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To: Members of the Executive Board

From: The Secretary

Subject: **Ghana—External Debt Sustainability Analysis**

The attached external debt sustainability analysis of Ghana is a background paper for the 1999 Article IV consultation with Ghana, which is tentatively scheduled for discussion on Friday, November 19, 1999. This paper was prepared jointly with the World Bank staff and in close collaboration with the Ghanaian authorities. It provides a very preliminary indication of the amount of assistance that Ghana could be eligible for under the proposed “Modifications to the Heavily Indebted Poor Countries Initiative” (EBS/99/138, 6/23/99).

Mr. S. Leite (ext. 38563) and Ms. Khemani (ext. 34027) are available to answer technical or factual questions relating to this paper prior to the Board discussion.

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# GHANA

## External Debt Sustainability Analysis

Prepared jointly by the staffs of the IMF and the World Bank<sup>1</sup>

### I. INTRODUCTION

1. Ghana is a heavily indebted poor country (HIPC). The debt sustainability analysis (DSAs) carried out in March 1998 and April 1999,<sup>2</sup> using aggregated figures, concluded that Ghana would likely not qualify under the original HIPC Initiative framework.<sup>3</sup> In light of the modifications to the HIPC Initiative, Ghana's eligibility for HIPC assistance has been re-examined. In the current analysis, the ratio of net present value of debt to exports, as well as the ratio of net present value of debt to fiscal revenues for 1999 are estimated to exceed the thresholds under the enhanced HIPC Initiative<sup>4</sup> as anticipated in the framework paper.<sup>5</sup> The

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<sup>1</sup> Approved by Paul Acquah and Ishan Kapur (IMF), and Peter Harrold and Axel van Trotsenburg (World Bank). Prepared following a joint IMF/World Bank mission in September 2-16, 1999 by Ritha Khemani and Kadima Kalonji (IMF) and Rocio Castro and Marie-Hélène le Manchec (World Bank)

<sup>2</sup> EBS/98/46, April 9, 1999 and EBS/99/57, April 16, 1999.

<sup>3</sup> In the April 1999 debt analysis, the NPV of debt-to-exports for 1999 was estimated at about 191 percent, lower than the threshold level.

<sup>4</sup> This tentative assessment is based on estimates subject to a number of qualifications. Export and import data have been recently revised upwards. This revision reduced the amount of HIPC Initiative assistance for which Ghana might qualify, based on the ratio of net present value of debt to exports under the enhanced HIPC Initiative; on the other hand, as a result of the revisions, the average export to GDP ratio for 1997 to 1999 is now about 33 percent, so that together with the average fiscal revenue to GDP ratio of about 18 percent, Ghana would be eligible for assistance under the openness/fiscal criteria. Forthcoming technical assistance missions in early 2000 are scheduled to further examine GDP and the revisions to exports and imports noted above, which could affect the assessment of assistance to Ghana under the enhanced HIPC Initiative.

<sup>5</sup> Modifications to the Heavily Indebted Poor Countries (HIPC) Initiative (EBS/99/138, July 23, 1999).

estimates for debt relief are based on the methodology that was applied under the original HIPC Initiative Framework.<sup>6</sup>

2. The debt sustainability analysis, based on macroeconomic projections through 2016, was prepared jointly by the IMF and the World Bank, in close collaboration with the Ghanaian authorities. The debt estimates and net present value (NPV)<sup>7</sup> calculations are based on external public and publicly guaranteed debt data as of end-December 1998.<sup>8</sup> The data were provided by the authorities, on a loan-by-loan basis, for which internal consistency has been checked. In addition, a reconciliation process has been completed with multilateral claims.

#### **A. The Level and Composition of Debt**

3. At the end of 1998, the nominal value of Ghana's total external debt was US\$5.9 billion (Table 1), or the equivalent of almost 79 percent of GDP. The net present value of this debt was estimated at US\$4.0 billion. About 53 percent of net present value of debt was owed to multilaterals and 47 percent to bilateral and commercial creditors. The World Bank was the largest creditor with 67 percent of multilateral debt, followed by the IMF and the African Development Bank with 13 percent each. Of the official bilateral debt, 67 percent was to Paris Club creditors, mainly owed to Japan (42 percent), and to commercial creditors and to non-Paris Club creditors (33 percent). About 1 percent of Paris Club debt was pre-cutoff date debt and all of it was contracted on ODA terms.

4. Ghana has not resorted to concessional debt rescheduling from the Paris Club, and therefore, has not fully utilized the traditional debt-relief mechanisms. Since the beginning of the Economic Recovery Program of 1983, Ghana has had only one rescheduling, in April 1996, which was on nonconcessional terms. The agreement pertained to pre-1983 debts to Brazil, Italy, and Norway and provided for a deferral of long-standing arrears.

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<sup>6</sup> The estimates are therefore provisional as aspects of this methodology, such as the exchange rate used for conversion of local currencies and the discount rate, are currently being reviewed by the Fund and the World Bank staff in the context of the agreed enhancements to the Initiative. Any proposed changes in the methodology will be discussed in a HIPC Initiative costings update (forthcoming).

<sup>7</sup> The NPV of debt is calculated using the average currency-specific Commercial Interest Reference Rate (CIRR) for the six-month period ending December 31, 1998 and converted into dollar at the 1998 end-of-period exchange rate.

<sup>8</sup> In the context of the HIPC Initiative, the coverage of the external debt excludes short-term debt, except long outstanding arrears on short-term debt. The stock of debt in the 1998 and 1999 DSAs included short-term debt, which is excluded in this current DSA.

5. Regarding debt service, about 80 percent of principal payments in 1998 were to multilateral and bilateral creditors and 20 percent to commercial creditors. With respect to interest payments, 69 percent were to multilateral and bilateral creditors and 30 percent to commercial creditors. Because of past borrowing on nonconcessional terms, there is a temporary bunching of payments to commercial creditors in 1998-2001, which tapers off subsequently.

### **B. Assumptions of the Baseline Scenario**

6. GDP growth is expected to be 4.5 percent in 1999 and 4 percent in 2000, and then pick up to 4.5 percent, and 5.5 percent in 2001 and 2002, and thereafter to 6 percent. As in earlier DSAs, we assume that, abstracting from the cyclical variations in GDP, growth is underpinned by adequate macroeconomic policies and structural reforms.<sup>9</sup> In 1999-2000, weaker cocoa prices and a slight decline in GDP growth are expected to slow any improvements in the debt-service indicators.

7. In accordance with the cocoa strategy, the volume of cocoa exports is expected to reach over 500,000 metric tons by 2005, and average about 700,000 metric tons in the subsequent years. The value of nontraditional exports after registering increases of 25 percent in the early years (a slowdown from the earlier growth of 50 percent) declines to less than 10 percent in the later years. The volume of gold and timber exports is expected to increase steadily by 5-6 percent, the latter mostly in the form of increased exports of timber products. The volume of imports of oil and non-oil is expected to grow less than GDP in the early years given the faster depreciation and growth in line with GDP in the later years. Under these assumptions, the current account deficit including official transfers, after peaking in 2000-02, narrows to about 4.0 percent in 2003, and about 3.0 percent in 2005, and 2.7 percent in 2007. In the later years, growth rates in the volume of exports are assumed to decline in comparison to earlier years; further, because of lower official transfers, the current account increases slightly to 3.5 percent.

8. Regarding financing, project and program grants rise to about US\$253 million in 1999 and decline subsequently to about US\$199 million in 2003. Concessional loans from multilaterals and other organizations are expected at US\$527 million in 1999, rising further in 2000. Future financing is assumed to be on concessional terms.

9. Aid flows are assumed to decline steadily as a percent of GDP. After rising as a share of GDP in the near term, from 10 percent of GDP in 1999 to 12 percent of GDP in 2000 (mostly because of slower GDP growth), aid flows decline thereafter to 10 percent in 2001 and 2002. The declining trend of aid flows in the projections is expected to be compensated by an upward trend in direct investment and private capital flows.

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<sup>9</sup> The balance of payments projections are shown in Table 2.

### C. Debt Sustainability Analysis<sup>10</sup>

10. The debt sustainability analysis incorporates a prospective stock of debt operation under Naples terms in December 1999, with 67 percent NPV reduction, on pre-cutoff date debt. Comparable treatment is also applied to other official bilateral creditors. The full use of traditional debt mechanisms will yield a reduction of US\$6.3 million in NPV terms.

11. As a share of exports, the NPV of external debt decreases from 172 percent in 1998 to 163 percent in 1999 (Table 3). The debt service-to-export ratio is estimated at 22 percent in 1998 and 19 percent in 1999. Finally, the NPV of debt-to-revenue ratio is estimated at 297 percent in 1998, using the end-1998 exchange rate and 337 percent in 1999, using the end-October 1999 exchange rate.

### D. Sensitivity Analysis

12. Some alternative scenarios were examined in order to assess the sensitivity of Ghana's debt indicators to external shocks (Table 6). Three possible downside scenarios have been described: (a) nonconcessional new borrowing; (b) combination of the previous scenario with lower prices and volumes of cocoa; and (c) the previous scenario and a decline in the price of gold. The analysis shows that external debt situation is vulnerable so that if Ghana were to borrow at nonconcessional terms, its external sustainability would worsen and shocks caused by fluctuations in cocoa and gold prices would have a significant effect on the profile of the current account and the external debt.

13. **Less favorable external financing.** Scenario 2 halves the amount of bilateral loans assumed to be forthcoming; nonconcessional borrowing at the London interbank rate plus 2 percent is used to close the financing gap.<sup>11</sup> The results show that the NPV of debt increases steadily, compared with the baseline case. The ratio drops sharply in 2005 to 117 percent of exports of goods and nonfactor services, but nevertheless remains higher than the baseline case by about 4 percentage points.

14. **Combination of less favorable financing and lower prices and volumes of cocoa.** In scenario 3, in addition to the shock in scenario 2 above, both prices and volumes of cocoa are lower by 2 percent throughout the period. The current account deficit widens throughout the period and is higher by slightly over 1 percent of GDP by 2005 relative to scenario 2 and by about 2 percent relative to the baseline case.<sup>12</sup> The debt-to-export ratio is higher by almost

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<sup>10</sup> See Table 3 and Table 4.

<sup>11</sup> This scenario highlights the inconsistency of a nonconcessional borrowing strategy in attaining a sustainable debt position in the case of Ghana.

<sup>12</sup> Additional resulting financing gaps in this scenario and in the following scenario are assumed to be filled on nonconcessional terms.

12 percentage points than the baseline case, and the debt-service ratio in terms of exports increases by 3 percentage points from 8 percent in the baseline scenario to 11 percent.

15. **Fall in the price of gold.** In Scenario 4 the price of gold, which was assumed in the baseline case to be US\$290 for 2000, drops to US\$270 instead. Subsequently, gold prices are assumed to go up with the world inflation rate as in the baseline. In spite of the cumulative effect of these shocks, Ghana's ratio of NPV of external debt to exports still falls below 150 percent by 2003. The NPV of debt to export ratio by 2007 is, however, higher by 17 percentage points than the baseline and the debt-service ratio is higher by over 3 percentage points.

### E. Conclusions

16. The results illustrate that the debt to export and fiscal revenue ratios are estimated to exceed the threshold levels defined under the enhanced HIPC assistance, therefore Ghana could qualify under both ratios for debt relief. Ghana meets the threshold required for assistance under the fiscal/openness criteria; in 1999, they are estimated to be about 33 percent and 18 percent, respectively.<sup>13</sup>

17. Based on the above vulnerability analysis as well as the debt burden, Ghana could potentially qualify for assistance under the enhanced HIPC Initiative. Preliminary calculations suggest that with a decision point in 2000, the required assistance could amount to US\$317 million and US\$1 billion<sup>14</sup> in NPV terms with the export and the fiscal revenues as the denominator, respectively. Some details on the estimates of the latter cost is presented in Table 5 with a potential decision point in 2000. The breakdown of the total cost by creditor group is also shown, assuming proportional burden sharing. If Ghana were to receive HIPC Initiative assistance, the country would also qualify for additional ODA forgiveness from bilateral creditors.

18. The Ghanaian authorities have not yet decided whether they will request assistance under the HIPC Initiative, given their concerns about the potential impact on future aid flows. Should they opt to request assistance under the HIPC Initiative, it is intended that work will be initiated for the preparation of a preliminary HIPC document to be presented to the Boards of the IMF and the Bank, which will include an updated DSA incorporating end-1999 data.

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<sup>13</sup> The thresholds are calculated using a three-year average of GDP, central government revenues, and exports of goods and nonfactor services.

<sup>14</sup> Fiscal revenue is converted using end-October exchange rate as a proxy for the end-1999 exchange rate. This estimate of HIPC assistance is affected markedly by the sharp depreciation of the exchange rate since mid-October. To illustrate the sensitivity to exchange rate changes, an average rate for January-October 1999 would result in assistance of US\$500 million.

Table 1. Ghana: External Debt 1/

	Nominal debt at end-1998			NPV of debt at end-1998		
	US\$ million	Percent of total debt	Debt shares (In percent)	US\$ million	Percent of total debt	Debt shares 2/ (In percent)
Total public and publicly guaranteed debt	5,899	100		4,019	100	
Multilateral Creditors	3,911	66	100	2,142	53	100
Of which:						
African Development Bank	134	2	3	158	4	7
African Development Fund	251	4	6	125	3	6
BADEA	14	0	0	13	0	1
IBRD	24	0	1	25	1	1
IDA	2,969	50	76	1,421	35	66
IMF	334	6	9	273	7	13
ECOWAS	0	0	0	0	0	0
European Investment Bank	93	2	2	78	2	4
IFAD	62	1	2	32	1	1
Nordic Development Fund	19	0	0	8	0	0
OPEC	12	0	0	11	0	0
Bilateral creditors	1,988	34	100	1,877	47	100
Paris Club	1,356	23	68	1,251	31	67
Of which:						
France	79	1	4	73	2	4
Germany	181	3	9	90	2	5
Italy	124	2	6	114	3	6
Japan	759	13	38	789	20	42
Netherlands	52	1	3	44	1	2
United Kingdom	70	1	4	69	2	4
Non-Paris Club official bilateral creditors	75	1	4	58	1	3
Of which:						
China	20	0	1	13	0	1
Korea	11	0	1	10	0	1
Kuwait	21	0	1	16	0	1
Saudi Arabia	15	0	1	12	0	1
Commercial	558	9	28	568	14	30
Of which:						
United Kingdom	172	3	9	171	4	9
France	64	1	3	66	2	4

Source: Ghanaian authorities and staff estimates.

1/ Public and publicly guaranteed external debt. Decision point is assumed to be in 2000, but 1998 is the latest year for which actual data are available before the decision point.

2/ These shares are applied to the total multilateral NPV reduction required at the completion point, to determine each creditors amount of assistance, under the Initiative.



Table 2. Ghana: Balance of Payments, 1996-2016  
(In millions of U.S. dollars, unless otherwise specified)

	1996	1997	1998	1999		2000	2001	2002	2003	2004	2005	2006	2007	2007-11	2012-16
				Prog	Rev.	Rev.	Rev.	Rev.	Rev.	Rev.	Rev.	Rev.	Rev.	Avg	Avg
Exports, f.o.b.	1,810	1,810	2,091	1,880	2,096	2,141	2,459	2,796	3,156	3,524	3,894	4,270	4,688	5,657	8,773
Cocoa beans and cocoa products	552	470	622	589	591	435	549	635	728	819	928	1,013	1,105	1,319	1,848
Gold	612	580	688	722	627	738	776	836	900	969	1,033	1,101	1,174	1,339	1,843
Timber and timber products	147	172	171	188	188	201	220	244	271	299	330	365	405	507	866
Others	499	588	611	380	690	766	915	1,079	1,257	1,437	1,603	1,791	2,005	2,492	4,216
Imports, f.o.b.	-2,295	-3,041	-2,897	-2,253	-2,924	-3,135	-3,396	-3,680	-4,027	-4,408	-4,776	-5,159	-5,621	-6,743	-10,309
Non-oil	-2,038	-2,807	-2,682	-2,065	-2,635	-2,816	-3,055	-3,323	-3,638	-3,986	-4,318	-4,661	-5,080	-6,100	-9,335
Oil	-258	-234	-215	-189	-289	-319	-341	-357	-388	-422	-458	-498	-541	-643	-974
Trade balance	-485	-1,231	-805	-374	-828	-994	-937	-884	-871	-884	-883	-889	-933	-1,086	-1,536
Services (net)	-211	-319	-260	-476	-228	-241	-252	-270	-279	-296	-308	-308	-315	-315	-293
Of which: interest payments	-155	-145	-149	-129	-129	-132	-135	-130	-132	-137	-139	-143	-149	-151	-158
Private transfers (net)	276	400	454	380	454	476	500	525	552	579	608	639	670	720	809
Current account balance,															
excluding official transfers	-420	-1,150	-612	-470	-603	-758	-689	-629	-598	-600	-582	-558	-577	-681	-1,020
Official transfers (net) 1/	206	160	230	235	253	276	189	209	204	204	204	204	204	204	170
Current account balance,															
including official transfers	-214	-991	-381	-235	-350	-482	-500	-420	-394	-396	-378	-355	-373	-477	-850
Capital account	421	555	244	312	255	308	211	408	485	546	569	591	616	696	960
Official capital (net)	351	500	254	267	216	208	111	262	240	228	211	188	173	155	89
Long-term loans	233	257	194	274	240	147	-9	166	137	121	101	82	65	48	1
Inflows	287	291	240	332	304	215	59	240	215	205	205	205	205	205	205
Amortization	-54	-34	-47	-58	-64	-68	-68	-74	-78	-84	-104	-123	-140	-157	-204
Medium-term loans	118	243	60	-7	-24	61	120	96	103	107	109	107	108	107	88
Inflows	274	439	300	246	223	265	279	235	225	225	225	225	225	225	225
Amortization	-156	-196	-240	-253	-247	-204	-159	-139	-122	-118	-116	-118	-117	-118	-137
Inflows	561	730	540	578	527	480	338	475	440	430	430	430	430	430	430
Amortization	-210	-230	-286	-311	-311	-272	-227	-213	-200	-202	-219	-242	-257	-275	-341
Private capital	70	55	-10	45	39	100	100	146	245	318	358	403	443	541	871
Other capital and errors and omissions	-220	461	238	0	145	0	0	80	93	-22	-52	23	-64	17	114
Of which: change in net foreign assets of consumer	-55	8	84	20	141	0	0	0	0	0	0	0	0	0	0
Other capital 1/	-85	523	126	0	0	0	0	80	93	-22	-52	23	-64	17	114
Overall balance	-14	25	100	77	50	-174	-289	68	183	128	138	259	179	219	225
Change in arrears	-100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Financing	114	-25	-100	-77	-50	-9	-70	-68	-183	-128	-138	-259	-179	-219	-225
Debt deferral	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net foreign assets	14	-25	-100	-77	-50	-9	-70	-68	-183	-128	-138	-259	-179	-219	-225
Net international reserves	14	-25	-100	-77	-50	-9	-70	-68	-183	-128	-138	-259	-179	-219	-225
Use of Fund credit	-86	-166	-27	-17	-15	22	27	15	-21	-41	-54	-55	-64	-42	0
Purchase (GRA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repurchase (GRA)	-25	-47	-33	0	0	0	0	0	0	0	0	0	0	0	0
Disbursements (SAF/ESAF)	40	0	111	61	60	60	60	30	0	0	0	0	0	0	0
Repayments (SAF/ESAF)	-101	-118	-105	-78	-75	-38	-33	-15	-21	-41	-54	-55	-64	-42	0
Increase in reserves	100	141	-73	-59	-35	-30	-96	-84	-163	-87	-84	-204	-116	-266	-153
Increase in gross reserves (increase -)	111	90	1	-59	0	0	0	0	0	0	0	0	0	0	0
Other items (increase -)	-11	51	-74												
Of which: increase in gross reserves	111	90	1	-59	-35	-30	-96	-84	-163	-87	-84	-204	-116	-266	-153
Financing gap 2/	0	0	0	0	0	183	359	0	0	0	0	0	0	0	0
<b>Memorandum items:</b>															
Current account deficit (in percent of GDP)															
Excluding official transfers	6	17	8	6	8	10	9	7	6	6	5	4	4	4	4
Including official transfers 3/	3	14	5	3	4	6	6	5	4	4	3	3	3	3	3
Gross international reserves															
End of period (US\$ millions)	599	508	508	561	543	573	670	753	916	1,003	1,086	1,291	1,406	1,673	2,814
In months of imports (c.i.f.)	3	2	2	3	2	2	2	2	3	3	3	3	3	3	3
Cocoa exports															
Volume (in thousands of tons)	394	315	376	360	398	390	390	419	451	478	511	547	585	670	852
Price (in US\$ per ton)	1,374	1,473	1,655	1,600	1,450	1,100	1,400	1,500	1,600	1,700	1,800	1,836	1,888	1,964	2,167

Sources: Bank of Ghana, and World Bank and Fund staff estimates.

1/ For the program period 1999-2001, includes only fully identified program grants.

2/ Financing gap for the program period 1999-2001 is defined as difference between assumed and fully committed /identified program support.

3/ For 2000 and 2001 assumes that the financing gap is filled.

Table 3. Ghana: Long Term Debt and Debt Service Projections (1998-2016)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2007-11 Avg.	2012-16 Avg.
(In millions of U.S. dollars)												
Total debt stock	5,898	6,090	6,436	6,791	7,041	7,259	7,449	7,622	7,784	7,934	8,234	8,830
Net present value (NPV)	4,018	3,998	4,113	4,275	4,404	4,526	4,632	4,731	4,827	4,920	5,129	5,594
Total debt service	563	499	437	388	342	332	354	381	404	429	428	458
Amortization	425	386	310	260	228	221	243	274	297	321	318	341
Of which												
Multilateral	209	144	106	103	90	99	124	153	171	199	234	261
Bilateral and commercial	216	242	204	158	138	122	119	121	126	121	84	80
Of which												
Paris Club	200	225	191	144	126	111	109	111	118	115	83	80
Interest payments	139	113	127	128	114	111	111	108	108	108	110	117
Of which												
Multilateral	45	39	48	52	50	52	55	57	60	63	82	90
Bilateral and commercial	93	74	79	75	64	59	56	51	48	45	28	26
Of which												
Paris Club	88	71	76	73	62	57	55	50	47	44	28	26
Memorandum items:												
Nominal GDP	7,474.5	7,789.0	7,338.0	8,012.0	8,476.0	9,451.0	10,510.0	11,522.0	12,536.0	13,691.9	16,257.7	24,556.6
Exports of nonfactor goods & services	2,561.3	2,570.8	2,639.7	2,985.0	3,358.5	3,759.4	4,171.3	4,584.6	5,017.6	5,500.8	6,625.0	10,257.6
(In percent of GDP)												
Total debt stock	78.9	78.2	87.7	84.8	83.1	76.8	70.9	66.2	62.1	57.9	51.2	36.4
Total debt stock (NPV)	53.8	51.3	56.0	53.4	52.0	47.9	44.1	41.1	38.5	35.9	31.9	23.0
Total debt service	7.5	6.4	6.0	4.8	4.0	3.5	3.4	3.3	3.2	3.1	2.7	1.9
(In percent of exports)												
Exports of goods and nonfactor services	2,338.9	2,454.4	2,590.6	2,731.8	2,994.4	3,367.6	3,763.0	4,171.8	4,591.2	5,034.3	6,073.3	9,662.5
Total debt stock	230.3	236.9	243.8	227.5	209.7	193.1	178.6	166.3	155.1	144.2	125.9	87.2
Total debt stock (NPV)	171.8	162.9	158.8	156.5	147.1	134.4	123.1	113.4	105.1	97.7	85.5	60.1
Total debt service	22.0	19.4	16.5	13.0	10.2	8.8	8.5	8.3	8.1	7.8	6.6	4.5

Sources: Ghanaian authorities, World Bank and Fund staff estimates.

Table 4. Ghana: Net Present Value of External Debt After Rescheduling, 1998-2010 1/  
(In millions of U.S. dollars, unless otherwise indicated)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Total NPV 2/	4,020	3,998	4,117	4,277	4,403	4,526	4,633	4,731	4,827	4,920	5,014	5,126	5,240
Old Debt	4,020	3,690	3,454	3,266	3,112	2,965	2,801	2,648	2,515	2,401	2,299	2,221	2,146
Official bilateral and commercial	1,878	1,621	1,424	1,270	1,136	1,018	905	809	725	659	605	558	511
Paris Club	1,255	1,114	1,025	963	906	852	795	745	691	637	589	543	498
Pre cut-off	10	2	2	2	2	2	2	2	2	2	2	2	2
Of which : ODA	10	2	2	2	2	2	2	2	2	2	2	2	2
Post cut-off	1,245	1,112	1,023	961	904	850	793	744	689	635	587	541	496
Non Paris Club	57	44	40	36	32	29	25	22	20	18	16	14	12
Pre cut-off	6	1	1	1	1	2	2	2	2	2	2	2	2
Of which : ODA	6	1	1	1	1	2	2	2	2	2	2	2	2
Post cut-off	51	43	39	35	31	27	24	21	18	16	14	12	10
Commercial	567	463	359	271	198	138	85	41	15	4	0	0	0
Pre cut-off	1	0	0	0	0	0	0	0	0	0	0	0	0
Post cut-off	566	463	358	271	198	137	85	41	15	4	0	0	0
Multilateral	2,142	2,069	2,031	1,996	1,976	1,947	1,896	1,839	1,789	1,742	1,693	1,663	1,635
Of which :													
World Bank	1,445	1,468	1,488	1,509	1,524	1,535	1,541	1,541	1,539	1,532	1,519	1,500	1,476
AfDB	283	264	245	228	211	194	178	162	146	133	120	112	109
IMF	273	207	178	151	143	128	96	62	38	17	0	0	0
EIB	78	71	64	56	48	41	35	29	23	18	13	13	12
IFAD	32	32	32	32	31	31	31	30	30	29	28	28	27
BADEA	13	11	9	7	6	5	5	4	3	3	2	1	1
OPEC	11	8	6	5	3	3	2	1	1	1	0	0	0
NDF	8	8	9	9	9	10	10	10	10	10	10	10	10
New Borrowing		308	663	1,011	1,292	1,561	1,832	2,083	2,312	2,519	2,716	2,905	3,094
Multilateral		171	331	490	611	721	827	920	1,003	1,074	1,143	1,212	1,289
Bilateral		137	332	521	681	840	1,005	1,163	1,309	1,445	1,573	1,693	1,805
<i>Memorandum items</i>													
Exports of goods and NFS 3/	2,339	2,454											
Fiscal revenues 4/	1,354	1,188											
NPV of debt-to-export	172	163											
NPV of debt-to-revenues	297	337											

Sources: Ghanaian authorities and World Bank and Fund staff estimates.

1/ After full use of traditional mechanisms, i.e., assuming a stock of debt operation at end-December 1999.

2/ Discounted on the basis of the average commercial interest reference rate for the respective currency, derived over the six-month period prior to the latest date for which actual data are available (base date). The currency-specific NPVs are converted into U.S. dollars for all years at the base date exchange rate.

3/ Backward-looking three-year average (e.g., average of exports over the period 1997-99 is reported as 1999).

4/ Converted into U.S. dollars using end-October 1999 exchange rate.

Table 5. Ghana: HIPC Initiative--Estimated Assistance Levels Under a Proportional Burden-Sharing Approach  
Under the Enhanced Framework 1/ 2/

NPV of debt-to-revenues-target (in percent)	With a decision point in 2000			Common reduction factor at the decision point 4/ (In percent)	Required NPV debt reduction on Paris Club debt assuming comparable action of non-multilateral creditors 5/
	Total (in millions of U.S. dollars)	Bilateral 3/	Multilateral		
250	1,028	452	576	26	374
<i>Memorandum items</i>					
NPV of debt 4/	3,998	1,758	2,240		
Revenues 6/	1,188	...	...		
NPV of debt-to-revenues (in percent)	337	...	...		
Bilateral debt reschedulable	...	49	...		

Sources: Ministry of Finance of Ghana and staff estimates.

1/ The proportional burden sharing approach is described in "HIPC Initiative--Estimated Costs and Burden Sharing Approaches" (EBS/97/127, 7/7/97 and IDA/SEC M 97-306, 7/7/97).

2/ Applies a hypothetical stock-of-debt operation on Naples terms and appropriate comparable treatment in December 1999.

3/ Includes official bilateral and commercial creditors.

4/ Based on latest data available at decision point after full application of traditional debt relief mechanisms.

5/ In millions of U.S. dollars.

6/ Using end-October 1999 exchange rate.

Table 6. Ghana : Debt and Debt Service Projections . A Sensitivity Analysis

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2007-2011 Avg.	2011-2016 Avg.
(In percent unless otherwise indicated)													
Base line scenario													
Current account (including official transfers)	14.4	5.1	4.5	6.3	5.6	5.0	4.2	3.8	3.3	2.8	2.7	2.8	3.5
NPV of debt to exports	143.4	171.8	162.9	158.8	156.6	147.1	134.4	123.1	113.4	105.1	97.7	85.5	60.1
Debt service ratio	23.5	22.0	19.4	16.5	13.0	10.2	8.8	8.5	8.3	8.1	7.8	6.6	4.5
Scenario 2 1/													
Current account (including official transfers)	14.4	5.1	4.6	6.6	5.8	5.3	4.5	4.1	3.6	3.1	3.0	3.1	3.6
NPV of debt to exports	143.4	171.8	163.6	162.4	162.3	153.5	140.6	128.3	117.2	107.6	99.0	84.8	57.7
Debt service ratio	23.5	22.0	20.0	17.3	13.6	11.1	9.8	9.4	10.3	10.0	9.6	8.1	5.0
Scenario 3 2/													
Current account (including official transfers)	14.4	5.1	4.6	6.8	6.1	5.8	5.4	5.1	4.9	4.6	4.6	5.0	5.6
NPV of debt to exports	143.4	171.8	163.6	162.5	165.0	158.1	146.3	135.7	126.1	118.1	111.3	101.4	83.0
Debt service ratio	23.5	22.0	19.6	17.4	13.7	11.2	10.3	10.1	11.2	11.1	10.9	9.5	5.2
Scenario 4 3/													
Current account (including official transfers)	14.4	5.1	4.6	7.5	6.8	6.6	6.1	5.9	5.6	5.3	5.3	6.6	8.0
NPV of debt to exports	143.4	171.8	163.6	163.6	166.5	159.2	149.8	141.0	130.7	122.0	115.2	102.9	78.5
Debt service ratio	23.5	22.0	19.6	17.8	14.0	11.6	10.6	10.6	11.7	11.5	11.3	9.7	5.3

Source: World Bank and Fund staff estimates.

1/ Higher nonconcessional financing.

2/ Nonconcessional financing as above and lower exports of cocoa.

3/ As above and lower gold prices.

