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ABSTRACT

An analytic and accounting framework is presented for examining the evolution of the external positions of eight developing countries: Argentina, Brazil, Chile, Korea, Mexico, Peru, the Philippines, and Venezuela. The framework is used to analyze the historical paths of external debts in these countries. Then, under fairly conventional baseline specifications, and assuming that no other relevant factors change significantly, projections for the debt-export ratios in these eight developing countries are generated, using the analytic framework and a simple simulation model. The baseline projections indicate cases in which external adjustment might be warranted. Through the simulation of some alternative scenarios, the analysis then suggests ways and means of effecting the necessary adjustments, including a rough idea of what magnitudes might be involved.

External Adjustment in Selected Developing Countries in the 1990s

William L. Helkie and David H. Howard¹

In 1982, the Mexican authorities announced that the country was encountering difficulties in discharging its external debt-servicing obligations to international commercial banks. The Mexican announcement ushered in what became known as the "international debt crisis," as many other developing countries eventually experienced debt-servicing difficulties. A series of debt reschedulings, concerted bank lending programs, macroeconomic adjustment programs (largely under the auspices of the International Monetary Fund), structural adjustment programs (mostly in conjunction with the World Bank), and some episodes of interest arrearages and other debt-service interruptions have marked the experience of developing countries since 1982.

International commercial banks emerged from this process less vulnerable financially to events in developing countries because of a combination of reduced lending to heavily indebted developing countries and increased capital. For example, the exposure of U.S. banks to Brazil and Mexico (the two most indebted developing countries) represented some 70 percent of U.S. bank capital in mid-1982 and only 15 percent at the end of 1990.

1. The authors are staff economists in the Division of International Finance. This paper represents the views of the authors and should not be interpreted as reflecting the views of the Board of Governors of the Federal Reserve System or other members of its staff. We would like to thank Michael Dooley, Robert Emery, Dale Henderson, Karen Johnson, Steven Kamin, Deborah Lindner, Jaime Marquez, Patrice Robitaille, Ted Truman, John Underwood, Timothy Wilson, and participants in the International Finance Division's Monday Workshop for their helpful comments and suggestions.

The experience of the developing countries has been mixed. Important progress toward stronger and more stable economies has been made in some countries, while in others little or no progress can be discerned. In some instances debt ratios and other indicators of the burden of the external debt have improved. Korea, for example, is no longer considered a potential credit problem, and a few other developing countries, notably Mexico, began to tap international capital markets on a limited voluntary basis at the end of the 1980s, after spending the bulk of the decade on the sidelines, without (normal) access to private international credits. However, for the most part, there has been no dramatic strengthening of external positions in developing countries.

In a study published in 1986 but first presented in 1983, Dooley, Helkie, Tryon, and Underwood [Dooley, et al, (1986)] examine the evolution of the external debt positions of eight developing countries between 1973 and 1982. They report simulations, based on certain assumptions, of the debt positions for these countries through 1990. According to their baseline scenario, debt-export ratios were generally to decline, on balance, between 1982 and 1990.

In the present paper, the historical path of the external debt positions in selected developing countries is analyzed using a framework presented in the following section. The paper then turns to a discussion of the prospects for the external debt positions of these developing countries in the 1990s. Emphasis is placed on the external adjustment process in several of the countries, since it is judged that by the end of the 1980s the relevant debt ratios were still perceived by market participants as being excessively high. The illustrative scenarios for the 1990s outlined in the present paper draw on a simulation model of individual developing

countries' external accounts that is broadly similar to the model underlying the scenario for the 1980s reported in Dooley, et al (1986).

The developing countries studied in this paper are: Argentina, Brazil, Chile, Korea, Mexico, Peru, the Philippines, and Venezuela. This sample is the same as that used by Dooley, et al (1986), which facilitates the comparison of that study's scenario for the 1980s with both actual events and the present study's scenario for the 1990s. More important, however, is the fact that the eight countries continue to constitute an interesting sample of developing countries with reasonably diverse experiences.²

The present paper concludes that under baseline assumptions that include economic growth of 2-1/2 percent in industrial countries and 4 percent in the developing countries (6 percent in Korea), a rate of price inflation in industrial countries of 3 percent, world real interest rates at 5 percent, and real exchange rates in the developing countries constant at their 1989-1990 average values, the debt-export ratios rise significantly in the 1990s in five of the eight countries studied. The possible need for external adjustment is then discussed. Some alternatives to the baseline simulations are used to suggest ways in which external adjustment might be achieved.

2. In this regard, it should be noted that Korea, which in 1982 was considered to be a potentially troubled debtor, ended the decade with official reserves amounting to over 50 percent of its gross external debt, and, as a member of the "four Tigers" of Asia, seemed to have put worries about its creditworthiness to rest.

The dynamics of external debt accumulation

1. Analytic framework

In order to examine the dynamics of external debt accumulation, it is useful to make two simplifying assumptions. First, it is assumed that the change in the stock of nominal net external debt (plus direct investments) is equal to the negative of the current account balance for the relevant period; that is, after rearranging the terms,

$$(1) \quad \dot{A} + \dot{R} - \dot{D} - DI = CAB,$$

where A is the nominal value of the stock of external assets held by the country's private sector residents, R is the nominal value of the stock of external reserves held by the country's public and banking sectors, D is the nominal value of the stock of external debt, DI is the nominal net flow of foreign direct investment, CAB is the current account balance, and the dot notation signifies the derivative with respect to time. Second, it is assumed that the current account balance is equal to the trade balance less interest and other current payments on the stock of net external debt and direct investments; that is,

$$(2) \quad CAB = TB + i(A + R) - (i + s)D - DIV,$$

where TB is the trade balance, i is "the" nominal rate of return on external assets, s is the interest-rate spread over i that is paid on external liabilities, and DIV is current payments on the existing stock of direct investments (that is, "dividends"). All nominal magnitudes are expressed in terms of dollars, and the interest rate (i) is a dollar rate.

Although useful, these two simplifying assumptions are not strictly correct. (In the empirical work reported in the present paper, TB is defined more accurately to be the non-investment-income current account balance.) Nevertheless, the assumptions embodied in equations (1) and (2)

capture the fundamentals of the external debt accumulation process: net debt is built up through the financing of current account deficits, and net investment income is the major non-trade current account item when a country's net debt position departs substantially from zero. These assumptions are used in the remainder of this section of the paper.

Equations (1) and (2) can be rearranged to yield:

$$(3) \quad \dot{D} = (\dot{A} - iA) + (\dot{R} - iR) - (DI - DIV) + (i + s)D - TB.$$

The first term on the right-hand side of equation (3) -- $(\dot{A} - iA)$ -- can be thought of as an adjusted "capital flight" term and will be denoted as KF. The term is, in fact, total private sector capital outflows (defined -- properly -- to include reinvested earnings on foreign assets) less the earnings on the stock of assets held abroad; KF therefore corresponds to the "broad" measure of capital flight that is often calculated from balance-of-payments data that do not report earnings on foreign assets.³ Thus,

$$(4) \quad KF = \dot{A} - iA.$$

The second term on the right-hand side of equation (3) -- $(\dot{R} - iR)$ -- can be interpreted as "reserves acquisition" and is denoted as RA. This concept of reserves accumulation focuses on net new purchases in excess of the (implicitly reinvested) earnings on the stock of reserves. Thus,

$$(5) \quad RA = \dot{R} - iR.$$

It is also convenient to define a foreign direct investment term -- denoted as FDI -- to be:

$$(6) \quad FDI = DI - DIV.$$

The nominal interest rate -- i -- can be decomposed into the (ex post) real interest rate and an inflation rate. That is,

3. See Gordon and Levine (1989) for a discussion of the various concepts and measures of capital flight.

$$(7) \quad i = r + \dot{P}^{\$/P^{\$}},$$

where r is the real interest rate and $P^{\$}$ denotes the U.S. price level.

Substituting equations (4), (5), (6), and (7) into equation (3), and dividing through by D , one obtains:

$$(8) \quad \dot{D}/D = KF/D + RA/D + r + \dot{P}^{\$/P^{\$}} + s - FDI/D - TB/D.$$

Equation (8) illustrates how the rate of external debt accumulation is determined by five major influences: capital flight (KF/D), reserves acquisition (RA/D), debt-servicing costs ($r + \dot{P}^{\$/P^{\$}} + s$), foreign direct investment (FDI/D), and the trade balance (TB/D).

Statistical measures of a country's external debt burden usually involve scaling the debt by some convenient economic aggregate, for example, nominal GDP. Let Z denote such a scale variable, and

$$(9) \quad d = D/Z,$$

where d is a generic "debt ratio." Using equations (8) and (9), one can obtain:

$$(10) \quad \dot{d}/d = KF/D + RA/D + r + \dot{P}^{\$/P^{\$}} + s - FDI/D - TB/D - \dot{Z}/Z.$$

For a given constant debt ratio, it follows from equation (10) that

$$(11) \quad TB/D = (KF/D + RA/D + r + \dot{P}^{\$/P^{\$}} + s) - FDI/D - \dot{Z}/Z.$$

Thus, if the nominal rate of return on external liabilities plus the "rates" of capital flight (that is, KF/D) and reserves acquisition (RA/D) exceeds (is less than) the rate of growth of the scale variable plus the "rate" of foreign direct investment (FDI/D), a country must run a trade surplus (deficit) in order to maintain a constant debt ratio.

2. Sustainability of the external debt position

Much of the above discussion of external debt accumulation and much of what follows in this section of the paper draw heavily on two earlier papers on the U.S. current account and external debt situations [Howard

(1989a, 1989b)]. There is one important difference, however: for the United States, the relevant external debt concept is net debt (D-A-R), while for the vast majority of the heavily indebted developing countries the relevant concept is gross debt (D alone) or perhaps gross debt net of external reserve assets (D-R). The developing countries' debt problems of the 1980s largely concerned gross external debt, not net debt. The primary reason for this distinction is that the earnings on foreign assets held by residents of developing countries (A) are typically not available to help service the foreign liabilities -- this is the essence of the capital flight "problem."⁴ There appears to be no such problem in the United States: earnings on assets held abroad are, to a more-or-less full extent, reported, remitted to the United States as appropriate, and subject to U.S. taxation.

There are several plausible ways of defining "external balance" or "stability" with respect to external debt. In many formal models in the economics literature, a long-run constraint is specified in which the present value of a country's net external debt position at a point in the future approaches zero as that point approaches infinity. The specification of this intertemporal constraint is made largely for a technical reason -- to rule out Ponzi schemes in which a country simply borrows indefinitely in order to make its interest payments.⁵ However, such schemes can be viable, at least in principle: as long as creditors are willing to lend, net debt can grow. There are conditions under which creditors will continue to lend

4. See Dooley (1988) for a discussion of this aspect of the phenomenon of capital flight; Dooley uses this feature as the defining characteristic of capital flight.

5. See, for example, Sachs (1982) or Blanchard (1983).

indefinitely.⁶ All but one of the definitions of debt stability discussed in the present section of this paper have to do with viewing a debt ratio as the operative measure of a lender's exposure to a country. Growth in the relevant scale variable can then prompt a willingness to increase claims on the country; this process can go on indefinitely.

One concept of external debt stability is a special case in which there is no scale variable involved. In this case, debt stability means that there is a standstill of all nominal lending in excess of explicit amortization payments (or reschedulings of principal payments) to a country. In terms of equation (11), the indebted country must run a trade surplus equal to the nominal interest payments on its external debt plus any capital outflows in excess of the net flow of foreign direct investment, a situation not unlike that which several heavily indebted developing countries have faced at times during the post-1982 "debt crisis." This concept of debt stability is austere, particularly in an inflationary environment where a significant portion of interest payments -- the inflation premium -- actually represents implicit amortization of the real value of the loan.⁷

An alternative concept of debt stability that makes more sense economically is to use the general (U.S.) price level as the scale variable. Thus external debt stability refers to a constant real value of the debt; the nominal stock of debt can increase at a rate of growth equal to the U.S.

6. See, for example, Cooper and Sachs (1985) or O'Connell and Zeldes (1988).

7. See Dooley, et al (1986) for a discussion of the inflation premium as an implicit amortization payment.

inflation rate.⁸ In terms of equation (11), this concept of external balance implies that a debtor country must run a trade surplus that is equal, as a percentage of external debt, to the real rate of interest on the debt (including the spread) plus the rate of capital flight (KF/D) and reserves acquisition (RA/D), less the rate of foreign direct investment (FDI/D).

In most discussions of external debt positions, the scale variable is taken to be some rough proxy for the debtor's capacity to service its debt. Two common examples of such scale variables are nominal GDP and nominal exports; other examples are wealth or the nation's capital stock. Another way of looking at the scale variable is as a measure of the creditors' general capacity or willingness to lend, in which case world (or foreign) wealth or output would be reasonable proxies. Again using the framework of equation (11), if the rate of growth of the scale variable exceeds the sum of the nominal dollar interest rate (including the spread) and the capital outflow and foreign direct investment terms, the indebted country can actually register trade deficits without suffering a deterioration of its external debt position, as measured by the relevant debt ratio. If the debt-GDP ratio is the appropriate external debt indicator, the crucial comparison involves the interest rate on external liabilities plus the rates of capital outflows and foreign direct investment and the domestic economic growth rate.

8. This is just one instance of a more general point -- external debt stability or even adjustment can be consistent with continued new borrowing. Criticisms of new borrowing as simply "piling debt on debt" are not necessarily well founded.

One message of the developing countries' external debt experience during the 1980s is that the debt ratios prevailing at the beginning of the decade were too high. The ensuing "debt crisis" involved in part debates over how best to lower the ratios and over what time period the decrease should be effected. Equation (10) indicates the influences that work to reduce a debt ratio over time: the flow of capital (including direct investment), debt-servicing costs, the trade balance, and the rate of growth of the scale variable.

3. Choice of scale variable

There are several statistical measures of a country's external debt "burden." Perhaps the two most commonly used measures are the ratio of (net or gross) debt to GDP (or GNP) and the ratio of (net or gross) debt to exports. Each of these ratios has its strong points as an indicator of a country's external debt situation, but neither is the definitive measure. The first measure scales the debt using the size of the economy as a proxy for the country's capacity to service its debt. The other measure scales the stock of debt using total exports as a proxy for the country's (near-term) capacity to generate foreign currency earnings and service its debt.

Scale variables typically are expressed in dollars when analyzing the debt situation of a developing country. This means that using domestic GDP as the scale variable requires that the country's GDP be converted from domestic currency into dollars, which introduces an exchange rate term into the calculations. (Exports are ordinarily expressed in dollars, so no additional adjustments are needed when the debt-export ratio is used.) This issue does not arise when analyzing the external debt position of a country with debts denominated mainly in its own currency, such as the United States.

If the dollar value of nominal exports is taken as the scale variable, then

$$(12) \quad Z = P^x \cdot x,$$

where P^x and x are the dollar export price and the volume of exports, respectively, of the developing country. In such a case, using equations (10) and (12), one can obtain

$$(13) \quad \dot{d}/d = KF/D + RA/D + r + s - [(P^x/P^x) - (P^{\$/P^{\$})] - \dot{x}/x - FDI/D - TB/D,$$

where the d denotes the debt-export ratio.

Equation (13) is fundamental to this paper's analysis of the international debt situation faced by the heavily indebted developing countries: the equation is used to organize the discussion of the historical development of the international debt situation in the 1970s and 1980s, and it is used as an organizing framework for various model simulations of the 1990s.

Debt ratios in selected developing countries

In Table 1, debt-export ratios in selected developing countries during the period 1974-1990 are presented.⁹ The ratios exhibit a variable

9. The sample of developing countries is the same as that used in Dooley, et al (1986), but the debt-ratio measure is different. Dooley, et al focus on the ratio of "real" interest payments to exports, in which nominal interest payments are adjusted for the implicit amortization represented by the inflation "premium" component of the nominal inflation rate. While this concept is analytically interesting (see the discussion of different concepts of debt sustainability and stability earlier in the present paper) it is of less operational interest because the implicit amortization is not readily rescheduled or refinanced. In practice, many debtor countries have had actually to pay a great deal of the amortization implicit in nominal interest payments. In effect, such amortization payments have been a major channel through which the more traditional debt ratio reported in Table 1 has been lowered over time.

Table 1
Debt-Export Ratios (Percent)

	<u>Argentina</u>	<u>Brazil</u>	<u>Chile</u>	<u>Korea</u>	<u>Mexico</u>	<u>Peru</u>	<u>Philippines</u>	<u>Venezuela</u>
1974	144	207	191	95	187	229	68	15
1975	229	239	261	110	245	296	98	15
1976	211	257	202	85	285	359	130	32
1977	169	306	225	109	380	429	194	98
1978	170	371	248	101	312	401	220	153
1979	211	337	198	117	267	224	213	148
1980	243	304	193	131	261	207	218	132
1981	302	299	280	121	283	244	244	131
1982	448	393	336	132	312	294	306	160
1983	470	401	371	133	325	312	299	220
1984	493	345	425	125	293	327	302	195
1985	493	360	437	142	328	364	339	206
1986	593	450	395	111	426	467	329	308
1987	695	430	331	71	366	510	327	274
1988	517	314	232	50	315	509	273	279
1989	538	287	185	45	266	432	233	211
1990	402	325	182	43	232	457	234	171

pattern across countries.¹⁰ In general, the debt ratios rose -- steeply in many cases -- during the 1970s, hitting peaks in the mid-1980s. In a few instances -- Korea in particular -- the declines from the mid-1980s peaks have been impressive, but in some other countries the ratios have not come down much from their peaks. In a number of countries, the debt ratios in 1990 were considerably higher than those that had prevailed in 1974.

Although many of the developing countries reported in Table 1 have made great strides toward structural adjustment, macroeconomic stability, and normalization of creditor relations, it is clear that at the beginning of the 1990s for the most part they had not yet fully restored their access to international credit markets.¹¹ Thus, it can be concluded that in the view of potential creditors, these countries' debt ratios, with a few exceptions, were "too high," that is, their levels of external debt were not sustainable. The notion of external debt sustainability is, of course, a slippery one. A particular level of debt-export ratio, for example, might be sustainable or unsustainable depending on such factors as a country's economic policies, its record of capital formation, its resource endowment, the size of its official holdings of foreign exchange reserves, and the prevailing international economic environment. Therefore, the sustainable level for a debt ratio is likely to vary across countries and over time. Nevertheless, on the basis of degree of access to international credits, it seems safe to conclude that, except for Korea and perhaps Chile, Mexico, and

10. For reference, Table A1 in the appendix presents data on the debt-GDP ratios for the same sample of developing countries.

11. Korea is the exception. Mexico is an intermediate case: it resumed some borrowing on commercial terms in 1989-1990 while at the same time it negotiated a debt-reduction package with its private sector international creditors. As of 1990, Chile and Venezuela seemed to be at least on the verge of becoming intermediate cases also.

Venezuela, the ratios reported for 1990 on Table 1 were too high for creditors' tastes and that further downward adjustments were warranted from the point of view of international capital markets.¹² The questions of how and when this adjustment might take place are addressed later in this paper, using equation (13) as an analytic framework.¹³

The evolution of the debt crisis

Equation (13) can be used as an analytic and accounting framework for describing the evolution of the debt ratios themselves and some of the underlying forces operating on the ratios. In the appendix to this paper, historical data for the period 1974-1990 on the debt-export ratios and the various right-hand-side variables in equation (13) are reported for each of the eight developing countries in the sample.

The appendix contains a discussion of the data base used for this study. Two features of the empirical implementation of the analytic framework of equation (13) warrant highlighting. The "trade balance" (TB) is actually the non-investment-income component of the current account

12. It should be noted that, at least in the case of sovereign borrowing, one can distinguish between the ability to service loans and the willingness to do so. International lenders, for the most part, when making credit decisions, are concerned with whether a country will service its debts rather than whether it can do so.

13. In 1989, U.S. Treasury Secretary Nicholas Brady put forward a plan aimed, in effect, at reducing the debt ratios of highly indebted developing countries, in which much of the adjustment was to consist of debt forgiveness by the countries' creditors. The "Brady Plan" approach can be treated in the context of equation (13) by a one-time shift in the value of external debt (D). The counterpart to the reduction in debt principal would be an implicit one-time increase in the current account balance, according to equation (1). Actual balance-of-payments accounting used for actual debt-reduction packages is somewhat less straightforward.

balance, and, as such, includes some services and other non-merchandise-trade items. The "residual" -- which on occasion was substantial -- is a conglomeration of a number of factors reflecting valuation effects on the dollar values of a country's external assets and liabilities that are not captured in the current account balance, and approximations resulting from using wholesale prices rather than export prices in some instances, using changes in annual observations rather than instantaneous changes, and from using balance of payments data that do not in all cases report such items as current receipts and payments on assets and liabilities completely or uniformly. Finally, another source of the residual is the poor quality of some of the data.¹⁴

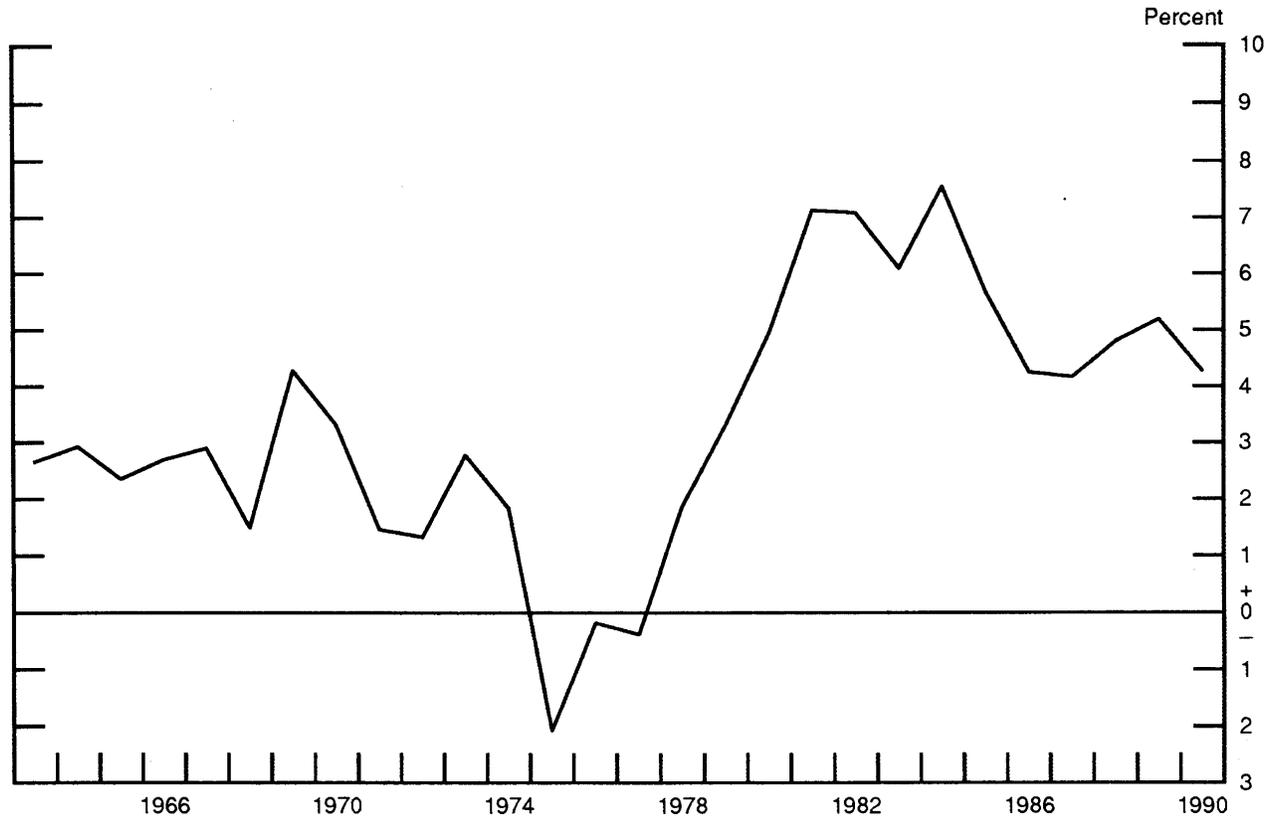
One noteworthy feature of the appendix tables (Tables A2-A9) is the prominent role played by a factor common to all countries -- the real U.S. dollar interest rate, that is, the "world" real interest rate. Starting toward the end of the 1970s and continuing throughout the 1980s, the real interest rate was a major source of upward pressure on developing countries' debt ratios. A country with a debt-export ratio of 100 at the end of 1979, would have had a ratio of 174 at the end of 1989 -- nearly a doubling in just 10 years -- if all other factors had summed to zero.

The interest rate, of course, becomes more and more important as external debt accumulates. Moreover, the level of the real interest rate jumped significantly just prior to the onset of the debt crisis and stayed more-or-less at the elevated level throughout the ensuing decade. In Figure 1, a longer time series for the world real interest rate is plotted. Two

14. In the projections for 1991-2000, the residual is attributable solely to the use of changes in annual observations rather than instantaneous changes.

Figure 1

World Real Interest Rate



immediate conclusions can be drawn from the figure: the average real interest rate in the 1980s (5.7 percent) was substantially higher than that recorded in the period 1963-1979 (1.9 percent overall, 2.5 percent excluding 1975-1977); the low, indeed mostly negative, real rates during the mid-1970s -- when the rates of growth of gross external debt tended to be very high in the developing countries -- were anomalies. The adverse swing in the world real interest rate between the 1970s and the 1980s -- particularly given that much of the developing countries' external debts were contracted at variable interest rates -- was undoubtedly a major factor contributing both to the onset and persistence of the debt crisis.

Capital and trade flows were two other important factors contributing to the evolution of developing country debt ratios. The pattern of these external flows differed across countries, of course. Table 2 reports the cumulated totals for selected capital and trade flow data. Argentina and Venezuela appear to have built up external (private) assets at roughly the same pace as they accumulated external debts during the 1974-1982 period. Mexico and the Philippines financed a considerable amount of capital flight with their external borrowings, but financed trade deficits as well. The remaining four countries tended to finance trade flows rather than private capital outflows with their external debt, but only in the case of Chile was there no cumulated capital flight recorded. Note also the marked reductions in capital outflows in most of the countries and the strengthening of the trade accounts in all eight countries after 1982.

The important influences of a country's "terms of trade" (its dollar export price relative to the general U.S. price level) and its export performance are shown dramatically in Tables A2-A9. The wide swings in the rates of change in dollar export prices and the volume of exports exhibited

Table 2
Cumulated Capital and Trade Flows
(billions of dollars)

	1974-1982			1983-1990		
	<u>ΔD</u>	<u>KF</u>	<u>TB</u>	<u>ΔD</u>	<u>KF</u>	<u>TB</u>
Argentina	37	28	5	17	5	27
Brazil	79	12	-38	26	15	70
Chile	14	0	-5	2	-8	6
Korea	33	6	-12	-4	9	49
Mexico	77	33	-17	11	11	67
Peru	9	2	-2	8	3	5
Philippines	22	8	-9	6	-1	5
Venezuela	30	29	24	3	13	42

Note: TB denotes the non-investment-income component of the current account balance.

in the tables account for a great deal of the historical movement of the debt-export ratios. The remarkable volatility of the terms of trade and export performance of the developing countries studied in the present paper reflects several factors: fluctuations in overall world trade; oil and commodity price swings, which would have a particularly strong influence in some of the countries in the sample; active exchange rate policies in the developing countries, particularly the use of discrete "maxi-devaluations" to restore or enhance a country's export competitiveness; and, undoubtedly, problems with the data, particularly in those countries (Argentina, Chile, Mexico, and Venezuela) for which wholesale prices expressed in dollars are used as a proxy for export prices.

Prospects for the 1990s: illustrative scenarios

Given the historical volatility of several of the factors underlying the debt ratios reported in the appendix tables, it is difficult to predict with much confidence the behavior of the ratios over the 1990s. Moreover, as mentioned earlier, the sustainable level of a particular debt ratio is itself a function of many variables that can change drastically over the course of a decade. In this paper, it is assumed that in many cases some further downward adjustment in the debt-export ratio may well be warranted by financial market considerations during the 1990s, and various illustrative scenarios are discussed.

Five illustrative scenarios are considered. In the "baseline" scenario, economic activity in industrial countries grows at 2-1/2 percent per year and prices in industrial countries rise at a 3 percent annual rate -- a scenario consistent with a growth rate of 8 percent in (nominal) world trade. In the eight developing countries, GDP is specified to grow at a 4

percent rate and real exchange rates are held constant at their 1989-1990 average values; consequently, imports rise at a 9 percent rate.¹⁵ In the baseline, capital outflows (private plus official) are zero, foreign direct investment equals the average for 1989 and 1990, and the real interest rate (LIBOR less the U.S. inflation rate) is 5 percent. This 5 percent figure is in line with the average real interest rate recorded in the second half of the 1980s.

The second scenario is what might be called "hard work": the real exchange rate is specified to be 10 percent lower than it is in the baseline throughout the 1990s. The growth of exports in this scenario exceeds by, on average, 1 percentage point per year the rate of growth of world trade in the base case owing to the real depreciation of the exchange rate.¹⁶ Developing country imports, on balance, grow 8 percent. The rest of the assumptions are the same as those made in the baseline scenario.

The third scenario is what might be called the "good luck" scenario: capital flight is a sizable negative number, that is, the developing country benefits from a reflow of half of the 1974-1990 flight capital back into the country over the course of the 1990s; and, perhaps not unrelated, real interest rates charged on the loans to the eight developing

15. In Korea, the annual real growth rate is assumed to be 6 percent; the consequent growth in imports is 12-1/2 percent per year.

16. This particular scenario is a bit more fanciful than the usual illustrative scenario in that each country in turn is specified to gain market share at the expense of the rest of the world. Such an exercise would be easier for an individual country acting alone than for all seven or eight countries in the sample acting at one time.

countries are 200 basis points lower than they are in the baseline case.¹⁷ The 200 basis point reduction results in a real interest rate at roughly the level prevailing during the 1960s. All other elements of the baseline scenario (including the exchange rate assumption) continue in effect. It should be noted that the return of flight capital does not require "good luck." It can arise from sound domestic policies in the developing country as well. However, aside from influencing the country risk term (the spread) at the margin, there is nothing the developing country can do to alter the real interest rate on its external debt; the country must rely on "good luck."

There are two additional scenarios: "high growth," in which industrial country growth is increased to an annual rate of 3-1/2 percent; and "domestic austerity," in which the pace of economic activity in the developing countries slows by 1-1/2 percentage points (annual rate) relative to the baseline. All of the alternatives to the baseline scenario are specified so as to have roughly similar effects on the paths of the debt-export ratios. There can be, however, some significant differences in a country's response to the various alternative specifications that reflect, for example, the country's debt level, its history of capital flight, its proportion of oil and non-oil exports, and its import dependence.

The different assumptions can have important consequences. For example, the different real interest rates have a substantial cumulated effect over 10 years: a debt-export ratio of 100 would end up at 163 under

17. The return of flight capital was an important feature of the 1988-1990 period. In Mexico alone, some \$16 billion in private capital flowed back to the country. For the other seven developing countries examined in this paper, a total of nearly \$15 billion in flight capital returned during the same three-year period.

the baseline assumption of a 5 percent real interest rate, if other factors summed to zero, while it would equal 134 under the "good luck" specification of 3 percent.

Many of the right-hand-side variables in equation (13) are inter-related and thus the alternative scenarios must take into account these relationships. In this paper, a simulation model of each developing country that allows for these relationships, and in which the co-determination of dollar export prices, export volumes, and the non-investment-income current account are highlighted, is used to derive internally consistent and economically sensible paths for the debt-export ratio and its key underlying variables, given the particular assumptions defining the scenario. The next section of the paper discusses the simulation model and its application to the study of various scenarios for the evolution of the debt situation in developing countries.

Simulation model

In the present paper, a small simulation model is used to project the debt-export ratio to the end of the century. The model is derived from the one described in Dooley, et al (1986); in fact, most of the model's parameter values are taken directly from that study. The model's parameters -- especially those for the import and export volume equations -- are in line with those found in the econometric studies of Bond (1985) and Marquez and McNeilly (1988), and consistent with the values estimated by Dornbusch (1985). A listing of the model is presented in Table 3.

In order to calculate current dollar exports of goods and services -- the denominator of the debt-export ratio -- an export unit value index for non-oil developing countries that is measured in dollars is first

Table 3
Simulation Model
Definitions of Variables
(Variables underlined are exogenous)

CAB	Current account balance
<u>CPID</u>	CPI in dollars
D	Gross external debt
<u>DI</u>	Net direct investment
DXRATIO	Debt-export ratio
GDP	Real gross domestic product
<u>GDPB</u>	Real gross domestic product - baseline value
GIP	Gross interest payments on external debt
<u>ICGNP</u>	Industrial country weighted average real GNP
<u>ICOUT</u>	Unrecorded capital outflows and other errors and omissions
<u>ICP</u>	Industrial country weighted average CPI in dollars
LDMGUV	Import price in dollars
LDXGUV	Export price in dollars
LDXGUVB	Export price in dollars - baseline value
<u>LIBOR</u>	London interbank offer rate
MVLID	Imports of goods and nonfactor services
<u>NT</u>	Net transfer payments
<u>POIL</u>	Oil export price in dollars
R	Interest rate charged on loans to developing countries
<u>SPREAD</u>	Spread over LIBOR
TB	Trade balance
<u>XA</u>	International external assets
<u>XOBPD</u>	Export volume of crude oil and petroleum products
XVD	Exports of goods and services
XVDB	Exports of goods and services - baseline value
XVDO	Exports of crude oil and petroleum products

Table 3 (continued)

Equations

Balance of Payments:

Exports of goods and services¹: $\log (XVD/LDXGUV) = 2.0 * \log (\underline{ICGNP}) +$
 $0.275 * \log (LDXGUV/\underline{CPID}) +$
 $0.45 * \log (LDXGUV(-1)/\underline{CPID}(-1)) +$
 $0.275 * \log (LDXGUV(-2)/\underline{CPID}(-2))$

Imports of goods and
 nonfactor services: $\log (MVLID/LDMGUV) = 1.5 * \log (GDP) -$
 $0.6 * \log (LDMGUV/\underline{CPID}) -$
 $0.3 * \log (LDMGUV(-1)/\underline{CPID}(-1)) -$
 $0.1 * \log (LDMGUV(-2)/\underline{CPID}(-2))$

Trade balance: $TB = XVD - MVLID$

Current account balance: $CAB = TB - GIP + \underline{NT}$

External debt: $D = D(-1) - CAB + \underline{DEL(XA)} + \underline{ICOUT} - \underline{DI}$

Gross interest payments: $GIP = R * D(-1)/100$

Interest rate on external debt: $R = \underline{LIBOR} + \underline{SPREAD}$

Debt export ratio: $DXRATIO = 100 * D/XVD$

Trade prices:

Export price: $\log (LDXGUV) = \log (\underline{ICP}) + 0.25 * \log (\underline{ICGNP}/\underline{ICGNP}(-1)) +$
 $0.75 * \log (\underline{ICGNP}(-1)/\underline{ICGNP}(-2)) +$
 $0.5 * \log (\underline{ICGNP}(-2)/\underline{ICGNP}(-3))$

Import price: $\log (LDMGUV) = \log (\underline{ICP})$

Oil exports (Mexico and Venezuela): $XVDO = \underline{XOBPD} * \underline{POIL} * 0.365$

Export multiplier: $GDP - \underline{GDPB} = 1.0 * 100 (XVD/LDXGUV - XVDB/LDXGUVB) +$
 $0.5 * 100 * (XVD(-1)/LDXGUV(-1) -$
 $XVDB(-1)/LDXGUVB(-1))$

¹. Income elasticity for Korea is 4.0.

calculated. It is assumed to rise in proportion to increases in the G-10 price level expressed in U.S. dollars and to rise with an elasticity of 1.5 with increases in the growth of industrial country real GNP, distributed over three years. The non-oil export price index (or, for Argentina, Chile, Mexico, and Venezuela, its proxy, the wholesale price index expressed in dollars) for each of the eight countries is assumed to rise in proportion to increases in the export unit value index for non-oil developing countries.

Based on the specified rate of growth of real GNP in the industrial countries, the model calculates the volume of non-oil exports using an income elasticity of 2.0 and a relative price elasticity of 1.0, distributed over three years. (For Korea, an income elasticity of 4.0 is used.) For Mexico and Venezuela, the model projects oil exports separately from non-oil exports. It is assumed that the price of these countries' oil exports would change dollar for dollar with changes in the OPEC oil price. The OPEC oil price is assumed to remain constant in real terms; that is, the nominal price rises 3 percent per year in line with the assumed rate of inflation in industrial countries. The volume of oil exports is assumed to remain constant at average levels in 1991 for Mexico and to increase 1-1/2 percent per year in Venezuela. In the alternative scenarios, the implicit assumption is that any additional increase or decrease in world demand for oil (at constant real oil prices) is met by increases in supplies from the Middle East.

The end-of-year value of gross external debt -- the numerator of the debt-export ratio -- is the sum of the debt at the beginning of the year, the current account deficit, the change in the international reserves of the government and banking system, and net private capital outflows, including foreign direct investment flows. Changes in international

reserves and net private capital flows are exogenous variables in the model. In the baseline extrapolation, reserves are held constant and net private capital flows other than direct investments are assumed to be zero. Direct investments are specified to be the 1989-1990 average value.

The "trade balance" is calculated from an accounting identity that subtracts net investment income from the current account balance. Real imports of goods and non-factor services are projected based on assumed rates of GDP growth in each of the eight countries using an income elasticity of 1.5 and a relative price elasticity of 1.0, distributed over three years. Gross interest payments on external debt are calculated from a set of accounting identities. The interest rate on international debt is the sum of the LIBOR rate plus an assumed spread. LIBOR is set near its 1990 levels at 8 percent in the baseline (a 5 percent real rate); the spread over LIBOR for each country is projected to be the average of its 1989-1990 level. Interest payments on the external debt are the product of the interest rate and the value of the external debt at the beginning of the year.

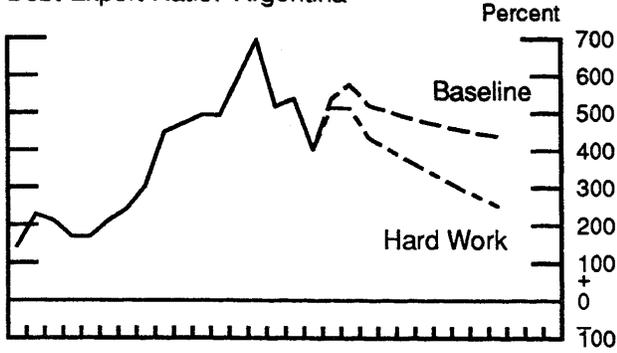
Simulation results

The baseline projections of the debt-export ratio for each developing country studied are shown in Figure 2; details of the projections are presented in the appendix, Tables A2-A9. The debt-export ratio increases significantly in Brazil, Korea, Mexico, Peru, and the Philippines, declines significantly in Venezuela, remains near its current level in Chile, and exhibits a hump-shaped pattern in Argentina, with the ratio ending the century at a level not much different than its 1990 value.

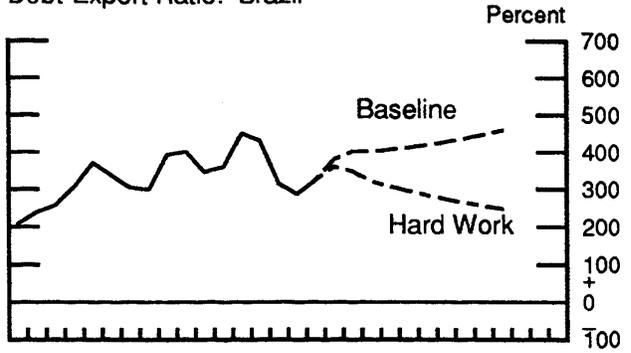
Figure 2

Hard Work

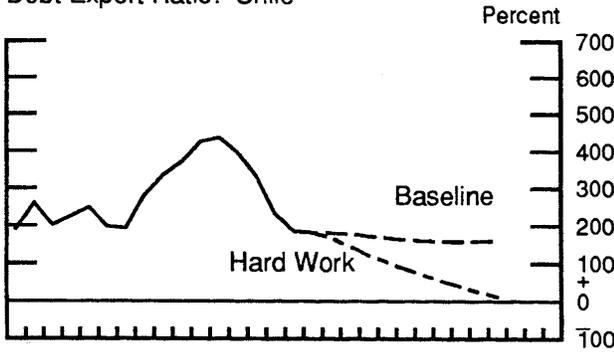
Debt-Export Ratio: Argentina



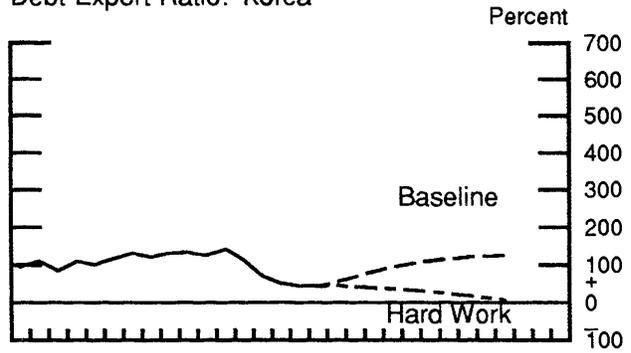
Debt-Export Ratio: Brazil



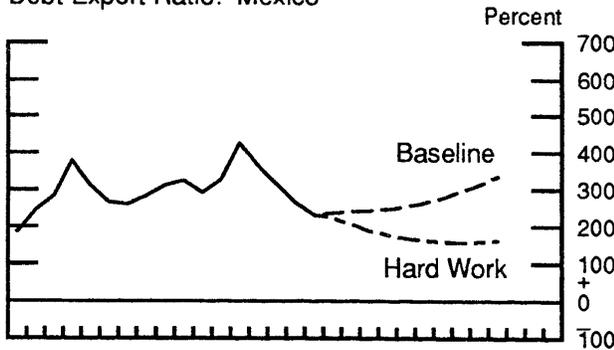
Debt-Export Ratio: Chile



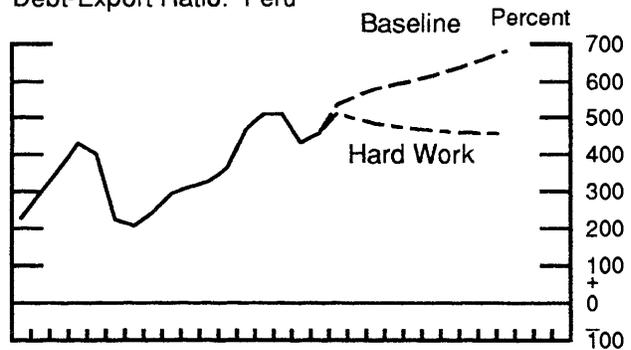
Debt-Export Ratio: Korea



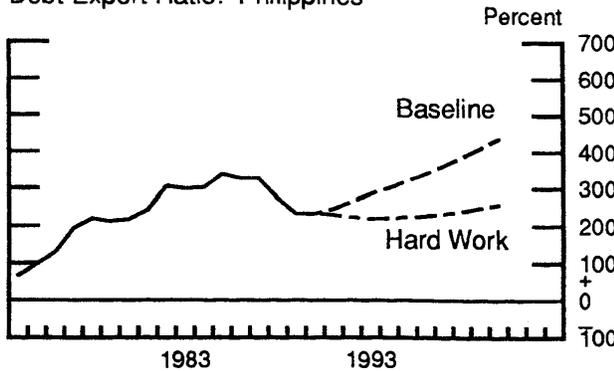
Debt-Export Ratio: Mexico



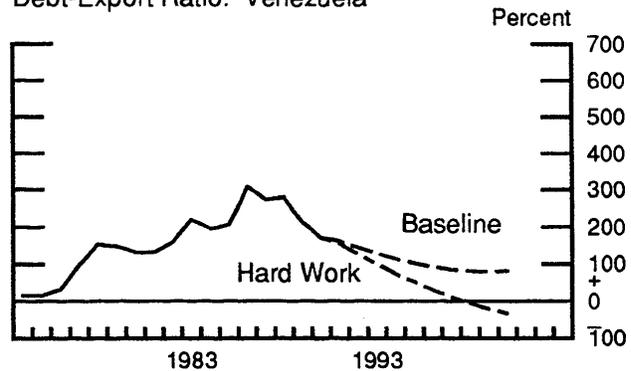
Debt-Export Ratio: Peru



Debt-Export Ratio: Philippines



Debt-Export Ratio: Venezuela



A key factor that explains the differential movements in the debt-export ratios is the evolution of the ratio of the "trade balance" to external debt. The differences in trade projections are attributable to differences in initial trade positions in the respective countries, recent events in the oil market that were favorable to most oil exporters, and differences in recent policies toward the value of the real exchange rate. If a country's trade account is initially in balance, given the differential income elasticities between exports (2.0) and imports (1.5) and the differential growth rates assumed for the developing countries (4 percent, except for Korea's 6 percent) and the industrial countries (2-1/2 percent), at constant real exchange rates the trade balance will move slightly into deficit during the 1990s. (If developing countries were assumed to grow at 3-1/4 percent, their trade accounts would remain in balance.)

Brazil, Korea, Mexico, Peru, and the Philippines are projected to run "trade" deficits during the 1990s. Of these, Korea, Mexico, and the Philippines begin the simulation period with small deficits on their trade accounts; Brazil and Peru achieved small surpluses in 1990, but in both cases, the surpluses are significantly smaller than those attained in 1989. In addition to starting the decade with a trade deficit, Korea and Mexico also have experienced significant recent real exchange rate appreciations, which affect the level of the real exchange rate used in the baseline projection. The assumed real value of the Korean won is 10 percent above its 1986-1990 average level; the assumed real value of the Mexican peso is roughly 12 percent above its average level during the same period. Brazil and Peru are projected to run trade deficits largely because of the substantial appreciations of the real value of their currencies in recent years, which result in the baseline exchange rate specification of roughly

22 percent above its 1986-1990 average in the case of Brazil and 33 percent in the case of Peru. The Philippines, although its assumed real exchange rate remains near its 1986-1990 average, experiences increasing deficits owing to increasing gross interest payments on debt accrued, in part, because of unfavorable terms-of-trade shocks in 1989 and 1990.

Venezuela, with a recorded "trade" surplus of nearly \$7.5 billion in 1990, is projected to achieve surpluses on its trade account throughout the decade. Venezuela's trade is in surplus because of favorable developments in the oil market that resulted in increases in both the volume and price of its exported oil. Oil export revenues increased on average by roughly 25 percent per year between 1988 and 1990. In addition, the Venezuelan bolivar has recently been maintained at less than 40 percent of its 1982 value in real terms. This exchange rate policy has spurred non-oil export revenues to rise 15 percent per year between 1987 and 1990, while imports remained on average at half their 1982 dollar value. Thus, even allowing for an 8 percent decline in oil export revenues in 1991 and a modest 4-1/2 percent per year increase thereafter, Venezuela's trade account remains in surplus throughout the decade.¹⁸ Unlike Venezuela, Mexico did not benefit substantially from increased demand for oil because of decisions taken in the 1980s not to invest in significant exploration activity or expansion of productive capacity.

The extrapolated values of the "trade accounts" for Argentina and Chile are near balance. Chile begins the decade with a slight surplus in its trade account. Having maintained its real exchange rate nearly unchanged since 1985, Chile's trade account remains nearly in balance

18. Venezuela's oil export volume in 1990 was unusually high owing to increased sales during the Iraq-Kuwait conflict.

throughout the simulation period. Argentina starts the decade with its trade account in substantial surplus, reflecting its more than 30 percent real exchange rate depreciation of 1989. However, with its real exchange rate having appreciated substantially during 1990, Argentina's trade surplus declines to near balance in 1991 and 1992 and then remains in slight surplus throughout the decade. It should be noted that the baseline assumption that Argentina maintains its real exchange rate at its 1989-1990 average implies a 30 percent real depreciation of the Argentinian austral from its 1990 level and a real exchange rate level some 6 percent below its 1986-1990 average.

An analysis of the sensitivity of the baseline simulation results to changes in the underlying assumptions, using the framework of equation (13), is presented in the appendix, Tables A10-A41. The paths of the debt-export ratios resulting from alternatives to the baseline assumptions are summarized in Table 4. Several experiments are conducted. They are: (1) a "hard work" scenario in which real non-oil exports are boosted by a sustained 10 percent real depreciation of the developing countries' real exchange rates; (2) a "good luck" scenario in which half of the private capital that moved abroad during the 1974-1990 period flows back to the eight developing countries during the 1990s, and real interest rates on the eight countries' international debt are 200 basis points lower than they are in the baseline case; (3) a "high growth" scenario in which industrial country real GNP growth is set at 3-1/2 percent rather than the 2-1/2 percent rate specified in the baseline; and (4) a scenario in which "domestic austerity" results in a growth rate in the developing countries that is 1-1/2 percentage points lower than in the baseline.

Table 4

Debt/Export Ratios

(Change from Baseline)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Argentina										
Hard Work	-22.70	-63.62	-86.59	-100.04	-113.68	-127.61	-141.84	-156.37	-171.18	-186.30
Good Luck	-23.91	-50.69	-68.92	-89.09	-107.86	-125.39	-141.80	-157.17	-171.60	-185.16
High Growth	-13.67	-35.05	-51.97	-68.49	-83.95	-99.19	-114.84	-130.94	-147.50	-164.54
Domestic Austerity	-1.88	-6.20	-11.46	-19.07	-28.60	-40.06	-53.49	-68.89	-86.28	-105.68
Brazil										
Hard Work	-19.28	-53.13	-80.66	-98.86	-117.06	-135.35	-153.74	-172.23	-190.82	-209.51
Good Luck	-10.95	-22.35	-32.48	-42.44	-51.98	-61.19	-70.12	-78.80	-87.29	-95.62
High Growth	-10.39	-26.82	-44.33	-61.49	-78.94	-97.18	-116.69	-137.44	-159.43	-182.63
Domestic Austerity	-2.16	-6.81	-13.46	-22.41	-33.55	-46.86	-62.35	-80.00	-99.80	-121.73
Chile										
Hard Work	-12.30	-32.54	-50.45	-63.72	-77.19	-90.88	-104.82	-119.00	-133.41	-148.07
Good Luck	-3.61	-7.19	-10.53	-13.66	-16.65	-19.54	-22.34	-25.09	-27.80	-30.50
High Growth	-5.50	-13.77	-22.81	-31.25	-39.64	-48.23	-57.25	-66.69	-76.54	-86.81
Domestic Austerity	-1.91	-6.05	-12.27	-20.56	-30.94	-43.44	-58.09	-74.89	-93.87	-115.06
Korea										
Hard Work	-9.96	-26.73	-43.97	-57.81	-70.42	-81.89	-92.31	-101.71	-110.16	-117.70
Good Luck	-1.71	-3.44	-5.20	-6.93	-8.63	-10.31	-11.93	-13.48	-14.95	-16.32
High Growth	-4.83	-13.21	-24.07	-35.43	-46.95	-58.32	-69.31	-79.61	-88.93	-97.02
Domestic Austerity	-2.35	-7.15	-14.16	-22.90	-33.26	-45.06	-58.14	-72.34	-87.50	-103.49
Mexico										
Hard Work	-12.77	-34.23	-54.34	-69.90	-85.95	-102.51	-119.58	-137.13	-155.18	-173.69
Good Luck	-9.89	-19.77	-29.03	-37.82	-46.25	-54.43	-62.43	-70.32	-78.16	-86.02
High Growth	-5.25	-13.39	-22.91	-32.42	-42.47	-53.39	-65.50	-78.88	-93.60	-109.73
Domestic Austerity	-2.19	-6.91	-14.08	-23.76	-36.00	-50.87	-68.42	-88.71	-111.76	-137.62
Peru										
Hard Work	-23.52	-63.56	-97.13	-114.81	-132.60	-150.60	-168.83	-187.28	-205.94	-224.83
Good Luck	-15.63	-31.64	-47.57	-62.37	-76.70	-90.68	-104.37	-117.83	-131.12	-144.28
High Growth	-13.64	-33.93	-56.53	-76.54	-96.15	-116.17	-137.33	-159.63	-183.07	-207.65
Domestic Austerity	-2.19	-6.91	-14.23	-23.82	-35.78	-50.14	-66.90	-86.05	-107.61	-131.58
Philippines										
Hard Work	-15.32	-41.18	-65.10	-81.16	-97.21	-113.31	-129.45	-145.64	-161.87	-178.14
Good Luck	-7.23	-14.63	-22.07	-29.13	-36.14	-43.15	-50.22	-57.37	-64.66	-72.11
High Growth	-6.78	-17.45	-30.03	-41.79	-53.61	-65.88	-78.97	-92.87	-107.56	-123.01
Domestic Austerity	-2.42	-7.60	-15.59	-26.01	-38.96	-54.43	-72.42	-92.89	-115.84	-141.24
Venezuela										
Hard Work	-6.67	-17.51	-28.81	-39.21	-50.24	-61.92	-74.28	-87.33	-101.11	-115.63
Good Luck	-14.06	-27.62	-40.46	-52.45	-63.76	-74.46	-84.59	-94.22	-103.42	-112.23
High Growth	-1.89	-4.77	-8.27	-11.91	-15.83	-20.16	-25.02	-30.49	-36.64	-43.56
Domestic Austerity	-1.53	-4.82	-9.99	-17.11	-26.32	-37.77	-51.58	-67.89	-86.85	-108.59

The debt-export ratios for the "hard work" scenario, in which the real exchange rate is specified to be 10 percent lower than in the baseline projection throughout the simulation period, are shown in Figure 2.

(Figures 3-5 depict the results of the other three alternative scenarios.)

The more competitive real exchange rate results in a substantial increase in the demand for the exports of the eight developing countries: the level of real exports of the eight countries is increased by 10 percent by the end of the decade, and the ratio of the "trade balance" to external debt is raised as well. In the case of Argentina, for example, the combined effect of these factors is to reduce the debt-export ratio by nearly 5 percent per year relative to the baseline.

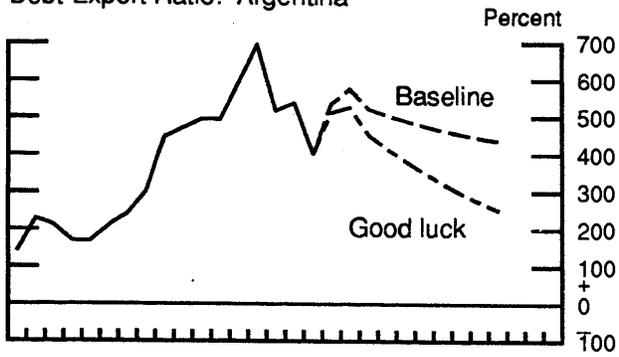
The "hard work" scenario has large effects on the levels of international debt. Venezuela ends the decade as a net creditor. Chile and Korea cut their levels of external debt in half relative to the baseline. The remaining five countries reduce their external debts by 25-40 percent.

In the "good luck" scenario (see Figure 3), private capital reflows and lower real interest rates act to lower the debt-export ratio. Since Chile did not experience any net private capital outflows during the 1974-1990 period, no reflow of private capital into Chile is assumed in the "good luck" case. Thus, a comparison of the results of Chile with those of the other seven countries isolates the real interest rate effect from that of the capital reflows. The direct effect of lower real interest rates is to lower gross interest payments on outstanding debt and, in turn, the accumulation of liabilities to foreigners. A 200 basis point reduction in real interest rates reduces the debt-export ratio by 2 percent per year.

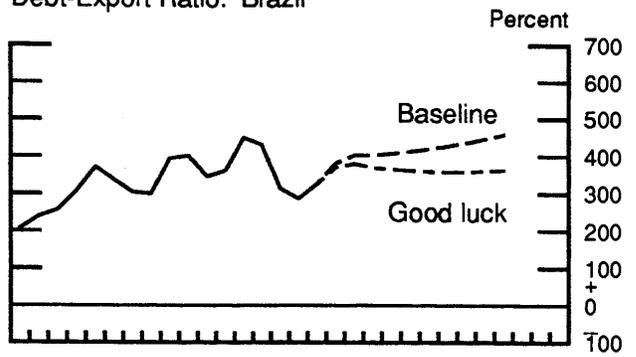
Figure 3

Good Luck

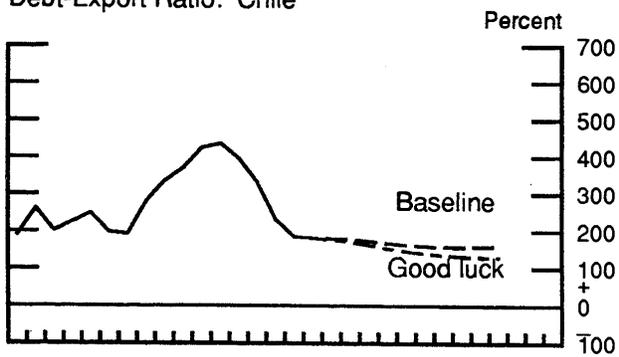
Debt-Export Ratio: Argentina



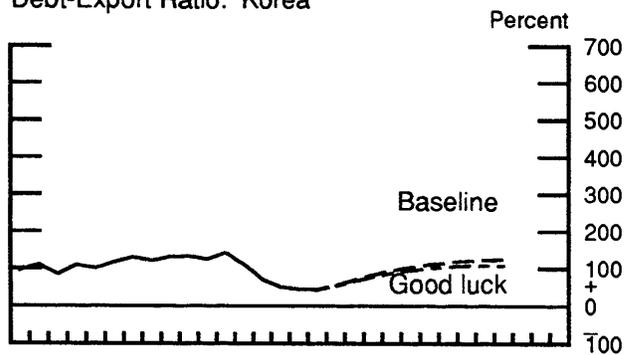
Debt-Export Ratio: Brazil



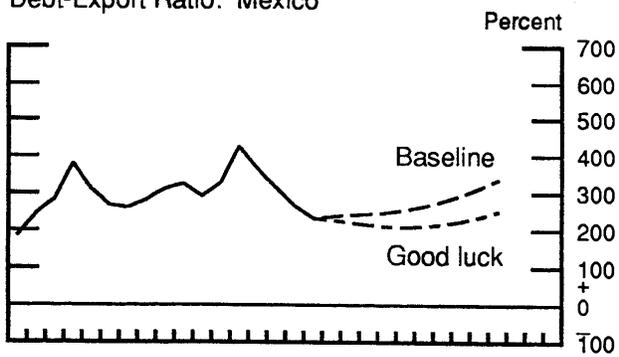
Debt-Export Ratio: Chile



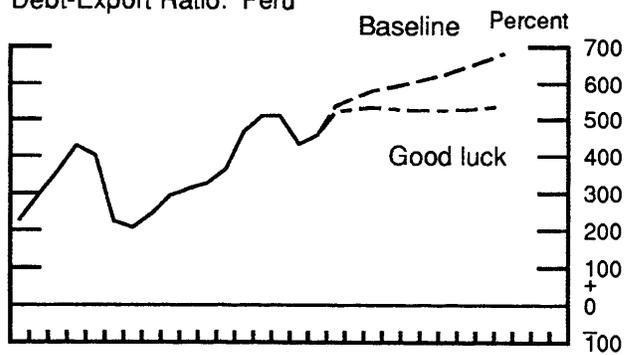
Debt-Export Ratio: Korea



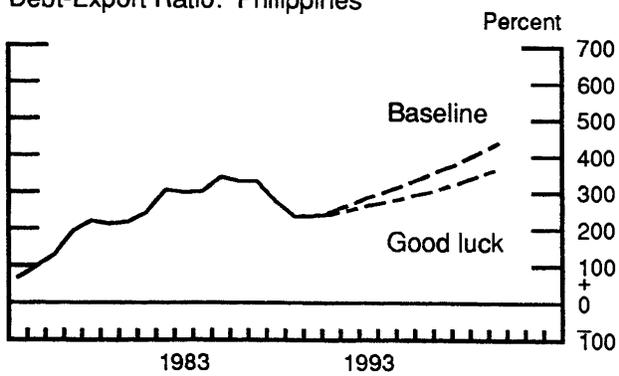
Debt-Export Ratio: Mexico



Debt-Export Ratio: Peru



Debt-Export Ratio: Philippines



Debt-Export Ratio: Venezuela

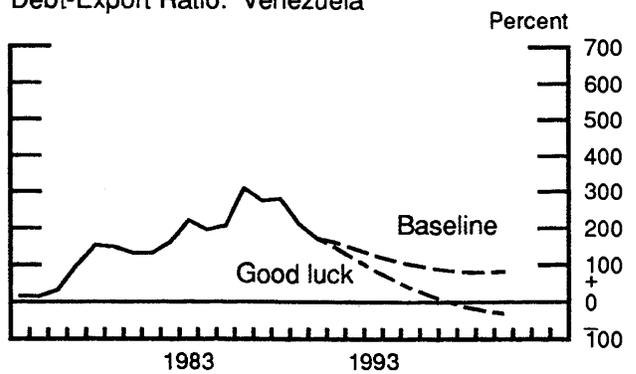
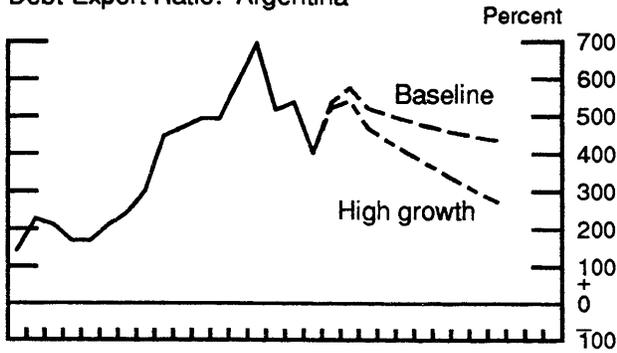


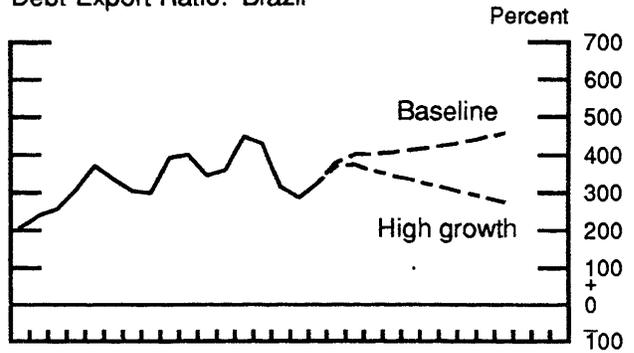
Figure 4

High Growth

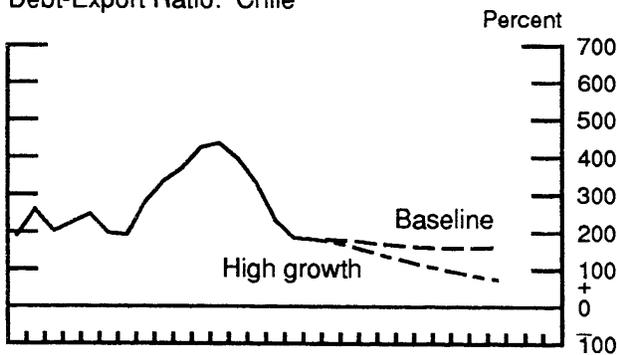
Debt-Export Ratio: Argentina



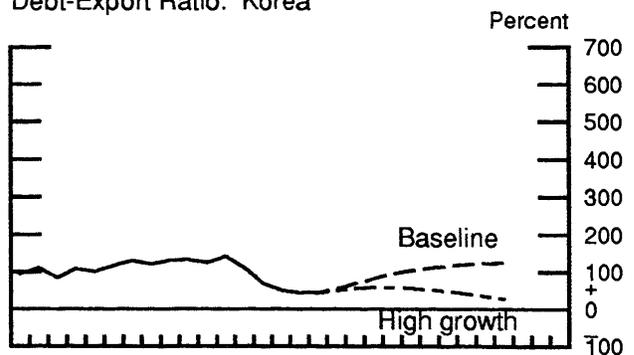
Debt-Export Ratio: Brazil



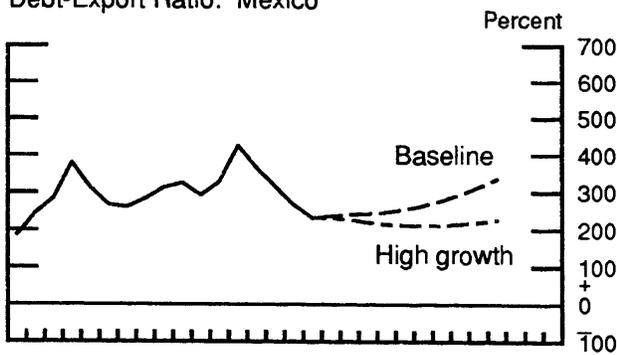
Debt-Export Ratio: Chile



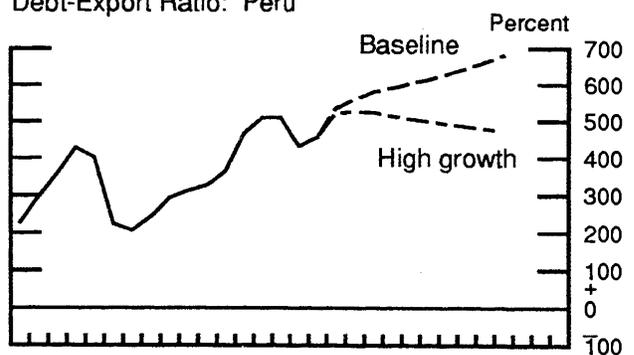
Debt-Export Ratio: Korea



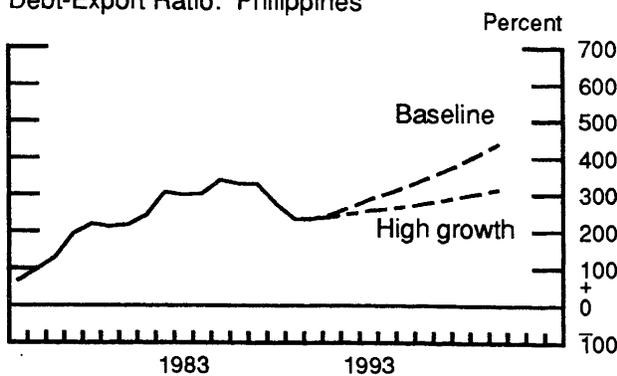
Debt-Export Ratio: Mexico



Debt-Export Ratio: Peru



Debt-Export Ratio: Philippines



Debt-Export Ratio: Venezuela

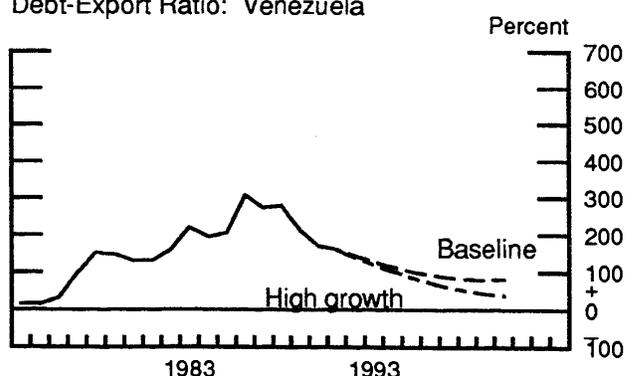
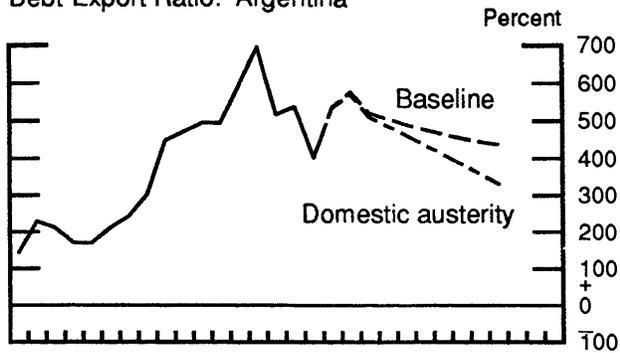


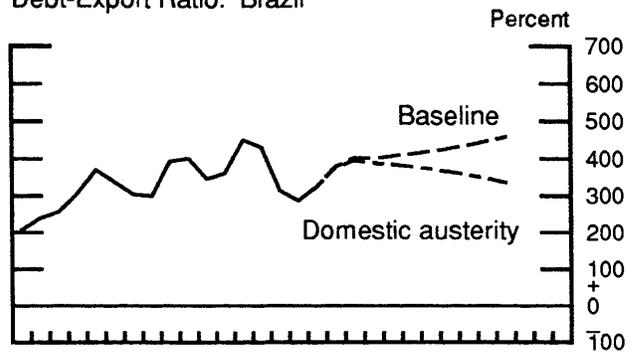
Figure 5

Domestic Austerity

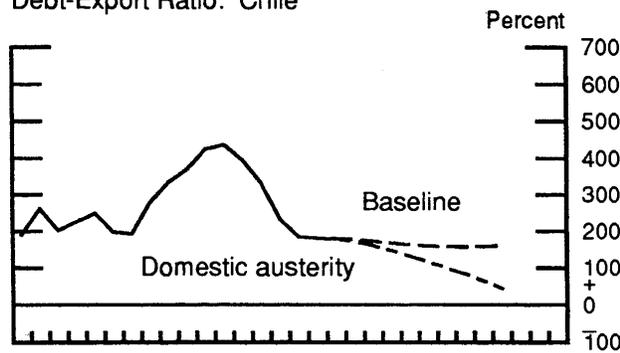
Debt-Export Ratio: Argentina



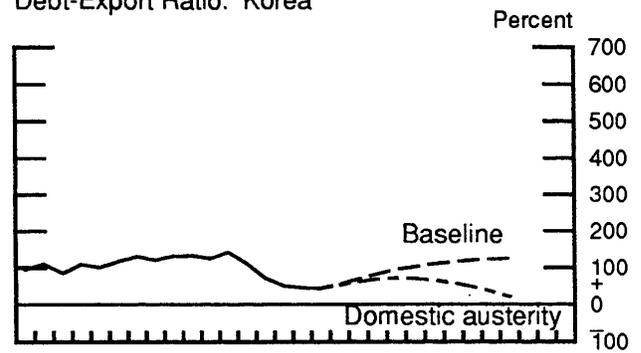
Debt-Export Ratio: Brazil



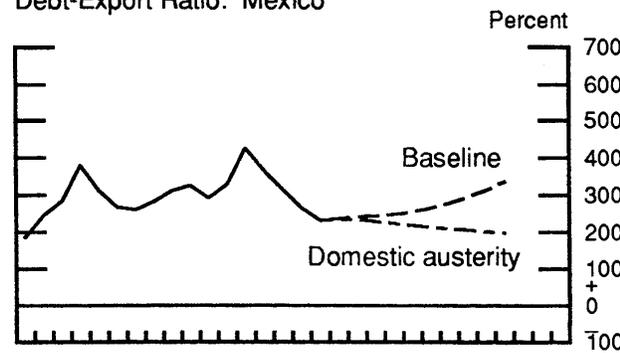
Debt-Export Ratio: Chile



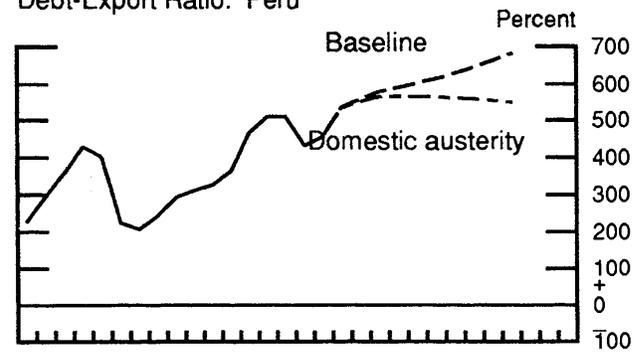
Debt-Export Ratio: Korea



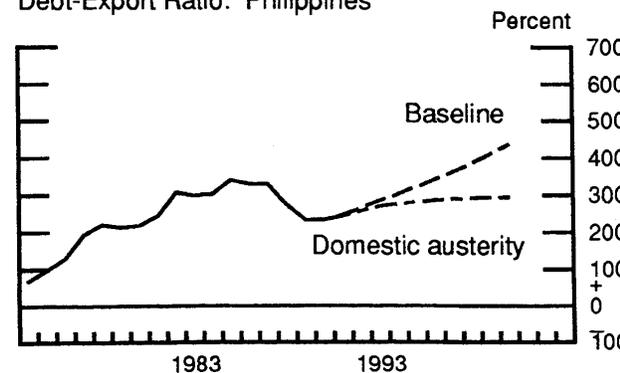
Debt-Export Ratio: Mexico



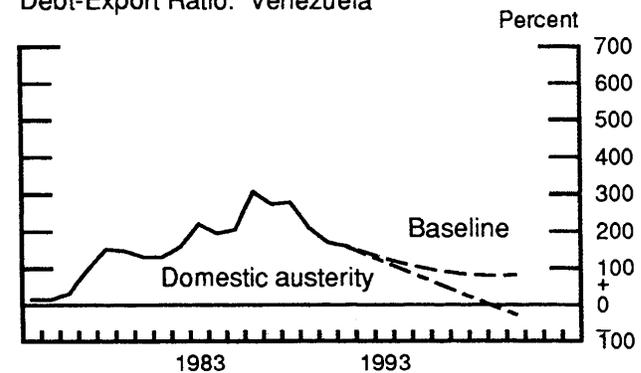
Debt-Export Ratio: Peru



Debt-Export Ratio: Philippines



Debt-Export Ratio: Venezuela



For the other seven countries, the interest rate effect is augmented by the assumed reflow of private capital. In the case of Argentina, for example, the 2 percentage point reduction in the debt-export ratio compared with the baseline projection owing to the lower interest rate is augmented by an additional 2-1/2 percentage point reduction from capital reflows. Since Argentina's "trade account" is in near balance during the 1990s in this scenario, the combined effects of interest rates and capital flows alone reduce its debt-export ratio in the year 2000 from slightly above its baseline level of 400 percent (roughly the 1990 historical value) to 250 percent. The "good luck" scenario has a large effect on the projected levels of international debt in each of the eight countries. By the end of the decade, seven of the eight countries reduce their debt by 15-40 percent with respect to the baseline scenario; and the other, Venezuela, becomes a net creditor.

The "high (industrial country) growth" (see Figure 4) and "domestic austerity" (see Figure 5) scenarios are, by construction, roughly similar in broad outline to the "hard work" scenario depicted in Figure 2 and the "good luck" scenario shown in Figure 3. In fact, the primary mechanism of adjustment in the "high growth" scenario is the same as in the "hard work" case: a substantial rise in exports. On the other hand, in the "domestic austerity" scenario a slower growth in imports induced by the sluggish pace of domestic economic activity in the developing country is the primary means of external adjustment. Differences in how the four alternative specifications affect a particular country reflect such factors as the country's level of external debt, its history of capital flight, the composition of its exports, and its dependence on imports.

It should be noted that although the "high growth" scenario appears to be an attractive alternative, it is not an option under the control of the developing countries' policy authorities; it too could be characterized as a "good luck" scenario. Moreover, an increase of 1 percentage point in industrial country growth from a 2-1/2 percent annual rate to a 3-1/2 percent pace would not appear to be feasible, at least not on a sustained basis for a ten-year period.

On the other hand, the domestic economic growth rate is susceptible to influence by the policy authorities in the developing countries. However, a slowdown in economic activity of the magnitude envisioned in the "domestic austerity" scenario would not appear to be desirable, particularly for an entire decade. Even a more modest slowdown, sustained for ten years, might well be problematic.

There are, of course, other policy options available to the authorities, and various combinations of the four alternative scenarios discussed in the present paper are possible. Nevertheless, of the four illustrative adjustment scenarios examined in this paper, it would seem that the most promising is that of "hard work." "Good luck," although always to be welcomed, is something on which the developing countries cannot rely, although domestic policy choices, particularly with regard to taxation, could encourage the return of flight capital -- one element of the "good luck" scenario -- and in so doing provide a useful complement to, or in some cases maybe even a substitute for, the "hard work" scenario.¹⁹ Debt

19. In a general equilibrium setting, capital flows would influence the exchange rate. Thus one would expect that a return of flight capital would tend to appreciate the developing country's exchange rate, thereby attenuating somewhat any adjustment taking place through the trade balance.

reduction, as in the "Brady Plan," is another potential complement.²⁰ Thus, of the alternatives analyzed in the present paper, changes in the real exchange rate could be viewed as the developing countries' most promising mechanism for effecting external adjustment over the longer run. The policy target implicit in such a strategy would be the international competitiveness of the particular developing country's tradeable goods industries.

Conclusions

In this paper, an analytic and accounting framework is presented for examining the possible evolution of the external positions of eight developing countries during the 1990s. Under fairly conventional baseline specifications, and assuming that no other relevant factors change significantly, projections for the debt-export ratios in these countries are generated using the paper's analytic framework and a simple simulation model. Assuming no changes in the relevant determinants of international creditors' views with regard to these debt-export ratios, one can make some conjectures regarding the possible need for external adjustment in the individual developing countries. This paper's framework can assist in the identification of cases in which external adjustment appears to be warranted, and, at the same time, through the simulation of some alternative scenarios, the analysis can suggest ways and means of effecting the necessary adjustment, including a rough idea of what magnitudes might be involved.

20. See footnote 13.

For the case of Korea, there is a modest upward trend in the debt-export ratio in the baseline case. However, such a trend would appear to have no adverse implications for creditors' views on the need for external adjustment. Korea is included in the sample because in the Dooley, et al (1986) study it was considered a potentially troubled debtor. Going into the 1990s, the country was no longer considered a potential problem. The baseline scenario would seem to indicate that this judgment was not unfounded.

The baseline scenarios for Chile and Venezuela also would appear to present no clear indication of a need for further external adjustment. Chile's debt-export ratio exhibits no trend at all in the baseline case, and Venezuela's ratio moves downward through the simulation period. Because these two countries at the start of the decade were on the verge of returning to normal access to international capital markets, one might conclude that no adjustment measures in addition to those implicit in the baseline assumptions would be necessary. However, it is important to bear in mind that the improved situations, as of the early 1990s, in these countries were fragile, and probably could be easily reversed. Moreover, the real exchange rate assumed in the baseline for Venezuela is quite competitive and a considerable effort might be required to maintain it at that level for the duration of the 1990s. The Venezuelan scenarios are dependent also on the particular oil-price and oil-export assumptions adopted for this study.

Brazil and Mexico -- the two most heavily indebted of developing countries -- present interesting cases. Each exhibits a rising debt-export ratio under the set of baseline assumptions, which is suggestive of a need for further external adjustment during the 1990s. For Brazil, the "hard

work" scenario shown on Figure 2 exemplifies what might be needed in terms of adjustment. Going into the decade, Brazil did not have access to voluntary international credits, which can be viewed as evidence that its debt-export ratio was too high. The 10 percent real exchange rate depreciation depicted in Figure 2 not only arrests the upward trend in the ratio resulting from the baseline assumptions, it also gets the debt-ratio headed substantially downward, that is, in the right direction from the point of view of international creditors.

In contrast to Brazil, Mexico did have access to more-or-less voluntary international credits at the start of the 1990s. However, its access was somewhat tenuous, and, although a case could be made that there was room for rebuilding Mexico's external debt in the near term, the upward trend in the debt-export ratio in the baseline scenario might be viewed as a cause for concern in the medium term. It would appear that further external adjustment in Mexico might well be prudent, or even necessary, at some point later in the decade. It is interesting to note that the "hard work" scenario shown on Figure 2 results in a mildly declining Mexican debt-export ratio, which might actually be what would be needed for Mexico to consolidate its hard-won gains in terms of its external position.

Argentina presents a peculiar case. After traversing a "hump" induced by the gyrations taken by the real exchange rate during the 1989-1990 period, the Argentinian debt-export ratio ends the 1990s up somewhat, but on a declining trend and at a level not much different than what it was at the beginning of the decade. In interpreting these results, there are two factors to keep in mind. First, Argentina at the start of the decade was far from attaining normal access to international capital markets. Therefore much external adjustment appeared to be necessary. Second, the

formula used in this study to obtain the real exchange rate specification for the baseline simulation yields a somewhat misleading number for Argentina because of the wide swing exhibited by the exchange rate between 1989 (when it was extremely competitive) and 1990 (when it was severely overvalued). Thus, a substantial real depreciation of the Argentinian austral from its 1990 average level is already incorporated in the baseline scenario. These two factors taken together would seem to indicate the need for substantial further external adjustment for Argentina during the 1990s because the baseline scenario, even though it reflects a considerable degree of implicit exchange rate adjustment compared with the 1990 starting point, would not appear to yield a sufficiently low debt-export ratio by the end of the decade.

Finally, Peru and the Philippines would seem to require much more external adjustment before they could reasonably expect to restore normal relations with international creditors. In each country, the baseline trend of the debt-export ratio is sharply upward. Moreover, each country began the 1990s with no access to voluntary international lending. As an indicator of just how severe the external adjustment problems facing these two developing countries would appear to be, it should be noted that the 10 percent real depreciation specified in the "hard work" scenario shown in Figure 2 would seem to fall far short of what would be needed to move these countries' debt-export ratios into the acceptable range: under the "hard work" scenario, Peru's ratio essentially stabilizes but does not decline; even with "hard work," the Philippine ratio continues to climb, albeit mildly.

References

- Blanchard, O., (1983) "Debt and the Current Account Deficit in Brazil," in Financial Policies and the World Capital Market: The Problem of Latin American Countries, ed. by P. Aspe Armella, R. Dornbusch, and M. Obstfeld (Chicago: University of Chicago Press), 187-197.
- Bond, M., (1985) "Export Demand and Supply for Groups of Non-oil Developing Countries," International Monetary Fund Staff Papers, 32, 56-77.
- Cooper, R. and J. Sachs, (1985) "Borrowing Abroad: The Debtor's Perspective," in International Debt and the Developing Countries, ed. by G. Smith and J. Cuddington (Washington, D.C.: The World Bank), 21-60.
- Dooley, M., (1988) "Capital Flight: A Response to Differences in Financial Risks," International Monetary Fund Staff Papers, 35, 422-436.
- Dooley, M., W. Helkie, R. Tryon, and J. Underwood, (1986) "An Analysis of External Debt Positions of Eight Developing Countries Through 1990," Journal of Development Economics, 21, 283-318.
- Dornbusch, R., (1985) "Policy Performance Links between LDC Debtors and Industrial Nations," Brookings Papers on Economic Activity, 2, 303-366.
- Gordon, D. and R. Levine, (1989) "The 'Problem' of Capital Flight - A Cautionary Note," The World Economy, 12, 237-252.
- Howard, D., (1989a) "The United States as a Heavily Indebted Country," International Finance Discussion Paper #353.
- _____, (1989b) "Implications of the U.S. Current Account Deficit," Journal of Economic Perspectives, 3, 153-165.
- Marquez, J. and C. McNeilly, (1988) "Income and Price Elasticities for Exports of Developing Countries," Review of Economics and Statistics, 70, 306-314.
- O'Connell, S. and S. Zeldes, (1988) "Rational Ponzi Games," International Economic Review, 29, 431-450.
- Sachs, J., (1982) "The Current Account in the Macroeconomic Adjustment Process," Scandinavian Journal of Economics, 84, 147-159.

Appendix

Data definitions and sources

Appendix tables:

Table A1	--	Debt-GDP ratios
Tables A2-A9	--	Historical data and baseline projections
Tables A10-A17	--	"Hard work" alternative scenario
Tables A18-A25	--	"Good luck" alternative scenario
Tables A26-A33	--	"High growth" alternative scenario
Tables A34-A41	--	"Domestic austerity" alternative scenario

Data Definitions and Sources

Gross external debt equals total long- and short-term debt. Source: Estimates based on data from the Bank for International Settlements (BIS), the World Bank (IBRD), the International Monetary Fund (IMF) and national sources.

Exports are exports of goods and services. Source: International Financial Statistics (IFS).

Real exports are exports of goods and services divided by the export unit value (or wholesale price index) expressed in dollars. Source: IFS.

Current account balance. Source: IFS.

Gross interest payments. Source: Estimates based on BIS, IMF, and national sources.

The "trade balance" equals the current account balance less gross interest payments.

Net service and other current account payments equal the "trade balance" less the merchandise trade balance. Source: IFS.

External reserve assets equal total international reserves less gold plus commercial bank assets. Source: IFS.

Net direct investment capital inflows. Source: IFS.

Industrial country GNP is the trade-weighted average GNP of the G-10 industrial countries. Source: National sources.

Industrial country CPI is the trade-weighted average CPI expressed in dollars for the G-10 industrial countries. Source: National sources.

U.S. GNP deflator. Source: Bureau of Economic Analysis, U.S. Department of Commerce.

LIBOR is the six-month interbank offer rate on dollar deposits in London. Source: IFS.

Developing country GDP. Source: IFS.

Developing country exchange rate. Source: IFS.

Developing country CPI. Source: IFS.

Table A1

Debt-GDP Ratios (Percent)

	<u>Argentina</u>	<u>Brazil</u>	<u>Chile</u>	<u>Korea</u>	<u>Mexico</u>	<u>Peru</u>	<u>Philippines</u>	<u>Venezuela</u>
1974	13	19	41	27	17	37	16	7
1975	21	19	66	31	18	37	20	5
1976	17	19	50	28	23	47	24	10
1977	22	24	44	38	38	73	39	30
1978	21	26	48	34	35	87	45	42
1979	20	27	45	35	32	60	45	50
1980	18	29	44	47	31	48	49	49
1981	29	30	48	47	33	41	54	48
1982	77	32	71	50	52	50	61	47
1983	67	48	91	49	65	63	70	57
1984	65	50	103	47	55	57	75	64
1985	77	47	127	51	55	83	81	59
1986	66	43	126	45	78	63	92	57
1987	72	42	113	31	81	44	87	75
1988	65	35	89	21	56	55	75	59
1989	107	26	70	16	47	38	65	77
1990	48	23	65	15	41	44	65	73

Table A2

Baseline

Equation (13): Argentina

(Percent)

	Debt/ Export Ratio	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1974	144.25	-15.57	8.48	-0.25	1.84	-3.97	27.13	9.00	-1.01	0.16	8.70	4.30
1975	228.67	58.52	13.15	-11.49	-2.07	-0.88	-29.26	9.82	7.53	0.00	-12.13	16.13
1976	211.04	-7.71	13.20	15.48	-0.18	0.16	56.59	6.30	-16.46	0.00	14.00	11.47
1977	169.19	-19.83	10.94	17.05	-0.38	-1.33	-14.33	6.75	67.67	1.46	16.10	18.04
1978	169.73	0.32	18.94	16.40	1.87	-2.88	26.01	7.33	-7.71	2.39	22.00	1.36
1979	211.28	24.48	22.59	33.07	3.31	-3.32	50.63	8.84	-15.99	1.99	4.54	1.17
1980	242.82	14.93	15.43	-4.62	4.95	-3.65	25.76	9.08	-10.17	3.76	-12.52	0.57
1981	302.00	24.37	34.12	-16.90	7.13	-2.56	-12.07	9.59	19.85	3.47	-3.09	1.17
1982	447.99	48.34	19.56	-2.86	7.08	0.22	-39.59	6.52	36.79	0.72	7.12	22.87
1983	470.12	4.94	1.86	-1.99	6.10	2.47	19.93	3.84	-16.54	0.42	6.80	3.26
1984	493.52	4.98	1.40	0.28	7.55	0.77	-3.58	3.74	5.25	0.58	6.62	0.11
1985	493.25	-0.06	0.38	3.73	5.67	1.85	-11.00	2.97	17.12	1.88	8.55	1.88
1986	593.30	20.29	-0.43	-1.10	4.25	1.58	4.62	2.60	-18.18	1.13	2.81	3.76
1987	695.08	17.15	4.90	-1.62	4.17	0.60	-2.13	3.14	-2.85	-0.04	-0.16	0.80
1988	516.82	-25.65	3.16	-2.92	4.80	-0.12	25.35	3.33	7.81	1.96	5.32	7.03
1989	537.71	4.04	12.56	-2.75	5.19	0.95	-26.98	4.08	45.17	1.75	7.98	11.93
1990	402.52	-25.14	-6.58	5.92	4.28	1.53	96.95	4.07	-36.59	3.14	12.48	41.62
1991	536.08	33.18	0.00	0.00	5.00	1.24	2.00	3.00	-23.35	2.54	2.45	7.59
1992	576.55	7.55	0.00	0.00	5.00	1.24	2.56	3.00	-3.89	2.44	0.67	0.09
1993	521.26	-9.59	0.00	0.00	5.00	1.24	2.94	3.00	12.34	2.30	2.28	1.03
1994	505.45	-3.03	0.00	0.00	5.00	1.24	3.00	3.00	4.91	2.20	2.15	-0.00
1995	490.54	-2.95	0.00	0.00	5.00	1.24	3.00	3.00	5.05	2.10	2.04	-0.01
1996	477.04	-2.75	0.00	0.00	5.00	1.24	3.00	3.00	5.06	2.00	1.91	-0.02
1997	465.00	-2.52	0.00	0.00	5.00	1.24	3.00	3.00	5.06	1.90	1.77	-0.03
1998	454.38	-2.28	0.00	0.00	5.00	1.24	3.00	3.00	5.06	1.80	1.61	-0.05
1999	445.17	-2.03	0.00	0.00	5.00	1.24	3.00	3.00	5.06	1.71	1.43	-0.06
2000	437.33	-1.76	0.00	0.00	5.00	1.24	3.00	3.00	5.06	1.61	1.25	-0.08

Table A3

Baseline

Equation (13): Brazil

(Percent)

	Debt/ Export Ratio	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1974	207.02	12.93	8.40	-6.81	1.84	-0.22	25.95	9.00	5.73	9.83	-48.01	-5.79
1975	239.46	15.67	0.26	-7.57	-2.07	1.85	-0.00	9.82	6.06	6.13	-26.54	-0.97
1976	257.02	7.33	-11.50	11.57	-0.18	2.67	15.39	6.30	-1.62	5.76	-18.77	-0.76
1977	306.44	19.23	28.39	2.56	-0.38	2.12	21.95	6.75	-1.82	5.82	-9.14	-3.40
1978	370.63	20.95	4.07	13.20	1.87	-1.12	-7.92	7.33	16.48	4.55	-9.09	-0.39
1979	336.71	-9.15	3.22	-5.75	3.31	-2.19	9.73	8.84	13.20	4.14	-9.59	0.90
1980	304.20	-9.66	4.06	-5.82	4.95	-1.72	5.97	9.08	22.04	2.55	-9.11	1.24
1981	299.38	-1.58	-1.51	2.03	7.13	-2.16	-5.87	9.59	22.89	3.27	-2.32	1.31
1982	392.87	31.23	0.60	-3.31	7.08	1.97	-6.07	6.52	-7.20	3.14	-4.66	3.58
1983	400.58	1.96	-0.45	0.27	6.10	1.20	-5.46	3.84	9.70	1.49	3.60	0.34
1984	345.33	-13.79	0.92	7.70	7.55	0.45	2.02	3.74	21.63	1.60	11.61	2.71
1985	360.07	4.27	3.27	-1.14	5.67	2.00	-5.66	2.97	2.86	1.21	10.23	0.14
1986	449.85	24.93	5.49	-3.23	4.25	2.73	-0.10	2.60	-14.17	0.17	4.46	3.46
1987	430.11	-4.39	8.40	1.54	4.17	0.92	-0.20	3.14	14.55	0.96	6.88	0.60
1988	314.09	-26.97	-2.32	1.54	4.80	0.45	0.30	3.33	27.78	2.26	11.87	7.44
1989	286.74	-8.71	-4.53	2.29	5.19	-0.80	1.00	4.08	4.37	0.64	9.15	0.22
1990	324.77	13.26	3.52	0.43	4.28	0.45	2.97	4.07	-9.27	0.18	6.68	1.06
1991	379.01	16.70	0.00	0.00	5.00	-0.17	2.00	3.00	-9.77	0.40	-0.06	1.44
1992	401.17	5.85	0.00	0.00	5.00	-0.17	2.56	3.00	0.62	0.37	-1.86	-0.28
1993	401.22	0.01	0.00	0.00	5.00	-0.17	2.94	3.00	6.02	0.34	-1.74	-0.25
1994	406.50	1.32	0.00	0.00	5.00	-0.17	3.00	3.00	4.91	0.31	-2.03	-0.32
1995	412.40	1.45	0.00	0.00	5.00	-0.17	3.00	3.00	5.05	0.28	-2.29	-0.33
1996	419.35	1.68	0.00	0.00	5.00	-0.17	3.00	3.00	5.06	0.26	-2.52	-0.35
1997	427.40	1.92	0.00	0.00	5.00	-0.17	3.00	3.00	5.06	0.24	-2.75	-0.36
1998	436.55	2.14	0.00	0.00	5.00	-0.17	3.00	3.00	5.06	0.21	-2.96	-0.37
1999	446.81	2.35	0.00	0.00	5.00	-0.17	3.00	3.00	5.06	0.19	-3.16	-0.39
2000	458.18	2.54	0.00	0.00	5.00	-0.17	3.00	3.00	5.06	0.17	-3.35	-0.40

Table A4
Baseline
Equation (13): Chile
(Percent)

	Debt/ Export Ratio	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1974	191.33	-14.95	12.15	-1.48	1.84	-2.36	49.81	9.00	7.02	-16.88	-0.76	5.09
1975	260.59	36.20	-3.39	0.28	-2.07	-1.75	-1.37	9.82	-20.60	1.11	-5.16	7.30
1976	202.06	-22.46	-2.71	7.86	-0.18	0.80	20.77	6.30	9.01	-0.02	9.00	4.24
1977	225.11	11.40	9.45	0.04	-0.38	0.96	12.81	6.75	-4.19	0.33	-5.88	-2.34
1978	247.99	10.17	-1.93	11.91	1.87	-0.86	-2.77	7.33	17.10	3.00	-11.75	-2.58
1979	198.07	-20.13	0.55	13.56	3.31	-1.88	26.95	8.84	25.28	3.15	-7.22	3.65
1980	192.80	-2.66	-5.69	15.26	4.95	-1.77	33.25	9.08	-0.76	1.81	-9.92	-0.09
1981	279.67	45.05	-9.87	3.50	7.13	-0.67	9.10	9.59	-18.01	2.99	-23.96	5.50
1982	335.68	20.03	6.37	-8.41	7.08	1.04	-17.90	6.52	11.82	2.45	-0.73	3.06
1983	370.54	10.39	-2.67	0.44	6.10	0.55	-6.03	3.84	-0.25	0.76	3.46	0.08
1984	424.96	14.69	-2.34	0.98	7.55	0.61	-0.64	3.74	-3.42	0.37	-0.49	-0.03
1985	436.61	2.74	-2.13	-0.82	5.67	1.05	-12.19	2.97	14.70	0.31	2.64	1.46
1986	395.32	-9.46	-1.41	0.16	4.25	2.40	-0.03	2.60	14.60	0.46	3.26	0.97
1987	331.24	-16.21	-1.74	0.07	4.17	0.54	4.83	3.14	15.78	0.46	3.43	2.11
1988	231.69	-30.05	-12.52	3.30	4.80	0.38	-5.08	3.33	37.15	0.51	6.91	10.13
1989	185.08	-20.12	-8.52	-0.91	5.19	0.99	5.58	4.08	10.47	1.32	5.25	1.66
1990	181.61	-1.88	-9.49	13.31	4.28	1.66	6.64	4.07	0.29	3.22	4.59	-0.98
1991	180.16	-0.80	0.00	0.00	5.00	1.33	2.00	3.00	-1.30	2.22	6.19	-1.01
1992	178.45	-0.95	0.00	0.00	5.00	1.33	2.56	3.00	1.33	2.22	3.12	-1.04
1993	173.12	-2.99	0.00	0.00	5.00	1.33	2.94	3.00	4.18	2.16	2.11	-0.92
1994	167.80	-3.07	0.00	0.00	5.00	1.33	3.00	3.00	4.91	2.08	1.54	-0.87
1995	163.52	-2.55	0.00	0.00	5.00	1.33	3.00	3.00	5.05	1.98	0.98	-0.87
1996	160.44	-1.88	0.00	0.00	5.00	1.33	3.00	3.00	5.06	1.88	0.39	-0.88
1997	158.59	-1.15	0.00	0.00	5.00	1.33	3.00	3.00	5.06	1.77	-0.24	-0.89
1998	157.97	-0.38	0.00	0.00	5.00	1.33	3.00	3.00	5.06	1.65	-0.89	-0.89
1999	158.57	1.15	0.00	0.00	5.00	1.33	3.00	3.00	5.06	1.54	-1.56	-0.90
2000	160.40	1.15	0.00	0.00	5.00	1.33	3.00	3.00	5.06	1.41	-2.21	-0.91

Table A5
Baseline

Equation (13): Korea
(Percent)

	Debt/ Export Ratio	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1974	95.27	1.01	-17.52	-0.99	1.84	-2.51	26.33	9.00	2.48	2.69	-49.31	-6.62
1975	110.49	15.97	-18.22	9.69	-2.07	1.11	-7.05	9.82	18.23	1.04	-32.57	-4.71
1976	84.59	-23.44	-2.24	21.70	-0.18	1.96	11.77	6.30	43.82	1.15	-2.02	3.75
1977	109.39	29.31	65.01	16.80	-0.38	1.76	9.38	6.75	26.38	0.91	5.49	-16.47
1978	100.81	-7.84	9.57	4.25	1.87	-2.69	10.69	7.33	18.60	0.43	-4.37	-2.83
1979	117.26	16.32	4.02	4.45	3.31	-4.32	19.55	8.84	-4.80	0.09	-18.71	-3.85
1980	130.67	11.44	1.79	3.77	4.95	-2.64	4.39	9.08	10.74	-0.03	-13.81	-4.22
1981	121.02	-7.38	-4.76	1.07	7.13	-4.99	3.15	9.59	17.09	0.20	-5.72	-0.70
1982	131.56	8.70	4.48	0.29	7.08	-2.68	-3.33	6.52	7.57	-0.23	1.38	-1.61
1983	132.99	1.09	4.06	-0.21	6.10	-1.39	-3.83	3.84	11.42	-0.15	2.65	-1.23
1984	125.12	-5.91	-0.84	1.83	7.55	-1.28	3.49	3.74	7.03	0.18	5.27	-0.95
1985	142.40	13.81	10.09	0.23	5.67	1.40	-3.75	2.97	2.21	0.47	6.56	-1.07
1986	111.37	-21.79	8.99	0.62	4.25	1.34	2.10	2.60	24.15	0.69	15.77	3.12
1987	70.79	-36.44	4.72	2.46	4.17	-0.47	10.09	3.14	21.77	0.89	25.31	7.61
1988	50.37	-28.85	-2.34	29.38	4.80	-0.69	13.61	3.33	10.93	1.81	39.36	2.39
1989	44.75	-11.16	1.97	6.22	5.19	-1.39	9.79	4.08	-4.87	1.27	21.33	0.28
1990	43.52	-2.74	-8.99	3.75	4.28	0.10	0.71	4.07	3.77	-0.32	1.05	-0.73
1991	54.45	25.12	0.00	0.00	5.00	-0.65	2.00	3.00	3.90	0.52	-26.58	-2.40
1992	68.65	26.07	0.00	0.00	5.00	-0.65	2.56	3.00	6.78	0.39	-31.73	-3.27
1993	82.81	20.63	0.00	0.00	5.00	-0.65	2.94	3.00	8.39	0.28	-27.97	-3.08
1994	93.97	13.46	0.00	0.00	5.00	-0.65	3.00	3.00	10.22	0.21	-22.00	-2.46
1995	103.16	9.78	0.00	0.00	5.00	-0.65	3.00	3.00	10.36	0.16	-17.86	-1.91
1996	110.56	7.18	0.00	0.00	5.00	-0.65	3.00	3.00	10.38	0.13	-14.84	-1.50
1997	116.31	5.20	0.00	0.00	5.00	-0.65	3.00	3.00	10.38	0.11	-12.53	-1.19
1998	120.50	3.60	0.00	0.00	5.00	-0.65	3.00	3.00	10.38	0.09	-10.67	-0.95
1999	123.24	2.27	0.00	0.00	5.00	-0.65	3.00	3.00	10.38	0.08	-9.11	-0.74
2000	124.60	1.11	0.00	0.00	5.00	-0.65	3.00	3.00	10.38	0.07	-7.77	-0.57

Table A6
Baseline
Equation (13): Mexico
(Percent)

	Debt/ Export Ratio	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of Trade Balance to External Debt (-)	Residual in Equation (13) (+)
1974	186.87	0.50	6.94	0.87	1.84	-0.06	22.27	9.00	7.61	7.53	-22.52	-3.21
1975	245.32	31.28	1.03	1.22	-2.07	4.35	10.65	9.82	-9.76	5.12	-23.04	-0.09
1976	284.60	16.01	14.84	-1.25	-0.18	4.59	-0.87	6.30	14.27	4.03	-12.14	-3.00
1977	379.94	33.50	42.16	3.71	-0.38	3.24	-3.35	6.75	17.96	2.71	-0.26	-4.92
1978	312.50	-17.75	5.91	0.99	1.87	-0.89	14.60	7.33	21.39	2.64	-2.48	3.20
1979	267.45	-14.42	6.85	1.47	3.31	-1.76	18.17	8.84	18.55	3.73	-5.53	1.78
1980	260.98	-2.42	10.53	3.50	4.95	0.34	23.73	9.08	11.08	5.04	-11.41	-2.39
1981	282.96	8.42	11.84	1.36	7.13	-1.95	16.53	9.59	7.84	4.94	-13.74	-3.98
1982	312.51	10.44	7.59	-3.57	7.08	2.00	-32.15	6.52	46.75	2.12	7.15	14.69
1983	325.43	4.14	10.51	4.45	6.10	1.81	-2.63	3.84	6.65	0.54	17.68	-0.34
1984	292.80	-10.03	3.54	3.32	7.55	1.30	21.88	3.74	-7.05	0.42	16.66	2.43
1985	327.88	11.98	6.16	-2.28	5.67	2.07	0.33	2.97	-9.06	0.52	10.85	0.02
1986	425.93	29.90	2.94	0.67	4.25	1.76	-20.90	2.60	1.35	1.20	6.40	5.73
1987	366.08	-14.05	6.67	7.55	4.17	0.73	4.60	3.14	20.69	1.78	11.32	2.09
1988	314.80	-14.01	-2.80	-6.79	4.80	-0.23	26.00	3.33	-15.04	0.58	5.14	4.38
1989	265.92	-15.53	-7.47	1.10	5.19	-0.04	7.18	4.08	4.85	2.63	3.24	-0.49
1990	232.15	-12.70	-6.05	4.17	4.28	-0.09	7.95	4.07	7.11	2.66	-0.86	-2.21
1991	236.63	1.93	0.00	0.00	5.00	-0.07	2.00	3.00	-1.58	2.69	-0.68	-3.57
1992	240.86	1.79	0.00	0.00	5.00	-0.07	2.56	3.00	1.05	2.63	-3.70	-3.61
1993	243.17	0.96	0.00	0.00	5.00	-0.07	2.94	3.00	3.19	2.49	-5.14	-3.49
1994	247.45	1.76	0.00	0.00	5.00	-0.07	3.00	3.00	3.73	2.33	-6.22	-3.34
1995	254.61	2.89	0.00	0.00	5.00	-0.07	3.00	3.00	3.88	2.14	-7.16	-3.18
1996	264.82	4.01	0.00	0.00	5.00	-0.07	3.00	3.00	3.94	1.94	-7.96	-3.00
1997	278.08	5.01	0.00	0.00	5.00	-0.07	3.00	3.00	3.99	1.75	-8.62	-2.81
1998	294.37	5.86	0.00	0.00	5.00	-0.07	3.00	3.00	4.03	1.55	-9.12	-2.61
1999	313.64	6.55	0.00	0.00	5.00	-0.07	3.00	3.00	4.07	1.37	-9.48	-2.42
2000	335.86	7.09	0.00	0.00	5.00	-0.07	3.00	3.00	4.12	1.20	-9.70	-2.24

Table A7
Baseline
Equation (13): Peru
(Percent)

	Debt/ Export Ratio	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1974	228.72	-2.22	-4.03	17.56	1.84	-2.84	22.45	9.00	12.23	1.81	-16.16	-3.41
1975	296.00	29.41	4.47	-14.33	-2.07	-1.40	-29.89	9.82	30.73	7.35	-30.63	10.48
1976	358.98	21.28	5.89	-2.42	-0.18	1.29	13.76	6.30	-10.46	3.33	-17.12	-0.09
1977	429.11	19.54	31.39	0.86	-0.38	0.55	9.23	6.75	11.84	0.86	-8.62	-6.33
1978	401.50	-6.43	2.29	1.34	1.87	-2.74	-1.48	7.33	14.38	0.27	3.77	0.42
1979	224.48	-44.09	-12.11	16.24	3.31	-1.50	47.51	8.84	16.25	0.73	16.92	22.54
1980	206.96	7.80	3.90	2.83	4.95	-2.08	32.44	9.08	-11.94	0.29	9.28	3.59
1981	243.91	17.85	-7.08	-5.99	7.13	-4.49	-19.99	9.59	9.23	1.25	-6.66	2.53
1982	293.85	20.47	4.52	-0.29	7.08	-2.50	-15.34	6.52	17.09	0.47	-6.15	1.21
1983	312.36	6.30	-8.76	-0.48	6.10	0.20	10.77	3.84	-17.14	0.31	1.26	0.61
1984	327.15	4.74	3.38	2.36	7.55	0.24	-11.15	3.74	16.41	-0.74	8.37	0.37
1985	363.83	11.21	9.95	0.94	5.67	1.47	-11.03	2.97	11.01	0.01	10.14	0.34
1986	466.92	28.34	8.23	-2.49	4.25	1.39	-9.10	2.60	-3.02	0.15	-0.36	2.04
1987	509.58	9.14	10.88	-4.43	4.17	0.19	22.11	3.14	-13.40	0.20	-2.79	1.32
1988	508.83	-0.15	-3.30	-0.54	4.80	-0.06	15.86	3.33	-11.92	0.14	1.35	1.05
1989	432.23	-15.06	5.04	2.57	5.19	0.12	11.98	4.08	9.99	0.31	11.25	1.47
1990	456.93	5.72	-4.27	1.22	4.28	0.95	-2.78	4.07	-2.64	0.15	4.80	-1.01
1991	536.12	17.33	0.00	0.00	5.00	0.54	2.00	3.00	-10.24	0.23	-0.35	0.43
1992	559.10	4.29	0.00	0.00	5.00	0.54	2.56	3.00	1.75	0.21	-1.66	-1.39
1993	580.06	3.75	0.00	0.00	5.00	0.54	2.94	3.00	2.72	0.19	-2.43	-1.36
1994	590.56	1.81	0.00	0.00	5.00	0.54	3.00	3.00	4.91	0.18	-2.62	-1.26
1995	601.91	1.92	0.00	0.00	5.00	0.54	3.00	3.00	5.05	0.16	-2.78	-1.19
1996	614.72	2.13	0.00	0.00	5.00	0.54	3.00	3.00	5.06	0.15	-2.93	-1.12
1997	629.07	2.34	0.00	0.00	5.00	0.54	3.00	3.00	5.06	0.13	-3.06	-1.07
1998	644.95	2.52	0.00	0.00	5.00	0.54	3.00	3.00	5.06	0.12	-3.18	-1.01
1999	662.34	2.70	0.00	0.00	5.00	0.54	3.00	3.00	5.06	0.11	-3.29	-0.96
2000	681.24	2.85	0.00	0.00	5.00	0.54	3.00	3.00	5.06	0.10	-3.39	-0.92

Table A8

Baseline

Equation (13): Philippines

(Percent)

	Debt/Export Ratio	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1974	68.05	-16.47	-29.95	39.75	1.84	-0.44	66.02	9.00	-13.46	0.20	-13.85	2.23
1975	97.79	43.71	-4.12	-1.17	-2.07	4.71	-20.39	9.82	12.89	4.04	-39.29	-6.20
1976	129.83	32.76	14.32	-3.94	-0.18	6.56	-12.43	6.30	22.09	4.06	-31.58	-8.16
1977	193.58	49.10	78.48	-4.43	-0.38	2.72	1.44	6.75	23.21	4.80	-13.93	-18.52
1978	219.96	13.63	11.33	8.27	1.87	-3.83	12.10	7.33	3.40	1.23	-11.87	-6.47
1979	212.60	-3.35	1.13	8.24	3.31	-3.35	22.96	8.84	3.62	0.06	-11.32	-3.20
1980	217.56	2.33	5.62	10.00	4.95	-6.69	4.22	9.08	22.67	-0.80	-10.33	-4.87
1981	243.51	11.93	12.67	-3.61	7.13	-8.82	-2.23	9.59	9.76	0.99	-6.86	-3.37
1982	306.11	25.71	6.10	-4.17	7.08	-4.08	-16.89	6.52	12.21	0.08	-8.12	1.53
1983	298.84	-2.38	-8.04	-3.66	6.10	-2.06	4.88	3.84	3.13	0.43	-5.36	-1.74
1984	301.88	1.02	-6.33	0.63	7.55	-1.70	10.37	3.74	-10.68	0.04	2.67	-0.47
1985	338.78	12.22	10.73	0.00	5.67	0.48	-12.20	2.97	12.48	0.05	7.41	0.11
1986	328.67	-2.98	5.67	4.15	4.25	-0.49	-11.20	2.60	22.80	0.47	9.14	1.18
1987	327.46	-0.37	6.37	-0.98	4.17	-0.49	9.91	3.14	-3.31	1.08	3.22	-1.67
1988	273.43	-16.50	-3.28	2.18	4.80	-1.34	10.35	3.33	5.36	3.12	2.91	-0.45
1989	232.98	-14.79	-6.64	2.38	5.19	-1.04	-1.86	4.08	18.52	1.65	0.36	-0.09
1990	233.53	0.24	-2.38	-0.42	4.28	0.30	-2.84	4.07	7.74	1.62	-3.17	-2.26
1991	246.10	5.38	0.00	0.00	5.00	-0.37	2.00	3.00	1.51	1.57	-5.41	-2.58
1992	265.04	7.69	0.00	0.00	5.00	-0.37	2.56	3.00	1.72	1.44	-8.32	-2.53
1993	285.68	7.79	0.00	0.00	5.00	-0.37	2.94	3.00	2.83	1.28	-9.67	-2.46
1994	302.70	5.96	0.00	0.00	5.00	-0.37	3.00	3.00	4.91	1.12	-9.67	-2.31
1995	321.04	6.06	0.00	0.00	5.00	-0.37	3.00	3.00	5.05	0.98	-9.57	-2.12
1996	340.96	6.20	0.00	0.00	5.00	-0.37	3.00	3.00	5.06	0.85	-9.43	-1.94
1997	362.46	6.31	0.00	0.00	5.00	-0.37	3.00	3.00	5.06	0.74	-9.27	-1.78
1998	385.52	6.36	0.00	0.00	5.00	-0.37	3.00	3.00	5.06	0.64	-9.20	-1.64
1999	410.09	6.38	0.00	0.00	5.00	-0.37	3.00	3.00	5.06	0.56	-8.89	-1.52
2000	436.17	6.36	0.00	0.00	5.00	-0.37	3.00	3.00	5.06	0.49	-8.68	-1.41

Table A9
Baseline
Equation (13): Venezuela
(Percent)

	Debt/ Export Ratio	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1974	15.04	-58.22	56.21	219.05	1.84	10.21	17.46	9.00	93.06	-22.63	334.68	68.03
1975	14.86	-1.15	-9.50	136.67	-2.07	3.81	13.47	9.82	-25.70	23.22	141.78	12.89
1976	31.80	113.98	96.73	-19.07	-0.18	27.21	7.00	6.30	-3.91	-59.27	65.73	12.53
1977	97.74	207.33	136.12	-8.30	-0.38	11.81	10.46	6.75	-4.49	-0.09	-69.58	-2.36
1978	152.93	56.45	15.39	-13.22	1.87	0.95	7.27	7.33	-7.56	0.63	-39.64	4.83
1979	147.81	-3.35	39.17	8.65	3.31	2.45	9.35	8.84	37.37	0.53	19.16	0.64
1980	131.79	-10.84	44.37	-2.95	4.95	0.01	19.87	9.08	13.75	0.23	35.48	3.03
1981	130.92	-0.66	18.69	5.15	7.13	-1.00	13.90	9.59	-3.18	0.63	30.77	1.91
1982	159.53	21.85	-6.90	-5.54	7.08	-2.07	8.61	6.52	-24.44	0.79	0.29	8.01
1983	220.29	38.09	27.35	5.72	6.10	2.22	6.36	3.84	-18.97	0.27	26.60	7.13
1984	195.13	-11.42	5.68	2.83	7.55	-1.28	-28.07	3.74	51.20	-0.01	22.63	15.82
1985	205.56	5.35	2.06	3.15	5.67	2.87	7.80	2.97	-15.45	0.15	21.71	2.14
1986	307.81	49.75	2.04	-11.62	4.25	2.87	8.56	2.60	-39.69	-1.26	3.71	20.92
1987	273.82	-11.04	-2.08	-0.14	4.17	1.00	-18.86	3.14	41.09	-0.05	4.55	9.61
1988	279.21	1.97	-8.45	-7.40	4.80	0.94	19.26	3.33	-17.31	0.06	-6.98	3.78
1989	211.50	-24.25	-1.27	1.96	5.19	0.88	-17.41	4.08	49.36	0.22	17.71	14.78
1990	171.27	-19.02	14.56	13.57	4.28	0.40	-5.93	4.07	37.69	0.60	31.98	8.45
1991	161.23	-5.86	0.00	0.00	5.00	0.64	2.00	3.00	-3.98	0.40	16.61	0.53
1992	144.00	-10.69	0.00	0.00	5.00	0.64	2.56	3.00	1.60	0.44	15.76	1.03
1993	128.35	-10.86	0.00	0.00	5.00	0.64	2.94	3.00	1.96	0.47	15.28	1.15
1994	114.14	-11.08	0.00	0.00	5.00	0.64	3.00	3.00	2.49	0.50	14.98	1.26
1995	102.18	-10.48	0.00	0.00	5.00	0.64	3.00	3.00	2.57	0.53	14.29	1.28
1996	92.66	-9.32	0.00	0.00	5.00	0.64	3.00	3.00	2.62	0.56	13.03	1.26
1997	85.72	-7.49	0.00	0.00	5.00	0.64	3.00	3.00	2.66	0.59	11.07	1.19
1998	81.50	-4.92	0.00	0.00	5.00	0.64	3.00	3.00	2.70	0.60	8.32	1.06
1999	80.15	-1.66	0.00	0.00	5.00	0.64	3.00	3.00	2.73	0.60	4.83	0.87
2000	81.80	2.06	0.00	0.00	5.00	0.64	3.00	3.00	2.77	0.58	0.85	0.62

Table A10
Hard Work

Equation (13): Argentina
(Percentage point difference from Baseline)

	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1991	-5.64	0.00	0.00	0.00	0.00	0.00	0.00	2.25	0.00	1.48	-1.91
1992	-7.64	0.00	0.00	0.00	0.00	0.00	0.00	4.67	0.04	2.71	-0.23
1993	-5.67	0.00	0.00	0.00	0.00	0.00	0.00	3.30	0.10	3.57	1.30
1994	-3.70	0.00	0.00	0.00	0.00	0.00	0.00	-0.00	0.17	3.81	0.29
1995	-4.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	4.16	0.32
1996	-4.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	4.54	0.36
1997	-4.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44	4.95	0.39
1998	-5.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	5.39	0.43
1999	-6.04	0.00	0.00	0.00	0.00	0.00	0.00	-0.00	0.64	5.87	0.47
2000	-6.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.74	6.38	0.51

Table A11
Hard Work

Equation (13): Brazil
(Percentage point difference from Baseline)

	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1991	-5.94	0.00	0.00	0.00	0.00	0.00	0.00	2.65	0.00	2.47	-0.82
1992	-9.10	0.00	0.00	0.00	0.00	0.00	0.00	4.89	0.01	4.53	0.33
1993	-7.91	0.00	0.00	0.00	0.00	0.00	0.00	3.12	0.02	5.65	0.88
1994	-5.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	5.73	0.42
1995	-5.45	0.00	0.00	0.00	0.00	0.00	0.00	-0.00	0.05	5.83	0.44
1996	-5.52	0.00	0.00	0.00	0.00	0.00	0.00	-0.00	0.07	5.90	0.44
1997	-5.56	0.00	0.00	0.00	0.00	0.00	0.00	-0.00	0.08	5.92	0.44
1998	-5.55	0.00	0.00	0.00	0.00	0.00	0.00	-0.00	0.09	5.90	0.44
1999	-5.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	5.84	0.43
2000	-5.41	0.00	0.00	0.00	0.00	0.00	0.00	-0.00	0.10	5.73	0.42

Table A12
Hard Work

Equation (13): Chile
(Percentage point difference from Baseline)

	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1991	-6.77	0.00	0.00	0.00	0.00	0.00	0.00	2.90	0.00	4.08	0.21
1992	-12.13	0.00	0.00	0.00	0.00	0.00	0.00	4.92	0.09	8.08	0.97
1993	-12.94	0.00	0.00	0.00	0.00	0.00	0.00	3.06	0.29	10.81	1.22
1994	-12.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	12.24	0.71
1995	-14.50	0.00	0.00	0.00	0.00	0.00	0.00	-0.00	0.89	14.38	0.77
1996	-17.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.32	17.04	0.82
1997	-21.54	0.00	0.00	0.00	0.00	0.00	0.00	-0.00	1.90	20.51	0.88
1998	-27.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.74	25.34	0.95
1999	-35.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.06	32.80	1.04
2000	-52.13	0.00	0.00	0.00	0.00	0.00	0.00	-0.00	6.60	46.72	1.19

Table A13
Hard Work

Equation (13): Korea
(Percentage point difference from Baseline)

	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1991	-22.89	0.00	0.00	0.00	0.00	0.00	0.00	3.05	0.00	21.08	1.24
1992	-31.85	0.00	0.00	0.00	0.00	0.00	0.00	5.19	0.07	29.68	3.09
1993	-27.96	0.00	0.00	0.00	0.00	0.00	0.00	3.18	0.15	27.79	3.15
1994	-20.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	22.65	2.45
1995	-19.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	21.30	2.29
1996	-19.61	0.00	0.00	0.00	0.00	0.00	0.00	-0.00	0.24	21.67	2.31
1997	-21.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	23.72	2.52
1998	-25.31	0.00	0.00	0.00	0.00	0.00	0.00	-0.00	0.30	28.00	2.99
1999	-32.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	36.22	3.90
2000	-48.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49	53.69	5.85

Table A14

Hard Work

Equation (13): Mexico

(Percentage point difference from Baseline)

	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1991	-5.50	0.00	0.00	0.00	0.00	0.00	0.00	2.20	0.00	3.36	0.06
1992	-9.48	0.00	0.00	0.00	0.00	0.00	0.00	3.77	0.09	6.05	0.43
1993	-9.57	0.00	0.00	0.00	0.00	0.00	0.00	2.44	0.25	7.30	0.41
1994	-7.74	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.43	7.16	-0.05
1995	-7.90	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.60	6.95	-0.25
1996	-7.77	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.75	6.47	-0.46
1997	-7.35	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.87	5.75	-0.64
1998	-6.66	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.95	4.84	-0.79
1999	-5.77	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.98	3.80	-0.90
2000	-4.74	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.98	2.73	-0.96

Table A15

Hard Work

Equation (13): Peru

(Percentage point difference from Baseline)

	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1991	-5.15	0.00	0.00	0.00	0.00	0.00	0.00	2.64	0.00	1.69	-0.82
1992	-7.61	0.00	0.00	0.00	0.00	0.00	0.00	4.94	0.00	3.02	0.36
1993	-6.29	0.00	0.00	0.00	0.00	0.00	0.00	3.02	0.01	3.57	0.30
1994	-3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	3.47	0.17
1995	-3.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	3.42	0.14
1996	-3.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	3.35	0.12
1997	-3.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	3.27	0.10
1998	-3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	3.16	0.09
1999	-2.98	0.00	0.00	0.00	0.00	0.00	0.00	-0.00	0.03	3.03	0.07
2000	-2.85	0.00	0.00	0.00	0.00	0.00	0.00	-0.00	0.03	2.89	0.07

Table A16

Hard Work

Equation (13): Philippines

(Percentage point difference from Baseline)

	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1991	-6.56	0.00	0.00	0.00	0.00	0.00	0.00	2.98	0.00	3.78	0.21
1992	-10.70	0.00	0.00	0.00	0.00	0.00	0.00	4.94	0.05	6.12	0.41
1993	-9.25	0.00	0.00	0.00	0.00	0.00	0.00	3.02	0.12	6.42	0.31
1994	-5.52	0.00	0.00	0.00	0.00	0.00	0.00	-0.00	0.19	5.50	0.17
1995	-5.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	4.87	0.07
1996	-4.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	4.24	-0.00
1997	-3.95	0.00	0.00	0.00	0.00	0.00	0.00	-0.00	0.26	3.63	-0.06
1998	-3.41	0.00	0.00	0.00	0.00	0.00	0.00	-0.00	0.26	3.05	-0.11
1999	-2.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	2.51	-0.14
2000	-2.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	2.01	-0.16

Table A17

Hard Work

Equation (13): Venezuela

(Percentage point difference from Baseline)

	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1991	-3.89	0.00	0.00	0.00	0.00	0.00	0.00	0.97	0.00	2.92	-0.00
1992	-7.48	0.00	0.00	0.00	0.00	0.00	0.00	1.74	0.01	6.34	0.61
1993	-10.44	0.00	0.00	0.00	0.00	0.00	0.00	1.14	0.05	10.05	0.81
1994	-13.66	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.12	14.40	0.95
1995	-20.20	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.25	21.38	1.52
1996	-31.50	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.50	33.45	2.55
1997	-55.29	0.00	0.00	0.00	0.00	0.00	0.00	0.10	1.12	58.90	4.83
1998	-146.02	0.00	0.00	0.00	0.00	0.00	0.00	0.10	3.73	156.11	13.91
1999	261.23	0.00	0.00	0.00	0.00	0.00	0.00	0.10	-8.63	-280.48	-27.78
2000	59.36	0.00	0.00	0.00	0.00	0.00	0.00	0.10	-2.68	-64.14	-7.37

Table A18
Good Luck

Equation (13): Argentina
(Percentage point difference from Baseline)

	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1991	-5.94	-2.64	0.00	-2.00	0.00	0.00	0.00	0.00	0.00	0.00	-1.30
1992	-4.88	-2.66	0.00	-2.00	0.00	0.00	0.00	0.00	0.11	0.03	-0.08
1993	-4.39	-2.63	0.00	-2.00	0.00	0.00	0.00	0.00	0.22	0.22	0.68
1994	-4.92	-2.64	0.00	-2.00	0.00	0.00	0.00	0.00	0.34	0.33	0.38
1995	-5.14	-2.65	0.00	-2.00	0.00	0.00	0.00	0.00	0.45	0.44	0.40
1996	-5.36	-2.67	0.00	-2.00	0.00	0.00	0.00	0.00	0.56	0.54	0.41
1997	-5.57	-2.68	0.00	-2.00	0.00	0.00	0.00	0.00	0.68	0.63	0.43
1998	-5.76	-2.70	0.00	-2.00	0.00	0.00	0.00	0.00	0.79	0.71	0.44
1999	-5.93	-2.71	0.00	-2.00	0.00	0.00	0.00	0.00	0.90	0.76	0.45
2000	-6.06	-2.72	0.00	-2.00	0.00	0.00	0.00	0.00	1.01	0.78	0.45

Table A19
Good Luck

Equation (13): Brazil
(Percentage point difference from Baseline)

	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1991	-3.37	-1.10	0.00	-2.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.27
1992	-2.92	-1.06	0.00	-2.00	0.00	0.00	0.00	0.00	0.01	-0.06	0.09
1993	-2.67	-1.00	0.00	-2.00	0.00	0.00	0.00	0.00	0.02	-0.10	0.24
1994	-2.58	-0.94	0.00	-2.00	0.00	0.00	0.00	0.00	0.03	-0.18	0.20
1995	-2.45	-0.88	0.00	-2.00	0.00	0.00	0.00	0.00	0.03	-0.27	0.19
1996	-2.31	-0.82	0.00	-2.00	0.00	0.00	0.00	0.00	0.04	-0.36	0.18
1997	-2.16	-0.76	0.00	-2.00	0.00	0.00	0.00	0.00	0.04	-0.47	0.17
1998	-2.01	-0.71	0.00	-2.00	0.00	0.00	0.00	0.00	0.04	-0.58	0.16
1999	-1.85	-0.65	0.00	-2.00	0.00	0.00	0.00	0.00	0.04	-0.70	0.14
2000	-1.70	-0.60	0.00	-2.00	0.00	0.00	0.00	0.00	0.04	-0.81	0.13

Table A20
Good Luck

Equation (13): Chile
(Percentage point difference from Baseline)

	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1991	-1.99	0.00	0.00	-2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
1992	-2.05	0.00	0.00	-2.00	0.00	0.00	0.00	0.00	0.05	0.06	0.06
1993	-2.07	0.00	0.00	-2.00	0.00	0.00	0.00	0.00	0.09	0.09	0.11
1994	-2.13	0.00	0.00	-2.00	0.00	0.00	0.00	0.00	0.13	0.10	0.11
1995	-2.17	0.00	0.00	-2.00	0.00	0.00	0.00	0.00	0.18	0.09	0.10
1996	-2.18	0.00	0.00	-2.00	0.00	0.00	0.00	0.00	0.21	0.04	0.08
1997	-2.15	0.00	0.00	-2.00	0.00	0.00	0.00	0.00	0.25	-0.03	0.06
1998	-2.08	0.00	0.00	-2.00	0.00	0.00	0.00	0.00	0.27	-0.15	0.04
1999	-1.97	0.00	0.00	-2.00	0.00	0.00	0.00	0.00	0.29	-0.29	0.03
2000	-1.82	0.00	0.00	-2.00	0.00	0.00	0.00	0.00	0.30	-0.47	0.01

Table A21
Good Luck

Equation (13): Korea
(Percentage point difference from Baseline)

	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1991	-3.92	-2.15	0.00	-2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1992	-2.45	-1.68	0.00	-2.00	0.00	0.00	0.00	0.00	0.01	-1.03	0.21
1993	-1.61	-1.24	0.00	-2.00	0.00	0.00	0.00	0.00	0.01	-1.48	0.16
1994	-1.32	-0.93	0.00	-2.00	0.00	0.00	0.00	0.00	0.01	-1.48	0.16
1995	-1.18	-0.73	0.00	-2.00	0.00	0.00	0.00	0.00	0.01	-1.42	0.14
1996	-1.12	-0.59	0.00	-2.00	0.00	0.00	0.00	0.00	0.01	-1.36	0.13
1997	-1.08	-0.49	0.00	-2.00	0.00	0.00	0.00	0.00	0.01	-1.29	0.13
1998	-1.08	-0.42	0.00	-2.00	0.00	0.00	0.00	0.00	0.01	-1.22	0.13
1999	-1.08	-0.36	0.00	-2.00	0.00	0.00	0.00	0.00	0.01	-1.15	0.13
2000	-1.11	-0.31	0.00	-2.00	0.00	0.00	0.00	0.00	0.01	-1.07	0.14

Table A22
Good Luck

Equation (13): Mexico
(Percentage point difference from Baseline)

	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1991	-4.26	-2.28	0.00	-2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
1992	-4.28	-2.32	0.00	-2.00	0.00	0.00	0.00	0.00	0.11	-0.16	0.00
1993	-4.11	-2.30	0.00	-2.00	0.00	0.00	0.00	0.00	0.22	-0.46	-0.04
1994	-3.86	-2.24	0.00	-2.00	0.00	0.00	0.00	0.00	0.32	-0.84	-0.16
1995	-3.50	-2.14	0.00	-2.00	0.00	0.00	0.00	0.00	0.39	-1.29	-0.27
1996	-3.04	-2.01	0.00	-2.00	0.00	0.00	0.00	0.00	0.43	-1.77	-0.36
1997	-2.51	-1.86	0.00	-2.00	0.00	0.00	0.00	0.00	0.45	-2.23	-0.43
1998	-1.96	-1.69	0.00	-2.00	0.00	0.00	0.00	0.00	0.45	-2.64	-0.46
1999	-1.45	-1.52	0.00	-2.00	0.00	0.00	0.00	0.00	0.43	-2.97	-0.47
2000	-0.99	-1.35	0.00	-2.00	0.00	0.00	0.00	0.00	0.40	-3.22	-0.46

Table A23
Good Luck

Equation (13): Peru
(Percentage point difference from Baseline)

	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1991	-3.42	-1.13	0.00	-2.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.29
1992	-2.95	-1.08	0.00	-2.00	0.00	0.00	0.00	0.00	0.01	-0.05	0.09
1993	-2.79	-1.03	0.00	-2.00	0.00	0.00	0.00	0.00	0.01	-0.15	0.10
1994	-2.62	-0.96	0.00	-2.00	0.00	0.00	0.00	0.00	0.02	-0.23	0.12
1995	-2.49	-0.90	0.00	-2.00	0.00	0.00	0.00	0.00	0.02	-0.33	0.10
1996	-2.35	-0.83	0.00	-2.00	0.00	0.00	0.00	0.00	0.02	-0.43	0.08
1997	-2.21	-0.77	0.00	-2.00	0.00	0.00	0.00	0.00	0.02	-0.53	0.06
1998	-2.06	-0.71	0.00	-2.00	0.00	0.00	0.00	0.00	0.02	-0.63	0.04
1999	-1.92	-0.66	0.00	-2.00	0.00	0.00	0.00	0.00	0.02	-0.74	0.03
2000	-1.77	-0.60	0.00	-2.00	0.00	0.00	0.00	0.00	0.02	-0.84	0.02

Table A24
Good Luck

Equation (13): Philippines

(Percentage point difference from Baseline)

	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1991	-3.09	-1.20	0.00	-2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
1992	-2.87	-1.14	0.00	-2.00	0.00	0.00	0.00	0.00	0.04	-0.25	0.06
1993	-2.51	-1.04	0.00	-2.00	0.00	0.00	0.00	0.00	0.07	-0.57	0.03
1994	-2.18	-0.93	0.00	-2.00	0.00	0.00	0.00	0.00	0.09	-0.81	0.03
1995	-1.92	-0.83	0.00	-2.00	0.00	0.00	0.00	0.00	0.10	-1.02	0.00
1996	-1.67	-0.74	0.00	-2.00	0.00	0.00	0.00	0.00	0.11	-1.20	-0.02
1997	-1.46	-0.65	0.00	-2.00	0.00	0.00	0.00	0.00	0.11	-1.34	-0.04
1998	-1.27	-0.57	0.00	-2.00	0.00	0.00	0.00	0.00	0.10	-1.46	-0.05
1999	-1.11	-0.51	0.00	-2.00	0.00	0.00	0.00	0.00	0.10	-1.55	-0.06
2000	-0.97	-0.44	0.00	-2.00	0.00	0.00	0.00	0.00	0.09	-1.63	-0.06

Table A25
Good Luck

Equation (13): Venezuela

(Percentage point difference from Baseline)

	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1991	-8.21	-6.04	0.00	-2.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.17
1992	-10.23	-7.18	0.00	-2.00	0.00	0.00	0.00	0.00	0.04	1.51	0.49
1993	-13.61	-8.71	0.00	-2.00	0.00	0.00	0.00	0.00	0.11	3.63	0.83
1994	-18.74	-10.99	0.00	-2.00	0.00	0.00	0.00	0.00	0.23	6.90	1.37
1995	-27.24	-14.83	0.00	-2.00	0.00	0.00	0.00	0.00	0.45	12.15	2.19
1996	-43.30	-22.54	0.00	-2.00	0.00	0.00	0.00	0.00	0.94	21.63	3.81
1997	-86.31	-45.01	0.00	-2.00	0.00	0.00	0.00	0.00	2.41	45.28	8.40
1998	*****	-686.44	0.00	-2.00	0.00	0.00	0.00	0.00	45.16	623.55	135.11
1999	84.58	57.58	0.00	-2.00	0.00	0.00	0.00	0.00	-4.44	-35.81	-11.26
2000	28.75	29.75	0.00	-2.00	0.00	0.00	0.00	0.00	-2.56	-3.78	-5.34

Table A26
High Growth

Equation (13): Argentina

(Percentage point difference from Baseline)

	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of Trade Balance to External Debt (-)	Residual in Equation (13) (+)
1991	-3.40	0.00	0.00	0.00	0.00	0.25	0.00	1.56	0.00	0.34	-1.25
1992	-3.90	0.00	0.00	0.00	0.00	0.75	0.00	2.19	0.01	0.74	-0.21
1993	-3.74	0.00	0.00	0.00	0.00	0.50	0.00	2.81	0.02	1.30	0.89
1994	-3.86	0.00	0.00	0.00	0.00	-0.00	0.00	2.51	0.05	1.71	0.41
1995	-4.00	0.00	0.00	0.00	0.00	0.00	0.00	2.20	0.09	2.13	0.42
1996	-4.32	0.00	0.00	0.00	0.00	0.00	0.00	2.06	0.13	2.57	0.44
1997	-4.81	0.00	0.00	0.00	0.00	-0.00	0.00	2.06	0.17	3.05	0.48
1998	-5.35	0.00	0.00	0.00	0.00	0.00	0.00	2.06	0.23	3.59	0.53
1999	-5.94	0.00	0.00	0.00	0.00	0.00	0.00	2.06	0.29	4.18	0.58
2000	-6.60	0.00	0.00	0.00	0.00	-0.00	0.00	2.06	0.35	4.83	0.64

Table A27
High Growth

Equation (13): Brazil

(Percentage point difference from Baseline)

	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of Trade Balance to External Debt (-)	Residual in Equation (13) (+)
1991	-3.20	0.00	0.00	0.00	0.00	0.25	0.00	1.83	0.00	0.57	-0.55
1992	-4.29	0.00	0.00	0.00	0.00	0.75	0.00	2.29	0.00	1.26	0.01
1993	-4.68	0.00	0.00	0.00	0.00	0.50	0.00	2.65	0.01	1.98	0.46
1994	-4.65	0.00	0.00	0.00	0.00	0.00	0.00	2.51	0.01	2.51	0.38
1995	-4.80	0.00	0.00	0.00	0.00	-0.00	0.00	2.20	0.02	2.98	0.40
1996	-5.07	0.00	0.00	0.00	0.00	0.00	0.00	2.06	0.02	3.41	0.42
1997	-5.48	0.00	0.00	0.00	0.00	-0.00	0.00	2.06	0.03	3.84	0.46
1998	-5.87	0.00	0.00	0.00	0.00	0.00	0.00	2.06	0.04	4.27	0.49
1999	-6.27	0.00	0.00	0.00	0.00	-0.00	0.00	2.06	0.04	4.70	0.53
2000	-6.66	0.00	0.00	0.00	0.00	0.00	0.00	2.06	0.05	5.12	0.56

Table A28

High Growth

Equation (13): Chile

(Percentage point difference from Baseline)

	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1991	-3.03	0.00	0.00	0.00	0.00	0.25	0.00	2.00	0.00	0.85	0.07
1992	-4.76	0.00	0.00	0.00	0.00	0.75	0.00	2.31	0.02	1.96	0.27
1993	-5.74	0.00	0.00	0.00	0.00	0.50	0.00	2.60	0.06	3.13	0.56
1994	-6.08	0.00	0.00	0.00	0.00	-0.00	0.00	2.51	0.13	4.04	0.59
1995	-6.72	0.00	0.00	0.00	0.00	0.00	0.00	2.20	0.21	4.91	0.60
1996	-7.54	0.00	0.00	0.00	0.00	-0.00	0.00	2.06	0.31	5.78	0.61
1997	-8.53	0.00	0.00	0.00	0.00	0.00	0.00	2.06	0.42	6.70	0.65
1998	-9.54	0.00	0.00	0.00	0.00	-0.00	0.00	2.06	0.54	7.61	0.68
1999	-10.52	0.00	0.00	0.00	0.00	0.00	0.00	2.06	0.67	8.49	0.70
2000	-11.44	0.00	0.00	0.00	0.00	-0.00	0.00	2.06	0.81	9.28	0.71

Table A29

High Growth

Equation (13): Korea

(Percentage point difference from Baseline)

	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1991	-11.10	0.00	0.00	0.00	0.00	0.25	0.00	4.19	0.00	6.59	-0.08
1992	-14.34	0.00	0.00	0.00	0.00	0.75	0.00	4.57	0.02	9.48	0.48
1993	-14.69	0.00	0.00	0.00	0.00	0.50	0.00	4.89	0.04	10.36	1.10
1994	-13.81	0.00	0.00	0.00	0.00	-0.00	0.00	4.84	0.05	10.58	1.67
1995	-13.76	0.00	0.00	0.00	0.00	0.00	0.00	4.53	0.06	11.03	1.85
1996	-14.24	0.00	0.00	0.00	0.00	-0.00	0.00	4.37	0.06	11.85	2.04
1997	-15.24	0.00	0.00	0.00	0.00	0.00	0.00	4.37	0.07	13.10	2.30
1998	-16.59	0.00	0.00	0.00	0.00	-0.00	0.00	4.37	0.07	14.75	2.61
1999	-18.37	0.00	0.00	0.00	0.00	0.00	0.00	4.37	0.08	16.89	2.98
2000	-20.71	0.00	0.00	0.00	0.00	0.00	0.00	4.37	0.10	19.67	3.44

Table A30
High Growth

Equation (13): Mexico
(Percentage point difference from Baseline)

	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1991	-2.26	0.00	0.00	0.00	0.00	0.25	0.00	1.46	0.00	0.54	-0.01
1992	-3.48	0.00	0.00	0.00	0.00	0.75	0.00	1.60	0.01	1.21	0.09
1993	-4.13	0.00	0.00	0.00	0.00	0.50	0.00	1.94	0.04	1.84	0.20
1994	-4.14	0.00	0.00	0.00	0.00	0.00	0.00	2.04	0.08	2.18	0.16
1995	-4.24	0.00	0.00	0.00	0.00	0.00	0.00	1.85	0.13	2.36	0.10
1996	-4.34	0.00	0.00	0.00	0.00	0.00	0.00	1.77	0.17	2.44	0.04
1997	-4.46	0.00	0.00	0.00	0.00	-0.00	0.00	1.80	0.20	2.45	-0.01
1998	-4.49	0.00	0.00	0.00	0.00	0.00	0.00	1.84	0.22	2.38	-0.06
1999	-4.44	0.00	0.00	0.00	0.00	0.00	0.00	1.87	0.24	2.24	-0.09
2000	-4.32	0.00	0.00	0.00	0.00	0.00	0.00	1.89	0.24	2.06	-0.12

Table A31
High Growth

Equation (13): Peru
(Percentage point difference from Baseline)

	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1991	-2.99	0.00	0.00	0.00	0.00	0.25	0.00	1.82	0.00	0.35	-0.57
1992	-3.77	0.00	0.00	0.00	0.00	0.75	0.00	2.32	0.00	0.76	0.05
1993	-4.06	0.00	0.00	0.00	0.00	0.50	0.00	2.57	0.00	1.12	0.13
1994	-3.63	0.00	0.00	0.00	0.00	-0.00	0.00	2.51	0.00	1.36	0.24
1995	-3.53	0.00	0.00	0.00	0.00	0.00	0.00	2.20	0.01	1.55	0.23
1996	-3.55	0.00	0.00	0.00	0.00	-0.00	0.00	2.06	0.01	1.71	0.22
1997	-3.70	0.00	0.00	0.00	0.00	0.00	0.00	2.06	0.01	1.86	0.22
1998	-3.83	0.00	0.00	0.00	0.00	0.00	0.00	2.06	0.01	1.99	0.23
1999	-3.94	0.00	0.00	0.00	0.00	0.00	0.00	2.06	0.01	2.10	0.23
2000	-4.04	0.00	0.00	0.00	0.00	-0.00	0.00	2.06	0.01	2.19	0.23

Table A32

High Growth

Equation (13): Philippines

(Percentage point difference from Baseline)

	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1991	-2.91	0.00	0.00	0.00	0.00	0.25	0.00	2.06	0.00	0.59	-0.01
1992	-4.24	0.00	0.00	0.00	0.00	0.75	0.00	2.32	0.01	1.14	-0.03
1993	-4.53	0.00	0.00	0.00	0.00	0.50	0.00	2.57	0.02	1.47	0.03
1994	-3.90	0.00	0.00	0.00	0.00	-0.00	0.00	2.51	0.03	1.50	0.14
1995	-3.56	0.00	0.00	0.00	0.00	0.00	0.00	2.20	0.04	1.42	0.10
1996	-3.34	0.00	0.00	0.00	0.00	-0.00	0.00	2.06	0.05	1.31	0.08
1997	-3.25	0.00	0.00	0.00	0.00	-0.00	0.00	2.06	0.05	1.20	0.06
1998	-3.13	0.00	0.00	0.00	0.00	0.00	0.00	2.06	0.05	1.06	0.05
1999	-3.00	0.00	0.00	0.00	0.00	-0.00	0.00	2.06	0.05	0.91	0.03
2000	-2.85	0.00	0.00	0.00	0.00	0.00	0.00	2.06	0.05	0.76	0.02

Table A33

High Growth

Equation (13): Venezuela

(Percentage point difference from Baseline)

	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1991	-1.10	0.00	0.00	0.00	0.00	0.25	0.00	0.52	0.00	0.36	0.03
1992	-1.94	0.00	0.00	0.00	0.00	0.75	0.00	0.33	0.00	1.05	0.20
1993	-2.88	0.00	0.00	0.00	0.00	0.50	0.00	0.63	0.01	2.03	0.28
1994	-3.80	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.02	3.14	0.36
1995	-5.06	0.00	0.00	0.00	0.00	0.00	0.00	0.94	0.04	4.55	0.46
1996	-6.72	0.00	0.00	0.00	0.00	-0.00	0.00	0.93	0.07	6.33	0.61
1997	-8.79	0.00	0.00	0.00	0.00	0.00	0.00	0.98	0.12	8.50	0.81
1998	-11.03	0.00	0.00	0.00	0.00	-0.00	0.00	1.03	0.19	10.86	1.05
1999	-13.05	0.00	0.00	0.00	0.00	0.00	0.00	1.07	0.29	12.98	1.30
2000	-14.17	0.00	0.00	0.00	0.00	-0.00	0.00	1.12	0.40	14.16	1.50

Table A34

Domestic Austerity

Equation (13): Argentina

(Percentage point difference from Baseline)

	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (-LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1991	-0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	-0.10
1992	-0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.76	-0.01
1993	-1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	1.16	0.16
1994	-1.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	1.63	0.12
1995	-2.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	2.16	0.17
1996	-2.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	2.74	0.21
1997	-3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	3.39	0.26
1998	-4.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	4.13	0.32
1999	-4.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	4.95	0.39
2000	-5.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	5.90	0.46

Table A35

Domestic Austerity

Equation (13): Brazil

(Percentage point difference from Baseline)

	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (-LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1991	-0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61	-0.05
1992	-1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.24	0.04
1993	-1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	1.83	0.15
1994	-2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	2.43	0.18
1995	-2.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	3.02	0.23
1996	-3.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	3.61	0.27
1997	-3.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	4.20	0.32
1998	-4.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	4.79	0.36
1999	-5.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	5.39	0.40
2000	-5.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	5.99	0.45

Table A36
Domestic Austerity
Equation (13): Chile
(Percentage point difference from Baseline)

	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1991	-1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.06	0.01
1992	-2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	2.39	0.08
1993	-3.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	3.87	0.23
1994	-5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	5.59	0.36
1995	-7.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	7.61	0.48
1996	-9.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44	10.04	0.61
1997	-12.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66	13.04	0.76
1998	-16.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96	16.94	0.94
1999	-22.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.38	22.32	1.20
2000	-31.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.05	30.60	1.59

Table A37
Domestic Austerity
Equation (13): Korea
(Percentage point difference from Baseline)

	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1991	-5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.71	0.32
1992	-8.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	8.76	0.74
1993	-9.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	9.96	0.99
1994	-9.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	11.19	1.28
1995	-11.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	12.86	1.48
1996	-13.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	15.16	1.75
1997	-16.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	18.45	2.13
1998	-20.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	23.42	2.71
1999	-28.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	31.62	3.66
2000	-42.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	47.37	5.50

Table A38

Domestic Austerity

Equation (13): Mexico

(Percentage point difference from Baseline)

	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1991	-0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.95	0.00
1992	-2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	2.01	0.04
1993	-3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	3.06	0.09
1994	-4.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	4.06	0.09
1995	-5.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	5.00	0.06
1996	-6.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	5.83	0.01
1997	-7.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	6.54	-0.06
1998	-7.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51	7.14	-0.12
1999	-8.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	7.61	-0.18
2000	-8.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66	7.98	-0.24

1 58 1

Table A39

Domestic Austerity

Equation (13): Peru

(Percentage point difference from Baseline)

	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1991	-0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44	-0.04
1992	-0.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90	0.03
1993	-1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.34	0.06
1994	-1.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.75	0.11
1995	-2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	2.15	0.13
1996	-2.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	2.54	0.15
1997	-2.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	2.91	0.16
1998	-3.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	3.27	0.18
1999	-3.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	3.62	0.19
2000	-3.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	3.95	0.21

Table A40
Domestic Austerity

Equation (13): Philippines
(Percentage point difference from Baseline)

	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1991	-1.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.07	0.04
1992	-2.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	2.10	0.07
1993	-2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	2.95	0.11
1994	-3.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	3.64	0.19
1995	-4.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	4.22	0.20
1996	-4.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	4.72	0.20
1997	-5.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	5.14	0.21
1998	-5.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	5.52	0.21
1999	-5.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	5.85	0.21
2000	-6.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	6.15	0.22

Table A41
Domestic Austerity

Equation (13): Venezuela
(Percentage point difference from Baseline)

	Change in Debt/Export Ratio	Ratio of Capital Flight to Debt (+)	Ratio of Reserves Acquisition to Debt (+)	Real Interest Rate (LIBOR) (+)	Spread over LIBOR (+)	Change in Dollar Export Prices (-)	Change in US GNP Deflator (+)	Change in Real Exports (-)	Ratio of Direct Investment to External Debt (-)	Ratio of "Trade Balance" to External Debt (-)	Residual in Equation (13) (+)
1991	-0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87	-0.02
1992	-2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.25	0.10
1993	-4.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	4.30	0.23
1994	-6.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	7.35	0.45
1995	-11.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	12.02	0.78
1996	-18.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	19.45	1.32
1997	-30.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	32.23	2.32
1998	-55.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.91	58.80	4.49
1999	-147.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.99	157.43	12.85
2000	297.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-7.46	-318.42	-28.10

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