%	-62.6%	6.6%	-37.8%

Note: Liquid reserves are defined as the sum of the Central Bank's operative reserves and the VIF's reserves.

Source: Central Bank of Venezuela and MetroEconomica

Different preferential rates have been periodically raised since exchange controls were imposed. The most drastic of those devaluations came in December, 1986, when the rate for most controlled transactions went up from Bs./US\$ 7.50 to Bs./US\$ 14.50. A devaluation on this scale (93%) was viewed as excessive, since correction of local currency overvaluation at that time required a much more moderate adjustment of the exchange rate.⁶

For its part, the free market rate has risen over the entire period of exchange controls, though there have been brief periods of decline and stabilisation. It has always been substantially higher than the preferential rates, at times more than double. (See Figure 2)

It will not be surprising that this situation has had an adverse impact on the economy. The level of internal prices, in particular, reflects a growing influence of the free market rate, which means that the economy has been undergoing a process of "dollarisation": more and more prices are set in terms of dollar costs at the free market exchange rate for the bolivar.⁷

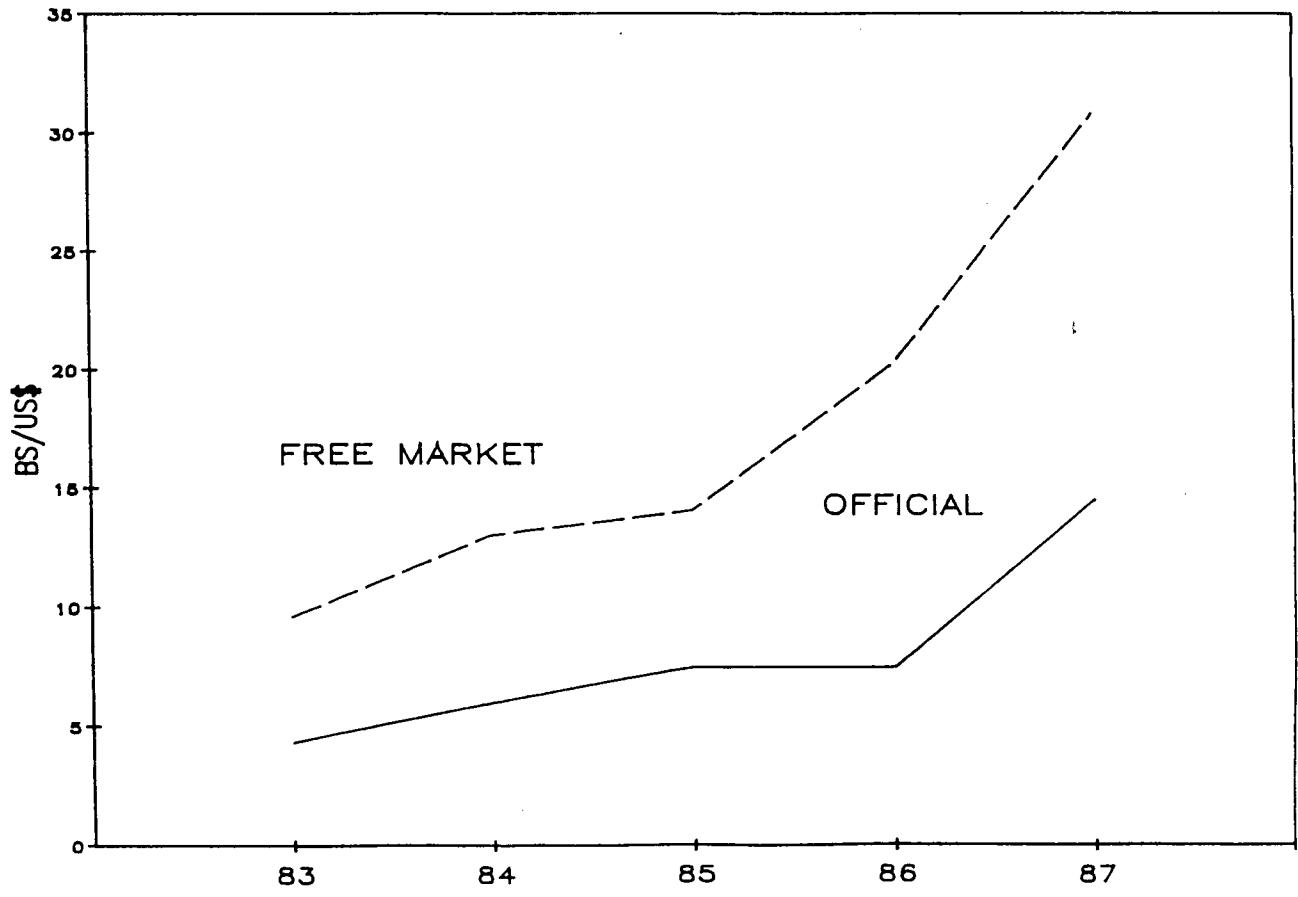


Figure 2. Exchange Rates

Inflationary pressure rose after the adoption of exchange controls, except in 1983, which saw the smallest rise in internal prices in the last fifteen years. That was due to the strict election-year price controls, politically justified by the fact that most of the products sold that year had been imported previously, at the traditional exchange rate of Bs./US\$ 4.30, or produced with raw materials and inputs purchased abroad at that exchange rate. A large portion of the country's imports continued to be made with foreign exchange at the old rate even after exchange controls went into effect that year.

However, *inflation* became stronger in 1984 and thereafter, though it was moderated by a number of factors: 1) the nature of the devaluation of the controlled exchange rate for imports; 2) price controls; and 3) the weakness of internal demand – especially real private consumption – in those recession years when demand continued to fall in per capita terms due to the deterioration of the population's purchasing power.

The last two factors depressed profit margins, since the combination of price controls and falling sales volumes prevented business from passing rising production costs along to final prices. In fact, the sustained contraction of real personal disposable income since 1979 not only provoked an uninterrupted decline in real per capita consumption for more than six years (1979–1985), but also increased the price elasticity of demand.

Under those conditions, producers generally preferred to narrow their profit margins and absorb a part of their rising production costs rather than raise prices, fearing that any increased income from such a measure would be more than offset by its impact on volume.

Inflationary pressures increased somewhat in the second half of 1986 as consumption recovered in response to a fiscal expansion adopted in late 1985, and rising expectations for devaluation and inflation. The negative real interest rates stimulated credit demand in order to finance advance purchases in a widespread anti-inflationary strategy of consumers.

This rise in demand was not totally matched by growing supply. In part, this reflected a shortage of imported raw materials and inputs. The fall of oil prices generated strong expectations of future devaluation and intensified the demand for dollars at the preferential exchange rate. This led the government to strengthen its exchange controls, delaying or entirely preventing many needed import transactions. The difficulty of obtaining controlled dollars, in turn, generated growing pressure on the free market, where the exchange rate rose very

rapidly.

However, the continuation of strict price controls and the persistence of a high price elasticity of demand for basic products prevented this increased inflationary pressure from fully expressing itself, with the result that the inflation figure for 1986 remained at the same level as that of the preceding two years.

1987: A Year of Strong Inflation

The relative price stability of the preceding years was broken in 1987, when Venezuela suffered its highest known inflation rate.⁸ The 93% devaluation of the bolivar imposed in December 1986, combined with a generalised increase in production costs, wages among them, contributed to increasing prices. Additionally, an increase in private consumption created by the across-the-board wage and salary increase decreed by the government in late April 1987, a stimulative fiscal policy, and a growing demand for real estate and durable goods in response to anticipated inflation, also stimulated price hikes.

Durable goods consumption was also stimulated by the freezing of interest rates at artificially low levels bearing no relationship to the higher expected inflation. This further aggravated the problem of negative real interest rates.

The December 1986 "maxi-devaluation" led to widespread expectations of an inflation rate in the neighbourhood of 30% for 1987, since private companies were thought to be unable to continue absorbing rising production costs by narrowing their profit margins. At the same time, interest rates remained frozen at their 1985 levels, averaging 10% for deposits and 13% for loans. The contrast between these two sets of figures furnishes an idea of the magnitude of the negative real interest rates in effect at that time.

Just as the prevalence of negative real interest rates provided a powerful stimulus to speculative borrowing, they also discouraged saving. As a result, the flow of deposits into the financial institutions dried up, particularly for the mortgage banks and the savings and loan associations. The Central Bank reacted to this disequilibrium in the financial market by trying to raise interest rates to more reasonable levels, but it could not do so, due to the government's refusal to tolerate such a measure.

Government spokesmen argued that to do so would damage productive sectors of the economy, especially construction, and that more expensive credits would make it impossible for a large part of the population to acquire housing or to continue paying their existing mortgage obligations.

When it found itself unable to raise interest rates, the Central Bank tried to cope with the inflationary danger implicit in the excess demand for credit by adopting a restrictive monetary policy. It not only reduced the volume of its discounts and advances to the financial institutions, but raised the interest rate offered by its over-night financial facility in order to soak up the banks' excess reserves and thereby limiting their ability to extend credit to private customers.

These measures created a tight money environment which, in conjunction with the artificially low controlled interest rates, led to the appearance of a parallel financial market with rates much higher than the official ones.

The shortage of liquidity, together with stricter price controls, helped to moderate inflation in the opening months of 1988. It also forced many private companies to sell dollars on the free market to meet their need for bolivars, which contributed to an initial stability of the exchange rate: it remained in the neighbourhood of Bs./US\$ 30.00 for several months, after having reached Bs./US\$ 36.00 in September 1987.

That stability was all the more surprising in view of the precipitous decline in the country's foreign reserves and the pessimistic expectations for the oil market prevailing throughout this period.

We can conclude from the previous analysis that recent economic policy in Venezuela has been characterised by a lack of coherence and consistency, and an absence of clear goals. Economic decisions are often made in isolation, responding more to specific short term political goals, rather than to economic objectives.

3. IMPACTS OF DIFFERENT OIL SCENARIOS

Three alternative macroeconomic scenarios for the 1988–1991 period are simulated, reflecting the effects on the Venezuelan economy of different degrees of long term weakness in the world oil market. These estimations should not be taken as real alternative forecasts for the Venezuelan economy, but only as comparative exercises that can give information on the possible reactions of the economy under different alternatives.

The differences among these scenarios are expressed in terms of prices and physical volume of exports. The aim of this exercise is to shed light on the courses of action available to Venezuela under conditions of adversity.

Economic policy in all three scenarios does not differ substantially from the one implemented in recent years. However, we assume some efforts by the authorities to rationalise public spending in order to prevent the consolidated

Table 3. Oil Assumptions

	1988	1989	1990	1991
Price (US\$/barrel):				
Base Scenario (optimistic)	16.1	16.9	18.2	19.5
Intermediate Scenario	14.0	14.7	15.8	17.0
Pessimistic Scenario	12.0	12.6	13.5	14.5
Value of Exports (Billion US\$):				
Base Scenario	8.681	9.385	10.189	11.336
Intermediate Scenario	8.130	8.837	9.680	10.512
Pessimistic Scenario	7.108	7.805	8.635	9.437

public sector deficit from running entirely out of control, but at the same time, trying to keep the economy from falling into a deep recession.

It is also established that Venezuela will continue to serve its public foreign debt under the terms of the current agreements, and that new foreign loans will show an upward tendency throughout the simulated period, but of moderate proportions.

3.1 Results of the Simulations

Naturally, a contraction in oil exports would make itself felt first and foremost in the balance of payments and public finance. It is the main cause of the deteriorating current account balance and the intensifying pressure on the country's international reserves, of which US\$ 2.3 billion more would be lost under the intermediate scenario, and US\$ 5.7 billion under the pessimistic scenario, than under the more favourable base scenario.

Under the less favourable scenarios, oil revenue would be severely depressed, and public sector finances would reflect that downturn in their most important revenue source. The cumulative income of the oil industry would be 5.6% lower under the intermediate scenario than under the base scenario, and the contraction would reach a full 15% under the pessimistic scenario, for the entire period simulated.

Our assumption of an attempt by the authorities to rationalise public spending without reducing it to the point of provoking a serious recession implies that the budget deficit would continue to increase. The cumulative deficit over the 1988–1991 period would equal 4.3% of cumulative gross domestic product under the base scenario, 5.5% under the intermediate scenario, and 7.5% under the pessimistic scenario. But in all three cases the deficit would shrink as a

percentage of GDP.

Table 4. Balance of Payments and International Reserves (Billion US\$)

	1988	1989	1990	1991
Current Account Balance:				
Base Scenario	-0.679	0.773	1.461	1.983
Intermediate Scenario	-1.347	0.141	1.032	1.369
Pessimistic Scenario	-2.580	0.801	0.319	0.914
Overall Balance of Payments:				
Base Scenario	-1.885	-0.839	-0.005	1.253
Intermediate Scenario	-2.554	-1.470	-0.435	0.639
Pessimistic Scenario	-3.786	-2.412	-1.147	0.184
International Reserves:				
Base Scenario	8.624	7.785	7.780	9.033
Intermediate Scenario	7.955	6.485	6.050	6.680
Pessimistic Scenario	6.722	4.311	3.164	3.348

Table 5. Public Deficit as Percentage of GDP

	1988	1989	1990	1991 Cumulative	
Base Oil Scenario	10.4	4.2	4.0	1.4	4.3
Intermediate Oil Scenario	11.4	5.2	5.0	3.0	5.5
Pessimistic Oil Scenario	11.3	7.2	6.9	5.0	7.5

Note: The Public Deficit is defined as the difference between the current revenues and total outlays of the Public Sector as a whole, including total public debt service payments, both internal and external.

These figures reflect the assumption of identical changes in the exchange rate for all three scenarios. But if the more adverse scenarios result in deeper devaluations, the deficit figures would be lower, since more internal revenues would be generated, either in the form of the exchange profits earned by the Central Bank or in that of higher taxes paid by the oil industry.

By the same token, if the currency were devalued in proportion to the variation in oil prices assumed by each of the scenarios, the higher relative costs of imports under the less favourable scenarios would probably provoke somewhat larger contractions of imports than herein projected.

However, real imports would not be very far from the figures yielded by these

simulations, since their price and product elasticities are close to unity, as a consequence of the drastic contraction of imports since 1983 (see Section 2.4) and the gradually rising use of import substituting industrial capacity.

Curiously, at the beginning of the period, imports are higher under the intermediate and pessimistic scenarios than under the more favourable base scenario. This near J-curve effect reflects the lower relative prices of imports under the more adverse scenarios, produced by the difference between internal and external inflation rates. As a result – assuming identical exchange rates in all three scenarios – the prices of domestic products would rise faster than those of foreign goods, thereby providing a stimulus to imports.

Table 6. Merchandise Imports and Trade Balance (Billion US\$)

	1988	1989	1990	1991
Merchandise Imports:				
Base Scenario	8.506	8.192	8.682	9.678
Intermediate Scenario	8.601	8.238	8.565	9.418
Pessimistic Scenario	8.768	8.102	8.184	8.752
Trade Balance:				
Base Scenario	1.702	3.030	3.674	4.127
Intermediate Scenario	1.043	2.403	3.233	3.488
Pessimistic Scenario	-0.173	1.448	2.483	2.966

However, in the later years of the period imports are slightly lower under the intermediate and pessimistic scenarios than under the base scenario, since the moderating effect of the lower levels of production is greater in absolute terms than the effect of lower relative prices.

That tendency would be further reinforced by the stricter controls on the supply of foreign exchange for imports which can be expected, in an attempt to cope with the persistent contraction of international reserves, more intense in the adverse scenarios. This could be so not only because of the fall in oil earnings, but also due to the limited availability of foreign loans that we assume, particularly in the early years of the studied period.

Throughout the period, inflation varies directly with the degree of adversity projected in each scenario: the more adverse the scenario, the higher the inflation rate. The prime cause is the greater expansion of the money supply under the more adverse scenarios, resulting in turn from the monetarisation of the larger budget deficits, which we assume would be financed for the most part by the

Central Bank.

This growing injection of funds into the economy to finance the budget deficit more than offsets the contraction of the monetary base provoked by the loss of international reserves. That is to say, the absolute effect of the monetarisation of the deficit is larger than the contraction of the monetary base as the Central Bank's international reserve holdings dwindle.

Another inflationary factor which is stronger in the more adverse scenarios is the more serious shortage of foreign exchange, which restricts imports and, consequently, internal production, thereby widening the gap between supply and demand.

Table 7. Consumer Price Variations (Percentages)

	1988	1989	1990	1991
Base Oil Scenario	15.4	20.0	20.5	21.7
Intermediate Oil Scenario	18.0	22.4	22.2	24.1
Pessimistic Oil Scenario	22.8	26.7	25.4	25.7

Productive activity, for its part, would suffer from a combination of difficulties which are also more severe under the less favourable scenarios: on the one hand, public sector demand would be depressed by lower revenues, in spite of all efforts to keep public spending from falling too drastically; on the other, private consumption would be constrained by larger contractions of real personal disposable income provoked by higher inflation and unemployment.

This explains the differences in the non-oil GDP growth rate. After a contraction in 1989 due to the implementation of adjustment policies that we assume for the first year of the new Administration, real GDP growth becomes moderately positive in 1990 and 1991 under the base scenario, remains virtually stagnant under the intermediate scenario, and actually contracts under the pessimistic scenario. However, in this last case the real GDP contraction of the first two years (1988–1989) is severe due to the direct impact of the oil price contraction on the economy during that period.

Unemployment rises quite substantially in the more adverse scenarios, to the point where a rate of over 14.3% is projected for the last year of the period under the worst of the three scenarios. Even these figures, as serious as they are, do not reflect the whole impact of declining growth rates on the labour force, since they indicate open unemployment only among the economically active population.

Table 8. Growth of Real Non-Oil GDP and Unemployment (Percentages)

	1988	1989	1990	1991
GDP Growth Rate:				
Base Scenario	1.0	-1.6	1.8	1.9
Intermediate Scenario	-0.8	-2.6	0.5	-0.2
Pessimistic Scenario	-4.0	-5.7	-1.7	-1.4
Unemployment Rate:				
Base Scenario	10.00	11.17	11.65	11.92
Intermediate Scenario	10.06	11.49	12.24	12.78
Pessimistic Scenario	11.19	12.14	13.38	14.33

However, they do not reveal the pervasive underemployment, formed by the group of workers who are underpaid or perform labour below the level appropriate to their education, ability, or skills. Naturally, underemployment also rises in the more adverse scenarios.

3.2 Options for Handling the Consequences of Lower Oil Prices

The figures shown above lead to the question of what Venezuela can do to cope with the consequences of a serious deterioration of its terms of trade provoked by falling prices on the world oil market.

One available response is the *diversification and growth of non-oil exports*. And Venezuela has considerable potential in this area, which still remains to be fully developed. However, it is dubious that the concentration of the nation's efforts on a strategy of expansion of non-oil exports is the most effective way to overcome the short term effects of a crisis created by a sharp contraction of export prices.

The crisis demands rapid and effective action, whose benefits would be felt immediately. For an economy without an export tradition (except in oil), such as Venezuela's, a broad based export strategy requires a substantial length of time to take root and then begin to yield concrete results. In the application of that strategy, exchange rate manipulation is only one of the essential components, and needs to be complemented with actions of other kinds.

It is of course necessary to adopt policies aimed at promoting "outward growth" through the development of a solid export sector, in order to reduce the country's external economic dependence and the vulnerability resulting from its reliance on highly unstable oil exports, in the medium term. But non-oil export promotion is not the way to correct the immediate effects of the oil crisis.

One alternative to that strategy is the *implementation of a more severe adjustment policy*, intended to reduce the economy's need to import. But as the results of the simulations outlined above indicate, the contraction of imports to be expected from a reduction of the level of economic activity under the more adverse scenarios is quite limited.

In fact, imports amount to a slightly larger percentage of GDP under the more adverse scenarios than under the optimistic base scenario, though the differences are only marginal. These figures support our conclusion that, following the drastic contraction of imports since 1983, there is only limited opportunity to reduce them still further (see Section 3.1).

Consequently, still other alternatives need to be explored in order to face the sudden effects of a drastic contraction of export prices. One of the most promising would seem to be a reduction of the country's net foreign debt service payments. This goal could be accomplished either through a reduction of the payments themselves, or through an offsetting inflow of new external credits, or a combination of both.

3.2.1 Limitation of Foreign Debt Service Payments

To examine the results of a reduction of foreign debt service payments, our three alternative scenarios were simulated once again, maintaining the oil assumptions as discussed above, but introducing a change in the external finance assumptions under which net foreign debt service payments would be limited to 20% of exports of goods and services.

As a result, net payments on the country's total foreign debts would fall by 27% under the base scenario, 30% under the intermediate scenario, and 37% under the pessimistic scenario, from the level assumed in the previous calculations. The funds thus saved could then be allocated to internal public spending under a more stimulative fiscal policy than would be viable under the conditions simulated before. With a larger injection of funds into the internal economy, growth would be more vigorous and unemployment less widespread than in the case of the previous simulations.

These new simulations yield more favourable results for the external sector of the economy. Even under the most unfavourable oil scenario, the contraction of international reserves is less pronounced; they would fall to only US\$ 6.742 billion by the end of the period, equivalent to nine months of merchandise imports, in contrast to the figure of US\$ 3.348 billion, equivalent to less than 5

Table 9. Average Rates of Growth and Unemployment (Percentages)

	Growth of Non-Oil GDP	Unemployment
Scenarios Assuming Debt Service Payments Under Current Agreements:		
Base Scenario	0.73	11.19
Intermediate Scenario	-0.79	11.64
Pessimistic Scenario	-3.22	12.76
Scenarios Assuming Debt Service Payments Equal to 20% of Exports:		
Base Scenario	0.88	10.67
Intermediate Scenario	-0.47	11.11
Pessimistic Scenario	-2.67	11.93

months of merchandise imports, under the same scenario in the original set of simulations.

Most of the improvement comes in the capital account of the balance of payments, since the bulk of the reduction of debt service would take the form of postponement of principal payments.

This change of assumptions would yield higher rates of internal inflation, since the smaller contraction of the Central Bank's international reserves would allow both the monetary base and the money supply itself to grow more rapidly. However, the larger expansion of high power money might well be neutralised – and we assume it would be – by a reduction of the Central Bank's financial assistance to the banking system.

Table 10. International Reserves (Billion US\$)

	1988	1989	1990	1991
Scenario Assuming Debt Service Payments Under Current Agreements:				
Base Oil Scenario	8.624	7.785	7.780	9.033
Intermediate Oil Scenario	7.955	6.485	6.050	6.680
Pessimistic Oil Scenario	6.722	4.311	3.164	3.348
Scenario Assuming Debt Service Payments Equal to 20% of Exports:				
Base Oil Scenario	9.664	9.727	10.231	11.360
Intermediate Oil Scenario	9.083	8.603	8.761	9.391
Pessimistic Oil Scenario	8.013	6.770	6.400	6.742

Still another factor acting to limit inflation is the ability to import more due to the increased availability of foreign currency. This would not only prevent the appearance of supply bottlenecks for domestic industry, but would also discourage price increases for tradeable goods. As a result of those offsetting factors, inflation would not be markedly higher than in the original simulations.

3.2.2 An Alternative Treatment for the Public Foreign Debt

One of the conclusions that can be drawn from the experience of the foreign debt crisis over the last few years is that successive reschedulings of payments, as applied since 1982, cannot produce a definite solution to the problem.

The interminable negotiations merely extend the time frame, in the hope that a viable alternative, acceptable to all the parties and permitting a true solution to the problem, might emerge in the future. That is the only benefit yielded by the persistent search for another, more appropriate and functional, way to approach the debt crisis, that has been carried on over the last few years.

Among the many proposals put forward in international financial circles, one of the most interesting is the Mexican plan to purchase US\$ 20 billion of its foreign debt at 50% discount, offering 20-year dollar-denominated Mexican government bonds in exchange. The face value payment of these bonds at their maturity would be guaranteed by zero-coupon bonds issued by the United States Treasury, which could be purchased by the Mexican government at a discount of about 80%.⁹

However, the first attempt to put that operation into practice was not very successful. Mexico bought only US\$ 3.665 billion of its debt, at a discount of about 30%, for which it issued 20-year bonds for US\$ 2.557 billion.

Among the reasons for the limited success of the Mexican plan is the inflexibility of the banking regulations, particularly those of the United States, which require creditor banks to record the amount of the discount at which they are willing to sell debts owed to them as a loss incurred at the time they announce their willingness to participate in the scheme, even if the operation is not realised.

Furthermore, the regulations require the banks to change the form of valuing their assets when they accept bonds in exchange for debts; in this case they must value the bonds at their market price. Since the Mexican bonds were likely to be heavily discounted by the market, due to the risk involved in the absence of a guarantee of interest payments, the acceptance of those bonds by the banks

would imply further substantial accounting losses.

The relative failure of this interesting experiment has led to a number of suggestions for ways to make it more viable. In this context, we have made certain proposals intended, among other things, to develop a way to guarantee payment of the interest or yield of the bonds issued by debtor governments. If the bonds were fully secured, creditors would be more willing to accept them in exchange for the original debts.

In our proposal, an international financial institution such as the World Bank would play an important role: it would collect the funds for the regular payment of interest from the debtor countries which have issued the bonds, and transfer those payments to the bond holders. At the same time, it would borrow funds from industrialised countries enjoying a financial surplus (such as Japan and Germany, and certain others) to create a fund for financial assistance to the debtor countries.

That assistance could take the form of long term loans for the purchase of the zero-coupon bonds issued by the US Treasury if the debtor country in question does not have sufficient international reserves for that purpose, or that of the opening of contingent lines of credit to guarantee the payment of the interest on the debtor country's bonds. Those lines of credit would be activated if the country found itself temporarily unable to make its payments. The debtor country would serve this debt towards the international agency on the basis of a pre-established schedule of payments.

A scheme such as this would make it possible for debtor countries' debts to be bought at their market value, with a substantial discount, which would permit a reduction in their international financial obligations.

Their foreign debt service would also decline considerably, since during the next twenty years, they would pay only the interest or yield on the bonds (which in turn, would have a face value of about half the amount of the original debt), plus the cost of the financing granted by the international institution for the purchase of the zero-coupon bonds that would back the face value payment of the debtor's bonds at maturity.

In addition, the implementation of this proposal would make it much more feasible for the creditor banks to participate in a debt-for-bond swap, since the guarantee of both principal and interest payments of the bonds would raise their market value to a more reasonable level, making them more acceptable to banks and easier to market.

However, no such plan would be viable without the political support of the authorities of the industrialised countries; they would have to make their banking regulations more flexible and create conditions more conducive to participation in debt conversion schemes.¹⁰

3.2.3 Results of the Application of the Proposed Debt–Bond Conversion Plan

To analyse the possible medium term effects of the implementation of the proposal for the conversion of foreign debt to bonds on the Venezuelan economy, the three oil scenarios were simulated once again, with a public foreign debt service scheme much like the one outlined above.

The new simulation assumes that the entire Venezuelan public foreign debt held by private banks (approximately US\$ 20 billion) would be purchased at a 50% discount, in exchange for 20-year bonds issued by the Venezuelan government for a total of US\$ 10 billion. These bonds are assumed to yield the LIBO rate plus 1% per annum.

We also assume that the Venezuelan government would borrow a sum equivalent to 50% of the cost of the zero-coupon bonds it would have to acquire to guarantee the face value payment at maturity on its bonds from the international financial institution in question. The said zero-coupon bonds could be bought at a discount of about 80%.

That is to say, Venezuela would have to pay US\$ 2.0 billion to purchase US\$ 10 billion of 20-year zero-coupon bonds, of which it would contribute US\$ 1.0 billion from its international reserves and borrow the rest from the international financial institutions. There would be no principal payments on that loan during the period covered by our simulation, and the interest is assumed to be at the LIBO rate.

The accumulated foreign debt service payments under this plan are even smaller than those which would be required under the scheme of limiting net payments to 20% of exports. Even in the case of the pessimistic oil scenario, which would involve the lowest debt service payments under that scheme, the payments would still be higher than under the debt–bond conversion plan. However, in our case the first year outlays under the debt–bond swap plan would be higher since we assume that 50% of the zero-coupon bond payment would be covered with international reserves.

Consequently, even under the most adverse oil scenario, the total volume of international reserves at the end of the period, in 1991, would be higher than if

Table 11. Total Net Foreign Debt Service Payments (Billion US\$)

	1988	1989	1990	1991
Scenarios Assuming Debt Service Under Current Agreements	3.729	3.846	3.612	3.029
Scenarios Assuming Debt Service Equal to 20% of Exports				
Base Oil Scenario	2.249	2.465	2.706	3.012
Intermediate Oil Scenario	2.136	2.348	2.595	2.832
Pessimistic Oil Scenario	1.926	2.130	2.369	2.595
Scenarios Assuming Debt Service Under Debt-Bond Swap Plan	*2.743	1.786	1.919	1.829

* Includes payment of US\$ 1.0 billion from international reserves for purchase of zero-coupon bonds.

net foreign debt service were limited to 20% of exports. Under the debt-bond conversion plan, Venezuela would retain US\$ 7.3 billion in international reserves at the end of 1991, which is equivalent to 9.5 months of merchandise imports.

The country would therefore be in a better position to cope with further deterioration of the oil market, although its international reserve holdings would still be limited, and it would still be impossible to use them more freely to import at the level required to stimulate domestic industry without substantially increasing the country's vulnerability to future oil crises.

Table 12. International Reserves at End of 1991 Under Pessimistic Oil Scenario (Billion US\$)

	International Reserves	Months of Imports
Debt Service Under Current Agreements	3.348	4.6
Debt Service Equal to 20% of Exports	6.742	9.0
Debt Service Under Debt-Bond Conversion	7.297	9.5

By the same token, the results for economic activity as measured by the rate of growth of non-oil real GDP are less unfavourable under the more adverse oil scenarios, since the retention of more foreign exchange would make it possible to inject more funds into the domestic economy instead of transferring them abroad. This would permit the adoption of more stimulative economic policies. Unemployment is also lower in this case than in the previous simulations.

Table 13. Average Annual Rate of Growth of Real Non-Oil GDP and Average Unemployment Rate Under Pessimistic Oil Scenario (Percentages)

	Growth	Unemployment
Debt Service Under Current Agreement	-3.1	12.8
Debt Service Equal to 20% of Exports	-2.7	11.9
Debt Service Under Debt-Bond Conversion	-2.0	11.5

However, even under the most favourable schemes for debt service, rates of growth are still strongly negative in the adverse oil scenarios. This implies that the reduction of foreign debt service payments would only serve to mitigate somewhat the impact of a sustained weakness of oil prices, but would not entirely neutralise it.

Just as in the previous case, inflation is not noticeably affected by the change in the form of handling foreign debt service. The reasons are those already discussed in the context of the 20% of export limitation option (see Section 3.2.1).

4. CONCLUSION

This study reveals the extreme vulnerability of heavily indebted developing economies which are largely dependent on the export of a product whose price can fall drastically and remain at low levels for long periods of time, as is the case of Venezuela. These economies live under the continual threat of sudden changes in their terms of trade due to circumstances over which they have little control or influence. That is why they have to take all possible action in order to be prepared to respond to these adverse developments.

Among other things, they must be able to retain substantial international reserves, minimise their external payments, especially their foreign debt service, and gain secure access to international financing.

For these goals to be achieved, new ways of managing the developing countries' foreign debt burden need to be devised, offering more viability and acceptability for all the parties concerned. If the only concession made to a debtor country suffering the effects of a sharp fall in the prices of its export products is an extension of the maturity of its debts, the grant of a longer grace period, and lower interest spreads, its ability to cope successfully with the worsening of its terms of trade will continue to be very seriously constrained.

Even if the debtor country could reach an agreement with its foreign

creditors to limit debt service net payments to a given percentage of its export earnings – 20% for example – it would still face unacceptable risks in the event of a prolonged decline in the prices of its export products.

Consequently, new arrangements for handling foreign debts need to be developed which, in addition to being acceptable to all concerned, permit a substantial and permanent reduction of external payments to the point where the debt burden and other foreign commitments become bearable. A plan to convert foreign debts into securities, such as the one outlined in this paper or another similar arrangement, could meet this need to a considerable degree.

However, the results of the simulations analysed above indicate that it will still be necessary to obtain external financing on a permanent basis, since it is only the combination of a continuing inflow of capital and a reduction of debt service payments that will allow indebted developing countries to cope with the crises provoked by the collapse of their export earnings without falling into situations of severe economic hardship.

Nevertheless, these recommendations would help these countries to handle the problem only in the short term. That is not enough. If these nations really want to reduce their vulnerability to this type of problem without suffering heavy burdens, they must implement rational and coherent economic policies aimed at achieving clear short, mid, and long term goals among which export development and diversification as well as reduction of import dependency should have the highest priority.

NOTES

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- 1) For a detailed description of the MODVEN VII model, see Palma, P.A. and Fontiveros, D. "A Comparative Sensitivity Analysis of the Venezuelan Macroeconomic Model 'MODVEN VII'" in *Economic Modelling* vol 5, No. 4, October 1988, pp.286–346.
- 2) The liquid foreign assets were made up of the international reserves held by the Central Bank, the Venezuelan Investment Fund (VIF), and the commercial banks, as well as the foreign currency deposits held abroad by the Venezuelan Petroleum Corporation (PDVSA). The latter were not counted as reserves, even though they were liquid funds owned by a public agency.

The VIF was created in 1974 to administer the excess revenues from oil exports not immediately injected into the internal economy. Later, it became the chief source of financing the investments made by the state-owned corporations. PDVSA, for its part, was created as a result of the nationalisation of the oil industry in 1976, as the holding company for the

- state-owned oil industry.
- 3) In August 1982, PDVSA's financial resources kept abroad were transferred to the Central Bank, where they were registered as international reserves. Meanwhile, the gold reserves were revalued from US\$ 42.22 per Troy ounce to US\$ 300. This increased the reserves by US\$ 2.935 billion.
 - 4) Here the gold reserves are valued at US\$ 300 per Troy ounce.
 - 5) An agreement to restructure the public foreign debt was reached in September 1984, but was not signed until February 1986. A few weeks before signing the contracts, the government agreed with its bankers to postpone certain amortisation payments due in 1985 and 1986. For a detailed analysis of the handling of the public foreign debt problem in the 1983-1987 period, see Palma (1987).
 - 6) According to MetroEconomica estimates, at the end of 1986, the equilibrium exchange rate for the commercial bolivar, according to the purchasing power parity and the existing capacity to import, was Bs./US\$ 11.90 approximately. See Fontiveros (1987).
 - 7) For a more detailed analysis of the effects of these exchange rate differentials, see Dornbusch (1986) and Garcia (1987).
 - 8) According to the Central Bank, the 1987 average annual increase in the consumer price index was 28.1%. However, between December 1986 and December 1987 those prices rose by 40.3%.
 - 9) For a more detailed explanation of this scheme, see Government of Mexico, *The United Mexican States, Collateralised Floating Rate Bonds Due 2008 (Collateralised as to Principal at Stated Maturity Only, Invitation of Bids*, January 1988.
 - 10) For a more detailed analysis of this proposal, see Palma, P.A. (1988), "A Formula do Mexico: Uma Sugestao Venezuelana", *Gazeta Mercantil*, March 30, Sao Paulo, Brazil, p.4.

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