



# SAMOA

## REQUEST FOR DISBURSEMENT UNDER THE RAPID CREDIT FACILITY—DEBT SUSTAINABILITY ANALYSIS

April 20, 2020

Approved By  
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Prepared by the staff of the International Monetary Fund (IMF) and the International Development Association (IDA).<sup>1</sup>

<b>Risk of external debt distress</b>	High <sup>2</sup>
<b>Overall risk of debt distress</b>	High
<b>Granularity in the risk rating</b>	Sustainable
<b>Application of judgment</b>	Yes—The forecast horizon informing mechanical risk signals is extended to 20 years to capture the long-term impact of frequent natural disasters on climate change.
<b>Macroeconomic projections</b>	The economy is expected to contract in FY2020-21. Primary deficit widens significantly in FY2020-21, followed by a gradual recovery as opposed to a stable path in 2019 DSA. Tourism earnings are expected to plummet in FY2020-21, widening the current account deficit and pushing reserves well below the adequate level.
<b>Financing strategy</b>	While the RCF will help finance BOP needs, the fiscal financing gap will be filled by external grants and concessional borrowing.
<b>Realism tools flagged</b>	None
<b>Mechanical risk rating under the external DSA</b>	Moderate
<b>Mechanical risk rating under the public DSA</b>	High

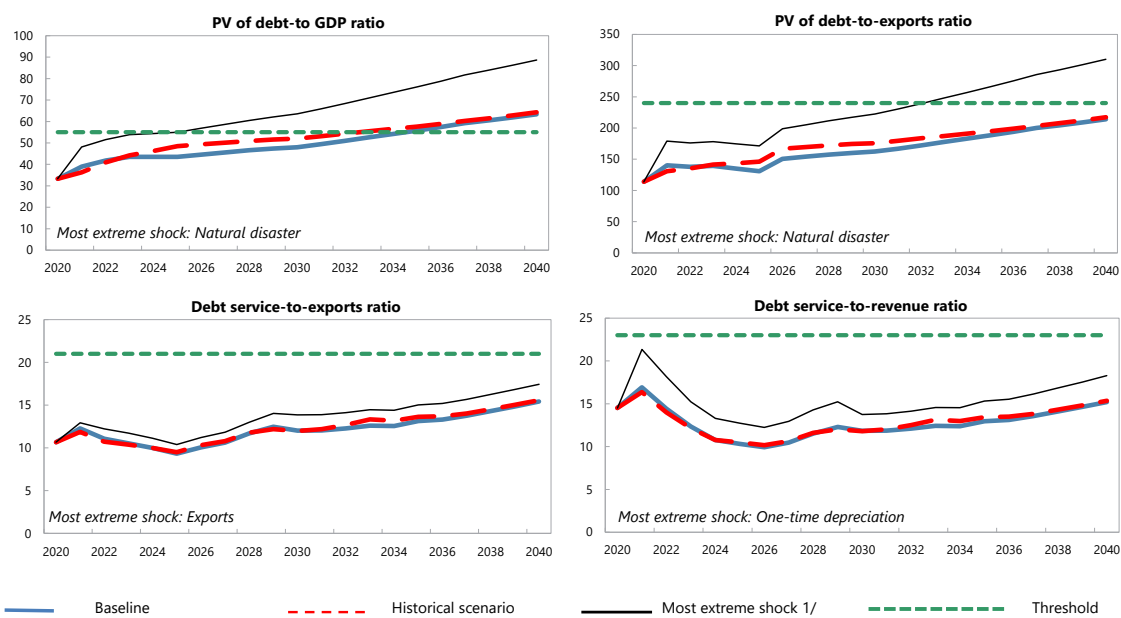
*Samoa remains at high-risk of external and overall public debt distress, while the baseline macro framework is further deteriorated compared to the May 2019 DSA due to the inclusion of the impacts of COVID-19. Under the baseline scenario, both the PV of external and public debt-to-GDP ratios incur threshold breaches in 2035 and 2028, respectively. While a model-based risk rating of external debt is moderate, judgement was applied to arrive at a high-risk rating to capture the long-term impact of frequent natural disasters on climate change. In addition, the real GDP growth shock under the standard stress test, a tailored natural disaster shock similar in scale to the median impact of natural disasters in Samoa's history, and a contingent liability shock further deteriorates debt*

<sup>1</sup> Debt coverage has remained unchanged compared to the 2019 DSA (IMF Country Report No. 19/138).

<sup>2</sup> The Composite Indicator score is 3.29, which is based on the October 2019 WEO and the World Bank's 2018 CPIA, and the country's debt-carrying capacity is assessed to be strong.

*sustainability. Despite the high risk of debt distress, Samoa's debt remains sustainable. This assessment hinges upon the government's efforts to build fiscal buffers and enhance resilience, as well as continued access to grants and concessional financing. A mix of stronger revenue mobilization measures, and expenditure rationalization in a growth-friendly, sustainable manner will create synergies for maintaining debt sustainability.*

**Figure 1. Samoa: Indicators of Public and Publicly Guaranteed External Debt under Alternative Scenarios, 2020-40 1/**



Customization of Default Settings		
	Size	Interactions
Standardized Tests	Yes	
Tailored Stress		
Combined CL	No	
Natural disaster	Yes	Yes
Commodity price	n.a.	n.a.
Market financing	n.a.	n.a.

Note: "Yes" indicates any change to the size or interactions of the default settings for the stress tests. "n.a." indicates that the stress test does not apply.

Borrowing assumptions on additional financing needs resulting from the stress tests*		
	Default	User defined
<b>Shares of marginal debt</b>		
External PPG MLT debt	100%	
<b>Terms of marginal debt</b>		
Avg. nominal interest rate on new borrowing in USD	1.1%	1.1%
USD Discount rate	5.0%	5.0%
Avg. maturity (incl. grace period)	29	29
Avg. grace period	7	7

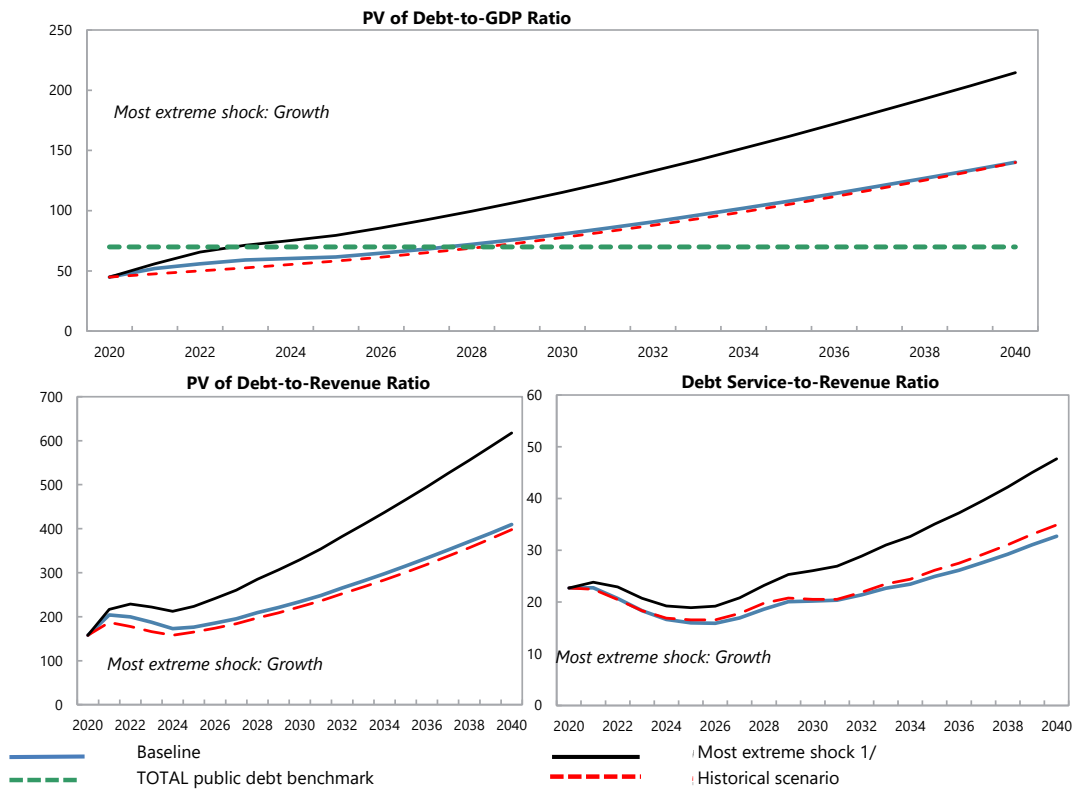
\* Note: All the additional financing needs generated by the shocks under the stress tests are assumed to be covered by PPG external MLT debt in the external DSA. Default terms of marginal debt are based on baseline 10-year projections.

Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio in or before 2030. The stress test with a one-off breach is also presented (if any), while the one-off breach is deemed away for mechanical signals. When a stress test with a one-off breach happens to be the most extreme shock even after disregarding the one-off breach, only that stress test (with a one-off breach) would be presented.

2/ The magnitude of shocks used for the commodity price shock stress test are based on the commodity prices outlook prepared by the IMF research department.

**Figure 2. Samoa: Indicators of Public Debt Under Alternative Scenarios, 2020-40 1/**



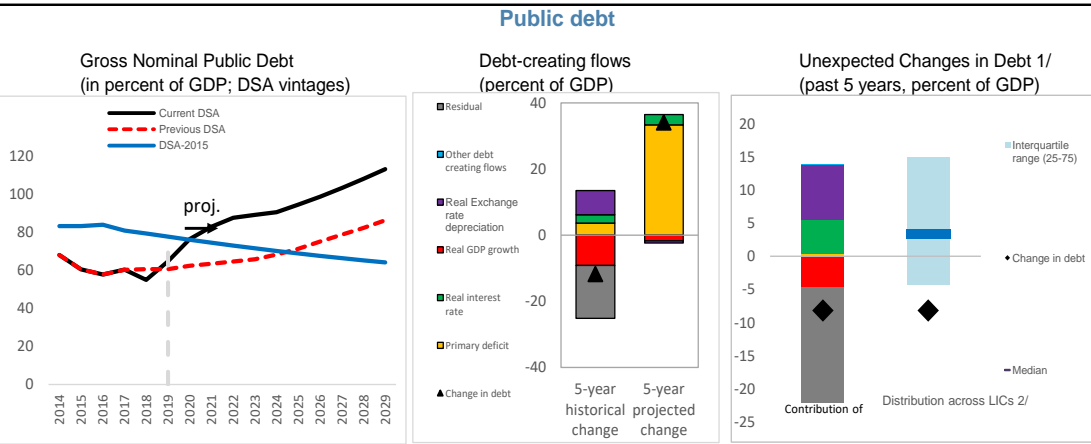
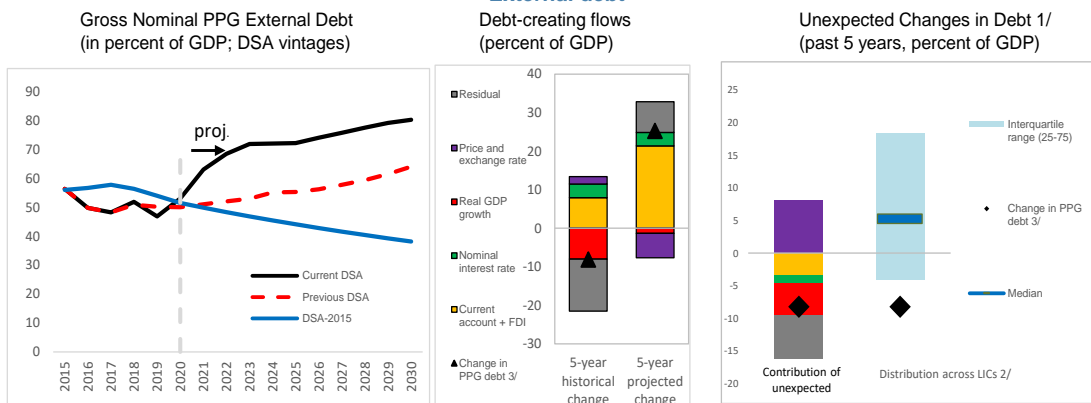
Borrowing assumptions on additional financing needs resulting from the stress tests*	Default	User defined
<b>Shares of marginal debt</b>		
External PPG medium and long-term	67%	67%
Domestic medium and long-term	33%	33%
Domestic short-term	0%	0%
<b>Terms of marginal debt</b>		
<b>External MLT debt</b>		
Avg. nominal interest rate on new borrowing in USD	1.1%	1.1%
Avg. maturity (incl. grace period)	29	29
Avg. grace period	7	7
<b>Domestic MLT debt</b>		
Avg. real interest rate on new borrowing	7.9%	7.9%
Avg. maturity (incl. grace period)	40	40
Avg. grace period	30	30
<b>Domestic short-term debt</b>		
Avg. real interest rate	-2.7%	-2.7%

\* Note: The public DSA allows for domestic financing to cover the additional financing needs generated by the shocks under the stress tests in the public DSA. Default terms of marginal debt are based on baseline 10-year projections.

Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio in or before 2030. The stress test with a one-off breach is also presented (if any), while the one-off breach is deemed away for mechanical signals. When a stress test with a one-off breach happens to be the most extreme shock even after disregarding the one-off breach, only that stress test (with a one-off breach) would be presented.

**Figure 3. Samoa: Drivers of Debt Dynamics–Baseline Scenario**



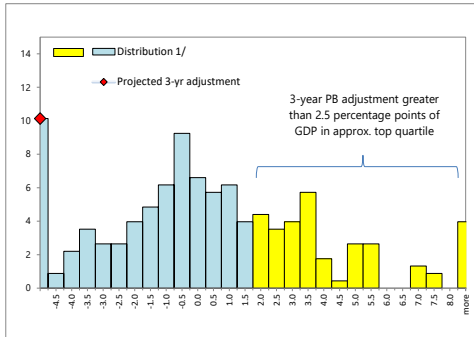
1/ Difference between anticipated and actual contributions on debt ratios.

2/ Distribution across LICs for which LIC DSAs were produced.

3/ Given the relatively low private external debt for average low-income countries, a ppt change in PPG external debt should be largely explained by the drivers of the external debt dynamics equation.

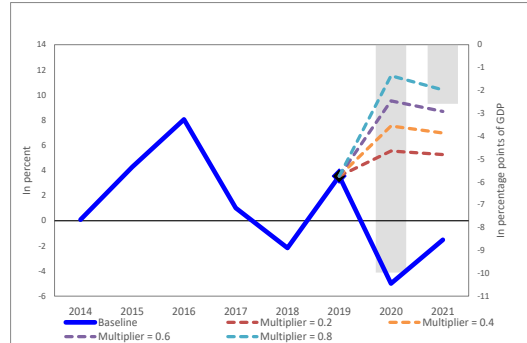
**Figure 4. Samoa: Realism Tools**

**3-Year Adjustment in Primary Balance  
(Percentage points of GDP)**



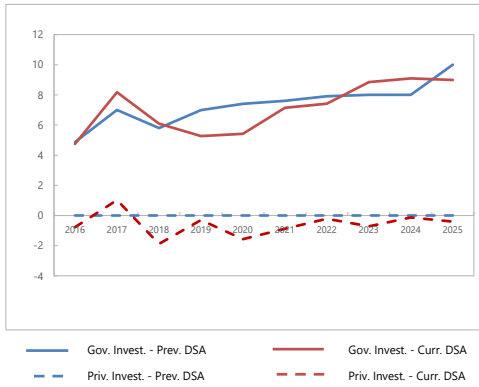
1/ Data cover Fund-supported programs for LICs (excluding emergency financing) approved since 1990. The size of 3-year adjustment from program inception is found on the horizontal axis; the percent of sample is found on the vertical axis.

**Fiscal Adjustment and Possible Growth Paths 1/**



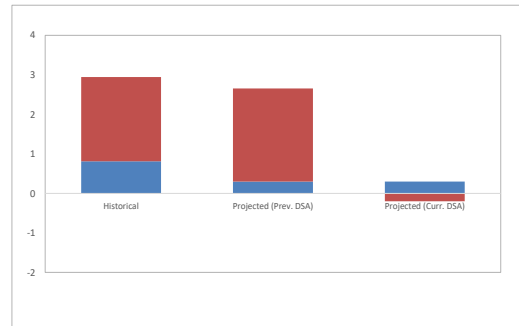
1/ Bars refer to annual projected fiscal adjustment (right-hand side scale) and lines show possible real GDP growth paths under different fiscal multipliers (left-hand side scale).

**Public and Private Investment Rates  
(percent of GDP)**



— Gov. Invest. - Prev. DSA      — Gov. Invest. - Curr. DSA  
 - - - Priv. Invest. - Prev. DSA      - - - Priv. Invest. - Curr. DSA

**Contribution to Real GDP growth  
(percent, 5-year average)**



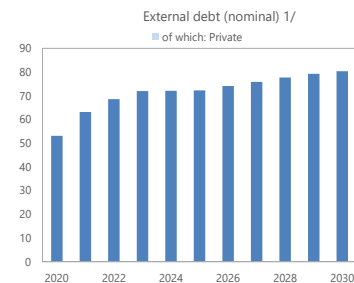
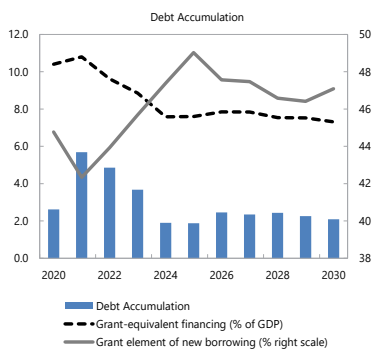
■ Contribution of other factors  
 ■ Contribution of government capital

**Table 1. Samoa: External Debt Sustainability Framework, Baseline Scenario, 2017-40**

(In percent of GDP, unless otherwise indicated)

	Actual			Projections								Average 8/ Historical Projections	
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2030	2040	Historical	Projections
<b>External debt (nominal) 1/</b>	48.3	52.0	46.9	53.1	63.1	68.5	72.0	72.1	72.2	80.3	103.4	49.4	71.7
<i>of which: public and publicly guaranteed (PPG)</i>	48.3	52.0	46.9	53.1	63.1	68.5	72.0	72.1	72.2	80.3	103.4	49.4	71.7
Change in external debt	-1.6	3.7	-5.1	6.2	10.0	5.4	3.4	0.1	0.1	1.1	2.1		
<b>Identified net debt-creating flows</b>	-1.0	0.8	-2.9	11.1	8.7	1.2	1.8	0.8	0.2	4.7	4.5	3.8	4.3
<b>Non-interest current account deficit</b>	1.2	-1.5	-2.9	6.5	6.4	1.9	1.7	1.4	0.6	4.2	3.9	3.4	3.6
Deficit in balance of goods and services	15.6	16.1	14.6	25.1	24.5	20.4	20.3	20.8	20.5	24.1	24.1	21.3	22.9
Exports	31.6	34.2	37.2	29.2	27.8	30.3	31.3	32.2	33.2	29.6	29.6		
Imports	47.2	50.3	51.8	54.3	52.3	50.7	51.6	53.1	53.7	53.7	53.7		
Net current transfers (negative = inflow)	-16.8	-20.5	-21.3	-22.4	-21.6	-21.2	-21.6	-22.0	-22.4	-22.4	-22.4	-20.7	-22.1
<i>of which: official</i>	-0.5	-0.5	-0.7	-3.2	-1.7	-1.2	-1.2	-1.1	-1.1	-1.1	-1.1		
Other current account flows (negative = net inflow)	2.5	2.9	3.7	3.9	3.5	2.8	3.0	2.6	2.5	2.4	2.2	2.7	2.8
<b>Net FDI (negative = inflow)</b>	-1.0	1.9	0.3	1.6	0.9	0.2	0.7	0.1	0.4	0.4	0.4	1.2	0.5
<b>Endogenous debt dynamics 2/</b>	-1.2	0.5	-0.3	3.0	1.4	-0.9	-0.7	-0.7	-0.7	0.1	0.2		
Contribution from nominal interest rate	0.7	0.7	0.7	0.6	0.6	0.7	0.8	0.8	0.8	0.8	1.0		
Contribution from real GDP growth	-0.5	1.0	-1.8	2.4	0.8	-1.6	-1.4	-1.5	-1.5	-0.7	-0.9		
Contribution from price and exchange rate changes	-1.5	-1.3	0.9	...	...	...	...	...	...	...	...		
<b>Residual 3/</b>	-0.6	2.9	-2.2	-4.8	1.4	4.1	1.7	-0.7	-0.1	-3.6	-2.4	-2.2	-1.3
<i>of which: exceptional financing</i>	-1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
<b>Sustainability indicators</b>													
<b>PV of PPG external debt-to-GDP ratio</b>	...	...	29.8	33.3	38.9	41.8	43.5	43.5	43.5	48.0	63.3		
<b>PV of PPG external debt-to-exports ratio</b>	...	...	80.2	114.0	140.1	137.9	139.3	135.0	130.9	162.2	214.0		
<b>PPG debt service-to-exports ratio</b>	7.5	8.7	8.1	10.7	12.3	11.1	10.5	10.0	9.3	12.0	15.4		
<b>PPG debt service-to-revenue ratio</b>	8.6	10.7	10.1	14.5	16.9	14.4	12.3	10.8	10.3	11.8	15.2		
Gross external financing need (Million of U.S. dollars)	21.4	27.8	3.1	92.6	88.4	47.7	51.9	44.9	40.2	93.1	140.2		
<b>Key macroeconomic assumptions</b>													
Real GDP growth (in percent)	1.0	-2.2	3.5	-5.0	-1.5	2.7	2.2	2.2	2.2	0.9	0.9	1.7	0.6
GDP deflator in US dollar terms (change in percent)	3.0	2.7	-1.7	2.5	1.7	2.1	2.2	2.2	2.2	2.1	2.8	1.9	2.1
Effective interest rate (percent) 4/	1.6	1.5	1.3	1.2	1.2	1.2	1.2	1.1	1.1	1.0	1.1	1.2	1.1
Growth of exports of G&S (US dollar terms, in percent)	8.1	9.0	10.6	-23.5	-4.8	14.3	7.7	7.7	7.6	3.0	3.7	6.6	1.2
Growth of imports of G&S (US dollar terms, in percent)	0.1	7.1	4.9	2.0	-3.6	1.6	6.3	7.4	5.6	3.0	3.7	4.7	3.1
Grant element of new public sector borrowing (in percent)	...	...	...	44.8	42.3	43.9	45.7	47.4	49.0	47.1	43.3	...	46.2
Government revenues (excluding grants, in percent of GDP)	27.3	27.7	29.7	21.5	20.2	23.2	26.7	29.9	30.0	30.0	30.0	25.9	27.4
Aid flows (in Million of US dollars) 5/	39.3	65.4	128.4	85.8	82.5	81.1	81.7	75.0	80.5	87.6	123.3		
Grant-equivalent financing (in percent of GDP) 6/	...	...	...	10.4	10.8	9.6	8.9	7.6	7.6	7.3	8.2	...	8.4
Grant-equivalent financing (in percent of external financing) 6/	...	...	...	70.9	59.2	61.1	64.8	72.0	73.0	69.0	61.0	...	67.9
Nominal GDP (Million of US dollars)	832	836	851	829	830	870	908	948	990	1,149	1,580		
Nominal dollar GDP growth	4.1	0.5	1.8	-2.6	0.1	4.8	4.4	4.4	4.4	3.0	3.7	3.6	2.8
<b>Memorandum items:</b>													
<b>PV of external debt 7/</b>	...	...	29.8	33.3	38.9	41.8	43.5	43.5	43.5	48.0	63.3		
In percent of exports	...	...	80.2	114.0	140.1	137.9	139.3	135.0	130.9	162.2	214.0		
Total external debt service-to-exports ratio	7.5	8.7	8.1	10.7	12.3	11.1	10.5	10.0	9.3	12.0	15.4		
<b>PV of PPG external debt (in Million of US dollars)</b>	...	...	253.7	276.0	323.1	363.4	395.4	412.6	430.4	551.8	1000.4		
(Pvt-Pvt-1)/GDPt-1 (in percent)	...	...	...	2.6	5.7	4.9	3.7	1.9	1.9	2.1	3.8		
Non-interest current account deficit that stabilizes debt ratio	2.8	-5.2	2.2	0.3	-3.7	-3.5	-1.7	1.3	0.4	3.0	1.8		

Definition of external/domestic debt	Residency-based
Is there a material difference between the two criteria?	No



Sources: Country authorities; and staff estimates and projections.

1/ Includes both public and private sector external debt.

2/ Derived as  $[r - g - \rho(1-g) + \epsilon\alpha(1+r)] / (1+g+p+g\rho)$  times previous period debt ratio, with  $r$  = nominal interest rate;  $g$  = real GDP growth rate,  $\rho$  = growth rate of GDP deflator in U.S. dollar terms,  $\epsilon$  = nominal appreciation of the local currency, and  $\alpha$  = share of local currency-denominated external debt in total external debt.

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

6/ 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).

7/ Assumes that PV of private sector debt is equivalent to its face value.

8/ Historical averages are generally derived over the past 10 years, subject to data availability, whereas projections averages are over the first year of projection and the next 10 years.

**Table 2. Samoa: Public Sector Debt Sustainability Framework, Baseline Scenario, 2017-40**  
(In percent of GDP, unless otherwise indicated)

	Actual			Projections								Average 6/	
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2030	2040	Historical	Projections
<b>Public sector debt 1/</b>	57.6	60.2	54.8	64.6	76.2	82.7	87.4	88.9	90.4	112.9	180.2	57.6	91.5
of which: external debt	48.3	52.0	46.9	53.1	63.1	68.5	72.0	72.1	72.2	80.3	103.4	49.4	71.7
<b>Change in public sector debt</b>	-2.7	2.6	-5.4	9.8	11.6	6.5	4.7	1.4	1.5	5.0	7.4		
<b>Identified debt-creating flows</b>	2.4	3.4	-3.7	10.1	11.4	6.6	4.9	1.6	1.6	5.1	10.2	2.8	5.4
<b>Primary deficit</b>	2.1	-0.1	-2.7	7.3	9.8	7.8	5.8	2.6	2.7	4.5	5.9	3.2	5.2
Revenue and grants	29.3	30.6	33.9	28.4	25.5	28.1	31.5	34.9	34.9	34.4	34.2	28.9	32.4
of which: grants	1.9	2.9	4.2	6.9	5.3	4.8	4.8	4.9	4.9	4.4	4.2		
Primary (noninterest) expenditure	31.4	30.6	31.2	35.7	35.4	35.8	37.3	37.5	37.6	38.9	40.1	32.1	37.6
<b>Automatic debt dynamics</b>	0.3	3.5	-1.0	2.9	1.6	-1.2	-0.9	-1.0	-1.0	0.6	4.2		
Contribution from interest rate/growth differential	0.5	1.8	-1.7	2.9	1.6	-1.2	-0.9	-1.0	-1.0	0.6	4.2		
of which: contribution from average real interest rate	1.1	0.5	0.3	0.0	0.6	0.8	0.9	0.9	0.9	1.6	5.8		
of which: contribution from real GDP growth	-0.6	1.3	-2.1	2.9	1.0	-2.0	-1.8	-1.9	-1.9	-0.9	-1.5		
Contribution from real exchange rate depreciation	-0.2	1.7	0.7	...	...	...	...	...	...	...	...		
<b>Other identified debt-creating flows</b>	0.0	0.0	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 contingent liabilities (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		
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 debt creating or reducing flow (please specify)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
<b>Residual</b>	-5.1	-0.8	-1.7	-0.3	0.1	-0.1	-0.2	-0.2	-0.1	-0.2	-2.8	-0.5	-0.1
<b>Sustainability indicators</b>													
<b>PV of public debt-to-GDP ratio 2/</b>	...	...	37.9	44.9	52.0	56.0	59.0	60.3	61.6	80.6	140.2		
<b>PV of public debt-to-revenue and grants ratio</b>	...	...	112.0	157.8	204.0	199.5	187.3	173.0	176.5	234.0	409.5		
<b>Debt service-to-revenue and grants ratio 3/</b>	16.6	18.7	14.5	22.7	22.8	20.7	18.3	16.7	16.0	20.2	32.7		
Gross financing need 4/	6.9	5.6	2.2	13.7	15.7	13.6	11.6	8.4	8.3	11.5	17.1		
<b>Key macroeconomic and fiscal assumptions</b>													
Real GDP growth (in percent)	1.0	-2.2	3.5	-5.0	-1.5	2.7	2.2	2.2	2.2	0.9	0.9	1.7	0.6
Average nominal interest rate on external debt (in percent)	1.5	1.5	1.3	1.2	1.2	1.2	1.1	1.1	1.1	1.0	1.1	1.2	1.1
Average real interest rate on domestic debt (in percent)	8.7	7.4	10.2	6.4	8.4	9.6	9.6	9.2	8.8	7.9	6.6	4.0	8.5
Real exchange rate depreciation (in percent, + indicates depreciation)	-0.5	3.4	1.4	...	...	...	...	...	...	...	...	0.5	...
Inflation rate (GDP deflator, in percent)	-0.1	2.0	2.2	2.8	2.5	2.2	2.5	2.8	2.8	2.8	2.8	1.0	2.7
Growth of real primary spending (deflated by GDP deflator, in percent)	9.7	-4.6	5.5	8.8	-2.4	4.1	6.5	2.6	2.4	1.0	1.0	1.7	2.7
Primary deficit that stabilizes the debt-to-GDP ratio 5/	4.8	-2.7	2.7	-2.6	-1.7	1.3	1.1	1.2	1.2	-0.5	-1.5	1.6	-0.1
PV of contingent liabilities (not included in public sector debt)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		

Sources: Country authorities; and staff estimates and projections.

1/ Coverage of debt: The central government plus social security, government-guaranteed debt. Definition of external debt is Residency-based.

2/ The underlying PV of external debt-to-GDP ratio under the public DSA differs from the external DSA with the size of differences depending on exchange rates projections.

3/ Debt service is defined as the sum of interest and amortization of medium and long-term, and short-term debt.

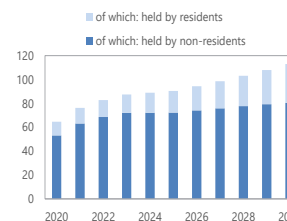
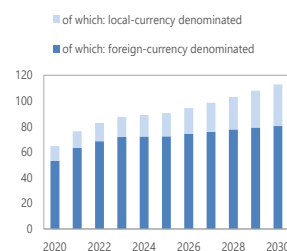
4/ Gross financing need is defined as the primary deficit plus debt service plus the stock of short-term debt at the end of the last period and other debt creating/reducing flows.

5/ Defined as a primary deficit minus a change in the public debt-to-GDP ratio (-): a primary surplus, which would stabilize the debt ratio only in the year in question.

6/ Historical averages are generally derived over the past 10 years, subject to data availability, whereas projections averages are over the first year of projection and the next 10 years.

Definition of external/domestic debt	Residency-based
Is there a material difference between the two criteria?	No

Public sector debt 1/





**Table 3. Samoa: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2020-40**

(In percent)

	2020	2021	2022	2023	2024	2025	2026	2027	Projections 1/													
									2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	
<b>PV of debt-to GDP ratio</b>																						
<b>Baseline</b>	33	39	42	44	44	43	45	46	47	47	48	49	51	53	54	56	57	59	60	62	63	
<b>A. Alternative Scenarios</b>																						
A1. Key variables at their historical averages in 2020-2030 2/	33	36	41	44	46	49	49	50	51	52	52	53	54	55	57	58	59	60	61	63	64	
<b>B. Bound Tests</b>																						
B1. Real GDP growth	33	41	47	49	49	49	50	51	52	53	54	55	57	59	61	62	64	66	68	69	71	
B2. Primary balance	33	40	44	46	46	46	47	48	49	50	51	52	53	55	56	58	59	61	62	64	65	67
B3. Exports	33	41	46	47	47	47	48	50	51	51	52	53	55	56	58	59	61	63	64	65	67	
B4. Other flows 3/	33	42	47	49	49	49	50	51	52	53	53	54	56	57	58	60	61	63	64	65	66	
B5. Depreciation	33	49	48	50	50	50	52	53	54	55	56	58	60	62	65	67	69	72	74	75	78	
B6. Combination of B1-B5	33	41	46	48	48	48	49	50	51	52	53	54	56	57	59	60	62	64	65	67	68	
<b>C. Tailored Tests</b>																						
C1. Combined contingent liabilities	33	42	44	46	46	46	48	49	50	51	51	53	55	56	58	60	62	64	65	66	68	
C2. Natural disaster	33	48	52	54	54	55	57	59	60	62	64	66	68	71	74	76	79	82	84	86	89	
C3. Commodity price	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
<b>Threshold</b>	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	
<b>PV of debt-to-exports ratio</b>																						
<b>Baseline</b>	114	140	138	139	135	131	151	154	157	160	162	167	172	178	183	188	194	200	204	209	214	
<b>A. Alternative Scenarios</b>																						
A1. Key variables at their historical averages in 2020-2030 2/	114	131	135	141	143	146	167	169	172	174	176	179	183	187	191	195	199	203	208	212	217	
<b>B. Bound Tests</b>																						
B1. Real GDP growth	114	140	138	139	135	131	151	154	157	160	162	167	172	178	183	188	194	200	204	209	214	
B2. Primary balance	114	144	146	147	143	139	160	163	167	170	172	177	183	188	194	199	205	211	215	220	225	
B3. Exports	114	151	160	161	156	151	174	178	182	185	187	191	197	202	208	213	219	225	230	234	239	
B4. Other flows 3/	114	150	156	157	152	148	170	173	177	179	180	184	189	193	198	202	207	212	215	219	223	
B5. Depreciation	114	140	126	128	124	120	139	142	145	148	150	156	162	168	173	179	186	192	197	202	208	
B6. Combination of B1-B5	114	149	145	153	148	144	165	169	173	175	177	182	187	192	198	203	208	214	219	223	228	
<b>C. Tailored Tests</b>																						
C1. Combined contingent liabilities	114	149	147	148	144	139	161	164	168	171	174	179	185	190	196	202	208	215	219	224	230	
C2. Natural disaster	114	179	176	178	175	171	199	205	211	217	222	230	239	248	257	266	275	285	293	301	310	
C3. Commodity price	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
<b>Threshold</b>	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	
<b>Debt service-to-exports ratio</b>																						
<b>Baseline</b>	11	12	11	11	10	9	10	11	12	12	12	12	12	13	13	13	13	14	14	15	15	
<b>A. Alternative Scenarios</b>																						
A1. Key variables at their historical averages in 2020-2030 2/	11	12	11	10	10	9	10	11	12	12	12	12	13	13	13	13	14	14	14	15	16	
<b>B. Bound Tests</b>																						
B1. Real GDP growth	11	12	11	11	10	9	10	11	12	12	12	12	13	13	13	13	14	14	14	15	16	
B2. Primary balance	11	12	11	11	10	9	10	11	12	13	13	13	13	13	14	14	14	14	15	16	16	
B3. Exports	11	13	12	12	11	10	11	12	13	14	14	14	14	14	14	15	15	16	16	17	17	
B4. Other flows 3/	11	12	11	11	10	10	10	11	12	13	13	13	14	14	14	14	15	15	16	16	17	
B5. Depreciation	11	12	11	10	10	9	10	10	11	12	11	11	11	12	12	12	13	13	14	14	15	
B6. Combination of B1-B5	11	13	12	11	11	10	11	11	12	13	13	13	13	14	14	14	14	14	15	16	17	
<b>C. Tailored Tests</b>																						
C1. Combined contingent liabilities	11	12	11	11	10	9	10	11	12	13	12	12	12	13	13	13	13	14	14	15	16	
C2. Natural disaster	11	13	12	12	11	10	11	12	13	14	14	14	14	14	14	15	15	16	16	17	18	
C3. Commodity price	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
<b>Threshold</b>	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	
<b>Debt service-to-revenue ratio</b>																						
<b>Baseline</b>	15	17	14	12	11	10	10	10	12	12	12	12	12	12	12	13	13	14	14	15	15	
<b>A. Alternative Scenarios</b>																						
A1. Key variables at their historical averages in 2020-2030 2/	15	16	14	12	11	10	10	11	12	12	12	12	12	13	13	13	13	14	14	15	15	
<b>B. Bound Tests</b>																						
B1. Real GDP growth	15	18	16	14	12	12	11	12	13	14	13	13	14	14	14	15	15	15	16	16	17	
B2. Primary balance	15	17	15	12	11	10	10	11	12	13	12	13	13	13	13	14	14	14	14	15	16	
B3. Exports	15	17	15	13	11	11	10	11	12	13	13	13	13	13	13	14	14	14	15	15	16	
B4. Other flows 3/	15	17	15	13	11	11	10	11	12	13	13	13	13	14	14	14	14	14	15	15	16	
B5. Depreciation	15	21	18	15	13	13	12	13	14	15	14	14	14	15	15	15	15	16	16	17	18	
B6. Combination of B1-B5	15	17	15	13	11	11	11	11	12	13	13	13	13	14	14	14	14	14	15	15	16	
<b>C. Tailored Tests</b>																						
C1. Combined contingent liabilities	15	17	15	13	11	10	10	11	12	12	12	12	12	13	13	13	13	14	14	15	15	
C2. Natural disaster	15	17	15	13	11	11	10	11	12	13	13	13	13	13	13	14	14	14	15	16	16	
C3. Commodity price	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
<b>Threshold</b>	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	

Sources: Country authorities, and staff estimates and projections.  
 1/ A bold value indicates a breach of the threshold.  
 2/ Variables include real GDP growth, GDP deflator (in U.S. dollar terms), non-interest current account in percent of GDP, and non-debt creating flows.  
 3/ Includes official and private transfers and FDI.

Table 4. Samoa: Sensitivity Analysis for Key Indicators of Public Debt, 2020-40

In percent

	Projections 1/																				
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
<b>PV of Debt-to-GDP Ratio</b>																					
<b>Baseline</b>	45	52	56	59	60	62	65	68	72	76	81	85	91	96	102	108	114	120	127	133	140
<b>A. Alternative Scenarios</b>																					
A1. Key variables at their historical averages in 2020-2030 2/	45	48	50	53	55	58	61	65	69	73	78	83	88	93	99	105	112	118	125	132	140
<b>B. Bound Tests</b>																					
B1. Real GDP growth	45	56	66	71	75	79	86	92	100	107	115	124	133	142	152	162	172	183	193	204	215
B2. Primary balance	45	54	60	64	65	66	70	73	77	81	86	91	96	102	108	114	120	126	133	139	146
B3. Exports	45	53	58	61	63	64	67	71	74	78	83	88	93	98	104	110	116	122	128	135	141
B4. Other flows 3/	45	55	62	65	66	67	70	74	78	82	86	91	96	101	106	112	118	124	130	136	143
B5. Depreciation	45	58	59	59	58	57	58	59	61	62	64	67	70	73	76	80	84	88	92	97	101
B6. Combination of B1-B5	45	54	59	62	64	66	69	73	78	82	87	93	99	105	111	117	124	131	138	145	153
<b>C. Tailored Tests</b>																					
C1. Combined contingent liabilities	45	57	61	64	65	67	70	74	77	82	86	91	97	102	108	114	121	127	134	140	147
C2. Natural disaster	45	69	73	77	80	82	86	91	96	101	107	113	120	127	134	142	149	157	165	173	182
C3. Commodity price	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>TOTAL public debt benchmark</b>	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
<b>PV of Debt-to-Revenue Ratio</b>																					
<b>Baseline</b>	158	204	199	187	173	176	186	195	209	221	234	248	265	281	298	315	333	352	371	390	410
<b>A. Alternative Scenarios</b>																					
A1. Key variables at their historical averages in 2020-2030 2/	158	187	178	166	158	165	174	184	197	209	222	236	252	268	284	301	319	338	357	377	398
<b>B. Bound Tests</b>																					
B1. Real GDP growth	158	217	229	222	212	224	241	260	285	307	330	354	383	410	437	466	495	526	556	586	618
B2. Primary balance	158	213	215	202	186	190	199	209	224	236	249	264	281	297	314	332	350	369	388	408	427
B3. Exports	158	207	208	195	180	183	192	202	216	228	240	254	271	287	303	320	338	356	375	393	413
B4. Other flows 3/	158	215	219	205	189	192	202	211	226	237	250	263	279	295	311	327	344	362	380	399	418
B5. Depreciation	158	232	212	189	168	165	168	171	178	182	189	196	206	215	226	236	248	260	273	285	299
B6. Combination of B1-B5	158	212	210	196	182	187	198	209	224	238	252	268	287	304	323	342	361	382	402	423	444
<b>C. Tailored Tests</b>																					
C1. Combined contingent liabilities	158	223	217	203	188	191	201	211	225	237	251	265	283	299	316	334	353	372	391	410	430
C2. Natural disaster	158	268	261	245	227	233	246	259	277	293	310	328	350	370	391	412	435	458	481	505	529
C3. Commodity price	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Debt Service-to-Revenue Ratio</b>																					
<b>Baseline</b>	23	23	21	18	17	16	16	17	19	20	20	20	21	23	23	25	26	28	29	31	33
<b>A. Alternative Scenarios</b>																					
A1. Key variables at their historical averages in 2020-2030 2/	23	22	20	18	17	17	17	18	20	21	21	21	22	23	24	26	28	29	31	33	35
<b>B. Bound Tests</b>																					
B1. Real GDP growth	23	24	23	21	19	19	19	21	23	25	26	27	29	31	33	35	37	40	42	45	48
B2. Primary balance	23	23	21	19	17	17	17	18	19	21	21	22	23	24	25	26	28	29	31	33	34
B3. Exports	23	23	21	18	17	16	16	17	19	20	21	21	22	23	24	25	27	28	30	31	33
B4. Other flows 3/	23	23	21	19	17	16	16	17	19	21	21	22	23	24	25	26	27	29	30	32	34
B5. Depreciation	23	24	24	21	19	18	18	19	21	22	22	22	23	24	24	26	27	28	30	31	33
B6. Combination of B1-B5	23	23	21	19	17	17	17	18	20	21	22	22	23	24	25	27	28	30	32	34	36
<b>C. Tailored Tests</b>																					
C1. Combined contingent liabilities	23	23	22	19	17	17	17	18	19	21	21	21	22	24	24	26	27	29	30	32	34
C2. Natural disaster	23	23	24	22	20	19	19	20	22	24	24	25	26	27	28	30	31	33	35	37	39
C3. Commodity price	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Sources: Country authorities; and staff estimates and projections.

1/ A bold value indicates a breach of the benchmark.

2/ Variables include real GDP growth, GDP deflator and primary deficit in percent of GDP.

3/ Includes official and private transfers and FDI.