



# VANUATU

## STAFF REPORT FOR THE 2013 ARTICLE IV CONSULTATION—DEBT SUSTAINABILITY ANALYSIS<sup>1</sup>

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

*Vanuatu remains at a low risk of debt distress based on the Low-Income Country Debt Sustainability Assessment (LIC DSA). Vanuatu's overall public debt level is low and should remain manageable, provided fiscal deficits remain small. Under the baseline scenario, all external debt sustainability indicators are projected to remain well below their applicable thresholds.<sup>2</sup> Public debt is also projected to remain low, consistent with the authorities' conservative borrowing policies. Contingent liabilities arising from lawsuits (all domestic) pose a moderate risk.*

## BACKGROUND

**1. Public and external debt levels remain comfortable.** In 2012, public debt rose slightly to 21.6 percent of GDP. A fiscal deficit of 1.6 percent of GDP was domestically financed. Total external debt declined to 25.5 percent of GDP, mainly reflecting lower private external debt, but also net repayments of public and publicly guaranteed (PPG) external debt, which declined to slightly below 14 percent of GDP.<sup>3</sup> Publicly guaranteed domestic debt (not included in the DSA baseline) amounts to 3 percent of GDP. Contingent liabilities arising from potential court-imposed damages in lawsuits amount to 10<sup>3</sup>/<sub>4</sub> percent of GDP. There are no other known contingent liabilities.

**2. The analysis is based on the standard LIC DSA framework.** The key assumptions are conservative (Box 1), and differ somewhat from those in the last DSA. Growth is higher in the medium term and lower in the longer run as investment rises and then declines. At the same

<sup>1</sup> This DSA was prepared jointly with the World Bank, in accordance with the Debt Sustainability Framework for low-income countries approved by the Executive Boards of the IMF and IDA. The debt data underlying this exercise were provided by the Vanuatu authorities.

<sup>2</sup> Vanuatu's policies and institutions, as measured by the World Bank's Country Policy and Institutional Assessment, averaged 3.4 over the past three years, placing it as a medium performer.

<sup>3</sup> Due to data limitations, external liabilities of banks are used as a proxy for private external debt.

time, the fiscal projections envisage a small primary deficit, in line with recent outcomes, and consistent with a stable public debt-to-GDP ratio. In addition, the non-interest current account deficit is projected to be slightly higher. Contingent liabilities are entirely domestic. PPG external debt has broadly evolved as forecast in the last DSA, while total external debt has declined faster as banks' foreign liabilities have fallen. On the other hand, total public debt has risen instead of declined as forecast at the time of the last DSA, as government deficits have not declined as forecast then.

### Box 1: Key Assumptions

	Baseline		Historical Avg. (10 yrs)	2011 DSA	
	2013-18	2019-33		2010-15	2016-30
Real GDP (percent change)	4.2	3.6	4.3	3.7	4.0
GNFS exports (US\$ terms; percent change)	3.6	7.0	12.7	7.3	7.3
Non-interest current account balance (percent of GDP)	-6.4	-5.0	-6.4	-5.4	-4.7
GDP deflator in US\$ terms (percent change)	1.2	2.8	6.3	5.7	3.0
Primary balance (percent of GDP)	-1.4	-0.6	0.2	-0.4	0.0

- *GDP growth* is projected to recover to a peak of 4¾ percent in 2015 as new largely donor-financed investment projects are implemented. This is, however, well below previous investment-driven growth spurts. In the long run, growth is assumed to gradually decline to 3½ percent, below the average of the past 10 years.
- The *GDP deflator* in US\$ terms is projected to rise gradually to 2¾ percent in the long run, in line with an inflation rate within the Reserve Bank of Vanuatu's target band.
- The *primary fiscal deficit* is assumed to stabilize at about ½ percent of GDP (and the overall deficit at about 1½ percent of GDP), slightly lower than the average of the past five years and consistent with the authorities' conservative borrowing policies and a stabilization of the public debt-to-GDP ratio. Critically, maintaining the modest deficits envisaged in the baseline scenario would compress public investment in the absence of domestic revenue measures.
- *Foreign aid* is projected to increase significantly in the next few years, before declining gradually as a percentage of GDP. Roughly 9 percent of total aid in the long run is assumed to be concessional loans, higher than the historical average but lower than in 2013–18 when a large, highly concessional loan is being disbursed.
- The *current account deficit* is projected around 5 percent in the longer run and assumed to be financed by foreign direct investment inflows and capital grants, reflecting the structure of the economy. Tourism, the main earner of foreign exchange, has significant upside potential.

## EXTERNAL DEBT SUSTAINABILITY

**3. Under the baseline scenario, Vanuatu's external debt remains sustainable.** Total and PPG external debt are projected to increase to 26¾ and 15¼ percent of GDP, respectively, by 2016 before declining again to levels similar to those at end-2012. Other key indicators of sustainability—the present value of PPG external debt, the ratio of PPG debt service to exports, and the ratio of PPG debt service to revenue—all remain well below the indicative thresholds.

**4. Stress tests indicate no breaching of the applicable thresholds for PPG external debt.**<sup>4</sup> However, if the authorities were to increase their external borrowing significantly beyond the amounts assumed in the baseline scenario, for example to finance large infrastructure projects with uncertain tax productivity, external debt levels could quickly rise, particularly if the terms of this borrowing were to be less favorable than the baseline borrowing mix.

## PUBLIC DEBT SUSTAINABILITY

**5. Under the baseline scenario, public sector debt increases to 26 percent of GDP in 2018, and then broadly stabilizes at that level.** This contrasts somewhat with the external DSA, where PPG external debt falls back to 2012 levels, due to amortization of old debt and a sharp slowdown in new external borrowing from 2017. All other indicators point in the same direction.

**6. Stress tests suggest that a realization of contingent liabilities equal to 10 percent of GDP, would result an equivalent increase in the debt-to-GDP ratio over the longer term.** A growth shock or lower long run growth, however, poses a bigger risk to public debt sustainability over the longer term. However, as with external debt, should the government debt-finance large infrastructure projects, public debt levels would rise commensurately.

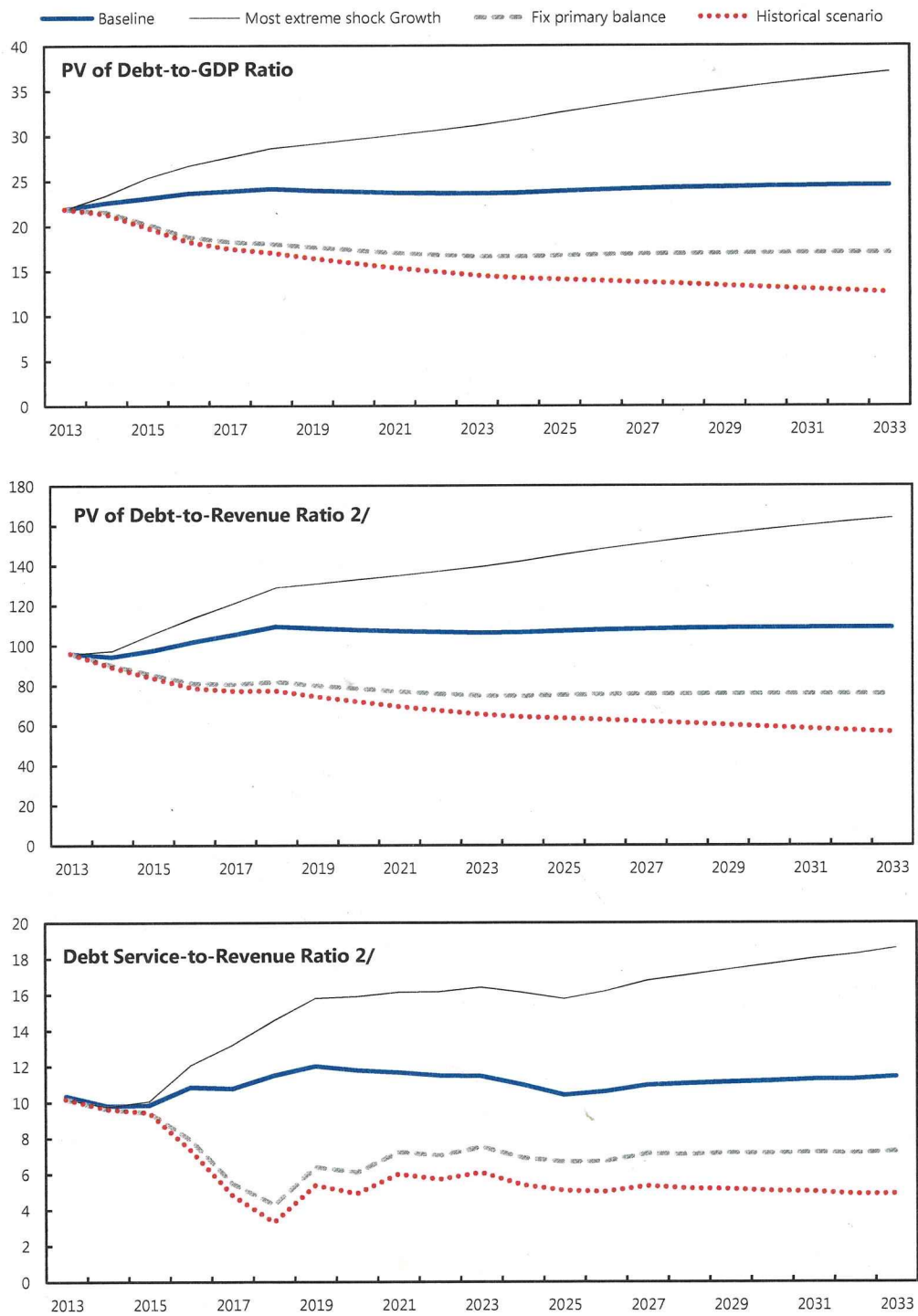
## STAFF ASSESSMENT

**7. Vanuatu is at a low risk of debt distress; external and public debt levels are low.** While they are projected to rise in the next few years, they remain manageable, and all indicators of vulnerability remain well below the applicable thresholds, even under stress tests.

**8. However, to contain public and external debt at prudent levels, the authorities will need to continue the cautious borrowing strategy of the past.** Combined with significant spending needs for infrastructure investment and maintenance, as well as in social sectors, this requires that domestic revenues be increased significantly.

<sup>4</sup> The historical scenario, which assumes that key variables such as export growth and the US\$ GDP deflator remain at the average levels of the past 10 years, was eliminated from the analysis, as it presents an unrealistically favorable view of conditions going forward (GDP growth was boosted by high levels of grant-financed investment while primary balances were positive).

**Figure 1. Vanuatu: Indicators of Public Debt Under Alternative Scenarios, 2013–2033 1/**

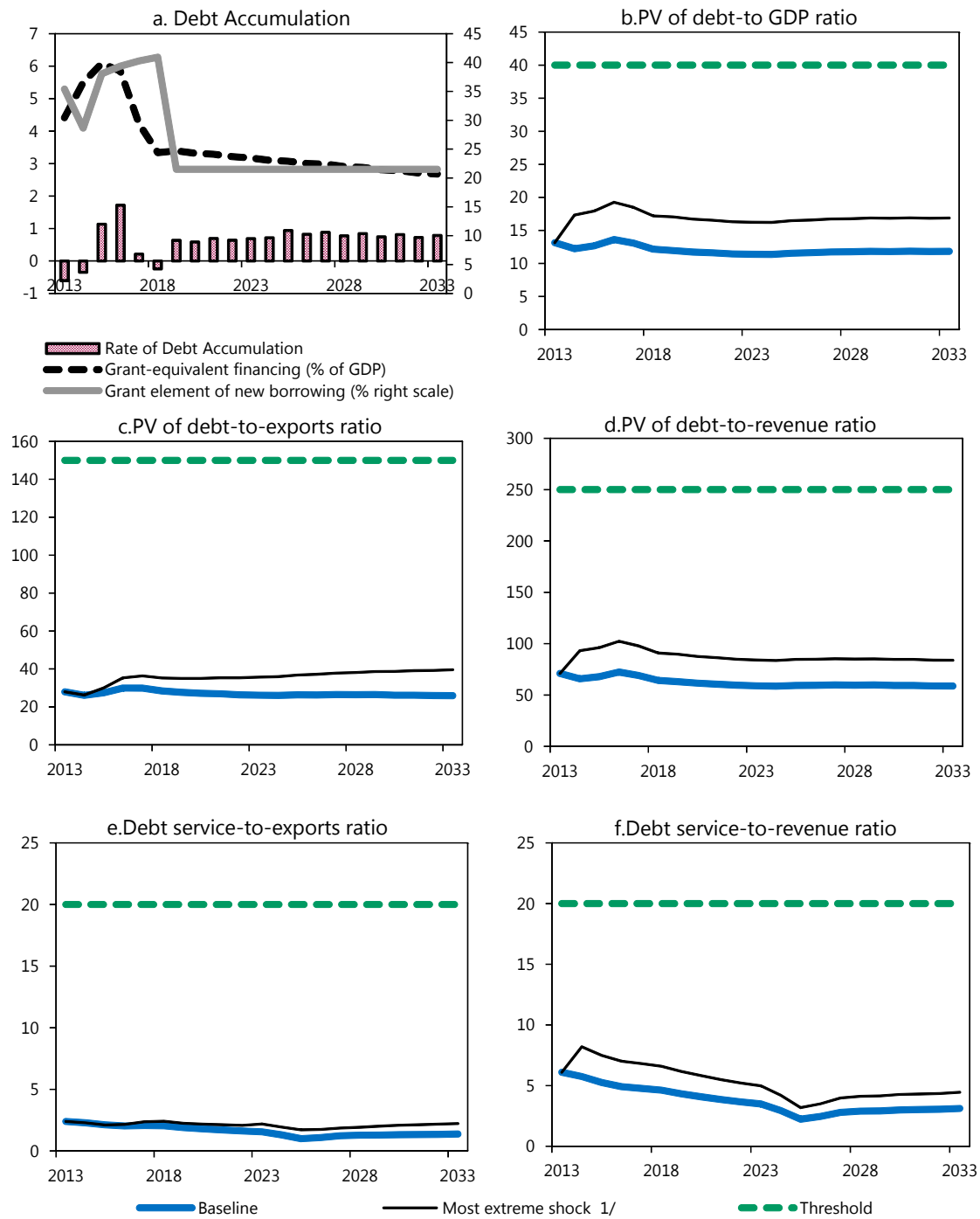


Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio in 2033.

2/ Revenues are defined inclusive of grants.

**Figure 2. Vanuatu: Indicators of Public and Publicly Guaranteed External Debt Under Alternative Scenarios, 2013–2033 1/**



Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio in 2033. In figure b. it corresponds to a One-time depreciation shock; in c. to a Terms shock; in d. to a One-time depreciation shock; in e. to a Terms shock and in figure f. to a One-time depreciation shock

**Table 1. Vanuatu: Public Sector Debt Sustainability Framework, Baseline Scenario, 2010–2033**  
(In percent of GDP, unless otherwise indicated)

	Actual			Average <sup>5/</sup>	Standard Deviation <sup>5/</sup>	Estimate					Projections			
	2010	2011	2012			2013	2014	2015	2016	2017	2018	2013-18 Average		2019-33 Average
<b>Public sector debt 1/</b>	19.4	20.9	21.6			21.4	22.1	23.5	25.4	25.8	26.0		25.5	26.6
<i>of which: foreign-currency denominated</i>	14.5	14.8	13.9			12.7	11.8	13.2	15.3	15.0	14.0		13.4	14.0
Change in public sector debt	-1.2	1.5	0.7			-0.2	0.7	1.4	1.8	0.4	0.2		0.0	0.0
Identified debt-creating flows	0.9	1.6	0.6			0.1	0.9	1.6	2.0	0.6	0.4		0.0	0.0
Primary deficit	2.0	1.7	1.0	-0.2	1.5	0.1	1.3	2.2	2.5	1.2	0.9	1.4	0.5	0.5
Revenue and grants	24.6	22.4	21.6			22.8	24.0	23.7	23.2	22.6	22.0		22.2	22.5
<i>of which: grants</i>	6.5	4.1	3.0			4.3	5.3	5.0	4.4	3.7	3.1		2.9	2.4
Primary (noninterest) expenditure	26.6	24.0	22.6			22.9	25.2	25.9	25.7	23.9	23.0		22.7	23.0
Automatic debt dynamics	-1.1	0.0	-0.4			0.0	-0.4	-0.6	-0.5	-0.6	-0.5		-0.5	-0.5
Contribution from interest rate/growth differential	-0.1	-0.1	-0.2			-0.2	-0.5	-0.8	-0.6	-0.7	-0.6		-0.4	-0.4
<i>of which: contribution from average real interest rate</i>	0.2	0.2	0.3			0.5	0.4	0.2	0.4	0.3	0.4		0.5	0.5
<i>of which: contribution from real GDP growth</i>	-0.3	-0.3	-0.5			-0.7	-0.9	-1.0	-1.0	-1.0	-1.0		-0.9	-0.9
Contribution from real exchange rate depreciation	-1.0	0.1	-0.2			0.2	0.1	0.1	0.1	0.1	0.1		...	...
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	-2.0	-0.1	0.1			-0.3	-0.2	-0.2	-0.2	-0.2	-0.2		-0.1	0.1
<b>Other Sustainability Indicators</b>														
<b>PV of public sector debt</b>	...	...	21.9			21.8	22.6	23.0	23.6	23.8	24.1		23.5	24.5
<i>of which: foreign-currency denominated</i>	...	...	14.2			13.1	12.2	12.7	13.6	13.1	12.1		11.4	11.8
<i>of which: external</i>	...	...	14.2			13.1	12.2	12.7	13.6	13.1	12.1		11.4	11.8
PV of contingent liabilities (not included in public sector debt)	...	...	...			...	...	...	...	...	...		...	...
Gross financing need 2/	3.5	3.1	2.6			2.5	3.6	4.6	5.0	3.7	3.4		3.1	3.0
PV of public sector debt-to-revenue and grants ratio (in percent)	...	...	101.2			95.7	94.2	97.3	101.7	105.4	109.3		106.1	108.7
PV of public sector debt-to-revenue ratio (in percent)	...	...	117.4			118.1	121.2	123.5	125.6	126.2	127.5		122.0	121.6
<i>of which: external 3/</i>	...	...	76.0			71.1	65.8	67.9	72.3	69.2	64.3		59.0	58.8
Debt service-to-revenue and grants ratio (in percent) 4/	6.2	6.4	7.6			10.3	9.8	9.8	10.8	10.7	11.5		11.4	11.4
Debt service-to-revenue ratio (in percent) 4/	8.4	7.8	8.8			12.8	12.6	12.5	13.4	12.9	13.4		13.2	12.8
Primary deficit that stabilizes the debt-to-GDP ratio	3.2	0.2	0.2			0.3	0.6	0.8	0.7	0.8	0.7		0.6	0.4
<b>Key macroeconomic and fiscal assumptions</b>														
Real GDP growth (in percent)	1.6	1.4	2.3	4.2	2.2	3.3	4.2	4.7	4.5	4.3	4.0	4.2	3.5	3.5
Average nominal interest rate on forex debt (in percent)	1.3	1.6	1.4	1.3	0.2	1.5	1.5	1.6	1.6	1.5	1.5	1.5	1.5	1.6
Average real interest rate on domestic debt (in percent)	5.1	5.4	6.2	4.1	2.1	6.0	4.3	2.7	4.7	4.5	4.5	4.4	4.6	4.6
Real exchange rate depreciation (in percent, + indicates depreciation)	-6.1	0.4	-1.6	-3.9	7.9	1.4	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	2.6	2.1	1.4	2.8	2.2	1.4	1.9	2.3	2.8	3.0	3.0	2.4	2.9	2.9
Growth of real primary spending (deflated by GDP deflator, in percent)	0.0	-0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Grant element of new external borrowing (in percent)	...	...	...	...	...	35.4	28.6	38.1	39.4	40.3	40.9	37.1	21.5	21.5

Sources: Country authorities; and staff estimates and projections.

1/ Budgetary central government, gross debt

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 2. Vanuatu: Sensitivity Analysis for Key Indicators of Public Debt, 2013–2033

	Projections							
	2013	2014	2015	2016	2017	2018	2023	2033
<b>PV of Debt-to-GDP Ratio</b>								
<b>Baseline</b>	22	23	23	24	24	24	24	24
<b>A. Alternative scenarios</b>								
A1. Real GDP growth and primary balance are at historical averages	22	21	20	18	17	17	14	13
A2. Primary balance is unchanged from 2013	22	22	20	19	18	18	17	17
A3. Permanently lower GDP growth 1/	22	23	24	24	25	26	29	41
<b>B. Bound tests</b>								
B1. Real GDP growth is at historical average minus one standard deviations in 2014-2015	22	23	25	27	28	29	31	37
B2. Primary balance is at historical average minus one standard deviations in 2014-2015	22	23	22	23	23	23	23	24
B3. Combination of B1-B2 using one half standard deviation shocks	22	22	22	23	23	24	26	30
B4. One-time 30 percent real depreciation in 2014	22	28	28	28	28	28	26	26
B5. 10 percent of GDP increase in other debt-creating flows in 2014	22	31	32	32	32	32	30	28
<b>PV of Debt-to-Revenue Ratio 2/</b>								
<b>Baseline</b>	96	94	97	102	105	109	106	109
<b>A. Alternative scenarios</b>								
A1. Real GDP growth and primary balance are at historical averages	96	89	83	78	77	77	65	56
A2. Primary balance is unchanged from 2013	96	90	85	81	81	82	75	76
A3. Permanently lower GDP growth 1/	96	95	99	105	110	117	128	180
<b>B. Bound tests</b>								
B1. Real GDP growth is at historical average minus one standard deviations in 2014-2015	96	97	106	114	121	129	139	164
B2. Primary balance is at historical average minus one standard deviations in 2014-2015	96	94	94	99	102	106	104	107
B3. Combination of B1-B2 using one half standard deviation shocks	96	92	90	97	103	109	115	133
B4. One-time 30 percent real depreciation in 2014	96	118	118	120	123	127	119	117
B5. 10 percent of GDP increase in other debt-creating flows in 2014	96	131	134	136	140	143	133	126
<b>Debt Service-to-Revenue Ratio 2/</b>								
<b>Baseline</b>	10	10	10	11	11	11	11	11
<b>A. Alternative scenarios</b>								
A1. Real GDP growth and primary balance are at historical averages	10	10	9	7	5	3	6	5
A2. Primary balance is unchanged from 2013	10	10	9	8	5	4	7	7
A3. Permanently lower GDP growth 1/	10	10	10	11	11	12	15	21
<b>B. Bound tests</b>								
B1. Real GDP growth is at historical average minus one standard deviations in 2014-2015	10	10	10	12	13	15	16	19
B2. Primary balance is at historical average minus one standard deviations in 2014-2015	10	10	10	11	9	11	11	11
B3. Combination of B1-B2 using one half standard deviation shocks	10	10	10	9	7	12	13	15
B4. One-time 30 percent real depreciation in 2014	10	11	11	13	13	14	14	15
B5. 10 percent of GDP increase in other debt-creating flows in 2014	10	10	11	31	13	22	13	13

Sources: Country authorities; and staff estimates and projections.

1/ Assumes that real GDP growth is at baseline minus one standard deviation divided by the square root of the length of the projection period.

2/ Revenues are defined inclusive of grants.

**Table 3. External Debt Sustainability Framework, Baseline Scenario, 2010–2033 1/**  
(In percent GDP unless otherwise indicated)

	Actual			Historical Average	Standard Deviation	Projections									
	2010	2011	2012			2013	2014	2015	2016	2017	2018	2013-2018 Average		2023	2033
<b>External debt (nominal) 1/</b>	<b>33.2</b>	<b>28.3</b>	<b>25.5</b>			<b>24.2</b>	<b>23.2</b>	<b>24.6</b>	<b>26.8</b>	<b>26.5</b>	<b>25.5</b>		<b>24.9</b>	<b>25.5</b>	
<i>of which: public and publicly guaranteed (PPG)</i>	14.5	14.8	13.9			12.7	11.8	13.2	15.3	15.0	14.0		13.4	14.0	
Change in external debt	2.2	-5.0	-2.7			-1.4	-0.9	1.4	2.2	-0.3	-1.0		0.0	0.0	
Identified net debt-creating flows	-4.3	-2.9	1.6			1.1	1.3	2.5	3.0	2.1	2.0		1.6	1.2	
<b>Non-interest current account deficit</b>	<b>4.7</b>	<b>7.4</b>	<b>5.8</b>	<b>6.4</b>	<b>1.1</b>	<b>5.6</b>	<b>6.0</b>	<b>7.0</b>	<b>7.2</b>	<b>6.2</b>	<b>5.8</b>	<b>6.3</b>	<b>5.1</b>	<b>4.5</b>	<b>5.0</b>
Deficit in balance of goods and services	5.7	6.7	3.3			3.7	4.3	5.1	5.5	4.7	4.6		4.1	3.6	
Exports	46.6	44.9	47.5			47.1	46.9	46.2	45.5	43.7	42.7		43.5	45.6	
Imports	52.4	51.6	50.8			50.8	51.1	51.3	51.0	48.5	47.4		47.7	49.2	
Net current transfers (negative = inflow)	-3.2	-1.6	-2.1	-3.8	1.4	-2.5	-2.1	-1.7	-1.6	-1.6	-1.5	-1.8	-1.1	-0.6	-1.0
<i>of which: official</i>	-3.0	-1.3	-1.8			-2.1	-1.8	-1.3	-1.3	-1.2	-1.1		-0.8	-0.4	
Other current account flows (negative = net inflow)	2.2	2.4	4.6			4.3	3.9	3.6	3.3	3.0	2.6		2.1	1.6	
<b>Net FDI (negative = inflow)</b>	<b>-5.7</b>	<b>-7.3</b>	<b>-4.7</b>	<b>-7.4</b>	<b>3.5</b>	<b>-4.2</b>	<b>-4.3</b>	<b>-4.0</b>	<b>-3.7</b>	<b>-3.5</b>	<b>-3.3</b>	<b>-3.8</b>	<b>-3.2</b>	<b>-3.0</b>	<b>-3.1</b>
<b>Endogenous debt dynamics 2/</b>	<b>-3.3</b>	<b>-3.0</b>	<b>0.5</b>			<b>-0.3</b>	<b>-0.4</b>	<b>-0.5</b>	<b>-0.6</b>	<b>-0.5</b>	<b>-0.5</b>		<b>-0.3</b>	<b>-0.3</b>	
Contribution from nominal interest rate	0.7	0.6	0.5			0.6	0.5	0.5	0.5	0.5	0.6		0.5	0.5	
Contribution from real GDP growth	-0.4	-0.4	-0.6			-0.8	-1.0	-1.0	-1.0	-1.1	-1.0		-0.8	-0.8	
Contribution from price and exchange rate changes	-3.6	-3.2	0.6			...	...	...	...	...	...		...	...	
<b>Residual (3-4) 3/</b>	<b>6.6</b>	<b>-2.1</b>	<b>-4.3</b>			<b>-2.5</b>	<b>-2.3</b>	<b>-1.2</b>	<b>-0.8</b>	<b>-2.4</b>	<b>-3.0</b>		<b>-1.6</b>	<b>-1.2</b>	
<i>of which: exceptional financing</i>	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		-0.3	-0.5	
PV of external debt 4/	...	...	25.8			24.6	23.7	24.1	25.1	24.5	23.6		22.9	23.4	
In percent of exports	...	...	54.3			52.2	50.5	52.2	55.1	56.0	55.2		52.7	51.2	
<b>PV of PPG external debt</b>	<b>...</b>	<b>...</b>	<b>14.2</b>			<b>13.1</b>	<b>12.2</b>	<b>12.7</b>	<b>13.6</b>	<b>13.1</b>	<b>12.1</b>		<b>11.4</b>	<b>11.8</b>	
<b>In percent of exports</b>	<b>...</b>	<b>...</b>	<b>29.8</b>			<b>27.9</b>	<b>26.1</b>	<b>27.4</b>	<b>29.9</b>	<b>29.9</b>	<b>28.4</b>		<b>26.2</b>	<b>25.9</b>	
<b>In percent of government revenues</b>	<b>...</b>	<b>...</b>	<b>76.0</b>			<b>71.1</b>	<b>65.8</b>	<b>67.9</b>	<b>72.3</b>	<b>69.2</b>	<b>64.3</b>		<b>59.0</b>	<b>58.8</b>	
<b>Debt service-to-exports ratio (in percent)</b>	<b>4.8</b>	<b>4.2</b>	<b>3.6</b>			<b>6.7</b>	<b>6.7</b>	<b>5.8</b>	<b>5.1</b>	<b>5.2</b>	<b>5.4</b>		<b>4.2</b>	<b>3.6</b>	
<b>PPG debt service-to-exports ratio (in percent)</b>	<b>1.4</b>	<b>1.4</b>	<b>1.4</b>			<b>2.4</b>	<b>2.3</b>	<b>2.1</b>	<b>2.0</b>	<b>2.1</b>	<b>2.0</b>		<b>1.6</b>	<b>1.4</b>	
<b>PPG debt service-to-revenue ratio (in percent)</b>	<b>3.6</b>	<b>3.5</b>	<b>3.5</b>			<b>6.1</b>	<b>5.8</b>	<b>5.3</b>	<b>4.9</b>	<b>4.8</b>	<b>4.6</b>		<b>3.5</b>	<b>3.1</b>	
Total gross financing need (Millions of U.S. dollars)	8.9	16.0	22.0			37.6	42.6	52.8	56.6	50.3	51.7		55.8	88.7	
Non-interest current account deficit that stabilizes debt ratio	2.5	12.4	8.5			6.9	7.0	5.7	5.0	6.5	6.8		5.2	4.4	
<b>Key macroeconomic assumptions</b>															
Real GDP growth (in percent)	1.6	1.4	2.3	4.2	2.2	3.3	4.2	4.7	4.5	4.3	4.0	4.2	3.5	3.5	3.6
GDP deflator in US dollar terms (change in percent)	13.0	10.6	-2.1	7.3	6.7	1.7	0.4	0.8	1.3	1.5	1.5	1.2	2.9	2.9	2.8
Effective interest rate (percent) 5/	2.5	2.0	1.9	1.9	0.3	2.3	2.3	2.3	2.1	2.1	2.2	2.2	2.2	2.3	2.2
Growth of exports of G&S (US dollar terms, in percent)	9.1	8.0	6.0	13.1	8.1	4.1	4.1	4.1	4.1	1.8	3.1	3.6	6.9	6.9	7.0
Growth of imports of G&S (US dollar terms, in percent)	6.9	10.4	-1.3	12.3	11.4	5.0	5.2	6.0	5.1	0.6	3.1	4.2	6.7	6.7	6.8
Grant element of new public sector borrowing (in percent)	...	...	...	...	...	35.4	28.6	38.1	39.4	40.3	40.9	37.1	21.5	21.5	21.5
Government revenues (excluding grants, in percent of GDP)	18.1	18.3	18.6			18.5	18.6	18.7	18.8	18.9	18.9		19.3	20.1	19.5
Aid flows (in Millions of US dollars) 7/	51.5	38.8	23.5			37.0	47.6	65.8	72.6	49.6	39.0		47.1	74.6	
<i>of which: Grants</i>	45.7	32.2	23.5			35.8	46.2	45.9	42.7	38.2	33.9		43.3	67.2	
<i>of which: Concessional loans</i>	5.8	6.6	0.0			1.2	1.4	19.8	29.9	11.4	5.0		3.8	7.4	
Grant-equivalent financing (in percent of GDP) 8/	...	...	...			4.4	5.5	6.1	5.8	4.2	3.3		3.2	2.7	3.0
Grant-equivalent financing (in percent of external financing) 8/	...	...	...			96.9	93.7	78.1	72.7	85.4	92.4		76.0	72.1	75.1
<b>Memorandum items:</b>															
Nominal GDP (Millions of US dollars)	700.8	786.3	787.0			826.7	864.7	912.9	966.3	1022.2	1078.8		1494.9	2806.1	
Nominal dollar GDP growth	14.9	12.2	0.1			5.1	4.6	5.6	5.8	5.8	5.5	5.4	6.5	6.5	6.6
PV of PPG external debt (in Millions of US dollars)	...	...	112.7			107.9	105.0	114.9	130.5	132.6	130.1		170.3	331.9	
(PVt-PVt-1)/GDPt-1 (in percent)	...	...	...			-0.6	-0.3	1.1	1.7	0.2	-0.2	0.3	0.7	0.8	0.8
Gross workers' remittances (Millions of US dollars)	1.1	2.3	3.0			3.1	3.2	3.4	3.6	3.7	3.8		4.3	5.2	
PV of PPG external debt (in percent of GDP + remittances)	...	...	14.1			13.1	12.2	12.6	13.6	13.0	12.1		11.4	11.8	
PV of PPG external debt (in percent of exports + remittances)	...	...	29.6			27.7	25.9	27.2	29.7	29.6	28.2		26.0	25.8	
Debt service of PPG external debt (in percent of exports + remittances)	...	...	1.4			2.4	2.3	2.1	2.0	2.0	2.0		1.5	1.4	

Sources: Country authorities; and staff estimates and projections.

1/ Includes both public and private sector 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/ Assumes that PV 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 PV of new debt).



**Table 4. Vanuatu: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2013–2033**  
(In percent)

	Projections							
	2013	2014	2015	2016	2017	2018	2023	2033
<b>PV of debt-to GDP ratio</b>								
<b>Baseline</b>	13	12	13	14	13	12	<b>11</b>	12
<b>A. Alternative Scenarios</b>								
A1. New public sector loans on less favorable terms in 2013-2033 2	13	12	14	16	16	15	<b>16</b>	18
<b>B. Bound Tests</b>								
B1. Real GDP growth at historical average minus one standard deviation in 2014-2015	13	12	13	14	14	13	<b>12</b>	12
B2. Export value growth at historical average minus one standard deviation in 2014-2015 3/	13	12	12	13	12	11	<b>11</b>	12
B3. US dollar GDP deflator at historical average minus one standard deviation in 2014-2015	13	12	13	13	13	12	<b>11</b>	12
B4. Net non-debt creating flows at historical average minus one standard deviation in 2014-2015 4/	13	12	12	13	13	12	<b>11</b>	12
B5. Combination of B1-B4 using one-half standard deviation shocks	13	8	3	4	4	3	<b>4</b>	9
B6. One-time 30 percent nominal depreciation relative to the baseline in 2014 5/	13	17	18	19	18	17	<b>16</b>	17
<b>PV of debt-to-exports ratio</b>								
<b>Baseline</b>	28	26	27	30	30	28	<b>26</b>	26
<b>A. Alternative Scenarios</b>								
A1. New public sector loans on less favorable terms in 2013-2033 2	28	26	30	35	36	35	<b>36</b>	40
<b>B. Bound Tests</b>								
B1. Real GDP growth at historical average minus one standard deviation in 2014-2015	28	26	27	30	30	28	<b>26</b>	26
B2. Export value growth at historical average minus one standard deviation in 2014-2015 3/	28	25	25	27	27	26	<b>24</b>	25
B3. US dollar GDP deflator at historical average minus one standard deviation in 2014-2015	28	26	27	30	30	28	<b>26</b>	26
B4. Net non-debt creating flows at historical average minus one standard deviation in 2014-2015 4/	28	26	26	29	29	27	<b>25</b>	26
B5. Combination of B1-B4 using one-half standard deviation shocks	28	17	6	8	8	7	<b>10</b>	19
B6. One-time 30 percent nominal depreciation relative to the baseline in 2014 5/	28	26	27	30	30	28	<b>26</b>	26
<b>PV of debt-to-revenue ratio</b>								
<b>Baseline</b>	71	66	68	72	69	64	<b>59</b>	59
<b>A. Alternative Scenarios</b>								
A1. New public sector loans on less favorable terms in 2013-2033 2	71	66	74	85	84	80	<b>80</b>	90
<b>B. Bound Tests</b>								
B1. Real GDP growth at historical average minus one standard deviation in 2014-2015	71	67	71	75	72	67	<b>62</b>	62
B2. Export value growth at historical average minus one standard deviation in 2014-2015 3/	71	64	63	67	64	59	<b>56</b>	58
B3. US dollar GDP deflator at historical average minus one standard deviation in 2014-2015	71	65	67	72	69	64	<b>59</b>	59
B4. Net non-debt creating flows at historical average minus one standard deviation in 2014-2015 4/	71	66	65	70	66	62	<b>57</b>	58
B5. Combination of B1-B4 using one-half standard deviation shocks	71	44	15	21	20	16	<b>23</b>	44
B6. One-time 30 percent nominal depreciation relative to the baseline in 2014 5/	71	93	96	102	98	91	<b>84</b>	84

**Table 4. Vanuatu: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2013–2033 (Continued)**

(In percent)

<b>Debt service-to-exports ratio</b>								
<b>Baseline</b>	2	2	2	2	2	2	<b>2</b>	1
<b>A. Alternative Scenarios</b>								
A1. New public sector loans on less favorable terms in 2013-2033 2	2	2	2	2	2	2	<b>2</b>	2
<b>B. Bound Tests</b>								
B1. Real GDP growth at historical average minus one standard deviation in 2014-2015	2	2	2	2	2	2	<b>2</b>	1
B2. Export value growth at historical average minus one standard deviation in 2014-2015 3/	2	2	2	2	2	2	<b>1</b>	1
B3. US dollar GDP deflator at historical average minus one standard deviation in 2014-2015	2	2	2	2	2	2	<b>2</b>	1
B4. Net non-debt creating flows at historical average minus one standard deviation in 2014-2015 4/	2	2	2	2	2	2	<b>2</b>	1
B5. Combination of B1-B4 using one-half standard deviation shocks	2	2	2	2	2	2	<b>0</b>	1
B6. One-time 30 percent nominal depreciation relative to the baseline in 2014 5/	2	2	2	2	2	2	<b>2</b>	1
<b>Debt service-to-revenue ratio</b>								
<b>Baseline</b>	6	6	5	5	5	5	<b>3</b>	3
<b>A. Alternative Scenarios</b>								
A1. New public sector loans on less favorable terms in 2013-2033 2	6	6	5	5	5	5	<b>5</b>	5
<b>B. Bound Tests</b>								
B1. Real GDP growth at historical average minus one standard deviation in 2014-2015	6	6	6	5	5	5	<b>4</b>	3
B2. Export value growth at historical average minus one standard deviation in 2014-2015 3/	6	6	5	5	5	5	<b>3</b>	3
B3. US dollar GDP deflator at historical average minus one standard deviation in 2014-2015	6	6	5	5	5	5	<b>3</b>	3
B4. Net non-debt creating flows at historical average minus one standard deviation in 2014-2015 4/	6	6	5	5	5	5	<b>3</b>	3
B5. Combination of B1-B4 using one-half standard deviation shocks	6	6	5	4	4	4	<b>1</b>	2
B6. One-time 30 percent nominal depreciation relative to the baseline in 2014 5/	6	8	7	7	7	7	<b>5</b>	4
<i>Memorandum item:</i>								
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	23	23	23	23	23	23	<b>23</b>	23

Sources: Country authorities; and staff estimates and projections.

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 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 (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.