

INTERNATIONAL DEVELOPMENT ASSOCIATION AND
INTERNATIONAL MONETARY FUND

KINGDOM OF LESOTHO

Joint World Bank/IMF Debt Sustainability Analysis

Prepared by the staffs of the International Development Association
and the International Monetary Fund

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This debt sustainability analysis is based on end-2006 data for external and domestic debt provided by the Lesotho authorities, and World Bank and IMF staff estimates for debt outstanding to multilateral creditors. The overall staff assessment is that Lesotho is at a moderate risk of debt distress and remains vulnerable to exchange rate changes and other shocks, although debt appears sustainable in a baseline scenario.

I. INTRODUCTION

1. **This debt sustainability analysis has been prepared jointly by World Bank and IMF staff.** It comprises external and domestic debt, and is based on the framework for low-income countries approved by the respective Executive Boards.¹ The framework takes into account indicative thresholds for debt burden indicators determined by the quality of the country's policies and institutions,² and comprises baseline and alternative scenarios.

2. **Lesotho's nominal public sector debt declined from 89.1 percent of GDP in 2002 to 51.4 percent of GDP (US \$746.0 million) at the end of 2006,** reflecting in part, the early repayment of non concessional loans, limited new borrowing, and an exchange rate

¹ See "Applying the Debt Sustainability Framework for Low-Income Countries Post Debt Relief," (IDA/SecM2006-0564 and SM/07/131).

² The World Bank Country Policy and Institutional Assessment (CPIA) have ranked Lesotho for the last three years as a "medium performer" in terms of policy and institutions with a rating of 3.5. The applicable indicative thresholds for debt sustainability, proposed under the framework for low-income countries are: (i) 40 percent for the NPV of debt-to-GDP ratio, (ii) 150 percent for NPV of debt-to-exports ratio; (iii) 250 percent for the NPV of debt-to-fiscal revenues ratio; (iv) 20 percent for the debt service to exports ratio; and (v) 30 percent for the debt service to revenue ratio.

appreciation between 2003 and 2006. Of the total public sector debt, US \$626.3 million was externally owed, with about 89 percent of the total (US \$560.0 million) owed to multilateral creditors, mainly IDA and the African Development Fund.³ Government also has domestic debt held by residents in the amount of US \$119.4 million. For private sector debt, only obligations toward countries outside the Common Monetary Area are recorded. At end 2006, these obligations were estimated at US \$2.3 million.

Lesotho: External and Domestic Nominal Debt Outstanding at end-2006

	In millions of U.S. dollars	In percent of GDP
Total Domestic and External PPG Debt	745.7	51.4
Total Domestic Debt	119.4	8.3
Total External Public PPG Debt	626.3	43.0
Multilateral sources	560.0	38.6
World Bank Group	268.4	18.5
African Development Fund	184.8	12.7
EU	34.3	2.4
IMF	35.2	2.4
Others	37.3	2.6
Bilateral sources	43.1	3.0
Commercial sources	23.2	1.6
Total Private External Debt	2.3	0.1
<i>Memo Item</i>		
NPV of Total External Debt	459.7	31.8

The baseline, medium-, and long-term scenario

3. The baseline scenario is based on a number of macroeconomic projections and financing terms, which are summarized below in Box 1. Compared to the DSA from previous years, the 2007 DSA assumes a higher level of real GDP growth and current account surpluses from 2007 to 2011 (Text Table). Real GDP growth is now forecast to average 5.2 percent up to 2012 with long-term growth remaining at 4.5 percent, compared to

³ The nominal public debt data does not include debt issued by the Lesotho Highlands Development Authority (LHDA). The liabilities of the LDHA are equal to about 10 percent of GDP and are not included since LHDA gets financing from South Africa to cover debt service.

Comparison of Key Variables in Debt Sustainability Analysis 2005 -07

	Non-interest Current Account (% of GDP)				Real GDP growth			
	2005 DSA	2006 DSA	2007 DSA	Actual	2005 DSA	2006 DSA	2007 DSA	Actual
2005	-7.2	-1.0	...	-5.2	-0.7	1.3	...	2.9
2006	-10.1	-3.2	...	5.4	2.2	2.5	...	7.2
2007	-10.3	1.8	2.1	...	1.7	1.4	4.9	...
2008	-11.5	-1.4	1.2	...	2.1	1.4	5.2	...
2009	-10.6	-4.7	2.0	...	2.5	2.6	5.4	...
2010	-10.7	-6.0	1.1	...	2.6	2.7	5.5	...

average growth rates of 2.1 in the medium-term projected in the last DSA. The last two DSAs assumed growth and current account balances somewhat under the historical average in view of the end of the MFA and the expectation of the expiration of trade preferences under AGOA in 2007.

4. **However, major favorable developments have taken place since then.** The positive growth performance, especially strong in 2006 (7.2 percent), was driven by booming diamond production (not fully anticipated in the previous DSAs), a recovery of the garment industry helped in part by the extension of AGOA trade preferences through 2012, and good performance in the agriculture and services sectors. In addition, the Millennium Challenge Corporation (MCC) compact was signed in 2007. The government is expected to receive large grants during the next five years, allowing it to undertake significant capital investment in the development of the country's health infrastructure and water supply, and is actively promoting private sector development. In particular, the construction of Metolong dam with support of MCC and other donors is expected to increase the potential for the location of "wet industries" such as fabric production, which would allow Lesotho to take fuller advantage of AGOA beyond 2012. These recent developments, which were not previously considered, largely account for the change in growth projections for this year's DSA.

5. The current account balance after recording a record surplus of 5.4 percent of GDP in 2006 is forecast to remain strong due to high diamond and garment exports, and continued large South Africa Customs Union (SACU) revenues to 2010. Then it is projected to deteriorate somewhat as SACU revenues revert back to more normal levels. In the baseline scenario, Lesotho starts facing "IDA-hardened" terms in 2010 as a result of the growth in its GNI per capita. Under the Atlas method, Lesotho's GNI per capita stood at US \$1,070 in 2006. Taking into account the lags included in this methodology and the assumptions about growth, Lesotho would no longer be able to borrow at standard IDA terms after 2010.⁴

⁴ In the DSA, IDA-hardened terms are incorporated and substituted for standard IDA terms after 2010, and implies a charge of 0.75 percent, grace period of 10 years and a maturity period of 20 years (including the grace period), compared to the 40-year maturity of standard IDA terms.

Box 1. Main Assumptions Under the Baseline Scenario

- Real GDP growth is assumed to increase from 2.8 percent over the last ten years to about 5.2 percent in 2007–12 and then from 2013 to stabilize at 4.5 percent.
- Inflation (as measured by the implicit GDP deflator) is assumed to move from an average of 4.4 over the last ten years, and then to stabilize slightly above 4 percent as prices converge to that of South Africa's.
- Fiscal surpluses are projected to remain strong up to 2012 reflecting large SACU revenues, and are assumed to weaken somewhat in subsequent years when SACU revenues are assumed to decline.
- Imports and exports of goods and services and transfers are assumed to grow in line with GDP (in US dollar terms). FDI is assumed to grow slightly more rapidly, taking into account the reduction of the corporate income tax rate in 2006 to attract foreign investment.
- The current account balance (including official transfers) is determined by the above trends, declining gradually from a 4.4 percent of GDP surplus in 2006 to smaller surpluses over the medium term and eventually reaching a deficit as SACU transfers and diamond exports decline. Net income is also assumed to decrease gradually over the long term as remittances from South Africa continue to grow less important over time.
- Net external public sector financing is assumed to rise to about 2.8 percent of GDP by the end of the current decade and then to stabilize at this level. Foreign grants are assumed to increase to about 4.6 percent of GDP in the medium term, reflecting the MCC compact, and thereafter to decline. After 2010, it is assumed that borrowing from IDA would be at hardened terms. The DSA assumes that new borrowing would be contracted on highly concessional terms during the projection period.
- Domestic debt is projected to fall in nominal terms gradually over time. Private sector debt is projected to increase only marginally in terms of GDP, to 0.5 percent by 2027.

6. **At end-2006, the NPV of external debt stood at 31.7 percent of GDP (Table 1).** Under the baseline scenarios, Lesotho's external debt indicators remain well below the thresholds throughout the projection period. The NPV of debt-to-GDP ratio, which was fractionally above the threshold in 2006, is expected to gradually decrease to 21 percent in 2017, below the policy-based indicative threshold (40 percent); and the NPV of debt-to-export ratio would also fall gradually to 41 percent by 2017, significantly below the 150 percent threshold. Both ratios will however increase marginally in the later years of the projection period reflecting harder financing terms as Lesotho no longer have access to borrowing from IDA at standard terms. Borrowing, however, is expected to still be on broadly concessional terms. The highly concessional nature of the existing debt and new borrowing contributes to debt service ratios below the indicative threshold throughout the projection period. The Government undertook to repay early a significant amount of non concessional debt resulting in lower scheduled interest payments and hence a declining effective interest on debt.

7. **At end-2006 domestic debt contributed only marginally to the baseline scenarios for Lesotho's public debt ratios (Table 3).** Lesotho has a low level of domestic debt, and so public debt indicators are very closely aligned to those of public external debt. Domestic debt, which was at 7.5 percent of GDP at the end of 2006, is expected to be gradually reduced to about 3 percent of GDP by 2017. Domestic debt has been issued by government mostly to provide an impetus to the formation of a money market. The proceeds from the sale of T-bills are held in deposits at the Central Bank of Lesotho; therefore these bills have not represented additions to net debt. The fiscal deficit is projected to remain largely externally financed on concessional terms, and expenditure levels are assumed to be financed from grants and tax revenue.

II. SENSITIVITY ANALYSIS

External Public debt indicators

8. **Sensitivity tests show that while Lesotho's debt burden would worsen in the event of an adverse macroeconomic shock or weaker economic performance, it would remain below the indicative thresholds in most cases (Table 2 and Figure 1).** In the event of key macroeconomic variables reverting to their pre-2007 levels throughout the projection period, the evolution of debt would be significantly affected. With output and export growth at their historical averages, public debt ratios would fail to improve. The more stringent test of current account balances at historical averages would cause external debt to breach the indicative thresholds.

9. **The debt indicators in the historical scenario (scenario A1) are more elevated than under the baseline scenario**, and the threshold of the NPV of debt-to-GDP is breached. The real GDP growth in the ten-year period up to 2006 averaged 2.8 percent, about half that assumed in the projection period. The noninterest current account was also significantly weaker than that projected under the baseline scenario due to the lower level of earlier SACU transfers. These combined effects projected through 2027 would yield significantly worse debt indicators, compared to the baseline scenario.

10. **Borrowing on less favorable terms (scenario A2) would lead to some deterioration of the external debt indicators.** The impact however would not be as severe as that under the A1 scenario. Under this scenario, the NPV of debt-to-GDP ratio would reach 25 percent in 2017, still well below the indicative thresholds. Similarly, the NPV of debt-to-exports ratio while higher than under the baseline scenario remains below the indicative threshold.

11. **The bound tests reveal that Lesotho would face the most distress if there were to be a much lower rate of growth and a much lower level of nondebt creating inflows such as FDI in 2007-2008 (scenario B5).** Under this scenario, the NPV of debt-to-GDP ratio first increases to 71 percent of GDP in 2009 before falling to 49 percent of GDP in 2017. There are also underlying vulnerabilities with respect to export growth. A shock to exports would lead to higher NPV of debt-to-GDP and NPV of debt-to- exports ratios.

Total Public Debt Indicators

12. **Public debt appears robust in the standard sensitivity tests (Table 4 and Figure 2).** The indicators are most sensitive to deviations from the baseline growth path. In the scenario with variables at historical averages ratios initially rise but eventually declines. A similar pattern is observed with more extreme shocks of shorter duration. Although significant pressures would be exerted on total public debt for a number of years, the indicators would remain on trajectories that eventually decline later in the projection period. It should be noted that in the analysis the public debt alternative scenarios are not defined the same way for those of the external debt and are therefore not directly comparable.

13. **The trajectory of gross debt understates somewhat the decline in Lesotho's net indebtedness** especially in the next few years. This trajectory takes into account the disbursement of loans in the pipeline even in periods when fiscal surpluses would permit a net reduction of debt. It is also assumed that the authorities will stick to the original schedule for the repayment of the highly concessional debt .This implies that the public sector will accumulate some assets over the medium term. Alternatively, the analysis could be assumed to show that there is margin for lower primary surpluses that would remain consistent with the reduction in gross debt shown in Figure 2. However, because of limited implementation capacity, the authorities are not expected to significantly increase their level of capital

investment making it more likely that they will accumulate assets rather than significantly increase their investment levels.

III. CONCLUSION

14. **Lesotho faces a moderate risk of debt distress although in the baseline scenario key debt ratios are below the indicative thresholds for a country with Lesotho's performance rating.** The risk would materialize if variables such as economic growth and the current account deficit were to revert to their historical levels. The results therefore underscore the need for the authorities to continue to pursue prudent debt policies combined with sound macroeconomic policies and structural reforms. Policies should focus on growth enhancing measures and investments, while continuing to seek grants and highly concessional loans in order to mitigate the likelihood of debt distress.

Table 1. Lesotho: External Debt Sustainability Framework, Baseline Scenario, 2005-2027¹
(Percent of GDP, unless otherwise indicated)

	Actual		Projections										2013-27 Average
	2005	2006	2007	2008	2009	2010	2011	2012	2012 Average	2017	2027		
External debt (nominal) ¹	45.5	43.1	42.4	39.7	38.0	37.4	37.1	36.5	36.5	33.2	29.4	29.4	
o/w public and publicly guaranteed (PPG)	45.4	43.0	42.2	39.5	37.8	37.3	36.9	36.3	36.3	33.1	29.4	29.4	
Change in external debt	-1.4	-2.4	-0.8	-2.7	-1.7	-0.5	-0.4	-0.6	-0.6	-0.3	-1.5	-1.5	
Identified net debt-creating flows	5.6	-9.1	-7.3	-6.2	-6.7	-5.6	-3.7	-2.4	-2.4	-2.1	-2.3	-2.3	
Non-interest current account deficit	5.2	-5.4	-2.1	-1.2	-2.0	-1.1	0.8	1.7	1.7	1.7	1.6	1.6	
Deficit in balance of goods and services	49.1	48.4	50.5	47.5	43.4	41.3	38.5	29.0	29.0	29.0	29.0	29.0	
Exports	49.4	52.3	52.1	52.2	51.4	51.8	52.1	50.9	50.9	50.9	50.9	50.9	
Imports	98.4	100.7	102.6	99.7	94.8	93.1	90.6	79.9	79.9	79.9	79.9	79.9	
Net current transfers (negative = inflow)	-21.0	-26.8	-29.2	-28.4	-26.3	-25.4	-23.0	-20.0	-20.0	-13.9	-6.5	-11.6	
o/w official	-20.2	-25.6	-28.0	-27.3	-25.2	-24.5	-22.1	-19.2	-19.2	-13.9	-6.5	-11.6	
Other current account flows (negative = net inflow)	-22.9	-27.0	-23.5	-20.3	-19.2	-17.0	-14.8	-7.3	-7.3	-13.3	-6.2	-13.3	
Net FDI (negative = inflow)	-4.0	-3.9	-3.7	-3.4	-3.2	-3.0	-2.8	-2.6	-2.6	-2.8	-3.0	-2.8	
Endogenous debt dynamics ²	4.4	0.3	-1.5	-1.6	-1.6	-1.6	-1.6	-1.5	-1.5	-1.1	-0.8	-0.8	
Contribution from nominal interest rate	1.7	0.9	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.4	
Contribution from real GDP growth	-1.4	-3.2	-2.0	-2.0	-2.0	-2.0	-1.9	-1.8	-1.8	-1.4	-1.3	-1.3	
Contribution from price and exchange rate changes	4.1	2.6	...	...	...	...	...	...	...	...	...	...
Residual ³	-7.0	6.7	6.5	3.6	5.0	5.1	3.3	1.8	1.8	1.9	0.9	0.9	
NPV of external debt ⁴	...	31.8	30.1	27.5	25.5	24.4	23.5	22.6	22.6	20.9	21.5	21.5	
In percent of exports	...	60.8	57.8	52.8	49.6	47.1	45.1	44.4	44.4	41.0	42.3	42.3	
NPV of PPG external debt	...	31.7	29.9	27.4	25.3	24.2	23.3	22.4	22.4	20.8	21.5	21.5	
Percent of exports	...	60.5	57.5	52.5	49.3	46.7	44.8	44.0	44.0	40.8	42.2	42.2	
Percent of government revenues	...	54.2	52.9	50.7	48.7	48.1	49.0	49.7	49.7	44.8	46.3	46.3	
Debt service-to-exports ratio (percent)	11.4	6.5	5.3	3.9	3.4	3.1	2.9	2.8	2.8	1.7	1.3	1.3	
PPG debt service-to-exports ratio (percent)	11.3	6.4	5.2	3.7	3.2	3.0	2.8	2.7	2.7	1.7	1.3	1.3	
PPG debt service-to-revenue ratio (percent)	11.4	5.7	4.8	3.6	3.2	3.1	3.1	3.0	3.0	1.8	1.4	1.4	
Total gross financing need (billions of U.S. dollars)	0.1	-0.1	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	
Non-interest current account deficit that stabilizes debt ratio	6.6	-3.0	-1.3	1.4	-0.2	-0.5	1.1	2.3	2.3	1.9	3.0	3.0	
Key macroeconomic assumptions													
Real GDP growth (percent)	2.9	7.2	4.9	5.2	5.4	5.5	5.6	5.1	5.1	4.5	4.5	4.5	
GDP deflator in US dollar terms (change in percent)	-8.0	-5.5	1.3	5.5	3.6	1.8	1.6	1.6	1.6	4.3	4.3	4.2	
Effective interest rate (percent) ⁵	3.5	1.9	1.2	1.1	1.0	1.0	0.9	0.8	0.8	1.1	1.5	1.3	
Growth of exports of G&S (US dollar terms, percent)	-1.9	7.4	5.8	11.2	7.6	8.3	7.9	4.3	4.3	7.5	9.0	8.9	
Growth of imports of G&S (US dollar terms, percent)	4.5	3.6	8.2	7.8	3.9	5.5	4.4	-5.8	-5.8	4.0	9.0	8.9	
Grant element of new public sector borrowing (percent)	...	...	47.4	48.9	48.7	48.5	48.5	49.3	49.3	42.5	41.6	39.1
Aid flows (in billions of US dollars) ⁶	0.2	0.1	0.2	0.6	0.8	0.8	0.8	0.7	0.7	0.9	1.5	1.5	
o/w Grants	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3	
Grant-equivalent financing (in percent of GDP) ⁷	...	...	2.9	6.1	6.8	6.5	5.8	5.1	5.1	4.9	4.4	4.9
Grant-equivalent financing (in percent of external financing) ⁸	...	...	63.8	79.4	81.0	79.8	77.9	79.7	79.7	76.9	74.1	74.0
Memorandum items:													
Nominal GDP (billions of US dollars)	1.4	1.5	1.5	1.7	1.9	2.0	2.2	2.3	2.3	3.5	8.3	8.3	
(NPV: NPV(-1)/GDP(-1) (percent)	0.2	0.5	0.5	0.3	0.6	0.6	0.6	0.4	0.4	1.5	1.3	1.3	

Source: Staff simulations.

¹ Includes both public and private sector external debt.

² Derived as $[r - g - \rho(1+g)]/(1+g+p+gp)$ times previous period debt ratio, with r = nominal interest rate; g = real GDP growth rate, and ρ = 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 Assumes that NPV of private sector debt is equivalent to its face value.

⁵ Current-year interest payments divided by previous period debt stock.

⁶ Historical averages and standard deviations are generally derived over the past 10 years, subject to data availability.

⁷ Defined as grants, concessional loans, and debt relief.

⁸ Grant-equivalent financing includes grants provided directly to the government and through new borrowing (difference between the face value and the NPV of new debt).

Table 2. Lesotho: Sensitivity Analyses for Key Indicators of Public and Publicly Guaranteed External Debt, 2006-27
(Percent)

	Projections									
	2006 Est.	2007	2008	2009	2010	2011	2012	2017	2027	
NPV of debt-to-GDP ratio										
Baseline	32	30	27	25	24	23	22	21	21	
A. Alternative Scenarios										
A1. Key variables at their historical averages in 2007-27 ¹	32	35	38	41	43	44	44	49	53	
A2. New public sector loans on less favorable terms in 2007-27 ²	32	30	28	27	26	26	25	25	29	
B. Bound Tests										
B1. Real GDP growth at historical average minus one standard deviation in 2007-08	32	30	28	27	26	25	24	21	22	
B2. Export value growth at historical average minus one standard deviation in 2007-08 ³	32	33	38	43	41	39	38	30	23	
B3. US dollar GDP deflator at historical average minus one standard deviation in 2007-08	32	39	50	46	44	42	40	35	37	
B4. Net non-debt creating flows at historical average minus one standard deviation in 2007-08 ⁴	32	39	45	42	40	39	37	29	23	
B5. Combination of B1-B4 using one-half standard deviation shocks	32	34	56	71	68	66	63	50	34	
B6. One-time 30 percent nominal depreciation relative to the baseline in 2007 ⁵	32	42	39	36	34	33	31	27	29	
NPV of debt-to-exports ratio										
Baseline	61	58	52	49	47	45	44	41	42	
A. Alternative Scenarios										
A1. Key variables at their historical averages in 2007-27 ¹	61	67	73	80	84	85	87	96	105	
A2. New public sector loans on less favorable terms in 2007-27 ²	61	58	54	52	51	50	50	49	57	
B. Bound Tests										
B1. Real GDP growth at historical average minus one standard deviation in 2007-08	61	58	53	49	47	44	43	38	40	
B2. Export value growth at historical average minus one standard deviation in 2007-08 ³	61	71	95	109	103	99	97	78	60	
B3. US dollar GDP deflator at historical average minus one standard deviation in 2007-08	61	76	52	49	46	44	43	38	40	
B4. Net non-debt creating flows at historical average minus one standard deviation in 2007-08 ⁴	61	75	86	82	78	74	73	58	45	
B5. Combination of B1-B4 using one-half standard deviation shocks	61	65	98	125	119	114	113	88	60	
B6. One-time 30 percent nominal depreciation relative to the baseline in 2007 ⁵	61	81	52	49	46	44	43	38	40	
NPV of debt-to-revenue ratio										
Baseline	54	53	51	49	48	49	50	45	46	
A. Alternative Scenarios										
A1. Key variables at their historical averages in 2007-27 ¹	54	62	70	79	86	94	101	107	118	
A2. New public sector loans on less favorable terms in 2007-27 ²	54	53	52	52	53	55	56	54	63	
B. Bound Tests										
B1. Real GDP growth at historical average minus one standard deviation in 2007-08	54	53	53	52	52	52	52	45	47	
B2. Export value growth at historical average minus one standard deviation in 2007-08 ³	54	59	70	82	81	83	84	65	51	
B3. US dollar GDP deflator at historical average minus one standard deviation in 2007-08	54	70	92	89	87	88	89	76	80	
B4. Net non-debt creating flows at historical average minus one standard deviation in 2007-08 ⁴	54	69	83	81	80	81	82	63	50	
B5. Combination of B1-B4 using one-half standard deviation shocks	54	60	104	136	136	138	140	107	73	
B6. One-time 30 percent nominal depreciation relative to the baseline in 2007 ⁵	54	75	72	69	68	68	69	59	62	

Continued...

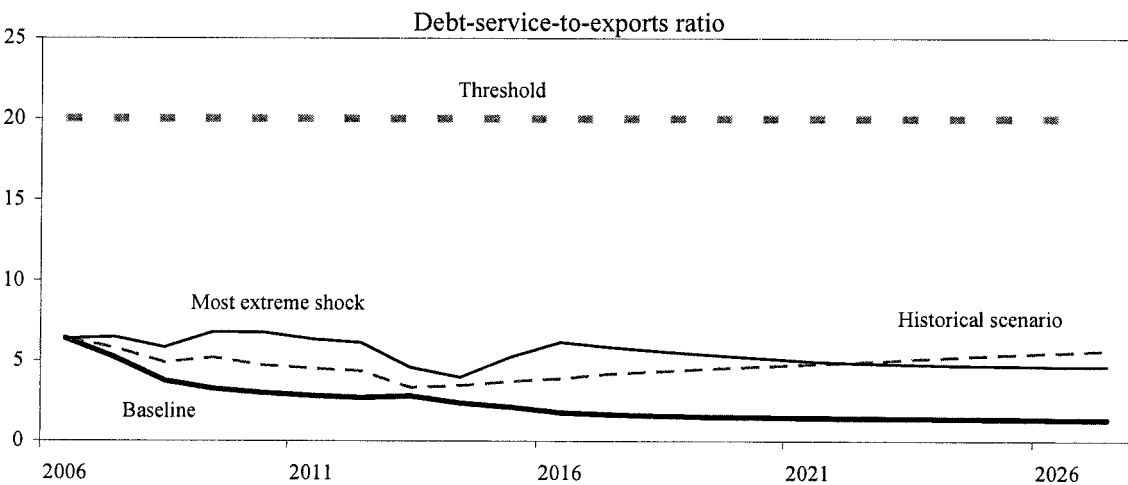
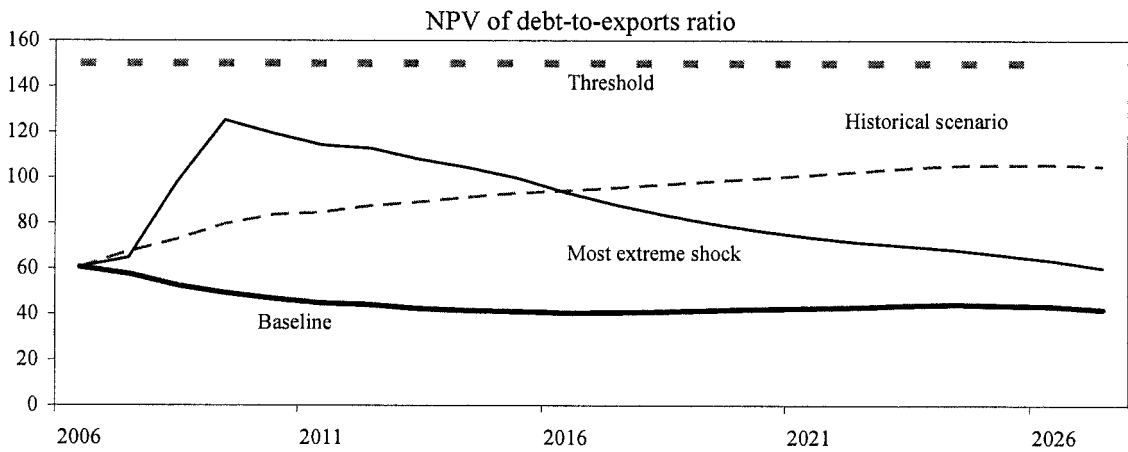
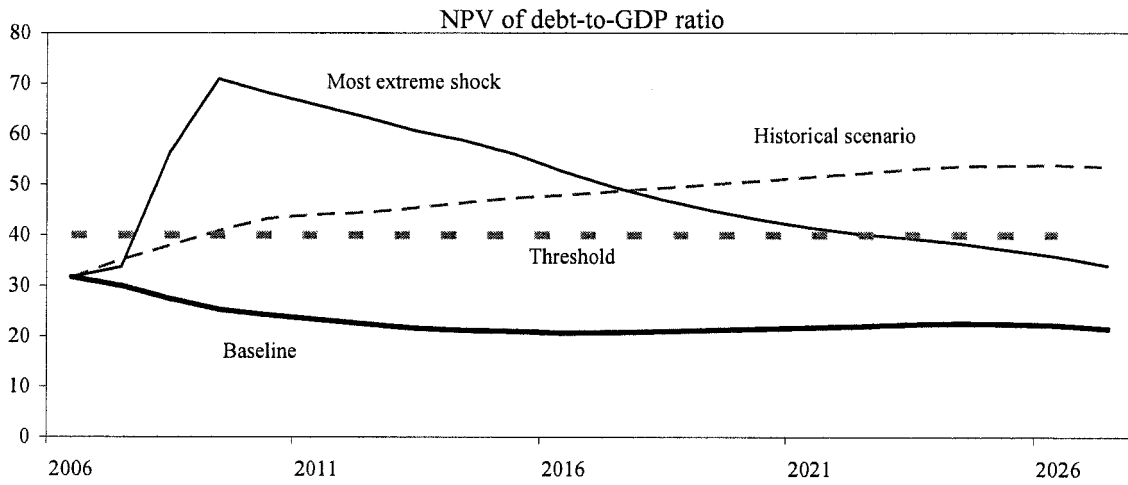
Table 2. Lesotho: Sensitivity Analyses for Key Indicators of Public and Publicly Guaranteed External Debt, 2006-27 (concluded)
(Percent)

	2006	2007	2008	2009	2010	2011	2012	2017	2027
	Est.	Projections							
Debt service-to-exports ratio									
Baseline	6	5	4	3	3	3	3	2	1
A. Alternative Scenarios									
A1. Key variables at their historical averages in 2007-27 ¹	6	6	5	5	5	5	4	4	6
A2. New public sector loans on less favorable terms in 2007-27 ²	6	6	5	5	5	4	4	3	4
B. Bound Tests									
B1. Real GDP growth at historical average minus one standard deviation in 2007-09	6	6	5	5	4	4	4	2	3
B2. Export value growth at historical average minus one standard deviation in 2007-09 ³	6	6	6	7	7	6	6	5	4
B3. US dollar GDP deflator at historical average minus one standard deviation in 2007-09	6	8	5	5	4	4	4	2	3
B4. Net non-debt creating flows at historical average minus one standard deviation in 2007-09 ⁴	6	6	5	6	5	5	5	4	3
B5. Combination of B1-B4 using one-half standard deviation shocks	6	6	6	7	7	6	6	6	5
B6. One-time 30 percent nominal depreciation relative to the baseline in 2007 ⁵	6	8	5	5	4	4	4	2	3
Debt service-to-revenue ratio									
Baseline	6	5	4	3	3	3	3	2	1
A. Alternative Scenarios									
A1. Key variables at their historical averages in 2007-27 ¹	6	5	5	5	5	5	5	5	6
A2. New public sector loans on less favorable terms in 2007-27 ²	6	5	5	5	5	5	5	3	4
A3. New public sector loans on less favorable IDA terms	6	5	4	3	3	3	3	2	1
B. Bound Tests									
B1. Real GDP growth at historical average minus one standard deviation in 2007-08	6	5	5	5	5	5	5	2	3
B2. Export value growth at historical average minus one standard deviation in 2007-08 ³	6	5	5	5	5	5	5	4	4
B3. US dollar GDP deflator at historical average minus one standard deviation in 2007-08	6	7	9	9	8	8	8	4	5
B4. Net non-debt creating flows at historical average minus one standard deviation in 2007-08 ⁴	6	5	5	6	5	5	5	4	4
B5. Combination of B1-B4 using one-half standard deviation shocks	6	6	6	7	8	8	8	7	6
B6. One-time 30 percent nominal depreciation relative to the baseline in 2007 ⁵	6	7	7	7	6	6	6	3	4
<i>Memorandum item:</i>									
Grant element assumed on residual financing (i.e., financing required above baseline) ⁶	37	39	39	39	39	39	39	39	39

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. The full presentation of the alternative scenario is in Table 1c.² Assumes that the interest rate on new borrowing is by 2 percentage points higher than in the baseline, 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 (implying 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 1. Lesotho: Indicators of Public and Publicly Guaranteed External Debt Under Alternative Scenarios, 2007-2027



Continued...

Figure 1. Lesotho: Indicators of Public and Publicly Guaranteed External Debt Under Alternative Scenarios, 2007-2027 (cont'd)

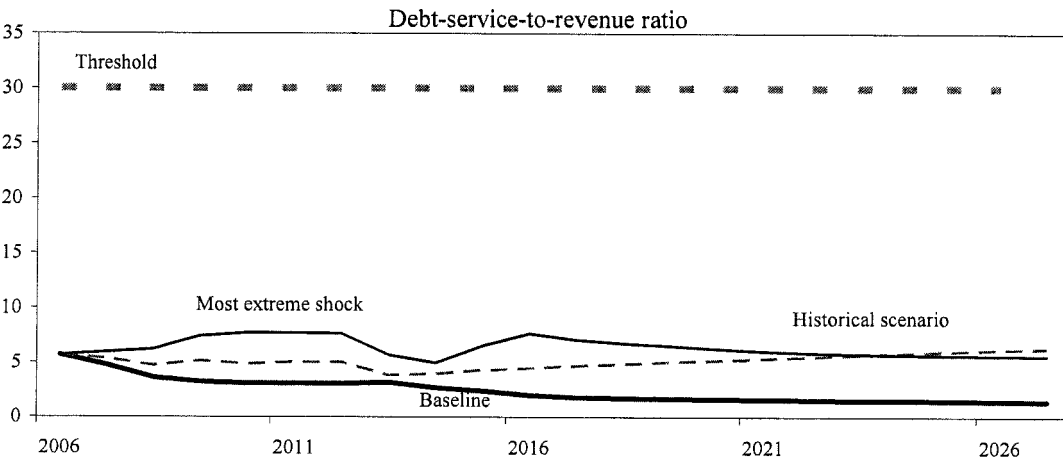
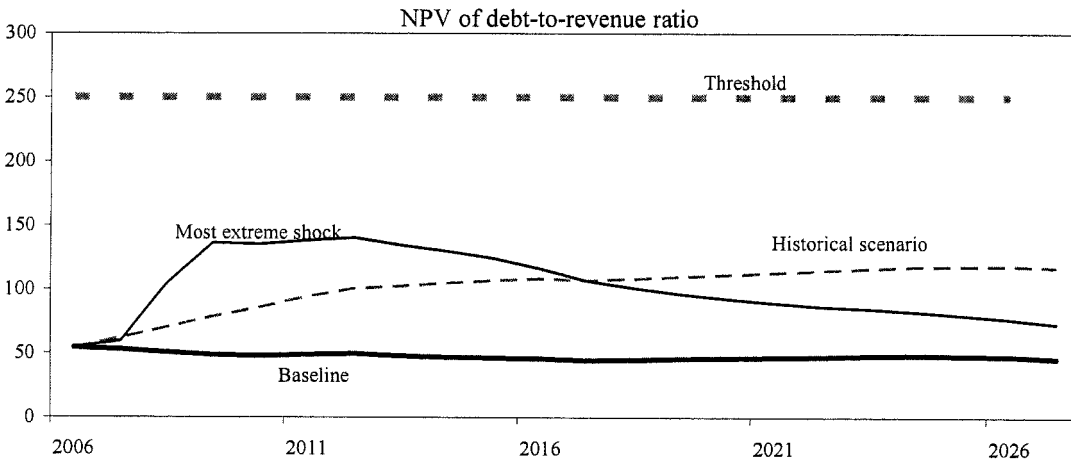
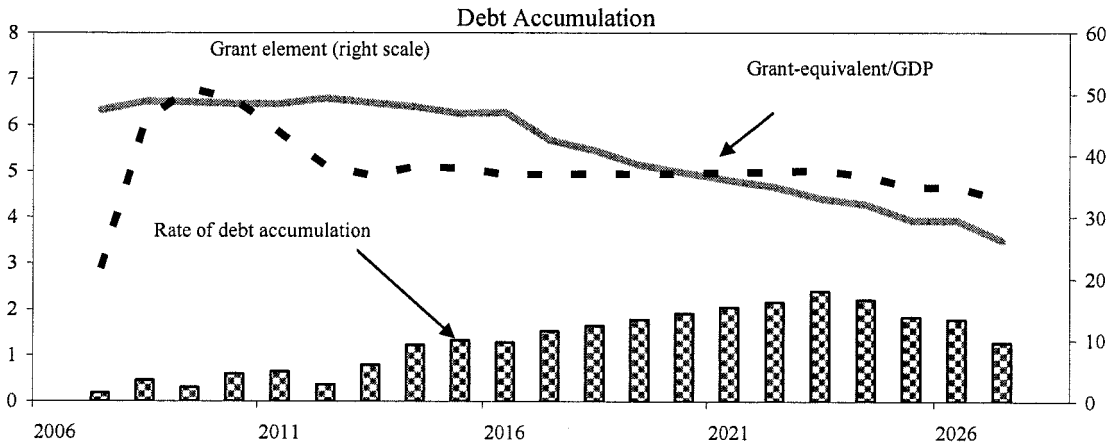


Table 3 Lesotho: Public Sector Debt Sustainability Framework, Baseline Scenario, 2004–2027
(Percent of GDP, unless otherwise indicated)

	Actual					Estimate					Projections				
	2004	2005	2006	Historical Average ⁵	Standard Deviation ⁵	2007	2008	2009	2010	2011	2012	2013-12 Average	2017	2027	2013-27 Average
Public sector debt¹	55.8	54.5	51.4			49.4	45.6	43.0	42.1	41.5	38.9		35.7	30.9	
o/w foreign-currency denominated	46.9	45.5	43.1			42.4	39.7	38.0	37.4	37.1	36.5		33.2	29.4	
Change in public sector debt	-16.8	-1.4	-3.1			-2.0	-3.8	-2.7	-0.9	-0.6	-2.5		1.9	-1.2	
Identified debt-creating flows	-19.6	-2.5	-14.8			-11.1	-11.3	-10.8	-9.9	-7.5	-5.2		-2.8	-2.7	
Primary deficit	-7.7	-7.1	-14.7	-2.8	6.5	-8.7	-7.2	-7.5	-7.4	-5.0	-2.9	-6.4	-0.4	-0.4	-0.8
Revenue and grants	49.3	50.8	59.5			58.0	58.6	57.3	55.3	51.9	49.0		47.5	51.0	
of which: grants	2.6	2.1	1.1			1.4	4.6	5.3	5.0	4.3	3.8		2.0	2.0	
Primary (noninterest) expenditure	41.7	43.7	44.9			49.3	51.4	49.8	47.8	46.8	46.1		47.1	50.6	
Automatic debt dynamics	-11.9	4.6	-0.2			-2.4	-4.1	-3.3	-2.5	-2.5	-2.3		-2.4	-2.3	
Contribution from interest rate/growth differential	-2.6	-0.6	-3.2			-2.4	-2.5	-2.6	-2.6	-2.6	-2.5		-1.7	-1.1	
of which: contribution from average real interest rate	0.3	1.0	0.5			0.0	-0.1	-0.3	-0.3	-0.4	-0.5		-0.2	0.3	
of which: contribution from real GDP growth	-2.9	-1.6	-3.6			-2.4	-2.4	-2.3	-2.2	-2.2	-2.0		-1.5	-1.4	
Contribution from real exchange rate depreciation	-9.4	5.2	3.0			0.1	-1.6	-0.7	0.1	0.2	0.2		-0.7	-1.2	
Other identified debt-creating flows	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Privatization receipts (negative)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Recognition of implicit or contingent liabilities	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Debt relief (HIPC and other)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Other (specify, e.g. bank recapitalization)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Residual, including asset changes	2.8	1.1	11.7			9.1	7.5	8.1	9.0	6.9	2.7		4.6	1.5	
NPV of public sector debt	34.1	33.9	39.9			37.0	33.3	30.4	28.8	27.5	24.5		22.0	21.8	
o/w foreign-currency denominated	25.2	24.9	31.7			30.0	27.4	25.4	24.2	23.1	22.0		19.4	20.3	
o/w external	25.2	24.9	31.7			30.0	27.4	25.4	24.2	23.1	22.0		19.4	20.3	
NPV of contingent liabilities (not included in public sector debt)															
Gross financing need ²	-2.9	-0.9	-10.8			-5.5	-4.7	-5.4	-5.6	-3.3	-1.3		0.7	0.6	
NPV of public sector debt-to-revenue and grants ratio (percent)	69.1	66.7	67.0			63.7	56.9	53.0	52.1	53.0	49.9		46.2	42.8	
NPV of public sector debt-to-revenue ratio (percent)	73.0	69.6	68.3			65.3	61.7	58.4	57.2	57.8	54.2		48.3	44.5	
o/w external ^{3/}	53.9	51.2	54.2			52.9	50.8	48.8	48.1	48.6	48.8		42.7	41.4	
Debt service-to-revenue and grants ratio (percent) ⁴	9.7	12.2	6.4			5.6	4.2	3.6	3.4	3.3	3.2		2.4	1.9	
Debt service-to-revenue ratio (percent) ⁴	10.2	12.7	6.5			5.7	4.6	4.0	3.7	3.6	3.5		2.5	2.0	
Primary deficit that stabilizes the debt-to-GDP ratio	6.3	-4.6	0.2			2.4	4.1	3.3	2.5	2.5	2.3		2.4	2.3	
Key macroeconomic and fiscal assumptions															
Real GDP growth (percent)	4.2	2.9	7.2	2.8	3.5	4.9	5.2	5.4	5.5	5.6	5.1	5.3	4.5	4.5	4.5
Average nominal interest rate on forex debt (percent)	2.0	3.9	2.1	2.6	0.8	1.2	1.1	1.1	1.0	0.9	0.9	1.0	1.1	1.5	1.3
Average real interest rate on domestic currency debt (percent)	2.9	3.1	1.0	5.4	5.5	0.6	-0.3	-0.7	0.5	-0.2	-1.0	-0.2	17.1	0.2	2.4
Real exchange rate depreciation (percent, + indicates depreciation)	-16.8	11.2	7.0	3.0	24.9	0.2									
Inflation rate (GDP deflator, percent)	4.0	3.4	4.2	5.8	4.0	6.2	7.3	6.9	5.0	4.8	4.8	5.8	4.3	4.3	4.2
Growth of real primary spending (deflated by GDP deflator, percent)	2.0	7.8	10.2	3.7	10.0	15.2	9.7	2.1	1.4	3.4	3.4	5.8	6.8	7.6	5.2
Grant element of new external borrowing (percent)	39.0	39.0	39.0	39.0	0.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0

Sources: Country authorities, and Fund staff estimates and projections.

¹ Covers gross debt of the general government.

² Gross financing need is defined as the primary deficit plus debt service plus the stock of short-term debt at the end of the last period.

³ Revenues excluding grants.

⁴ Debt service is defined as the sum of interest and amortization of medium and long-term debt.

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

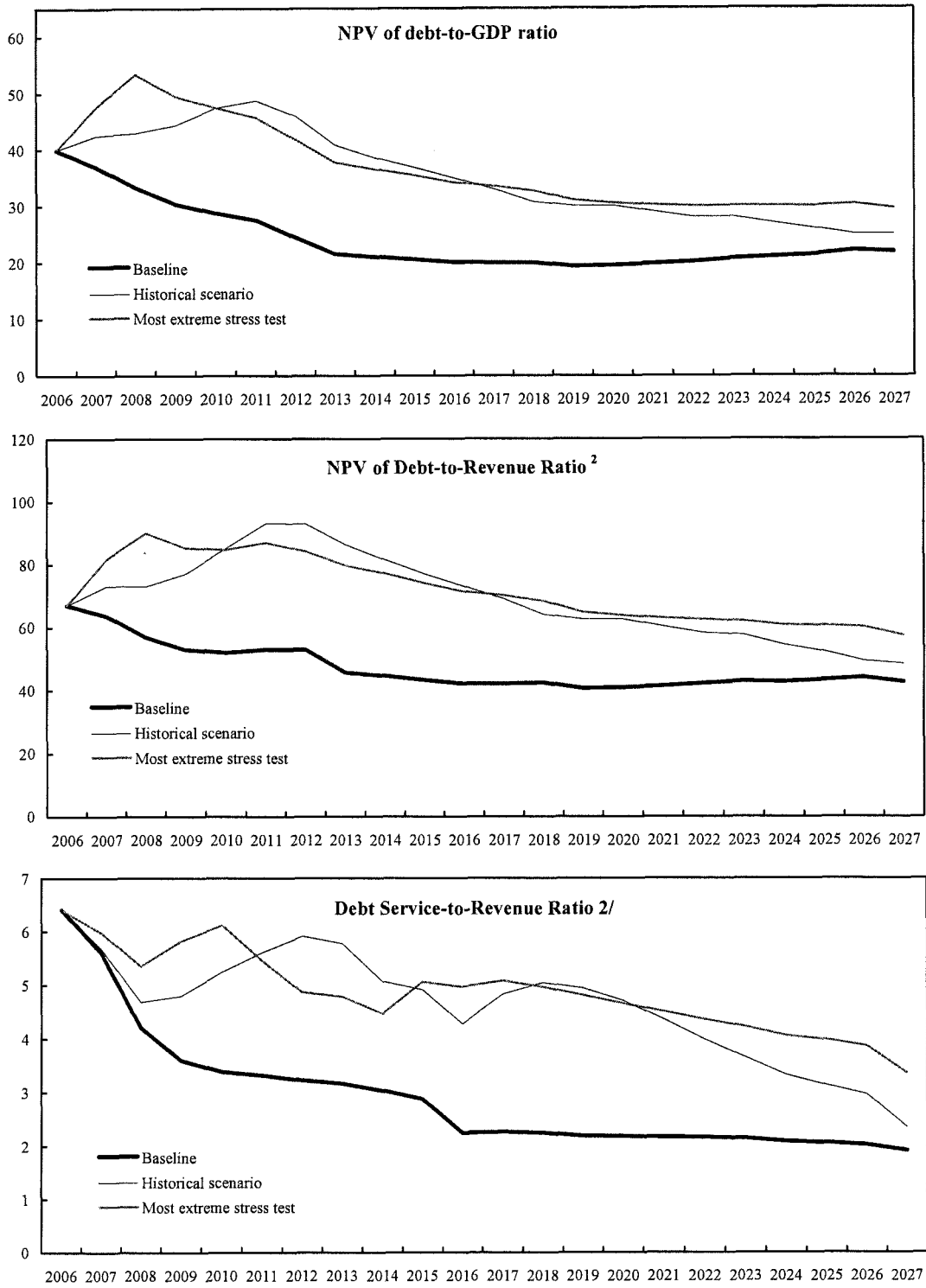
Table 4. Lesotho: Sensitivity Analysis for Key Indicators of Public Debt 2006-2027

	2006	2007	2008	2009	2010	2011	2012	2017	2027
	Est.	Projections							
NPV of Debt-to-GDP Ratio									
Baseline	40	37	33	30	29	28	24	22	22
A. Alternative scenarios									
A1. Real GDP growth and primary balance are at historical averages	40	42	43	44	47	49	46	35	25
A2. Primary balance is unchanged from 2007	40	37	32	28	26	21	14	...	...
A3. Permanently lower GDP growth ¹	40	37	34	32	32	32	30	36	32
B. Bound tests									
B1. Real GDP growth is at historical average minus one standard deviations in 2007-2008	40	39	37	34	32	31	27	25	24
B2. Primary balance is at historical average minus one standard deviations in 2007-2008	40	47	52	48	46	44	41	35	29
B3. Combination of B1-B2 using one half standard deviation shocks	40	48	53	50	47	46	42	35	30
B4. One-time 30 percent real depreciation in 2007	40	50	45	41	38	35	31	25	23
B5. 10 percent of GDP increase in other debt-creating flows in 2007	40	47	42	38	36	34	30	26	23
NPV of Debt-to-Revenue Ratio ²									
Baseline	67	64	57	53	52	53	53	46	43
A. Alternative scenarios									
A1. Real GDP growth and primary balance are at historical averages	67	73	73	77	85	93	93	73	48
A2. Primary balance is unchanged from 2007	67	64	55	49	46	41	28	...	...
A3. Permanently lower GDP growth ¹	67	64	58	56	57	61	61	77	63
B. Bound tests									
B1. Real GDP growth is at historical average minus one standard deviations in 2007-2008	67	64	57	53	52	53	50	46	43
B2. Primary balance is at historical average minus one standard deviations in 2007-2008	67	81	89	84	83	85	82	73	57
B3. Combination of B1-B2 using one half standard deviation shocks	67	82	90	85	85	87	84	74	58
B4. One-time 30 percent real depreciation in 2007	67	87	77	71	68	68	64	54	45
B5. 10 percent of GDP increase in other debt-creating flows in 2007	67	81	72	67	65	65	62	54	46
Debt Service-to-Revenue Ratio ²									
Baseline	6	6	4	4	3	3	3	2	2
A. Alternative scenarios									
A1. Real GDP growth and primary balance are at historical averages	6	6	5	5	5	6	6	5	2
A2. Primary balance is unchanged from 2007	6	6	4	4	3	3	3	6	9
A3. Permanently lower GDP growth ¹	6	6	4	4	4	4	4	4	3
B. Bound tests									
B1. Real GDP growth is at historical average minus one standard deviations in 2007-2008	6	6	4	4	3	3	3	2	2
B2. Primary balance is at historical average minus one standard deviations in 2007-2008	6	6	5	6	6	5	5	5	4
B3. Combination of B1-B2 using one half standard deviation shocks	6	6	5	6	6	5	5	5	3
B4. One-time 30 percent real depreciation in 2007	6	6	5	4	4	4	4	3	3
B5. 10 percent of GDP increase in other debt-creating flows in 2007	6	6	4	4	3	3	3	2	2
Debt Service-to-GDP Ratio									
Baseline	4	3	2	2	2	2	2	1	1
A. Alternative scenarios									
A1. Real GDP growth and primary balance are at historical averages	4	3	3	3	3	3	3	2	1
A2. Primary balance is unchanged from 2007	4	3	2	2	2	1	1	1	1
A3. Permanently lower GDP growth ¹	4	3	2	2	2	2	2	2	2
B. Bound tests									
B1. Real GDP growth is at historical average minus one standard deviations in 2007-2008	4	3	3	2	2	2	2	1	1
B2. Primary balance is at historical average minus one standard deviations in 2007-2008	4	3	3	3	3	3	2	3	2
B3. Combination of B1-B2 using one half standard deviation shocks	4	3	3	3	3	3	2	2	2
B4. One-time 30 percent real depreciation in 2007	4	3	3	2	2	2	2	1	1
B5. 10 percent of GDP increase in other debt-creating flows in 2007	4	3	2	2	2	2	2	1	1

Sources: Country authorities; and Fund staff estimates and projections.

¹ Assumes that real GDP growth is at baseline minus one standard deviation divided by the square root of 20 (i.e., the length of the projection period).² Revenues are defined inclusive of grants.

Figure 2. Lesotho: Indicators of Public Debt Under Alternative Scenarios, 2007-2027 ¹



Source: Staff projections and simulations.

¹ Most extreme stress test is test that yields highest ratio in 2017.

² Revenue including grants.