St. Lucia: Debt Sustainability Analysis

This Debt Sustainability Analysis paper for **St. Lucia** was prepared by a staff team of the International Monetary Fund as background documentation for the periodic consultation with the member country. It is based on the information available at the time it was completed on **January 10, 2003**. The views expressed in this document are those of the staff team and do not necessarily reflect the views of the government of **St. Lucia** or the Executive Board of the IMF.

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ST. LUCIA

Debt Sustainability Analysis

Prepared by the Western Hemisphere Department

(In consultation with other departments)

Approved by Anthony R. Boote and Matthew Fisher

January 10, 2003

This report provides background information for the discussion in (SM/03/10), on fiscal and external debt sustainability. The staff prepared a standard set of sensitivity tests around the adjustment scenario presented in Appendix V to the staff report, as well as for a scenario based on unchanged fiscal policies. The methodology used reflects that recently endorsed by the Executive Board.[1]

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1. **The medium-term scenario prepared by the staff assumes continued fiscal consolidation and thus is compatible with sustainable debt levels even in the presence of adverse economic shocks.**[2] The main purpose of the stress test exercise was to determine the fiscal adjustment necessary to stabilize the debt ratio at a sustainable level, even in the presence of negative shocks. The tests show that stabilizing the debt/GDP ratio for the public sector (Tables 1 and 2 and Figure 1) at around the levels prevailing in 2002/03 (60 percent of GDP for total public debt and 40 percent of GDP for external debt) would allow the absorption of economic shocks without generating unstable debt dynamics. Most temporary shocks would, however, shift the debt ratio upwards, and further adjustment would be necessary to restore the preshock level.

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[1] The analysis is based on the methodology proposed in "Assessing Sustainability", SM/02/166.

[2] This is consistent with the authorities' own strategy (St. Lucia—Medium-Term Economic Strategy, presented at the June 2002 meeting of the CGCED at the World Bank). However, the authorities did not commit at this stage to 2 percentage points of GDP reduction in the central government deficit in 2003/04 proposed by staff, which is assumed under this scenario.

2.   **The application of historical averages to the main macroeconomic variables (Test 1) results in a positive outcome** with the debt ratio declining over time by 4 percentage points of GDP, to 53 percent of GDP in 2007. As expected, the total public debt appears particularly sensitive to a large, 30-percent real devaluation shock, which would push the debt ratio up by over 20 percentage points of GDP. A combination of adverse shocks to the real interest and growth rates as well as to the primary balance appears also benign (Tests 2–4). After the initial increase, the debt ratio falls rapidly and converges to the level of the staff's scenario. The key factors behind these results are the existence of primary surpluses in the past and the relatively low interest rates on past borrowing, largely from the noncommercial sources. Testing for other shocks yields results which are less favorable than in the base case. A shock to the revenue-to-GDP ratio (Tests 8 and 8a) produces an adverse impact on both the debt/GDP and the debt-to-revenue ratios; for the latter, it would be about 20 percentage points higher in 2007 than in 2002, despite falling after the shock.

3.   **Absent fiscal adjustment, the total public debt could exceed 80 percent of GDP by 2007** (Table 3). As revenue and grants and primary expenditure ratios to GDP would remain unchanged over time, the primary deficit would stay at about 4 percent of GDP while interest burden would continue to increase. Under this scenario, nearly all stress tests raise debt ratios to unsustainable levels.

4.   **For the external debt, stress tests show that a 30 percent nominal devaluation shock has the highest impact, raising the debt/GDP ratio by about 20 percentage points during 2003–07** (Table 2 and Figure 2). A similar end-period outcome is generated by the current account stress test. The most benign outcome, with the debt ratio falling rapidly, is generated from setting the main macroeconomic variables at their average historical values (Test 1); this outcome reflects relatively high nondebt creating inflows and lower interest rates in the past. The GDP growth and inflation shocks (Test 3) yield intermediate results.
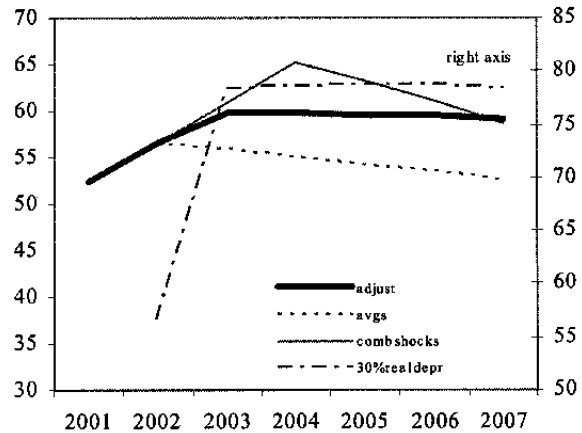

Figure 1. Public Debt (% GDP)

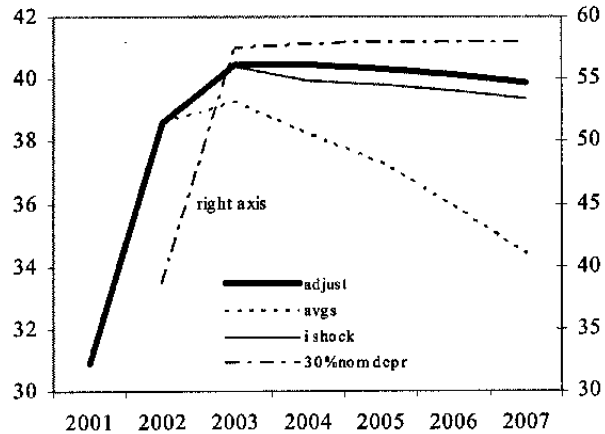Firgure 2. External Public Debt (% GDP)

Table 1 . St. Lucia: Public Sector Debt Sustainability Framework, 2001–07

(In percent of GDP, unless otherwise indicated)

	Actual	Projections					
	2001	2002	2003	2004	2005	2006	2007

I. Medium-Term Projections—Adjustment Scenario

	Actual 2001	2002	2003	2004	2005	2006	2007
1 **Public sector debt 1/**	**52.5**	**56.6**	**59.8**	**59.7**	**59.7**	**59.5**	**59.1**
Of which: foreign-currency denominated	31.0	38.6	40.1	39.9	39.8	39.7	39.3
2 Change in public sector debt	5.6	4.1	3.2	-0.1	-0.1	-0.2	-0.4
3 Identified debt-creating flows (4+7+12)	5.1	4.1	3.2	-0.1	-0.1	-0.2	-0.4
4 Primary deficit	0.4	3.6	2.0	-1.0	-0.7	-0.8	-0.8
5 Revenue and grants	28.3	27.1	27.0	28.0	28.5	28.5	28.5
6 Primary (noninterest) expenditure	28.7	30.7	28.9	26.9	27.8	27.7	27.6
7 Automatic debt dynamics 2/	4.7	2.0	1.2	1.0	0.6	0.6	0.4
8 Contribution from interest rate/growth differential 3/	4.7	2.0	1.2	1.0	0.6	0.6	0.4
9 *Of which:* contribution from real interest rate	2.1	1.8	2.1	2.1	2.3	2.3	2.1
10 *Of which:* contribution from real GDP growth	2.5	0.2	-0.8	-1.1	-1.7	-1.7	-1.7
11 Contribution from exchange rate depreciation 4/	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12 Other identified debt-creating flows	0.0	-1.4	0.0	0.0	0.0	0.0	0.0
13 Privatization receipts (negative)	0.0	-1.4	0.0	0.0	0.0	0.0	0.0
14 Recognition of implicit or contingent liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15 Other (specify, e.g., bank recapitalization)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16 Residual, including asset changes (2 3)	0.6	0.0	0.0	0.0	0.0	0.0	0.0
Public sector debt in percent of revenues 1/	185.3	208.9	221.6	213.4	209.4	208.8	207.4
Gross financing 5/	7.1	10.2	8.7	4.1	4.5	6.0	6.8
In billions of U.S. dollars	0.0	0.1	0.1	0.0	0.0	0.0	0.1

Key macroeconomic and fiscal assumptions

	Actual 2001	2002	2003	2004	2005	2006	2007
Real GDP growth (in percent)	-5.2	-0.5	1.5	2.0	3.0	3.0	3.0
Average nominal interest rate on public debt (in percent) 6/	6.2	6.3	6.2	6.0	6.1	6.1	6.1
Average real interest rate (nominal rate minus change in GDP deflator, in percent)	4.3	3.4	3.9	3.7	4.1	4.1	3.8
Nominal appreciation (increase in US dollar value of local currency, in percent)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Inflation rate (GDP deflator, in percent)	1.9	2.9	2.3	2.3	1.9	2.0	2.2
Growth of real primary spending (deflated by GDP deflator, in percent)	-5.8	6.3	-4.2	-5.0	6.3	2.7	2.7

II. Stress Tests

	2002	2003	2004	2005	2006	2007
1. Real GDP growth, real interest rate, and primary balance are at historical averages in 2003–07	56.6	55.8	55.0	54.2	53.4	52.6
2. Real interest rate is at historical average plus two standard deviations in 2003 and 2004	56.6	61.2	62.8	62.8	62.6	62.3
3. Real GDP growth is at historical average minus two standard deviations in 2003 and 2004	56.6	63.8	68.2	68.1	67.9	67.4
4. Primary balance is at historical average minus two standard deviations in 2003 and 2004	56.6	60.6	64.3	64.3	64.1	63.8
5. Combination of 2-4 using one standard deviation shocks	56.6	60.8	65.2	63.2	61.0	58.6
6. One time 30 percent real depreciation in 2003 7/	56.6	78.3	78.5	78.6	78.6	78.4
7. Ten percent of GDP increase in other debt-creating flows in 2003	56.6	69.8	69.9	69.9	69.8	69.5
8. Impact on **debt-to-GDP ratio** if revenue-to-GDP ratio is at historical average minus two standard deviations in 2003–04	56.6	62.2	65.5	65.5	65.4	65.0
8a. Impact on **debt-to-revenue ratio** if revenue-to-GDP ratio is at historical average minus two standard deviations in 2003-04	208.9	252.7	266.2	229.9	229.5	228.3

Sources: St. Lucian Authorities; and Fund staff estimats and projections.

1/ Gross debt of nonfinancial public sector (includes liabilities to the National Insurance Corporation). The nonfinancial public sector is defined here as the central government, the Castries City Council, the St. Lucia Air and Sea Ports Authority, the Water and Sewerage Company, the National Development Corporation, and the Marketing Board.

2/ Derived as [(r - π(1+g) - g + αε(1+r)]/(1+g+π+gπ)) times previous period debt ratio, with r = interest rate; π = growth rate of GDP deflator; g = real GDP growth rate; a = share of foreign-currency denominated debt; and e = nominal exchange rate depreciation (measured by increase in local currency value of U.S. dollar).

3/ The real interest rate contribution is derived from the denominator in footnote 2/ as r - π (1+g) and the real growth contribution as -g.

4/ The exchange rate contribution is derived from the denominator in footnote 2/ as αε(1+r).

5/ Defined as public sector deficit, plus amortization of medium- and long-term public sector debt, plus short-term debt at end of previous period.

6/ Derived as nominal interest expenditure divided by previous period debt stock.

7/ Real depreciation is defined as nominal depreciation (measured by percentage fall in dollar value of local currency) minus domestic inflation (based on GDP deflator).

Table 2. St. Lucia: External Sustainability Framework, 2001–07

(In percent of GDP, unless otherwise indicated)

	Actual	Projections					
	2001	2002	2003	2004	2005	2006	2007

I. Medium-Term Projections—Adjustment Scenario

	2001	2002	2003	2004	2005	2006	2007
1 External debt	30.9	38.6	40.5	40.5	40.4	40.2	39.9
2 Change in external debt	3.3	7.7	1.9	0.0	-0.1	-0.2	-0.2
3 Identified external debt-creating flows (4+8+11)	2.2	3.3	2.2	2.0	1.7	2.2	2.2
4 Current account deficit, excluding interest payments	4.3	6.7	6.4	6.1	6.2	7.4	7.5
5 Deficit in balance of goods and services	1.6	3.9	3.6	3.3	3.3	4.5	5.5
6 Exports	55.2	54.8	56.2	58.1	58.3	57.3	57.1
7 Imports	56.8	58.7	59.8	61.4	61.6	61.8	62.6
8 Net nondebt creating capital inflows (negative)	-5.0	-4.5	-5.0	-5.1	-5.1	-5.8	-5.8
9 Net foreign direct investment, equity	5.0	4.5	5.0	5.1	5.1	5.8	5.8
10 Net portfolio investment,equity	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11 Automatic debt dynamics 1/	2.9	1.1	0.8	1.0	0.6	0.6	0.5
12 Contribution from nominal interest rate	1.5	1.7	2.2	2.6	2.5	2.5	2.4
13 Contribution from real GDP growth	1.5	0.1	-0.6	-0.8	-1.2	-1.2	-1.1
14 Contribution from price and exchange rate changes 2/	0.0	-0.7	-0.8	-0.8	-0.8	-0.8	-0.8
14 Residual, including change in gross foreign assets (2–3)	1.0	4.4	-0.3	-2.0	-1.8	-2.4	-2.5
External debt-to-exports ratio (in percent)	56.0	70.5	72.0	69.7	69.2	70.1	69.9
Gross external financing need (in millions of U.S. dollars) 3/	61.3	88.1	76.1	78.8	79.2	98.8	109.8
In percent of GDP	9.5	13.3	11.1	11.1	10.6	12.6	13.3
Key macroeconomic and external assumptions							
Real GDP growth (in percent)	-5.2	-0.5	1.5	2.0	3.0	3.0	3.0
Exchange rate appreciation (U.S. dollar value of local currency, change in perc	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GDP deflator in U.S. dollars (change in percent)	0.1	2.4	2.2	2.1	1.9	2.0	1.9
Nominal external interest rate (in percent)	5.0	5.5	5.9	6.7	6.6	6.5	6.3
Growth of exports (U.S. dollar terms, in percent)	-11.3	1.2	6.5	7.6	5.3	3.3	4.7
Growth of imports (U.S. dollar terms, in percent)	-16.4	5.3	5.8	6.8	5.4	5.3	6.4

II. Stress Tests for External Debt Ratio

	2001	2002	2003	2004	2005	2006	2007
1. Real GDP growth, nominal interest rate, dollar deflator, noninterest current account, and nondebt inflows are at historical average in 2003–07		38.6	39.3	38.2	37.3	35.9	34.4
2. Nominal interest rate is at historical average plus two standard deviations in 2003 and 2004		38.6	40.4	39.9	39.8	39.6	39.4
3. Real GDP growth is at historical average minus two standard deviations in 2003 and 2004		38.6	43.1	46.3	46.2	46.1	46.0
4. Change in U.S. dollar GDP deflator is at historical average minus two standard deviations in 2003 and 2004		38.6	42.0	43.7	43.6	43.5	43.3
5. Noninterest current account is at historical average minus two standard deviations in 2003 and 2004		38.6	47.6	55.3	55.4	55.4	55.3
6. Combination of 2–5 using one standard deviation shocks		38.6	46.5	53.0	53.1	53.1	53.0
7. One time 30 percent nominal depreciation in 2003		38.6	57.4	57.8	57.9	58.0	57.9

Sources: St. Lucian Authorites; and Fund staff estimates and projections.

1/ Derived as [r - g - ρ(1+g) + εα(1+r)]/(1+g+ρ+gρ) times previous period debt stock, with r = nominal effective interest rate on external debt;
r = change in domestic GDP deflator in U.S. dollar terms, g = real GDP growth rate, e = nominal appreciation (increase in dollar value of domestic currency),
and a = share of domestic-currency denominated debt in total external debt.

2/ The contribution from price and exchange rate changes is defined as [-ρ(1+g) + εα(1+r)]/(1+g+ρ+gρ) times previous period debt stock.
r increases with an appreciating domestic currency (e > 0) and rising inflation (based on GDP deflator).

3/ Defined as noninterest current account deficit, plus interest and amortization on medium- and long-term debt, plus short-term debt at end of
previous period.

Table 3. St. Lucia: Public Sector Debt Sustainability Framework, 2001–07
Unchanged Policies Scenario

(In percent of GDP, unless otherwise indicated)

	Actual	Projections					
	2001	2002	2003	2004	2005	2006	2007

I. Medium-Term Projections—Unchanged Policies

Overall balance (after grants)	-3.4	-6.8	-7.2	-7.5	-7.8	-8.1	-8.5
Public sector debt 1/	52.5	57.4	62.4	67.5	72.4	77.4	82.3
Of which : foreign-currency denominated	31.0	39.2	40.9	44.1	47.1	50.2	53.2

II. Stress Tests

1. Real GDP growth, real interest rate, and primary balance are at historical averages in 2003–07		57.1	56.1	55.6	55.2	54.8	54.3
2. Real interest rate is at historical average plus two standard deviations in 2003 and 2004		57.4	63.6	70.1	75.1	80.1	85.1
3. Real GDP growth is at historical average minus two standard deviations in 2003 and 2004		57.4	66.0	76.0	81.5	87.2	92.7
4. Primary balance is at historical average minus two standard deviations in 2003 and 2004		57.4	61.1	65.0	69.9	74.9	79.8
5. Combination of 2–4 using one standard deviation shocks		57.4	61.0	65.1	67.7	70.2	72.6
6. One time 30 percent real depreciation in 2003 2/		57.4	80.6	86.3	91.5	96.7	101.9
7. 10 percent of GDP increase in other debt-creating flows in 2003		57.4	72.4	77.8	82.8	87.9	92.9
8. Impact on debt-to-GDP ratio if revenue-to-GDP ratio is at historical average minus two standard deviations in 2003–04		57.4	65.5	73.9	78.9	84.0	89.0
8a. Impact on debt-to-revenue ratio if revenue-to-GDP ratio is at historical average minus two standard deviations in 2003–04		209.9	266.0	300.2	284.9	303.4	320.9

Sources: St. Lucian Authorities; and Fund staff estimates and projections.

1/ Gross debt of nonfinancial public sector.
2/ Real depreciation is defined as nominal depreciation (measured by percentage fall in dollar value of local currency) minus domestic inflation (based on GDP deflator).