

## Cameroon: Joint Bank-Fund Debt Sustainability Analysis

1. **This appendix updates the debt sustainability analysis (DSA) prepared in October 2005 (EBS/05/149, Appendix II).** The DSA, which is prepared jointly by the IMF and the World Bank, is based on the common standard framework for low-income countries approved by the Executive Boards of the IMF and IDA.<sup>1</sup> Three key differences underpin the results of this update relative to those in EBS/05/149: (i) this update uses the reconciled debt database and debt service projections of the HIPC completion point DSA; (ii) it includes full MDRI debt relief in the baseline; and (iii) new borrowing has been revised in line with the long term framework discussed with the authorities.

2. **The update confirms that Cameroon remains in the category of low-income countries with a low risk of debt distress.** After the full delivery of HIPC assistance, bilateral debt relief beyond the HIPC Initiative and MDRI, Cameroon's external debt is projected to remain comfortably below the country-specific policy dependent thresholds in the long run. Standard stress tests reveal that, after Cameroon crosses the IDA-only threshold, the risk of debt distress would increase if external debt is contracted at terms less concessional than IDA "hardened" terms.

### Background

3. **Recent developments concerning Cameroon's public and publicly guaranteed (PPG) external debt have been positive.**

Nominal PPG debt declined from US\$ 7.0 billion in 2004 to US\$6.2 billion in 2005, corresponding to 7.7 percentage points of GDP decrease in the stock of debt. External debt service was reduced from 8.8 percent of GDP in 2004 to 6.8 percent in 2005, reflecting debt relief by Paris Club creditors as well as HIPC assistance notably by the IMF and the European Union. Debt service is well below the average of 7.3 percent for all 28 HIPCs that reached the decision point by end-2004.

#### Public External Debt

(In U.S. dollar)

	2004	2005
Total	6,984	6,200
Multilateral	2,056	1,847
World Bank	1,194	1,112
African Development Bank	331	310
IMF	318	272
Other	213	530
Bilateral	4,696	3,977
Paris Club	4,560	3,914
Non Paris Club	136	63
Commercial	233	376

Source: Staff estimates cameroonian authorities.

<sup>1</sup> For the IMF, see *The Acting Chairs Summing Up, Operational Framework for Debt Sustainability Assessments in Low-Income Countries—Further Considerations*. The Bank's Executive Board endorsed the framework on April 12, 2005. For additional information on the LIC DSA framework, see the following joint Fund-World Bank staff papers: *Debt Sustainability in Low-Income Countries—Proposal for an Operational Framework and Policy Implications*, *Debt Sustainability in Low-Income Countries—Further Considerations on an Operational Framework and Policy Implications* (SM/04/118, 9/10/04), and *Operational Framework for Debt Sustainability Assessments in Low-Income Countries—Further Considerations*.

## Medium Term Macroeconomic Framework

4. **The underlying macroeconomic assumptions of the HIPC DSA and the LIC DSA are identical.** GDP growth is expected to accelerate over the medium-term to 6 percent in 2011, reflecting economic stimulus from higher capital spending, and the implementation of structural reforms (Table 1). Over the long-term, growth in the non-oil economy is expected to stabilize at about 5.5 percent, while oil GDP will gradually decline. Investment is expected to remain at about 21.5 percent of GDP, a level considered to be supportive of long term economic growth. Inflation will average 2 percent in line with the central bank long-term commitment to low inflation. Exports of goods and services are projected to gradually decline over time reflecting the decline in petroleum exports. Non-oil exports in real terms are projected to accelerate over the medium-term reflecting increased investment in key sectors of the economy (primarily services). Thereafter, they are expected to grow by an average of 6.6 percent, somewhat higher than the average in recent years. The share of oil exports is assumed to decline gradually from about 50 percent in 2005 to 11 percent in 2025. The current account deficit, including grants, is expected to increase to about 4 percent over the medium-term, and gradually improve thereafter. The external current account deficit is expected to be financed through foreign direct investment and loans, a mixture of which will be from IDA and the rest from other creditors on less concessional terms.

5. **New public borrowing is assumed to gradually increase over the medium-term** to help finance new investment. External borrowing is expected to rise gradually to 1.8 percent of GDP in 2015 and then to gradually decline to about 1 percent by 2025. IDA borrowing is assumed to constitute 47 percent of new borrowing, with the remainder loans originating from other multilateral and bilateral creditors on less concessional terms. When Cameroon crosses the IDA-only threshold in 2010, disbursements from the Bank will also be on less concessional terms.

## Debt Sustainability Analysis

6. **All debt ratios have improved relative to the results of the LIC DSA** conducted last October because of the impact of MDRI relief in the baseline scenario. All debt indicators will remain substantially below the relevant country-specific debt burden threshold in the long run (Box 1 and Table 1). Nevertheless, as in the October 2005 LIC DSA debt indicators are expected to steadily increase in the long term, reflecting additional borrowing to meet the country's development needs and reduced concessionality from 2010 onwards. The risk of debt distress will remain low assuming that GDP and export growth in the non-oil sector remain robust in the long run, and the authorities maintain a prudent fiscal and borrowing policies. The debt sustainability outlook also hinges on the ability of Cameroon to attract significant foreign direct investment by the private sector.

7. **The combined effect of HIPC relief at completion point and MDRI sets the stage for long term debt sustainability.** Assuming full delivery of HIPC relief and MDRI in 2006, the NPV of debt would decrease from US\$5.7 billion at end-2005 to \$480 million or 2.8 percent of

GDP at end-2006 (Table 1).<sup>2</sup> Debt burden indicators are projected to increase steadily over the long term, while remaining comfortably below the country-specific policy dependent thresholds. Debt service is projected to decrease from 3.6 percent of exports in 2006 to 2.1 percent in 2015, before rising to 5.8 percent in 2025.

## Risks and Vulnerabilities

8. **There are some risks to debt sustainability in the presence of exogenous shocks.** If new borrowing is contracted on less concessional terms than under the baseline, all debt ratios will start deteriorating, and the NPV of debt-to-export ratio may exceed the indicative thresholds (Figure 1 and Table 2).<sup>3</sup>

9. **The sustainability of Cameroon's long term debt hinges on continuing strong macroeconomic performance and sound policies.** These include an average real GDP growth of about 5.5 percent annually, low inflation, strong tax effort, and expenditure restraint. Further advances on governance, a strong commitment to reforms, export diversification, and prudent borrowing policies will be essential for maintaining debt sustainability.

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<sup>2</sup> The NPV of debt is calculated by applying a single discount rate of 5 percent to debt service converted in dollar terms using the WEO average exchange rate with respect to the U.S. dollar, and maintaining the exchange rates constant thereafter. This differs from the HIPC methodology, where the NPV of debt is calculated by applying currency specific discount rates to debt service converted into dollar at fixed end-2005 exchange rates.

<sup>3</sup> The historical scenario implies a growth rate of 4 percent in line with the assumptions of the low growth scenario used in the sensitivity analysis (section E of the main text). The reason that debt indicators under the historical scenario appear more favorable than those resulting from the sensitivity analysis is primarily due to differences in the non-interest external current account balance. Specifically, under the historical scenario the external current account balance is more favorable than that assumed under the sensitivity analysis. As a result, the financing need is lower, which implies less borrowing and more favorable debt indicators.

### Box 1. Cameroon: Debt Sustainability Indicators

	Indicative thresholds 1/	2006	2015	2025
NPV of debt in percent of GDP	40	2.8	10.1	12.7
Exports	150	10.6	57.3	89.5
Debt service (percent of exports)	20	3.6	2.1	5.8

Source: Staff estimates and Cameroonian authorities.

1/ Based on the quality of policies and institutions of the country as ranked in the Country Policy and Institutional Assessment (CPIA) Index, see *Operational Framework for Debt Sustainability Assessments in Low Income Countries-Further Consideration*, March 28, 2005.

Table 1. Cameroon: External Debt Sustainability, Baseline Scenario, 2005-25 1/  
(In percent of GDP, unless otherwise indicated)

	Actual 2005	Historical Average 5/ 2005	Projections													2012-25 Average
			2006	2007	2008	2009	2010	2011	2006-11 Average	2012	2013	2014	2015	2020	2025	
External debt (nominal) 1/	36.5		32.4	31.8	31.2	30.4	29.8	29.1		28.6	28.3	27.9	27.7	24.9	20.0	
<i>of which: public and publicly guaranteed (PPG)</i>	36.5		32.4	31.8	31.2	30.4	29.8	29.1		28.6	28.3	27.9	27.7	24.9	20.0	
Change in external debt	-7.7		-4.1	-0.6	-0.6	-0.8	-0.6	-0.7		-0.4	-0.4	-0.3	-0.2	-0.8	-1.1	
Identified net debt-creating flows	0.4		-0.2	0.4	1.1	1.3	1.5	1.5		1.8	1.9	1.8	1.9	1.6	0.5	
Non-interest current account deficit	1.1	0.7	1.0	1.8	2.6	2.8	3.1	3.1		3.2	3.2	3.1	3.1	2.7	1.3	2.6
Deficit in balance of goods and services	3.1		3.0	3.3	4.1	4.2	4.4	4.5		4.5	4.5	4.4	4.4	3.8	2.3	
Exports	24.7		26.1	24.3	22.9	21.4	20.6	20.0		19.4	18.9	18.3	17.7	15.3	14.1	
Imports	27.9		29.1	27.6	26.9	25.6	25.0	24.4		23.9	23.4	22.7	22.0	19.1	16.5	
Net current transfers (negative = inflow)	-1.3	-1.2	-1.2	-1.1	-1.0	-1.0	-0.9	-0.9		-0.9	-0.8	-0.8	-0.8	-0.7	-0.6	-0.7
Other current account flows (negative = net inflow)	-0.8		-0.7	-0.4	-0.4	-0.4	-0.4	-0.4		-0.4	-0.5	-0.5	-0.5	-0.5	-0.5	
Net FDI (negative = inflow)	-0.1	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1		-0.1	-0.1	-0.1	-0.1	-0.1	0.0	-0.1
Endogenous debt dynamics 2/	-0.6		-1.1	-1.2	-1.3	-1.4	-1.4	-1.5		-1.3	-1.2	-1.2	-1.1	-1.0	-0.8	
Contribution from nominal interest rate	0.4		0.4	0.1	0.1	0.1	0.1	0.2		0.2	0.2	0.2	0.2	0.3	0.2	
Contribution from real GDP growth	-1.1		-1.5	-1.3	-1.5	-1.5	-1.5	-1.6		-1.4	-1.4	-1.4	-1.3	-1.3	-1.1	
Residual 3/	-8.1		-3.8	-1.0	-1.7	-2.1	-2.2	-2.2		-2.2	-2.2	-2.1	-2.1	-2.3	-1.6	
o/w exceptional financing	-2.5		-2.5	-2.6	-2.3	-1.9	-1.5	-1.2		-1.0	-0.9	-0.9	-0.9	-0.7	-0.6	
NPV of PPG external debt	2.6		2.8	3.3	3.8	4.3	5.0	6.0		7.1	8.1	9.1	10.1	13.0	12.7	
In percent of exports	10.3		10.6	13.4	16.8	20.3	24.1	30.1		36.4	42.9	49.7	57.3	85.4	89.5	
PPG ratio debt service to exports ratio (in percent)	6.8		3.6	0.9	1.0	1.3	1.3	1.4		1.4	1.7	1.9	2.1	3.5	5.8	
<b>Key macroeconomic assumptions</b>																
Real GDP growth in US dollars terms (in percent)	2.6	4.0	4.2	4.3	4.9	5.1	5.5	6.0	5.0	5.3	5.3	5.3	5.1	5.3	5.4	5.3
GDP deflator in US dollar terms (change in percent)	4.9	2.7	-2.6	0.9	2.0	1.9	2.1	2.1	1.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0
Effective interest rate (percent) 4/	1.1	4.8	1.1	0.3	0.4	0.4	0.5	0.6	0.5	0.6	0.7	0.8	0.9	1.1	1.2	1.0
Growth of exports of G&S (US dollar terms, in percent)	15.0	7.7	7.2	-1.9	-0.1	0.4	3.4	5.0	2.3	4.7	4.3	4.3	3.2	4.9	6.4	4.8
Growth of imports of G&S (US dollar terms, in percent)	7.9	6.8	6.1	-0.1	3.6	1.9	5.1	5.7	3.7	5.4	4.8	4.3	4.0	4.3	4.6	4.4
Grant element of new public sector borrowing (in percent)	40.7	...	40.9	40.9	41.0	41.4	41.4	34.7	40.1	34.7	34.7	34.7	34.7	34.7	34.7	34.7
<i>Memorandum item:</i>																
Nominal GDP (billions of U.S. dollars)	17.0		17.2	18.2	19.3	20.7	22.3	24.1		25.9	27.8	29.9	32.0	45.6	65.2	

Source: Staff simulations.

1/ Includes only public and publicly guaranteed external debt.

2/ Derived as  $[r - g - \rho(1+g)] / (1+g+\rho+g\rho)$  times previous-period debt ratio; with  $r$  = nominal interest rate;  $g$  = real GDP growth rate, and  $\rho$  = growth rate of GDP deflator in U.S. dollar terms.

3/ Includes exceptional financing (i.e., changes in arrears and debt relief); changes in gross foreign assets; and valuation adjustments. For projections also includes contribution from price and exchange rate changes.

4/ Current-year interest payments divided by previous period debt stock.

5/ Historical averages and standard deviations are generally derived over the past 10 years, subject to data availability.

Table 2. Cameroon: Sensitivity Analyses of Public and Publicly Guaranteed External Debt, 2005-25  
(In percent)

	Projections												
	2005	2006	2007	2008	2009	2010	2015	2020	2021	2022	2023	2024	2025
<b>NPV of debt-to-GDP ratio (threshold=40)</b>													
<b>Baseline</b>	3	3	3	4	4	5	10	13	13	13	13	13	13
<b>A. Alternative scenarios</b>													
A1. Key variables at their historical averages in 2006-20 1/	3	3	4	4	4	4	5	6	6	6	7	7	8
A2. New public sector loans on less favorable terms in 2006-20 2/	3	3	3	4	5	7	16	23	24	24	25	25	25
<b>B. Bound tests</b>													
B1. Real GDP growth at historical average minus one standard deviation in 2006-07	3	3	3	4	5	5	10	13	13	14	13	13	13
B2. Export value growth at historical average minus one standard deviation in 2006-07 3/	3	4	6	7	7	7	12	14	14	14	14	14	13
B3. U.S. dollar GDP deflator at historical average minus one standard deviation in 2006-07	3	3	4	4	5	6	11	15	15	15	15	14	14
B4. Net non-debt creating flows at historical average minus one standard deviation in 2006-07 4/	3	3	4	5	5	6	11	13	13	13	13	13	13
B5. Combination of B1-B4 using one-half standard deviation shocks	3	4	4	5	5	6	11	14	14	14	14	14	13
B6. One time 30 percent nominal depreciation relative to the baseline in 2006 5/	3	4	5	6	6	7	15	19	19	19	19	19	18
<b>NPV of debt-to-exports ratio (threshold=150)</b>													
<b>Baseline</b>	10	11	13	17	20	24	57	85	88	90	91	91	89
<b>A. Alternative scenarios</b>													
A1. Key variables at their historical averages in 2006-20 1/	10	12	15	16	17	17	28	37	40	42	45	49	53
A2. New public sector loans on less favorable terms in 2006-20 2/	10	10	12	16	24	34	92	150	158	166	172	176	179
<b>B. Bound tests</b>													
B1. Real GDP growth at historical average minus one standard deviation in 2006-07	10	11	13	17	21	25	58	86	89	90	91	91	90
B2. Export value growth at historical average minus one standard deviation in 2006-07 3/	10	17	27	31	36	40	75	101	104	105	105	104	102
B3. U.S. dollar GDP deflator at historical average minus one standard deviation in 2006-07	10	11	13	17	21	25	58	86	89	90	91	91	90
B4. Net non-debt creating flows at historical average minus one standard deviation in 2006-07 4/	10	12	17	21	25	29	61	88	91	92	93	92	91
B5. Combination of B1-B4 using one-half standard deviation shocks	10	15	17	21	25	28	61	87	90	91	92	91	90
B6. One time 30 percent nominal depreciation relative to the baseline in 2006 5/	10	11	13	17	21	25	58	86	89	90	91	91	90
<b>Debt-service ratio (threshold=20)</b>													
<b>Baseline</b>	7	4	1	1	1	1	2	4	4	5	5	5	6
<b>A. Alternative scenarios</b>													
A1. Key variables at their historical averages in 2006-20 1/	7	3	1	1	1	1	2	2	2	2	2	2	3
A2. New public sector loans on less favorable terms in 2006-20 2/	7	3	1	1	1	2	5	11	12	13	14	14	13
<b>B. Bound tests</b>													
B1. Real GDP growth at historical average minus one standard deviation in 2006-07	7	3	1	1	1	1	2	3	4	5	5	5	6
B2. Export value growth at historical average minus one standard deviation in 2006-07 3/	7	4	1	1	2	2	3	5	5	6	6	7	7
B3. U.S. dollar GDP deflator at historical average minus one standard deviation in 2006-07	7	3	1	1	1	1	2	3	4	5	5	5	6
B4. Net non-debt creating flows at historical average minus one standard deviation in 2006-07 4/	7	3	1	1	1	1	2	4	4	5	5	6	6
B5. Combination of B1-B4 using one-half standard deviation shocks	7	4	1	1	1	1	2	4	4	5	5	6	6
B6. One time 30 percent nominal depreciation relative to the baseline in 2006 5/	7	3	1	1	1	1	2	3	4	5	5	5	6
<i>Memorandum item:</i>													
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	36	36	36	36	36	36	36	36	36	36	36	36	36

Source: Staff projections and simulations.

1/ Variables include real GDP growth, growth of GDP deflator (in U.S. dollar terms), non-interest current account in percent of GDP, and non-debt creating flows.

2/ Assumes that new borrowing is not concessional with the interest rate of 8 percent, while grace and maturity periods are the same as in the baseline.

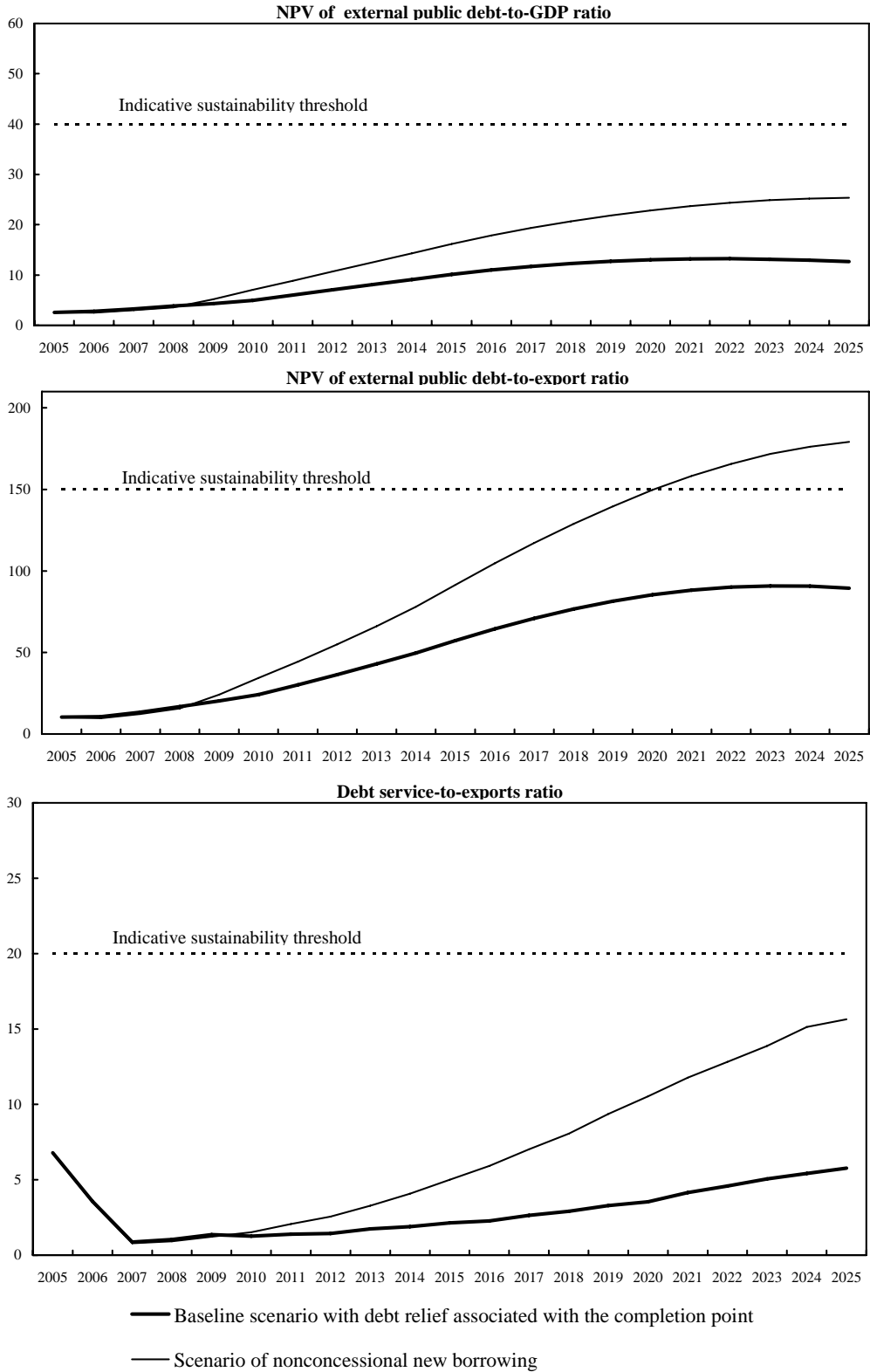
3/ Exports values are assumed to remain permanently at the lower level, but the current account as a share of GDP is assumed to return to its baseline level after the shock (implicitly assuming an offsetting adjustment in import levels).

4/ Includes official and private transfers and FDI.

5/ Depreciation is defined as percentage decline in dollar/local currency rate, such that it never exceeds 100 percent.

6/ Applies to all stress scenarios except for A2 (less favorable financing) in which the terms on all new financing are as specified in footnote 2.

Figure 2. Cameroon: Indicators of Public and Publicly Guaranteed External Debt Under Alternative Scenarios, 2005-25 (In percent)



Source: staff projections and simulations.