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External Debt Sustainability: Guidelines for Low- and Middle-income Countries

Claudio M. Loser

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PREFACE

The *G-24 Discussion Paper Series* is a collection of research papers prepared under the UNCTAD Project of Technical Support to the Intergovernmental Group of Twenty-Four on International Monetary Affairs (G-24). The G-24 was established in 1971 with a view to increasing the analytical capacity and the negotiating strength of the developing countries in discussions and negotiations in the international financial institutions. The G-24 is the only formal developing-country grouping within the IMF and the World Bank. Its meetings are open to all developing countries.

The G-24 Project, which is administered by UNCTAD's Division on Globalization and Development Strategies, aims at enhancing the understanding of policy makers in developing countries of the complex issues in the international monetary and financial system, and at raising awareness outside developing countries of the need to introduce a development dimension into the discussion of international financial and institutional reform.

The research papers are discussed among experts and policy makers at the meetings of the G-24 Technical Group, and provide inputs to the meetings of the G-24 Ministers and Deputies in their preparations for negotiations and discussions in the framework of the IMF's International Monetary and Financial Committee (formerly Interim Committee) and the Joint IMF/IBRD Development Committee, as well as in other forums.

The Project of Technical Support to the G-24 receives generous financial support from the International Development Research Centre of Canada and contributions from the countries participating in the meetings of the G-24.

**EXTERNAL DEBT SUSTAINABILITY:
GUIDELINES FOR LOW- AND
MIDDLE-INCOME COUNTRIES**

Claudio M. Loser

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Abstract

The high debt burden continues to hamper the growth prospects of many developing countries and is increasing their vulnerability. Bilateral official aid has declined sharply and financing by multilateral organizations is low. Developing countries have experienced net negative resource transfers, reducing their ability to invest. Finally, growth in these countries has lagged worldwide growth, particularly in Latin America and Africa.

Poorer countries depend heavily on support of official institutions. Aid to poorer countries has diminished and in many cases their debt burden appears to be unsustainable. Countries with access to market borrowing on the other hand, have been affected by high volatility in international capital markets, while having fewer policy options than in the past to absorb shocks.

Debt sustainability assessments normally focus on the behaviour of the external debt to GDP ratio, which depends on the behavior of debt, interest rates, the behaviour of GDP, and the movements in the real exchange rate. In crisis situations, countries can have recourse to debt restructuring or reduction, but such action cannot be a regular means of dealing with external financing problems, as it affects access to new financing. The process is defective and new solutions are required.

There is good evidence on indicators and predictors of external debt crises. There are key macroeconomic indicators which, in general have a good capacity to predict debt problems, but they work with variable lags, and are not reliable in all cases. Thus, a good tracking system needs to be based on several of these indicators.

The impact of sovereign credit ratings on access of developing countries to capital markets and on the terms of borrowing is significant. Worsening ratings can have adverse consequences on debt sustainability. To avoid this problem, credit agencies should expand their use of indicators, and take a broader view of developments than at present, including with regard to programmes that countries are undertaking with the support of the international financial institutions.

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EXTERNAL DEBT SUSTAINABILITY: GUIDELINES FOR LOW- AND MIDDLE-INCOME COUNTRIES

Claudio M. Loser*

I. Introduction

Throughout their history developing countries have been subject to repeated economic crises, with serious consequences for their long-term growth prospects. The links of these crises to the external sector performance, including the problems of external debt and its sustainability, have been the subject of prolonged debate. While the issue of debt was always present, particularly in relation to the increased availability of investable resources, the relevance of this topic has been heightened in recent years. Increasing capital mobility and greater use of market borrowing by emerging economies may well have helped improve economic performance and growth prospects, but with low levels of bilateral and multilateral lending the vulnerability of the developing countries' economies has increased.

As developing countries became more integrated into the world economy and a wider universe of private investors have come into the picture, the volatility of capital flows has risen sharply and aggravated the effects of both internal and external shocks. More dramatically, developing countries have seen their debt burden remain high as a proportion of GDP with the possible exception of East Asia; and their rate of growth has lagged behind that of the industrialized world, most dramatically in Latin American and sub-Saharan Africa. The high debt burden, low growth rates, and considerable resource outflows has put in serious doubt the premise that foreign borrowing on current terms is an appropriate mechanism to enhance growth.

The poorest countries have experienced a significant shortage of new funds in their struggle to increase economic growth, with the exception of

* I want to thank the Inter-American Dialogue for allowing me to accommodate this project during my stay. This paper reflects to a large extent the experience I gained during my stay at the IMF, particularly at this institution, in connection with many IMF supported programmes during my career. I want to thank Ariel Buiara, Director of the G-24 Secretariat, and an anonymous source for very useful and instructive comments; Eric Jacobstein and Hilda Scioville for their hard work and invaluable support during this project. Of course, this paper reflects my personal views only, and all existing errors are mine.

those obtained under the Enhanced Structural Adjustment Facility (ESAF)/Poverty Reduction and Growth Facility (PRGF) and Heavily Indebted Poor Countries (HIPC) initiatives,¹ coordinated by the IMF and the World Bank, and even for those countries the burden remains very high. The more advanced economies have been hit by boom-bust borrowing cycles. The uncertainties associated with market borrowing by these countries have given rise to a number of initiatives to deal with the problems of excessive borrowing and the specter of default, already a reality for countries like Argentina and Ecuador. Proposals like the Sovereign Debt Restructuring Mechanism (SDRM), and the re-emergence of collective clauses as part of foreign borrowing have been central to these discussions, but with limited progress in the resolution of debt problems so far. Moreover, creditors are developing new mechanisms to deal with this issue but with limited input from developing countries.

The official community in the advanced economies has been providing less counter cyclical financial resources to developing countries – i.e. funds made available when private flows decline and changes in the private sector lending structure – resulting in a shortening of maturities for the emerging economies and, consequently, less predictability of capital flows. As a consequence, borrowing countries have had to absorb a larger proportion of the burden of adjustment. In these conditions, they are seriously curtailed in their capacity to respond to adverse shocks and grow on a sustained fashion. The IMF and other International Financial Institutions (IFIs) have become increasingly aware of these problems and have sought to develop operational mechanisms to reduce debt vulnerability.² However, such efforts have been unsuccessful, and major problems remain.

The difficulties in finding a comprehensive methodology to deal with debt are in part a consequence of the different characteristics of the universe of debtor-developing countries. As noted, the sources of financing for emerging middle-income economies – mainly in Asia, Europe, and Latin America, and constituting about 15 per cent of world GDP – are either direct investment or foreign non-concessional financing, like bond placements and bank lending. In their case, access to foreign financing is highly sensitive to the general conditions in the world economy and regional developments. Market participants, judge domestic policies increasingly

without regard for the advice or programmes of the IMF and other IFIs, and they are reacting violently in a world of greater capital mobility.

The IFIs seek to fulfill their role of technical and financial support, but the relative size of their financing remains low. They constitute only about 19 per cent of total debt outstanding by developing countries, and only 13 per cent among middle-income countries. In these circumstances, official packages have become increasingly ineffective in reversing economic crises. Thus, the specter of default has become a renewed threat. In such a context, the emphasis of debt management has moved away from the traditional view of additionality of resources for investment into preventive actions aimed at reducing the effects of domestic shocks as well as avoiding contagion.

Total debt of developing countries increased until 1999 and then stabilized at about \$3 trillion as of last year. Furthermore, while debt has declined as a proportion of GDP (table 1), it remains high at some 40 per cent, and the ratio of debt to exports at 113 per cent. More importantly, the net resource transfer – the resources available for use after paying interest – has been negative in recent years for all regions. These magnitudes suggest that it is difficult to consider current levels of debt sustainable and helping growth.

Low-income countries depend heavily on the financial support of the bilateral and multilateral official institutions. The 65 countries covered in this definition represent a large proportion of the developing countries, but only somewhat more than 3 per cent of world GDP (a decline compared to more than 5 per cent in 1980). In their case, the availability of resources (both grants and concessional financing) is less sensitive to market developments. The financial support to these countries has tended to decline as well, reflecting more difficult budgetary conditions and a general disappointment with the results of external aid among donor countries in recent decades. As discussed above, the main exception today is the ESAF/PRGF/HIPC. The initiative, nonetheless, deals only with outstanding debt and not with new flows, and debt remains high for these countries. The initiative, while expected to have very significant consequences for heavily indebted countries, has a limited scope, and their debt ratio, while lower than in the past, was 85 per cent of output in 2001. Moreover, it has tended to discriminate against

Table 1

DEBT AND DEBT SERVICE FOR DEVELOPING COUNTRIES										
<i>(Billions of dollars and per cent)</i>										
	1970	1980	1990	1996	1997	1998	1999	2000	2001	2002
Total debt stocks (\$ billion)										
East Asia and Pacific	8.6	64.6	239.0	497.9	528.7	535.4	541.4	497.4	504.1	509.5
Europe and Central Asia	5.0	75.6	217.9	367.0	386.9	484.2	494.4	503.6	497.8	511.8
Latin America and Caribbean	32.6	257.4	475.4	670.9	702.2	774.3	794.8	782.9	764.9	789.4
Middle East and North Africa	4.8	83.4	182.9	203.7	195.0	209.8	213.9	202.1	200.6	202.3
South Asia	12.3	37.8	129.5	155.2	155.0	163.0	167.4	165.1	161.7	166.8
Sub-Saharan Africa	6.9	60.8	179.9	231.3	220.9	228.5	215.0	211.4	203.0	204.4
Total (all developing countries)	70.2	579.6	1421.6	2126.0	2188.8	2395.2	2427.0	2362.6	2332.1	2384.2
Debt service (LTDS), total long term (\$ billion)										
East Asia and Pacific	0.8	7.1	27.8	56.1	56.5	56.9	69.7	68.4	68.9	69.6
Europe and Central Asia	0.7	10.3	28.6	38.3	40.7	50.9	58.9	66.0	84.6	71.0
Latin America and Caribbean	4.8	38.8	37.9	93.8	119.6	118.1	144.7	158.1	152.2	123.3
Middle East and North Africa	0.5	8.7	20.3	22.6	21.9	19.4	22.5	20.8	19.1	18.0
South Asia	0.8	2.1	8.8	14.5	16.1	14.8	13.8	14.9	13.4	13.1
Sub-Saharan Africa	0.6	5.2	9.0	13.7	13.7	12.1	12.0	11.9	12.1	11.8
Total (all developing countries)	8.2	72.1	132.4	239.0	268.4	272.2	321.5	340.1	350.2	306.7
Total debt (EDT)/exports of goods and services (XGS) (per cent)										
East Asia and Pacific	..	190.0	135.2	106.2	100.7	109.4	101.8	77.2	79.9	71.1
Europe and Central Asia	..	422.3	306.3	105.8	105.4	133.1	145.3	121.9	114.6	110.1
Latin America and Caribbean	..	201.6	254.5	198.9	188.0	206.2	202.7	168.4	170.5	173.6
Middle East and North Africa	..	40.9	118.9	109.7	104.1	139.5	120.2	88.1	88.7	86.9
South Asia	..	164.3	324.7	196.4	183.7	187.4	180.1	154.1	147.1	138.6
Sub-Saharan Africa	..	65.4	208.6	216.6	202.5	234.8	207.7	175.2	170.2	164.5
Total (all developing countries)	..	84.6	170.8	139.5	132.9	153.1	148.1	119.4	118.5	112.8
Debt service (TDS)/exports of goods and services (XGS) (per cent)										
East Asia and Pacific	..	26.7	17.8	13.3	12.1	12.8	14.0	11.4	12.1	10.9
Europe and Central Asia	..	70.2	44.8	12.3	12.2	15.6	20.3	18.4	21.7	18.0
Latin America and Caribbean	..	36.3	24.4	31.4	35.3	34.1	41.0	38.6	35.5	29.6
Middle East and North Africa	..	5.6	15.6	13.6	13.3	14.7	14.2	10.1	9.5	8.7
South Asia	..	12.0	28.7	21.0	21.3	18.5	16.1	14.7	12.7	11.4
Sub-Saharan Africa	..	7.2	12.8	14.3	14.6	14.8	13.3	11.2	11.2	10.7
Total (all developing countries)	..	13.0	18.7	17.6	18.2	19.2	21.9	19.3	19.2	16.2
Total debt (EDT)/GNI (per cent)										
East Asia and Pacific	..	16.2	35.5	35.3	35.9	40.2	37.1	31.8	31.1	28.7
Europe and Central Asia	..	80.6	17.6	34.6	35.0	49.3	58.2	54.2	51.2	48.6
Latin America and Caribbean	..	35.8	44.6	37.7	36.0	39.6	46.1	40.9	41.5	48.2
Middle East and North Africa	..	22.0	45.7	35.7	33.2	36.2	35.2	30.5	29.6	30.5
South Asia	..	16.2	32.4	30.3	28.8	29.9	29.1	27.9	26.5	25.4
Sub-Saharan Africa	..	23.5	63.1	72.5	67.0	73.4	70.2	68.8	67.7	65.0
Total (all developing countries)	..	20.6	35.2	37.7	36.6	42.1	44.1	39.7	38.9	39.1

Source: World Bank, *Global Development Finance 2003: Striving for Stability in Development Finance* (2003); OECD, *External Debt Statistics* (various issues).

the poorest countries, which may have been more dependent on grants than loans in the past (e.g. Haiti).

Further complicating this picture, the aid to poorer countries has diminished and has been characterized by increasing emphasis on structural, economic, social, and political reform, and participatory solutions within each country. The rules of access are clearly changing, with greater imposition of external views. With a more complex process, there have been long periods without support, entailing a more severe process of domestic macroeconomic adjustment, contrary to the logic of debt relief.

The paper is organized as follows: Section II deals with the sources of debt vulnerability, including internal and external shocks. Section III deals with external debt sustainability. Section IV covers issues of debt control, currency and maturity structure of debt and its management, risk management of debt, and restructuring issues. Section V deals with external debt vulnerability and risk indicators, including external, domestic, and market indicators. Finally, Section VI presents a summary and a list of recommendations.

II. Sources of vulnerability

The key issue related to external debt management is its sustainability over the medium term. Sustainability will depend among others on developments in the domestic economy and those related to the external environment, as well as the initial level and structure of external debt.³ A domestic policy imbalance will have different implications depending on the nature of the external debt, e.g. whether it is market related or official, and whether it has a short- or long-term maturity structure, together with the overall conditions of the economy.

A. Vulnerabilities for countries with limited access to private financing

A vast majority of smaller countries with relatively limited levels of development depend on bilateral and multilateral official flows, to a large extent of a concessional nature, as well as unilateral transfers. It is also a common feature that only a small proportion of the enterprise sector, mainly the

large export-oriented or import-substituting enterprises as well as public utilities, have access to commercial type of financing.⁴ For these countries, external debt shocks have depended on the policies of donors/creditors regarding their external aid approach, and the domestic conditions in the receiving country. Initiatives like that for the HIPC countries have sought to help but as of today have not been able to reduce the debt burden substantively.

The aid decisions in the donor country are subject to their budgetary process and the political forces and balances in each particular country. Thus, the total amount of resources will be very sensitive to the trends toward external aid. As has been observed in recent decades, the total bilateral and multilateral support by advanced economies to developing countries has declined as a proportion of total debt, from 54 per cent in 1970 to 42 per cent in 2002. Furthermore, bilateral aid has declined from 40 per cent to 23 per cent of total debt over the same period (tables 2 and 3). The net flow of official development assistance has tended to fall and now stands at 0.17 per cent of the GDP of the advanced economies, a far cry from the one per cent objectives of years past.

Moreover, aid has become less responsive to short-term or cyclical phenomena. Even multilateral aid has remained low in relative size and more constrained than in the past. Therefore, aid recipients face a trend decline in their external inflows.⁵ When a country is heavily indebted, the prospect of a decline in net inflows, and a possible net resource outflow (defined as the external current account outcome net of interest and dividend payments and entailing the transfer of domestic resources to the creditor countries) makes the management of the economy very demanding, as it transfers the cost of lower aid to the borrowing country, and hampers growth. This is confirmed by the recent experience of developing countries in all regions, with negative resource outflows of more than one per cent of GDP a year (table 4). While these negative flows are not a bad sign in theory, the poor growth record of developing countries indicates a serious disconnect between capital flows and economic development.

Domestic policy shocks and real external shocks are the culprits of vulnerability for this group of countries. Real external shocks, like declines in terms of trade, increased protection among advanced economies, political conflicts and wars, or natural catastrophes, immediately impose a burden on the

Table 2

STRUCTURE OF DEBT BY CREDITOR										
<i>(Billions of dollars)</i>										
	1970	1980	1990	1996	1997	1998	1999	2000	2001	2002
<i>Debt to multilaterals</i>										
East Asia and Pacific	0.5	5.5	35.0	51.5	51.4	59.6	64.4	65.8	66.1	68.4
Europe and Central Asia	0.6	4.4	16.6	26.9	29.1	32.7	34.1	34.8	36.8	41.6
Latin America and Caribbean	3.0	14.2	60.0	70.6	70.6	83.8	91.6	93.1	97.8	105.1
Middle East and North Africa	0.2	5.6	15.8	23.5	22.2	24.4	24.5	23.2	22.9	24.2
South Asia	2.2	9.3	38.2	56.5	55.8	59.8	63.1	61.1	60.7	65.6
Sub-Saharan Africa	0.9	7.6	38.2	54.7	53.6	57.1	56.1	54.7	54.5	60.4
Total (all developing countries)	7.3	46.5	203.7	283.7	282.8	317.4	333.9	332.6	33.9	365.3
<i>Debt to official creditors</i>										
East Asia and Pacific	4.1	21.0	108.3	158.6	151.6	170.6	190.3	177.8	173.3	185.9
Europe and Central Asia	2.6	18.6	64.3	140.6	135.5	145.0	147.5	143.9	132.0	132.2
Latin America and Caribbean	8.1	45.0	146.2	170.3	157.4	158.5	162.5	161.0	157.4	164.8
Middle East and North Africa	3.1	31.2	80.9	114.5	106.4	109.3	104.6	98.7	95.8	96.5
South Asia	10.9	30.1	86.5	105.9	101.6	107.6	116.5	106.1	104.5	111.0
Sub-Saharan Africa	4.2	25.7	108.7	135.4	130.7	138.2	128.1	134.4	128.3	135.8
Total (all developing countries)	33.1	171.7	595.1	825.2	783.2	829.2	849.5	821.8	791.4	826.1
<i>Debt to private creditors</i>										
East Asia and Pacific	1.0	18.7	68.6	103.3	119.8	110.3	107.9	100.1	102.3	106.4
Europe and Central Asia	0.4	26.3	107.8	126.3	132.3	148.4	144.7	139.3	131.9	134.3
Latin America and Caribbean	7.7	99.9	208.4	238.8	237.1	255.3	258.7	263.4	261.6	265.9
Middle East and North Africa	1.1	29.6	54.6	38.6	37.8	42.6	49.3	47.6	47.7	48.5
South Asia	0.7	2.4	24.3	25.8	30.8	34.6	31.2	35.7	35.7	33.6
Sub-Saharan Africa	1.6	16.4	35.7	34.5	33.0	32.2	28.4	25.8	23.8	20.7
Total (all developing countries)	12.4	193.2	499.4	567.3	590.7	623.3	620.1	611.9	603.0	609.4

Source: World Bank, *Global Development Finance 2003: Striving for Stability in Development Finance* (2003).

external sector, and thus will have a direct impact on domestic policy making. Countries will need to follow an appropriate combination of adjustment and financing. The main issue will remain the mix between the two, which will depend on the nature of the shock (transitory or permanent) and the availability of financing. With limited sources of funds, namely foreign reserves of the banking system, quick disbursing financing from IFIs (particularly the IMF) and some degree of new disbursements/debt relief

from bilateral donors, there has been low availability of fresh funds. As a consequence, countries had to absorb the brunt of adjustment and adjust to the amounts available.⁶

Domestic policy shocks are likely to be the most sensitive source of vulnerability, most often resulting from inappropriate macro policies. The initial impact may be similar to those resulting from a real external shock, e.g. balance-of-payments pressures,

Table 3

STRUCTURE OF DEBT BY CREDITOR										
<i>(Percentage of total debt)</i>										
	1970	1980	1990	1996	1997	1998	1999	2000	2001	2002
<i>Debt to official creditors/total Debt (EDT)</i>										
East Asia and Pacific	48.2	32.5	45.3	31.8	28.7	31.9	35.1	35.7	34.4	36.5
Europe and Central Asia	52.6	24.6	29.5	38.3	35.0	29.9	29.8	28.6	26.5	25.8
Latin America and Caribbean	25.0	17.5	30.8	25.4	22.4	20.5	20.5	20.6	20.6	20.9
Middle East and North Africa	63.3	37.4	44.2	56.2	54.5	52.1	48.9	48.8	47.8	47.7
South Asia	88.9	79.6	66.8	68.2	65.5	66.0	69.6	64.2	64.7	66.5
Sub-Saharan Africa	60.4	42.3	60.4	58.5	59.2	60.5	59.6	63.6	63.2	66.4
Total (all developing countries)	47.1	29.6	41.9	38.8	35.8	34.6	35.0	34.8	33.9	34.7
<i>Debt to private creditors/total Debt (EDT)</i>										
East Asia and Pacific	51.8	67.5	54.7	68.2	71.3	68.1	64.9	64.3	65.6	63.5
Europe and Central Asia	47.4	75.4	70.5	61.7	65.0	70.1	70.2	71.4	73.5	74.2
Latin America and Caribbean	75.0	82.5	69.2	74.6	77.6	79.5	79.5	79.4	79.4	79.1
Middle East and North Africa	36.7	62.6	55.8	43.8	45.5	47.9	51.1	51.2	52.2	52.3
South Asia	11.1	20.4	33.2	31.8	34.5	34.0	30.4	35.8	35.3	33.5
Sub-Saharan Africa	39.6	57.7	39.6	41.5	40.8	39.5	40.4	36.4	36.8	33.6
Total (all developing countries)	52.9	70.4	58.1	61.2	64.2	65.4	65.0	65.2	66.1	65.3
<i>Debt to multilaterals/total debt (EDT)</i>										
East Asia and Pacific	..	8.4	14.6	10.3	9.7	11.1	11.9	13.2	13.1	13.4
Europe and Central Asia	..	5.8	7.6	7.3	7.5	6.8	6.9	6.9	7.4	8.1
Latin America and Caribbean	..	5.5	12.6	10.5	10.1	10.8	11.5	11.9	12.8	13.3
Middle East and North Africa	..	6.7	8.6	11.5	11.4	11.6	11.5	11.5	11.4	11.9
South Asia	..	24.6	29.5	36.4	36.0	36.7	37.7	37.0	37.6	39.3
Sub-Saharan Africa	..	12.5	21.6	23.6	24.3	25.0	26.1	25.9	26.8	29.6
Total (all developing countries)	..	8.0	14.3	13.3	12.9	13.3	13.8	14.1	14.5	15.3

Source: World Bank, *Global Development Finance 2003: Striving for Stability in Development Finance* (2003).

inflation, and problems with economic activity. However, the mix between domestic adjustment and financing may well be different than when a country faces an external shock. Specifically, foreign donors/creditors will be less willing to provide support when the root of the domestic economic problems is perceived to be the result of domestic policies. In such circumstances, the domestic authorities will need to pursue more aggressive macroeconomic policies than in the presence of an external event.⁷ Still, there are clear limits to the ability of poor countries to proceed with a strong adjustment, and donors do not always recognize this.

B. Vulnerability of countries with access to market-related financing

The focus of public attention on debt and balance-of-payments issues has been concentrated among the largest developing countries. Concerns have arisen about the impact of their problems on the overall behaviour of investors, and on the general performance of capital markets. The external debt crises of the 1980s, the Mexican crisis of 1994–1995, the Asian, Russian, and the different Latin American problems of recent years, have all been aggravated by the dependence of their budgets and

Table 4

NET RESOURCE TRANSFER FROM DEBT										
<i>(Billions of dollars and per cent)</i>										
	1970	1980	1990	1996	1997	1998	1999	2000	2001	2002
<i>Net resource transfers on debt (\$ billion)</i>										
East Asia and Pacific	0.7	5.2	1.9	16.1	16.1	-15.0	-20.7	-29.7	-27.6	-22.9
Europe and Central Asia	0.3	9.8	0.5	-0.8	6.6	14.0	3.5	-5.1	-19.0	-10.2
Latin America and Caribbean	1.6	5.6	-8.6	7.8	2.9	23.2	-23.9	-35.3	-43.1	-41.9
Middle East and North Africa	0.4	3.3	-5.8	-9.4	-10.6	-3.1	-10.2	-8.7	-5.1	-6.1
South Asia	0.8	2.5	1.4	-2.7	-2.3	0.3	-4.7	-0.9	-4.8	-4.4
Sub-Saharan Africa	0.7	5.4	0.7	-4.0	-2.1	-4.4	-3.7	-3.2	-3.0	-2.7
Total (all developing countries)	4.5	31.8	-10.0	6.9	10.6	15.0	-59.7	-82.9	-102.6	-88.3
<i>Net resource transfers/Gross National Income (GNI) (per cent)</i>										
East Asia and Pacific	2.6	1.3	0.3	1.1	1.1	-1.1	-1.4	-1.9	-1.7	-1.3
Europe and Central Asia	1.9	10.4	0.0	-0.1	0.6	1.4	0.4	-0.5	-0.2	-1.0
Latin America and Caribbean	1.0	0.8	-0.8	0.4	0.2	1.2	-1.4	-1.8	-2.3	-2.6
Middle East and North Africa	0.9	0.9	-1.5	-1.7	-1.8	-0.5	-1.7	-1.3	-0.1	-0.9
South Asia	0.9	1.1	0.4	-0.5	-0.4	0.1	-0.8	-0.1	-0.1	-0.7
Sub-Saharan Africa	1.1	2.1	0.3	-1.3	-0.6	-1.4	-1.2	-1.0	-0.1	-0.9
Total (all developing countries)	0.7	1.1	-0.2	0.1	0.2	0.3	-1.1	-1.4	-1.7	-1.4

Source: World Bank, *Global Development Finance 2003: Striving for Stability in Development Finance* (2003).

their private investment on market-related financing. These countries tend to have a significant domestic capital markets and access to foreign borrowing. Furthermore, there is a close association between the domestic and the foreign financial markets, particularly in the presence of increasingly integrated markets.

While domestic and external shocks have similar initial effects as those described for less developed countries, the vulnerability of financial-market dependent economies is increased as investors react to the effects of the initial shocks. Furthermore, individual economies are subject to external financial shocks better known as financial contagion, which will require domestic adjustment, even if the origin of the crisis is not associated with the domestic economy.⁸ Typical cases of contagion have been those of Brazil in response to the crisis of Asia and Russia; Argentina, in response to the Brazil crisis of 1999, and the reaction of financial markets to Latin

American risk after the Argentine crisis of 2001–2002. Under those conditions, the vulnerability of emerging countries is much greater than that of poorer countries.⁹

In any of the cases described above an external event will result in an increase in borrowing costs (for example as measured by the EMBI or Emerging Market Bond Index), and a capital outflow. This will exert pressures on foreign reserves and on the foreign exchange markets, well beyond the effects from the initial shock. Under these conditions, in today's world policy response has to be quicker and possibly more forceful than in the absence of significant capital mobility. Investors are likely to respond not only to the effect of the shock, but also to the expected behaviour of other investors, accelerating any possible financial stress that may emerge.

In the past, the reactions of the markets could be ameliorated as countries started negotiations with

the IMF in order to obtain financial support. In today's world, with many more participants in the market, it appears increasingly more difficult to help control these outflows, unless the negotiation between the country and the IMF and the IFIs is accompanied with a commitment by banks and governments to a significant financial package. The catalyst role of the IFIs has declined and the vulnerability of debtor countries has increased, more so as the amounts of possible support on the part of the official community have stagnated. With limited official financing, the role of the IFIs as sources of counter cyclical financing has diminished and private lenders perceive a greater risk of debt standstills, defaults, or possible forced restructurings, and therefore seek to reduce quickly their exposure to countries in difficulty.

As countries face these increasingly volatile and rapidly reacting capital markets, they deflate but at a cost in terms of activity and growth, so as to avoid these runs. Countries are expected to "behave well", with or without IMF intervention. In this sense borrowing countries confront a stricter test of economic performance than before. The IMF and other IFIs have remained relatively small in terms of available resources (13 per cent of total debt in 2002 for middle income countries), thus having limited impact at a time of crisis. In this context, the advice of the IMF is questioned more often, with a faster reaction on the part of economic agents to move funds outside the country. While country authorities may impose controls at times of crisis, it is likely that these controls may be either ineffectual in controlling outflows, or detrimental in attracting additional resources.¹⁰ Only an early imposition of transparent and market friendly controls to inflows, like those imposed by Chile in the past, will help reduce volatility effectively.

In its response, the authorities will need to focus on the mix between financing and adjustment. Countries may face short-term reversible shocks (terms of trade fluctuations), or longer-term unsustainable situations (secular changes in terms of trade, excessive levels of indebtedness, or excessive fiscal and monetary expansion)¹¹ In the presence of short-term shocks a country may proceed with a more moderate process of adjustment, or maintain its policy stance. A more permanent shock would require a more decisive policy reaction. However, it is essential that the IFIs and the developed world recognize the need for a more forceful counter cyclical

role for the developing countries, to avoid the serious costs that the increased vulnerability entail.

III. External debt sustainability principles

The previous section discussed the issue of the vulnerability of developing countries and the need to find an adequate balance between domestic adjustment and foreign lending. This section covers the principles involving the sustainability of external debt, and the implications for debt management.

A. External debt sustainability

External debt sustainability, by its very nature, entails the need to pursue a time-consistent path that will allow that the debt-servicing burden over time, as a minimum, does not hamper economic growth, and in more general circumstances enhances growth. The simplest test of sustainability is that over the medium term the rate of return on investment exceeds the opportunity cost of the funds, with the real interest rate as the most relevant proxy. While such principle is valid at the micro level, and it would hold if all external resources were to be invested on that basis, the actual experience of debtor countries is more complex. In practice, the public sector borrowing and part of the private sector borrowing do not follow these principles and tends to be oriented to expenditure with no market-related rate of return. It thus entails the need for limits in expenditure or increases in revenue, associated with higher growth in the future.¹² Debt sustainability exercises focus mainly on the public finances, where the level of indebtedness has to be seen at an aggregate level, fundamentally, through the medium term debt service ratio to revenues of the public sector, and the behaviour of the external public debt to GDP ratio. As shown in chart 1 there are three typical scenarios, with an increasing, a stabilizing, or a declining ratio of debt to GDP. The simplest policy proposition is that the debt/GDP ratio should either stabilize or decline, although there are no set rules as to what is an adequate level of debt.

The ratio of debt to GDP, in simple terms, will depend on the behaviour of debt, the behaviour of real GDP and the movements in the real exchange

rate. To the extent that GDP grows faster than debt, or the real exchange rate appreciates, the ratio will tend to decline, and vice versa (see box 1 for an analysis of debt dynamics). However, this principle does not help in terms of policy making, but only alerts to the behaviour of the variables. It is thus crucial to understand the behaviour of the underlying variables, namely the components of debt dynamics. Those components are the payment of interest and the net resource transfer – the resources that are effectively available for actual use after interest payments – and the impact of these resources on growth. To the extent that the interest rate exceeds the rate of growth of the economy, the debt to GDP ratio will increase. Thus, a transfer of real resources abroad will be required to attain the stabilization of the debt ratio. Accordingly efforts will be required to obtain the resources internally (chart 2). In circumstances of a crisis either of internal or external origin, it could also result in the need for a reduction in the face value of debt as a mechanism to restore viability.

The best way to illustrate the policy implications of such resource transfer is in terms of the public sector debt. For the public sector finances, the movements of the ratio of debt to GDP, equivalent to the public sector overall deficit, will be equal to the sum of the primary balance (the fiscal outcome excluding interest payments) and the total interest bill. To the extent that the interest bill exceeds the primary surplus in excess of what would be permissible on account of GDP growth, the ratio of debt to GDP will increase (see box 1). If the objective is to reduce the debt to GDP ratio, this will require an adjustment of policies to increase the primary surplus. If growth is lower, and the interest rate higher, the internal effort will be necessarily higher. This holds for both total debt and external debt of the public sector, although if there is both internal and external public debt, there is a need to take into account the possible substitution between the two types of debt. No matter what additional considerations, it is clear that, the overall effort (domestic or external) will be higher as debt increases. Moreover if the debt servicing effort results in a decline in output, the debt/GDP ratio is very likely to deteriorate.

To the extent that there is a constraint on the availability of new financing either in the short or the medium term, both the external current account, as a mechanism to provide the needed resource trans-

Chart 1

BEHAVIOUR OF DEBT SERVICE RATIO TO GDP

(Per cent of GDP)

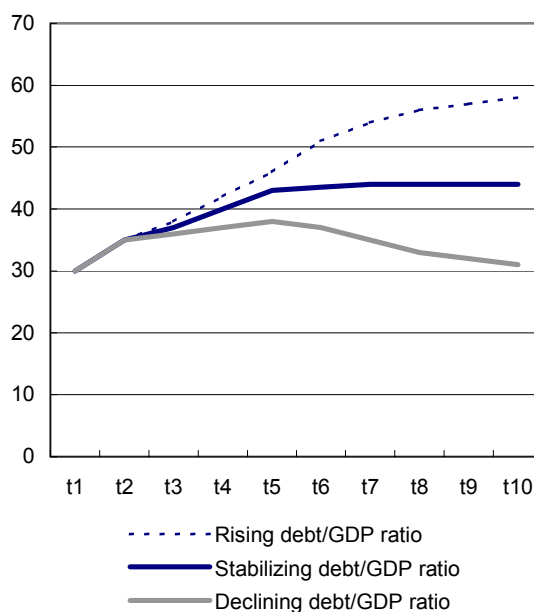
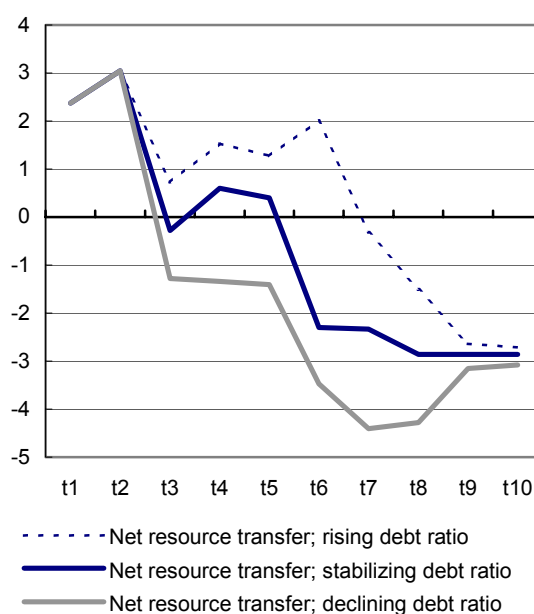


Chart 2

NET RESOURCE TRANSFER UNDER DIFFERENT ASSUMPTIONS OF DEBT-RATIO BEHAVIOUR

(Per cent of GDP, based on the debt ratio depicted in chart 1)



Box 1**FACTORS AFFECTING THE STABILITY OF THE RATIO OF DEBT TO GDP**

In simple terms, the behaviour of the debt service ratio (**ed**), is a function of the changes in the stock of debt (**ED**), the movements in GDP (**y**), and the relation between domestic prices (**p**), and the exchange rate (**R**), measured as units of domestic currency per unit of foreign exchange. If for simplicity, we assume that foreign inflation is non-existent or that the stock of debt is adjusted for changes in foreign prices, the formula would be:

$$\frac{d\text{ed}}{\text{ed}} = \frac{d\text{ED}}{\text{ED}} - \frac{dy}{y} + \frac{dR}{R} - \frac{dp}{P} \quad (1)$$

For a constant real exchange rate, i.e. $\frac{dR}{R} = \frac{dp}{P}$, the relation between debt and GDP is straightforward as it depends on the change in debt and GDP. However, it is devoid of policy meaning, without further elaboration.

If formula (1) is expanded further on the basis that $d\text{ED} = \frac{d\text{NT}}{\text{ED}} + iD$,

to include the net resource transfer (**NT**) and the amounts needed to cover interest payments, the formula would be as follows:

$$\frac{d\text{ed}}{\text{ed}} = \frac{d\text{NT}}{\text{ED}} + i - \frac{dy}{y} + \frac{dR}{R} - \frac{dp}{P} \quad (2)$$

Furthermore, if a debt restructuring is contemplated, the formula becomes

$$\frac{d\text{ed}}{\text{ed}} = \frac{d\text{NT}}{\text{ED}} + i - \frac{dy}{y} + \frac{dR}{R} - \frac{dp}{P} - \frac{DR}{\text{ED}} \quad (3)$$

Where **DR** represents a quantum reduction in external debt. From this formula it is clear that, for a given real exchange rate ($\frac{dR}{R} = \frac{dp}{P}$), if interest rates exceed the rate of growth it will be necessary to effect a transfer abroad. Formula (3) also shows the effect of a crisis on debt service as reflected by depreciation in excess of domestic inflation, and with slow or negative growth. Such scenario is a stylized reflection of a debt crisis, which may entail the need for either a reduction in interest payment or a reduction in debt. Such actions, of course will need to be viewed dynamically, as a cut in the stock of debt today will most likely reduce the access to additional financing in the future, and needs to be incorporated in the calculations of gross external financing requirement.

The formulation for the public sector can be approximated by the following formula, which excludes for simplicity the effects of inflation and the exchange rate:

$$d\text{EDP} + d\text{DPD} = ie * \text{EDP} + id * \text{DPD} - \text{PrS} \quad (4)$$

Where **EDP** is external debt of the public sector; **DPD**, domestic debt; **ie**, interest on foreign debt; **id**, interest on domestic debt; and **PrS**, the primary surplus of the public sector. To the extent the interest rates are higher or the size of the debt larger, the internal effort will be necessarily higher. It is also clear that there can be some substitution between domestic and foreign debt, but the constraint in that case may be associated with a possibly higher domestic interest rate.

Equivalent formulations can be found in several papers, including **Morris Goldstein, Brazil, Debt Sustainability**. These principles also underlie the financial programming exercises that are pursued in the context of Fund programmes.

It is important to note that these principles hold for both contractual and non-contractual (FDI) obligations. An additional element is the payment of amortization, which is not included in this formulation but will have a direct bearing on the sustainability of debt, as renewal of debt is formulated in terms of gross flows, rather than net changes in the stock of debt as is assumed in the formula, implicitly assuming no problems of roll-over. The formulas also abstract from the impact of conversion of contingent liabilities into actual obligations.

fer, and the primary fiscal balance, as the policy instrument of the public sector will need to be utilized to attain a balance between the available resources and the requirements of a debtor country economy. Under these conditions it is also necessary to bring debt reduction as an additional mechanism of adjustment.

The path to sustainability depends on a number of other conditions: the initial stock of debt, the availability of concessional financing, and the level of possible aid, as shown in a recent paper by Sebastian Edwards on Nicaragua. This conclusion is important; while many countries have benefited from major debt reduction exercises, a country's success is still dependent on future availability of resources.¹³

B. Limitations to the sustainability analysis

While the approach described above is powerful in terms of coverage and overview of policies, the analysis is subject to many constraints that need to be taken into account. In his paper on *Debt Sustainability, Brazil and the IMF*, Morris Goldstein¹⁴ enumerates a number of important caveats applicable to the public sector, that are the basis for the following enumeration, with some additions associated with the issues of foreign debt. All these considerations in the end make it necessary to move away from the emphasis on adjustment and more toward aid.

- The conventional framework does not take into account the problems related to the transfer of resources in the external sector, i.e. the foreign exchange constraint, which reduces the ability to effect the transfer without loss of income.
- The debt sustainability exercises need to take into account both net capital flows and gross financing requirements, to account for the debt amortization schedules.
- In general the focus of projections is related to actual liabilities of the public sector, without regard to contingent liabilities, or the possible risk of private liabilities becoming part of the public debt, an experience that was common in Asia and Latin America.
- The exercise needs to take into account the feedback of macroeconomic policy adjustments on debt, banking, and the exchange rate.

- The projections need to be based on realistic assumptions about the terms of new borrowing, as well as the possible volatility in key variables, thereby requiring a range of scenarios, rather than single projections. Excessively optimistic scenarios may lead to an eventual aggravation of the debt situation.
- Projections do not show the difficulties involved in attaining the required adjustment, which needs to be made explicit in any exercise on sustainability, particularly when there are questions about the external solvency of the debtor country. In those cases, debt restructuring and reduction are realistic options that have to be included.
- Finally, any debt sustainability exercise needs to include an assessment that determines the adequate level of indebtedness, and goes beyond the stability of the ratio of debt to GDP. While the debt mechanics will adequately measure the required effort (either in the form of a primary fiscal balance and the required net resource transfer), a judgment is frequently lacking about the sustainability of the required adjustment effort over the medium term. This will depend on the growth potential of the economy and the political and social constraints involved in effecting the transfer of resources abroad.

IV. Mechanisms of debt management

The mechanisms of debt management are of significant importance but relatively limited in number, as they refer to the amount to be borrowed, the type of instrument to be utilized, the terms of borrowing, including its currency and specific guarantees, and the type of creditor involved.

A. Magnitude of foreign borrowing

For the public sector, the magnitude of foreign borrowing and possible limits to it will be determined by the net financial gap of the public sector, the amount of amortization falling due, and the balance between domestic and foreign borrowing. The first two points are straightforward in terms of their prin-

principles, although they require considerable elaboration in practical terms. However, the balance between domestic and foreign financing goes to the core of macroeconomic management.

Under the simplest of circumstances, if a Central Bank holds a high level of foreign reserves, and there are no legal limitations for direct borrowing by the government there may be a simple substitution between use of reserves and foreign borrowing, with limited effect on domestic macroeconomic variables. More often, the substitution between domestic and foreign borrowing will entail a change in domestic interest rates as a consequence of the greater pressures imposed on domestic markets, under the realistic assumption that there is no perfect substitution between external and domestic markets. In these circumstances, the monetary and the public sector authorities will need to follow a high degree of coordination, because of the unintended consequences that a loan or bond placement either domestically or abroad will have on the macroeconomic equilibrium.

Finally, the amount of actual foreign borrowing frequently underestimates other external commitments. Some more advanced developing countries have made use of derivative markets, including through forward operations. Such was the case of South Africa and Brazil in recent years. The transactions commit countries to large obligations based on exchange rate risk, even if they appear as contingent obligations in government statistics.

B. Borrowing instruments

The choice of instruments available to borrowing countries is wide, and this paper will not dwell in this area. As noted above, there are two main sources of foreign financing: official bilateral and multilateral institutions, and private sources. Regarding public sources, these are generally in the form of loans, guaranteed by the borrowing country, and by the official creditor country as well.¹⁵ In general, these resources have been oriented mainly to the public sector, but also to the private sector, particularly through the efforts of the multilateral development agencies (IFC of the World Bank Group, and equivalent mechanisms of the regional banks). However, the magnitudes have been smaller than in the case of direct lending to the government.

Private lending to developing countries has had a long tradition in international capital markets. Placements have been in the form of either loans by banks or other financial institutions or the placements of bonds and equivalent instruments in the general market or in the form of private placements. These instruments constitute, together with foreign direct investment, the most important tool of foreign financing of private investment in developing countries, and the largest proportion of their debt (see tables 2 and 3). The viability of foreign private financing has been marred by the volatility of economic performance by many borrowing countries, over many years. Thus, these placements, while important for the borrowing countries constitute only a small fraction of total international financing flows. Nonetheless, there is a significant segment of dedicated investors in this market.

The terms of foreign financing relate to only a few key issues, although they are implemented in a wide variety of different ways, making these markets complex and highly specialized. These elements are interest rates, maturities, guarantees, and risk management.

Interest rates are generally linked to a key market rate, namely, the US treasury rate, or LIBOR for US dollar placements, and equivalent rates for other currencies, but seldom those of the borrowing countries. The pricing is generally reflected in a spread over the base rate directly linked and highly sensitive to the economic and political conditions of the borrowing countries.¹⁶

Risk management is carried out following a combination of maturities, with correspondingly different interest rates, together with a mix of currencies and guarantees. There are no fixed norms relating to the optimal mix of debt, other than the common rules related to debt portfolio management, that tends to balance the benefits of lower interest rates and longer terms, and the exposure to a well diversified basket of currencies, in light of the fluctuation of exchange rates among different currencies.

C. Debt restructuring

Restructuring is a central component of the discussion of external debt, but it can only be seen as an exceptional instrument in debt's general management over the medium term.

At times there may be questions about the moral value of certain types of debt, particularly those contracted by governments with limited legitimacy, or for controversial purposes, like arms related obligations,¹⁷ and which at times may lead to repudiation. However, the basic premise of debt management is that successive governments recognize previous obligations, and that debt restructuring/reduction are one-time solutions associated with problems of liquidity or solvency. The main argument against this type of exercises is that they drastically reduce the ability of a country to have access to financial markets in the future, thus having a detrimental effect on available resources over the medium term.¹⁸ However, it is clear that if the domestic economy is appropriately managed, after restructuring risk conditions and premia will improve. However, to take advantage of this improvement, once a debt standstill or default is declared, it is extremely important to move forward quickly to help restore some degree of availability without legal threats, thus reopening doors to trade and finance.

Many efforts have been made to provide for a stable and predictable framework for debt renegotiations, equivalent to bankruptcy procedures at the national level. The most recent effort has been made by the IMF, in the form of its Sovereign Debt Restructuring Mechanism (SDRM) proposal, consisting of the establishment of procedures for standstills, and eventual restructuring of debt obligations of countries in difficulties. However, private lenders have opposed this proposal, because they fear the possible emergence of moral hazard; by borrowing countries, because they fear that markets will charge an additional premium in the presence of a greater risk of default; and from larger member governments, that may be weary of a possible loss of sovereign power of its supervisory and judicial system to a multilateral organization.¹⁹

A declaration of default (Ecuador, 2000, and Argentina, 2001) requires considerable subsequent actions on the part of creditors and debtors to restore some degree of normalcy. However, there are no agreed procedures in the private sector, and the process is sometimes long and complex. In these circumstances, the IFIs, and particularly the IMF and the World Bank, seek to act as honest brokers, carrying out an evaluation of the restructuring requirements, and providing the macroeconomic analysis required for such exercise. Over time however, the role has fluctuated, from very heavy

involvement in the early 1980s, at the time of the debt crisis, to an arms length approach in recent cases. Lenders are now developing proposals for codes of conduct and qualified majorities to deal with debt restructuring/reduction exercises. However, these proposals have not been discussed with borrowing countries with a great risk that they will be imposed without consultation.

A somewhat different experience emerges in relation to public debt. While public and publicly guaranteed lending has declined in importance for many countries, this type of financing remains important, particularly at times of crisis. For this type of debt, there are informal follow up mechanisms, like the Berne Union for trade related credits, and well-established mechanisms for restructuring debt, particularly the Paris Club.²⁰ The Paris Club brings together all major official creditors to a country, and follows agreed principles, based on the type of debt, the presence of arrears, and the level of income of the debtor country. On this basis and with the cooperation of the IMF, acting as a technical advisor, creditors determine a degree of debt relief on official debt that is usually incorporated in the context of an arrangement with the IMF.

In most debt exercises there is a serious conflict among creditors at the time of debt restructuring exercises. Multilateral creditors, like the IMF and the World Bank are accepted to have preferred creditor status, although there are increasing questions about the legal basis of the position. Official creditors may provide extended repayment schedules with low interest, but give debt reduction only under Naples (concessional) terms or in the context of the ESAF/PRGF exercises for poorer countries and leave middle-income countries out of possible debt reduction exercises. In these circumstances private creditors see themselves as residual creditors, having to absorb the brunt of the adjustment. Such argument may be valid for bilateral aid but is tenuous for multilateral agencies, which tend to come in at the time when private creditors are leaving (counter-cyclical lending), and when risk is greater. Furthermore, official creditors, particularly IFIs, tend to come in earlier than private creditors in their rescue efforts, and provide a combination of maturities and interest rates that in fact constitute some form of debt reduction.

In any event, this area of debt management, possibly the most critical for countries in serious

external difficulty, is the one where the process of international cooperation and coordination works the least. The different objectives of creditors, debtors, country authorities and the multilateral organizations have made the task of debt crisis management particularly difficult, with adverse consequences for the borrowers. These difficulties make any accusation of moral hazard of debt restructuring and official borrowing of very little relevance. This area, however, requires considerable additional efforts in the future, at a time when the capital volatility has increased significantly. Such efforts in turn may need to cover all types of debt and should result from a process of consultation between debtors and creditors, and not be unilateral.

V. External debt vulnerability and risk indicators

The late Charles Kindleberger in his book “Manias, Panics, and Crashes”, first published decades ago, reviews the link between domestic policies and external crisis. However, only in recent years has there been a systematic analysis of indicators that can predict the emergence of a crisis.²¹

The fundamental approach in this regard is to analyse the behaviour of a series of indicators based on past experience, and correlate those indicators with the actual occurrence of a crisis. These indicators can be classified into two broad categories, macroeconomic and external indicators, and market-related indicators. While most studies are focused on currency and banking crises, their relevance to a debt crisis and early warning is significant.

A. External debt indicators

The external debt indicators are the most direct and simplest to follow, but an assessment is difficult to make without a macroeconomic context in which the debt dynamics take place, as reflected below. In all cases, rapid increases in the relevant ratios provide a clear signal that problems of debt are mounting. The key indicators are:

- *External debt ratio to GDP.* The most widely used measure of the debt burden, as discussed in section III.A above.

- *External debt service ratio to GDP or external debt service ratio to exports.* Measure the debt-servicing burden, in conjunction with indicators like *interest to GDP*.
- *Ratio of short-term debt to total debt and debt service due to total debt.* Both are appropriate indicators of liquidity issues associated with external debt. As the ratio of short-term debt to GDP increases or the amounts falling due increase, there will be more questions about the viability of rolling over existing external debt.

B. Macroeconomic indicators

The commonly accepted methodology for the follow up of macro indicators consists of analysing the behaviour of a series of macroeconomic variables for a period of twelve to twenty-four months before the emergence of a crisis. The studies then analyse the link of these variables with the event of crises. The correlation between these events provides an idea of the predictive value of the key variables. The indicators with the best predictive value are presented below:

- *Net international reserves.* A decline is generally observed prior to the emergence of a crisis, accompanied by imbalances in other variables.
- *Real effective exchange rate.* In general a sustained real appreciation is observed prior to a debt and currency crisis, frequently caused by the combination of rising fiscal deficits and significant foreign borrowing. The behaviour of the exchange rate is of course also linked to other important factors, e.g. terms of trade, change in export patterns, and changes in relative productivity.
- *Inflation.* An accelerating rate of inflation, together with an appreciating exchange rate (in part due to a fixed exchange rate) provides an indication of possible crisis.
- *Output growth.* A deceleration of growth, or output decline, is another leading indicator of crisis, associated with problems in the external sector, increased borrowing costs, loss in competitiveness, and credit availability problems abroad and domestically.

- *Export and import behaviour.* Both indicators provide a signal of possible weakness in the balance of payments, through the *external current account*, thus suggesting a lesser capacity to service debt.
- *Terms of trade.* A decline in terms of trade will indicate a possible reduction in the country's capacity to pay in the future.
- *Monetary indicators.* Indicators of growth in *domestic credit*, *credit to the public sector*, the *monetary base*, and *M2*, point at an excessive expansion of domestic demand, that will suggest the possible emergence of imbalances.
- *Interest rates.* High real interest rates, together with increasing spreads between lending and deposit interest rates, also suggest increasing problems in capital markets.
- *Fiscal deficit and credit to the public sector.* Indicators of domestic imbalance.

Frequently, international financial organizations or private sector lenders focus on only a few indicators, and may make judgments about conditions in the borrowing countries that are not warranted (see section V.C below). Acting on that basis they may well generate further volatility in the borrowing country, asking for too much adjustment, or making fewer funds available.

All the indicators described above have a good predictive capacity regarding banking, currency and external debt crises. Nonetheless, their predictive value is far from perfect. To begin with, the prediction of a crisis cannot be based on only a few indicators. It is most likely the simultaneous movement of several of the indicators can predict possible problems, and even so the possible outcome can be very different. A number of adverse indicators in countries like Jamaica until very recently suggested problems, but were incorrectly predicting a crisis. While in Argentina, appreciating exchange rates, declining GDP, a widening public sector deficit, and an increasing external current account deficit suggested a possible crisis, other signals, like foreign reserves and domestic credit suggested otherwise, until a major crisis erupted in 2001. In the case of Uruguay, most indicators did not suggest the emergence of a crisis, but contagion from Argentina led to the restructuring of external debt in early 2003.

In these circumstances, the indicators described can only be seen as early signals that may require correction in policies, but not as decisive proof of an impending problem. The predictive value of the various variables for different periods of time, are summarized in tables 5 and 6. From these tables it can be seen that the predictive value varies considerably and there is no certainty about the lags between signals and an event of crisis. In those circumstances the most reasonable approach is to follow a broad number of indicators in a pragmatic fashion.

C. *Sovereign credit ratings*

The impact of changes in credit ratings by specialized credit rating agencies on the access of developing countries to capital markets is significant. Increases in ratings will result in improvements in the terms of borrowing available to a country (Mexico, 2001), while reductions can have devastating effects on these terms (Uruguay, 2002). The rating of sovereign securities is an offspring of the ratings of private companies, which constitute the bulk of the business of the main rating agencies: Fitch, Institutional Investor, Moody's, and Standard and Poor.

While generally there has been no problem in the assessment of developed countries and their access has been predictable, this is not the case with regard to emerging economies, with limited access to capital markets. In general, the ratings are perceived as a source of instability for many of the borrowing countries. In particular, the downgrading of countries in the aftermath of a negative event or in the wake of debt servicing problems is seen as a cause of a further aggravation of economic conditions for the borrowing countries (Republic of Korea and Thailand, 1997; Argentina, 2001, and Uruguay, 2002). A major concern is the fact that downgrading eventually may lead to a default on the part of the borrowing country. In her recent article on this issue, Reinhart²² asserts that in emerging economies there is a strong link between currency crises and default, and that downgrades can be expected to precede currency crisis and default, thus suggesting that rating agencies are procyclical.

The evidence of recent years suggests that downgrades have followed crises and not predicted them. Clear examples are those of Asia and Latin

Table 5

	INDICATORS OF CRISIS					
	BOP crises		Banking crises		Currency crises	
	Crises called ^a	Noise-to-signal ratio ^b	Crises called ^a	Noise-to-signal ratio ^b	Crises called ^a	Noise-to-signal ratio ^b
M2 multiplier	76	0.67	73	0.50	70	0.61
Domestic credit/GDP	61	0.64	50	0.59	62	0.62
Real interest rate	89	0.75	100	0.45	44	0.77
Lending deposit rate ratio	71	1.52	57	1.93	67	1.69
Excess M1 balances	37	0.56	32	0.82	66	0.52
M2/reserves	81	0.52	75	0.71	70	0.48
Bank deposits	51	0.67	67	1.03	49	1.20
Exports	85	0.40	88	0.61	72	0.42
Imports	52	1.10	60	1.60	54	1.16
Terms of trade	75	0.70	96	0.79	58	0.77
Real exchange rate	59	0.14	58	0.28	57	0.19
Reserves	75	0.55	92	0.71	72	0.55
Real interest rate differential	86	0.90	100	0.52	42	0.99
Output	74	0.46	89	0.48	57	0.52
Stock prices	64	0.38	81	0.28	53	0.47
Fiscal deficit/GDP	27	0.49	43	0.44

Source: ISTAR, *The American Economic Review* (1999); IMF, *IMF Staff Papers* (1998).

a Percentage of cases where a signal accurately called a crisis.

b Ratio of noise to signal is based on an index where a value of one indicates as many fails as good signals. The smaller the number, the more accurate the indicator.

Table 6

CORRELATION MATRIX ^a	
	Debt crisis
Debt crisis	1.0000
Short-term debt	0.0010
Debt service due	0.0317
Reserves	-0.1258
Total debt	0.1264
Commercial share of debt	0.0233
Concessional share of debt	0.0240
Multilateral share of debt	0.0470
Interest rates	0.0930
Overvaluation	0.0150
Openness	0.0592

Source: IMF, IMF Working Paper (2001).

a Correlation shown between debt crisis and leading indicators.

America. Many critics in these circumstances have questioned the value of the changes in ratings. This has been the case, particularly when the downgrades have come in the wake of a major crisis and the country seeks the restoration of stability, in conjunction with the IMF, and the World Bank. While the rating agencies are required to reflect the previous experience, it is preferable that they take a forward-looking view, and consider the measures being taken to correct existing imbalances. In the circumstances, the changes in rating may hinder rather than help the process of recovery.

The Reinhart study shows that sovereign credit ratings do not predict well the emergence of currency crises in emerging economies. This is consistent with the view that the ratings reflect events *ex-post facto*. However, the movements in ratings tend to predict defaults much better, i.e. a downgrade will be followed by a possible default on debt.²³ Of course, the

question is the causality of such downgradings. Downgradings tend to affect negatively capital market access, with adverse consequences on output and the sustainability of debt. Thus, it may well be the case that the change in rating ends up causing, or as a minimum aggravating, the debt difficulties of a borrowing country. It is clear that rating agencies need to deal with the market for developing country credits. However, the key issue is the methodology being used, which needs to be based on a broader set of indicators, in order to assess the prospects of borrowing countries.

VI. Summary and conclusions

Academics and international institution officials have devoted considerable thought and effort to solve the problem of external debt of developing countries. However, external debt remains one of the greatest burdens for this group of countries, hampering their growth prospects, and increasing their vulnerability.

- For developing countries, the debt burden has remained high at 40 per cent of GDP and 113 per cent of exports. The importance of bilateral official aid has declined sharply, although in part this reflects some debt reduction efforts, and new flows are a far cry from original commitments. Financing by multilateral organizations has remained low as a proportion of total debt, precluding the ability of these institutions to provide counter-cyclical support. In all regions, developing countries have experienced net negative resource transfers, reducing their ability to invest domestically. Finally growth for this group of countries has lagged worldwide growth, particularly in Latin America and sub-Saharan Africa.
 - Poorer countries depend heavily on the support of official institutions. Aid to poorer countries has diminished, and donors have increased conditionality on structural reforms. As a consequence, disbursements have slowed, imposing major adjustment costs at a time when the debt burden remains unsustainable. Countries with access to market-related borrowing have been subject to high volatility, as funds move swiftly in and out of borrowing countries, while the IFIs
- have lost relative power and have not been able to act counter-cyclically.
 - The largest developing countries have significant domestic capital markets and access to foreign borrowing. While having access to investable resources, the vulnerability of financial-market dependent economies is high. With limited official financing from institutions like the IMF, private lenders have tended to perceive a greater risk of debt standstills or default and therefore sought to reduce their exposure to countries in difficulty. As a consequence, countries have fewer margins than in the past to absorb shocks, and the burden of adjustment has fallen more and more on borrowing countries.
 - Debt sustainability exercises help to deal with problems of debtor countries. Normally, the emphasis of these exercises is placed on the behaviour of the external debt to GDP ratio. The simplest policy proposition is that the debt/GDP ratio should either stabilize or decline, although there are no set rules as to what is an adequate level of debt. The ratio will depend on the levels of debt, interest rates and GDP; and the movements in the real exchange rate. Furthermore, in a crisis countries can have recourse to a reduction in the actual level of debt. In the specific case of the public sector finances, the efforts to stabilize the ratio of debt to GDP will focus on the primary surplus.
 - Debt restructuring cannot be seen as regular source of financing/refinancing, as it affects future access to financing. However, at times of crisis, as is the case today, they become inevitable. Frequently there is a serious conflict among creditors at the time of debt restructuring exercises. Different objectives of creditors, debtors, and the multilateral organizations, have made the task of debt crisis management particularly difficult, generally with adverse consequences for the borrowing country economies. Solutions are required including the development of qualified majorities and the use of neutral arbitrators.
 - Recent literature has provided a significant body of evidence about the most relevant indicators and predictors of external and debt crises. The key macroeconomic indicators are the real effective exchange rate; output growth; terms of

trade; monetary indicators; interest rates; exports, imports and the current account; the ratios of external debt, debt service and interest payments to GDP; the ratio of debt service to exports, and the ratios of short-term debt to total debt, and debt service due to total debt. All these indicators have a good predictive capacity. However, they do not predict with total accuracy, because they work with variable lags, and sometimes predict erroneously. Thus, a good tracking system needs to be based on several of these indicators.

- The impact of changes in sovereign credit ratings on the access of developing countries to capital markets is significant. Improved ratings will result in better terms of borrowing, while reductions in these ratings can have devastating effects on these terms, with adverse consequences on output and the sustainability of debt. Thus, changes in rating can cause or aggravate the debt difficulties of a borrowing country. To avoid this problem, credit agencies should expand their use of indicators, and take a broader view of developments than at present, including with regard to programmes with IFIs.

In conclusion, the following recommendations can be made for the various parties involved in debt issues:

For debtor countries

- The key policy advice is the pursuit of prudent macro policies, which allow for controlled borrowing, reduced effects of external volatility, and reserve accumulation in good times.
- Public and private borrowing needs to be subject to strict scrutiny, in terms of its use, within the context of growth oriented debt sustainability exercises, with comprehensive debt monitoring and follow-up procedures, including on private sector debt. The IMF and other IFIs are and should continue to provide technical assistance in these areas.
- Borrowing countries need to set up contingent financing, in preparation of short-term crises, in order to preclude unnecessarily tough policy adjustments. IFIs and particularly the IMF need to play a major role in this regard.

For international financial organizations

- As a main principle, financial resources have to start increasing again in line with broad indicators of world economic growth, trade and finance, to allow for adequate levels of financing at times of crisis.
- With additional resources, IFIs should take a strong counter-cyclical approach, with active engagement when private sources of financing dry up.
- In order to be effective, balance-of-payments support at times of capital account crises needs to be prompt, significant in size, and with only a limited link to complex reforms, to avoid excessive upfront delays in negotiations and eventual disbursements.
- Better and more pro-active rules need to be developed within a multilateral context, so as to deal effectively with prospective defaults, and other debt difficulties. A possible solution could be an arbitrage system, with the help of neutral agents or facilitators.

For the official donor/creditor community

- Increased concessional resources are needed for low-income countries, under ODA, to enhance their prospects for growth. Such increase needs to be effected in conjunction with the International Financial Institutions.
- Bilateral aid need to supplement the resources made available by the IFIs.
- Concerted efforts are needed to improve the mechanisms for debt restructuring.

For rating agencies

- To avoid pro-cyclicality of their recommendations, rating agencies need to broaden the use of objective and reliable indicators of debt, in order to provide adequate and relevant indicators to the markets.
- Rating agencies should base their decisions on forward-looking assessments, and not only looking at past performance. The efforts to cor-

rect imbalances, with the help of the IMF and other agencies, need to be incorporated into the analysis, to avoid reactive and passive downward ratings.

For private creditors

- For their own protection, private creditors need to cooperate in developing adequate mechanisms of debt renegotiation, including through accepted arbitrage, or through appointment of a facilitator.
- Private creditors should develop procedures for cooperation with official creditors, and debtor countries in crisis to reduce volatility, and preserve financing flows, in line with the growth potential of the borrower, and not based only on short-term considerations.

Notes

- 1 The International Monetary Fund (IMF) and the World Bank Group started this initiative jointly under the Enhanced Structural Adjustment Facility (ESAF), which provided concessional resources to poor developing countries. This facility was subsequently converted into the Poverty Reduction and Growth Facility (PRGF), which was in turn combined with the Highly Indebted Poor Country Facility (HIPC). This facility seeks debt reduction by official creditors, including multilateral agencies, in the context of comprehensive programmes of structural reform monitored by the IMF and the World Bank. However, even for the poor countries, the debt burden still remains high at some 50 per cent of GDP and 180 per cent of exports.
- 2 IMF (2003). *Debt Sustainability in Low-Income Countries: Towards a Forward-Looking Strategy*. Washington, DC, International Monetary Fund, May. That paper covers many of the aspects discussed. It takes a different approach, based on present values of debt, but without emphasizing net resource transfers associated with debt, and should be seen as complementing this paper.
- 3 The presentation that follows will not focus on issues such as the origin of the existing stock, the recognition of contingent liabilities, or possible issues of litigation associated with particular obligations. However, these are issues of extreme importance, and need to be considered for any debt management strategy.
- 4 In the case of less developed countries, the term foreign borrowing, while not necessarily of a concessional nature is associated with official funding. The behaviour of official funding is in general considerably less sensitive to market developments, e.g. interest rates and exchange rates, over narrow ranges, although it would be sensitive to significant deviations in policy, as donor countries decide not to continue supporting a particular country if its policies are considerably out of line with a sustainable path.
- 5 In the recent past, a common phenomenon has been the channeling of aid to specific countries over a short period of time, with limited continuity. Cases like Haiti, Nicaragua, and Guatemala, in response to political changes; Nicaragua (again) and Honduras in the presence of natural catastrophes; Afghanistan, Pakistan, and now Iraq in response to political and war-related events illustrate this point, the possible exceptions being Egypt, Jordan, and Israel. This is contrasted with the expectation of many of the recipients that aid will continue for a long period of time, reflecting the requirements that these countries tend to develop. Under these circumstances, the real issue is not vulnerability but the mix between required adjustment and the availability of concessional financing over the medium term.
- 6 The availability of foreign debt relief in these circumstances will be concentrated in two sources. The Paris Club will deal mainly with current obligations and arrears, providing limited reduction in the debt burden. Mechanisms like the ESAF and PRGF, in turn, are meant to deal with the highly indebted poor countries' problems with a medium-term perspective rather than over the short term and have not been shown to enhance growth.
- 7 It may be argued that to some extent the policy mistakes of an earlier government, should not be "paid" by the successor administration, and the new authorities should be given a more benevolent treatment on the part of foreign donors. However, the pursuit of poor policies cannot be seen as a fortuitous and random event, but should be seen as part of the general government process, and, as such, remains the responsibility of the whole body politic, at least in a democratic government.
- 8 Contagion is defined in terms of a negative impact of an external event. Contagion is closely associated with the existing conditions in a particular country. Thus, the impact of the Mexican crisis of 1995 was greater on Argentina and Uruguay than that of other countries, because of the existing perceived weaknesses in their financial system and the dependence on (largely short term) foreign financing. In turn during the Asian crisis, contagion was linked to financial and trade links among countries, their net foreign asset position, and the existing exchange rate regime in each country.
- 9 Clerk P and Polak JJ (2002). *Liquidity and the Role of the SDR in the International Monetary System*. Washington, DC, International Monetary Fund, December.
- 10 While the medium term effects of controls on outflows have been shown to have generally a negative impact, there may be short-term benefits at a time of a major crisis, like a bank run, or contagion (Malaysia, 1997). Nonetheless, the effectiveness of the measures is reduced over time, as economic agents find alternative channels for their transactions, with possibly irreversible damage to the local financial systems. Furthermore, in some cases the controls may aggravate the existing situation (Argentina, 2001).
- 11 The sustainability of a specific policy course in response to a shock cannot be determined independently of the particular circumstances of the country in terms of its external debt and international reserve position. Greater availability of financing will allow for a longer period where adjustment is not required if shocks are revers-

ible. Thus, the availability of counter cyclical financing becomes crucial.

This paper will not deal with the general policy response to external debt related shocks. For detailed discussions on these issues see Arriazu R (2003). *Lecciones de la crisis Argentina*. Editorial El Ateneo, Buenos Aires; Croce E, Da Costa M and Ramón HJ (2002). *Programación Financiera: Métodos y Aplicación al Caso de Colombia*. Washington, DC, International Monetary Fund; and Dornbusch R, Fisher S and Startz R (2003). *Macroeconomics*. New York, McGraw Hill/Irwin. For a more detailed discussion on the external management of macroeconomic shocks, see Loser CM (1977). *External Debt Management and Balance of Payments Policies*. IMF Staff Papers, 24(1): 168–192. Washington, DC, International Monetary Fund.

- 12 The recent IMF paper on “Debt Sustainability in Low-Income Countries” focuses on the present value of debt to analyse debt sustainability. Such an approach provides a useful summary indicator for debt sustainability.
- 13 See Edwards S (2002). *Debt Relief and Fiscal Sustainability*. Working Paper 8939. Cambridge, National Bureau of Economic Research, May. The paper applies to the case of a HIPC country but extends to other cases.
- 14 See Goldstein M (2003). *Debt Sustainability, Brazil, and the IMF*. Washington, DC, Institute for International Economics. Similar considerations are included in Loser CM (1977). *External Debt Management and Balance of Payments Policies*. IMF Staff Papers, 24(1): 168–192. Washington, DC, International Monetary Fund.
- 15 While IFIs have tended to lend directly to countries, in some exceptional circumstances they have also have been provided in the form of guarantees to foreign placements by specific countries (Argentina and Colombia are cases in point). In those cases the guarantee may have been in the form of rolling guarantees on interest payments. At the time of the restructuring of debt in late 1980s, the World Bank and the IMF lent resources to help enhance the value of the new bonds that were to replace the previous issues, thus reducing the interest cost to borrowing countries.
- 16 The spreads are closely followed in international financial markets, directly affecting the price of debt in the secondary markets. The best known index is the Emerging Market Bond Index (EMBI) which tracks the spread for most emerging economies, and is one of the key indicators used to assess the borrowing prospects of a specific country.
- 17 See Boorman J (2003). *Dealing Justly With Debt*. Speech given at the Carnegie Council on Ethics and International Affairs. New York, April 30.
- 18 Any process of default and debt reduction tends to constitute an inter-temporal transfer of resources from future generations to the present, as availability of funds can decline for future projects, at least for some time. This argument goes against the more commonly accepted view that debt reduction only corrects excessive transfers to foreign lenders, a questionable assertion in light of the significant amount of resources lost by most creditors in a typical debt crisis.
- 19 Most international bond issues are subject to the jurisdiction of the US (New York State), Great Britain, and to a considerably lesser extent, Germany and Japan. The establishment of the SDRM could shift some coverage of action away from those jurisdictions.

- 20 The Paris Club is an association of official creditor agencies that deals with the restructuring of public and publicly guaranteed debt of developing debtor countries. It provides a common framework for negotiation for all participating creditor countries.
- 21 See Allen M, Rosenberg C and Keller C, with Setser B and Rouhini N (2002). *A Balance Sheet Approach to Financial Crisis*. IMF Working Paper. Washington, DC, IMF, December; Detragiache E and Spilimbergo A (2001). *Crises and Liquidity: Evidence and Interpretation*. IMF Working Paper. Washington, DC, IMF, January; Kaminsky GL, Lizondo S and Reinhart CM (1998). *Leading Indicators of Currency Crises*. IMF Staff Papers, 45(1): 1–48. Washington, DC, IMF; Kaminsky GL and Reinhart CM (1999). *The Twin Crises: The Causes of Banking and Balance-of-Payments Problems*. *American Economic Review*, 89 (3): 473–500; Goldstein M, Kaminsky GL and Reinhart CM (2000). *Assessing Financial Vulnerability: An Early Warning System for Emerging Markets*. Washington DC, Institute for International Economics.
- 22 Reinhart C (2003). *Default, Currency Crises and Sovereign Credit Ratings*. New York University – University of Maryland Project.
- 23 As Reinhart correctly points out, the predictive value about defaults does not hold in the cases of major official support exercises (Mexico in 1995, Republic of Korea in 1997, Brazil in 1998 and 2002, and Uruguay in 2002). These support efforts are of course directed to the avoidance of defaults, and in the end need to be included in the assessment of rating agencies about the credit-worthiness of borrowing countries.

Bibliography

- Allen M, Rosenberg C and Keller C, with Setser B and Rouhini B (2002). *A Balance Sheet Approach to Financial Crisis*. IMF Working Paper. Washington, DC, International Monetary Fund, December.
- Arriazu R (2003). *Lecciones de la crisis Argentina*. Editorial El Ateneo, Buenos Aires.
- Boorman J (2003). *Dealing Justly With Debt*. Speech given at the Carnegie Council on Ethics and International Affairs. New York, April 30.
- Clerk P and Polak JJ (2002). *Liquidity and the Role of the SDR in the International Monetary System*. Washington, DC, International Monetary Fund, December.
- Collins C and Kincaid RG (2003). *Managing Financial Crises: Recent Experience and Lessons for Latin America*. IMF Occasional Paper 03/217. Washington, DC, International Monetary Fund.
- Croce E, Da Costa M and Ramón HJ (2002). *Programación Financiera: Métodos y Aplicación al Caso de Colombia*. Washington, DC, International Monetary Fund.
- Detragiache E and Spilimbergo A (2001). *Crises and Liquidity: Evidence and Interpretation*. IMF Working Paper. Washington, DC, International Monetary Fund, January.
- Devlin R (1989). *Debt Crisis in Latin America: The Supply Side of the Story*. Princeton, Princeton University Press.
- Dornbusch R, Fisher S and Startz R (2003). *Macroeconomics*. New York, McGraw Hill/Irwin.

- Edwards S (2002). Debt Relief and Fiscal Sustainability. Working Paper 8939. Cambridge, National Bureau of Economic Research, May.
- Goldstein M, Kaminsky GL and Reinhart CM (2000). Assessing Financial Vulnerability: An Early Warning System for Emerging Markets. Washington DC, Institute for International Economics.
- Goldstein M (2003). Debt Sustainability, Brazil, and the IMF. Washington, DC, Institute for International Economics.
- IMF (2003). World Economic Outlook: Growth and Institutions. Washington, DC, International Monetary Fund, April.
- IMF (2003). Debt Sustainability in Low-Income Countries: Towards a Forward-Looking Strategy. Washington, DC, International Monetary Fund, May.
- Kaminsky GL, Lizondo S and Reinhart CM (1998). Leading Indicators of Currency Crises. IMF Staff Papers, 45(1): 1–48. Washington, DC, International Monetary Fund.
- Kaminsky GL and Reinhart CM (1999). The Twin Crises: The Causes of Banking and Balance-of-Payments Problems. *American Economic Review*, 89 (3): 473–500.
- Kindleberger CP (2000). Manias, Panics and Crashes: A History of Financial Crises. New York, John Wiley & Sons.
- Kuczynski PP and Williamson J (2003). After the Washington Consensus: Restarting Growth and Reform in Latin America. Washington, DC, Institute for International Economics.
- Loser CM (1977). External Debt Management and Balance of Payments Policies. IMF Staff Papers, 24(1): 168–192. Washington, DC, International Monetary Fund.
- Mussa M (2002). Argentina and the Fund: From Triumph to Tragedy. Washington, DC, Institute for International Economics.
- OECD. External Debt Statistics (various issues).
- Reinhart C (2003). Default, Currency Crises and Sovereign Credit Ratings. New York University – University of Maryland Project.
- Vreeland JR (2003). The IMF and Economic Development. Cambridge, Cambridge University Press.
- World Bank (2003). Global Development Finance: Striving for Stability in Development Finance. Washington, DC, World Bank.

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