
FRBSF WEEKLY LETTER

September 27, 1985

The Debt Problem: Evolution and Prospects

Recent initiatives by Latin American borrowers have renewed concern about the prospects for alleviating the international debt problem. For example, at the end of July 1985, Peru announced that it would limit debt payments to 10 percent of its export revenue. At about the same time, twenty Latin American governments meeting in Lima, Peru called for linking the payments on their debt to the growth in their export earnings.

This *Letter* suggests a simple analytical framework for assessing these developments and the ability of debtor countries to control their debt burden in the short-run. The discussion will focus on borrowers in the western hemisphere (Latin America and the Caribbean) — the source of much of the recent concern.

The debt-to-exports ratio

The following analysis uses as a measure of a country's debt burden its total foreign debt relative to its current earnings from exports of goods and services. Changes in this debt-to-exports ratio indicate whether a country's debt burden is rising or falling in relation to its capacity to pay. While often used as a measure of solvency, the ratio may also be interpreted as an indicator of changes in a country's liquidity, i.e., its ability to meet payment obligations on schedule. The higher the ratio, the higher are the debt servicing requirements relative to the potentially available flow of export earnings. As a result, a country would have to depend more on additional external financing to respond to any temporary shocks to its economy.

Using the debt-to-exports ratio allows one to focus on three key variables that can indicate whether a reduction in the debt burden is feasible in the short-run: the rate of interest the country pays on its external debt, the growth in its exports of goods and services, and the level of its net exports of goods and services (here defined as exports of goods and services less imports and service payments, excluding interest payments). Other things being equal, the rate of interest will increase the debt outstanding and raise the ratio. By the same token, the growth of exports increases the level of

exports — lowering the ratio. In addition, net exports provide a (potential) means of retiring debt or servicing interest payments, which also tends to lower the ratio.

This framework is the basis for the well-known rule that the debt burden rises if the interest rate on the debt exceeds the rate of growth of exports. However, the rule is only strictly true if net exports are zero (i.e., the value of exports equals the value of imports). Positive net exports allow the possibility of a declining debt burden, even if export growth does not match the interest cost of the debt. This has been an important element in the external debt management of several major Latin American borrowing countries.

The relationship between the debt-to-exports ratio and its determinants can be expressed algebraically, but a simple numerical example will illustrate how it is determined. In 1984, the total debt of the western hemisphere was \$351 billion, while total exports of goods and services amounted to \$126 billion. This yields a debt-to-exports ratio of 2.8. If interest rates averaged 10 percent in 1985, and interest payments were met through international borrowing, the debt outstanding would rise to \$386 billion (1.1 times \$351 billion). If at the same time exports grew 4 percent to \$130 billion, the debt-to-exports ratio would rise to 2.96 (\$386 billion/\$130 billion) in 1985. If net exports are positive, however, the surplus can be used to offset this increase. This simplified analysis abstracts from other factors that may influence the debt picture, such as private investment flows.

Experience in the western hemisphere

The charts illustrate the western hemisphere's experience within this analytical framework. While interest rates (represented by the benchmark interest rate in international loans — the three-month London Interbank Offer Rate, LIBOR) climbed from 8.7 percent to 14 percent between 1978 and 1980, exports grew at an extraordinary rate exceeding 30 percent annually in both 1979 and 1980 (Chart 2). The debt-to-exports ratio thus de-

FRBSF

clined (Chart 1) even though there were large negative net exports in that period (Chart 3).

In 1981, the export growth rate fell below the interest rate, while net exports remained in deficit. As a result, the debt-to-exports ratio began to climb. The situation deteriorated dramatically in 1982. While the interest rate remained at a high level, the severe world recession caused an 11 percent drop in exports of goods and services for the year and a sharp rise in the debt-to-exports ratio. This lowered the capacity of borrowers to meet cash flow requirements and precipitated the debt crisis. Efforts to curtail imports severely brought the net export deficit close to zero, but could not prevent the sudden jump in the debt burden and the concomitant liquidity squeeze.

The debt-to-exports ratio continued to rise in 1983, notwithstanding intensified efforts to reduce imports and the resulting dramatic improvement in net exports to significant positive levels, because export growth was near zero while interest rates remained high. Further improvements in net exports, made possible by a sharp increase in export growth and continued curtailment of imports, finally brought about a decline in the debt-to-exports ratio in 1984, although the ratio remained above its level in 1982.

Aside from illustrating how an export shock (caused by the world recession) precipitated the 1982 debt crisis, the charts show that borrowers in the western hemisphere have had to make adjustments in their economic policies to generate enough positive net exports to stabilize their debt burden. Because export growth remained below the interest rate, the adjustments involved curtailing imports and service payments (excluding interest). The latter fell by 16 percent in 1982, 26 percent in 1983, and increased only marginally in 1984. This degree of import reduction was unknown in the western hemisphere in the 1970s, and probably accounts for much of the region's recent impatience with the adjustment process.

Short-term prospects

Both the Peruvian and Latin American proposals cited earlier may be interpreted as attempts to ease import reductions by linking net exports (which include debt service payments) to the performance of exports. Peru's position is that its payment-to-exports ratio should not exceed a cer-

tain percentage. The declaration of the Latin American countries in effect means there should be no attempt to run a net exports surplus if export growth falls below a certain threshold, and that the net exports should grow in proportion to exports once the threshold is exceeded.

In either case, borrowers in the western hemisphere would like an arrangement to allow import growth, but they also have an interest in controlling their debt burden to restore their creditworthiness and to maintain the stability of the financial system that supports their international transactions. A look at the likely behavior of the three determinants of the debt-to-exports ratio in 1985 will allow us to assess whether it is possible to accomplish both.

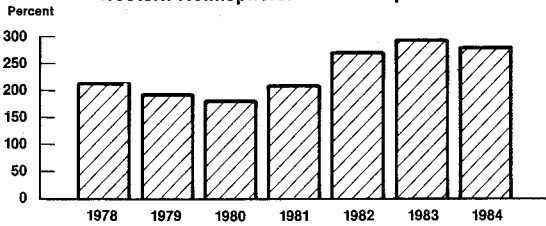
First, the interest costs for borrowers in the western hemisphere have fallen significantly due to declines in interest rates, lower spreads, and waived commission fees on renegotiated debt to selected borrowers. LIBOR averaged 8.8 percent from January to May 1985; by July it had dropped below 8 percent. This compares with an average of 13.1 percent in 1982, 9.6 percent in 1983, and 10.7 percent in 1984.

Second, export growth among borrowers in the western hemisphere depends significantly on output growth in industrial countries. Assuming moderate U.S. economic growth, a recent estimate indicates that the growth of major industrial countries will average 2.5 percent this year. Empirical work by William Cline and others suggests that this may correspond to a rise in the exports of debtor countries in excess of 4 percent. Under these conditions, export growth in 1985 will fall below the 8.8 percent achieved in 1984, but the region will not experience the sudden export drop it did in 1982.

The figures thus suggest that export growth (about 4 percent) will remain below the rate of interest (about 10 percent, including the spread over LIBOR) and create a tendency for the debt-to-exports ratio to rise (from 2.8 to 2.96, as shown earlier).

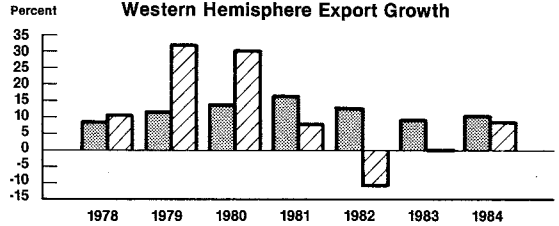
To prevent an increase in their relative debt burden, borrowers in the western hemisphere will again have to generate positive net exports and control import growth accordingly. However, the

Chart 1
Western Hemisphere: Debt-to-Exports Ratio



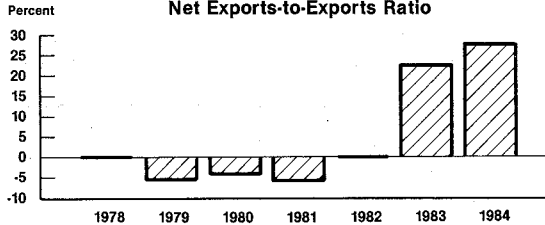
"Western Hemisphere" refers to Latin America and the Caribbean.

Chart 2
3-Month LIBOR Rate and Western Hemisphere Export Growth



Legend:
 ■ 3-month LIBOR on Eurodollar deposits, annual average daily rates.
 ▨ Growth in value of exports, Western Hemisphere. Quarter over previous year's quarter.

Chart 3
Western Hemisphere: Net Exports-to-Exports Ratio



Notes: "Exports" consist of goods and services. "Net exports" are exports of goods and services less imports and service payments, excluding interest payments.

degree of import compression can be relaxed significantly. Given the anticipated export growth and LIBOR, imports and service payments (excluding interest) could grow by as much as 20 percent without increasing the debt-to-exports ratio. Since imports were lower than exports in 1984, net exports can remain positive, and the debt-to-exports ratio may still fall even if import growth far exceeds export growth in 1985. This assumes that lenders and borrowers will focus on reducing the debt-to-exports ratio, rather than the volume of outstanding debt.

While the data illustrate the apparent feasibility of controlling the relative debt burden in 1985 a number of qualifications are in order. Borrowers in the western hemisphere whose debt-to-exports ratio considerably exceeds the average may find it more difficult to stabilize their debt burden. Moreover, improvements in the world economy have not uniformly benefitted countries. For example, while the drop in oil prices facilitates import reduction and adjustment among many borrowers, it has reduced the export revenue of oil producers. An analysis of the aggregate hides important variations among individual countries.

The apparent impatience of certain borrowers in the western hemisphere with the adjustment process may also complicate its continuation. Sluggish U.S. economic growth in the first half of 1985, which could have furthered declines in the export revenue of a number of borrowers, may have contributed to this impatience. An export decline would require further import contraction to stabilize the debt-to-exports ratio, making adjustment more difficult. If U.S. economic growth accelerates in the second half of 1985 as expected, the export performance of borrowing countries should improve significantly and thereby ease the pressures on the adjustment process.

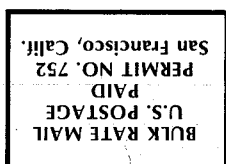
Conclusion

Notwithstanding significant improvements since 1982, a sustained curtailment of imports has made borrowers impatient with the adjustment process. In the short-run, it appears possible for borrowers in the western hemisphere to reduce their relative debt burdens while allowing some import growth.

Ramon Moreno

Nevada Oregon Utah Washington
 Alaska Arizona California Hawaii Idaho

Research Department Federal Reserve Bank of San Francisco



BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT

(Dollar amounts in millions)

Selected Assets and Liabilities	Amount Outstanding	Change from	Change from 9/5/84	Percent ⁷
Large Commercial Banks	9/4/85	8/28/85	Dollar	
Loans, Leases and Investments ^{1 2}	194,986	1,994	12,273	6.7
Loans and Leases ^{1 6}	175,778	1,196	11,872	7.2
Commercial and Industrial	51,472	593	2,005	4.0
Real estate	64,243	48	3,306	5.4
Loans to Individuals	35,648	89	6,030	20.3
Leases	5,441	7	406	8.0
U.S. Treasury and Agency Securities ²	12,126	802	325	2.7
Other Securities ²	7,082	-	77	1.0
Total Deposits	203,502	6,830	10,092	5.2
Demand Deposits	51,528	5,775	4,188	8.8
Demand Deposits Adjusted ³	32,220	969	3,465	12.0
Other Transaction Balances ⁴	14,479	904	1,585	12.2
Total Non-Transaction Balances ⁶	137,495	151	4,318	3.2
Money Market Deposit				
Accounts—Total	45,456	352	7,458	19.6
Time Deposits in Amounts of \$100,000 or more	37,935	-	3,239	- 7.8
Other Liabilities for Borrowed Money ⁵	22,483	-	2,268	11.2
Two Week Averages of Daily Figures	Period ended 8/26/85	Period ended 8/12/85		
Reserve Position, All Reporting Banks				
Excess Reserves (+)/Deficiency (-)	91	12		
Borrowings	25	59		
Net free reserves (+)/Net borrowed(-)	66	- 46		

¹ Includes loss reserves, unearned income, excludes interbank loans

² Excludes trading account securities

³ Excludes U.S. government and depository institution deposits and cash items

⁴ ATS, NOW, Super NOW and savings accounts with telephone transfers

⁵ Includes borrowing via FRB, TT&L notes, Fed Funds, RPs and other sources

⁶ Includes items not shown separately

⁷ Annualized percent change