International Finance Discussion Papers

Number 227

August 1983

AN ANALYSIS OF EXTERNAL DEBT POSITIONS OF EIGHT DEVELOPING COUNTRIES THROUGH 1990

by

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An Analysis of External Debt Positions of Eight Developing Countries Through 1990*

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In this paper we trace the accumulation of large external debts by eight developing countries since 1973 and provide a perspective on their external positions through 1990. The principal conclusions we draw from the analysis include:

1. The accumulation since 1973 of external debt by six large Latin American debtors (Argentina, Brazil, Chile, Mexico, Peru and Venezuela) was not associated with trade deficits. Instead, these countries, to varying degrees, made net service payments to nonresidents and accumulated private and official claims on nonresidents.
2. An appropriate measure of the burden of external debt compares the real interest charges on debt to the ability of the country to make such payments to nonresidents. One such measure, the ratio of real interest payments to exports, rose dramatically for all eight countries studied in 1982. Under reasonable assumptions, the ratio will decline through 1990.
3. The debt burden would be reduced rapidly by reductions of real interest rates or equivalent changes in the present value of outstanding external debts. Faster economic growth in the industrial (OECD) countries and associated increases in

export earnings have a powerful effect by 1990 but provide little relief for the next two years. The same conclusion applies to adjustment policies in the borrowing countries that result in larger trade surpluses.

4. For some countries continued capital outflows that do not generate foreign exchange earnings for the country could offset much of the improvement in the ratio of real interest payments to exports through 1990. On the other hand, earnings accruing to residents on new and existing foreign assets would be an important offset to interest payments to nonresidents if such earnings were made available to residents that had incurred external debt.

In the next section we present historical data on external debt, cumulated trade and current account deficits, and implicit private capital outflows for the eight countries mentioned above. In Section II a framework is presented that provides a useful measure of the present and prospective economic burden of the external debts of these countries. The preferred measure of the burden is shown to be the ratio of real interest payments to exports. A qualitative discussion of the behavior of this measure over time relative to the behavior of real interest rates, inflation rates and the balance of payments is also provided. Finally, in Section III, we present a description of the simulation model used to generate forecasts through 1990, the assumptions that are required for the projections, and a brief discussion of the results. Detailed tables containing both the historical data and baseline projections are provided in the Appendix.

I. The Accumulation of Debt 1974-1982

The rapid build-up of external liabilities by the eight developing countries studied substantially augmented these countries' purchasing power

in world markets in recent years. But it would be a mistake to assume that this borrowing was associated with large merchandise trade deficits in all cases. While it is impossible to trace how the purchasing power provided by external creditors was utilized, the six Latin American countries as a group matched all of their imports with exports of merchandise.

As shown in columns 1 and 2 in Table 1, the cumulated trade deficits of Brazil, Chile, Mexico and Peru were less than 1/5 as large as their buildup in external debts. Argentina and Venezuela ran substantial cumulative trade surpluses. The two Asian countries, Korea and the Philippines, did show cumulated trade deficits equal to about 2/3 and 1/2 respectively of their buildup in external debt, a pattern more typical of developing countries as a group. A comprehensive analysis of the implications of these very different patterns of international payments for the countries studied is beyond the scope of this paper. However, it is clear that we cannot assume that the build up in external debt was related to net imports of goods, or growth in productive capacity, in any simple manner. Each country studied has a unique history which, of course, also affects its prospects for the future.

As shown in Column 3 of Table 1 the most important net use of foreign exchange for Brazil, Chile, Mexico and Peru was net service payments, largely in the form of net interest payments on external debt. Brazil, for example, made $68 billion in net service payments over the nine years shown. Interest payments are considered payments for the services provided by the existing stock of financial capital provided by nonresidents. As we shall see in the next section, however, in an inflationary environment a substantial share of such service payments should be considered inflation premiums rather than rental payments for the use of foreign capital.

Columns 4 and 5 in Table 1 show cumulative changes in official and private claims on nonresidents. The buildup in official reserve assets was an important use of funds for only three countries: Chile, Korea and Venezuela. In contrast, the accumulation of private claims on nonresidents accounted for more than half of the buildup of external debt for Venezuela and Argentina and accounted for 20 percent or more of the buildup for four other countries.

The estimates for private claims on nonresidents shown in column 5 are derived from the other data in Table 1. Column 5 is the difference between the buildup in external debt in column 1 and the recorded uses of

Table 1

External Debt and Cumulated Changes in Balance of Payments Flows: 1974-1982 1/
(Billions of U.S. Dollars)

	(1) Cumulated Increase in Gross External Debt	(2) Cumulated Trade Deficit 2/	(3) Cumulated Net Service and Other Current Account Payments	(4) Cumulated Increase in Official Reserves	(5) Cumulated Increase in Private Claims on Nonresidents 3/
Argentina	33	-10	20	2	20
Brazil	94	16	68	-1	11
Chile	15	3	10	3	0
Korea	34	21	-1	6	6
Mexico	83	9	37	0	36
Peru	11	1	5	1	3
Philippines	20	13	0	2	4
Venezuela	27	-33	26	9	26

1/ For a time series of yearly data and definitions see Appendix Tables 1-8.

2/ Deficit = +

3/ Difference between column 1 and columns 2-4.

foreign exchange in columns 2-4. Since it is a residual, the estimate for private claims on nonresidents is subject to errors in the other data series. For example, if export values are consistently understated or import values understated, perhaps to conceal financial capital flight, our estimate of the growth of private claims on nonresidents would be biased downward. While a large number of such errors are possible we do not think it is likely that the estimates shown are qualitatively misleading.

The importance of private accumulation of external assets has varied considerably among the developing countries studied. We have not attempted to explain this different experience among countries or for individual countries over time. It is clear, however, that the residents of a debtor country should be considered to be important creditors of the country. In some respects residents face incentives similar to small external creditors. Like other "fringe" creditors, residents respond to economic incentives and perceptions about the course of the economy and economic policy. They can, in part, offset new financial inflows from offical or other private sources. Efforts to limit residents' access to foreign assets have been an important aspect of exchange control policy in many of these countries. The success of such policies, however, is open to question. Moreover, fear of new exchange control measures may induce residents to reinvest earnings outside the exchange control area.

It should be noted that gross capital inflows and outflows are not in themselves the cause of debt problems. Many countries have gross external debts which are roughly offset by gross external assets. The United States, for example, receives earnings on foreign investments that outweigh payments on gross debts. This situation is a problem only if the external receipts are for some reason -- for example the economic policies of the country -- not available to those who have to make payments on external debt. In general, this situation arises when all debtors become concerned about a country's economic or political outlook. Residents will

prefer to invest in an instrument that is not subject to exchange controls imposed by their government. Moreover, earnings on assets outside the controlled market will likely remain outside the controlled market.

The historical data indicate that the source of external debts has varied considerably among the countries studied. The clear warning suggested by this data is that the analysis and simulations of likely future developments provided in the next two sections necessarily conceal important differences among individual countries that may be crucial in determining their prospects. Nevertheless it may be useful to proceed with a very general framework that later can be modified to consider individual countries in greater detail.

II. The Burden of External Debt

In order to evaluate recent developments as well as the outlook for these countries, it seems natural to compare a measure of debt service burden to a measure of the ability of each country to generate payments to nonresident creditors. One popular measure is the ratio of debt service, which includes interest payments and scheduled amortization on some or all debt, to export earnings. This measure has the advantage of showing the potential claim on export proceeds in the, presumably unusual, event that all creditors who have the contractual right to demand payment choose to do so. It is not, however, the appropriate number to consider in evaluating the medium-term outlook for these countries. A better measure is the countries' expected ability to generate the foreign exchange necessary to make interest payments on expected levels of debt.

Table 2 shows alternative measures of debt service burdens for eight developing countries in 1982. Column 1 shows a conventional measure of the sum of interest payments, short term debt that must be rolled over at least once during the year, and scheduled repayments of longer term debt. Mexico and Brazil by this measure had to arrange for nearly $45 billion and

Table 2

Measures of Debt Service in 1982

	(1) Total Debt Service--Including Short-Term Debt	(2) Short-term Debt	(3) Scheduled Amortization of Medium- and Long-Term Debt	(4) Gross Interest Payments	(5) Inflation Premium[1]	(6) Real Interest Payments[2]	(7) Real Net Interest Payments as a Percentage of Exports
			(billions of U.S. dollars)				(percent)
Mexico	45.1	26.0	7.2	11.9	4.9	7.0	16
Brazil	35.0	15.2	7.8	12.0	5.4	6.6	24
Venezuela	23.8	17.0	2.3	4.5	2.0	2.5	7
Argentina	19.8	9.6	5.1	5.1	2.1	3.0	26
Korea	18.4	11.6	2.3	4.5	2.2	2.3	7
Philippines	9.7	6.6	0.9	2.2	1.2	1.0	8
Chile	6.2	3.0	1.2	2.0	1.1	0.9	8
Peru	5.0	2.5	1.2	1.3	.75	0.5	9
Total	163.0	91.5	28.0	43.5	19.65	23.8	

1/ U.S. GNP deflator times gross debt.

2/ Gross interest payments less inflation premium.

$35 billion respectively in rollovers and new money in 1982. Column 2 shows that about half of this total represented short term debt. As shown in Column 3 about one-third of the remaining debt service was accounted for by scheduled amortization of longer term debt. The remaining $12 billion for each country shown in Column 4 represented gross interest payments. But we estimate that about half of these interest payments reflected an inflation premium contained in nominal interest charges. Our estimate of the inflation premium is the change in the U.S. GNP deflator times gross external debt in Column 1. The inflation premium was built in through the use of floating rate debt which has become the largest component of debt for these countries. These payments, shown in Column 5, are comparable to the scheduled amortization in Column 3 since they would have to be reloaned to the country in order to keep the nominal value of the debt increasing at the rate of inflation and therefore the real value of the debt unchanged. Column 6 shows our estimate of the real interest payments on foreign debt. This is a much smaller magnitude than the conventional debt service number of Column 1. This measure has the desirable property of isolating the foreign currency payment necessary to maintain, but not amortize, an existing real stock of foreign debt.

The ability to make these payments depends in the largest sense on the debtor country's productive capacity relative to its domestic absorption of output. An imperfect, but accessible, measure of this ability is the level of the dollar value of exports. The real net interest payments expressed as a percentage of exports of goods and services in 1982, both measured in current dollars, are shown in Column 7. We will focus on this shorthand measure of a country's external debt position in the remainder of this paper. This ratio has several desirable properties. The numerator is the foreign currency payment, measured in current dollars, necessary to maintain, but not to amortize, an existing real stock of foreign debt. The

denominator, exports of goods and services in current dollars, represents the ability of a country to make its interest payments. As long as the rate of real interest charges is the same across countries and over time, the path of this ratio is the same as the path of total external debt relative to exports.

We do not know what level of this ratio is sustainable for any country nor would we suggest that it is the only relevant measure of a country's debt position. However, this measure does clearly show a deterioration in the external position of several of these countries to levels that are very high by historical standards. Forecasts for this magnitude, or something like it, presumably help determine whether the much larger debt service payments including amortization, shown in Column 1, will in fact be demanded by creditors.

As shown in Appendix Tables 9-16, prior to 1981 and 1982 real interest payments for the eight countries were a very small or negative share of exports in spite of the fact that nominal debt was already rising rapidly. The reasons for this are straightforward. First, the dollar value of these countries' exports grew rapidly throughout the 1970's in both volume and value terms. Moreover, dollar prices of oil and other exports grew faster than the dollar prices of traded goods in general. While the denominator, the dollar value of exports, grew rapidly, the growth rate of the numerator was restrained by generally low or at times negative real interest rates on dollar debt. In part, this was due to the low rate of interest of fixed rate non-bank debt that helped keep total interest charges down early in the period.

In 1981 and 1982 this climate changed rapidly. Export growth fell and even become negative as world output growth leveled off while interest rates on floating rate dollar debt rose relative to inflation rates so that real interest costs on existing debt increased substantially.

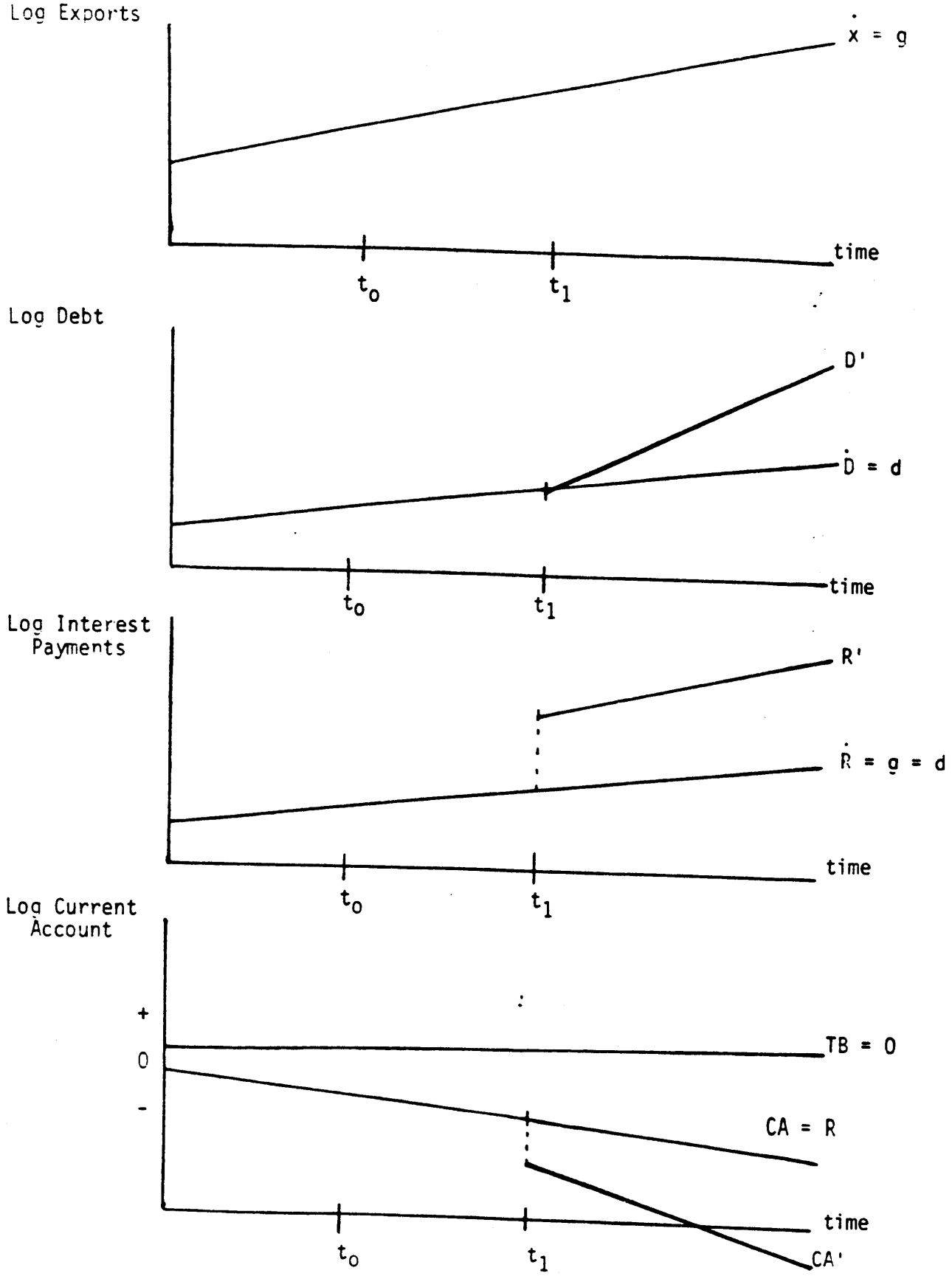
The impact of this change in the economic environment on the ratio of real interest payments to exports (K) is illustrated in Chart 1. In Chart 1 inflation is assumed to be zero; hence, real and nominal magnitudes are equal. At time t_o real exports are growing at a constant rate (g). Real debt (D), shown in the second panel, is growing at a constant rate (d). Since real interest payments (R), shown in the third panel, are equal to D times the real interest rate (r), and r is constant, R also grows at rate d. As long as g = d the K ratio (R/X), will remain at its initial value. A convenient way to insure that g = d is to assume:

1. That trade in goods is balanced so that the real value of debt cannot change over time because of trade in goods.
2. That the real rate of interest, r, is equal to the growth rate of exports, g.
3. Under these conditions the real current account deficit will be equal to R = rD and will grow at rate d. This is shown in the bottom panel of Chart 1.

In this special case, the growth in debt is matched by the growth in exports, and as long as r is constant, K will remain unchanged.

If, for example, a country's exports are expected to grow at the same rate as, or more rapidly than, the real rate of interest, the outlook for roughly balanced trade and a current account deficit is not a cause for concern. However, a change in the real rate of interest on dollar credits immediately alters these relationships. In terms of Chart 1, at time t_1 the real rate of interest increases. There is no immediate effect on D or X, but R jumps to R' and the ratio, K, also increases proportionately. If the balance of trade does not change, the current account deficit widens to CA' and the increased real interest payments are added to the debt so that D grows at a higher rate along D' which further

Chart 1


Log Exports
$\dot{X} = g$
time
t_o
t_1
Log Debt
D'
$\dot{D} = d$
time
t_o
t_1
Log Interest Payments
R'
$\dot{R} = g = d$
time
t_o
t_1
Log Current Account
+
0
-
TB = 0
CA = R
time
CA'
t_o
t_1

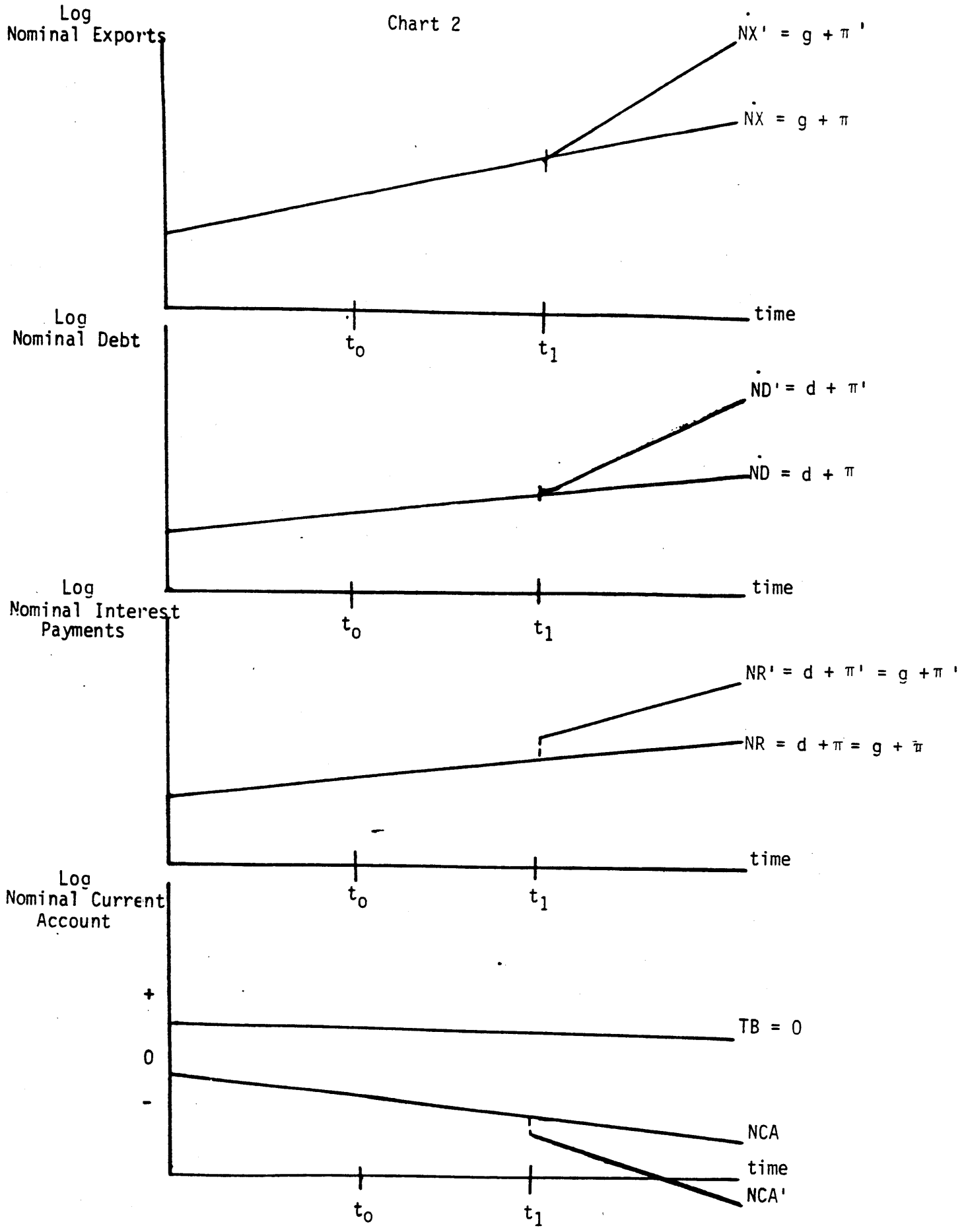
increases K. In fact, it is interesting to note that if $r > g$, that is, if the real rate of interest exceeds the growth rate of exports, the trade balance will have to move into surplus in order to avoid an ever increasing K.

The analysis is complicated somewhat in an inflationary environment. Changes in nominal interest rates that are matched by changes in the rate of inflation do not result in a change in the K ratio even though the current account deficit does change. This is illustrated in Chart 2 which is the same as Chart 1 except that all variables are measured in current dollars. As shown in the top panel at t_0 nominal exports grow at $g + \pi$, where π is the dollar rate of inflation. If nominal debt (ND) grows at $d + \pi$, if the nominal rate of interest is $r + \pi$, and if the nominal rate is unchanged, then the nominal interest payment (NR) also grows at $d + \pi$. Again, if $d = g$ the K ratio remains unchanged.

As before, assume that trade in goods is balanced so that debt is not growing due to trade in goods. This means that nominal debt is growing at the rate of nominal interest, $r + \pi$. In turn, this implies that the nominal current account is in deficit equal to $NR = D(r + \pi)$.

But because the nominal interest payments include amortization of debt equal to πD, we have to be careful in relating balance of payments identities to changes in real debt positions. At t_1, a rise in nominal interest rates matched by a rise in the rate of inflation does not cause the K ratio to change as long as trade remains balanced. This can be seen in the top two panels. The nominal value of exports begins to grow at $g + \pi'$. Nominal debt also begins to grow at $d + \pi'$ and, since $g = d$, the K ratio remains unchanged. The rise in nominal interest rates does generate a larger current account deficit. The larger current account deficit implies that nominal debt is growing more rapidly as shown in the second panel.

Chart 2


Log
Nominal Exports
$\dot{NX}' = g + \pi'$
$\dot{NX} = g + \pi$
time
t_o
t_1
Log
Nominal Debt
$\dot{ND}' = d + \pi'$
$\dot{ND} = d + \pi$
time
t_o
t_1
Log
Nominal Interest
Payments
$NR' = d + \pi' = g + \pi'$
$NR = d + \pi = g + \pi$
time
t_o
t_1
Log
Nominal Current
Account
+
0
-
TB = 0
NCA
time
NCA'
t_o
t_1

For this reason, if current account balances are used to evaluate adjustment policies, the value of the current account objective should be adjusted upward if the inflation rate rises and adjusted downward if the inflation rate falls.

While we do not know what level of K is sustainable, we felt it was useful to project values of K under alternative assumptions about external economic developments and domestic policies of these countries. Presumably, forecasts of K (or something like it) are a factor which creditors would use to determine whether to continue lending to a particular country.

III. Simulations

In order to project the K ratios we built a simple simulation model incorporating the relationships described above.[1/] Since there is only a very limited base of econometric work on the trade of developing countries from which to draw, we chose parameter values judgmentally. The values we chose are, however, consistent with some preliminary econometric work of our own reported in Appendix Tables 17-20.

The model first calculates current dollar exports -- the denominator of our measure of the debt burden. An aggregate export unit value index (for non-oil developing countries) is used for all eight countries. The index, which is measured in dollars, is assumed to rise in proportion to changes in the U.S. price level and to changes in industrial country economic activity, and to rise with an elasticity of 0.5 when the U.S. dollar depreciates (on a weighted average basis) against the currencies of other industrial countries. These estimates are based on an equation reported in Appendix Table 17 that regresses the percent changes in the

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1/ A copy of the program is available from the authors.

export unit value on percent changes in U.S. prices, the dollar exchange rate, and industrial country economic activity using quarterly data for the period since 1970.

Based on estimates of the growth of real GNP in the OECD area, the model calculates export volume using an income elasticity of 2.0 and a relative price elasticity of 1.0 distributed over three years. These estimates are based on equations reported in Appendix Table 18 that regress real exports for various developing countries on industrial country income and relative prices (the developing country's domestic prices over industrial countries' domestic prices measured in dollars) using quarterly data for the period since 1970. The relative price term varied considerably across countries ranging from -0.5 to 1.75. The estimated income elasticities were somewhat imprecise and were in the the range of 1.0 to 5.0, consistent with our assumption of 2.0. Given the preliminary nature of this work our assumed parameters should be viewed with some caution when applied to individual country simulations.

For Mexico and Venezuela the model projects oil exports separately from nonoil exports. We assumed that the price of these countries' oil exports would change dollar for dollar with changes in the OPEC oil price. We assume that the OPEC oil price remains at $29 per barrel through 1984, rises to $32 per barrel in 1985, and stays at that level through 1990. Oil export volume is determined from OECD GNP and the OPEC oil price using estimated elasticities of 1.0 and -0.25 respectively. These estimates are taken from the oil consumption functions in the International Division's Multi-Country Model. We assume that for Mexico and Venezuela, the increase in exports would be proportional to the increase in OECD consumption.

Real interest payments on the external debt -- the numerator of our measure -- are calculated from a set of accounting identities. The interest rate on bank debt is the sum of the LIBOR rate plus an assumed

spread. After 1984 the real interest rate faced by these countries is assumed to converge to 5 percent. The interest rate on external debt is the weighted average of the interest rates on bank debt and non-bank debt using the shares of external debt for each country as weights. (See Table 3.)

The implicit interest rate on non-bank debt for each country is computed from total net interest payments using the weights given above, and is extrapolated at its 1982 level. Interest payments on the external debt are the product of the interest rate and the annual average value of the external debt. The year-end value of the debt is the sum of the debt at the beginning of the year, the current account deficit, and any additional net capital outflows. The current account deficit equals the trade deficit,

Table 2

Bank Debt as a Percent of
Net Debt in 1982

(Percent)

Argentina	69.5
Brazil	60.3
Chile	56.5
Korea	60.4
Mexico	73.2
Peru	40.9
Philippines	56.4
Venezuela[1/]	157.2

1/ Venezuela held extensive official foreign exchange reserves. Hence, its gross bank debt was larger than its net debt. Venezuela was assumed to earn LIBOR minus 0.5 percentage points on its reserves in the simulation.

assumed to be a policy variable controlled by the debtor country in the control solution, plus interest payments on external debt, plus other service payments less net transfer receipts. Other service payments and net transfer receipts are extrapolated at their 1982 levels. Real interest payments on external debt (in current dollars) equal the product of the real interest rate and the annual average value of the external debt. The real interest rate equals the interest rate on external debt less the U.S. inflation rate. Nominal imports are derived from the trade balance identity in the control solution, given the value of exports and the trade balance itself; real imports are nominal imports deflated by an aggregate import unit value. The LDC import unit value is assumed to rise in proportion to changes in the U.S. price level and rise with an elasticity of 0.5 when the U.S. dollar depreciates on a trade-weighted basis (see Appendix Table 19).

The trade balances are assumed to follow projections included in IMF approved stabilization programs in 1983-84 for all of the countries studied with the exceptions of Venezuela and Korea as shown in Table 4. For Venezuela and Korea other sources were utilized. After 1984 the trade balances are assumed to follow a smooth trajectory toward zero in the baseline scenario.

OECD growth is assumed to recover to 1.8 percent in 1983, 3.4 percent in 1984, and remain at 3 percent from 1985 through 1990. The assumption for 1985-1990 is consistent with estimates of growth of potential output for OECD countries in the 1970's. Estimates for average interest rate charges on developing country bank debt and the U.S. GNP deflator are shown in columns 10 and 11 of Table 4. Taken together these assumptions imply about a 2 percentage point drop in real interest rates faced by these countries in 1990 as compared with 1983. The foreign exchange value of the dollar is extrapolated at its average value for the first half of 1983.

Table 4

Baseline Projection Assumptions

	Trade Surplus (billions of U.S. dollars)										
	Argentina	Brazil	Chile	Korea	Mexico	Peru	Philippines	Venezuela	OECD/GNP (change, year/year)	6-Month LIBOR Plus Spread	U.S. C.P.I. (change, year/year)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1982	2.7	0.7	0.2	-2.4	7.7	-0.8	-2.8	3.4	-0.7	14.5	5.9
1983	3.0	6.0	1.3	1.0	10.0	0.3	-2.2	5.7	1.8	10.8	4.0
1984	3.5	8.0	1.5	1.5	10.0	0.7	-2.1	5.3	3.4	10.75	3.4
1985	2.0	5.0	1.0	-1.6	6.0	0.2	-1.4	2.9	3.0	10.4	4.0
1986	1.0	2.0	0.5	-1.0	3.0	0.1	-0.6	1.4	3.0	10.2	4.0
1987	0	0	0	-0.5	0	0	0	0	3.0	9.8	4.0
1988	0	0	0	0	0	0	0	0	3.0	9.4	4.0
1989	0	0	0	0	0	0	0	0	3.0	9.0	4.0
1990	0	0	0	0	0	0	0	0	3.0	9.0	4.0

The baseline projections for each developing country studied are summarized in Table 5 and presented in greater detail in Appendix tables 9-16. In every case the ratio of interest payments to exports declines after 1984. But only for Argentina, Chile, and Mexico is there a decline between 1982 and 1984. In these three countries the approximately balanced current account projected for 1983-84 keeps nominal debt and interest payments nearly constant while the value of exports grows comparatively rapidly. In most cases the ratio falls to roughly half its 1982 level by the end of the projection period, but remains at levels that are high compared with 1974-1981.

The average annual rate of growth of external debt, which is not necessarily equal to the rate of growth of bank debt, is shown in Appendix tables 9-16. For 1983-84 the growth in total debt varies over a wide range from a high of 13 percent for the Philippines to minus 8 percent for Venezuela, but in every case there is a substantial slowing as compared to recent years. With the exception of Korea and the Philippines the growth of nominal debt falls within a 9-14 percent range by 1990.

An analysis of the sensitivity of our simulation results to changes in the underlying assumptions is also summarized in Table 5.[1/] Five experiments were conducted. They are: (1) one percentage point higher real economic growth in the OECD countries throughout the forecast period; (2) a one percentage point drop in the LIBOR interest rate; (3) a fall in each country's real exchange rate equal to 5 percent; (4) one precentage point slower real economic growth in the country considered; and (5) private capital outflows in real terms continuing at the same rate as their average in 1980-82.

1/ Detailed tables for each experiment are available from the authors.

Table 5

Ratio of Real Interest Payments to Exports:
Summary of Simulation Results
(percent)

	Baseline (1) 1982	Baseline (2) 1984	Baseline (3) 1990	Change from Baseline: High OECD Growth (4) 1984	High OECD Growth (5) 1990	Low Real Interest Rate (6) 1984	Low Real Interest Rate (7) 1990	Low Real Exchange Rate (8) 1984	Low Real Exchange Rate (9) 1990	Low Domestic Growth (10) 1984	Low Domestic Growth (11) 1990	Trend Capital Outflow (12) 1984	Trend Capital Outflow (13) 1990
Argentina	26.1	20.2	14.2	-1.5	-7.0	-2.1	-2.3	-1.2	-3.9	-0.1	-2.4	4.6	14.3
Brazil	24.0	25.2	19.3	-1.7	-7.4	-2.4	-2.7	-1.4	-3.9	-0.2	-2.8	0.2	0.6
Chile	7.7	6.8	3.8	-0.5	-1.5	-1.1	-0.9	-0.4	-1.0	-0.1	-1.1	0.1	0.1
Korea	6.9	7.3	3.5	-0.5	-1.3	-0.7	-0.5	-0.6	-1.4	-0.2	-2.5	0.1	0.5
Mexico	16.0	12.4	8.2	-0.7	-3.6	-1.7	-1.7	-0.6	-2.2	-0.1	-1.9	2.0	6.1
Peru	9.1	10.1	4.4	-0.7	-2.0	-1.1	-0.7	-0.6	-1.3	-0.1	-1.4	0.4	1.1
Philippines	8.2	9.6	4.4	-0.7	-2.1	-1.3	-0.9	-0.6	-1.4	-0.2	-1.4	0.2	0.6
Venezuela	7.4	7.4	6.3	-0.4	-3.5	-1.0	-1.4	-0.4	-2.8	-0.2	-2.9	4.3	16.2

1/ Difference between baseline ratio and ratio under the alternative scenario.

2/ One percentage point higher real economic growth in the OECD countries through the projection period (1983-1990).

3/ One percentage point drop in the LIBOR interest rate (1983-1990).

4/ A 5 percent decline in the price adjusted exchange rate of domestic currency in 1983 maintained through 1990

5/ One percentage point lower domestic economic growth through the projection period (1983-1990).

6/ Private capital outflows continuing in real terms at the same rate as the average for 1980-1982.

For our sensitivity analysis, we made two revisions to the model. Real imports, which were derived from an exogenous trade balance in the control solution, are projected using an income elasticity of 1.5 and a price elasticity of 1.0 distributed over three years. This estimate is based on equations regressing real imports on real GNP and the real exchange rate for several developing countries. (The equations are summarized in Apperdix Table 20.) The estimated income elasticities were in the range of 0.6 to 2.0 and the real exchange rate elasticities were in the range of 0 to -2.7. In addition, we inserted an export multiplier on domestic GNP of 1.5 in the first year with a cumulative effect of 2 by the second year. Thus if real exports rise by 1 billion 1980 dollars, real GNP rises by 2 billion 1980 dollars after two years which in turn raises imports.

As shown in column 5 of Table 4 one percentage point higher real economic growth in the OECD countries throughout the forecast period generates a considerable improvement in the ratio of real interest payments to exports by 1990.[1/] However, as shown in column 4, the effects of faster growth in 1983 and 1984 are quite small. It takes some time before the cumulative effects of the higher OECD growth rates have a significant impact on the stock of debt relative to the flow of exports. An assumption that is crucial to this result is that the rise in export receipts associated with higher growth rates in the OECD countries is offset only to a limited extent by increased imports. For Brazil and Mexico the trade surplus in 1990 is about $11 billion larger as compared to the baseline scenario and is greater by lesser amounts for the other countries studied. If this trade surplus did not materialize roughly half of the reduction in the ratio associated with higher OECD growth would be forfeited.

1/ The real interest rate is not changed in this simulation.

While higher OECD growth has little impact in the short run, lower real interest rates, as shown in columns 6 and 7, have an immediate impact on the real cost of the debt. A one percentage point drop in LIBOR reduces our measure of the real burden of the foreign debt of these countries by one to two percentage points by 1984. However, in this case there is little or no increasing cumulative effect.

These countries could also reduce the rate of growth of their debts through reductions in the real exchange values of their currencies. Columns 8 and 9 show the effects of a 5 percent reduction in real exchange rates in 1983 that is maintained throughout the projection period. Roughly one quarter of the improvement in the ratio is realized by 1984.

As shown in columns 10 and 11, lower domestic economic growth would also have a substantial cumulative effect on the ratio of real interest payments to exports. The cumulative impact of one percentage point lower growth of domestic output would yield a 1-4 percentage point improvement in the ratio by 1990.

Finally in columns 12 and 13 the effects of private capital outflows that continue in real terms at their 1980-82 average are shown. For several countries the improvement shown in the baseline scenario would be more than eliminated by further private capital outflows.

While our baseline scenario and sensitivity results rest on a number of tenuous assumptions some concluding comments are suggested by the simulation exercise.

First, the range of parameter estimates reported in Appendix Tables 17 to 20 suggest that further work on individual countries is needed. Our use of judgmental parameters in the simulation model necessarily reduces our confidence in the results of the model for particular countries. However, we believe that this type of exercise is a useful way to approach the analysis of debt burdens.

Second, movements in market interest rates are clearly more important for the short run prospects as compared with the other factors considered.

Third, the policies followed by the debtor countries themselves are crucial to the outlook for their debt positions. Even the favorable effects of an increase in OECD growth can be substantially reduced if appropriate policies are not followed to allow the trade surplus to materialize. Moreover, capital outflows probably depend in large part on the confidence that domestic residents have in the soundness of domestic economic policies and the stability of domestic financial markets.

Finally, in the real world the effects we have considered are not independent of one another. In putting together a more realistic set of simulations one would want to combine the results for alternative assumptions about interest rates, economic activity, exchange rates and capital flows in a more integrated pattern.

APPENDIX TABLE 1

HISTORICAL DATA -- ARGENTINA
(BILLIONS OF U.S. DOLLARS)

	CUMULATED CHANGE IN GROSS EXTERNAL DEBT SINCE 1973 1/	CUMULATED CHANGE IN EXTERNAL ASSETS SINCE 1973 2/	CUMULATED CURRENT ACCOUNT SINCE 1973 3/	CUMULATED TRADE BALANCE SINCE 1973 3/	CUMULATED IMPLICIT CAPITAL OUTFLOW SINCE 1973 4/
1974	1.1	0.4	-0.1	-0.7	0.8
1975	1.5	-0.5	1.2	-0.2	0.8
1976	1.9	0.7	0.6	-1.3	0.6
1977	3.4	2.5	-0.6	-3.1	1.5
1978	6.5	4.4	-2.4	-6.0	4.5
1979	13.2	8.9	-1.9	-7.8	6.2
1980	22.2	6.4	2.9	-6.4	12.9
1981	31.6	3.4	7.6	-7.1	20.6
1982	32.6	2.3	10.1	-9.8	20.2

1/ INCLUDING CUMULATED DIRECT INVESTMENT INFLOWS. WHILE THESE INFLOWS ARE NOT USUALLY CONSIDERED PART OF A COUNTRY'S EXTERNAL DEBT, THEY ARE INCLUDED HERE BECAUSE DIRECT INVESTMENT INFLOWS DO HELP FINANCE PRIVATE CAPITAL OUTFLOWS. CUMULATED DIRECT INVESTMENT FLOWS FROM 1973 THROUGH 1982 AMOUNTED TO $ 2.635 BILLION.

2/ TOTAL RESERVES LESS GOLD PLUS COMMERCIAL BANK ASSETS

3/ DEFICIT EQUALS +

4/ CUMULATED IMPLICIT CAPITAL OUTFLOW SINCE 1973 EQUALS THE CHANGE IN GROSS EXTERNAL DEBT SINCE 1973 MINUS THE CHANGE IN EXTERNAL ASSETS SINCE 1973 MINUS THE CUMULATED CURRENT ACCOUNT BALANCE SINCE 1973

APPENDIX TABLE 2

HISTORICAL DATA -- BRAZIL
(BILLIONS OF U.S. DOLLARS)

	CUMULATED CHANGE IN GROSS EXTERNAL DEBT SINCE 1973 1/	CUMULATED CHANGE IN EXTERNAL ASSETS SINCE 1973 2/	CUMULATED CURRENT ACCOUNT SINCE 1973 3/	CUMULATED TRADE BALANCE SINCE 1973 3/	CUMULATED IMPLICIT CAPITAL OUTFLOW SINCE 1973 4/
1974	6.9	-0.9	7.5	4.8	0.3
1975	15.5	-2.4	14.6	8.3	3.3
1976	23.3	0.4	21.2	10.7	1.7
1977	31.5	1.1	26.3	10.8	4.1
1978	48.3	6.5	33.3	11.9	8.5
1979	56.9	3.5	43.8	14.7	9.6
1980	68.1	-0.0	56.7	17.6	11.4
1981	81.0	1.4	68.4	16.3	11.2
1982	93.5	-1.3	83.4	15.6	11.4

1/ INCLUDING CUMULATED DIRECT INVESTMENT INFLOWS. WHILE THESE INFLOWS ARE NOT USUALLY CONSIDERED PART OF A COUNTRY'S EXTERNAL DEBT, THEY ARE INCLUDED HERE BECAUSE DIRECT INVESTMENT INFLOWS DO HELP FINANCE PRIVATE CAPITAL OUTFLOWS. CUMULATED DIRECT INVESTMENT FLOWS FROM 1973 THROUGH 1982 AMOUNTED TO $ 15.48 BILLION.

2/ TOTAL RESERVES LESS GOLD PLUS COMMERCIAL BANK ASSETS

3/ DEFICIT EQUALS +

4/ CUMULATED IMPLICIT CAPITAL OUTFLOW SINCE 1973 EQUALS THE CHANGE IN GROSS EXTERNAL DEBT SINCE 1973 MINUS THE CHANGE IN EXTERNAL ASSETS SINCE 1973 MINUS THE CUMULATED CURRENT ACCOUNT BALANCE SINCE 1973

APPENDIX TABLE 3

HISTORICAL DATA -- CHILE
(BILLIONS OF U.S. DOLLARS)

	CUMULATED CHANGE IN GROSS EXTERNAL DEBT SINCE 1973 1/	CUMULATED CHANGE IN EXTERNAL ASSETS SINCE 1973 2/	CUMULATED CURRENT ACCOUNT SINCE 1973 3/	CUMULATED TRADE BALANCE SINCE 1973 3/	CUMULATED IMPLICIT CAPITAL OUTFLOW SINCE 1973 4/
1974	0.4	-0.1	0.3	-0.2	0.2
1975	1.9	0.0	0.9	-0.3	1.0
1976	1.7	0.3	0.8	-0.9	0.6
1977	1.7	0.3	1.5	-0.8	-0.1
1978	3.4	1.7	2.6	-0.4	-0.9
1979	5.5	2.0	3.8	-0.0	-0.3
1980	8.7	3.4	5.8	0.8	-0.5
1981	13.4	3.8	10.5	3.4	-0.9
1982	15.4	2.6	12.8	3.2	-0.0

1/ INCLUDING CUMULATED DIRECT INVESTMENT INFLOWS. WHILE THESE INFLOWS ARE NOT USUALLY CONSIDERED PART OF A COUNTRY'S EXTERNAL DEBT, THEY ARE INCLUDED HERE BECAUSE DIRECT INVESTMENT INFLOWS DO HELP FINANCE PRIVATE CAPITAL OUTFLOWS. CUMULATED DIRECT INVESTMENT FLOWS FROM 1973 THROUGH 1982 AMOUNTED TO $ 1.57 BILLION.

2/ TOTAL RESERVES LESS GOLD PLUS COMMERCIAL BANK ASSETS

3/ DEFICIT EQUALS +

4/ CUMULATED IMPLICIT CAPITAL OUTFLOW SINCE 1973 EQUALS THE CHANGE IN GROSS EXTERNAL DEBT SINCE 1973 MINUS THE CHANGE IN EXTERNAL ASSETS SINCE 1973 MINUS THE CUMULATED CURRENT ACCOUNT BALANCE SINCE 1973

APPENDIX TABLE 4

HISTORICAL DATA -- KOREA
(BILLIONS OF U.S. DOLLARS)

	CUMULATED CHANGE IN GROSS EXTERNAL DEBT SINCE 1973 1/	CUMULATED CHANGE IN EXTERNAL ASSETS SINCE 1973 2/	CUMULATED CURRENT ACCOUNT SINCE 1973 3/	CUMULATED TRADE BALANCE SINCE 1973 3/	CUMULATED IMPLICIT CAPITAL OUTFLOW SINCE 1973 4/
1974	1.7	-0.0	2.0	1.9	-0.3
1975	4.4	0.5	3.9	3.6	-0.0
1976	6.4	1.9	4.2	4.2	0.3
1977	8.8	3.2	4.2	4.7	1.4
1978	13.1	3.8	5.3	6.5	4.0
1979	18.4	4.6	9.4	10.9	4.3
1980	23.9	5.4	14.8	15.2	3.7
1981	29.8	9.8	19.4	18.9	0.6
1982	33.6	5.8	21.9	21.3	5.9

1/ INCLUDING CUMULATED DIRECT INVESTMENT INFLOWS. WHILE THESE INFLOWS ARE NOT USUALLY CONSIDERED PART OF A COUNTRY'S EXTERNAL DEBT, THEY ARE INCLUDED HERE BECAUSE DIRECT INVESTMENT INFLOWS DO HELP FINANCE PRIVATE CAPITAL OUTFLOWS. CUMULATED DIRECT INVESTMENT FLOWS FROM 1973 THROUGH 1982 AMOUNTED TO $ 0.56 BILLION.

2/ TOTAL RESERVES LESS GOLD PLUS COMMERCIAL BANK ASSETS

3/ DEFICIT EQUALS +

4/ CUMULATED IMPLICIT CAPITAL OUTFLOW SINCE 1973 EQUALS THE CHANGE IN GROSS EXTERNAL DEBT SINCE 1973 MINUS THE CHANGE IN EXTERNAL ASSETS SINCE 1973 MINUS THE CUMULATED CURRENT ACCOUNT BALANCE SINCE 1973

APPENDIX TABLE 5

HISTORICAL DATA -- MEXICO
(BILLIONS OF U.S. DOLLARS)

	CUMULATED CHANGE IN GROSS EXTERNAL DEBT SINCE 1973 1/	CUMULATED CHANGE IN EXTERNAL ASSETS SINCE 1973 2/	CUMULATED CURRENT ACCOUNT SINCE 1973 3/	CUMULATED TRADE BALANCE SINCE 1973 3/	CUMULATED IMPLICIT CAPITAL OUTFLOW SINCE 1973 4/
1974	4.5	0.0	2.9	2.8	1.6
1975	10.1	0.3	7.1	5.9	2.7
1976	16.7	-0.0	10.5	8.0	6.2
1977	23.3	0.5	12.3	8.5	10.5
1978	27.6	0.8	15.5	9.7	11.3
1979	36.4	1.3	21.0	11.9	14.1
1980	52.8	2.9	28.7	13.6	21.2
1981	75.5	3.5	42.6	16.7	29.4
1982	82.6	-0.1	46.4	9.0	36.3

1/ INCLUDING CUMULATED DIRECT INVESTMENT INFLOWS. WHILE THESE INFLOWS ARE NOT USUALLY CONSIDERED PART OF A COUNTRY'S EXTERNAL DEBT, THEY ARE INCLUDED HERE BECAUSE DIRECT INVESTMENT INFLOWS DO HELP FINANCE PRIVATE CAPITAL OUTFLOWS. CUMULATED DIRECT INVESTMENT FLOWS FROM 1973 THROUGH 1982 AMOUNTED TO $ 9.83 BILLION.

2/ TOTAL RESERVES LESS GOLD PLUS COMMERCIAL BANK ASSETS

3/ DEFICIT EQUALS +

4/ CUMULATED IMPLICIT CAPITAL OUTFLOW SINCE 1973 EQUALS THE CHANGE IN GROSS EXTERNAL DEBT SINCE 1973 MINUS THE CHANGE IN EXTERNAL ASSETS SINCE 1973 MINUS THE CUMULATED CURRENT ACCOUNT BALANCE SINCE 1973

APPENDIX TABLE 6

HISTORICAL DATA -- PERU
(BILLIONS OF U.S. DOLLARS)

	CUMULATED CHANGE IN GROSS EXTERNAL DEBT SINCE 1973 1/	CUMULATED CHANGE IN EXTERNAL ASSETS SINCE 1973 2/	CUMULATED CURRENT ACCOUNT SINCE 1973 3/	CUMULATED TRADE BALANCE SINCE 1973 3/	CUMULATED IMPLICIT CAPITAL OUTFLOW SINCE 1973 4/
1974	1.1	0.4	0.7	0.4	-0.1
1975	3.5	-0.1	2.3	1.5	1.3
1976	4.8	-0.2	3.5	2.2	1.6
1977	5.8	-0.1	4.4	2.7	1.5
1978	6.6	0.0	4.6	2.3	2.0
1979	7.2	1.1	3.8	0.8	2.3
1980	7.8	1.6	3.7	-0.1	2.5
1981	8.7	0.8	5.2	0.5	2.7
1982	10.7	1.0	6.6	1.3	3.1

1/ INCLUDING CUMULATED DIRECT INVESTMENT INFLOWS. WHILE THESE INFLOWS ARE NOT USUALLY CONSIDERED PART OF A COUNTRY'S EXTERNAL DEBT, THEY ARE INCLUDED HERE BECAUSE DIRECT INVESTMENT INFLOWS DO HELP FINANCE PRIVATE CAPITAL OUTFLOWS. CUMULATED DIRECT INVESTMENT FLOWS FROM 1973 THROUGH 1982 AMOUNTED TO $ 1.10 BILLION.

2/ TOTAL RESERVES LESS GOID PLUS COMMERCIAL BANK ASSETS

3/ DEFICIT EQUALS +

4/ CUMULATED IMPLICIT CAPITAL OUTFLOW SINCE 1973 EQUALS THE CHANGE IN GROSS EXTERNAL DEBT SINCE 1973 MINUS THE CHANGE IN EXTERNAL ASSETS SINCE 1973 MINUS THE CUMULATED CURRENT ACCOUNT BALANCE SINCE 1973

APPENDIX TABLE 7

HISTORICAL DATA -- PHILIPPINES
(BILLIONS OF U.S. DOLLARS)

	CUMULATED CHANGE IN GROSS EXTERNAL DEBT SINCE 1973 1/	CUMULATED CHANGE IN EXTERNAL ASSETS SINCE 1973 2/	CUMULATED CURRENT ACCOUNT SINCE 1973 3/	CUMULATED TRADE BALANCE SINCE 1973 3/	CUMULATED IMPLICIT CAPITAL OUTFLOW SINCE 1973 4/
1974	1.0	0.6	0.2	0.4	0.2
1975	2.1	0.5	1.1	1.6	0.5
1976	3.6	0.4	2.2	2.8	1.0
1977	5.2	0.2	3.1	3.6	2.0
1978	7.8	0.9	4.2	4.9	2.7
1979	10.6	1.8	5.8	6.4	3.0
1980	13.7	3.1	7.9	8.4	2.7
1981	16.2	2.6	10.2	10.6	3.4
1982	19.9	2.4	13.6	13.4	3.9

1/ INCLUDING CUMULATED DIRECT INVESTMENT INFLOWS. WHILE THESE INFLOWS ARE NOT USUALLY CONSIDERED PART OF A COUNTRY'S EXTERNAL DEBT, THEY ARE INCLUDED HERE BECAUSE DIRECT INVESTMENT INFLOWS DO HELP FINANCE PRIVATE CAPITAL OUTFLOWS. CUMULATED DIRECT INVESTMENT FLOWS FROM 1973 THROUGH 1982 AMOUNTED TO $ 1.62 BILLION.

2/ TOTAL RESERVES LESS GOLD PLUS COMMERCIAL BANK ASSETS

3/ DEFICIT EQUALS +

4/ CUMULATED IMPLICIT CAPITAL OUTFLOW SINCE 1973 EQUALS THE CHANGE IN GROSS EXTERNAL DEBT SINCE 1973 MINUS THE CHANGE IN EXTERNAL ASSETS SINCE 1973 MINUS THE CUMULATED CURRENT ACCOUNT BALANCE SINCE 1973

APPENDIX TABLE 8

HISTORICAL DATA -- VENEZUELA
(BILLIONS OF U.S. DOLLARS)

	CUMULATED CHANGE IN GROSS EXTERNAL DEBT SINCE 1973 1/	CUMULATED CHANGE IN EXTERNAL ASSETS SINCE 1973 2/	CUMULATED CURRENT ACCOUNT SINCE 1973 3/	CUMULATED TRADE BALANCE SINCE 1973 3/	CUMULATED IMPLICIT CAPITAL OUTFLOW SINCE 1973 4/
1974	-1.9	4.2	-6.1	-7.2	-0.1
1975	-1.3	6.6	-8.5	-10.6	0.6
1976	-2.5	6.2	-9.0	-12.5	0.3
1977	3.9	10.6	-6.1	-11.9	-0.6
1978	9.4	9.9	-0.8	-9.7	0.3
1979	17.9	14.3	-1.5	-13.9	5.1
1980	21.1	18.0	-6.7	-22.1	9.8
1981	23.9	17.8	-11.1	-29.9	17.2
1982	27.0	9.1	-7.6	-33.3	25.5

1/ INCLUDING CUMULATED DIRECT INVESTMENT INFLOWS. WHILE THESE INFLOWS ARE NOT USUALLY CONSIDERED PART OF A COUNTRY'S EXTERNAL DEBT, THEY ARE INCLUDED HERE BECAUSE DIRECT INVESTMENT INFLOWS DO HELP FINANCE PRIVATE CAPITAL OUTFLOWS. CUMULATED DIRECT INVESTMENT FLOWS FROM 1973 THROUGH 1982 AMOUNTED TO $ -0.33 BILLION.

2/ TOTAL RESERVES LESS GOLD PLUS COMMERCIAL BANK ASSETS

3/ DEFICIT EQUALS +

4/ CUMULATED IMPLICIT CAPITAL OUTFLOW SINCE 1973 EQUALS THE CHANGE IN GROSS EXTERNAL DEBT SINCE 1973 MINUS THE CHANGE IN EXTERNAL ASSETS SINCE 1973 MINUS THE CUMULATED CURRENT ACCOUNT BALANCE SINCE 1973

APPENDIX TABLE 9

BASELINE SCENARIO 1/ — ARGENTINA

	REAL INTEREST OVER EXPORTS (PERCENT)	REAL INTEREST PAYMENTS (BILLIONS OF DOLLARS)	NOMINAL INTEREST PAYMENTS (BILLIONS OF DOLLARS)	EXPORTS OF GOODS AND SERVICES (BILLIONS OF DOLLARS)	EXPORTS OF GOODS AND SERVICES GROWTH RATE (PERCENT)	TOTAL NOMINAL DEBT-NET (BILLIONS OF DOLLARS)	TOTAL NOMINAL DEBT-NET GROWTH RATE (PERCENT)	TOTAL REAL DEBT-NET 2/ (1980=100)
1974	-7.6	-0.4	0.3	4.7	-	6.3	-	52.6
1975	-6.6	-0.2	0.4	3.6	-23.4	7.6	20.6	58.2
1976	1.9	0.1	0.5	4.6	27.8	6.8	-10.5	49.2
1977	-0.4	-0.0	0.4	6.8	47.8	6.4	-5.9	43.5
1978	-1.6	-0.1	0.4	7.8	14.7	7.3	14.1	46.1
1979	-4.4	-0.4	0.5	9.9	26.9	9.3	27.4	52.8
1980	-9.6	-1.1	0.9	11.2	13.1	20.0	115.0	100.0
1981	2.9	0.3	3.0	11.8	5.4	31.5	57.5	142.7
1982	26.1	2.5	4.5	9.6	-18.6	33.3	5.7	142.2
1983	26.3	2.8	3.8	10.5	9.8	34.5	3.7	143.0
1984	20.2	2.5	3.9	12.6	19.5	35.4	2.4	140.8
1985	18.7	2.6	4.0	13.8	9.6	37.8	6.9	144.7
1986	17.4	2.7	4.3	15.7	13.6	41.6	9.9	152.9
1987	16.4	2.9	4.7	17.8	13.6	46.6	12.2	165.0
1988	15.5	3.1	5.1	20.3	13.6	52.1	11.8	177.4
1989	14.5	3.3	5.5	23.0	13.6	58.1	11.4	190.0
1990	14.2	3.7	6.2	26.2	13.6	64.7	11.3	203.4

	TOTAL REAL DEBT-NET GROWTH RATE (PERCENT)	CURRENT ACCOUNT BALANCE (BILLIONS OF DOLLARS)	TRADE BALANCE (BILLIONS OF DOLLARS)	IMPLICIT CAPITAL OUTFLOW (BILLIONS OF DOLLARS)	CUMULATED CAPITAL OUTFLOW (BILLIONS OF DOLLARS)	REAL IMPORTS GROWTH RATE (PERCENT)	NOMINAL INTEREST RATE (PERCENT)	REAL INTEREST RATE (PERCENT)
1974	-	0.1	0.7	0.8	0.8	-	5.0	-6.0
1975	10.5	-1.3	-0.5	0.0	0.8	-4.3	5.8	-3.4
1976	-15.4	0.6	1.1	-0.2	0.6	-19.8	6.9	1.2
1977	-11.6	1.2	1.8	0.9	1.5	37.6	6.1	-0.4
1978	6.0	1.8	2.9	3.0	4.5	-1.8	5.8	-1.8
1979	14.5	-0.5	1.8	1.8	6.2	49.5	6.0	-5.3
1980	89.5	-4.8	-1.4	6.7	12.9	24.9	6.1	-7.4
1981	42.7	-4.7	0.7	7.7	20.6	-11.0	11.7	1.3
1982	-0.4	-2.5	2.7	-0.4	20.2	-39.8	13.9	7.7
1983	0.6	-1.5	3.0	0.0	20.2	7.7	11.3	8.2
1984	-1.5	-1.1	3.5	0.0	20.2	14.8	11.3	7.3
1985	2.8	-2.7	2.0	0.0	20.2	22.7	11.0	7.0
1986	5.6	-4.0	1.0	0.0	20.2	18.3	10.9	6.9
1987	7.9	-5.4	0.0	0.0	20.2	15.8	10.6	6.6
1988	7.5	-5.8	-0.0	0.0	20.2	8.8	10.3	6.3
1989	7.1	-6.2	0.0	0.0	20.2	8.8	10.1	6.1
1990	7.0	-6.9	0.0	0.0	20.2	8.9	10.1	6.1

1/ HISTORICAL DATA FOR 1974-82, PROJECTIONS FOR 1983-90
2/ TOTAL NOMINAL DEBT-NET DIVIDED BY U.S. GNP DEFLATOR

APPENDIX TABLE 10

BASELINE SCENARIO 1/ -- BRAZIL

	REAL INTEREST OVER EXPORTS (PERCENT)	REAL INTEREST PAYMENTS (BILLIONS OF DOLLARS)	NOMINAL INTEREST PAYMENTS (BILLIONS OF DOLLARS)	EXPORTS OF GOODS AND SERVICES (BILLIONS OF DOLLARS)	EXPORTS OF GOODS AND SERVICES GROWTH RATE (PERCENT)	TOTAL NOMINAL DEBT-NET (BILLIONS OF DOLLARS)	TOTAL NOMINAL DEBT-NET GROWTH RATE (PERCENT)	TOTAL REAL DEBT-NET 2/ (1980=100)
1974	-5.4	-0.5	0.6	9.3	-	13.2	-	34.7
1975	-1.2	-0.1	1.5	9.8	5.4	22.1	67.4	53.2
1976	3.8	0.4	1.8	11.2	14.3	25.8	16.7	58.7
1977	1.8	0.2	2.1	13.5	20.5	31.6	22.5	67.6
1978	-0.5	-0.1	2.7	14.5	7.4	41.1	30.1	81.6
1979	-5.4	-1.0	4.2	18.0	24.1	50.5	22.9	90.1
1980	-6.0	-1.4	6.3	23.2	28.9	63.6	25.9	100.0
1981	8.0	2.2	9.2	26.9	15.9	72.8	14.5	103.7
1982	24.0	5.6	10.5	23.4	-13.0	86.0	18.1	115.4
1983	29.5	7.0	9.8	23.8	1.7	93.0	8.2	121.1
1984	25.2	6.7	10.5	26.5	11.5	98.8	6.1	123.6
1985	23.2	7.0	11.1	30.1	13.6	108.1	9.4	130.1
1986	22.2	7.6	12.2	34.3	13.6	121.5	12.4	140.6
1987	21.3	8.3	13.5	38.9	13.6	138.2	13.7	153.7
1988	20.5	9.1	14.9	44.2	13.6	156.3	13.1	167.2
1989	19.5	9.8	16.5	50.3	13.6	176.0	12.6	181.0
1990	19.3	11.0	18.5	57.1	13.6	197.7	12.3	195.5

	TOTAL REAL DEBT-NET GROWTH RATE (PERCENT)	CURRENT ACCOUNT BALANCE (BILLIONS OF DOLLARS)	TRADE BALANCE (BILLIONS OF DOLLARS)	IMPLICIT CAPITAL OUTFLOW (BILLIONS OF DOLLARS)	CUMULATED CAPITAL OUTFLOW (BILLIONS OF DOLLARS)	REAL IMPORTS GROWTH RATE (PERCENT)	NOMINAL INTEREST RATE (PERCENT)	REAL INTEREST RATE (PERCENT)
1974	-	-7.5	-4.8	0.3	0.3	-	6.0	-5.0
1975	53.4	-7.1	-3.5	3.0	3.3	-14.3	8.5	-0.6
1976	10.4	-6.6	-2.4	-1.5	1.7	6.9	7.5	1.8
1977	15.0	-5.1	-0.1	2.4	4.1	-3.6	7.3	0.8
1978	20.8	-7.0	-1.1	4.4	8.5	4.6	7.4	-0.2
1979	10.4	-10.5	-2.8	1.1	9.6	9.6	9.2	-2.1
1980	11.0	-12.9	-2.9	1.7	11.4	2.1	11.0	-2.5
1981	3.7	-11.7	1.3	-0.2	11.2	-1.8	13.5	3.2
1982	11.3	-15.0	0.7	0.2	11.4	4.8	13.2	7.1
1983	4.9	-9.0	6.0	0.0	11.4	-17.5	11.0	7.9
1984	2.1	-7.7	8.0	0.0	11.4	-0.5	11.0	7.0
1985	5.2	-11.3	5.0	0.0	11.4	21.8	10.8	6.8
1986	8.1	-15.4	2.0	0.0	11.4	17.9	10.6	6.6
1987	9.4	-18.7	0.0	0.0	11.4	12.8	10.4	6.4
1988	8.8	-20.1	0.0	0.0	11.4	7.4	10.1	6.1
1989	8.2	-21.7	0.0	0.0	11.4	7.6	9.9	5.9
1990	8.0	-23.7	-0.0	0.0	11.4	7.8	9.9	5.9

1/ HISTORICAL DATA FOR 1974-82, PROJECTIONS FOR 1983-90
2/ TOTAL NOMINAL DEBT-NET DIVIDED BY U.S. GNP DEFLATOR

APPENDIX TABLE 11

BASELINE SCENARIO 1/ -- CHILE

	REAL INTEREST OVER EXPORTS (PERCENT)	REAL INTEREST PAYMENTS (BILLIONS OF DOLLARS)	NOMINAL INTEREST PAYMENTS (BILLIONS OF DOLLARS)	EXPORTS OF GOODS AND SERVICES (BILLIONS OF DOLLARS)	EXPORTS OF GOODS AND SERVICES GROWTH RATE (PERCENT)	TOTAL NOMINAL DEBT-NET (BILLIONS OF DOLLARS)	TOTAL NOMINAL DEBT-NET GROWTH RATE (PERCENT)	TOTAL REAL DEBT-NET 2/ (1980=100)
1974	-12.3	-0.3	0.2	2.3	-	4.4	-	85.5
1975	-14.5	-0.3	0.2	1.8	-21.7	5.9	34.1	105.0
1976	-0.2	-0.0	0.3	2.4	33.3	5.4	-8.5	90.9
1977	-0.3	-0.0	0.3	2.5	4.2	5.3	-1.9	83.8
1978	1.7	0.1	0.5	3.0	20.0	5.4	1.9	79.3
1979	-1.5	-0.1	0.6	4.7	56.7	7.0	29.6	92.4
1980	-3.5	-0.2	0.8	6.3	34.0	8.6	22.9	100.0
1981	-1.2	-0.1	1.0	6.1	-3.2	12.5	45.3	131.7
1982	7.7	0.5	1.4	6.5	6.6	15.2	21.6	150.9
1983	9.7	0.7	1.2	7.2	10.3	15.7	3.5	151.4
1984	6.8	0.6	1.2	8.4	17.7	16.1	2.3	149.0
1985	5.9	0.6	1.2	9.6	13.6	17.0	5.5	151.1
1986	5.4	0.6	1.3	10.9	13.6	18.4	8.5	157.6
1987	4.8	0.6	1.4	12.4	13.6	20.5	11.0	168.3
1988	4.4	0.6	1.5	14.1	13.6	22.6	10.4	178.6
1989	3.9	0.6	1.6	16.0	13.6	24.8	9.8	188.6
1990	3.8	0.7	1.7	18.2	13.6	27.2	9.6	198.8

	TOTAL REAL DEBT-NET GROWTH RATE (PERCENT)	CURRENT ACCOUNT BALANCE (BILLIONS OF DOLLARS)	TRADE BALANCE (BILLIONS OF DOLLARS)	IMPLICIT CAPITAL OUTFLOW (BILLIONS OF DOLLARS)	CUMULATED CAPITAL OUTFLOW (BILLIONS OF DOLLARS)	REAL IMPORTS GROWTH RATE (PERCENT)	NOMINAL INTEREST RATE (PERCENT)	REAL INTEREST RATE (PERCENT)
1974	-	-0.3	0.2	0.2	0.2	-	4.3	-6.7
1975	22.9	-0.6	0.1	0.8	1.0	-24.2	4.1	-5.1
1976	-13.4	0.1	0.6	-0.4	0.6	-0.3	5.7	-0.1
1977	-7.8	-0.7	-0.1	-0.7	-0.1	33.0	6.4	-0.1
1978	-5.4	-1.1	-0.4	-0.8	-0.9	15.3	8.6	1.0
1979	16.5	-1.2	-0.4	0.6	-0.3	24.6	10.2	-1.1
1980	8.2	-2.0	-0.8	-0.2	-0.5	14.4	10.6	-2.9
1981	31.7	-4.7	-2.6	-0.4	-0.9	31.2	9.7	-0.7
1982	14.6	-2.3	0.2	0.9	-0.0	-18.0	9.7	3.6
1983	0.4	-1.0	1.3	0.0	-0.0	-6.3	7.7	4.5
1984	-1.6	-0.9	1.5	0.0	-0.0	10.8	7.6	3.6
1985	1.4	-1.4	1.0	0.0	-0.0	15.3	7.4	3.4
1986	4.3	-1.9	0.5	0.0	-0.0	13.6	7.3	3.3
1987	6.7	-2.5	-0.0	0.0	-0.0	12.4	7.1	3.1
1988	6.2	-2.6	0.0	0.0	-0.0	8.0	6.9	2.9
1989	5.6	-2.7	0.0	0.0	-0.0	8.1	6.6	2.6
1990	5.4	-2.9	0.0	0.0	-0.0	8.3	6.6	2.6

1/ HISTORICAL DATA FOR 1974-82, PROJECTIONS FOR 1983-90
2/ TOTAL NOMINAL DEBT-NET DIVIDED BY U.S. GNP DEFLATOR

APPENDIX TABLE 12

BASELINE SCENARIO 1/ -- KOREA

	REAL INTEREST OVER EXPORTS (PERCENT)	REAL INTEREST PAYMENTS (BILLIONS OF DOLLARS)	NOMINAL INTEREST PAYMENTS (BILLIONS OF DOLLARS)	EXPORTS OF GOODS AND SERVICES (BILLIONS OF DOLLARS)	EXPORTS OF GOODS AND SERVICES GROWTH RATE (PERCENT)	TOTAL NOMINAL DEBT-NET (BILLIONS OF DOLLARS)	TOTAL NOMINAL DEBT-NET GROWTH RATE (PERCENT)	TOTAL REAL DEBT-NET 2/ (1980=100)
1974	-0.8	-0.0	0.4	5.4	-	4.8	-	37.6
1975	-0.6	-0.0	0.5	5.9	9.9	6.9	43.8	49.6
1976	2.0	0.2	0.6	9.5	60.7	7.5	8.7	51.0
1977	0.6	0.1	0.6	13.1	38.2	8.5	13.3	54.3
1978	0.1	0.0	0.8	17.2	31.3	12.1	42.4	71.7
1979	-1.1	-0.2	1.4	19.5	13.8	16.6	37.2	88.5
1980	-1.6	-0.4	2.2	22.6	15.6	21.3	28.3	100.0
1981	3.0	0.8	3.1	27.3	20.8	22.7	6.6	96.6
1982	6.9	2.0	3.6	28.4	4.2	30.4	33.9	121.9
1983	8.6	2.6	3.6	29.9	5.1	32.7	7.5	127.0
1984	7.3	2.4	3.8	33.5	12.3	34.5	5.5	128.8
1985	6.6	2.5	3.9	38.1	13.6	36.4	5.6	130.8
1986	6.0	2.6	4.1	43.3	13.6	37.9	4.0	130.8
1987	5.2	2.6	4.1	49.2	13.6	38.9	2.7	129.1
1988	4.5	2.5	4.1	55.9	13.6	39.4	1.3	125.8
1989	3.9	2.5	4.1	63.6	13.6	39.8	1.2	122.3
1990	3.5	2.5	4.1	72.2	13.6	40.3	1.3	119.1

	TOTAL REAL DEBT-NET GROWTH RATE (PERCENT)	CURRENT ACCOUNT BALANCE (BILLIONS OF DOLLARS)	TRADE BALANCE (BILLIONS OF DOLLARS)	IMPLICIT CAPITAL OUTFLOW (BILLIONS OF DOLLARS)	CUMULATED CAPITAL OUTFLOW (BILLIONS OF DOLLARS)	REAL IMPORTS GROWTH RATE (PERCENT)	NOMINAL INTEREST RATE (PERCENT)	REAL INTEREST RATE (PERCENT)
1974	-	-2.0	-1.9	-0.3	-0.3	-	10.0	-1.0
1975	31.7	-1.9	-1.7	0.3	-0.0	-4.8	8.5	-0.6
1976	2.8	-0.3	-0.6	0.4	0.3	27.2	8.3	2.6
1977	6.4	0.0	-0.5	1.1	1.4	24.6	7.5	1.0
1978	32.2	-1.1	-1.8	2.6	4.0	28.9	7.8	0.1
1979	23.3	-4.2	-4.4	0.4	4.3	8.1	9.8	-1.5
1980	13.0	-5.3	-4.4	-0.6	3.7	-4.8	11.6	-1.9
1981	-3.4	-4.6	-3.6	-3.2	0.5	11.6	14.1	3.8
1982	26.2	-2.5	-2.4	5.3	5.8	1.5	13.6	7.4
1983	4.2	-2.4	-2.3	0.0	5.8	4.1	11.3	8.2
1984	1.4	-1.9	-1.6	0.0	5.8	6.4	11.3	7.3
1985	1.5	-2.0	-1.6	0.0	5.8	9.8	11.1	7.1
1986	0.0	-1.6	-1.0	0.0	5.8	8.2	11.0	7.0
1987	-1.3	-1.1	-0.5	0.0	5.8	8.7	10.7	6.7
1988	-2.6	-0.6	0.0	0.0	5.8	8.9	10.5	6.5
1989	-2.7	-0.6	-0.0	0.0	5.8	10.0	10.2	6.2
1990	-2.6	-0.6	0.0	0.0	5.8	9.9	10.2	6.2

1/ HISTORICAL DATA FOR 1974-82, PROJECTIONS FOR 1983-90
2/ TOTAL NOMINAL DEBT-NET DIVIDED BY U.S. GNP DEFLATOR

APPENDIX TABLE 13

BASELINE SCENARIO 1/ -- MEXICO

	REAL INTEREST OVER EXPORTS (PERCENT)	REAL INTEREST PAYMENTS (BILLIONS OF DOLLARS)	NOMINAL INTEREST PAYMENTS (BILLIONS OF DOLLARS)	EXPORTS OF GOODS AND SERVICES (BILLIONS OF DOLLARS)	EXPORTS OF GOODS AND SERVICES GROWTH RATE (PERCENT)	TOTAL NOMINAL DEBT-NET (BILLIONS OF DOLLARS)	TOTAL NOMINAL DEBT-NET GROWTH RATE (PERCENT)	TOTAL REAL DEBT-NET 2/ (1980=100)
1974	-8.3	-0.5	0.7	5.8	-	12.6	-	40.3
1975	-5.7	-0.4	1.0	6.4	10.3	17.3	37.3	50.7
1976	5.9	0.4	1.6	7.2	12.5	23.6	36.4	65.4
1977	1.0	0.1	1.8	9.0	25.0	29.1	23.3	75.8
1978	-1.3	-0.1	2.2	11.5	27.8	32.3	11.0	78.2
1979	-6.5	-1.0	3.0	16.0	39.1	39.3	21.7	85.5
1980	-6.4	-1.6	4.6	24.6	53.8	52.2	32.8	100.0
1981	1.9	0.6	7.0	30.5	24.0	72.1	38.1	125.2
1982	16.0	4.9	9.6	30.4	-0.3	81.7	13.3	133.6
1983	16.7	5.4	7.9	32.2	6.0	80.4	-1.6	127.5
1984	12.4	4.6	7.8	36.7	14.1	79.0	-1.8	120.4
1985	10.6	4.4	7.6	41.4	12.5	81.4	3.0	119.3
1986	9.9	4.5	7.9	45.3	9.4	87.1	7.0	122.7
1987	9.3	4.6	8.3	49.6	9.7	96.1	10.4	130.3
1988	8.8	4.8	8.8	54.6	9.9	105.8	10.0	137.9
1989	8.2	4.9	9.4	60.1	10.2	115.9	9.6	145.3
1990	8.2	5.4	10.3	66.4	10.4	127.0	9.6	153.1

	TOTAL REAL DEBT-NET GROWTH RATE (PERCENT)	CURRENT ACCOUNT BALANCE (BILLIONS OF DOLLARS)	TRADE BALANCE (BILLIONS OF DOLLARS)	IMPLICIT CAPITAL OUTFLOW (BILLIONS OF DOLLARS)	CUMULATED CAPITAL OUTFLOW (BILLIONS OF DOLLARS)	REAL IMPORTS GROWTH RATE (PERCENT)	NOMINAL INTEREST RATE (PERCENT)	REAL INTEREST RATE (PERCENT)
1974	-	-2.9	-2.8	1.6	1.6	-	6.5	-4.5
1975	25.8	-4.2	-3.1	1.1	2.7	1.9	6.7	-2.5
1976	29.0	-3.4	-2.1	3.5	6.2	-4.9	7.8	2.1
1977	15.8	-1.8	-0.5	4.3	10.5	-7.6	6.8	0.4
1978	3.1	-3.2	-1.2	0.8	11.3	26.4	7.2	-0.5
1979	9.3	-5.5	-2.2	2.8	14.1	26.5	8.4	-2.9
1980	17.0	-7.7	-1.7	7.0	21.2	22.9	10.1	-3.4
1981	25.2	-13.9	-3.1	8.3	29.4	34.6	11.3	0.9
1982	6.7	-3.8	7.7	6.9	36.3	-28.6	12.5	6.3
1983	-4.6	0.2	10.0	0.0	36.3	-2.6	9.8	6.6
1984	-5.6	0.3	10.0	0.0	36.3	14.3	9.7	5.7
1985	-0.9	-3.5	6.0	0.0	36.3	24.6	9.5	5.5
1986	2.8	-6.8	3.0	0.0	36.3	13.7	9.3	5.3
1987	6.2	-10.2	0.0	0.0	36.3	12.1	9.0	5.0
1988	5.8	-10.7	0.0	0.0	36.3	5.3	8.8	4.8
1989	5.4	-11.3	0.0	0.0	36.3	5.5	8.5	4.5
1990	5.3	-12.2	0.0	0.0	36.3	5.8	8.5	4.5

1/ HISTORICAL DATA FOR 1974-82, PROJECTIONS FOR 1983-90
2/ TOTAL NOMINAL DEBT-NET DIVIDED BY U.S. GNP DEFLATOR

APPENDIX TABLE 14

BASELINE SCENARIO 1/ — PERU

	REAL INTEREST OVER EXPORTS (PERCENT)	REAL INTEREST PAYMENTS (BILLIONS OF DOLLARS)	NOMINAL INTEREST PAYMENTS (BILLIONS OF DOLLARS)	EXPORTS OF GOODS AND SERVICES (BILLIONS OF DOLLARS)	EXPORTS OF GOODS AND SERVICES GROWTH RATE (PERCENT)	TOTAL NOMINAL DEBT-NET (BILLIONS OF DOLLARS)	TOTAL NOMINAL DEBT-NET GROWTH RATE (PERCENT)	TOTAL REAL DEBT-NET 2/ (1980=100)
1974	-8.0	-0.2	0.2	1.9	-	3.3	-	67.2
1975	-12.2	-0.2	0.2	1.7	-8.4	5.9	78.8	110.1
1976	1.4	0.0	0.4	1.8	1.9	7.2	22.0	127.1
1977	-4.3	-0.1	0.4	2.1	22.2	8.0	11.1	132.6
1978	-1.6	-0.0	0.6	2.4	12.7	8.7	8.7	134.0
1979	1.3	0.1	1.0	4.2	72.0	8.1	-6.9	112.1
1980	-6.2	-0.3	0.8	4.9	16.7	8.2	1.2	100.0
1981	-0.5	-0.0	0.9	4.3	-12.2	9.6	17.1	106.1
1982	9.1	0.4	1.0	3.9	-8.0	11.3	17.7	117.7
1983	13.9	0.6	0.9	4.0	2.2	11.4	0.9	115.1
1984	10.1	0.5	0.9	4.5	12.4	11.1	-2.7	107.7
1985	8.5	0.4	0.9	5.1	13.6	11.3	1.6	105.2
1986	7.5	0.4	0.9	5.8	13.6	11.6	2.5	103.7
1987	6.5	0.4	0.9	6.6	13.6	11.9	3.4	103.0
1988	5.6	0.4	0.9	7.5	13.6	12.3	3.3	102.4
1989	4.9	0.4	0.9	8.5	13.6	12.7	3.3	101.7
1990	4.4	0.4	0.9	9.7	13.6	13.2	3.4	101.1

	TOTAL REAL DEBT-NET GROWTH RATE (PERCENT)	CURRENT ACCOUNT BALANCE (BILLIONS OF DOLLARS)	TRADE BALANCE (BILLIONS OF DOLLARS)	IMPLICIT CAPITAL OUTFLOW (BILLIONS OF DOLLARS)	CUMULATED CAPITAL OUTFLOW (BILLIONS OF DOLLARS)	REAL IMPORTS GROWTH RATE (PERCENT)	NOMINAL INTEREST RATE (PERCENT)	REAL INTEREST RATE (PERCENT)
1974	-	-0.7	-0.4	-0.1	-0.1	-	6.0	-5.0
1975	63.8	-1.5	-1.1	1.4	1.3	14.7	4.6	-4.6
1976	15.4	-1.2	-0.7	0.3	1.6	-15.8	6.1	0.4
1977	4.4	-0.9	-0.4	-0.1	1.5	-2.3	5.3	-1.2
1978	1.0	-0.2	0.3	0.5	2.0	-30.8	7.2	-0.5
1979	-16.3	0.8	1.6	0.3	2.3	3.0	11.9	0.6
1980	-10.8	0.1	0.8	0.2	2.5	36.7	9.8	-3.7
1981	6.1	-1.5	-0.6	0.2	2.7	24.8	10.1	-0.2
1982	10.9	-1.4	-0.8	0.8	3.1	3.4	9.6	3.4
1983	-2.1	-0.2	0.3	0.0	3.1	-21.0	8.1	4.9
1984	-6.4	0.2	0.7	0.0	3.1	-1.1	8.0	4.0
1985	-2.4	-0.3	0.2	0.0	3.1	22.5	7.9	3.9
1986	-1.4	-0.4	0.1	0.0	3.1	11.0	7.8	3.8
1987	-0.6	-0.5	0.0	0.0	3.1	10.5	7.6	3.6
1988	-0.6	-0.5	0.0	0.0	3.1	8.8	7.5	3.5
1989	-0.7	-0.5	-0.0	0.0	3.1	8.8	7.3	3.3
1990	-0.5	-0.5	0.0	0.0	3.1	8.9	7.3	3.3

1/ HISTORICAL DATA FOR 1974-82, PROJECTIONS FOR 1983-90
2/ TOTAL NOMINAL DEBT-NET DIVIDED BY U.S. GNP DEFLATOR

APPENDIX TABLE 15

BASELINE SCENARIO 1/ — PHILIPPINES

	REAL INTEREST OVER EXPORTS (PERCENT)	REAL INTEREST PAYMENTS (BILLIONS OF DOLLARS)	NOMINAL INTEREST PAYMENTS (BILLIONS OF DOLLARS)	EXPORTS OF GOODS AND SERVICES (BILLIONS OF DOLLARS)	EXPORTS OF GOODS AND SERVICES GROWTH RATE (PERCENT)	TOTAL NOMINAL DEBT-NET (BILLIONS OF DOLLARS)	TOTAL NOMINAL DEBT-NET GROWTH RATE (PERCENT)	TOTAL REAL DEBT-NET 2/ (1980=100)
1974	-0.6	-0.0	0.1	3.5	-	1.3	-	20.1
1975	-2.2	-0.1	0.1	3.2	-10.1	2.4	84.6	34.0
1976	0.6	0.0	0.2	3.4	6.9	3.9	62.5	52.3
1977	-2.5	-0.1	0.2	4.2	22.9	5.5	41.0	69.2
1978	2.4	0.1	0.6	4.8	16.4	7.2	30.9	84.2
1979	1.4	0.1	1.0	6.2	27.4	9.0	25.0	94.6
1980	-1.7	-0.1	1.2	7.9	27.4	10.8	20.0	100.0
1981	3.0	0.2	1.5	8.4	6.2	13.4	24.1	112.4
1982	8.2	0.7	1.6	8.2	-1.8	16.8	25.4	132.8
1983	11.3	1.0	1.5	8.5	3.6	19.0	13.2	145.8
1984	9.6	0.9	1.7	9.4	11.1	21.3	12.1	157.2
1985	8.9	1.0	1.8	10.7	13.6	23.1	8.2	163.5
1986	8.1	1.0	1.9	12.2	13.6	24.1	4.5	164.2
1987	6.9	1.0	1.9	13.9	13.6	24.5	1.8	160.7
1988	5.8	0.9	1.9	15.7	13.6	24.9	1.7	157.1
1989	4.9	0.9	1.9	17.9	13.6	25.3	1.5	153.4
1990	4.4	0.9	1.9	20.3	13.6	25.7	1.6	149.9

	TOTAL REAL DEBT-NET GROWTH RATE (PERCENT)	CURRENT ACCOUNT BALANCE (BILLIONS OF DOLLARS)	TRADE BALANCE (BILLIONS OF DOLLARS)	IMPLICIT CAPITAL OUTFLOW (BILLIONS OF DOLLARS)	CUMULATED CAPITAL OUTFLOW (BILLIONS OF DOLLARS)	REAL IMPORTS GROWTH RATE (PERCENT)	NOMINAL INTEREST RATE (PERCENT)	REAL INTEREST RATE (PERCENT)
1974	-	-0.2	-0.4	0.2	0.2	-	9.1	-1.9
1975	69.1	-0.9	-1.2	0.3	0.5	0.8	5.4	-3.7
1976	53.7	-1.1	-1.1	0.5	1.0	6.1	6.3	0.6
1977	32.4	-0.8	-0.8	1.0	2.0	3.4	4.3	-2.2
1978	21.6	-1.2	-1.3	0.7	2.7	3.5	9.4	1.8
1979	12.3	-1.6	-1.5	0.3	3.0	5.6	12.3	1.1
1980	5.7	-2.1	-1.9	-0.3	2.7	6.6	12.1	-1.4
1981	12.4	-2.3	-2.2	0.7	3.4	5.0	12.4	2.1
1982	18.1	-3.4	-2.8	0.5	3.9	15.2	10.6	4.4
1983	9.8	-2.7	-2.2	0.0	3.9	-3.6	8.5	5.4
1984	7.8	-2.8	-2.1	0.0	3.9	4.6	8.5	4.5
1985	4.0	-2.2	-1.4	0.0	3.9	1.3	8.3	4.3
1986	0.4	-1.5	-0.6	0.0	3.9	1.7	8.2	4.2
1987	-2.1	-0.9	0.0	0.0	3.9	4.5	7.9	3.9
1988	-2.2	-0.9	0.0	0.0	3.9	9.9	7.7	3.7
1989	-2.4	-0.9	0.0	0.0	3.9	9.8	7.5	3.5
1990	-2.3	-0.9	0.0	0.0	3.9	9.7	7.5	3.5

1/ HISTORICAL DATA FOR 1974-82, PROJECTIONS FOR 1983-90
2/ TOTAL NOMINAL DEBT-NET DIVIDED BY U.S. GNP DEFLATOR

APPENDIX TABLE 16

BASELINE SCENARIO 1/ — VENEZUELA

	REAL INTEREST OVER EXPORTS (PERCENT)	REAL INTEREST PAYMENTS (BILLIONS OF DOLLARS)	NOMINAL INTEREST PAYMENTS (BILLIONS OF DOLLARS)	EXPORTS OF GOODS AND SERVICES (BILLIONS OF DOLLARS)	EXPORTS OF GOODS AND SERVICES GROWTH RATE (PERCENT)	TOTAL NOMINAL DEBT-NET (BILLIONS OF DOLLARS)	TOTAL NOMINAL DEBT-NET GROWTH RATE (PERCENT)	TOTAL REAL DEBT-NET 2/ (1980=100)
1974	0.0	0.0	0.2	12.0	-	-1.1	-	-21.9
1975	2.0	0.2	0.0	10.1	-16.2	-3.3	200.0	-60.1
1976	0.8	0.1	-0.1	10.4	2.8	-3.2	-3.0	-55.2
1977	2.2	0.2	0.1	10.9	5.5	-1.2	-62.5	-19.4
1978	3.3	0.4	0.5	10.9	-0.8	5.0	-516.6	75.2
1979	3.1	0.5	1.3	16.3	50.2	9.0	80.0	121.6
1980	2.8	0.6	1.8	22.2	36.4	8.4	-6.7	100.0
1981	4.0	1.0	2.0	24.5	10.3	11.2	33.3	120.8
1982	7.4	1.5	2.5	19.5	-20.5	22.9	104.5	232.8
1983	10.1	1.9	2.6	19.1	-2.2	20.8	-9.1	205.2
1984	7.4	1.6	2.4	21.5	12.7	18.9	-9.1	179.3
1985	5.8	1.5	2.2	25.5	18.7	19.3	1.8	175.6
1986	5.7	1.5	2.4	27.2	6.7	21.2	10.2	186.0
1987	5.7	1.7	2.6	29.1	6.9	24.8	16.9	209.2
1988	5.9	1.8	2.9	31.1	7.1	28.7	15.7	232.8
1989	5.9	2.0	3.2	33.4	7.4	33.0	14.7	256.8
1990	6.3	2.3	3.7	36.0	7.6	37.7	14.2	282.1

	TOTAL REAL DEBT-NET GROWTH RATE (PERCENT)	CURRENT ACCOUNT BALANCE (BILLIONS OF DOLLARS)	TRADE BALANCE (BILLIONS OF DOLLARS)	IMPLICIT CAPITAL OUTFLOW (BILLIONS OF DOLLARS)	CUMULATED CAPITAL OUTFLOW (BILLIONS OF DOLLARS)	REAL IMPORTS GROWTH RATE (PERCENT)	NOMINAL INTEREST RATE (PERCENT)	REAL INTEREST RATE (PERCENT)
1974	-	6.1	7.2	-0.1	-0.1	-	11.1	0.1
1975	174.9	2.4	3.4	0.6	0.6	22.1	-0.0	-9.1
1976	-8.3	0.5	1.9	-0.3	0.3	30.2	3.1	-2.7
1977	-64.8	-2.9	-0.6	-0.9	-0.6	28.6	-4.5	-11.0
1978	-487.0	-5.3	-2.1	0.9	0.3	4.2	26.3	18.7
1979	61.8	0.8	4.2	4.8	5.1	-22.6	18.6	7.3
1980	-17.8	5.2	8.2	4.6	9.8	-11.4	20.7	7.2
1981	20.8	4.4	7.8	7.4	17.2	18.1	20.4	-10.1
1982	92.6	-3.5	3.4	8.3	25.5	9.8	14.7	8.5
1983	-11.8	2.0	5.7	0.0	25.5	-22.8	11.9	8.8
1984	-12.6	1.8	5.3	0.0	25.5	15.3	12.0	8.0
1985	-2.1	-0.4	2.9	0.0	25.5	31.8	11.7	7.7
1986	6.0	-2.1	1.4	0.0	25.5	9.1	11.6	7.6
1987	12.4	-3.7	0.0	0.0	25.5	7.9	11.2	7.2
1988	11.3	-4.0	0.0	0.0	25.5	2.8	10.8	6.8
1989	10.3	-4.3	0.0	0.0	25.5	3.0	10.8	6.4
1990	9.8	-4.8	0.0	0.0	25.5	3.3	10.8	6.4

1/ HISTORICAL DATA FOR 1974-82, PROJECTIONS FOR 1983-90
2/ TOTAL NOMINAL DEBT-NET DIVIDED BY U.S. GNP DEFLATOR

APPENDIX TABLE 17

Parameter Estimates for Export Unit Value Equation

Country/ Region	Coefficient A1	A2	A3	RHO1	Regression Statistics R^2	Durbin-Watson	Estimation Interval
Non-oil LDC	-0.005 (-0.53)	-0.42 (-2.42)	1.00 (1.20)	NA	0.19	1.10	70 Q2 to 81 Q4
Non-oil LDC	-0.005 (-0.75	-0.44 (-3.04)	0.65 (1.23)	NA	0.21	1.18	63 Q1 to 81 Q4
Non-oil	-0.002 (-0.25)	-0.41 (-2.87)	0.33 (0.63)	0.42	0.14	1.99	63 Q1 to 81 Q4
Brazil	-0.011 (-0.81)	-0.56 (-1.96)	1.75 (1.27)	NA	0.13	1.58	70 Q1 to 81 Q4
Brazil	-0.009 (-0.84)	-0.59 (-2.33)	1.14 (1.25)	NA	0.10	1.61	63 Q1 to 81 Q4
South Korea	-0.007 (-1.02)	-0.15 (-0.99)	1.34 (1.88)	NA	0.11	1.20	70 Q1 to 81 Q4
South Korea	-0.007 (-1.09)	-0.16 (-1.14)	0.86 (1.55)	NA	0.08	1.31	64 Q1 to 81 Q4
Philippines	-0.009 (-0.47)	-0.97 (-2.39)	0.73 (0.38)	NA	0.14	1.34	70 Q1 to 81 Q4
Philippines	-0.004 (-0.32)	-0.98 (-3.0)	0.34 (0.29)	NA	0.13	1.41	62 Q1 to 81 Q4

1/ The numbers in parentheses are t-statistics. The estimated equation is:
PCH (XGUV) = PCH (UCPI) + A1 + A2 * PCH (UFEFW10) + A3 * PCH (UFGNPF11),

where PCH represents the percent change of the variable in parentheses, XGUV is the export unit value, UCPI is the U.S. CPI, UFEFW10 is the FRB 10-country trade-weighted U.S. dollar exchange rate index, UFGNPF11 is a trade-weighted index of industrial country GNP, and RHO1 is the first order autocorrelation correction parameter.

APPENDIX TABLE 18

Parameter Estimates for the Export Volume Equation

Country Region	Coefficient A1	Coefficient A2	Coefficient Σ A3(i)	Coefficient RHO1	Regression Statistic R^2	Regression Statistic Durbin-Watson	Estimation Interval
Brazil	-10.79 (-14.86)	1.94 (21.18)	1.05 (5.93)	NA	0.92	1.32	62 Q1 to 81 Q4
Brazil	-9.79 (-9.69)	1.05 (2.09)	1.74 (4.28)	NA	0.85	1.38	70 Q1 to 81 Q4
Korea	-24.37 (-5.65)	5.16 (13.42)	0.59 (0.93)	NA	0.93	1.07	73 Q1 to 82 Q4
Korea	-27.24 (-4.85)	5.39 (9.38)	0.95 (1.16	0.48	0.84	1.95	73 Q1 to 82 Q4
Peru	-14.3 (2.81)	2.91 (3.75)	0.46 (1.83)	NA	0.79	1.37	75 Q1 to 83 Q1
Philippines	-5.54 (-6.21)	1.87 (3.77)	-0.26 (0.66)	0.70	0.52	2.23	60 Q1 to 81 Q4
Philippines	-13.55 (-12.78)	3.85 (12.55)	-0.59 (-2.21)	NA	0.89	1.28	70 Q1 to 81 Q4

1/ The numbers in parentheses are t-statistics. The estimated equation is:

$$\log (XGD/XGUV) = A1 + A2 * \log (UFGNPF11)) + \sum_{i=o}^{-11} A3(i) * \log (RERMW(i))$$

where log represents the natural logarithm of the variable in parentheses, XGD is exports in current dollars, XGUV is the export unit value, UFGNPF11 is a trade-weighted index of industrial country GNP, RERMW is the real exchange rate vs. the G-10 countries plus Switzerland, and RHO1 is the first order autocorrelation correction parameter.

APPENDIX TABLE 19

Parameter Estimates for the Import Unit Value Equatio

Country/ Regions	Coefficient A1	A2	A3	RHO1	RHO2	Regression Statistics R^2	Durbin-Watson	Estimation Interval
Non-oil LDC	-0.18 (-0.21)	1.25 (10.41)	-0.47 (-3.89)	0.96	NA	0.63	1.34	62 Q1 to 81 Q4
Non-oil LDC	1.10 (1.87)	1.0	-0.48 (-3.89)	0.98	NA	0.52	1.28	62 Q1 to 81 Q4
Non-oil LDC	-0.51 (0.50)	1.38 (9.55)	-0.55 (-4.33)	1.45	0.52	0.73	1.92	70 Q1 to 81 Q4
Non-oil LDC	1.32 (2.19)	1.0	-0.53 (4.18)	1.52	-0.54	0.48	1.93	70 Q1 to 81 Q4
Brazil	-3.06 (1.95)	1.68 (10.06)	-0.35 (-1.45)	0.87	NA	0.72	1.72	70 Q1 to 81 Q4
Brazil	0.40 (0.16)	1.0	-0.33 (-1.31)	1.0	NA	0.27	1.66	70 Q1 to 81 Q4
Korea	-2.11 (-1.68)	1.47 (8.17)	-0.31 (-1.98)	1.54	-0.62	0.63	2.29	70 Q1 to 81 Q4
Korea	0.23 (0.32)	1.0	-0.30 (-1.92)	1.60	-0.64	0.36	2.29	70 Q1 to 81 Q4
Philippines	-3.32 (-1.82)	1.62 (7.31)	-0.22 (-0.84)	0.91	NA	0.56	1.72	70 Q1 to 81 Q4
Philippines	-0.32 (-0.23)	1.0	-0.19 (-0.68)	0.98	NA	0.25	1.68	70 Q1 to 81 Q4

1/ The numbers in parentheses are t-statistics. The estimated equation is:

log (MGUV) = A1 + A2 * log (UCPI) + A3 * log (UFEFW10)

where MGUV is the import unit value (dollar basis), UCPI is the U.S. CPI, UFEFW10 is the FRB trade-weighted exchange rate index of the U.S. dollar vs the G-10 countries plus Switzerland, and HO1 and RHO2 are first and second order autocorrelation correction parameters.

APPENDIX TABLE 20

Parameter Estimates for the Import Volume Equation

Country Region	Coefficient A1	A2	Σ A3(i)	RHO1	Regression Statistics R^2	Durbin-Watson	Estimation Interval
Brazil	1.60 (-0..74)	1.94 (4.46)	-2.015 (2.15)	0.80	0.43	2.01	69 Q1 to 81 Q4
Korea	11.65 (2.27)	0.58 (4.55)	-2.71	NA	0.67	1.08	73 Q1 to 82 Q4
Philippines	0.73 (4.38)	0.81 (11.84)	-0.25 (-3.16)	NA	0.86	1.27	60 Q1 to 82 Q4
Philippines	-0.89 (-1.66)	0.93 (12.10)	0.0 (0.0)	NA	0.87	1.73	70 Q1 to 82 Q4

1/ The numbers in parentheses are t-statistics. The estimated equation is:

$$\log (MGD/MGUV) = A1 + A2 * \log (GNP) + \sum_{i=o}^{-11} A3(i) * \log (RERMW(i)).$$

where log represents the natural logarithm of the variable in parentheses, MGD is imports in current dollars, MGUV is the import unit value, GNP is gross national product, RERMW is the real exchange rate vs. the G-10 countries plus switzerland, and RHO1 is the first order autocorrelation correction parameter.