

CEPAL Review

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CONTENTS

Reactivation and development: the great commitment of Latin America and the Caribbean. <i>Norberto González,</i>	'
Alleviation of the debt burden: historical experience and present need. <i>Carlos Massad.</i>	17
From austerity measures to structural adjustment. <i>Lucio Geller</i> and <i>Víctor Tokman.</i>	^
External debt and the reform of the international monetary system. <i>Arturo O'Connell.</i>	51
The origin and magnitude of the recessionary adjustment in Latin America. <i>Richard L Ground.</i>	"7
Turning page in relations between Latin America and the Caribbean countries. <i>Elvio Baldinelli.</i>	87
The international division of industrial labour and the core-periphery concept. <i>Kimmo Kiljunen.</i>	"
Services: a disquieting link between Latin America and the world economy. <i>Francisco Javier Prieto.</i>	117
Technology transfer in the mining sector: options for the Latin American Mining Organization (OLAMI). <i>Michael Nelson.</i>	137
The role of the public sector and transnational corporations in the mining development of Latin America. <i>Jan Kñakal.</i>	^3
Mining development in relation to the origin of capital. <i>Patricio Jones.</i>	^3
New objectives for the development of mining resources. <i>Rolando Sanz Guerrero.</i>	173
Recent ECLAC publications.	

Relieving the debt burden: past experience and present needs

*Carlos Massad**

The rapid growth of the Latin American external debt from the mid-1970s onwards has been due to factors both of demand and supply, which bear witness to the co-responsibility of creditors and debtors. This co-responsibility, however, is not reflected in the distribution between the two parties of the burden of the debt: a situation which has caused a change not only in the magnitude but also in the direction of the net flows of real resources between the region and the rest of the world. Thus, between 1960 and 1980 the countries of the region were recipients of an annual net transfer of real resources from abroad equal to around 1% of their gross domestic product, but since the first half of the 1980s these countries have contributed to the rest of the world close on 4% of their gross domestic product per year. Although the figures vary from country to country, the general trend is the same for all.

Despite this heavy transfer of real resources to the exterior, the foreign debt problem does not seem to be on the way to a solution. The debt continues to increase, albeit slowly, while exports, and also the product, remain relatively stagnant after having plummeted in 1982/1983, partly because of the countries' own efforts to adjust in order to comply with their external commitments in a context of world economic recession and shrinkage of the international financial markets.

The author divides the article into four sections. In the first he examines the debt servicing burden, comparing the experience of the 1930s with the 1980s, and presents a simulation model which enables different evolutions of this servicing and its effects to be assessed. He then describes the options for solution and the concrete proposals that have been formulated, and ends with some considerations on the role played by the international monetary and financial system.

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The debt burden and adjustment

1. *Expansionary or recessionary adjustment?*

The continued transfer of real resources abroad diminishes those available for domestic consumption and investment and makes necessary an equivalent surplus of saving over investment. It is precisely this surplus that is transferred abroad.

In order to make this transfer, these resources have to be converted into transferable resources, which is achieved through the generation of an equivalent surplus of exports over imports. Thus, the surplus of saving over investment has its counterpart in the external sector.

From the standpoint of employment and economic activity, the ideal combination of circumstances would be one in which the necessary surplus is generated through an increase in saving and is converted into resources transferable overseas through an increase in exports and efficient import substitution. In this way, the transfer would be achieved while maintaining a high level of activity and employment and without sacrificing investment. The cost of the transfer in terms of well-being does not disappear, since a part of the goods and services produced through the use of the available resources has to be transferred abroad. Nevertheless, this cost would be minimized with the disappearance of the problems linked with unemployment and the reduction of the growth potential.

In the actual fact, however, the surplus to be transferred was generated through a drastic fall in investment, and its conversion into transferable resources was produced through a striking drop in imports, employment and the level of business activity. The contraction of imports had to create the macroeconomic space needed not only to transfer abroad the real resources involved in the servicing of the debt but also to accommodate a fall in the level of Latin American exports due to the unprecedented deterioration in the terms of trade and the prices of the overwhelming majority of products exported by the region.

Thus, from their maximum level reached in 1981, Latin American imports at constant prices have fallen by 40% so that their 1985 level is lower than that of 1974. The per capita gross domestic product in 1985 was 9% lower than in 1980 and the fall in per capita national income, which takes into account the negative effect of the terms of trade and factor payments to the exterior (mainly profits and interest), was still more pronounced.

The severity of the adjustment process and the high cost that the countries have been willing to pay in order to maintain normality as far as possible, in the servicing of their external debt, reveal the interest of the Latin American governments in maintaining a long-term relationship with the foreign financial markets. The governments have not been in favour of solutions involving a rupture, and unilateral action has only occurred in isolated cases and through lack of other options.

The events of 1985 and of the first half of 1986 have helped to aggravate the debt problem in at least two aspects: the problem has become concentrated in a smaller number of countries, but its magnitude has not diminished; and the growth rate of the world economy does not appear to be reaching satisfactory levels even after the fall in oil prices. Moreover, the terms of trade (excluding oil) show no signs of recovery despite the brusque devaluation of the dollar on international markets. It seems that time is not helping to solve the problem, except in so far as it enables the creditors to strengthen their equity position (by increases in their reserves and capital) so as to place themselves in a better position to cope with their portfolio risks. The passage of time might also allow certain adjustment policies adopted by the debtor countries to begin to show some effect, but the implications for the world economy and the terms of trade of a situation in which many countries, are adjusting at the same time and in the same direction do not encourage much hope in this respect.

2. The debt servicing burden

Although the nominal interest rates applicable to the debt are now only half what they were in 1981, the continuing rise in the volume of the debt, coupled with the persistent deterioration in the terms of trade, mean that the debt servi-

cing burden continues to increase. For a country that had experienced a fall in its terms of trade similar to that of the group of non-oil-exporting countries of Latin America, the cost of paying one dollar of interest, expressed in terms of real resources, would have grown by 50% between 1980 and 1984. This means that if in 1980 it was necessary to sacrifice a hundred units of tradeable goods in order to service the debt, at the end of 1984 it was necessary to sacrifice a hundred and fifty units for the same service (Massad, 1986a). In 1985 the situation was even worse, since the fall in interest payments did not succeed in compensating for the further fall in the terms of trade.

Two elements are decisive in this result: the interest rates and other costs applicable to the foreign debt, and the variation in the terms of trade. The behaviour of both is largely beyond the control of the individual debtor countries. These, however, do have a collective influence, neither sought for nor desired, on the terms of trade. Their simultaneous efforts to increase their exports, particularly of primary products, in a world economy of sluggish growth have a depressive effect on the prices of those products, so that without wanting to, they aggravate their own external finance problems (Massad, 1984). This effect has now been recognized internationally (BIS, 1986; JEC, 1986).

3. The 1930s and the 1980s

From the standpoint of employment and economic activity, particularly in Latin America, the crisis of the 1980s has features at least as serious as those of the Great Depression of the 1930s. The terms of trade of the non-oil-exporting countries of Latin America and the Caribbean in 1985 were even worse than those recorded in any year of the earlier great world crisis. For the countries of the region as a whole, the terms of trade in 1985 were only 4% higher than the average between 1930 and 1937 (see table 1 and figures I and II). During the great world crisis the bulk of the debt consisted of bonds floated abroad, for which there was a market. When the crisis radically reduced the debtor countries' capacity to make payments abroad and they found themselves obliged to suspend totally or partially their servicing of the debt, the market price of the bonds plummeted. In 1939, for ins-

tance, seven years after the worst moment of the crisis, South American bonds with arrears of payment were quoted at 14% of their nominal value, Central American bonds at 30% and West Indian bonds at 46% of their value. Between 1935 and 1939 Chile purchased bonds of its own debt with a nominal value of US\$ 88 million at the prices of the period for a payment of around US\$ 13 million, that is, it paid 15 cents for each dollar of debt (Feuerlein and Hanna, 1941). This contraction of the debt represented a reduction of one-third in the total Chilean debt in bonds expressed in 1935 dollars.

Through the application of this mechanism and the total or partial suspension of debt servicing, its burden was distributed between creditors and debtors. In the crisis of the 1980s the cases of default are few and the burden of debt servicing, except in a few isolated and unimpor-

Table 1
LATIN AMERICA: TERMS OF TRADE,
1930-1985
(*Indexes 1970 = 100*)

	Latin America as a whole	Non-oil-exporting countries ⁶
1930	102.4	95.3
1931	82.7	78.1
1932	89.5	83-2
1934	82.7	79.0
1935	93.3	89.6
1936	95.7	93-1
1937	100.3	97.0
1938	94.1	89.9
1939	93.3	80.5
1940	90.8	86.4
1941	94.5	90.6
1942	94.8	93-4
1943	99.3	93.5
1944	106.2	103.3
1945	102.9	100.9
1946	118.1	117.2
1947	121.0	118.3
1948	122.0	110.2
1949	114.8	103-1
1950	135.9	114.9
1951	135.4	118.8
1952	117.4	99.2
1953	129.2	109.2
1954	125.8	109-9
1955	123.1	99.1
1956	124.5	100.4
1957	130.6	99.8
1958	119.3	92.4

	Latin America as a whole ^a	Non-oil-exporting countries
1959	109.3	88.3
1960	106.4	90.6
1961	104.4	89.9
1962	98.8	85.8
1963	98.7	88.9
1964	100.4	96.4
1965	95.6	92.8
1966	95.8	93.7
1967	94.3	91.0
1968	95.2	91.3
1969	96.7	96.2
1970	100.0	100.0
1971	97.4	91.8
1972	100.0	96.2
1973	113.4	107.1
1974	131.4	97.8
1975	113.8	84.9
1976	118.9	90.6
1977	125.8	98.4
1978	112.7	88.2
1979	116.8	84.2
1980	119.7	79.4
1981	110.2	71.0
1982	99.8	65.0
1983	94.3	65.0
1984	99.3	68.8
1985 ^c	96.9	66.1

Source: 1930-1949: ECLAC (1977).

1950-1985: ECLAC, on the basis of official figures.

^aIncludes 19 countries.

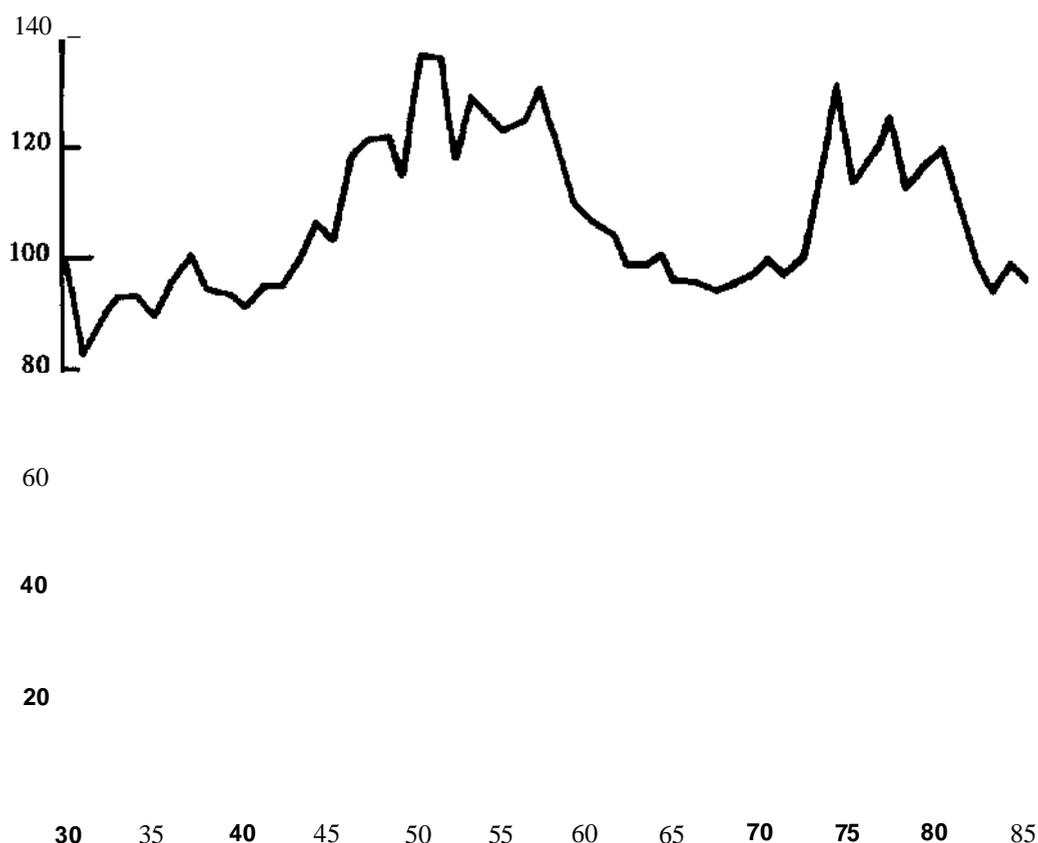
^bExcludes Mexico, Venezuela, Ecuador.

^cPreliminary figures.

tant cases, has not been lightened for the debtor in relation to market conditions. The debt is mainly with the banking system, and the profits of the major creditor banks have grown steadily during the whole period. The exceptions to this (mainly the Bank of America) have no connection with the portfolio of loans to the developing countries but rather with the internal economic situation of some sectors and enterprises in the United States (JEC, 1986).

During the crisis of the 1930s, agreements were concluded between creditors and debtors which reduced the capital of the debt and lowered the interest payments far below those of the market, as well as extending the payment period. Agreements of this type have not been achieved in the crisis of the 1980s. On the contrary, the transfers of real resources overseas by the Latin American debtor countries due to the payment of interest on their debt, as a proportion of their

Figure I
LATIN AMERICA:³ INDEX OF TERMS OF TRADE, 1930-1985
 (1970^s 100)



Source: 1930-1949: ECLAC (1977); 1950-1985: ECLAC, on the basis of official information.
^aIncludes 19 countries.

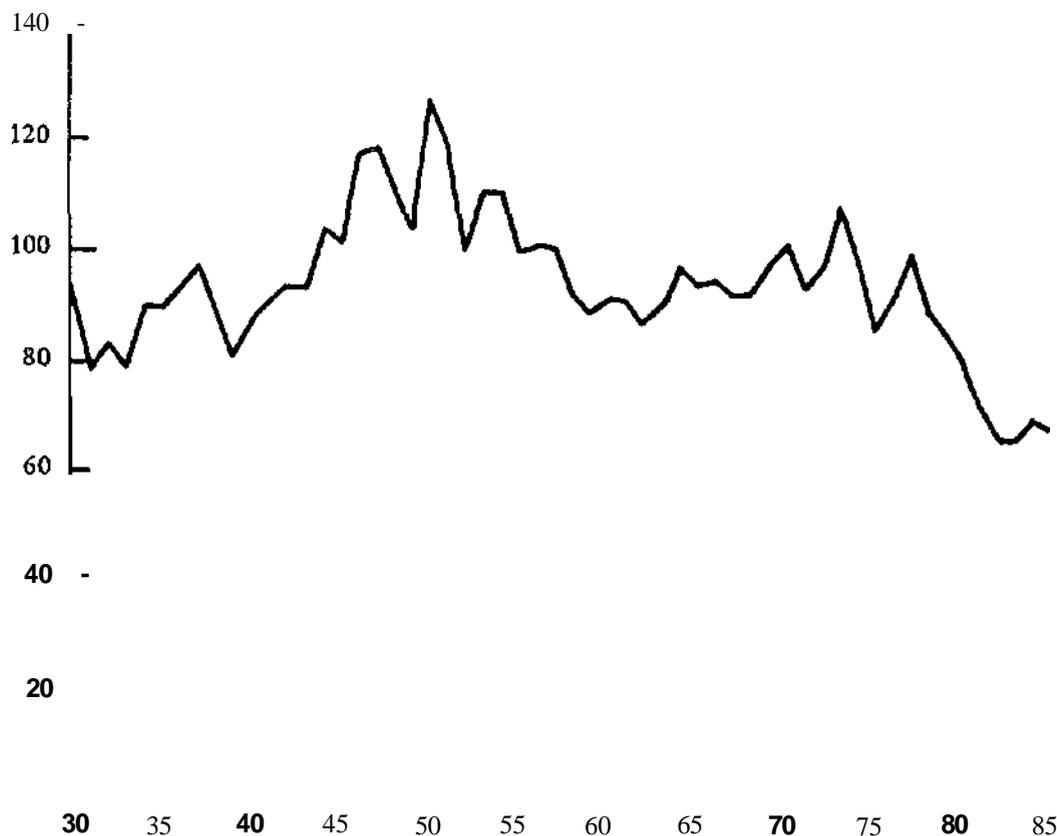
exports, are far above even those made by Germany after the Treaty of Versailles in respect both of war reparations and of interest payments on its foreign debt and remittances of profits.

In fact, the total net profits, interest and war reparations paid to the exterior never reached 25% of German exports, even in the worst days of the great crisis. In the case of Latin America, in contrast, payments of interest and profits bordered on 40% of exports of goods from 1982 onwards. What is more, when in 1931 these payments, including war reparations, reached 23% of German exports (or 36% if capital flight from Germany is added), a special commission of the Bank of International Settlements (BIS), responsible for advising the Bank on the ques-

tion of the payment of reparations, decided that Germany was justified in declaring that it could not comply with a large part of this obligation (Haberler, 1950). In the following year (1932) payments of war reparations fell by 84%, and they disappeared completely in 1933. Moreover, during the period of heaviest reparation payments, Germany was a net receiver of financial resources from abroad: between 1924 and 1932 Germany's net capital inflows were 20% higher than the sum of the payments of interest, profits and war reparations (see table 2).

The commercial banks that are creditors of Latin America have reached agreements with some enterprises whose debt is not State guaranteed to reduce the capital and alleviate interest

Figure II
 LATIN AMERICAN NON-OIL-EXPORTING COUNTRIES:²
 TERMS OF TRADE, 1930-1985
 (1970 = 100)



Source: 1930-1949: ECLAC (1977); 1950-1985: ECLAC, on the basis of official information.
^aExcludes Mexico, Venezuela and Ecuador.

payments. However, the amounts involved are very small in relation to the total debt (less than 1 %), so that these agreements have little significance at the macroeconomic level.

4. *The debt burden and growth:
 a simulation model*

With the aim of assessing the magnitude of the efforts that the debtor countries must make in order to meet their debt obligations in a context of growth, a model was used (see the annex) which relates the growth rate of the debt with the external interest rate, the debt/product ratio, and the foreign trade imbalance (or the difference between saving and investment) (Massad, 1985; Massad 1986b).

Use of the model called for the estimation of the investment needed to secure a growth of the product of 4% per year: a figure considered a minimum target. The investment rate required for a growth of 4% on average for the group of seven countries studied was 23% of the product. For the purposes of the simulation, however, a lower rate (20% of the product) was used, since it was considered that, as the countries had idle capacity and relatively high unemployment, it would be possible to grow with less investment than that required on average for long periods. A more precise study might attempt to estimate the investment requirements of a cyclical nature.

It was also necessary to estimate the income-elasticities of the demand for imports. The exis-

Table 2

GERMANY: CURRENT PAYMENTS AND NET INFLOW OF CAPITAL, 1924-1932*(Billions of marks)*

Year	Exports of goods	War repara- tions	Interest and profits"	Capital inflow	2 + 3	5/1	4 - 5	7/1
	1	2	3	4	5	6	7	8
1924	7.8	0.3	-0.2	3.1	0.1	0.01	3.0	0.38
1925	9.6	1.1	-	3.5	1.1	0.11	2.4	0.25
1926	10.7	1.2	0.2	1.1	1.3	0.12	-0.2	-0.02
1927	11.1	1.6	0.3	5.3	1.9	0.17	3.4	0.31
1928	12.6	2.0	0.6	3.8	2.5	0.20	1.3	0.10
1929	13.7	2.5	0.8	3.2	3.3	0.24	-0.1	-0.01
1930	12.2	1.7	1.0	1.0	2.7	0.22	-1.7	-0.14
1931	9.6	1.0	1.2	-1.3	2.2	0.23	-3.5	-0.36
1932	5.8	0.2	0.9	-0.2	1.1	0.19	-1.3	-0.22

Source: Prepared on the basis of data compiled by the League of Nations (1945b).

"Net interest and profits remitted abroad. Minus sign indicates net income.

Includes net balance on other services, net capital inflow, and errors and omissions. The latter mainly represent unregistered capital movements. Minus sign indicates net outflow.

ting estimates refer to average elasticities for long periods and do not permit an assessment of what will probably happen with imports when the product falls or rises with some abruptness. Hence, estimates were made of cyclical elasticities, which turned out to be much higher than the average or trend elasticities, which were also calculated for purposes of comparison. The latter coincide with those estimated in other studies.

The calculations were made country by country for seven Latin American nations: Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela. With the results of the estimates mentioned, three sets of simulations were prepared for different relative levels of indebtedness: high (corresponding to a debt equal to the product); medium (defined as a foreign debt equal to 70% of the product); and low (where the debt represents 50% of the gross domestic product).

For each of these three levels of indebtedness, five different rates of real interest on the debt and three rates of real growth of the debt were used. Four consecutive annual periods were

simulated, and the results were averaged out to obtain the figures given in tables 3, 4 and 5. The averages conceal a leap that occurs in the first year of the exercise, as the rates of saving adjust to the levels required. In some cases, the balance is such that it seems impossible to achieve it in practice, so that the level of the debt would have to grow more than was assumed.

For the countries with high Indebtedness (table 3), if the nominal debt in dollars grows at 3% per year and if the external rate of interest, which includes all the costs of the debt, is 10% per year, a domestic saving rate of 27% of the product would be required and there would have to be a real growth rate of exports of 18% per year on average in the first four years of the exercise, which would clearly be difficult to achieve. With an interest rate of 4% per year the saving needed for a growth of 4% is reduced to 21% of the product (for a growth of the debt of 3% per year) and exports would have to increase at an annual average rate of 13%.

The best of all the situations simulated, for all the countries, consists of a growth of the debt of 7% and an interest rate on the debt of 4% per

Table 3

D/Y = 1

	I	AMI ⁿ	AME ⁶	AMX ⁱ	AIM	AEXMf	AEXME ⁶	AEXMX ⁱ	TRMf	TRME*	TRMX ^e
	Y	Y	Y	Y	M	EX	EX	EX	Y	Y	Y
0.12	0.20	0.25	0.29	0.32	0.11	0.16	0.20	0.23	0.05	0.09	0.12
0.10	0.20	0.23	0.27	0.30	0.11	0.14	0.18	0.21	0.03	0.07	0.10
0.08	0.20	0.21	0.25	0.28	0.11	0.12	0.16	0.19	0.01	0.05	0.08
0.06	0.20	0.19	0.23	0.26	0.11	0.10	0.14	0.17	-0.01	0.03	0.06
0.04	0.20	0.17	0.21	Q.24	0.11	0.08	0.15	0.13	-0.03	0.01	0.04

Table 4

D/Y = 0.7

	I	AMI ⁿ	AME*	AMX [£]	AIM	AEXMf	AEXME*	AEXMX ^C	<i>TKm^{ad}</i>	TRME ⁰	TRMX ^C
	Y	Y	Y	Y	M	EX	EX	EX	Y	Y	Y
0.12	0.20	0.23	0.26	0.29	0.11	0.14	0.17	0.20	0.04	0.06	0.09
0.10	0.20	0.22	0.25	0.27	0.11	0.13	0.16	0.18	0.02	0.05	0.07
0.08	0.20	0.20	0.24	0.26	0.11	0.11	0.15	0.17	0.01	0.04	0.06
0.06	0.20	0.19	0.22	0.24	0.11	0.10	0.13	0.15	-0.01	0.02	0.04
0.04	0.20	0.18	0.22	0.22	0.11	0.09	0.11	0.13	-0.02	0.01	0.02

*

Table 5

D/Y = 0.5

	I	AMI ⁿ	AME*	AMX ^C	AIM	AEXMI ⁿ	AEXME ⁶	AEXMX ^C	TRMI ^{Drf}	TRME ⁶	TRMX ^f
	Y	Y	Y	Y	M	EX	EX	EX	Y	Y	Y
0.12	0.20	0.22	0.24	0.26	0.11	0.13	0.15	0.17	0.02	0.04	0.06
0.10	0.20	0.21	0.23	0.25	0.11	0.12	0.14	0.16	0.01	0.03	0.05
0.08	0.20	0.20	0.22	0.24	0.11	0.11	0.13	0.15	-	0.02	0.04
0.06	0.20	0.19	0.21	0.23	0.11	0.10	0.12	0.14	-0.01	0.01	0.03
0.04	0.20	0.18	0.20	0.22	0.11	0.09	0.11	0.13	-0.02	-	0.02

ⁿAssumes a nominal growth rate of the debt of 7% per year.

Assumes a nominal growth rate of the debt of 3%.

ⁱAssumes a zero nominal growth rate of the debt.

Minus sign signifies inflow of resources from abroad.

i = External interest rate (including all the costs of the external debt).

I/Y = Ratio of investment/GDP required.

AMI/Y = Minimum ratio of saving/GDP required.

AME/Y = Medium ratio of saving/GDP required.

AMX/Y = Maximum ratio of saving/GDP required.

AIM/M = Growth rate of imports.

AEXMI/EX = Minimum growth rate of exports required.

AEXME/EX = Medium growth rate of exports required.

AEXMX/EX = Maximum growth rate of exports required.

TRMI/Y = Minimum transfer of resources abroad/GDP.

TRME/Y = Medium transfer of resources abroad/GDP.

TRMX/Y = Maximum transfer of resources abroad/GDP.

year. In these circumstances, the saving required is around 17%-18% of the product and the real growth rate of exports falls to 8%-9% per year. Although the rate of saving is similar to that recorded in recent years, the required growth rate of exports is much higher than that which was actually achieved.

To judge from the available information, it does not seem likely that the external debt can grow at a nominal 7% per year. Even if it did, it would imply the maintenance of the present debt/product ratios, which does not seem desirable as a long-term result. If it is assumed, for example, that the nominal growth of the debt is around 3% per year, the results deteriorate. In the best of cases domestic saving of 20% of the product is required, with a growth rate of exports of 9%-10% per year in real terms. It should be borne in mind that for the group of countries considered in the study the rate of saving in relation to the product in the period 1981-1985 reached an average of 17%, while real exports grew at an annual average rate of 5.4%.

Even the figure of 3% nominal growth of the debt does not seem easy to achieve, so an analysis was also made of the situation when the debt does not grow (i.e., it falls in real terms). In this case, with an interest rate of 6% per year, in the best of all the situations simulated (that of a relatively low debt) the saving required is around 23% of the product and the real growth of exports would have to be of the order of 14% per year on average.

Naturally, if the interest rate were 8% instead of 6% and the debt remained constant, the results would be even worse: in the best of cases a domestic saving of 24% of the product would be needed, with a real annual export growth rate of 15% on average.

The high rate of export growth needed in every case shows that the "natural" solution to the debt problem depends decisively on the expansion of the world economy. If this does not grow enough, increases in exports such as those indicated are highly improbable, and even if they did occur, it would be at the cost of additional adverse effects on the terms of trade.

The calculations show the obvious need to seek formulas to relieve the debt burden which will reduce the saving and export efforts requi-

red, even in the case of those countries with a relatively low debt.

These formulas should alleviate the debt without cost, that is, to say, without using up resources of the debtor countries. There are only three ways of achieving this objective: reduction of real interest rates (or of the capital of the debt), improvement of the terms of trade, and an increase in the productivity of investments. The first two do not depend on the policies of the debtor countries, at least in the short term: it is the creditor countries which have the appropriate policy instruments in their hands. The third essentially depends on the domestic policies of the debtor countries, but it too is linked with the prices of the products they export: only a change for the better in these prices would rapidly raise the productivity of investment, measured in terms of importable goods. Other changes in productivity would call for new investments, and even structural reforms, which take time and require more financing. In this sense "financing" and "adjustment" are not alternatives, but complementary terms.

A reduction of two points in the interest rate alleviates the saving effort by one to two percentage points of the product and reduces by between one and two percentage points the rate of export growth that would be required.

The return of real interest rates to their historical levels of between 1% and 3% per year, or specific measures to reduce the cost of the debt to those levels, would mean a reduction of the investment effort needed by two to four percentage points of the product, while the rate of export growth needed would also be reduced by two to four percentage points. This appears to be an indispensable contribution by the creditors if the effort of the debtors is to be sustainable.

We must therefore examine the nature of solutions to the debt problem that could be attained by lessening the burden of its servicing. The solution of the debt problem is in the interests of the debtors, but it also favours the creditors themselves. On the one hand it improves the quality of their portfolio of assets and facilitates the return of the financial system to normality. It also makes possible a more normal handling of economic policy without the enormous uncertainties that always accompany crisis situations. Finally, it permits a higher growth

rate in the debtor countries, whose purchases of all kinds from the creditor countries represent an appreciable element of dynamism for the economies of the latter. Studies made in respect

of the United States indicate that perhaps a half of any reduction in the servicing of the Latin American debt will be devoted to purchases in that country (JEC, 1986).

II

Possible solutions

The solutions designed to relieve the burden of the debt are based on five premise's (Massad, 1986b):

i) Both creditors and debtors must share the responsibility for the rapid growth of the debt.

ii) The fact that the debt problem has reached an acute stage is the result not only of factors beyond the debtor countries' control (the policies applied by the industrial countries, the international recession, the procyclical behaviour of external financing), but also of the debtors' own policies. Nevertheless, the widespread impact of the problem underlines the importance of the external factors.

iii) The prolonged recessionary adjustment of the debtor countries' economies is unsustainable.

iv) As time is needed for the reassignment of resources which is essential in order to generate the surpluses required for the servicing of the debt, adjustment and financing are not different approaches to the debt problem but both form part of its solution.

v) It is in the interest both of the debtor and the creditor countries to reach a rapid solution of the present crisis.

As recent experience shows, the reduction of the interest rate and the improvement of the terms of trade are crucial for the solution of the debt problem. Failing a market solution consistent with both variables, every other solution points to a reduction of interest payments on the debt. There are two ways of tackling this issue. One is the restriction of interest payments in accordance with certain criteria of capacity to pay, such as total exports, the price of a key export product, total foreign exchange receipts, or the gross domestic product. The other method consists of a direct reduction, without accumulation, of service payments. If the first method permitted the debt servicing to accumulate

indefinitely above the limits adopted, then the first and the second methods would be financially equivalent.

1. *Reduction of interest payments on the debt*

The burden of the debt can be directly reduced either by lowering interest rates and other costs below the market rates or by a direct reduction of the principal of the debt. Although the two approaches differ in accounting terms, they are, under equal tax conditions, financially equivalent. The reduction of interest is reflected in the balance sheet of the creditor institution only with the passage of time (provided that accounting rules permit this), whereas the reduction in the principal of the debt is immediately reflected in full in the accounts. This accounting difference may be decisive for the stability of the creditor institution.

Accounting rules are very important in this respect. In the United States, for instance, interest concessions must be reflected in a charge against capital only if the sum of the future payments of capital and interest is lower than the total capital outstanding at the time of granting the concession (JEC, 1986). This means that, even if interest and commissions are reduced to zero, there is no compulsory charge against the capital of the debt if there is an assurance that this capital will be paid in the future. Hence the margin of negotiation of interest by the banks between zero and market rates is basically limited by the need to maintain a reasonable profitability on their own capital.

The effects on the profits of the creditor banks of an alleviation of interest payments on the debt do not seem to be excessive. A study by the United States Congress points out that if Latin American interest payments had been reduced by US\$12 billion in 1985 and if the

banks had written down by 1 % the value of their existing credits in Latin America in that year, the nine most important banks in the United States would have shown profits in 1985 which, after payment of taxes, were higher than the level recorded in 1984, even if those banks had absorbed a part of the reduction of interest in proportion to their credits with Latin America (JEC, 1986). It should be noted that the effects on the banks' profits (after tax) of a reduction of interest or a reduction of capital may differ according to the tax treatment applicable in each case.

In so far as the reduction of interest improves the economic situation of the debtors, the prospects of the recovery of their capital by the creditors improve also. Hence, when the risk commitment with a particular debtor is relatively small compared with the total of a bank's portfolio of assets, the bank prefers to make concessions regarding interest rather than to grant new loans to the debtor at risk; in this way the debtor's situation is improved and the possibility of recovery of capital is strengthened. According to private commercial bankers in the United States, the regional banks prefer this method to the granting of "fresh" money to foreign debtors.

Numerous formulas have been proposed for reducing the cost of interest payments on the external debt. The reduction or elimination of commissions and other charges is one that has already been applied to a limited extent in the three rounds of renegotiations held since 1982. In the first, both the spread over the reference rate and the commissions were considerably higher than their levels before the crisis. The average spread in the first round reached 2.22% over LIBOR and the average commission amounted to 1.27% for the twelve countries involved in the renegotiations. In the second round, the average spread was reduced to 1.77% over LIBOR for the group of seven countries that renegotiated in 1983-1984, while the commissions were reduced to 0.8%. In the third round, the average spread over LIBOR and the commissions were reduced even further to 1.44% and 0.42% respectively. In this last round some countries negotiated the complete elimination of commissions, but the spread over the reference rate was maintained, and was even much higher

than that prevailing before the crisis, which in some cases was well below 1%.

Thanks to direct negotiations between the debtors and the commercial banks, a reduction has thus been achieved in the interest spreads and commissions in comparison with the high figures recorded in the first round of renegotiations. Nonetheless, the reference interest rates remain above their historical levels. In some recent cases of renegotiations the traditional reference rates (LIBOR or Prime) have been replaced by rates representing the cost of attraction of funds on the part of the banks, which are lower than the traditional reference rates. The difference is only small, however, and may represent a relief on the cost to the debtor of no more than half a percentage point per year.

A rescheduling of debt payments involves the separation of payment in national currency from payment in foreign exchange. If the benefits achieved in the rescheduling are not transmitted in full to the individual debtor, the latter is still under the obligation to possess, at the dates originally agreed, the national currency needed to purchase the foreign exchange with which the debt or its service will finally be paid. Thus the rescheduling may imply a fiscal benefit, to the extent that the authorities of the debtor country demand payment in national currency from individual debtors, while the payment abroad in foreign exchange is deferred in accordance with the rescheduling. This allows domestic monetary policy more room for manoeuvre and may also serve as a mechanism applicable in formulas designed to alleviate interest payments abroad.

The formulas employed so far have not been sufficient to provide a notable relief in the servicing of the debt. Consequently, many other formulas are still being considered, both to reduce interest payment commitments and to modify the nature of these payments. The former include the automatic capitalization of interest at rates well below those in force and the payment of interest in national currency for subsequent conversion into foreign exchange.

The capitalization of interest would enable the annual interest payments to be regulated by capitalizing the amount exceeding certain limits. Thus as well as lightening the burden of interest payments an element of stability is introduced into the debtors' balance of payments by isolat-

ing the annual interest payments from changes that may occur in international interest rates. Mechanisms of this type would form an automatic stabilizer for the world economy. They would also help to distribute the cost of the capitalization proportionally among the creditors.

The payment of interest in national currency (indexed in accordance with the currency in which the loan is expressed) is conceptually similar to the foregoing method, with the difference that in this case the possibility is envisaged that the creditor may employ the funds accumulated in the national currency of the debtor country for certain specified uses. For instance, the accumulated resources might be employed for purchasing specific goods and services or certain securities or other assets in the debtor country, or they might also be lent again in that country; the conversion of these funds into foreign currency and the corresponding payment abroad would be subject to stipulated formulas linked, for example, with total exports or the value of the exports of a key product for the economy in question. This mechanism might also be handled so as to regulate payments of interest to the exterior and convert them into a relatively constant flow over time.

Any of the options for payment in national currency that would be usable locally would, if given generalized application, undoubtedly have macroeconomic effects in the debtor country both in terms of inflationary pressures and of changes in the structure of ownership.

2. *Reduction of the principal of the debt*

Another way of reducing interest payments to the exterior is the direct reduction of the principal of the debt. The straightforward accounting write-down of the State-guaranteed debt might have negative effects on the debtors' future access to the normal market, so that this possibility can only be considered when the debtors do not expect to have further recourse to the market for a prolonged period. This is not usual with the Latin American countries, so that for them the methods for reducing the principal of the debt are more limited. There are, however, formulas, which enable the principal of the debt to be reduced without affecting the debtors' access to the commercial credit market. For instance, a

secondary market of debt bonds such as that which has been emerging since the end of 1984 would enable the debtors to purchase their own debt at a capital value below 100% of the debt, when the market values it in this way.¹ Transactions are known to have been carried out at values between 60% and 90% of the nominal debt, depending on the countries involved, and some of them have set up formal mechanisms for the repurchase of their own debt with the commercial banks (for example, Chile). Obviously, the reduction of the principal of the debt implies a reduction in interest payments. So far, operations of this kind represent only small percentages of the total debt of the residents of the countries in question with the banks.

There have also been proposals for the transfer of assets of the commercial banks to multilateral agencies, which would purchase them for less than their nominal value and take over the task of rescheduling the debtors' payments, transferring to the latter the benefit of the lower value of these assets. The difficulty about these proposals is that the operation would require an increase in the capital of the multilateral institutions concerned or would exhaust the margins of capital available for direct loans by them. Consequently, this type of solution does not seem to represent a formula that would lead to an increase in the net resources available to debtors. For the creditors, however, it might prove attractive if they perceive a considerable and widespread risk in their present portfolio.

3. *Transformation of debt into equity capital*

One way of changing the nature of the interest payment commitment which can also be combined with the repurchase of the debt is the transformation of the latter into equity capital. By doing this, the nature of the commitment is changed, since the regular payment of interest is replaced by remittances of profits as these are generated. Since the State does not guarantee the commercial risk of the investments, the transformation of debt into equity capital means in

¹ It may be argued that the co-existence of a debt valued below its nominal value and of new loans is only due to the fact that the latter are not voluntary. The line between "voluntary" and "involuntary" new loans is by no means clear.

practice the elimination of the public guarantees which might be committed in respect of the debt. This transformation could also reduce the rigidity of the annual amounts of remittances to the exterior, since the profits are dependent on the economic result of the enterprise.

In view of the magnitudes involved, the transformation of debt into equity capital, if carried out on a widespread basis, might signify a very important change in the ownership of the national wealth, with the ensuing political effects.

The repurchase of debt and its transformation into equity capital could serve as a mechanism to facilitate the return of national capital invested abroad. If the operation of repurchase and investment involves attractive profits, as seems to be the case in the transactions carried out so far, it would not be surprising if national capital abroad were attracted by the opportunities offered by such a process.

4. *Debt from official sources*

The solution mechanisms referred to are mainly applicable to debt from private sources. As regards debt from official sources, which represents a relatively small proportion of the debt for Latin American countries as a whole, the terms of the renegotiations agreed to should not be limited by the same criteria of profitability as

those that apply to the loans of commercial banks. Indeed, this is what has happened in practice, since the renegotiations with the Paris Club provide for no commissions or spreads over certain reference rates. What is more, in recent renegotiations the creditor countries have agreed to reschedule not only capital maturities but also interest payments (Dominican Republic). Nonetheless, many public export-financing institutions in the creditor countries tend to limit their loans when maturities are being renegotiated, thus acting in the same way as the commercial banks.

The governments of the creditor countries are not subject to the same restrictions as the commercial banks in the writing-off of certain loans, although the rules vary from country to country. The cancellation or writing-off of debts by a creditor government need not have the same effects on additional financing as such reductions entail for the debtors in the commercial banking system. The same is true of reductions in interest payments. Thus, in those cases where substantial relief in the payment of the debt is needed the contribution that external official creditors might make can be very important. At present a third of the total Latin American external debt comes from sources other than banks, particularly government institutions and official multilateral agencies.

III

Some concrete proposals

1. *The proposal of the President of the Inter-American Development Bank*

The President of the Inter-American Development Bank, Antonio Ortiz Mena, has put forward an ingenious proposal. Although it has not been worked out in every detail, the main idea is to refinance automatically a proportion of the interest payments on the debt, thus reducing their cost, through the transfer of the necessary amounts by the creditor banks to a special fund to finance investment projects for the promotion of export growth in the debtor countries. The growth of exports would subsequently facilitate the return of the loaned sources to the special fund and thence to the original creditors.

This would establish a form of automatic partial refinancing of the interest by the banks, the use of the resources thus provided being confined to projects for the expansion of exports (Montagnon, 1986).

2. *The Baker initiative*

In October 1985 the United States Secretary of the Treasury, James A. Baker, proposed a set of ideas as guidelines for solving the problem of the debt (Baker, 1985). Baker accepts the statement of the debtor countries that the debt problem can only be solved in a framework of growth and co-operation between creditors and debtors. He points out the need for structural reforms designed to liberalize the trade and payments of

the debtor countries and to give more importance in these countries to private enterprise, as a condition for gaining access to new loans both from the commercial banks and from the multilateral financing agencies. At the time of its presentation the Baker initiative envisaged new financing in the amount of some US\$ 10 billion per year for three years, 70% of which would come from the commercial banks. This would allow for a nominal growth of around 3% per year in the debt of the countries covered by the initiative.

This initiative is the first official proposal by the United States Government which recognizes the need for government action by the creditor countries to solve the problem of the debt. Although the multilateral financing agencies have conducted their operations subsequent to the announcement of the Baker initiative within its framework, up to mid-1986 the commercial banks had not done so. Moreover, the collapse of oil prices from the beginning of 1986 invalidated the amounts involved in this initiative (ECLAC 1986).

3. *Proposal of the Cartagena Consensus*

The eleven Latin American signatories of the Cartagena Consensus (Argentina, Bolivia, Brazil, Chile, Colombia, the Dominican Republic, Ecuador, Mexico, Peru, Uruguay and Venezuela) have put forward an emergency proposal for negotiations on the subject of the external debt and growth. The proposal does not advocate a collective renegotiation of the terms of the outstanding external debt but it does emphasize the need to establish an international economic climate appropriate for solving the problem. This climate should include the reduction of interest rates to their traditional levels, an increase in the flow of finance, and the strengthening of international machinery to help cushion the impact on the developing countries of fluctuations in the terms of trade and interest rates. The signatory countries have pointed out the need to distinguish between the treatment of the debt already contracted and that of the new debt, so as to facilitate treatment of the latter on market terms, while making possible the application of more favourable conditions for the outstanding debt.

The proposal states the need to put an end to the protectionist measures that hamper the sale

of the debtor countries' products in world markets and stresses the importance of setting a limit on net transfers of resources in respect of debt servicing which will be compatible with a reasonable growth rate of the GDP. The countries of the Consensus have sought to initiate a dialogue between debtors and creditors on these topics, which are of interest to all, and have insisted that the precise terms of the renegotiation of the debt as such must be a matter for agreement between individual debtors and their creditors.

4. *Proposals in the United States Congress*

The need to seek an alleviation of the debt burden—an achievement which would benefit both debtors and creditors—is beginning to be recognized in political circles in the creditor countries. Proposals on the subject have recently been presented by Senators and Representatives in the United States Congress.

In declarations made in April, May and June of 1986, Senator Bill Bradley (Bradley, 1986) points to the desirability of providing relief in the form of a reduction of debt interest and principal, to be negotiated between each debtor country and a commission made up of government and banking creditors and international agencies. These negotiations would lead to the establishment of a set of support measures for those developing debtor countries which were willing to adopt reforms designed to promote growth, increase domestic saving and restrain capital flight. One of the elements to be considered would be the use of democratic processes to ensure that the plans for economic reform in the debtor countries would have widespread domestic support.

Senator John F. Kerry, for his part, advocates an international development programme which fixes a ceiling for debt servicing as a percentage of exports and a progressive alleviation of the servicing burden according to the degree of disequilibrium in the debtor's trade balance (Kerry, 1986). The programme would be financed by contributions from all the developed countries. A board of seven members would direct the programme, four being elected and the other three representing the International Monetary Fund, the World Bank and GATT. The executive secretary would be chosen from among the elected members by vote of the seven.

Representative Charles E. Schumer proposes a maximum limit of 25% of exports for the servicing of the debt and the writing-off by the banks of a proportion of the loans on the basis of an estimate made by the United States Government as to what would be a reasonable payment on the debt (Schumer, 1986). The writing-off would be a long-term operation, so as not to create problems of capital for the creditor institutions.

5. *The Rohatyn proposal*

The President of the Corporation for Aid to the Municipality of New York, Felix Rohatyn, has

emphasized the desirability of securing a major reduction in the interest rates applicable and extending the credit payment periods. This relief would be accompanied by new capital for the developing countries, coming not from the banking system but from the countries with a big trade surplus, especially Japan. The programme would be supervised by the World Bank, and the beneficiary countries would undertake to carry out domestic reforms to improve their efficiency and increase the importance of the private sector (Rohatyn, 1986).

IV

Debt, adjustment and the monetary system

The foregoing proposals are aimed at lightening the burden of the current debt, but not at correcting the defects in the system that cause the recurrent external financial problems of the developing countries and increase their vulnerability to negative external influences. These defects are reflected in the procyclical behaviour of external financing and in an asymmetrical adjustment process which only imposes effective discipline on countries which have to seek finance from the International Monetary Fund.

1. *The procyclical behaviour of external financing*

A repeated lesson of history is that international financing behaves in a markedly procyclical manner. In the past century the loans obtained by the new Latin American republics to defend their recently won independence were obtained through the sale of bonds in England. Argentina (Buenos Aires), Chile, Colombia, Guatemala, Mexico and Peru floated their issues in London between 1820 and 1825. At the end of that year, as a result of the financial panic in England, the flow of finance was halted, and in the following two years all the debtors except Brazil suspended interest payments. It took thirty years of successive renegotiations to regularize the situation. In the third and fourth decades of the past century the debt of the states making up the United States grew to fifteen times its 1820 size. The depression that began in 1837 in England halted

financial flows to the United States, and nine states of that country suspended interest payments in 1841-1842; two of them, Mississippi and Florida, repudiated the whole of their debt and one, Michigan, repudiated part of it. The other six simply ceased to pay interest, without any official announcement (Solomon, 1983).

A new wave of defaults occurred during the depression of 1873 which brought with it, as did the earlier ones, a fall in international capital movements, which in its turn unleashed a crisis in the servicing of the debt. Eleven states of the United States fell into arrears. In view of the need to create a mechanism to facilitate negotiations between the official debtors that issued bonds and their holders of these on the London market, the British Corporation of Foreign Bondholders was set up in this market and represented them in the negotiations which regularly took place and which ended in the reduction of the principal or in the rescheduling of payments of principal and interest. The only debtors in default that did not reach an agreement with this Corporation in its half-century of life up to 1914 were the states of the United States which had repudiated their debts (Feis, 1930).

A similar commission was set up in the United States in 1933 with the name of Foreign Bondholder Protective Council.

In the great crisis of the 1930s, the group of main debtor countries exported net capital bet-

ween 1931 and 1937 (the worst years of the depression), while the main creditor countries received a heavy net inflow of capital (North, 1962). Both in the great crisis of the 1930s and in that of the 1980s the United States absorbed capital from overseas. During this latter crisis the Latin American foreign debt, which had been growing at the rate of around 20 % per year since the mid-1970s, suddenly reduced its growth rate to 8% in 1983, 5.6% in 1984 and 2.1 % in 1985. This last rate of growth of the debt is considerably lower than the international inflation rate. The increase in the debt is also lower than the direct payments of interest and profits to the exterior.

The phenomenon of the procyclical behaviour of foreign financing has been recognized for over forty years. It was assumed that the World Bank would fulfil the function of providing anticyclical finance in the postwar period (League of the Nations, 1945a).

Repeated historical experience underscores the need to look at the debt problem not only on a country-by-country basis, but also from a system-wide point of view: a need which is all the more imperative in view of the fallacies of generalization that can arise through the recommendation of policies which may be appropriate for individual countries but which are counter-productive for the group of countries as a whole. Hence, solutions of the debt problem, call not only for national policies promoting the necessary economic adjustments and measures by the creditors to lighten the burden of the debt, but also for modifications in the international monetary and financial systems, as well as in world trade.

2. The monetary system and the debt: stabilizing mechanisms

There is already recognition of the lack of symmetry in the international monetary system in relation to adjustment policies. This defect increases the burden that falls on the debtor countries, which are subject to effective stimulating or dissuasive mechanisms. The problem of asymmetry is, in the final analysis, a problem of the power that the official international agencies can exercise over their members. Hence it is an extremely difficult one to solve in practice. Nevertheless, it is important to recognize the

existence of this asymmetry in order to seek solutions which, without having an adverse effect on the interests of the creditor countries, will alleviate the problems of the debtor countries. In view of the nature of the problem to be solved, it is desirable to strengthen the existing mechanisms, while creating others designed to increase the financing available from the official multilateral agencies, and to perfect machinery to soften the effects of external events on the economies of the developing debtor countries.

Increasing the resources available from the multilateral agencies would make it possible to offset the procyclical behaviour of the present financial flows and stimulate the contribution of resources by private institutions in the international market to these countries. At the same time, it would enable more rational conditions to be established for the granting of loans.

This last aspect is of the greatest importance, since the conditionality applied by the official multilateral agencies for the use of their resources is closely linked with the resources at their disposal: the more limited they are, the more rigorous and generally more recessionary is the conditionality applied. The more limited the resources, the shorter is the time in which the adjustment must be carried out, which makes it more drastic. If the adjustment is not carried out on a symmetrical basis whereby the creditor countries contribute to it through their own policies, the greater will be the demands to be met by the credit available for relieving the burden on the debtor countries.

As regards the shock-absorbing mechanisms, it should be noted that two such mechanisms of general application have been established since the Second World War, both under the aegis of the International Monetary Fund: the compensatory financing facility for falls in export income and the oil facility; the latter functioned only as a transitory mechanism that provided resources in the years 1974-1975, and it ended its operations in mid-1976.

A third instrument is the subsidy account destined to reduce, for low-income countries, the cost of using the resources of the supplementary financing facility of the Fund.

Finally, the buffer stock financing facility has been little used and only in relation to two products, tin and sugar.

Because of the limited financial resources available, all these mechanisms have included a set of very restrictive conditions governing their use. They were conceived to solve problems of individual countries or products, on the assumption that the economy as a whole would maintain a normal financing. Apart from these mechanisms, others are needed to act as automatic stabilizers in the case of global problems, and particularly the following three: variations in international interest rates, fluctuations in the terms of trade, and the procyclical behaviour of external financing.

The variations in international interest rates have exceeded all expectations. These rates rose abruptly in 1980-1981, reaching levels three or four times higher than those recorded in previous years, after which they fell to a little less than half their maximum levels. Real interest rates followed the movements of nominal rates, although today they are three times as high as the historical rates. In view of the growth of the foreign debt of the developing debtor countries, especially in Latin America, in comparison with almost any variable of scale, together with the change in the composition of the debt into one with a variable rate, the changes in interest rates have a very marked effect on the external and internal equilibrium of the debtor countries.

Mechanisms to soften the effects of interest rate variations on the economies of debtor countries can take numerous forms. One possibility is the extension of the coverage of the International Monetary Fund's compensatory financing facility to include rises in international interest rates above a certain specified level (for example, a movable ten-year average). At the end of 1985, each percentage point of variation in the interest rate signified almost US\$ 6 billion for the developing countries as a whole. Formulas applicable at the national level might also be employed, such as automatically capitalizing interest payments above a certain limit. This type of formula at the national level has already been mentioned in earlier pages.

In the case of variations in the terms of trade, action would need to be taken in three directions. The first, already mentioned, would be to extend the coverage of the International Monetary Fund's compensatory financing facility. To give a rough idea of the sums involved, suffice it to say

that the 16.5% fall in the terms of trade for the Latin American and Caribbean countries between 1980 and 1985, has reduced the purchasing power of their exports by US\$ 300 billion over the said period.

The second relates to the access of the goods produced by developing countries to the main world markets, the aim being to facilitate the diversification of production and exports in these countries and to avoid transferring to them the cost of market protection in the industrialized countries.

Finally, as regards the procyclical behaviour of external financing, it would be necessary to study the relaxation of the debt-capital ratios of the multilateral development financing agencies, so that they could speedily enlarge their operations at moments of retrenchment of the private markets and reduce them when these markets expanded more vigorously. By relaxing the debt-capital ratio, the international agencies would be able to acquire in the markets the resources which the developing countries are not in a position to obtain, at this stage of the process, as experience has shown.

Naturally, the introduction of automatic stabilizing mechanisms will become less urgent, and even perhaps unnecessary, if symmetry can be achieved as regards the adjustment efforts of the creditor and debtor economies. As this seems very difficult to attain, however, the stabilizing mechanisms, or their absence, will have a powerful influence on the world economy in the coming years.

3. *The monetary system and conditionally*

Controversy over the conditions on which these agencies are prepared to lend their resources to their member countries recurs whenever these resources become scarce. Likewise, the willingness of the countries to apply adjustment policies that follow the traditional rules of these institutions is in direct proportion to their need to obtain new resources.

Between 1975 and 1982, the period of abundance in the international financial markets, the analysis of conditionality was set aside, to appear again abruptly when the net financial flows to the debtor countries were halted.

From the standpoint of the multilateral agencies, the conditionality must be such as to

permit the functioning of the economy at a level of activity compatible with the resources available within the context of a given situation of the world economy. From the standpoint of the countries using the resources of the multilateral agencies, however, this view of the problem leads to a contraction of economic activity and employment which is often unsustainable. As a higher level of economic activity would usually call for greater financial resources from abroad, the incompatibility of the two criteria is obvious. Although there is a certain margin for growth by saving financial resources through the application of policies that discriminate between different uses of the resources, this margin is generally limited and does not last for long. In a world economic and financial system that is asymmetrical in applying the discipline of adjustment, the limited availability of the resources is what determines the conditional ity applied, so that the multilateral agencies can hardly take into consideration the growth needs of the countries. With insufficient resources, any conditionality will inevitably be recessionary. Even that which aims at producing structural changes to improve efficiency will have this character, since these changes also require time and financing.

In a world in which an asymmetrical adjustment mechanism is operating, only an increase in available financing and the introduction of stabilizing mechanisms can minimize the recessionary effects of the conditionality.

The lack of finance on appropriate terms introduces an inevitable recessionary bias into the conditionality. Such conditionality, which has to be formulated within the framework of the real functioning of the world economic system, could be modified, however, to the extent that the multilateral financing agencies succeed in playing the anti-cyclical role which belongs to them and if appropriate stabilizing mechanisms can be introduced into the economic system. As the IMF has done to a limited extent in recent years, it is the task of the multilateral financing agencies to play a very active part in procuring funds to finance adjustment programmes that do not involve drastic falls in the per capita product and do not increase unemployment. These programmes will certainly not be of a stereotyped nature, since they must take into account the special features and economic and social priorities of each of the countries requiring resources. With more adequate funds, however, conditionality and growth cease to be opposing options.

Annex

MODEL USED IN THE SIMULATION EXERCISES

A) *The model:*

From the fundamental equations of the product we have:

1. $Y = C + I + EX - IMP$ where:
 Y = Gross domestic product
 C = Domestic consumption
 I = Gross domestic investment
 EX = Exports of goods and services
 IMP = Imports of goods and services.
2. $Y - C - I = EX - IMP$, but
3. $Y - C = A$
 where: A = Total domestic saving.
4. $I - A = IMP - EX$
 Moreover, we define the growth of the debt as a function of:
5. $dD = INT + IMP - EX$
 where: D — Total external debt

INT — Payments of interest to the exterior

dD = Annual growth in D .

Replacing (4) in (5) and dividing by D , we have:

$$6. \frac{dD}{D} = \frac{INT}{D} + \frac{I}{D} - \frac{A}{D}$$

where: $\frac{INT}{D}$ interest rate (and other expenses) actually paid on the debt.

Multiplying and dividing (6) by Y as applicable, we have:

$$7. \left[\frac{dD}{D} = i + \frac{Y}{D} \frac{I}{Y} - \frac{A}{Y} \right]$$

where: $i = \frac{INT}{D}$

B) For the purposes of the simulation the equation simulated was defined on the basis of (7):

$$A - \frac{Y}{Y} \quad , \quad Y \quad I \quad dD \quad , \quad D$$

$$Y \quad D \quad Y \quad D \quad Y$$

In the exercise the following conditions were assumed:

- A growth rate of the product of 4%.
- Investment/product ratio needed equal to 20%.
- External interest rates of: 12%, 10%, 8%, 6% and 4%.
- Debt/product ratio of 1.0, 0.7 and 0.5.
- Growth rates of the debt of 7%, 3% and 0%.
- Growth rate of imports given by:

$$\frac{AM}{M} - n \quad \frac{AY}{Y}$$

where: n = Product elasticity (cyclical) of imports.

The (cyclical) elasticity was obtained by means of an econometric estimate for the period 1970-1985°.

- The growth of exports is given by:

$$1) \quad \frac{I}{Y} - \frac{A}{Y} \quad \frac{IMP}{Y} \quad \frac{EX}{Y}$$

$$2 \quad EX \quad IMP \quad \frac{I}{Y} + \frac{A}{Y}$$

"The function used to estimate the (cyclical) product elasticity of imports was:

$$M = a + b_1GDP + b_2GDPREC + cTC$$

where: M = Imports
 GDP = Gross domestic product
 GDPREC = Dummy • GDP dummy = 1 if (GDP < 0) = 0 if GDP > 0
 TC = Real exchange rate applicable to imports

The sign ^ indicates growth rate.

We know that:

$$\frac{EX}{Y} \setminus = EX \quad (1 + EX)$$

$$Y \quad Y \quad (1 + Y)$$

$$4) \quad (Ei.) \quad (1+Y) = \frac{\dot{U}}{Y} 1(1+EX)$$

$$5) \quad EX = \left[\left(\frac{Ei}{Y} \right) (1+Y-1) \right] \frac{JL}{EX}$$

where the sign A indicates growth rate.

All the variables are measured in dollars at current prices.

Bibliography

- His (Bank for International Settlements) (1980): *Fifty-sixth annual report*. Basle, June.
- Baker, J. (1985): *Statement by the United States Secretary of the Treasury to the Joint IMI World Bank Annual Meeting*. Seoul, October.
- Bradley, B. (1986): *LDC debt testimony before the Senate Banking Committee*. M May.
- ECIAC (Economic Commission for Latin America and the Caribbean) (1986): *The problem of the external debt: gestation, development, crisis and prospects* (u:/<U406). Santiago, Chile, 6 May.
- (1977): *América Latina: relación de precios del intercambio, 1928-1976* (i:/c:i:i(u./1040). Santiago, Chile.
- Feis, H. (1930): *Europe, the world's banker 1870-1914*. Yale University Press.
- Feuerlein, W. and E. Hanna (1941): *Dollars in Latin America*. New York: Council on Foreign Relations. Haberler, G.V. (1950): *The theory of international trade*. London: William Hodge and Co.
- jl< (Staff of the Joint Economic Committee of the Congress of the United States) (1986): *The impact of the Latin American debt crisis on the U.S. economy*. Washington, D.C., 10 May (mimeographed).
- Kerry, J.F. (1986): A way out of the debt crisis. *Congressional Record*, vol. 112, No. 60. Statement by Senator Kerry. Washington, D.C., 7 May.
- Massad, C. (1986a): "The real cost of the external debt for the creditor and for the debtor", in *Latin America: International Monetary System and External financing* IUNDIVI*-IAC RI.A/77/021). Santiago, Chile: UNDIVIXAC.
- (1986b): *Debt and debt crisis in Latin America*. Washington, D.C.: Economic Development Institute of the World Bank (in the press).
- (1985): "Debt: an overview", in *The debt problem: acute and chronic aspects*. C. Massad (comp.) *Journal of Development Planning*. New York: United Nations.
- (1984): *Ajuste recesivo, ajuste expansivo y condiciona/i-dad*. Address given on the occasion of the fiftieth anniversary of the Banco Central de Reserva de El Salvador. San Salvador, 19 June.
- Montagnon, P. (1985): "IMt urges Fund to aid Latin American countries". *Financial Times*, 21 September.
- North, D.C (1962): "International capital movements in historical perspective", in *U.S. private and government investment abroad*. RE. Mikescil (comp.). University of Oregon Books.
- Rohatyn, F. (1986): *Address before the Overseas Development Council's Conference on the Future of the World Bank*. Washington, D.C.
- Schumer, C. (1986): "Ease up on debtor nations", in *New York Times*, 10 March.
- League of Nations (1945a): *Economie stability in the post-war world* (Part II). Geneva.
- (1945b): *Experiencia monetaria internacional: lecciones del periodo de entreguerras*. Geneva.
- Solomon, R. (1983): *International economic letter*, vol. III, No. 1, 18January.