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Chapter 17

ON THE DESIGN OF A NEW MECHANISM FOR AFRICA'S EXTERNAL DEBT

Diery Seck

INTRODUCTION

Over the last decade, the debate on Africa's development has been dominated by one key issue: Africa's external debt. The intensity and spirit of partisanship that have surrounded this debate give a fair measure of the high stakes behind the solutions that it will lead to. The position espoused by African countries and their allies is that the continent failed to develop and alleviate its large pockets of poverty because, among other causes, it uses a disproportionate amount of its limited resources to service its external debt. In response, the international donor community has designed and implemented a series of debt relief plans with increasingly liberal terms. The most recent relief initiatives include the Highly Indebted Poor Countries (HIPC) Initiative, cancellation of the official debt of 14 African countries in 2005, and the current launching of the Multilateral Debt Relief Initiative (MDRI).

These initiatives seek to lessen Africa's debt burden by reducing its stock of outstanding external debt through write-offs. However, in spite of their generosity and their demonstration of a strong commitment of the donor community to support Africa's development, they can be considered remedial measures and not acts of concerted preventions of future debt crises. In other words, even if Africa's external debt is entirely cancelled, there is no assurance that the factors that have historically caused a build-up of Africa's external debt and its resulting debt crisis will not be repeated in a few years, further hampering its development prospects. Therefore, the current debate on relief of the indebtedness of African countries must be complemented by a forward-looking identification of measures aimed at preventing future debt crises.

The purpose of the present study is three-fold. First, it examines the nature and extent of Africa's debt crisis as it has unfolded over the past 25 years, and the validity of the main factors thought to have caused the crisis. Second, with the help of a conceptual framework and empirical verification, the analysis investigates why African countries, unlike other developing countries, experience recur-

rent difficulties in servicing their external debt. Finally, based on the uncovered empirical evidence, the study concludes by formulating a number of specific measures that will hopefully help prevent future external debt crises in Africa.

ANALYSIS OF THE AFRICAN DEBT CRISIS

The nature of the debt crisis

The widely-held view that African countries' external debt service is too heavy and, as a result, undermines their development efforts presumes that they borrowed on unfavourable terms – Consequently, if there is an external debt crisis, its roots should be found in one or a combination of the key terms of Africa's debt contracts. The following is an examination of those terms over time, since the formal inception of an organized euro credit market in the early 1980s, and in comparison with other countries of the developing world in Asia and Latin America. In this respect, the level of interest rates, the maturity of loans and their magnitude will be studied.

Level of interest rates

In Table 1, the interest rates on new loans are presented for the period 1980-2003, for the twenty-five most indebted African countries, eleven Asian countries and sixteen Latin American countries. On average the 25 African countries constitute about 90% of Africa's total debt stock for any given year. See Table A1 in the appendix. It is notable that apart from middle-income countries like Gabon, Morocco, South Africa and Tunisia, and oil exporting countries like Algeria, and Angola, the average interest rate on African countries debt was 5% or less for the period under study. The rate was less than 3% for the poorest countries which, taking world inflation into account for the same period, would give real interest rates close to zero.

Table 1 also shows that, since 1995, interest rates on Africa's debt were lower than for Asian and Latin American countries. Even country by country comparisons reveal that most African countries enjoyed lower interest rates than their counterparts in Asia and Latin America. Finally, while interest rates have declined steadily over the entire period, their drop has translated into a more favourable rate differential of 1.6% vs. 2.6% against Asian countries in 2003 and 1.6% vs. 4.6% against Latin American countries the same year. In summary, the level of interest rates on Africa's external debt was neither high nor unfavourable and cannot be blamed for Africa's current debt burden.

Maturity of external debt

According to conventional wisdom, economic development is a long term process that should be funded with long term sources. Therefore, it is argued, long maturity loans are preferable. Based on this criterion, Table 2 shows, the average maturity of Africa's debt has improved over time from 22.1 years in 1980 to 30.7 years in 2003. Some of the poorest African countries such as Ethiopia, Guinea and Uganda had debts with a maturity exceeding 45 years in

Table 18.1: Average interest rate on new external debt of selected countries (in %)

Country	1980	1985	1990	1995	2000	2001	2002	2003	Average
Algeria	8,1	8,4	8,4	6,5	6,2	3,2	2,8	2,1	6,6
Angola	n.a.	n.a.	6,9	8,1	4,9	5,0	4,9	3,7	6,3
Cameroon	6,9	7,6	6,6	2,6	0,7	2,5	0,9	0,9	4,4
Congo, Dem. Rep.	5,1	4,0	5,9	2,5	0,0	0,0	4,5	0,9	2,8
Congo, Rep.	7,6	9,9	5,1	2,2	0,0	0,8	0,8	0,8	4,6
Cote d'Ivoire	11,4	9,7	5,9	1,9	0,8	0,0	0,8	0,0	5,1
Egypt, Arab Rep.	5,0	7,9	5,2	3,1	5,3	8,4	2,2	2,7	5,3
Ethiopia	3,6	3,3	6,6	1,0	0,8	0,9	1,0	0,8	2,4
Gabon	11,2	10,2	7,9	4,7	0,0	4,4	4,5	0,0	6,5
Ghana	1,4	3,3	3,0	3,3	3,7	1,5	0,8	1,1	2,8
Guinea	4,6	3,1	2,6	2,1	1,3	0,8	0,8	1,0	2,3
Kenya	3,5	6,7	4,3	2,9	1,1	3,5	3,8	1,9	3,7
Madagascar	5,7	3,6	1,1	1,0	0,8	0,8	0,8	0,8	2,4
Malawi	6,0	1,9	1,3	1,0	0,8	0,8	0,8	0,8	2,1
Morocco	8,1	8,3	6,8	4,6	3,6	3,7	3,5	4,1	6,2
Mozambique	n.a.	2,6	1,4	0,9	0,8	0,8	0,9	0,8	1,7
Nigeria	10,5	8,5	6,6	0,0	0,8	1,0	1,3	0,8	5,2
Senegal	5,9	5,4	1,9	1,2	0,9	1,3	1,7	1,4	2,7
South Africa	n.a.	n.a.	n.a.	5,4	6,1	5,9	6,8	5,3	6,0
Sudan	5,7	2,5	0,8	0,0	0,0	0,0	0,0	0,0	1,8
Tanzania	4,1	5,7	1,1	1,7	0,9	0,7	0,6	0,8	2,2
Tunisia	6,2	7,7	6,9	6,1	4,0	4,1	5,1	4,2	6,1
Uganda	4,9	3,5	1,0	0,9	1,0	0,8	0,8	0,7	2,2
Zambia	6,7	2,5	8,1	1,8	0,8	0,9	0,8	0,8	3,5
Zimbabwe	7,1	5,5	6,5	3,8	5,0	7,1	3,6	4,0	5,5
Average	6,3	5,7	4,7	2,8	2,0	2,4	2,2	1,6	4,0
Bangladesh	1,7	1,5	1,8	1,9	2,6	2,0	1,4	1,2	1,6
Bhutan	n.a.	1,3	0,0	1,3	3,6	1,1	6,8	5,6	2,5
India	5,4	6,2	5,4	3,7	4,7	3,6	2,3	1,2	5,0
Indonesia	8,1	7,2	6,0	5,7	4,2	4,8	3,7	4,6	6,1
Jordan	7,3	8,4	4,5	4,7	4,8	2,2	2,1	2,2	5,5
Malaysia	11,2	8,7	4,8	5,8	5,7	4,0	4,9	1,4	6,7
Nepal	0,8	1,6	0,9	3,5	1,4	1,3	1,1	0,9	1,5
Pakistan	4,4	5,7	5,3	5,2	6,3	2,8	1,9	1,7	4,9
Philippines	9,9	8,5	6,2	4,8	6,8	5,2	6,4	6,0	6,4
Sri Lanka	3,9	3,2	1,8	3,6	4,3	2,7	1,9	1,9	3,5
Thailand	9,6	8,3	4,8	5,7	1,5	2,1	2,2	2,0	5,7
Average	6,2	5,5	3,8	4,2	4,2	2,9	3,2	2,6	4,5
Argentina	13,7	10,2	6,4	6,9	9,9	5,9	3,4	3,3	8,4
Bolivia	8,4	5,1	4,2	3,8	4,2	3,3	4,1	3,1	4,6
Brazil	11,9	9,0	8,2	7,3	8,3	6,6	7,7	7,4	8,9
Chile	13,9	9,5	7,8	6,2	7,0	5,9	4,3	4,5	8,0
Colombia	12,9	9,6	8,0	4,8	7,9	8,7	7,7	5,4	8,3
Costa Rica	11,2	7,6	6,9	2,6	7,9	7,2	5,6	6,4	7,2

PART VI: GLOBALIZATION, REGIONAL INTEGRATION AND NEPAD

Country	1980	1985	1990	1995	2000	2001	2002	2003	Average
Dominican Republic	8,9	8,1	5,9	6,6	6,6	6,5	2,6	5,0	6,1
Ecuador	10,7	6,9	6,4	6,4	7,0	5,6	4,7	1,6	7,1
El Salvador	4,2	4,8	4,6	6,5	8,2	7,9	7,5	6,7	6,1
Guatemala	7,9	7,9	5,9	4,2	7,2	6,8	4,5	6,2	6,4
Honduras	6,8	6,4	6,5	2,3	5,1	1,6	1,8	2,1	4,9
Jamaica	7,2	7,7	7,6	5,8	9,1	9,9	7,3	6,7	7,0
Mexico	11,3	9,5	8,6	8,0	7,7	5,9	5,5	5,0	8,4
Paraguay	7,0	8,6	3,5	5,6	6,4	4,8	2,4	2,3	6,1
Uruguay	10,1	11,4	9,1	6,8	7,8	6,3	3,2	1,7	7,9
Venezuela, RB	12,1	8,6	8,2	7,4	8,1	8,1	5,1	6,0	8,8
Average	9,9	8,2	6,7	5,7	7,4	6,3	4,8	4,6	7,1

Source: Global Development Finance, Online, World Bank.

2003, while, for the same year Ghana, Madagascar, Malawi, Mozambique and Tanzania had maturities of more than 40 years.

African countries that experience the lowest debt maturity are middle-income or oil exporters. They also have little or no variation of their average debt maturity over the period 1998-2003. Considering that for the poorest African countries maturity have increased by more than 75% (Malawi, Tanzania and Uganda) and more than doubled for Ethiopia, Guinea and Madagascar, with substantial increases for the other low income countries, it is manifest that one of the key debt relief measures adopted since the mid-1990s was to lengthen the maturity of new and rescheduled loans.

Compared to other continents Africa has more favourable maturity not only in length, but also for its evolution over time. The average maturity declined for Asian countries and remained stable for Latin America from 1980 to 2003 but it increased by 38.9% for Africa. In conclusion, African countries were given a longer time to repay their external debt than other countries and that preferential treatment grew longer over time. However, as will be discussed later, long and increasing debt maturities may have contributed to the African debt crisis.

Magnitude of Africa's external debt

For the purpose of comparison, the magnitude of African countries' external debt is measured relative to their respective national incomes. Table 3 presents the ratio of total debt stock to gross national income for the countries discussed above. From relatively moderate levels in 1980, the debt to income ratio of African countries tripled by 1995. Countries like DRC, Madagascar and Sudan experienced even larger increases. As will be seen later, this fast accumulation of external debt that reached a peak in the mid-1990s is at the heart of the current African debt crisis.

ON THE DESIGN OF A NEW MECHANISM FOR AFRICA'S EXTERNAL DEBT

Table 18.2: Average maturity of external debt of selected countries (in years)

Country	1980	1985	1990	1995	2000	2001	2002	2003	Average
Algeria	12,5	11,5	9,1	10,7	11,1	12,0	13,6	11,8	10,8
Angola	n.a.	n.a.	10,2	8,7	4,3	4,0	5,0	6,3	7,4
Cameroon	23,3	17,4	15,1	23,3	42,6	30,3	33,9	22,5	23,9
Egypt, Arab Rep.	26,6	13,1	25,5	21,8	16,4	8,5	10,1	12,2	20,8
Ethiopia	19,2	19,6	21,7	36,3	38,8	43,0	39,6	45,1	29,6
Ghana	44,1	32,8	32,1	26,8	23,0	39,3	44,8	42,2	31,5
Guinea	19,3	29,1	30,5	21,3	38,1	42,1	47,7	45,4	31,6
Kenya	31,3	19,4	24,7	25,9	38,6	23,5	11,0	27,1	26,6
Madagascar	18,2	31,8	36,2	36,8	40,1	40,4	40,6	41,3	33,9
Malawi	23,6	44,4	37,7	38,6	44,7	41,2	45,1	41,3	37,9
Morocco	18,7	18,6	19,9	19,1	22,7	19,2	18,2	16,0	17,5
Mozambique	n.a.	28,8	35,0	36,8	46,7	39,4	35,8	43,4	35,2
Nigeria	10,9	13,2	19,0	0,0	34,7	34,9	20,5	35,6	15,2
Senegal	20,0	23,5	33,5	38,0	38,5	33,1	34,3	37,9	31,3
South Africa	n.a.	n.a.	n.a.	14,3	9,2	10,4	9,7	10,0	11,1
Tanzania	22,8	23,0	34,9	17,0	38,2	40,8	33,6	40,6	31,5
Tunisia	18,4	16,0	14,3	16,7	17,4	17,9	14,5	18,2	16,6
Uganda	26,2	30,8	33,0	39,2	39,2	39,7	38,4	47,0	33,7
Zambia	18,6	38,9	16,2	36,3	39,6	43,2	39,5	39,8	31,2
Average	22,1	24,2	24,9	24,6	30,7	29,6	28,2	30,7	25,7
Bangladesh	36,0	37,6	34,1	38,2	24,9	26,2	33,6	31,9	35,2
Bhutan	n.a.	38,2	0,0	33,4	31,7	31,5	23,2	28,6	25,5
India	32,4	23,9	21,9	23,3	11,4	23,7	23,8	21,8	21,9
Indonesia	19,8	17,5	21,6	18,1	19,0	22,7	21,7	12,9	18,9
Jordan	15,4	11,7	19,9	21,8	19,5	21,3	16,0	21,6	18,1
Malaysia	13,8	21,4	20,9	18,3	13,2	13,6	11,7	6,7	14,6
Nepal	46,0	42,2	39,2	29,8	31,4	31,0	35,6	37,4	37,7
Pakistan	30,1	26,8	22,5	17,4	12,5	19,9	23,7	19,9	21,9
Philippines	17,6	10,7	21,9	24,1	16,4	10,4	12,8	9,7	18,0
Sri Lanka	30,6	36,0	34,8	25,5	22,5	28,1	28,1	26,9	29,0
Thailand	16,8	18,5	22,2	14,8	29,0	7,3	24,9	6,6	17,4
Average	25,9	25,9	23,5	24,1	21,0	21,4	23,2	20,4	23,5
Argentina	8,6	9,7	17,1	11,2	11,7	14,4	11,7	9,7	12,1
Bolivia	15,5	31,8	29,2	28,8	28,4	23,2	21,8	21,4	25,3
Brazil	11,6	12,6	11,8	7,7	13,1	10,0	12,6	10,5	11,0
Chile	8,4	13,1	17,9	18,0	6,3	12,8	6,5	9,4	12,2
Colombia	15,5	12,0	16,5	11,6	10,7	12,5	9,2	12,4	12,6
Costa Rica	13,3	18,4	15,4	7,2	11,3	12,0	22,2	8,0	13,7
Dominican Rep.	12,3	17,1	24,5	19,8	9,3	9,5	12,1	10,8	16,8
Ecuador	14,9	13,8	17,4	15,8	16,6	10,7	13,1	21,3	15,7
El Salvador	27,6	26,8	29,8	22,6	15,2	15,4	20,6	20,1	21,4
Guatemala	15,5	14,8	17,8	30,9	19,2	22,5	19,6	19,8	19,4
Honduras	23,6	24,3	21,2	29,8	30,9	37,1	39,4	25,3	25,7
Jamaica	13,8	10,5	17,8	16,8	11,2	13,5	16,0	9,2	15,8
Mexico	9,9	12,7	13,4	7,1	10,6	12,8	16,1	12,8	11,3

PART VI: GLOBALIZATION, REGIONAL INTEGRATION AND NEPAD

Country	1980	1985	1990	1995	2000	2001	2002	2003	Average
Paraguay	26,6	14,8	34,4	19,0	21,8	19,5	18,3	18,0	22,7
Uruguay	15,3	7,0	12,9	7,6	8,5	12,3	11,4	15,7	13,1
Venezuela, RB	7,7	12,8	14,5	7,3	8,0	8,9	8,6	8,3	10,3
Average	15,0	15,8	19,5	16,3	14,6	15,4	16,2	14,5	16,2

N.B.: Dem. Rep of Congo, Rep. of Congo, Cote d'Ivoire, Gabon, Sudan and Zimbabwe were removed from this table because of unreliable data.

Source: Global Development Finance, Online, World Bank.

After 1995, most African countries experienced a steady decline in the level of their external debt with the exception of Malawi and Uganda that decreased their debt levels more slowly and posted a spike in 2003. However, the debt levels of African countries in 2003 were still too high compared to what they were in 1980. The upsurge of Africa's debt between 1980 and 1995 was higher than that of Asian countries that only doubled while Latin American countries increased their debt to income ratio by a mere 17%. By 2003, the ratio stood at 93.9% for Africa, 58.3% for Asia and 59.9% for Latin America.

Table 18.3: Ratio of total debt to gross national income of selected countries (in %)

Country	1980	1985	1990	1995	2000	2001	2002	2003	Average
Algeria	47,1	32,4	47,0	83,5	49,8	42,5	42,6	36,2	51,1
Angola	n.a.	n.a.	104,6	311,9	131,1	116,8	99,3	90,4	199,7
Cameroon	46,1	40,1	62,4	126,8	112,3	106,5	92,8	78,2	72,9
Congo, Dem. Rep.	34,4	93,3	119,6	271,4	298,6	257,8	191,6	207,4	153,8
Congo, Rep.	98,8	150,7	212,9	488,8	214,8	229,9	234,4	205,7	224,9
Cote d'Ivoire	77,1	153,4	187,3	188,8	122,7	115,0	107,1	93,8	146,9
Egypt, Arab Rep.	89,2	115,1	78,6	55,6	29,1	29,5	33,4	38,2	77,0
Ethiopia	n.a.	78,0	101,0	180,2	84,8	88,7	108,2	108,4	107,7
Gabon	39,3	39,0	74,6	102,8	92,5	91,2	85,1	72,9	75,0
Ghana	31,7	50,8	66,5	93,1	137,1	129,5	121,7	106,7	76,5
Guinea	n.a.	..	92,9	89,9	111,6	109,4	107,3	96,1	98,0
Kenya	48,1	70,8	87,0	84,1	59,9	50,5	50,6	47,5	71,6
Madagascar	31,0	92,1	125,2	144,0	123,5	93,1	104,4	91,9	109,7
Malawi	72,9	94,6	84,8	162,4	162,8	155,8	158,1	187,7	113,7
Morocco	52,8	131,4	100,7	75,2	63,9	58,1	52,0	43,7	82,5
Mozambique	n.a.	65,9	200,4	349,7	204,0	145,8	139,8	120,0	201,9
Nigeria	14,6	68,1	130,7	131,7	83,1	71,0	75,7	70,0	93,8
Senegal	51,0	104,7	68,0	90,1	84,2	81,0	84,9	69,0	81,4
South Africa	n.a.	n.a.	n.a.	17,1	19,9	21,8	24,2	17,8	19,1
Sudan	69,3	75,0	119,2	280,3	152,8	126,6	115,7	107,0	136,4
Tanzania	n.a.	n.a.	158,5	144,7	80,2	72,3	75,5	73,4	117,7
Tunisia	41,7	60,6	64,7	63,2	57,3	57,1	64,5	64,8	60,3
Uganda	55,5	35,5	61,1	62,9	60,8	67,4	69,5	73,8	58,7
Zambia	90,3	226,5	229,9	215,3	186,1	163,5	168,8	153,4	199,1

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Country	1980	1985	1990	1995	2000	2001	2002	2003	Average
Zimbabwe	11,9	43,9	38,6	73,5	54,8	40,6	n.a.	n.a.	48,0
Average	52,8	86,8	109,0	155,5	111,1	100,8	100,3	93,9	105,3
Bangladesh	22,3	30,3	40,4	40,7	32,1	31,4	34,3	34,3	35,0
Bhutan	n.a.	5,5	31,4	38,7	47,7	55,4	70,6	72,2	32,4
India	11,4	18,1	26,7	26,9	21,9	20,5	21,0	19,0	22,6
Indonesia	28,0	44,4	64,0	63,4	103,7	97,8	78,8	67,5	66,9
Jordan	46,6	78,4	219,0	118,8	87,2	85,3	87,2	85,2	108,4
Malaysia	27,5	68,6	36,4	40,6	50,7	54,9	55,1	50,2	50,7
Nepal	10,4	22,5	45,1	54,9	51,6	48,5	53,5	55,7	40,1
Pakistan	38,8	40,0	49,5	49,5	45,9	45,7	48,7	45,4	45,4
Philippines	53,7	89,1	69,4	51,7	76,9	77,4	72,3	72,4	70,6
Sri Lanka	46,1	59,5	74,6	65,1	57,1	55,3	58,6	56,7	62,0
Syrian Arab Republic	26,2	64,3	144,4	184,8	125,7	116,5	112,8	104,6	119,8
Thailand	25,9	45,8	33,3	60,6	66,0	59,1	47,7	36,9	47,8
Average	30,6	47,2	69,5	66,3	63,9	62,3	61,7	58,3	58,5
Argentina	35,6	61,1	46,1	39,0	53,3	59,1	157,0	136,0	56,7
Bolivia	97,1	167,2	92,4	81,2	70,9	60,1	65,9	75,1	98,3
Brazil	31,5	49,1	26,7	23,2	41,0	46,4	51,6	49,6	37,1
Chile	45,5	141,5	67,3	35,3	51,3	60,7	63,6	62,5	68,6
Colombia	20,9	42,9	45,1	27,6	41,7	45,8	42,8	43,9	37,0
Costa Rica	59,5	121,0	68,8	33,1	30,3	29,8	29,7	32,7	70,9
Dominican Republic	31,2	74,1	64,7	37,8	24,3	25,0	30,6	41,1	44,5
Ecuador	52,3	80,7	132,4	72,6	94,4	73,6	71,5	65,5	89,5
El Salvador	26,1	50,2	45,5	27,8	35,2	39,2	42,9	46,3	39,6
Guatemala	15,1	24,4	41,1	25,2	22,4	21,7	20,4	20,4	25,8
Honduras	60,6	78,5	130,6	129,6	96,1	80,8	84,1	83,2	96,7
Jamaica	78,1	225,0	114,2	82,2	61,7	69,9	69,8	74,2	103,2
Mexico	30,5	55,2	41,1	60,5	26,5	24,0	22,0	22,8	44,0
Paraguay	20,7	58,0	39,1	28,2	40,1	41,1	53,5	53,2	38,1
Uruguay	17,0	89,7	49,3	28,0	41,3	53,3	88,6	109,1	48,7
Venezuela, RB	42,1	60,5	70,4	47,1	31,8	29,0	36,6	42,3	52,0
Average	41,5	86,2	67,2	48,6	47,6	47,5	58,2	59,9	59,4

Source: Global Development Finance, Online, World Bank.

Capacity to service external debt

The ratio of debt service to total exports of African, Asian and Latin American countries is presented in Table 4 for the period 1980-2003. From historically high levels reaching the 35-45% range in the decade 1985-1995 African countries' debt service ratios have gradually declined and, with the exception of Morocco and Zambia all countries scored less than 16% in 2003. In fact their ratios were mostly between 6% and 15%. It is also noteworthy that African countries ratios were comparable to those of Asian countries throughout the period while Latin American countries scored ratios twice as high since 2001.

In spite of their modest debt service ratios African countries are confronted with a low capacity to service their external debt because they have chronic deficits in their trade balances. Considering the degree of incompressibility of their imports of basic commodities and development inputs, and downward trends

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in official development assistance (ODA), they may have limited resources available to service their foreign debt which forces many of them to face the painful choice between financing development and servicing debt.

Table 18.4: Ratio of debt service to total exports of selected countries (in %)

Country	1980	1985	1990	1995	2000	2001	2002	2003	Average
Algeria	27,4	35,6	63,4	n.a.	n.a.	n.a.	n.a.	n.a.	48,2
Angola	n.a.	n.a.	8,1	12,0	20,7	22,7	16,3	14,9	15,9
Cameroon	13,3	30,1	20,5	20,8	n.a.	n.a.	n.a.	n.a.	21,5
Congo, Rep.	10,6	34,4	35,4	13,1	1,6	4,2	1,0	4,0	20,5
Cote d'Ivoire	38,7	34,8	35,4	23,1	22,6	13,3	13,9	8,5	32,0
Egypt, Arab Rep.	13,4	26,8	20,4	13,2	8,5	9,5	10,4	11,7	15,9
Ethiopia	7,8	24,6	39,0	18,4	13,0	18,0	7,6	6,8	21,6
Gabon	17,8	11,6	6,4	15,3	n.a.	..	n.a.	n.a.	12,1
Ghana	13,1	23,6	38,4	24,9	18,7	12,8	7,3	14,7	26,0
Guinea	n.a.	..	20,0	25,0	20,4	12,3	15,2	15,1	17,3
Kenya	21,0	38,7	35,4	30,4	19,0	16,0	16,7	15,8	28,8
Madagascar	19,3	41,8	45,5	7,6	9,6	5,2	8,7	6,1	25,3
Malawi	27,8	39,8	29,3	25,0	12,5	8,1	6,3	7,7	24,7
Morocco	33,4	34,6	21,6	33,4	21,0	18,0	24,0	23,5	30,5
Mozambique	n.a.	34,5	26,2	34,5	11,7	8,5	6,9	6,9	23,0
Nigeria	4,1	32,7	22,6	13,8	n.a.	n.a.	n.a.	n.a.	19,2
Senegal	28,7	20,8	20,0	16,8	14,3	12,3	11,6	10,4	18,5
South Africa	n.a.	n.a.	n.a.	9,5	9,8	11,4	12,3	9,0	11,4
Sudan	20,5	13,7	8,7	6,7	2,5	2,3	0,8	0,9	10,7
Tanzania	21,2	39,9	32,9	17,9	12,8	10,2	6,7	5,2	24,7
Tunisia	14,8	25,0	24,5	16,9	20,0	12,7	13,5	13,0	19,3
Uganda	17,3	41,6	81,4	19,8	7,8	4,8	6,4	7,1	33,4
Zambia	25,2	15,9	14,9	n.a.	20,2	11,3	25,4	27,8	24,5
Zimbabwe	3,8	29,1	23,2	..	n.a.	n.a.	n.a.	n.a.	24,3
Average	19,0	30,0	29,3	19,0	14,0	11,2	11,1	11,0	22,6
Bangladesh	17,0	18,7	25,8	13,2	8,6	7,5	7,4	6,0	14,7
Bhutan	n.a.	0,0	5,5	10,9	4,8	4,2	4,6	n.a.	4,4
India	9,5	22,3	31,9	29,7	14,9	12,1	14,1	18,1	22,1
Indonesia	n.a.	28,8	33,3	29,9	22,5	23,6	24,8	26,0	29,3
Jordan	8,4	16,8	20,4	12,4	12,6	10,6	8,8	16,4	15,7
Malaysia	6,3	30,4	12,6	7,0	5,6	6,0	7,1	7,8	11,4
Nepal	2,9	7,1	15,7	7,5	7,0	6,9	6,2	6,0	8,2
Pakistan	16,2	23,3	21,3	26,6	25,2	24,6	17,9	16,0	23,1
Philippines	26,6	31,6	27,0	16,1	14,4	22,5	22,8	22,1	24,8
Country	1980	1985	1990	1995	2000	2001	2002	2003	Average

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Sri Lanka	12,0	16,5	13,8	8,0	10,3	10,1	9,8	7,5	12,9
Syrian Arab Republic	11,4	9,0	21,8	4,3	4,8	3,6	3,3	4,2	10,5
Thailand	18,9	31,9	16,9	11,6	16,3	25,4	23,2	15,6	19,2
Average	12,9	19,7	20,5	14,8	12,2	13,1	12,5	13,2	16,3
Argentina	37,3	60,1	37,0	30,2	70,8	42,9	16,6	37,9	47,4
Bolivia	35,0	49,6	38,6	29,4	37,1	31,1	27,5	20,9	37,0
Brazil	63,3	39,1	22,2	36,6	93,5	75,5	68,9	63,8	53,3
Chile	43,1	48,4	25,9	24,5	24,8	27,9	32,8	31,3	33,8
Colombia	16,1	41,8	40,9	31,5	27,8	35,1	39,5	43,9	35,3
Costa Rica	29,1	41,5	23,9	13,8	8,0	9,7	8,7	9,7	20,5
Dominican Republic	25,3	19,1	10,4	6,2	4,8	5,9	6,4	8,2	12,9
Ecuador	33,9	33,0	32,5	24,9	25,7	28,9	28,9	27,9	33,1
El Salvador	7,5	24,0	15,3	9,0	6,7	6,8	7,7	8,8	13,4
Guatemala	7,9	28,1	12,6	10,8	8,8	9,1	7,1	7,4	15,2
Honduras	21,4	24,7	35,3	34,0	13,0	11,3	12,1	11,6	24,7
Jamaica	19,0	37,6	26,9	16,2	15,4	16,4	18,6	16,5	24,5
Mexico	44,4	43,7	20,7	27,0	30,3	25,6	22,7	20,9	33,3
Paraguay	21,0	23,0	12,4	5,6	10,9	12,7	12,4	9,9	14,8
Uruguay	18,8	42,6	40,8	22,1	29,4	35,9	40,3	26,3	27,9
Venezuela, RB	15,4	26,4	21,5	13,5	3,1	9,9	14,9	8,1	15,6
Average	27,4	36,4	26,1	21,0	25,6	24,0	22,8	22,1	27,7

Source: Global Development Finance, Online, World Bank

Conditions of debt relief

Table 5 gives an account of interest forgiven on the external debt of African, Asian and Latin American countries. It shows that, over the period 1989-2003, most African countries have benefited from the measure, while oil producing countries, South Africa and Zimbabwe have not. The amount of interest forgiven for African countries exceeds by far that of the other developing regions. The same picture is depicted in Table 6 that displays the amount of principal forgiven. During the entire period a total of \$ 41.27 billion was forgiven on principal payments while \$ 8.74 was forgiven on interest for African countries, which adds up to \$ 50 billion whereas the total values are \$ 1.9 billion for Asia and \$ 4.5 billion for Latin America. For interest as well as principal forgiven more African countries have benefited than their counterparts elsewhere.

In spite of historically favourable borrowing conditions Africa has resorted to debt relief measures more than other developing countries and the evidence shows the duration and the severity of the debt crisis. Table 7 shows that most African countries have seen an increase in their stock of debt caused by interest that was not paid and was consequently rescheduled and capitalized as new principal. For the entire period 1989-2003, this process amounted to \$ 27.92 billion, which is less than the \$ 50 billion forgiven in interest and principal. By subtracting the interest capitalized from the amounts forgiven –in Tables 5 and

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6 it appears that most African countries' total debt stock decreased as a result of debt relief measures for a total net amount of \$ 22 billion for the period 1989-2003. However, four countries experienced increases in their external debt stock: Algeria by \$ 1.2 billion, Congo by \$ 641 million, Gabon by \$ 790 million and Nigeria by \$ 10.8 billion. Overall, five countries, Cameroon, DRC, Cote d'Ivoire, Egypt and Nigeria, account for 69% of the capitalized interest of the sampled African countries.

Table 18.5: Interest forgiven for external debt of selected countries (in Million US Dollars)

Country	1989	1990	1995	1997	1999	2000	2001	2002	2003	Total (89-03)
Algeria	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Angola	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	3,0
Cameroon	0,0	0,0	0,0	89,4	15,5	1,9	243,7	82,3	104,0	566,4
Congo, Dem. Rep.	41,4	14,7	0,0	0,0	0,3	0,0	0,0	1 466,8	27,0	1 550,2
Congo, Rep.	0,0	0,1	0,0	4,0	1,5	0,0	0,0	0,0	0,0	41,9
Cote d'Ivoire	0,0	0,0	29,6	0,0	7,9	6,9	2,5	140,3	78,7	515,9
Egypt, Arab Rep.	0,0	2 481,4	6,8	2,0	0,0	0,0	0,0	0,0	0,0	2 992,5
Ethiopia	0,0	0,0	0,6	2,9	426,2	0,0	11,4	23,0	16,4	510,6
Gabon	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	14,3	14,6
Ghana	1,1	0,0	0,0	0,0	0,0	0,0	0,0	27,2	9,2	39,2
Guinea	19,5	0,0	7,8	2,8	1,9	0,0	15,1	13,9	14,4	93,2
Kenya	2,7	12,7	0,0	0,0	0,0	0,0	0,0	0,0	0,0	15,4
Madagascar	2,7	0,1	0,0	16,7	0,6	0,0	68,6	38,0	34,8	180,3
Malawi	0,5	0,0	0,0	0,0	0,0	0,0	23,1	6,6	7,1	37,3
Morocco	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	96,8
Mozambique	0,0	13,9	12,0	8,0	0,5	1,8	288,7	2,0	1,7	483,9
Nigeria	0,8	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,8
Senegal	15,1	0,0	4,6	0,0	0,0	9,8	7,3	1,6	2,0	83,9
South Africa	n.a.	n.a.	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Sudan	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Tanzania	12,9	10,4	0,0	75,2	0,0	203,7	191,3	40,5	3,5	663,6
Tunisia	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Uganda	0,1	0,6	0,7	0,0	4,1	10,6	9,3	3,4	4,7	577,8
Zambia	0,7	22,1	0,8	1,4	37,2	17,6	31,2	17,9	13,0	274,7
Zimbabwe	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Total	97,5	2 556,0	62,9	202,4	495,7	252,3	892,2	1 863,5	330,8	8 742,0
Bangladesh	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	12,6	13,0
Bhutan	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
India	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Indonesia	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Jordan	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	3,9	4,1
Malaysia	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Nepal	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Pakistan	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Philippines	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Sri Lanka	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Syrian Arab Rep.	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	6,0
Country	1989	1990	1995	1997	1999	2000	2001	2002	2003	Total
Thailand	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0

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Total	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	16,5	23,1
Argentina	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Bolivia	89,0	59,9	7,9	12,1	7,5	8,0	18,1	13,0	11,8	244,4
Brazil	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Chile	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Colombia	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Costa Rica	0,0	187,4	0,0	0,0	0,0	0,0	0,0	0,0	0,0	189,8
Dominican Republic	0,0	0,0	0,0	0,0	0,3	0,3	0,3	0,0	0,0	184,5
Ecuador	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
El Salvador	0,0	0,0	0,0	0,0	0,4	0,0	0,0	0,0	0,0	0,4
Guatemala	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Honduras	5,8	10,5	0,3	0,1	9,4	4,6	23,0	10,9	2,8	84,9
Jamaica	0,0	0,5	0,0	0,0	0,0	0,0	0,0	0,0	0,0	20,8
Mexico	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Paraguay	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Uruguay	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Venezuela, RB	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Total	94,8	258,3	8,2	12,2	17,6	12,9	41,4	23,9	14,6	724,8

Source: Global Development Finance, Online, World Bank.

**Table 18.6: Principal forgiven for external debt of selected countries
(in Million U.S. Dollars)**

Country	1989	1990	1995	1997	1999	2000	2001	2002	2003	Total
Algeria	0,0	0,0	0,0	9,8	0,0	0,0	0,0	0,0	0,0	14,2
Angola	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,2	0,0	3 746,5
Cameroon	6,9	9,5	0,1	73,0	19,8	4,4	411,7	193,4	308,1	1 634,2
Congo, Dem. Rep.	111,5	9,4	0,0	0,0	1,3	0,0	0,0	2 086,5	74,8	2 283,5
Congo, Rep.	6,4	0,0	23,6	36,7	16,9	0,0	0,0	0,0	0,0	335,8
Cote d'Ivoire	28,8	50,1	292,0	0,0	16,4	21,7	11,7	323,2	184,8	2 391,5
Egypt, Arab Rep.	2 705,2	10 575,8	34,7	26,8	0,6	24,9	0,0	0,0	0,0	13 895,0
Ethiopia	0,0	66,5	7,4	19,0	4 320,6	0,0	25,2	71,6	100,6	4 695,3
Gabon	4,3	0,0	40,3	2,1	0,0	0,0	0,0	0,0	67,2	382,9
Ghana	43,9	102,4	0,8	7,2	0,0	0,0	0,0	140,4	56,4	485,3
Guinea	288,8	1,9	52,9	6,9	4,4	0,0	35,6	30,7	28,1	511,6
Kenya	432,5	84,0	0,0	25,5	0,2	10,4	0,1	0,2	0,6	648,9
Madagascar	348,8	185,4	0,0	47,7	2,6	0,0	81,9	80,0	50,7	1 024,3
Malawi	14,6	50,8	0,0	0,0	0,0	0,0	71,6	39,4	42,3	220,8
Morocco	0,0	31,2	0,0	4,7	0,0	117,5	0,0	0,0	0,0	2 975,2
Mozambique	0,0	210,2	310,8	215,1	41,0	6,9	26,7	28,2	81,7	1 166,9
Nigeria	31,3	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	45,4
Senegal	862,3	18,1	14,2	3,9	0,0	12,3	21,1	26,2	23,3	1 347,2
South Africa	n.a.	n.a.	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Sudan	0,6	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,6
Tanzania	41,5	102,2	140,2	243,1	25,9	385,3	216,5	90,5	91,5	1 975,2
Tunisia	5,6	7,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	28,2
Uganda	0,2	50,6	0,0	0,0	6,5	13,3	24,0	17,1	25,6	176,8
Zambia	187,8	114,4	0,9	0,9	52,9	38,8	38,2	30,5	31,8	1 193,0
Country	1989	1990	1995	1997	1999	2000	2001	2002	2003	Total
Zimbabwe	0,0	23,8	65,8	0,0	4,7	0,0	0,0	0,0	0,0	95,2
Total	5 121,0	11 693,3	983,7	722,4	4 513,8	635,5	964,3	3 158,1	1 167,5	41 273,5

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Bangladesh	0,3	0,0	0,0	0,0	0,0	0,0	0,0	0,0	103,5	403,6
Bhutan	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
India	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Indonesia	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Jordan	0,0	0,0	322,5	34,0	2,0	27,5	91,7	0,0	52,9	1 022,3
Malaysia	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Nepal	0,0	0,0	0,0	0,0	2,0	0,0	0,0	0,0	0,0	13,3
Pakistan	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Philippines	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,4
Sri Lanka	0,0	0,0	6,6	0,0	0,0	8,8	0,0	0,0	4,4	19,8
Syrian Arab Republic	0,0	0,1	0,0	0,0	0,0	0,0	0,0	0,0	0,0	397,7
Thailand	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	12,5
Total	0,3	0,1	329,1	34,0	4,0	36,3	91,7	0,0	160,8	1 869,6
Argentina	0,0	0,0	0,0	0,0	0,0	0,1	0,0	0,0	0,0	0,1
Bolivia	696,1	92,0	73,7	82,8	34,0	28,1	99,2	40,8	33,6	1 913,4
Brazil	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Chile	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	30,7
Colombia	0,0	2,3	0,0	0,0	0,0	0,0	0,0	0,0	0,0	40,0
Costa Rica	0,0	0,0	2,6	1,6	0,0	0,0	0,0	0,1	0,2	18,7
Dominican Republic	2,9	7,3	0,4	0,0	0,2	0,7	0,1	0,0	14,6	35,8
Ecuador	0,0	0,7	0,0	0,0	0,0	0,0	0,0	0,0	0,0	4,3
El Salvador	0,0	0,0	0,0	0,0	0,6	17,0	0,0	0,0	0,0	517,8
Guatemala	0,2	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,2
Honduras	0,0	10,1	10,0	0,8	32,4	14,3	51,9	30,0	5,3	658,1
Jamaica	0,0	0,1	0,0	0,0	7,5	4,0	2,7	3,0	1,1	427,0
Mexico	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Paraguay	107,9	15,5	0,0	0,0	0,0	0,0	0,0	0,0	0,0	190,7
Uruguay	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	15,5
Venezuela, RB	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Total	807,1	128,0	86,7	85,2	74,7	64,2	153,9	73,9	54,8	3 852,3

Source: Global Development Finance, Online, World Bank.

Table 18.7: Rescheduled and capitalized interest of selected African countries' external debt (in Million U.S. Dollars)

Country	1989	1990	1995	1997	1999	2000	2001	2002	2003	Total
Algeria	0,0	0,0	380,2	89,2	0,0	0,0	0,0	0,0	0,0	1 214,7
Angola	120,0	42,6	70,1	0,0	0,0	0,0	0,0	1,5	0,1	546,9
Cameroon	107,5	22,0	154,1	563,8	141,4	15,6	82,9	22,0	21,4	2 204,0
Congo, Dem. Rep.	419,3	131,0	0,0	0,0	0,7	0,0	0,0	1 297,9	17,6	1 866,5
Congo, Rep.	8,5	369,5	41,6	18,9	6,9	0,0	0,0	0,0	0,0	1 017,4
Cote d'Ivoire	57,2	286,5	130,6	874,9	29,8	24,5	11,2	152,5	90,7	2 337,2
Egypt, Arab Rep.	0,0	0,0	49,4	18,3	9,6	1,1	0,4	0,3	0,2	2 047,0
Ethiopia	0,0	0,0	5,6	16,2	99,9	0,0	0,0	0,0	0,0	178,3
Gabon	81,6	77,0	67,8	44,5	0,0	307,4	74,1	0,0	0,0	1 187,9
Ghana	0,0	0,0	0,0	0,0	0,0	0,0	52,2	20,7	8,2	129,0
Guinea	56,6	0,0	15,5	11,0	6,2	0,0	3,4	3,0	3,2	153,5
Country	1989	1990	1995	1997	1999	2000	2001	2002	2003	Total
Kenya	0,0	0,0	0,0	0,0	0,0	36,5	15,0	0,0	0,7	214,8
Madagascar	42,6	15,9	0,0	250,8	11,7	0,0	24,0	11,2	11,5	396,7
Malawi	1,0	0,0	0,0	0,0	0,0	0,0	2,2	0,4	0,4	4,0

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Morocco	257,6	218,5	0,0	0,0	0,0	0,0	0,0	0,0	0,0	733,3
Mozambique	0,0	118,3	57,2	64,0	83,3	0,2	3,5	0,0	0,0	768,5
Nigeria	1 206,3	169,2	0,0	0,0	4,2	8 470,9	57,1	0,0	0,0	10 801,4
Senegal	62,6	27,3	48,9	0,8	0,0	0,0	0,0	0,0	0,0	278,6
South Africa	n.a.	n.a.	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Sudan	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Tanzania	50,6	96,2	0,0	228,8	1,9	97,2	12,2	9,2	0,0	658,7
Tunisia	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Uganda	10,6	1,0	30,4	0,0	0,0	0,0	0,0	0,0	1,0	108,4
Zambia	0,0	320,7	5,3	72,0	91,8	63,5	47,1	10,8	0,0	1 077,5
Zimbabwe	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Total	2 482,0	1 895,7	1 056,7	2 253,2	487,4	9 016,9	385,3	1 529,5	155,0	27 924,3

Source: Global Development Finance, World Bank.

**Table 18.8: Rescheduled debt principal of selected African countries
(in Million U.S. Dollars)**

Country	1989	1990	1995	1997	1999	2000	2001	2002	2003	Total (1989-2003)
Algeria	0,0	0,0	4 404,8	2 114,1	0,0	0,0	0,0	0,0	0,0	14 042,9
Angola	291,2	159,5	359,9	28,2	3,1	3,1	4,6	17,7	4,9	2 296,9
Cameroon	219,4	25,9	293,6	405,5	218,3	20,4	138,4	30,0	37,3	2 669,3
Congo, Dem. Rep.	556,3	259,1	0,0	0,0	6,2	0,0	0,0	2 220,4	61,4	3 103,4
Congo, Rep.	31,6	386,3	64,9	69,9	24,9	0,0	0,0	0,0	0,0	1 435,5
Cote d'Ivoire	70,6	589,6	192,4	137,7	33,6	44,7	27,8	172,5	106,8	2 575,9
Egypt, Arab Rep.	0,0	0,0	260,0	95,3	85,1	12,8	2,5	0,8	0,9	5 379,3
Ethiopia	0,0	0,0	22,9	88,8	220,3	0,0	14,2	11,8	11,3	586,6
Gabon	174,4	188,1	253,0	191,2	0,0	439,6	82,5	0,0	0,0	2 518,1
Ghana	0,0	0,0	0,0	0,0	0,0	0,0	142,7	54,3	25,3	283,0
Guinea	66,3	71,2	94,3	23,9	14,3	0,0	4,6	2,8	2,3	431,4
Kenya	0,0	0,0	0,0	0,0	0,0	144,8	89,8	0,0	8,9	611,2
Madagascar	98,8	65,0	0,0	578,5	27,0	0,0	11,9	9,4	6,2	880,7
Malawi	4,2	0,0	0,0	0,0	0,0	0,0	6,0	1,8	1,9	13,9
Morocco	462,4	591,3	0,0	0,0	0,0	0,0	0,0	0,0	0,0	1 989,8
Mozambique	0,0	224,9	161,7	50,3	385,7	1,4	1,5	0,0	0,0	1 574,5
Nigeria	2 878,7	1 280,2	0,0	0,0	10,3	12 026,9	21,7	0,0	0,0	18 276,2
Senegal	94,5	75,9	173,0	4,0	0,8	0,0	0,0	0,0	0,0	527,4
South Africa	n.a.	n.a.	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Sudan	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Tanzania	14,7	58,8	0,0	421,9	1,7	252,0	14,4	13,9	4,3	1 044,2
Tunisia	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Uganda	18,2	3,5	0,0	0,0	0,0	0,0	0,0	0,0	8,3	245,2
Zambia	0,0	465,6	6,6	54,9	181,5	105,0	67,1	21,1	0,0	1 448,9
Zimbabwe	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,8	0,8
Total	4 981,3	4 444,9	6 287,1	4 264,2	1 212,8	13 050,7	629,7	2 556,5	280,6	61 935,1

Source: Global Development Finance, World Bank.

PART VI: GLOBALIZATION, REGIONAL INTEGRATION AND NEPAD

According to Table 9, all African countries have experienced positive net resource flows for a total of \$ 416.78 billion. Egypt, Morocco and South Africa being among the main African destinations for foreign direct investment, appropriated 35.6% of the net resource flows. During the entire period 1989-2003, there was not a single year during which the aggregate net resource flow was negative.

Table 18.9: Aggregate net resource flows of selected African countries (in Million US Dollars)

Country	1980	1985	1990	1995	2000	2001	2002	2003	Total (1980-2003)
Algeria	1 295,2	469,3	283,1	1 504,8	-1 007,6	-548,6	114,2	-290,6	6 943,4
Angola	n.a.	n.a.	536,5	1 018,3	599,2	2 038,0	1 602,0	2 258,1	17 415,1
Cameroon	658,8	221,5	646,4	164,4	239,0	254,5	351,6	891,7	10 027,3
Congo, Dem. Rep.	477,3	196,9	625,6	138,7	160,3	279,0	757,5	5 095,8	11 916,8
Congo, Rep.	547,8	244,8	29,3	144,4	192,8	95,7	384,1	233,8	6 178,8
Cote d'Ivoire	1 138,6	136,2	855,5	871,3	179,9	200,1	676,4	199,7	12 875,7
Egypt, Arab Rep.	3 050,8	4 118,7	5 182,9	1 352,7	1 955,3	2 007,5	333,8	-578,2	62 525,3
Ethiopia	218,5	1 101,1	837,9	630,2	673,6	856,2	1 170,8	1 395,5	21 261,3
Gabon	-73,5	164,2	273,0	-170,6	-158,2	-39,2	25,8	-58,8	762,8
Ghana	181,1	203,7	757,8	754,2	514,4	820,2	574,7	480,6	12 509,9
Guinea	72,7	112,0	211,5	284,7	101,1	185,1	172,6	213,1	5 063,7
Kenya	624,0	366,1	1 322,3	391,7	365,2	102,2	229,5	381,2	10 545,0
Madagascar	361,6	177,9	514,1	240,3	274,0	339,0	285,3	484,0	7 983,3
Malawi	178,2	60,8	320,0	392,6	341,6	326,3	278,9	394,1	6 498,9
Morocco	1 748,4	1 043,3	1 753,1	545,0	643,5	2 508,4	-503,5	1 843,6	27 301,4
Mozambique	n.a.	544,7	948,2	1 011,0	931,0	973,2	2 240,4	1 096,5	18 829,9
Nigeria	774,2	-575,7	459,2	626,2	42,4	-453,7	318,7	274,2	20 744,2
Senegal	262,3	207,8	692,3	422,3	331,5	313,8	394,6	339,0	10 109,0
South Africa	n.a.	n.a.	n.a.	5 796,6	6 358,6	6 950,3	1 067,8	4 523,7	58 734,6
Sudan	1 045,8	856,9	603,3	185,0	563,5	730,1	1 013,0	1 909,5	16 734,9
Tanzania	806,9	381,0	884,1	706,1	1 303,7	1 326,3	1 240,8	1 652,2	21 072,9
Tunisia	610,3	457,0	399,2	799,5	1 006,0	1 578,7	2 024,8	1 656,7	19 325,4
Uganda	112,3	189,5	484,6	686,8	880,4	850,8	742,9	1 004,7	11 768,1
Zambia	520,7	399,0	929,3	569,0	698,8	517,3	511,3	588,4	12 518,8
Zimbabwe	220,9	163,0	363,5	600,0	111,8	27,1	141,0	150,0	7 136,0
Total	14 832,6	11 239,8	19 912,7	19 664,9	17 301,7	22 238,2	16 149,0	26 138,7	416 782,2

Source: Global Development Finance, World Bank.

CAUSES OF THE AFRICAN DEBT CRISIS

The analysis in section 1 has shown that historically African countries' external debt was contracted on rather favourable terms compared to other developing regions of the world. Considering that Africa experienced severe and protracted debt service difficulties illustrated by a long series of debt relief plans put in place by the international community, it is warranted to re-examine the soundness of past sovereign lending policies given Africa's economic specificity. In this context the three avenues of investigation that will be pursued are captured by the following three hypotheses:

1. The proceeds of sovereign debt were used for consumption rather than investment by African countries.
2. African countries borrowed too much.
3. The maturity of loans to African countries was too long.

Use of the proceeds of Africa's sovereign debt

One of the views in the debate on Africa's debt crisis is that debt service is burdensome because African countries did not use the proceeds of their contracted loans for investment. In other words, African countries borrowed to consume. This section is an empirical investigation on the use of the proceeds of loans extended to African countries over a 30-year period from 1975 to 2004. To this end a number of econometric estimations are conducted to uncover if the funds were used for productive ends, consumption or to smooth fluctuations in African countries consumption over time. The methodology is adapted from a study by Jeanne and Zettelmeyer (2006). Three sets of regressions are conducted under the respective headings of production, consumption and volatility. A sample of 33 African countries is selected for the period 1975-2004. The same set of explanatory variables is used for the production and consumption regressions. They are country averages of the following cash flow and income variables:

- Net transfer on long term public and publicly guaranteed debt by private creditors as % of GDP (NTRPRVGDP)
- Net transfer of total long term public and publicly guaranteed debt as % of GDP (NTRTOTGDP)
- Gross national income per capita in Atlas method (GNICAPA)¹
- Domestic credit to private sector by local banks (CREPRIV)
- Exports of goods and services as % of GDP (EXPORT)

In the case of production, the variables hypothesized to capture the use of the loan proceeds are:

- Gross capital formation as % of GDP (INVGDP)
- Exports of goods and services as % of GDP (EXPORT)
- Per capita GDP growth over the period 1975-2004 (GDPCAPG)

For consumption the following dependent variables are selected:

- Total final consumption as % of GDP (CONSTOT)
- General government final consumption expenditure as % of GDP (CONSGOV)
- Household final consumption expenditure as % of GDP. (CONSHOU)

The data were obtained from World Bank Global Development Finance and World Bank Development Indicators, online. The technique of ordinary least squares was used for all the cross section regressions. The results of the

estimations are displayed in Table 10 for the production use hypothesis and in Table 11 for consumption.

Table 18.10: Econometric tests of the use of loan proceeds for production or investment by sovereign borrower countries

Regressor	Dependent variable	Dependent variable	Dependent variable
	Investment/GDP	Per capita income growth	Exports/GDP
NTRPRVGD	-0.244 (-0.156)	-0.303 (-0.437)	10.648** (3.203)
NTRTOTGD	-0.086 (-0.161)	0.357 (1.518)	-3.431** (-2.991)
GNICAPA	0.003** (2.883)	0.0006 (1.303)	0.008** (3.940)
CREPRIV	0.018 (0.374)	0.014 (0.675)	-0.176 (-1.559)
EXPORT	0.065 (0.857)	0.009 (0.265)	
Constant	14.949** (5.276)	-0.813 (-0.650)	30.190** (7.400)
Adjusted R2	0.451	0.028	0.583
# observations	33	33	33

N.B. Figures in parentheses are t values of regressors. The symbol ** denotes significance at the 99% confidence level and * denotes 95% confidence level.

The results reported in the first two columns show that net debt transfers, whether from private or public creditors, had no effect on aggregate investment or growth of per capita income during the 30 year period under study. So, for African countries, the claim that sovereign foreign indebtedness serves to fuel economic growth through investment is not supported by the empirical evidence. However, as shown on the third column of Table 10, two conflicting effects emerge regarding African countries' exports. On the one hand, net transfers by private creditors had a positive effect on the level of exports while net transfers by public lenders had a negative effect and seem to have served as a substitute for export earnings, thereby reducing the need for countries to export to service their external debt.

The evidence also seems to indicate that countries with a higher per capita income tend to invest more and to export more, relative to their GDP. Finally, the regression for which average growth of per capita income is the dependent variable (Column 2) shows that there is no convergence of income levels between low income and high income African countries (the coefficient of GNICAPA is insignificant) and that no significant determinant of economic growth is uncovered by the empirical model which, in itself, has no explanatory power.

Table 18.11: Econometric tests of the use of loan proceeds for consumption by sovereign borrower countries

Regressor	Dependent variable	Dependent variable	Dependent variable
	Total consumption/GDP	Government consumption/GDP	Household consumption/GDP
NTRPRVGDP	-0.491 (-0.210)	1.210 (0.700)	-1.294 (-0.475)
NTRTOTGDP	2.655** (3.354)	0.054 (0.092)	2.489* (2.691)
GNICAPA	-0.002 (-1.710)	-0.0004 (-0.347)	-0.002 (-1.352)
CREPRIV	0.019 (0.276)	0.015 (0.287)	-0.0003 (-0.004)
EXPORT	-0.308* (-2.713)	0.254** (3.019)	-0.551** (-4.153)
Constant	91.621** (21.738)	7.750* (2.483)	84.085** (17.078)
Adjusted R2	0.723	0.391	0.770
# observations	33	33	33

N.B. Figures in parentheses are t values of regressors. The symbol ** denotes significance at the 99% confidence level and * denotes 95% confidence level.

Table 11 reports the regressions of aggregate consumption measured in various ways on the same explanatory variables as for production. Total net transfers by public foreign lenders have a positive impact on aggregate consumption. However, total net transfers by private foreign lenders and credit to the private sector by local banks have no impact. In the light of column 3 of Table 10, this means that African countries have historically borrowed from public foreign lenders to finance their final total consumption and used private foreign borrowing to boost their exports. African countries with a higher average income do not tend to have a higher propensity to consume but countries that export more also consume more relative to GDP. The level of Government consumption is unaffected by net foreign transfers or by the level of per capita income but is positively influenced by the level of exports. Column 3 of Table 11 underscores a strong positive impact of net transfers by foreign public lenders on the level of household consumption. Combined with the results displayed in Table 10, this finding shows that, over the last 30 years, African countries have borrowed from foreign public lenders to finance consumption of their households and not to invest or facilitate growth of per capita income. Private foreign lenders and domestic credit to the private sector did not play a counter-balancing role to mitigate this process and this may have been a contributing factor in the emergence of the African debt crisis.

Table 18.12: Econometric tests of the use of loan proceeds against volatility of consumption for sovereign borrower countries

Regressor	Dependent variable Volatility of total consumption/GDP	Dependent variable Volatility of Govern- ment consumption/ GDP	Dependent variable Volatility of House- hold consumption/ GDP
Volatility of NTRPRVGDP	-5.329 (-1.954)	-0.566 (-1.328)	-3.985 (-1.532)
Volatility of NTRTOT- GDP	1.581 (0.739)	0.344 (1.029)	0.957 (0.469)
Volatility of GNICAPA	0.0003 (1.063)	-0.0003 (-0.372)	0.000 (0.014)
Volatility of EXPORT	1.546** (3.555)	0.431** (6.344)	0.862* (2.079)
Constant	6.672 (1.353)	0.666 (0.726)	11.834* (2.111)
Adjusted R2	0.254	0.554	0.072
# observations	33	33	33

N.B. Figures in parentheses are t values of regressors. The symbol ** denotes significance at the 99% confidence level and * denotes 95% confidence level.

Table 12 is an investigation of the possible link between the volatility of the level of consumption. The three regressions reported indicate that the volatility of total consumption, Government consumption or household consumption is not related to the volatility of net transfers but rather on the volatility of exports. Based on this result, the claim that foreign borrowing helped African countries smooth their consumption patterns over time does not have empirical support.

The empirical evidence provided by the three sets of regression can be summarized as follows. African countries sovereign foreign borrowing did not serve to increase aggregate investment or per capita income growth. Furthermore, net lending by private foreign creditors fuelled growth in exports while net lending by public creditors substituted for export earnings. African countries used foreign loans provided by public creditors to finance their consumption, particularly household consumption. Considering that neither foreign lending by private creditors nor bank lending to the private sector helped to increase aggregate investment, African countries did not increase their productive capacity or their per capita income as a result of foreign borrowing and, over time, were faced with a crisis in their foreign debt service, as is evidenced in Table 4.

MARKET CAUSES OF THE AFRICAN DEBT CRISIS

The purpose of the present section is to identify the causes of the African debt crisis. To that end a theoretical model will seek to establish the link between the level of interest rates and maturity of debt on the one hand, and debt service difficulties on the other hand. Empirical evidence will serve to test the validity of the model.

Interest rates and the African debt crisis

Let us assume a perfectly functioning sovereign debt market where lenders' behaviour is characterized by risk neutrality and a zero-profit condition. This condition implies that international creditors lend at the risk-free rate to riskless borrowers, without a mark-up. Let us also assume that the equilibrium rate of interest charged to country k is set by the following simple model:

$$i_k = \frac{i_f}{1 - P_k} \quad (1)$$

i_k = rate of interest on loans to country k

i_f = risk-free rate of interest

P_k = probability that county k will default on its loan i.e. not pay it back

We have $0 \leq P_k \leq 1$

and $i_k - i_f$ = risk premium component of interest rate applicable to country k .

When a credit is given to country k , the stream of discounted future debt service payments must, in equilibrium, equal the amount of the loan. In other words, the creditor buys the stream of future debt service cash flows by paying their present value, the equilibrium interest rate applicable to country k , i_k , serving as the discount rate. So, the equilibrium value of the loan is:

$$L_k = \sum_{t=1}^N \frac{DS_t}{(1 + i_k)^t} \quad (2)$$

L_k = value of the loan

DS_t = debt service for period t

N = maturity of the loan

Combining eqs. (1) and (2) gives

$$L_k = \sum_{t=1}^N \frac{DS_t}{\left[1 + \left(\frac{i_k}{1 - P_k}\right)\right]^t} \quad (3)$$

Consider two hypothetical countries. The first one, denoted country f , is deemed riskless, because its probability of default is zero. The second country is considered risky because it has a positive probability of default. It is also representative of most African countries. Consider also that the two countries contract to pay their creditor identical streams of debt service cash flows over the same maturity. If the loan pricing relationship depicted in eq.(3) applies to both countries, then the riskless country will receive a bigger loan because its future debt service payments will be discounted at a lower interest rate. In other words, the riskier loan will have a non zero probability of default that translates into a

positive risk premium incorporated into the discount rate thereby reducing the present value of the discounted debt service payments.

Consequently, if an African country borrows at an interest rate that is lower than what equilibrium pricing would dictate, for a contracted stream of future debt service payments, it receives more money for the loan than it should. Excess borrowing then arises and is equal to the difference between the equilibrium level of the loan and its actual level. Furthermore, if interest rates charged to African countries are kept artificially low through aid facilities such as the World Bank's International Development Assistance (IDA), African countries will tend to borrow more and consequently increase their indebtedness even if on concessionary terms. This may call into question the soundness of concessionary lending schemes and debt relief packages that result in low interest rates on loans rather than non-debt assistance or relief measures.

Table 13 displays the results of econometric tests of the relationship between the interest rates on sovereign loans and the Euromoney country ratings of selected developing countries. The values of the country ratings reported in the March issue of the magazine are used after a logarithmic transformation. The interest rates reported in Table 1 are used for the estimation. The model is estimated for four distinct years, 1987, 1995, 2000 and 2003, to test the constancy of the relationship over time. Panel A shows the results for all the countries in the sample. The same results are reported in Panel B for African countries and in Panel C for Asian and Latin American countries. The econometric estimation that is conducted can also be considered an empirical verification of the validity of the relationship portrayed in eq(1) between the level of risk of a borrower country and the interest rate that is charged on its loans.

For all three panels the model supports existence of a relationship between interest rates and country risk. The regression coefficient of the Log of Euromoney Country Risk Rating is consistently positive and significant for all sub-samples and all years of estimation, except for Africa in 1995. The explanatory power of the empirical model captured by the Adjusted R² varies significantly across the sub-samples but is frequently in the 25% to 30% range. This rather moderate value indicates that other determinants of interest rates, whether quantitative or qualitative, are at play but are not captured in the present specification. Overall, for the years under study, the model establishes a positive and significant relationship between sovereign borrower risk as measured by Euromoney Country Risk Rating, and the rate of interest on loans to developing countries.

However, the results reported in Panel B for African countries for the year 1995 are different. The Adjusted R² is less than 5% and the coefficient for the Country Rating is insignificant. This seems to indicate that in 1995, with respect to African countries, sovereign lending departed from a historical pattern of charging a risk premium for risky loans. This result is borne out but the figures reported in Tables 1 and 3. Table 1 shows that the average rate of interest for African countries declined from a high of 6.3% in 1980 to only 2.8% in 1995, at the height of episode of Structural Adjustment Programmes characterized by

significant domestic and external imbalances and severe debt service difficulties faced by most African countries. Concomitantly, as is shown on Table 3, African countries' average ratio of total debt to gross national income (GNI) rose sharply from 52.8% in 1980 to a peak of 155.5% in 1995. During the same period Asian countries only doubled their debt to GNI ratio while Latin American countries experienced a slight decline. These facts are consistent with the theoretical arguments captured in the model portrayed by eqs.(1-3) and can be summed up as follows. During the 1990s, international lending markets increasingly softened the borrowing terms of African countries, especially with respect to interest rates that no longer reflected the level of risk of the recipients. As a result, African countries over-borrowed and were faced with a stock of debt that their economies in crisis and under reform could not service sustainably.

Table 18.13: Cross section Regression of Spread over LIBOR on Log. of Euromoney Country Risk Rating of Sovereign debtor countries

Panel A. All countries	Year 1987	Year 1995	Year 2000	Year 2003
Log. Euromoney	2.3119**	3.600**	6.163**	3.836**
Country risk rating	(4.333)	(5.194)	(5.768)	(4.883)
Constant	-2.316	-9.335**	-18.294**	-11.211**
	(-1.297)	(-3.605)	(-4.669)	(-3.889)
Adjusted R2	0.255	0.295	0.342	0.269
# of observations	53	63	63	63
Panel B. Africa	Year 1987	Year 1995	Year 2000	Year 2003
Log. Euromoney	4.000**	1.757	3.868**	2.697**
Country risk rating	(4.273)	(1.464)	(2.877)	(3.129)
Constant	-7.667*	-3.408	-11.674*	-7.822*
	(-2.552)	(-0.804)	(-2.447)	(-2.584)
Adjusted R2	0.504	0.0456	0.233	0.268
# of observations	18	25	25	25
Panel C. Asia and Latin America	Year 1987	Year 1995	Year 2000	Year 2003
Log. Euromoney	1.874**	3.848**	5.158**	3.281*
Country risk rating	(2.850)	(3.955)	(3.843)	(0.019)
Constant	-0.852	-9.923*	-13.556*	-8.732
	(-0.380)	(-2.640)	(-2.699)	(-1.738)
Adjusted R2	0.173	0.284	0.271	0.120
# of observations	35	38	38	38

N.B. Figures in parentheses are t values of regressors. The symbol ** denotes significance at the 99% confidence level and * denotes 95% confidence level.

Debt maturity and the African debt crisis

The analysis will now focus on the link between the debt service difficulties faced by African countries and the maturity of their external loans. Recognizing that the debtor country will, over the life of the loan, make several discrete debt service payments, one can rewrite eq.(2) by expanding it as follows:

$$L_K = \frac{DS_1}{(1+i_{k_1})} + \frac{DS_2}{(1+i_{k_2})^2} + \frac{DS_3}{(1+i_{k_3})^3} + \dots + \frac{DS_N}{(1+i_{k_N})^N} \quad (4)$$

Eq.(2) is identical to eq.(4) because the single discount rate, i_k , replaces the N discount rates in eq.(4) but renders the same value of the loan given the stream of future debt service payments. What is new in eq. (4) is that, for each future period t , the debt service is discounted at a unique interest rate i_{k_t} . The underlying rationale is that the same amount to be paid in different future periods could carry different levels of uncertainty, thus of risk. It is argued that, in the case of African countries, the more distant into the future the contracted debt service payment, the higher the risk that it will not be made.

For instance, the debt service payment expected for period N , denoted DS_N is significantly more uncertain than the debt service payment expected for next period, DS_1 . In that case the rate at which DS_N is discounted i_{k_N} will be higher than i_{k_1} because it incorporates a higher risk premium. As the stream of future debt service payments expands out into the future, their present values tend to diminish significantly under the joint action of an increasingly higher discount rate and a large number of periods over which the payments are discounted.

Consequently, for sovereign borrowers that have a high risk of default, which is the case for many African countries, the present values of distant debt service payments are close to zero and, under equilibrium, command a market loan value that is also close to zero. In other words, African countries, given their level of borrower risk, should not have long loan maturities, although the appropriate maturity limit would vary between countries.

But why is a more distant debt service payment more risky than a closer one? The reason lies in the distributional characteristics of African countries' external revenues available for debt service. These revenues can be understood to include exports earnings minus incompressible imports. For the sake of sustainability, grants from foreign donors and potential future debt service forgiven are excluded from the analysis. The link between the African debt crisis and the maturity of the loans will be examined from a static point of view and later, a dynamic one. However, the analysis will first examine the main characteristics of the probabilistic distribution of African countries' export earnings over time.

Distributional characteristics of African countries' export earnings

The purpose of this section is to analyze the link between the characteristics of the probabilistic distribution of the export proceeds of an African country and the likelihood of debt service difficulties. A country is considered to be in debt crisis (in default) if the portion X_t of its export earnings that is available for debt service is less than the contracted amount of debt service for that year. What is the probability that, for a given period t , X_t will be lower than the contracted debt service for that year, DS_t ? For the sake of simplicity, it is assumed that X_t is normally distributed. Its probabilistic distribution function is given by:

$$f(X_t) = \frac{1}{\sqrt{2\pi \text{var}(X_t)}} \exp \left[-\frac{1}{2 \text{var}(X_t)} (\delta - E(X_t))^2 \right] \quad (5)$$

and the probability of default for debtor-country k at period t is :

$$P(X_t < DS_t) = \int_0^{DS_t} f(X_t) dX_t \quad (6)$$

Historically, the export earnings of African countries have been considered erratic, often with large annual fluctuations. Consequently, they can be hypothesized to follow a random walk.¹ If the export proceeds of African countries follow a random walk, the uncertainty surrounding their expected values for increasingly distant periods into the future will be increasingly large, when measured with their variance, and the probability of defaulting on a given contracted debt service payment will also increase for more distant years. This point will be examined in further detail in the next two sections.

Table 14 provides results on unit root tests aimed at verifying if the export earnings of African countries follow a random walk. Constant Dollar values of export earnings for the period 1975-2003 were used for an Augmented Dickey-Fuller test. The results show that the export earnings of all the sampled African countries have a unit root and therefore follow a random walk. The economic consequence of this feature is that for increasingly distant periods into the maturity of the loan, the probability that African countries' export earnings can take on extremely large or small values also increases. Forecast of the export earnings at, say a 95% confidence level, for each of the future periods will yield a confidence band that widens and takes a conical shape, when graphed over the maturity of the loan. This is illustrated in the shaded area of Figure 1 below.

The last column of Table 14 displays the coefficients of variation of the annual growth rates of African countries' export earnings in constant Dollars. The variability of African exports is very high and underscores the challenge of servicing fixed external debt obligations with a source of revenue that is characterized by substantial uncertainty. It is commonly accepted that high concentration in a few export products, reliance on unprocessed agricultural output or unmitigated exposure to highly volatile world markets of primary commodities are the main cause of variability of African countries' export earnings. The modest historical record of the average growth of African exports, which is illustrated by the decline in their share of world trade, is also a contributing factor.

Table 18.14. Augmented Dickey-Fuller Unit Root Tests and Coefficients of Variation for Export Earnings of Selected African countries (in constant 2000\$) for period 1975-2003.

	Country	ADF test statistic	Probability ²	Unit Root	Coefficient of variation of export growth, %
1	Algeria	-1.850	0.653	Y	157.5
2	Angola	-2.126	0.506	Y	190.0
3	Cameroon	-2.031	0.560	Y	229.2
4	Congo Rep.	-2.920	0.172	Y	177.8
5	Cote d'Ivoire	-2.408	0.368	Y	321.0
6	Egypt	-1.056	0.919	Y	130.0
7	Ethiopia	0.494	0.999	Y	247.1
8	Gabon	-2.390	0.376	Y	404.1
9	Ghana	-2.039	0.555	Y	435.5
10	Guinea	-3.692	0.065	Y	118.2
11	Kenya	-3.287	0.091	Y	252.3
12	Madagascar	-3.158	0.113	Y	1134.9
13	Malawi	-3.652	0.043	Y	406.0
14	Morocco	-2.258	0.442	Y	88.4
15	Mozambique	0.986	0.999	Y	220.4
16	Nigeria	-2.241	0.450	Y	484.5
17	Senegal	-1.802	0.677	Y	355.7
18	South Africa	-1.223	0.886	Y	142.5
19	Sudan	-0.226	0.989	Y	175.7
20	Tanzania	-2.619	0.279	Y	160.5
21	Tunisia	-0.079	0.993	Y	101.4
22	Uganda	-2.118	0.506	Y	144.9
23	Zambia	1.212	0.999	Y	869.2
24	Zimbabwe	-3.608	0.052	Y	267.7

Static assessment of the distribution of future debt service payments

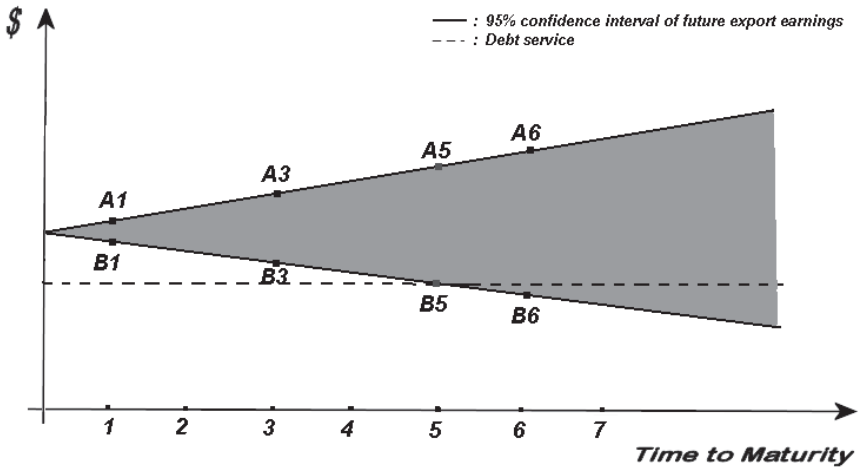
For the sake of simplicity, it is assumed that African countries use their export earnings to service their external debt, which means that external aid is not destined for that purpose, at least ex-ante. The variability of a country's export earnings has a direct impact on the variability of its capacity to service its external debt. Therefore, assessment of a debtor-country's credit-worthiness must include assessment of the probabilistic distribution of its export proceeds for each of the future periods over which debt service payments will be expected. The link between the length of the loan maturity and debt service difficulties is illustrated in Figure 1.

In Figure 1, the horizontal line indicates the number of years until maturity of the loan while the vertical line denotes Dollar amounts. Consider a country that contracts debt that will be serviced with equal payments until the maturity of the loan. The equal payments made by the country are depicted by the dotted horizontal line denoted DS. At the time of the issuance of the loan, which is $t=0$, the distribution of the future export receipts of the borrower-country is assessed and summarized by the shaded area in the following manner. At the end of the first period, according to the assessed distribution, it is estimated that there is a 95% chance that the country's export earnings will be between the value A1 and the value B1.³

If the debt service payment expected three years from now is considered, the 95% confidence interval is bounded by the higher value A3 and the lower value B3. The same can be said of all future debt service payments with increasingly wider confidence bands. The graph shows that the more distant into the future a debt service payment is, the more uncertain it is, and consequently, the higher the risk premium that should be attached to its equilibrium discount rate. The graph also shows that as the maturity is extended, the probability increases that the country's export earnings for a given year will be lower than the debt service payment contracted for that year.

In this example, in year 5, the 95% confidence band intersects with the contracted annual debt service (dotted) line denoted DS. After year 5, the probability of debt service difficulty, measured by the shaded area below the dotted line increases, which is indicative of the probability of a future debt service crisis. Therefore, for very long maturities, the probability of a debt crisis is very high and from the foregoing analysis, one can conclude that concessionary lending that has historically been characterized by long maturities may have contributed to the current external debt crisis faced by a large number of African countries.

Table 2 shows that African countries have, over the years, contracted external debt at increasingly longer maturities, sometimes as a result of relief packages aimed at addressing debt payment crises. Considering that long maturity loans extended to countries that have highly volatile export earnings can contribute to future debt service crises, concessionary lending facilities that use this practice may need to be reviewed and perhaps modified. It can also be argued that if long term financing is deemed necessary for development purposes of African countries, fixed and unconditional debt service payments should be terminated even for soft loans and replaced with either debt service payments that are contingent on the performance of a country's exports or with pure grants altogether.

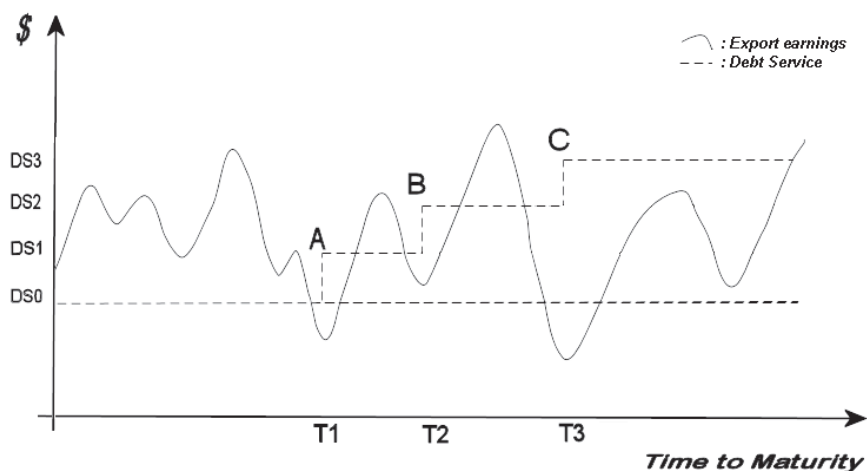
Figure 1 : Static forecast of future debt service difficulties

Dynamic assessment of the distribution of future debt service payments

The analysis conducted with Figure 1 is based on the assumption that no new development will affect the country's future export earnings and that initially contracted debt service payments will not change over the life of the loan. It also postulates that the debt service payments cannot be renegotiated in the advent of a debt service incident such as accumulation of arrears or a temporary default. These common features of African countries' record in the sovereign debt market will now be taken into account in the analysis with the help of Figure 2.

Figure 2 describes the same initial situation – $t=0$ – as Figure 1. However, it goes further to depict the evolution of the debtor-country's export earnings denoted by the solid line, and the various episodes of debt renegotiation with the resulting levels of debt service. The confidence band illustrated by the shaded area of Figure 1 is not drawn because not one, but a series of confidence intervals, would be needed in Figure 2, each one associated with a new renegotiated debt service level. Indeed, the distribution of the future export earnings would need to be re-assessed for each new level of renegotiated debt service because of the adverse impact of debt service on export performance. For the sake of clarity, the various confidence bands are omitted from presentation of Figure 2.

In Figure 2, export earnings are depicted as following a random walk. From inception of the loan contract until the date T_1 their level is higher than that of the initially contracted debt service payment DS_0 . But at T_1 the level of exports declines sharply and is now lower than DS_0 . The loan is then renegotiated and the accrued interests are capitalized which translates into a new and higher debt service that is set at DS_1 . Two adverse events happen at T_1 . First, the debtor

Figure 2: Dynamic forecast of future debt service difficulties

country must now pay DS1 (point A) which is higher than DS0 to service its debt because of its poor export performance. Second, the higher debt service payment has a negative impact on the country's future export prospects. Consider the situation at T2. The country's export earnings are higher than the initially contracted payment, DS0, but lower than the new renegotiated payment, DS1. As a result, it finds itself unable to service its debt and a new level of debt service payment must be renegotiated and set at DS2 (point B).

This situation may repeat itself several times as is illustrated by point C which is associated with an even higher debt service payment (DS3) if the loan has a long maturity considering that African countries have export earnings that have high variability and follow a random walk process. From the foregoing analysis, it appears that extending loans to African countries at long maturities and fixed debt service payments may have contributed to their current debt crisis, even if the rates of interest that they were charged were concessionary. This stems from the fact that the export earnings that they use to service their debt are highly variable and evolve randomly. In the absence of a self-correcting process in their export proceeds that tends to revert them to a more predictable long term trend, a debt service incident in a given year cannot be expected to be followed by a counterbalancing favourable year in the country's export performance.

Consequently, the adverse economic consequences of debt crises tend to accumulate and therefore have permanent rather than transitory effects. Figure 2 has shown why the longer the maturity, the more severe the accumulation and the more severe the debt crisis, which is currently the case for many African countries. It is noteworthy that, as shown in Table 4, the level of debt service relative to exports is moderate and has been lower than that of Asian or Latin

American countries and cannot be considered the cause of the debt crisis. Arguably, the combination of the high variability of African countries export earnings with fixed debt service payments scheduled over long maturities, should be considered one of the prime suspects for Africa's current debt crisis.

WAYS TO PREVENT FUTURE AFRICAN DEBT CRISES

The foregoing analysis has helped unveil a number of causes of the African debt crisis. The causes that are discussed focus primarily on the economic dimensions of the African external debt challenge and therefore do not dwell on other possible causes such as political strife and poor governance. These other causes are indirectly taken into account only through their impact on economic factors. The discussion will also not focus on current or past debt relief measures because they seek to address the current consequences of past borrowing. In this regard, the present paper could be considered as a contribution to the debate on the design of a new international mechanism for Africa's external debt. Discussion of the ways to prevent future debt crises is organized, not with respect to the nature of the underlying causes, but in relation to the actors that could play a role in mitigating the risk of future crises. Three types of actors are identified in the analysis: African countries, the international lending community and the donor community.

African countries' role in prevention of future debt crises

Measure 1: As was shown in the discussion of Table 14, African countries need to seek to reduce the variability of their export earnings through a number of measures that could include control of the regularity of their agricultural output through use of modern techniques, and diversification of their export base.

Measure 2: They could also expand their productive and export capacity by investing the proceeds of external loans rather than devote them to consumption as illustrated by the results reported in Tables 10 and 11. Indeed, Table 10 shows that African countries did not use loan proceeds to invest or to stimulate growth; but countries' export growth was aided by foreign borrowing. Instead, foreign loans extended by public creditors were used to increase domestic household consumption which was neither conducive to growth nor to expansion of exports.

International lending community's role in prevention of future debt crises

Measure 3: The lending community could undertake to unbundle loans by removing the grant element. Instead, pure market-based loans - with respect to interest rates and maturity - should be extended to African countries separately from grants that would also be provided. In this manner their level of overall debt exposure would be easier to monitor and their tendency to over-borrow would be reduced. As is in Table 13, mispriced sovereign loans contribute to excessive borrowing and result in future debt crises.

Measure 4: The international lending community could also consider replacing fixed debt service payments with debt service payments whose level would be contingent on the export performance of African countries' export performance or some other economic indicator. The evidence provided in Table 14 and Figures 1 and 2 shows that African countries' export earnings are highly variable and evolve randomly, and therefore cannot be relied upon to service external debt obligations over long maturities without some degree of flexibility. The loan instrument that would make it possible would be a quasi-consol that would carry a minimum annual debt service – for example all or a fraction of interest accrued - and a provision for early payment of principal at the discretion of the debtor country.⁴ Countries that issue quasi-consols would be held to a maximum level of external indebtedness.

Measure 5: A corollary to market-based functioning of the African external debt is full information disclosure of loan transactions and continuous assessment of a country's creditworthiness. To better serve that purpose and help lenders increase the degree of liquidity of their portfolios, steps should be taken to enhance and better organize a competitive international secondary market for African sovereign debt. Debtor countries would also be allowed to buy back their own debt on the secondary market, which would give them a way to influence their risk profile.

Donors' role in prevention of future debt crises

Measure 6: In order to help African countries plan their financial flows predictably and reliably over longer periods, donors could commit irrevocably to provision of development aid in satisfactory volume and quality. This move would be in keeping with commitments made under the Paris Declaration.

Measure 7: In order to help African countries reduce uncertainty regarding their future capacity to service external debt, donors could set up a debt service support fund that would supplement debtor countries' effort to pay back their debt under extreme adverse circumstances. This measure would shift some of the risk exposure from lenders to the international donor community, thus making loans by private creditors more attractive.

CONCLUSION

The current debate on Africa's debt crisis and the search for measures to alleviate it place emphasis on relief packages that consist primarily in write-offs. The present study has sought to contribute in the emerging African debt architecture by proposing a number of measures aimed at preventing future external debt crises. To that end, it focused on three areas of investigation namely examination of the nature and extent of the African debt crisis, search for the causes of the crisis and identification of the ways to prevent future crises. The analysis of the terms of Africa's external debt has shown that, for the period 1980-2003, the level of interest rates was low and has been steadily declining, especially for

poor, non-oil producing African countries. It was also lower than for developing countries in Asia and Latin America and the Caribbean.

Africa's debt was also contracted on maturities that are longer than for their counterparts in other developing regions and have grown longer over the years. These seemingly borrowing terms triggered a ballooning of the continent's debt stock that reached 155% of its gross national income, well above the ratio of Asia and Latin America. It is noteworthy that the debt service ratio of African countries was not higher than that of other regions and has also been declining. In summary, the current external debt crisis of African countries cannot be attributed to high interest rates, low maturities of high debt service relative to their exports. Furthermore, over the last 15 years, African countries have benefited from debt relief measures that were more generous than has been the case for other parts of the world, even for countries of comparable income levels.

Therefore, the causes of Africa's debt crisis must be found in other factors. The empirical evidence has helped identify two causes. First, econometric estimation indicates that the proceeds of Africa's external borrowing were not used for investment or to foster economic growth but to fuel consumption of households. Furthermore, lending by foreign public creditors was mainly used for consumption and served as a substitute for African exports while lending by private foreign creditors had a positive impact on African exports. Higher income African countries tend to invest more and export more than low income countries. The second cause of debt service difficulties lies in the combination of the long maturities of Africa's debt and its fixed debt service obligations that must be serviced with highly variable exports earnings. This gives rise to an increasing probability of default as the maturity of loans grows longer.

Based on these findings, the study proposes a number of measures designed to help prevent future debt crises. They can be summarized as follows. African countries could seek to diversify their export base and use proceeds of external borrowing for investment rather than consumption. The international lending community could abandon or lessen the practice of concessionary lending and replace it with pure market-determined loans that would be supplemented by pure grants to be provided by donors. It could also design new lending instruments that would allow for debt service payments that are contingent on debtor-countries' export performance.

To help support these measures, the international secondary market for Africa's external debt could be revitalized and better organized for easier monitoring of Africa's indebtedness and to facilitate debtor-countries' buy-back of their own debt. Finally, the donor community could commit irrevocably to predictable levels of support in the spirit of the Paris Declaration and set up a debt service support fund aimed at relieving countries faced with extreme economic circumstances, thereby shifting some of the risk from lenders to donors and making private lending to African countries more attractive.

Notes

1. If X_t follows a random walk, then $X_t = \rho X_{t-1} + \varepsilon_t$. Consequently, its process has a unit root i.e. $\rho = 1$ and for any future period t the variance of the value of X_t is t times larger than the variance of the value of X for next period. In other words $\text{var}(X_t) = t \text{var}(X_1)$.
2. Based on McKinnon one sided p values.
3. A confidence interval of 99% or of any value no higher than 100% can be computed using the same statistical method given the underlying probability function that drives the distribution of the country's export earnings. The confidence interval of 95% is used here for illustrative purposes.
4. A consol is a loan that never matures but serves interest regularly.

References

- Abrego, Lisandro and Doris C. Ross. 2001. "Debt Relief under the HIPC Initiative: Context and Outlook for Debt Sustainability and Resource Flow," *IMF Working Paper 144*. Washington, DC, International Monetary Fund.
- Aiello F. 1999. "The stabilization of LDCs' export earnings: the impact of the EU Stabex program," *International Review of Applied Economics*, 13, pp. 71-85.
- Avery, W. 1990. "The Origins of Debt Accumulation Among LDCs in the World Political Economy," *Journal of Developing Areas*, 24, pp. 503-522, July.
- Aylward, Lynn and Rupert Thorne. 1998. "An Econometric Analysis of Countries' Repayment Performance to the International Monetary Fund," *IMF Working Paper 98/32*. Washington, DC, International Monetary Fund.
- Berg, Andrew and Jeffrey Sachs. 1988. "The Debt Crisis: Structural Explanations of Country Performance," *Journal of Development Economics*, 29 (3), pp. 271-306.
- Berger, Allen N. at al. 2005. "Debt Maturity, Risk, and Asymmetric Information," *IMF Working Paper N° 05/201*. Washington, DC, International Monetary Fund.
- Berlage, L. at al. 2003. "Prospective Aid and Indebtedness Relief: A Proposal," *World Development* 31 (10), pp. 1635-54.
- Bernal, R. 1987. "Resolving the Debt Crisis," *Economia Internazionale*, 40, pp. 155-171, May.
- Bigsten A., J. Levin and H. Person. 2001. "Debt Relief and Growth: a study of Zambia and Tanzania," *Discussion Paper 2001/104*. United Nations University / World Institute for Development Economics Research (UNU/WIDER). www.wider.unu.edu/publications/dps/dp2001-104.pdf
- Bird, G. and A. Milne. 2003. "Debt Relief for Low Income Countries: Is it Effective and Efficient?" *The World Economy* 26(1), pp. 43-59.
- Birdsall N. J. Williamson and B. Deese. 2002. *Delivering on Debt Relief, From IMF Gold to a New Aid Architecture*. Washington, DC, Center for Global Development and Institute for International Economics.
- Birdsall, Nancy, C. Claessens and I. Diwan. 2002. "Policy Selectivity Foregone: Debt and Donor Behaviour in Africa," *Working Paper 17*, Center for Global Development.

PART VI: GLOBALIZATION, REGIONAL INTEGRATION AND NEPAD

- Brewer, Thomas L. and Pietra Rivoli. 1990. "Politics and Perceived Country Creditworthiness in International Banking," *Journal of Money, Credit and Banking*, 22 (3), pp. 357-369.
- Brooks, R. at. al. 1998. "External Debt Histories of Ten Low-Income Developing Countries: Lessons from their Experience," *IMF Working Paper N° 98/72*. Washington DC, International Monetary Fund.
- Brun J., G. Chambas and B. Laporte. 2001. "Stabex versus IMF compensatory financing: impact on Fiscal policy," *Journal of International Development*, 13, pp. 571-81.
- Bulow, J. and K. Rogoff. 1990. "Cleaning up third World Debt without Getting Taken to the Cleaners," *Journal of Economic Perspectives*, 4, pp. 31-42, Winter.
- Cantor, Richard and Frank Packer. 1996. "Determinants and Impact of Sovereign Credit Ratings," *Federal Reserve Bank of New York Policy Review*, pp. 37-52, (October).
- Catão, Luis and Bennett Sutton. 2002. "Sovereign Defaults: The Role of Volatility," *IMF Working Paper 02/149*. Washington, DC, International Monetary Fund.
- Chalk, Nigel and Richard Hemming. 2000. "Assessing Fiscal Sustainability in theory and Practice," *IMF Working Paper 81*. Washington, DC, International Monetary Fund.
- Chowdhury AR. 2001. "External Debt and Growth in Developing Countries: A sensitivity and Causal Analysis," United Nations University / World Institute for Development Economics Research (UNU / WIDER) *Discussion Paper N° 2001/95*. www.wider.unu.edu/publications/dps/dp2001-95.pdf
- Christensen J. 2004. "Domestic Debt Markets in Sub-Saharan Africa," *IMF Working Paper WP 04/46*. Washington, DC.
- Claessens S. at al. 1997. "Analytical Aspects of the Debt Problems of Heavily Indebted Countries," in: Zubair Iqbal, and Ravi Kanbur (eds), *External Finance for Low-Income countries*, pp. 21-48. Washington, DC, IMF.
- Claessens, S. at al. 1996. "Analytical aspects of the Debt Problems of Heavily Poor countries," *Policy Research Working Paper 1618*. Washington, DC, World Bank.
- Clemens, B., R. Bhattacharya and T.Q. Nguyen. 2003. "External Debt, Public Investment and Growth in Low-Income Countries," *IMF Working Paper, WP/03/249*. Washington, DC, International Monetary Fund. www.imf.org/external/pubs/ft/wp/2003/wp03249.pdf
- Cline, W. 1995. *International Debt Re-examined*. Washington, DC, Institute for International Economics.
- Cline, W. 1997. "Debt Relief for Heavily Indebted Poor Countries: Lessons from the Debt Crisis of the 1980s," in Zubair, I. and R. Kanbur (eds), *External Finance for Low-Income Countries*. Washington, DC, IMF.
- Cohen, Daniel. 1996. "The sustainability of African Debt," World Bank Policy Research Department *Working Paper 1691*. Washington, DC.
- Corsetti, Giancarlo, Bernardo Guimarães and Nouriel Roubini. 2003. "International Lending of Last Resort and Moral Hazard: A model of the IMF's Catalytic Finance," New York, New York University, November (Unpublished). <http://www.econ.yale.edu/~corsetti/euro/imf.pdf>
- Cottarelli, Carlo and Curzio Giannini. 2002. "Bedfellows, Hostages, or Perfect Strangers? Global Capital Markets and the Catalytic Effects of IMF Crisis Lending," *IMF Working Paper 02/193*. Washington, DC, International Monetary Fund.

ON THE DESIGN OF A NEW MECHANISM FOR AFRICA'S EXTERNAL DEBT

- Crosbie, Peter J. and Jeffrey R. Bohn. 2001. "Modelling Default Risk," Moody's KMV. Available via the Internet: <http://www.moodyskmv.com>
- Crouhy, Michel, Dan Galai and Robert Mark. 2000. "A comparative Analysis of current Credit Risk Models," *Journal of Banking & Finance*, Vol. 24, pp. 59-117.
- Dagdeviren, H. and J. Weeks. 2001. "How Much Poverty could HIPC Reduce?" Paper presented at the WIDER Development conference on Debt Relief, Helsinki (Finland), 17-18 August.
- Daseking, C. and R. Powell. 1999. "From Toronto Terms to the HIPC Initiative: A brief history of debt relief for low-income countries," *IMF Working Paper 99/142*. Washington, DC, International Monetary Fund.
- Dell'Arricia, Giovanni, Isabel Schnabel and Jeromin Zettelmeyer. 2002. "Moral Hazard and International Crisis Lending: A Test," *IMF Working Paper 02/181*. Washington, DC, International Monetary Fund.
- Dijkstra, G. and N. Hermes. 2001. "The Uncertainty of Debt Service Payments and Economic Growth of HIPCs, Is there a Case for Debt Relief?" United Nations University / World Institute for Development Economics Research (UNU/WIDER). Discussion Paper N° 2001/122. www.wider.unu.edu/publications/dps/dp2001-122.pdf
- Dikhanov, Yuri. 2004. *Historical PV of Debt in Developing Countries, 1980-2001*. Washington, DC, World Bank.
- Dittus, P. 1989. "The Budgetary Dimension of the Debt Crisis in Low-Income Sub-Saharan Countries," *Journal of Institutional and Theoretical Economics*, 145 (2), pp. 358-366, June.
- Dym, Steven 1997. "Credit Risk Analysis for Developing Country Bond Portfolios," *The Journal of Portfolio Management*, 23 (2), pp. 99-103.
- Easterly, W. 1999. "How did Highly Indebted Poor Countries Become Highly Indebted? Reviewing Two Decades of Debt Relief," *World Bank Policy Research Working Paper 2346*. Washington, DC.
- Edwards, S. 2003. "Debt Relief and the Current Account, An Analysis of the HIPC Initiative," *The World Economy* 26 (4), pp. 513-31.
- Edwards, Sebastian. 2002. "Debt Relief and Fiscal sustainability," *NBER Working Paper 8939*. Cambridge, Massachusetts, National Bureau of Economic Research.
- EURODAD. 2002. "Going the Extra Mile: How and Why Creditors Should Go Further With Debt Reduction for the Poorest countries," Brussels, European Network on Debt and Development (EURODAD).
- Fedelino, Annalisa and Alina Kudina. 2003. "Fiscal Sustainability in African HIPC Countries: A Policy Dilemma?" *IMF Working Paper N° 03/187*. Washington DC, International Monetary Fund.
- Feder, Gershon, Richard Just and Knud Ross. 1981. "Projecting Debt Servicing Capacity of Developing Countries," *Journal of Financial and Quantitative Analysis*, 26 (5), pp. 651-669.
- Finger, J. M. and D. A. DeRosa. 1980. "The Compensatory Finance Facility and Export instability," *Journal of World Trade Law*, 14, pp. 14-22.
- Foxley, A. 1987. "Latin American Development after the Debt Crisis," *Journal of Development Economics*, 27 pp. 201-225, October.

PART VI: GLOBALIZATION, REGIONAL INTEGRATION AND NEPAD

- Gapen, Michael T. et al. 2005. "Measuring and Analyzing Sovereign risk with Contingent Claims," *IMF Working Paper N° 05/155*. Washington, DC, International Monetary Fund.
- Gautam, M. 2003. *The Heavily Indebted Poor Countries (HIPC) Debt Initiative, An OED Review*. Washington, DC, World Bank, Operations Evaluation Department (OED).
- General Accounting Office (GAO). 2000. *Developing Countries: Debt Relief Initiative for Poor countries Facing Challenges*. Washington, DC, United States General Accounting Office.
- Gilbert, Christher L. and Alexandra Tabova. 2003. *Realignment of Debt Service Obligations and Ability to Pay in Confessional Lending: feasibility and Modalities*. Washington, DC, World Bank.
- Goreux, L. M. 1980. *Compensatory Financing Facility*. Washington, DC, International Monetary Fund.
- Gray, Dale F. 2004. "Modelling Sovereign Default Risk and Country Risk Using Moody's-MfRisk Framework with Specific Country Applications," *MfRisk Working Paper N°1-04*.
- Gunter, B. G. 2001. "Does the HIPC Initiative Achieve its Goal of Debt Sustainability," United Nations University / World Institute for Development Economics Research (UNU/WIDER). *Discussion Paper 2001/100*, September. www.wider.unu.edu/publications/dps/dp2001-100.pdf
- Gunter, B. G. 2002. "What's Wrong with the HIPC Initiative and What's Next?" *Development Policy Review 20 (1)*, pp. 5-24.
- Hajivassiliou, Vassili A. 1989. "Do the Secondary Markets Believe in Life After Debt?" World Bank Policy, *Planning and Research Working Paper 252*. Washington, DC, The World Bank.
- Hajivassiliou, Vassili A. 1994. "A Simulation Estimation Analysis of the External Debt Crises of Developing Countries," *Journal of Applied Econometrics*, 9, pp. 109-131.
- Hansen, H.K. 2001. "The Impact of Aid and External Debt on Growth and Investment: Insights from Cross-Country Regression Analysis," paper presented at the United Nations University (UNU)/World Institute for Development Economics Research (WIDER). Development Conference on Debt Relief, Helsinki. www.wider.unu.edu/conference-2001-2/parammem%20papers/2_1_Hansen.pdf
- Haque, Nadeem U., Mark Nelson and Donald J. Mathieson. 1998. "The relative Importance of Political and Economic Variables in Creditworthiness Ratings," Washington, DC, *IMF Working Paper 98/46*. International Monetary Fund.
- Hjertholm, P. 2003. "Theoretical and Empirical Foundations of HIPC Debt Sustainability targets," *Journal of Development Studies*, 39 (6), pp. 67-100, August.
- IMF. 2003b. *Debt Sustainability in Low-Income Countries – Towards a Forward-Looking Strategy*. Washington, DC, May.
- IMF and World Bank. 2004a. *Global Monitoring Report 2004 – Policies and Actions for Achieving the MDGs and Related Outcomes*. Washington, DC, April.
- IMF and World Bank. 2004b. *Debt sustainability in Low-Income Countries-Proposals for an Operational Framework and Policy Implications*. Washington, DC, February.
- IMF and World Bank. 2001a. *The Challenge of Maintaining Long-Term External Debt Sustainability*. Washington, DC, April.

ON THE DESIGN OF A NEW MECHANISM FOR AFRICA'S EXTERNAL DEBT

- IMF and World Bank. 2001b. *Assistance to Post-Conflict Countries and the HIPC Framework*. Washington, DC, April.
- IMF and World Bank. 2002a. *The Enhanced HIPC Initiative and the Achievement of Long-Terms External Debt Sustainability*. Washington, DC, April.
- Jeanne, Olivier. 2000. "Debt Maturity and the Global financial Architecture Investment," *CEPR Discussion Paper 2520*. London, Centre for Economic Policy Research.
- Jeanne, Olivier, and Zettelmeyer, Jeronim. 2006. "What is Sovereign Debt Good For?" Paper presented at the Annual Meeting of the American Economic Association, Boston, MA, January.
- Kraay, Aart and Vikram Nehru. 2004. "When Is External Debt Sustainable?" World Bank Policy Research *Working Paper 3200*. Washington DC, World Bank.
- Krueger, A. 1987. "Origins of the Developing Countries' Debt Crisis 1970 to 1982," *Journal of Developing Economics*, 27, 165-187, October.
- Krugman, P. 1988. "Financing vs. Forgiving a Debt Overhang," *Journal of Development Economics*, 29, pp. 253-268, November.
- Lee, Suk Hun. 1993. "Relative Importance of Political Instability and Economic Variables on Perceived Country Creditworthiness," *Journal of International Business Studies*, 24 (4), pp. 801-812.
- Lloyd-Ellis, H., G. W. McKenzie and S. H. Thomas. 1990. "Predicting the Quantity of LDC Debt Rescheduling," *Economics Letters* 32 (1), pp. 67-73.
- Loko, B. at al. 2003. "The Impact of External Indebtedness on Poverty in Low-Income Countries," *IMF Working Paper, WP/03/61*. Washington, DC, International Monetary Fund. www.imf.org/external/pubs/ft/wp/2003/wp0361.pdf
- Lombardi, Domenico. 2005. "The IMF's Role in Low-Income Countries: Issues and Challenge," *IMF Working Paper N° 05/177*. Washington DC, International Monetary Fund.
- Manasse Paolo and Nouriel Roubini. 2005. "Rules of Thumb for Sovereign Debt Crises," *IMF Working Paper N° 05/42*. Washington, DC, International Monetary Fund.
- Manasse, Paolo, Nouriel Roubini and Axel Schimmelpfenning. 2003. "Predicting Sovereign Debt Crises," *IMF Working Paper N° 03/221*. Washington DC, International Monetary Fund.
- Manasse, Paolo, Nouriel Roubini and Axel Schimmelpfenning. 2003. *Predicting Sovereign Debt Crisis: Manuscript*. University of Bologna, IMF and New York University.
- Mandeng, Ousmène Jacques. 2004. "Intercreditor Distribution in Sovereign Debt Restructuring," *IMF Working Paper N° 04/183*. Washington, DC, International Monetary Fund.
- Martin, M. 2002. "Debt Relief and Poverty Reduction: Do we need a HIPC III?" Paper presented to North-South Institute, Global Finance Governance Initiative Workshop, Ottawa, May 1-2.
- McFadden, Daniel at al. 1985. "Is There Life after Debt? An Econometric Analysis of the creditworthiness of Developing Countries," in: Gordon W. Smith and John F. Cuddington (ed.), *International Debt and the Developing Countries*. Washington, DC, World Bank.
- Mckenzie, David. 2002. "An Econometric analysis of the Creditworthiness of IBRD Borrowers," World Bank Policy Research *Working Paper 2822*. Washington D.C, World Bank.

PART VI: GLOBALIZATION, REGIONAL INTEGRATION AND NEPAD

- Ndikumana, L. and J. K. Boyce. 1998. "Congo's Odious Debt: External Borrowing and Capital Flight in Zaire," *Development and Change*, Vol. 29, pp. 195-217.
- Obadan, Mike I. 2004. *Foreign Capital Flows and External Debt; Perspectives on Nigeria and the LDCs Group*. Ibadan (Nigeria), National Centre for Economic Management and Administration (NCEMA).
- Patillo, Catherine, Hélène Poirson and Luca Ricci. 2004. "What are the Channels Through Which External Debt Affects Growth?" *IMF Working Paper N° 04/15*. Washington D.C., International Monetary Fund.
- Pattilo C., H. Poirson, and L. Ricci. 2002. *External Debt and Growth*. IMF Working Paper, WP/02/69. Washington, DC, International Monetary Fund. www.imf.org/external/pubs/ft/wp/2002/wp0269.pdf
- Reinhart, Carmen M. 2002. "Default, Currency Crises and Sovereign Credit Ratings," *World Bank Economic Review*, 16 (2), pp. 151-170.
- Reinhart, Carmen M. 2002. "Default, Currency Crises and Sovereign Credit Ratings," *NBER Working Paper 8738*. Cambridge, Massachusetts, National Bureau of Economic Research.
- Reuss, Konrad. 1996. "Trends in Sovereign Ratings," *The World of Banking*, 15(1), pp. 12-14.
- Rwegasira D. G. and F. M. Mwega. 2003. "Public Debt and Macroeconomic Management in Sub-Saharan Africa," In: UNCTAD (2003), *Management of Capital Flows: Comparative Experiences and Implications for Africa*. New York and Geneva, United Nations.
- Sachs, J. D. 2002. "Resolving the Debt Crisis of Low-Income Countries," *Brookings Papers on Economic Activity*, (1), pp. 257-86.
- Serieux J.E. and S. Yiagadeesen. 2001. "The Debt Service Burden and Growth: Evidence from Low-Income Countries," Paper presented at the United Nations University (UNU)/World Institute for Development Economics research (WIDER). Development Conference on Debt Relief, Helsinki, www.wider.unu.edu/conference-2001-2/parammem%20papers/4_2_Serieux.pdf
- Sy, Amadou N. R. 2003. "Rating the Rating Agencies: Anticipating Currency Crises or Debt Crises?" *IMF Working Paper N° 03/122*. Washington DC, International Monetary Fund.
- Ul Haque, Nadeem et al. 1996. "The Economic Content of Indicators of Developing Country Creditworthiness," *IMF Staff Papers*, 13 (4), December.
- United Nations. 2000. "Recent Developments in the Debt Situation of Developing Countries," Report of the Secretary-General, General Assembly, fifty-fifth session, Agenda item 92 (c), Macroeconomic Policy Questions: External Debt Crisis and Development, A/55/422. New York, 26 September.
- United Nations Conference on Trade and Development. 2004. *Debt Sustainability: Oasis or Mirage? Economic Development in Africa*. New York and Geneva, UNCTAD.
- Van den End, W. and M. Tabbac. 2005. *Measuring financial Stability; Applying the MfRisk Model to the Netherlands*. De Nederlandsche Bank, WP N° 30, March.
- Vasquez, I. 2001. "Debt Relief for Poor Countries: Are the World Bank and IMF Doing the Right Thing?" *Cato Institute Policy Forum*, July 16, Ian Vasquez (Moderator and Presenter), with Lerrick A., Galliot Center for Public Policy, Carnegie Mellon

ON THE DESIGN OF A NEW MECHANISM FOR AFRICA'S EXTERNAL DEBT

University; and Hadjimichael M, IMF. Washington, DC, The Cato Institute, FA Hayek Auditorium.

Were, M. 2001. "The Impact of External Debt on Economic Growth in Kenya: an Empirical Assessment," United Nations University / World Institute for Development Economics Research (UNU / WIDER) *Discussion Paper N° 2001/116*. www.wider.unu.edu/publications/dps/dp2001-116.pdf

World Bank. 2000. *A Strategy for Increasing IDA's Effectiveness in Africa*. Washington, DC, Africa Region.