WORLD BANK GROUP

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# SAMOA

## JOINT WORLD BANK-IMF DEBT SUSTAINABILITY ANALYSIS

**Approved by:**

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Prepared by the staff of the International Development Association (IDA) and the International Monetary Fund (IMF)[1]

| SAMOA: JOINT BANK-FUND DEBT SUSTAINABILITY ANALYSIS | |
|---|---|
| **Risk of external debt distress** | High |
| **Overall risk of debt distress** | High |
| **Granularity in the risk rating** | Sustainable |
| **Application of judgment** | Yes. Expected long-term effects of natural disaster and climate change-related events were considered in arriving at the bottom-line risk assessment. |

Samoa remains at high risk of external and overall debt distress, unchanged from the previous DSA published in March 2021. Consistent with previous DSAs, judgment was applied to extend the projection horizon to 20 years as opposed to the standard 10 years, given that the mechanical external and overall risk rating from the model was assessed as moderate. This allows for the inclusion of the average long-term effects of natural disasters and climate change by incorporating their impacts on economic growth, the fiscal position, and the current account balance in the baseline scenario over the long term (FY2029-2043).[2] These factors result in breaches of the thresholds for the present value (PV) of the external public and publicly guaranteed (PPG) debt-to-GDP ratio from FY2042 onwards in the baseline. As a result, Samoa's external and overall risk ratings are assessed as high. In the stress test scenarios, thresholds for the PV of external PPG debt-to-GDP and PV of public debt to GDP are breached from FY2034 and FY2029, respectively. A tailored natural disaster shock, similar in scale to the median impact of natural disasters in Samoa's history and assumed to strike in FY2024, also leads to breaches of the debt-to-GDP thresholds. The debt service-to-revenue ratio does not breach its indicative target because of the preponderance of concessional loans in external

[1] This DSA has been prepared jointly by the IMF and World Bank, following *Guidance Note on the Bank-Fund Debt Sustainability Framework for Low Income Countries* (2018).

[2] Samoa's fiscal year runs from July 1 to June 30.

debt. Given Samoa's vulnerability to natural disasters and external shocks, reforms to raise revenues, improve the quality of spending, and attain higher, more diversified economic growth will be vital to building fiscal and external buffers and minimizing risks to debt sustainability. While domestic debt remains small, government-guaranteed debt accounted for 7.6 percent of GDP in FY2022.

## PUBLIC DEBT COVERAGE

1. **This Debt Sustainability Analysis (DSA) covers central government and central government-guaranteed debts (Text Table 1)**. There is no sub-national government structure in Samoa. The Central Bank of Samoa (CBS) is not allowed to contract debt on behalf of the government and State-Owned Enterprises (SOEs) must seek government approval for all new loans.[3] Non-guaranteed debt of non-financial SOEs stood at 0.6 percent of GDP in FY2022. Given the lack of consolidated, timely data on SOE revenue and expenditures, SOEs are not included in the baseline debt sustainability analysis but are captured in the contingent liability stress test.[4] The definition of external and domestic debt is based on residency.[5]

Text Table 1. Samoa: Debt Coverage

| | Subsectors of the public sector | Sub-sectors covered |
|---|---|---|
| 1 | Central government | X |
| 2 | State and local government | Not applicable |
| 3 | Other elements in the general government | |
| 4 | o/w: Social security fund | Not applicable |
| 5 | o/w: Extra budgetary funds (EBFs) | |
| 6 | Guarantees (to other entities in the public and private sector, including to SOEs) | X |
| 7 | Central bank (borrowed on behalf of the government) | Not applicable |
| 8 | Non-guaranteed SOE debt | |

2. **The stress test capturing combined contingent liabilities accounts for implicit liabilities and a potential financial market shock (Text Table 2)**. This stress test reflects the possible consequences for the path of public debt of a shock that requires the government to cover some contingent liabilities—including liabilities which are incurred only after the assumed shock. The test incorporates contingent liabilities amounting to 7 percent of GDP, which comprises 2 percent of GDP of non-guaranteed SOE debt and 5 percent of GDP resulting from a financial market shock.[6]

[3] Therefore, credit to the central bank under the IMF's Rapid Credit Facility is not included in public debt.
[4] SOE non-guaranteed debt has not been reported in the FY2023 budget as suggested in the previous DSA. However, it is published on an ongoing basis as part of the government's quarterly debt bulletin.
[5] Since all the domestic debt is in tala and all the external debt is in foreign currency, the residency-based classification is equivalent to the currency-based classification in the case of Samoa.
[6] Contingent liabilities arising from government guarantees are already included in the baseline definition of public debt.

Text Table 2. Samoa: Combined Contingent Liability Shock

| | | Default | Used for the analysis |
|---|---|---|---|
| 1 | The country's coverage of public debt | The central government plus government-guaranteed debt | |
| 2 | Other elements of the general government not captured in 1. | 0 percent of GDP | 0 |
| 3 | SOE debt (not guaranteed by the government) 1/ | 2 percent of GDP | 2 |
| 4 | PPP | 35 percent of PPP stock | 0 |
| 5 | Financial market (the default value of 5 percent of GDP is the minimum value) | 5 percent of GDP | 5 |
| | Total (2+3+4+5) (in percent of GDP) | | 7 |

1/ The default shock of 2% of GDP was used in order to capture fiscal risks from a shock to SOE revenue or expenditure requiring infusion of government funds beyond existing liabilities (which amount to only 0.6 percent of GDP).

# BACKGROUND ON DEBT

3. **Central government debt (referred to hereafter as public debt) was 43.7 percent of GDP in FY2022, a decrease of 2.6 percentage points of GDP from FY2021**. Stronger-than-expected tax revenues and grants, and under-execution of capital expenditure (CAPEX) due to implementation delays, led to an overall fiscal surplus of 5.4 percent of GDP in FY2022 compared to a surplus of 1.7 percent of GDP in FY2021. The surplus helped ensure continued timely repayments of external debt, thereby contributing to the reduction in debt-to-GDP ratio.

4. **Public external debt was US$349 million (43.7 percent of GDP) at the end of FY2022, a decrease of 2.4 percentage points of GDP compared to FY2021**. Just over half (51.3 percent) of the outstanding public external debt at the end of FY2022 was from multilateral creditors, including the IDA and Asian Development Bank (ADB), and 48.7 percent was from bilateral creditors China and Japan (Text Table 3). Domestic debt has been declining gradually and at end-FY2022 remained below 1 percent of GDP (Text Table 4). All domestic public debt is issued in local currency.

Text Table 3. Samoa: Evolution of Public Debt

| | FY2019 | FY2020 | FY2021 | FY2022 | FY2019 | FY2020 | FY2021 | FY2022 |
|---|---|---|---|---|---|---|---|---|
| | (In millions of SAT) | | | | (In percent of external debt) | | | |
| Total public debt | 1058.6 | 1012.3 | 1004.4 | 948.4 | ... | ... | ... | ... |
| External | 1043.7 | 1004.6 | 999.9 | 946.8 | 100.0 | 100.0 | 100.0 | 100.0 |
| Multilateral | 544.3 | 540.6 | 515.7 | 485.4 | 52.2 | 53.8 | 51.6 | 51.3 |
| IDA | 279.4 | 294.9 | 290.8 | 279.6 | 26.8 | 29.4 | 29.1 | 29.5 |
| ADB | 235.5 | 218.3 | 201.4 | 184.9 | 22.6 | 21.7 | 20.1 | 19.5 |
| OPEC | 22.6 | 20.9 | 17.5 | 15.6 | 2.2 | 2.1 | 1.8 | 1.6 |
| Other | 6.8 | 6.5 | 6.0 | 5.3 | 0.7 | 0.6 | 0.6 | 0.6 |
| Bilateral | 499.4 | 463.9 | 484.2 | 461.4 | 47.8 | 46.2 | 48.4 | 48.7 |
| Exim Bank (China) | 409.5 | 377.3 | 403.1 | 394.0 | 39.2 | 37.6 | 40.3 | 41.6 |
| Japan | 89.9 | 86.7 | 81.1 | 67.3 | 8.6 | 8.6 | 8.1 | 7.1 |
| Domestic | 14.9 | 7.8 | 4.5 | 1.6 | ... | ... | ... | ... |
| Memorandum items: | | | | | | | | |
| Nominal GDP (millions of SAT) | 2390.1 | 2340.1 | 2169.3 | 2168.8 | | | | |
| Market rate (tala/U.S. dollar, end period) | 2.6 | 2.7 | 2.6 | 2.7 | | | | |

Sources: Samoan authorities; and staff estimates.

Text Table 4. Samoa: Public Debt Stock, FY2022

| | Share of total debt | In percent of GDP |
|---|---|---|
| Total public debt | 100.0 | 43.7 |
| External | 99.8 | 43.7 |
| Multilateral | 51.2 | 22.4 |
| IDA | 29.5 | 12.9 |
| ADB | 19.5 | 8.5 |
| OPEC | 1.6 | 0.7 |
| Other | 0.6 | 0.2 |
| Bilateral | 48.7 | 21.3 |
| Exim Bank (China) | 41.5 | 18.2 |
| Japan | 7.1 | 3.1 |
| Domestic | 0.2 | 0.1 |
| | | |
| Memorandum items: | | |
| Nominal GDP (millions of SAT) | | |
| Market rate (tala/U.S. dollar, end period) | | |

Sources: Samoan authorities; and staff estimates.

5. **Public and publicly guaranteed (PPG) debt totaled 51.3 percent of GDP in FY2022, of which guarantees were 7.6 percent of GDP**. Government-guaranteed debt declined by 2.2 percentage points of GDP to 7.6 percent of GDP (Text Table 5). The decrease was driven mainly by a reduction of guarantees on liabilities of Samoa Airways, as an aircraft lease backed by the guarantee was cancelled, with an early cancellation fee paid by the airline.

Text Table 5. Samoa. Government Guarantees.

| | FY2019 | FY2020 | FY2021 | FY2022 |
|---|---|---|---|---|
| **By Creditor** | In millions of Tala | | | |
| Unit Trust of Samoa | 25.6 | 37.4 | 45.1 | 67.6 |
| Bank South Pacific | 4.4 | 4.0 | 3.3 | 2.6 |
| Central Bank of Samoa | 95.7 | 86.6 | 85.1 | 79.7 |
| Accident Compensation Corporation | 10.0 | 10.0 | 10.0 | 0.0 |
| European Investment Bank | 11.3 | 8.2 | 4.5 | 2.5 |
| Samoa National Provident Fund | 15.4 | 14.3 | 14.1 | 13.0 |
| FAHE Ltd | 0.0 | 0.0 | 51.2 | 0.0 |
| Total | 162.5 | 160.5 | 213.3 | 165.3 |
| | | | | |
| **By Borrower** | In millions of Tala | | | |
| Samoa Shipping Services | 1.2 | 1.1 | 1.1 | 1.0 |
| Samoa Housing Corporation | 11.5 | 10.1 | 11.6 | 10.0 |
| Samoa Airways | 24.3 | 35.8 | 91.1 | 53.0 |
| Development Bank of Samoa | 115.5 | 103.4 | 99.4 | 92.3 |
| Unit Trust of Samoa | 10.0 | 10.0 | 10.0 | 0.0 |
| Samoa Airport Authority | 0.0 | 0.0 | 0.0 | 9.0 |
| Total | 162.5 | 160.5 | 213.3 | 165.3 |

Source: Samoan authorities.

# BACKGROUND ON MACRO ASSUMPTIONS

**6. The Samoan economy experienced a pandemic-driven three-year recession**. Real GDP endured a cumulative 16 percent decline over FY2020-22, which represents a significant decline in disposable income given gross national income per capita of just over US$4,000.[7] Furthermore, the largest effects were on the poorest and most vulnerable households, as formal sector employment declined by less than 1 percent during the recession. Remittances—which are a source of income for eighty percent of households—have provided significant support to household incomes, rising to over 33 percent of GDP in FY2022, from 24 percent of GDP in FY2020.

Text Table 6. Samoa. Baseline Macroeconomic Assumptions

(in percent of GDP, unless otherwise noted)

| | Current DSA (2023 Article IV) | | | | Previous DSA (2021 Article IV) | | | |
|---|---|---|---|---|---|---|---|---|
| | FY2023-28 | FY2029-33 | FY2034-43 | FY2029-43 | FY2021-26 | FY2027-31 | FY2032-41 | FY2027-41 |
| Real GDP growth (in percent change) | 3.3 | 1.0 | 1.0 | 1.0 | 0.8 | 0.7 | 1.2 | 1.0 |
| Inflation (in percent change) | 4.7 | 3.0 | 3.0 | 3.0 | 1.7 | 2.6 | 2.8 | 2.7 |
| Current account deficit | 3.0 | 2.7 | 4.6 | 4.0 | 5.0 | 5.5 | 6.2 | 6.0 |
| Overall fiscal deficit | 2.4 | 4.1 | 6.4 | 5.6 | 3.7 | 4.8 | 6.3 | 5.8 |

Sources: Samoan authorities; and staff projections.

**7. The baseline assumptions broadly follow those in the March 2021 DSA (Text Table 6)**. They are consistent with the macroeconomic framework based on updated data provided by the authorities and estimates by staff. The discount rate used to calculate the net present value of external debt is 5 percent. Given Samoa's vulnerability to natural disasters and the effects of climate change, the baseline scenario incorporates the assumed effects of these factors, consistent with previous cross-country analysis.[8] Specifically, it lowers GDP growth by 1.3 percentage points to 1.0 percent per year, raises the current account deficit by 3.5 percent of GDP, and increases the fiscal deficit by 3.5 percent of GDP on average each year during FY2029-43.[9] No major disasters are assumed in the baseline during FY2023–28 to simplify the policy discussion of the medium-term outlook. The other main assumptions are:

- **The economy is expected to recover due to the post-Covid resumption of tourism**. Border restrictions from FY2020 onward led to a sharp contraction in tourism and related industries and hindered construction activity. In late FY2022, a local outbreak of Covid-19 prompted domestic mobility restrictions for several weeks. On account of these developments, real GDP contracted by -6.0 percent in FY2022, following a -7.1 percent decline in FY2021. Real GDP is projected to

[7] While most households enjoy relatively good access to electricity, safe drinking water, and sanitation, when measured against a "cost of basic needs" poverty line, the incidence of poverty in FY2013/14 (the latest available data) remained high at 20.3 percent of the population.

[8] See Samoa Article IV consultations for 2017, 2019, and 2021. See also the IMF Board Paper *Small States' Resilience to Natural Disasters and Climate Change*. The baseline scenario is premised on a business-as-usual scenario for emissions and increase in world temperature.

[9] The deficits were increased by 0.5 percent of GDP each year from FY2029 to FY2035 from their FY2028 values to account for the impact of natural disasters and climate change gradually deteriorating macroeconomic outcomes. FY2028 was chosen instead of a period average, as the macroeconomic framework incorporates some recovery from the COVID-19 pandemic over the first several years of the forecast horizon.

recover by 5.0 percent in FY2023, with additional years of above-trend growth expected thereafter as the economy normalizes. The recovery is expected to be driven by the rebound in tourism activity and public investment with spillovers to other sectors.[10] Near-term risks are broadly balanced. The main upside risk is the possibility of the rapid recovery in tourism inflows spilling over into greater overall economic momentum. Downside risks are centered around the possibility of a slowdown in global economic activity and thus weaker tourism demand. A renewed acceleration in global food and energy prices could also weigh on household purchasing power. Finally, Samoa faces the ever-present risk of a natural disaster. Real GDP growth projections for FY2023 and FY2024 are higher than the growth path projected by the realism tool, which is based on the projected fiscal adjustment and a typical fiscal multiplier in a LIC of about 0.4 (Figure 4). However, the tool does not account for the effects of the pandemic on real growth in FY2022 or the projected post-reopening rebound. Over the medium term, growth is projected to return to its steady-state rate of 2-2.5 percent, driven by the still-growing population and slow productivity growth.[11]

- **Inflation has spiked, due mainly to exogenous factors**. Headline inflation increased to over 15 percent in y/y terms in 2022 before declining back to single digits, largely driven by rising import prices. Inflation of local items also gathered momentum, with producers passing through higher input prices onto domestic goods and services, amidst supply constraints and rising wage demands. High inflation is projected to persist into FY2024 before gradually normalizing to the Central Bank of Samoa's indicative target rate of 3.0 percent.[12] As in past episodes of inflation driven by external shocks, this would be anchored by the exchange rate basket regime.

- **The resumption of tourism should also help bolster the external position**. The current account balance was a deficit of 11.6 percent of GDP in FY2022 largely due to the absence of tourism inflows, while imports were resilient. These were partially offset by an increase in remittances to over 33 percent of GDP (from 24 percent in FY2020). External debt-GDP has been stable in recent years and is projected to decline in FY2023 despite large current account deficits, with the residual in recent years driven by capital account inflows and positive errors and omissions. Staff projects the current account deficit to narrow to 3.3 percent of GDP in FY2023 driven by a resumption of tourism inflows amounting to over 10 percent of GDP, reflecting data since reopening and cross-country experience. More narrowing is projected in the medium term as tourism normalizes—albeit remaining below its pre-pandemic share of the economy due to capacity constraints—partially offset by a decline in remittances from their recent exceptional

[10] The projected medium-term level of public investment was revised to 6 percent of GDP compared to 8 percent in the previous DSA. The current assumption is in line with historical outturns. However, in the near term there is an increase from the low outturn in FY2022 (0.9 percent of GDP).
[11] The medium-term (FY2023-28) average is higher than in the previous DSA because that round included the contraction in FY2021 in the projection period, while in the current vintage FY2021 is part of the historical sample, and the medium term is boosted by the recovery expected as tourism inflows are restored.
[12] The Central Bank of Samoa (CBS) relates Samoa's inflation rate to its major trading partners' annual average inflation rate—this determines the target that the CBS seeks to maintain each year—to pursue price stability. The indicative target rate has been 3 percent in recent years.

levels (though staying above pre-pandemic levels). This would sustain reserve coverage at over 6 months, which is above levels assessed to be adequate to buffer external shocks.

- **The central government recorded a surplus of 5.4 percent of GDP in FY2022**. This compares with a budgeted deficit of 2.5 percent of GDP, as capital expenditure was under-executed and tax revenue and grants were stronger than expected. The FY2023 budget plans a deficit of 3.5 percent of GDP, compared to a staff projection of a 2.0 percent of GDP deficit based on robust VAGST (value-added on goods and services tax) receipts and assuming a slower recovery in capital and other expenditure execution. The deficit in FY2023 is assumed to be financed by deposits accumulated through previous surpluses.[13] In the medium term, tax revenue is assumed to grow in line with the economy while expenditure would increase modestly due to a normalization of investment. Other primary expenditure is projected to decline modestly from the elevated levels experienced during the pandemic but remain above pre-pandemic levels. The average deficit would thus be 2.5 percent of GDP for FY2024 to FY2028, compared to an average deficit of 0.9 percent of GDP in the five pre-pandemic years.

- **To finance the fiscal deficit in the forecast period, the financing mix is assumed to be largely in line with the current debt profile**. The planned new financing needs identified in the DSA are consistent with public gross financing needs in the baseline macroeconomic framework. Most financing is external, with financing amounts by each institution or bilateral lender in line with the current shares and the financing terms also reflecting prevailing policies. The grant element of all new loans is 47 percent on average. It is assumed that borrowing from both MDBs and bilateral partners is on full credit terms.[14] Domestic debt—which entirely stems from including liabilities from government guarantees in the debt stock—is assumed to be rolled over at prevailing domestic interest rates.[15]

## COUNTRY CLASSIFICATION AND DETERMINATION OF SCENARIO STRESS TESTS

8. **Samoa's debt-carrying capacity remains strong (Text Table 7).** The Composite Indicator (CI) index, which has been calculated based on the October 2022 WEO and the World Bank's 2021 Country Policy and Institutional Assessment (CPIA), is 3.28, indicating that the country's debt-carrying capacity remains strong in the LIC-DSA framework. The CI index was 3.22 in the March 2021 DSA.

[13] Fluctuations in government deposits have been the main driver of past residuals in government debt accumulation.

[14] Consistent with the 2017 LIC DSF guidance note, firmly committed financing is assumed as grants and projected new financing from IDA and ADB is assumed at regular credit terms. This is done to avoid a circular situation where the assumption that future commitments will be on grant terms would yield actual commitments on credit terms.

[15] It is assumed that the liabilities of Samoa Airways to UTOS (Text Table 5) are financed entirely by domestic debt of the central government in FY2023.

Text Table 7. Samoa: Composite Indicator Rating

| Components | Coefficients (A) | 10-year average values (B) | CI Score components (A*B) = (C) | Contribution of components |
|---|---|---|---|---|
| CPIA | 0.385 | 3.969 | 1.53 | 47% |
| Real growth rate (in percent) | 2.719 | 0.567 | 0.02 | 0% |
| Import coverage of reserves (in percent) | 4.052 | 51.077 | 2.07 | 63% |
| Import coverage of reserves^2 (in percent) | -3.990 | 26.089 | -1.04 | -32% |
| Remittances (in percent) | 2.022 | 15.494 | 0.31 | 10% |
| World economic growth (in percent) | 13.520 | 2.898 | 0.39 | 12% |
| CI Score | | | 3.28 | 100% |
| CI rating | | | Strong | |

9. **Based on the CI rating, Samoa's debt is assessed against a high debt carrying capacity (Text Table 8)**. The relevant indicative thresholds for countries with a strong CI rating are 55 percent for the PV of PPG external debt-to-GDP ratio, 240 percent for the PV of PPG external debt-to-exports ratio, 21 percent for the PPG external debt service-to-exports ratio, and 23 percent for the external debt service-to-revenue ratio. The benchmark for the PV of total public debt under strong capacity is 70 percent.

Text Table 8. Samoa: Debt Thresholds

| Debt carrying capacity (CI classification) | PV of PPG external debt in percent of | | PPG external debt service in percent of | | PV of total public debt |
|---|---|---|---|---|---|
| | GDP | Exports | Exports | Revenue | GDP |
| Weak | 30 | 140 | 10 | 14 | 35 |
| Medium | 40 | 180 | 15 | 18 | 55 |
| Strong | 55 | 240 | 21 | 23 | 70 |

10. **There are six standardized stress tests in the DSF, each applied to both the external and the public DSA**. These standard stress tests capture shocks to real GDP growth, the primary fiscal balance, exports, other external flows (includes official and private transfers and FDI), exchange rate depreciation, and a combination of these shocks. In standardized stress tests, a variable is subject to a shock, and the post-shock values of the stressed variables are set to the baseline projection minus one standard deviation. However, if the historical average is less favorable than the baseline projection, then the post-shock values are instead set to the historical average minus one standard deviation.[16]

11. **Given the frequency and severity of natural disasters in Samoa, a tailored stress test for a natural disaster shock in the medium term was also conducted**. The natural disaster shock is implemented through one-off shocks to public debt, GDP, and exports. The default setting (10 percent of GDP increase in debt stock, 1.5 percent decline in real GDP growth, and 3 percent decline in exports growth) was modified so that the stress test captures Samoa's historical experience, based on staff

[16] See 2018 Guidance Note on the Bank-Fund Debt Sustainability Framework for Low Income Countries.

research.[17] The tailored stress test assumes that new debt contracted to finance damages increases the public debt-to-GDP ratio by 21 percent in FY2024, the median size of damages caused by natural disasters in the past.[18] Real GDP and exports decline by 3 percent and 6 percent in FY2024, respectively, relative to the baseline.

# DEBT SUSTAINABILITY

**12. Risks to debt sustainability in Samoa are assessed to be high**. While Samoa's mechanical risk rating based on a ten-year horizon is moderate for both external and overall debt, judgment was applied by incorporating the expected long-term effects of natural disaster and climate change-related events in line with the empirical work cited above, with breaches in years 11-20 used to arrive at the bottom-line risk assessment.[19] External debt breaches its threshold under the baseline while public debt remains slightly below the threshold in the long run. Stress test scenarios generally push both external and public debt above their relevant thresholds, in some cases by a significant margin. Given that most scenarios flag high risks and with Samoa's high exposure to shocks such as natural disasters, staff's judgment is that there is a high enough probability of large and protracted breaches of the thresholds in the long run to assign final ratings of a high risk of external and overall debt distress.

## EXTERNAL DEBT SUSTAINABILITY ANALYSIS

**13. Under the baseline scenario, Samoa's external debt breaches the indicative threshold in 2041 (Figure 1)**. The PV of the external debt-to-GDP ratio is expected to increase gradually from 30 percent of GDP in FY2022 to 59 percent of GDP in FY2043, on account of increased external borrowing to meet fiscal financing needs.[20] Given the large share of concessional loans in external debt, the debt service-to-revenue ratio does not breach the indicative threshold.

**14. Stress tests confirm the vulnerability of external debt dynamics to shocks (Text Figure 1)**. All standard stress tests breach the threshold for the PV of the external debt-GDP-ratio, with the combination shock causing the earliest breach (starting in FY2034). For the tailored shocks, a natural

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[17] See the IMF Working Paper 18/108, "The Economic Impact of Natural Disasters in Pacific Island Countries" (https://www.imf.org/en/Publications/WP/Issues/2018/05/10/The-Economic-Impact-of-Natural-Disasters-in-Pacific-Island-Countries-Adaptation-and-45826).

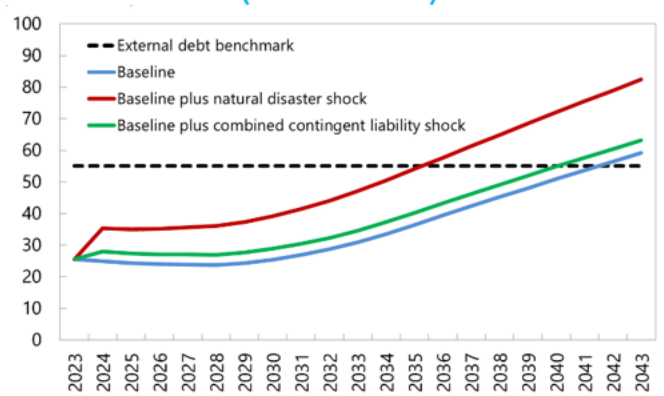
[18] The maximum damage Samoa has suffered from natural disasters is 161.8 percent of GDP while average damage amounted to 47.7 percent of GDP (Lee et al, 2018). This is the highest in the sample of 12 Pacific island countries using data from 1980-2016. The research also highlights that although the probability that at least one disaster occurs in a given year is relatively low compared to the sample, the probability for Samoa being exposed to a severe natural disaster per year is second highest in the sample.

[19] The application of judgment is in line with paragraph 87 of the 2018 Guidance Note, which states that threshold breaches in years 11-20 may provide a rationale to change the risk rating when: (i) breaches are expected to be large and persistent, thus resulting in significant differences relative to historical averages; and (ii) occur with a high probability despite occurring in the distant future. It envisages such situations potentially arising from trends that are not easily influenced by policy interventions, such as climate change leading to an increased frequency and/or severity of natural disasters (as in Samoa's case).

[20] The historical scenario results in a higher debt path than the baseline by incorporating the pandemic-driven economic decline in FY2020-22 into the historical data. This results in an assumption of almost zero economic growth, despite the assumed resumption of tourism inflows.

disaster has the largest negative impact on the debt trajectory, causing a large, protracted breach to the PV of the external debt-to-GDP ratio commencing in FY2036 (Text Figure 1). The contingent liability shock breaches the PV of the external debt-to GDP ratio threshold from FY2041 (Table 3).

Text Figure 1. PV of External Debt-to-GDP Ratio (Percent of GDP)

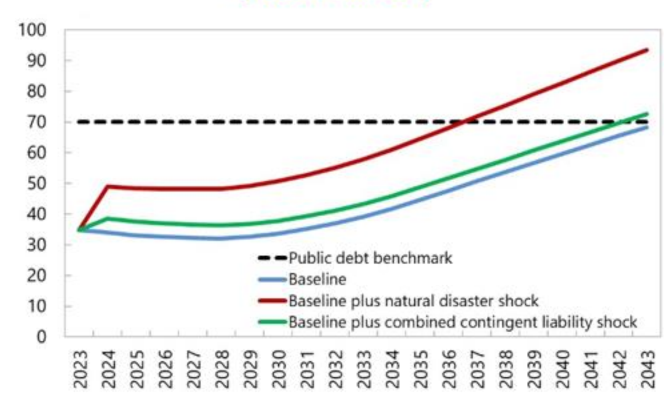



Source: Staff estimates

## PUBLIC SECTOR DEBT SUSTAINABILITY ANALYSIS

**15. The projected path of public sector debt broadly parallels that of external debt (Text Figure 2)**. Under the baseline scenario, the PV of the public debt-to-GDP ratio remains slightly below the benchmark (Figure 2). However, most of the standard stress tests exceed the benchmark in the final years of the forecast horizon. They also show signs of instability in the debt dynamics before breaching the threshold. The real GDP growth stress test finds a sizable breach from FY2029 onward, as a result of the severity of the shock—a two-year contraction of 9 percent. In addition, the natural disaster shock results in a threshold breach in FY2037 that grows substantially thereafter (Table 4).

Text Figure 2. PV of Public Debt-to-GDP Ratio (Percent of GDP)




Source: Staff estimates

**16. The primary deficits and real economic growth projected in the baseline are expected to return to being the main drivers of debt dynamics**. The external and public debt trajectory in the current DSA is lower than that of the March 2021 DSA (Figure 3), with the difference over the medium term largely explained by a lower starting point for debt as a result of sizable fiscal surpluses in FY2021 and FY2022, and the projected use of accumulated government deposits for financing in FY2023. Among the drivers of external debt dynamics, economic growth is projected to hold down the debt ratio as the economy recovers. The less negative projected contribution for the current account is driven by the recovery of tourism. For public debt, the projected easing of the primary balance would add to the debt ratio but be partially offset by the return to positive economic growth.

## RISK RATING AND VULNERABILITIES

**17. Samoa's debt sustainability carries high risks due to its long-term vulnerability to natural disasters and climate change**. Under the baseline assumptions, external debt is expected to breach the indicative threshold while public debt would remain slightly below its threshold. However, tests incorporating a natural disaster result in large, persistent breaches. The other stress tests also result in breaches. This underscores that another occurrence of a major natural disaster, or any of a wide range of macroeconomic shocks, could substantially worsen the debt level and generate unfavorable debt dynamics. The bottom-line finding is thus that Samoa's risk of debt distress remains high.

**18. However, debt is assessed as sustainable, given its favorable profile and supported by recent and ongoing policy measures**. With almost all debt on concessional terms, debt service indicators generally remain below their relevant thresholds, suggesting cash flow pressures could remain manageable even in scenarios where debt levels become high. Samoa has also accumulated sizeable cash reserves (reaching 16.4 percent of GDP in FY2022), acting as a buffer for future shocks. The government has adopted a *Medium-Term Debt Management Strategy FY2021/22-FY2025/26* (MTDS), which outlines policies that would contribute to debt sustainability, including a commitment to refrain from any non-concessional borrowing.[21] Samoa has also implemented reforms to better manage risks from contingent liabilities as part of a programmatic reform agenda under the SDFP.[22] In addition, the government has embarked on a strong structural reform agenda as laid out in its five-year plan *Pathway for the Development of Samoa FY2021/22-FY205-26*. Given that the high risks to debt sustainability are predominantly driven by the impacts of natural disasters and climate change, the government is also focused on building resilience, with the help of development partners. This has included the recent approval of a multi-hazard early warning system policy and a disaster risk financing policy, use of contingent

[21] The government has complied with the World Bank's Sustainable Development Finance Policy (SDFP) Performance and Policy Actions (PPAs), including no new non-concessional borrowing, which has been in place since FY21—ensuring compliance with the MTDS.

[22] The World Bank supported the government of Samoa in preparing on-lending and government guarantee policies, which were approved by the Cabinet in 2020 and 2022, respectively. For FY2023, to improve the monitoring and management of existing government guarantees and enhance transparency, the Ministry of Finance will be applying the credit risk assessment framework from the government guarantee policy to Samoa Airways and Development Bank of Samoa (the two largest beneficiaries of government guarantees) and presenting the outcomes and recommendations to Cabinet. The Ministry of Finance will also expand the reporting of government guarantees by presenting detailed breakdowns, including by creditor and borrower (SOE) in the December Quarter Debt Bulletin.

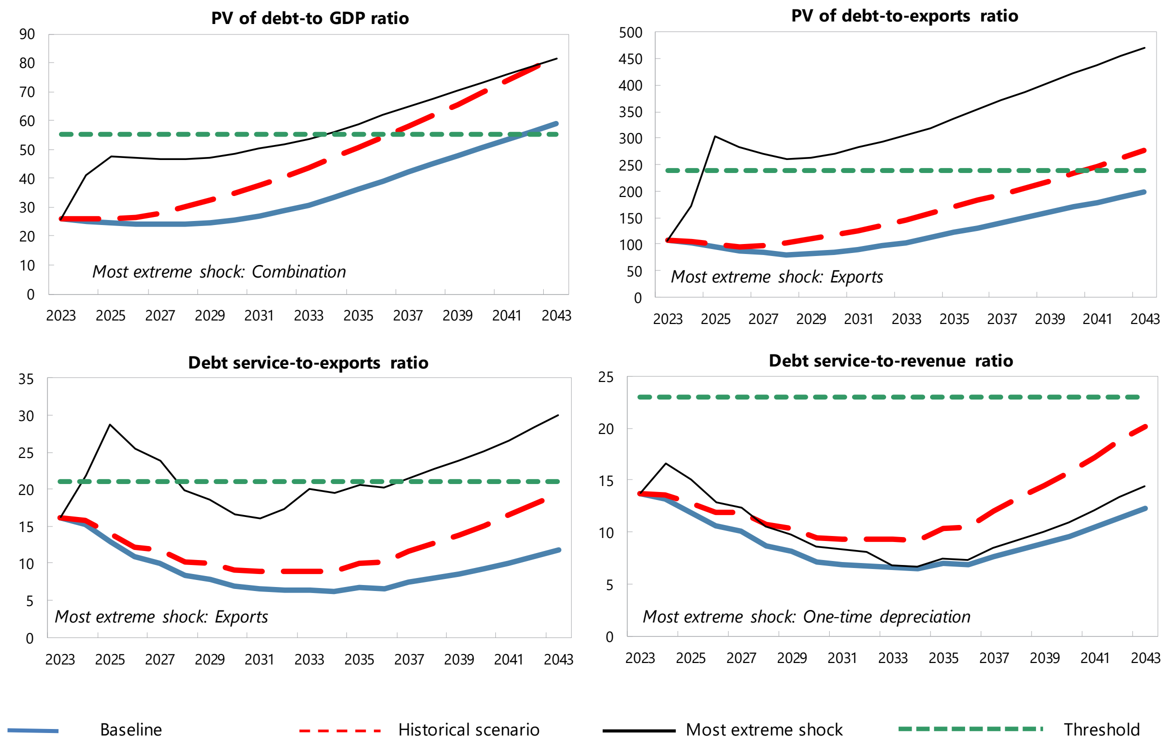
financing facilities from the World Bank and Asian Development Bank, and participation in assessments of climate-related aspects of public financial management and overall macroeconomic policy.[23]

**19. In view of Samoa's debt risks, building fiscal and external buffers, enhancing resilience to natural disasters and climate change, and boosting long-term inclusive growth will be critical to ensure long-term sustainability**. Given that the breaches of debt thresholds generally occur in the outer years of the projection horizon, the fiscal consolidation and other policies necessary to safeguard fiscal sustainability can be implemented gradually. Revenue mobilization will be critical in this regard, given the continued needs for expenditure on climate-resilient infrastructure and strengthening the social safety net. Strengthened public financial management—including improved governance and controls at SOEs—is also essential to help contain fiscal risks. The authorities will need to pursue sufficient financing on highly concessional terms to meet the financing needs projected in the baseline scenario while ramping up climate adaptation investment. The recovery of tourism and robust remittances (staying above pre-pandemic levels) will contribute to the preservation of external buffers. Experience during the pandemic has also illustrated the importance of structural reforms to boost economic growth and diversification, through upgrading the skills of the work force, improving the business environment, and improving trade facilitation to reduce costs. Related efforts to reach the Sustainable Development Goals and raise medium-term growth and employment would also help boost debt carrying capacity.

**20. Authorities' views.** The authorities agreed with staff's assessment that debt is sustainable but that there are high risks of debt distress due to the anticipated effects of climate change and natural disasters on macroeconomic and fiscal outcomes. Indeed, these risks have been a key driver of the "zero borrowing policy" followed since 2021 in which no new external loans (including non-concessional ones) have been contracted and amortizations have been paid using accumulated deposits. In their view, this also underscores the importance of stepped-up grant financing from the international community to fund climate-resilient infrastructure projects. The authorities are also committed to the other policies necessary to safeguard debt sustainability. Specifically, priorities include a gradual fiscal consolidation primarily through improved revenue administration and reallocation of expenditure to priority areas; strengthened public financial management, including at SOEs; and structural reforms to boost inclusive growth by upgrading the skills of the workforce and improving the overall business environment.

[23] See G. Brule, et al, *Samoa: PEFA Assessment of Climate Responsive Public Financial Management*, 2021, and Y. Kinoshita, et al, *Samoa: Climate Macroeconomic Assessment Program (CMAP)*, 2022.

## Figure 1. Samoa: Indicators of Public and Publicly-Guaranteed External Debt under Alternative Scenarios, 2023-2043 1/




| Customization of Default Settings | Size | Interactions |
|---|---|---|
| **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 |
|---|---|---|
| **Shares of marginal debt** | | |
| External PPG MLT debt | 100% | |
| **Terms of marginal debt** | | |
| Avg. nominal interest rate on new borrowing in USD | 1.3% | 1.3% |
| USD Discount rate | 5.0% | 5.0% |
| Avg. maturity (incl. grace period) | 30 | 30 |
| Avg. grace period | 7 | 7 |

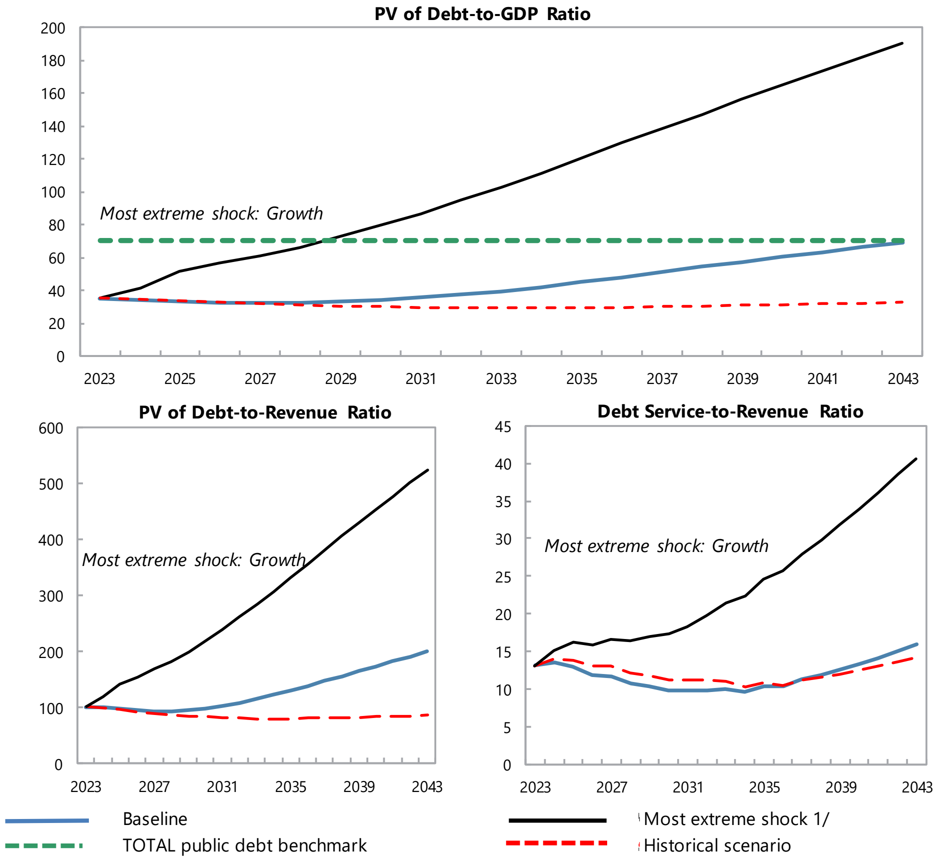
* Note: All the additional financing needs generated by the shocks under the stress tests are assumed to be covered by PPG external MLT debt in the external DSA. Default terms of marginal debt are based on baseline 10-year projections.

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 2033. 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 exterme 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, 2023-2043



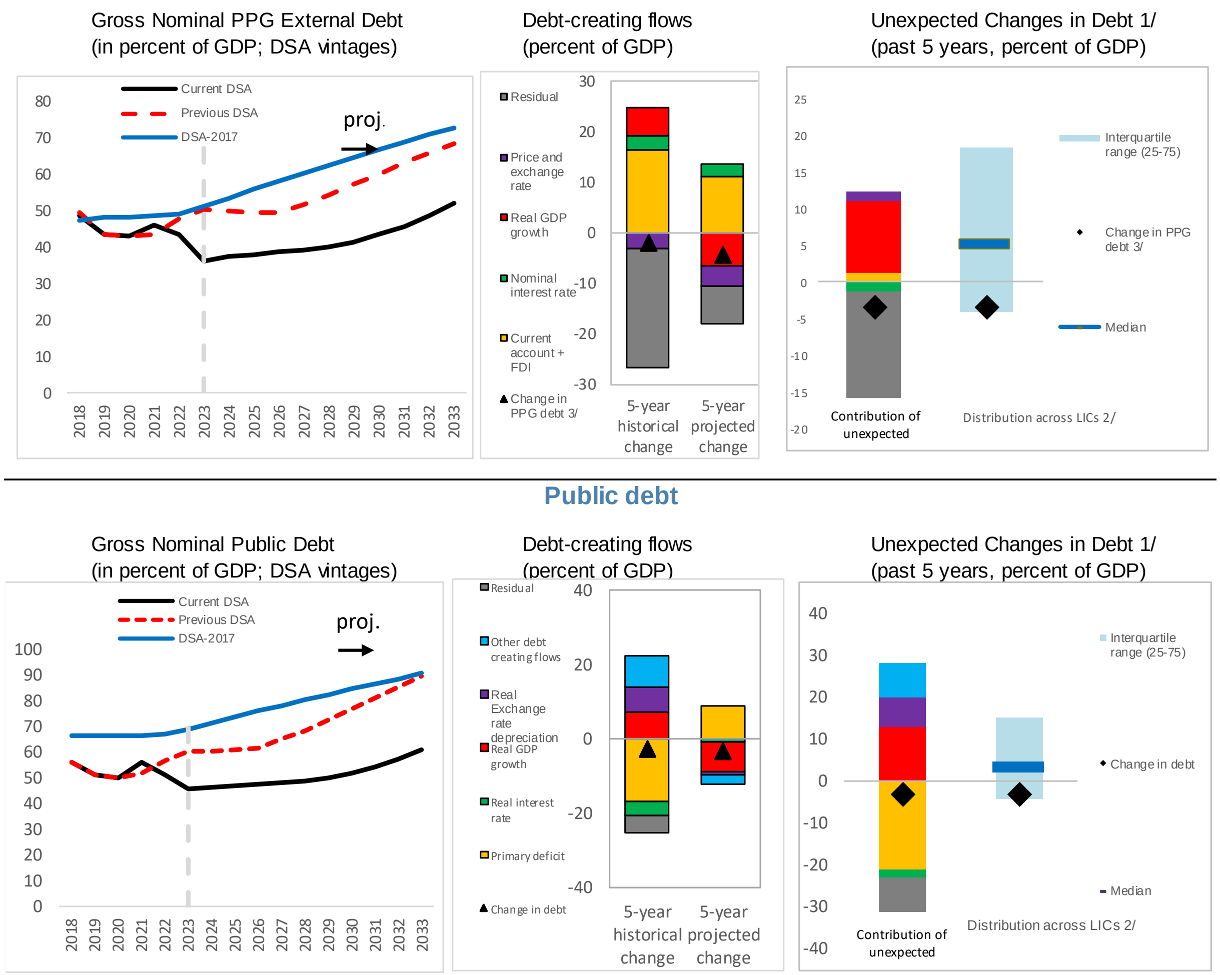

| Borrowing assumptions on additional financing needs resulting from the stress tests* | Default | User defined |
|---|---|---|
| **Shares of marginal debt** | | |
| **External PPG medium and long-term** | 79% | 79% |
| **Domestic medium and long-term** | 21% | 21% |
| **Domestic short-term** | 0% | 0% |
| **Terms of marginal debt** | | |
| **External MLT debt** | | |
| **Avg. nominal interest rate on new borrowing in USD** | 1.3% | 1.3% |
| **Avg. maturity (incl. grace period)** | 30 | 30 |
| **Avg. grace period** | 7 | 7 |
| **Domestic MLT debt** | | |
| **Avg. real interest rate on new borrowing** | 5.5% | 5.5% |
| **Avg. maturity (incl. grace period)** | 10 | 10 |
| **Avg. grace period** | 1 | 1 |
| **Domestic short-term debt** | | |
| **Avg. real interest rate** | 0.0% | 0.0% |

* 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 2033. 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 exterme 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



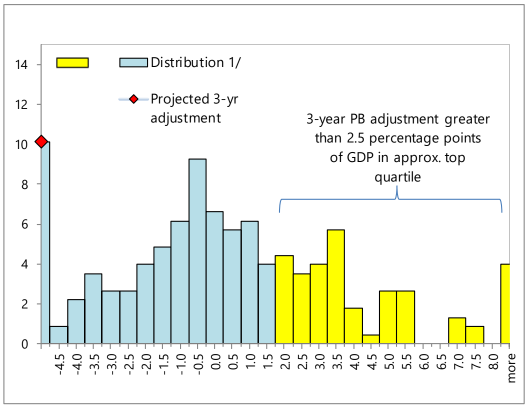

1/ Difference between anticipated and actual contributions on debt ratios.

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.

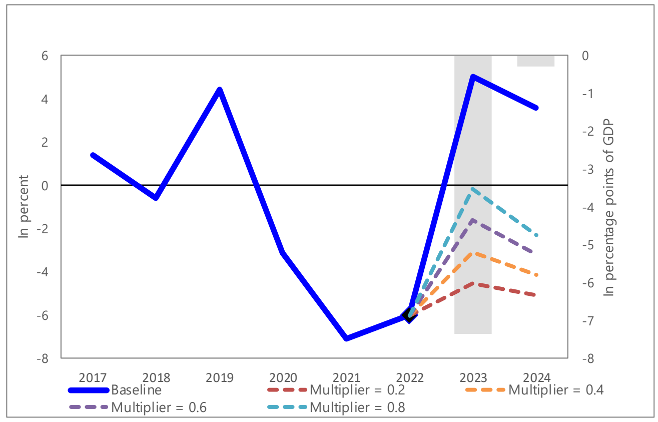
## Figure 4. Samoa: Realism Tools

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



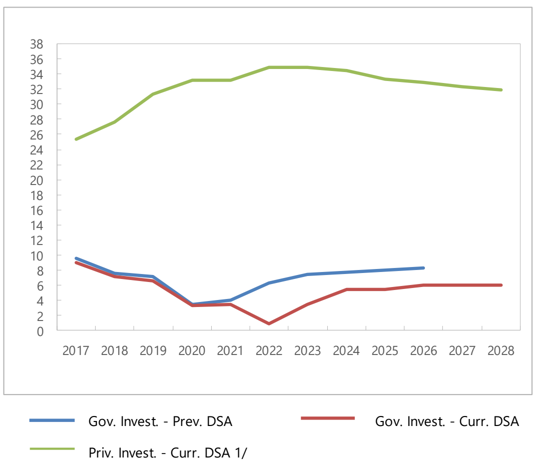

1/ Data cover Fund-supported programs for LICs (excluding emergency financing) approved since 1990. The size of 3-year adjustment from program inception is found on the horizontal axis; the percent of sample is found on the vertical axis.

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



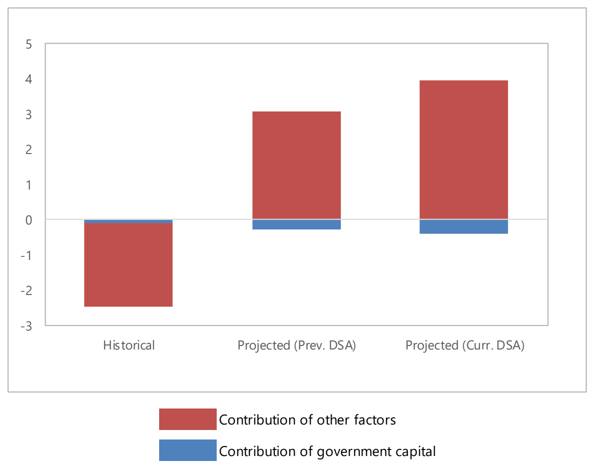

1/ Bars refer to annual projected fiscal adjustment (right-hand side scale) and lines show possible real GDP growth paths under different fiscal multipliers (left-hand side scale).

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




1/ Private investment was published for the first time after the previous DSA.

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

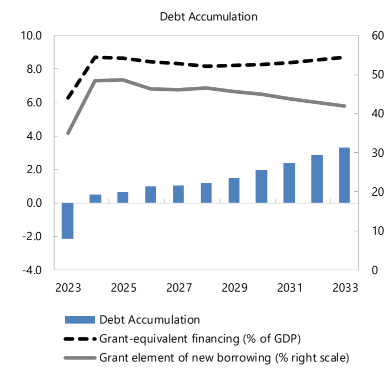


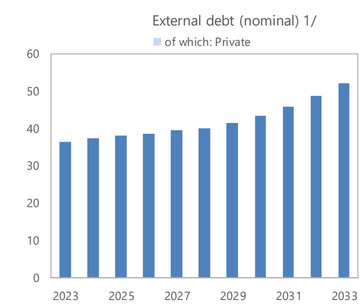
## Table 1. Samoa: External Debt Sustainability Framework, Baseline Scenario, 2020-2043

(In percent of GDP, unless otherwise indicated)

| | Actual | | | Projections | | | | | | | | Average 8/ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2033 | 2043 | Historical | Projections |
| **External debt (nominal) 1/** | 42.9 | 46.1 | 43.7 | 36.4 | 37.4 | 38.0 | 38.6 | 39.4 | 40.0 | 52.0 | 90.2 | 47.6 | 41.9 |
| ***of which: public and publicly guaranteed (PPG)*** | 42.9 | 46.1 | 43.7 | 36.4 | 37.4 | 38.0 | 38.6 | 39.4 | 40.0 | 52.0 | 90.2 | 47.6 | 41.9 |
| Change in external debt | -0.7 | 3.2 | -2.4 | -7.3 | 1.0 | 0.6 | 0.7 | 0.8 | 0.6 | 3.3 | 3.6 | | |
| **Identified net debt-creating flows** | 2.5 | 15.0 | 11.6 | 0.1 | 2.3 | 2.1 | 1.8 | 0.8 | -0.2 | 2.7 | 3.5 | 2.8 | 1.4 |
| **Non-interest current account deficit** | -0.8 | 14.0 | 11.1 | 2.8 | 3.6 | 3.4 | 2.9 | 1.8 | 0.7 | 3.1 | 3.5 | 3.5 | 2.4 |
| Deficit in balance of goods and services | 18.1 | 37.6 | 40.5 | 32.2 | 31.1 | 28.4 | 25.9 | 24.3 | 22.5 | 25.0 | 26.0 | 22.4 | 25.8 |
| Exports | 29.4 | 11.7 | 12.3 | 24.3 | 24.5 | 26.2 | 27.9 | 28.8 | 29.8 | 29.8 | 29.8 | | |
| Imports | 47.5 | 49.3 | 52.7 | 56.5 | 55.6 | 54.6 | 53.8 | 53.1 | 52.3 | 54.8 | 55.8 | | |
| Net current transfers (negative = inflow) | -21.8 | -24.8 | -31.8 | -31.9 | -29.9 | -27.4 | -25.3 | -24.8 | -24.0 | -24.0 | -24.0 | -21.3 | -25.7 |
| *of which: official* | -0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Other current account flows (negative = net inflow) | 2.9 | 1.2 | 2.4 | 2.4 | 2.3 | 2.4 | 2.3 | 2.3 | 2.2 | 2.1 | 1.5 | 2.3 | 2.3 |
| **Net FDI (negative = inflow)** | 0.4 | -0.8 | -0.6 | -1.2 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.4 | -0.9 | -0.6 |
| **Endogenous debt dynamics 2/** | 2.9 | 1.8 | 1.2 | -1.5 | -0.8 | -0.7 | -0.6 | -0.5 | -0.4 | 0.1 | 0.3 | | |
| Contribution from nominal interest rate | 0.6 | 0.6 | 0.5 | 0.6 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.6 | 1.2 | | |
| Contribution from real GDP growth | 1.4 | 3.1 | 2.8 | -2.0 | -1.3 | -1.2 | -1.1 | -1.0 | -0.8 | -0.5 | -0.8 | | |
| Contribution from price and exchange rate changes | 0.9 | -1.9 | -2.2 | ... | ... | ... | ... | ... | ... | ... | ... | | |
| **Residual 3/** | -3.2 | -11.9 | -14.1 | -7.4 | -1.2 | -1.5 | -1.1 | 0.0 | 0.7 | 0.6 | 0.1 | -3.3 | -0.7 |
| *of which: exceptional financing* | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | | |
| **Sustainability indicators** | | | | | | | | | | | | | |
| **PV of PPG external debt-to-GDP ratio** | ... | ... | 30.0 | 25.8 | 25.2 | 24.5 | 24.2 | 24.0 | 23.9 | 30.8 | 59.0 | | |
| **PV of PPG external debt-to-exports ratio** | ... | ... | 244.5 | 106.4 | 103.1 | 93.7 | 86.8 | 83.5 | 80.3 | 103.5 | 197.9 | | |
| **PPG debt service-to-exports ratio** | 13.0 | 14.4 | 24.2 | 16.2 | 15.3 | 12.9 | 10.8 | 10.0 | 8.3 | 6.3 | 11.7 | | |
| **PPG debt service-to-revenue ratio** | 14.0 | 5.7 | 10.2 | 13.7 | 13.2 | 11.9 | 10.5 | 10.1 | 8.7 | 6.6 | 12.2 | | |
| Gross external financing need (Million of U.S. dollars) | 29.6 | 126.1 | 111.7 | 49.4 | 63.6 | 61.7 | 56.8 | 46.2 | 31.3 | 62.2 | 133.4 | | |
| **Key macroeconomic assumptions** | | | | | | | | | | | | | |
| Real GDP growth (in percent) | -3.1 | -7.1 | -6.0 | 5.0 | 3.6 | 3.4 | 3.0 | 2.6 | 2.3 | 1.0 | 1.0 | 0.2 | 2.3 |
| GDP deflator in US dollar terms (change in percent) | -1.9 | 4.7 | 5.0 | 2.7 | 0.8 | 2.0 | 2.3 | 2.3 | 3.1 | 2.7 | 2.7 | 0.7 | 2.5 |
| Effective interest rate (percent) 4/ | 1.3 | 1.3 | 1.2 | 1.4 | 1.4 | 1.3 | 1.3 | 1.2 | 1.2 | 1.2 | 1.4 | 1.3 | 1.3 |
| Growth of exports of G&S (US dollar terms, in percent) | -20.6 | -61.3 | 3.6 | 113.4 | 5.2 | 13.0 | 12.2 | 8.4 | 9.1 | 3.8 | 3.8 | -3.7 | 16.4 |
| Growth of imports of G&S (US dollar terms, in percent) | -6.6 | 1.0 | 5.5 | 15.6 | 2.7 | 3.5 | 4.0 | 3.5 | 3.8 | 4.7 | 3.8 | 0.7 | 5.2 |
| Grant element of new public sector borrowing (in percent) | ... | ... | ... | 34.9 | 48.4 | 48.5 | 46.4 | 46.1 | 46.5 | 41.9 | 38.3 | ... | 44.5 |
| Government revenues (excluding grants, in percent of GDP) | 27.3 | 29.6 | 29.1 | 28.7 | 28.5 | 28.4 | 28.6 | 28.6 | 28.6 | 28.6 | 28.6 | 26.5 | 28.6 |
| Aid flows (in Million of US dollars) 5/ | 89.0 | 58.3 | 78.1 | 56.4 | 94.1 | 97.9 | 98.4 | 102.1 | 105.0 | 133.0 | 207.6 | | |
| Grant-equivalent financing (in percent of GDP) 6/ | ... | ... | ... | 6.2 | 8.7 | 8.7 | 8.4 | 8.3 | 8.2 | 8.7 | 9.5 | ... | 8.2 |
| Grant-equivalent financing (in percent of external financing) 6/ | ... | ... | ... | 91.8 | 74.4 | 75.5 | 75.2 | 75.4 | 76.7 | 70.1 | 62.9 | ... | 75.9 |
| Nominal GDP (Million of US dollars) | 867 | 844 | 832 | 898 | 938 | 989 | 1,043 | 1,095 | 1,155 | 1,389 | 2,011 | | |
| Nominal dollar GDP growth | -5.0 | -2.7 | -1.4 | 7.9 | 4.4 | 5.5 | 5.4 | 5.0 | 5.5 | 3.8 | 3.8 | 0.8 | 4.8 |
| **Memorandum items:** | | | | | | | | | | | | | |
| PV of external debt 7/ | ... | ... | 30.0 | 25.8 | 25.2 | 24.5 | 24.2 | 24.0 | 23.9 | 30.8 | 59.0 | | |
| In percent of exports | ... | ... | 244.5 | 106.4 | 103.1 | 93.7 | 86.8 | 83.5 | 80.3 | 103.5 | 197.9 | | |
| Total external debt service-to-exports ratio | 13.0 | 14.4 | 24.2 | 16.2 | 15.3 | 12.9 | 10.8 | 10.0 | 8.3 | 6.3 | 11.7 | | |
| PV of PPG external debt (in Million of US dollars) | | | 249.8 | 231.9 | 236.5 | 242.8 | 252.4 | 263.2 | 276.3 | 428.3 | 1185.7 | | |
| (PVt-PVt-1)/GDPt-1 (in percent) | | | | -2.1 | 0.5 | 0.7 | 1.0 | 1.0 | 1.2 | 3.3 | 5.0 | | |
| Non-interest current account deficit that stabilizes debt ratio | 0.0 | 10.9 | 13.5 | 10.1 | 2.5 | 2.8 | 2.3 | 1.1 | 0.1 | -0.2 | -0.1 | | |

| 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 - ρ(1+g) + Ɛα (1+r)]/(1+g+ρ+gρ) times previous period debt ratio, with r = nominal interest rate; g = real GDP growth rate, ρ = growth rate of GDP deflator in U.S. dollar terms, Ɛ=nominal appreciation of the local currency, and α= 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.

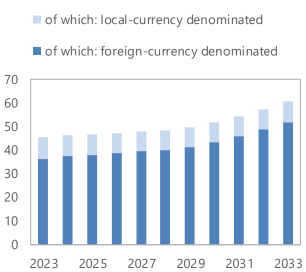
## Table 2. Samoa: Public Sector Debt Sustainability Framework, Baseline Scenario, 2020-2043

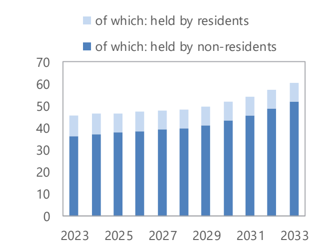
(In percent of GDP, unless otherwise indicated)

| | Actual | | | Projections | | | | | | | | Average 6/ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2033 | 2043 | Historical | Projections |
| **Public sector debt 1/** | **50.1** | **56.1** | **51.3** | **45.6** | **46.4** | **46.8** | **47.3** | **47.9** | **48.4** | **60.7** | **100.3** | **56.7** | **50.6** |
| **of which: external debt** | **42.9** | **46.1** | **43.7** | **36.4** | **37.4** | **38.0** | **38.6** | **39.4** | **40.0** | **52.0** | **90.2** | **47.6** | **41.9** |
| Change in public sector debt | -1.0 | 6.0 | -4.8 | -5.7 | 0.8 | 0.4 | 0.5 | 0.7 | 0.5 | 3.4 | 3.7 | | |
| **Identified debt-creating flows** | **0.6** | **1.4** | **0.7** | **-4.7** | **0.3** | **0.4** | **0.6** | **0.8** | **0.9** | **3.7** | **4.4** | **0.4** | **1.1** |
| **Primary deficit** | **-6.1** | **-2.1** | **-5.9** | **1.5** | **1.8** | **1.8** | **1.8** | **1.8** | **1.8** | **4.3** | **5.3** | **-0.6** | **2.5** |
| Revenue and grants | 36.0 | 36.5 | 38.5 | 34.6 | 34.4 | 34.4 | 34.6 | 34.6 | 34.6 | 34.6 | 34.6 | **31.4** | **34.6** |
| *of which: grants* | 8.7 | 6.8 | 9.4 | 5.9 | 5.9 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | | |
| Primary (noninterest) expenditure | 29.9 | 34.4 | 32.7 | 36.1 | 36.2 | 36.2 | 36.4 | 36.4 | 36.4 | 38.9 | 39.9 | **30.8** | **37.0** |
| **Automatic debt dynamics** | **2.9** | **2.9** | **3.8** | **-3.7** | **-1.5** | **-1.4** | **-1.2** | **-1.1** | **-0.9** | **-0.5** | **-0.9** | | |
| Contribution from interest rate/growth differential | 2.0 | 2.8 | 0.8 | -3.7 | -1.5 | -1.4 | -1.2 | -1.1 | -0.9 | -0.5 | -0.9 | | |
| *of which: contribution from average real interest rate* | 0.3 | -1.0 | -2.8 | -1.3 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | | |
| *of which: contribution from real GDP growth* | 1.6 | 3.8 | 3.6 | -2.5 | -1.6 | -1.5 | -1.4 | -1.2 | -1.1 | -0.6 | -1.0 | | |
| Contribution from real exchange rate depreciation | 0.9 | 0.1 | 3.0 | ... | ... | ... | ... | ... | ... | ... | ... | | |
| **Other identified debt-creating flows** | **3.8** | **0.6** | **2.8** | **-2.4** | **0.0** | **0.0** | **0.0** | **0.0** | **0.0** | **-0.1** | **-0.1** | **0.4** | **-0.3** |
| 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) | 3.8 | 0.6 | 2.8 | -2.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.1 | -0.1 | | |
| **Residual** | **-1.6** | **4.6** | **-5.5** | **-1.1** | **0.5** | **0.0** | **-0.1** | **-0.1** | **-0.4** | **-0.4** | **-0.7** | **-1.3** | **-0.3** |
| **Sustainability indicators** | | | | | | | | | | | | | |
| **PV of public debt-to-GDP ratio 2/** | **...** | **...** | **38.9** | **35.1** | **34.3** | **33.3** | **32.8** | **32.5** | **32.3** | **39.6** | **69.1** | | |
| **PV of public debt-to-revenue and grants ratio** | **...** | **...** | **101.1** | **101.3** | **99.6** | **97.0** | **94.9** | **94.1** | **93.5** | **114.4** | **199.7** | | |
| **Debt service-to-revenue and grants ratio 3/** | **12.8** | **6.1** | **15.0** | **13.1** | **13.5** | **13.0** | **12.0** | **11.7** | **10.7** | **10.1** | **15.9** | | |
| Gross financing need 4/ | 2.3 | 0.7 | 2.7 | 3.6 | 6.4 | 6.2 | 6.0 | 5.9 | 5.5 | 7.7 | 10.8 | | |
| **Key macroeconomic and fiscal assumptions** | | | | | | | | | | | | | |
| Real GDP growth (in percent) | -3.1 | -7.1 | -6.0 | 5.0 | 3.6 | 3.4 | 3.0 | 2.6 | 2.3 | 1.0 | 1.0 | **0.2** | **2.3** |
| Average nominal interest rate on external debt (in percent) | 1.3 | 1.3 | 1.2 | 1.4 | 1.4 | 1.3 | 1.3 | 1.2 | 1.2 | 1.2 | 1.4 | **1.3** | **1.3** |
| Average real interest rate on domestic debt (in percent) | 4.1 | 5.3 | -1.3 | -2.7 | 4.7 | 4.3 | 4.8 | 4.8 | 4.9 | 5.0 | 5.3 | **2.7** | **4.1** |
| Real exchange rate depreciation (in percent, + indicates depreciation) | 2.1 | 0.2 | 6.5 | ... | ... | ... | ... | ... | ... | ... | ... | **2.1** | **...** |
| Inflation rate (GDP deflator, in percent) | 1.0 | -0.2 | 6.4 | 8.0 | 3.0 | 3.5 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | **2.0** | **3.5** |
| Growth of real primary spending (deflated by GDP deflator, in percent) | -6.8 | 7.1 | -10.9 | 16.2 | 3.7 | 3.4 | 3.8 | 2.6 | 2.3 | 2.3 | 1.0 | **0.5** | **4.0** |
| Primary deficit that stabilizes the debt-to-GDP ratio 5/ | -5.1 | -8.1 | -1.1 | 7.2 | 1.0 | 1.4 | 1.3 | 1.2 | 1.4 | 1.0 | 1.6 | **-4.8** | **1.6** |
| 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 | | |

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

Public sector debt 1/




Sources: Country authorities; and staff estimates and projections.
1/ Coverage of debt: The central government, 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 stabilizes 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.

## Table 3. Samoa: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Dept, 2023-2043

(In percent)

| | Projections 1/ | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 |
| **PV of debt-to GDP ratio** | | | | | | | | | | | | | | | | | | | | | |
| **Baseline** | 26 | 25 | 25 | 24 | 24 | 24 | 24 | 25 | 27 | 29 | 31 | 33 | 36 | 39 | 42 | 45 | 48 | 51 | 53 | **56** | **59** |
| **A. Alternative Scenarios** | | | | | | | | | | | | | | | | | | | | | |
| A1. Key variables at their historical averages in 2023-2033 2/ | 26 | 26 | 26 | 27 | 28 | 30 | 32 | 35 | 38 | 41 | 44 | 47 | 51 | 54 | **58** | **62** | **66** | **69** | **74** | **78** | **82** |
| **B. Bound Tests** | | | | | | | | | | | | | | | | | | | | | |
| B1. Real GDP growth | 26 | 29 | 32 | 31 | 31 | 31 | 32 | 33 | 35 | 37 | 40 | 43 | 47 | 51 | 54 | **58** | **62** | **66** | **69** | **73** | **76** |
| B2. Primary balance | 26 | 27 | 28 | 28 | 27 | 27 | 28 | 29 | 31 | 33 | 35 | 37 | 40 | 43 | 46 | 49 | 51 | 54 | **57** | **60** | **62** |
| B3. Exports | 26 | 31 | 40 | 40 | 39 | 39 | 40 | 41 | 42 | 44 | 46 | 48 | 50 | 53 | **56** | **58** | **61** | **63** | **66** | **68** | **71** |
| B4. Other flows 3/ | 26 | 34 | 40 | 39 | 39 | 39 | 39 | 40 | 42 | 43 | 44 | 46 | 48 | 51 | 53 | **55** | **57** | **59** | **62** | **64** | **66** |
| B5. Depreciation | 26 | 32 | 25 | 25 | 25 | 25 | 25 | 26 | 28 | 30 | 33 | 37 | 41 | 45 | 49 | 53 | **57** | **60** | **64** | **68** | **72** |
| B6. Combination of B1-B5 | 26 | 41 | 48 | 47 | 47 | 46 | 47 | 48 | 50 | 52 | 54 | **56** | **59** | **62** | **65** | **67** | **70** | **73** | **76** | **79** | **81** |
| **C. Tailored Tests** | | | | | | | | | | | | | | | | | | | | | |
| C1. Combined contingent liabilities | 26 | 28 | 28 | 27 | 27 | 27 | 28 | 29 | 31 | 32 | 35 | 37 | 40 | 43 | 46 | 49 | 52 | 55 | **58** | **60** | **63** |
| C2. Natural disaster | 26 | 36 | 36 | 36 | 36 | 37 | 38 | 40 | 42 | 45 | 48 | 51 | 55 | **58** | **62** | **66** | **69** | **73** | **76** | **80** | **83** |
| **Threshold** | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 |
| **PV of debt-to-exports ratio** | | | | | | | | | | | | | | | | | | | | | |
| **Baseline** | 106 | 103 | 94 | 87 | 83 | 80 | 82 | 85 | 90 | 96 | 103 | 112 | 122 | 131 | 141 | 151 | 160 | 170 | 179 | 189 | 198 |
| **A. Alternative Scenarios** | | | | | | | | | | | | | | | | | | | | | |
| A1. Key variables at their historical averages in 2023-2033 2/ | 106 | 105 | 99 | 95 | 97 | 101 | 109 | 117 | 126 | 136 | 147 | 158 | 170 | 182 | 194 | 207 | 220 | 233 | **247** | **261** | **276** |
| **B. Bound Tests** | | | | | | | | | | | | | | | | | | | | | |
| B1. Real GDP growth | 106 | 103 | 94 | 87 | 83 | 80 | 82 | 85 | 90 | 96 | 103 | 112 | 122 | 131 | 141 | 151 | 160 | 170 | 179 | 189 | 198 |
| B2. Primary balance | 106 | 110 | 106 | 99 | 95 | 92 | 94 | 98 | 103 | 109 | 116 | 125 | 135 | 144 | 154 | 163 | 173 | 182 | 191 | 200 | 209 |
| B3. Exports | 106 | 171 | **305** | **282** | **271** | **260** | **264** | **272** | **283** | **294** | **306** | **320** | **336** | **354** | **371** | **388** | **405** | **422** | **438** | **455** | **471** |
| B4. Other flows 3/ | 106 | 137 | 151 | 140 | 135 | 129 | 131 | 135 | 140 | 145 | 149 | 155 | 163 | 170 | 177 | 185 | 192 | 200 | 207 | 214 | 221 |
| B5. Depreciation | 106 | 103 | 76 | 70 | 68 | 65 | 67 | 70 | 75 | 81 | 89 | 98 | 109 | 119 | 130 | 140 | 150 | 161 | 171 | 180 | 190 |
| B6. Combination of B1-B5 | 106 | 181 | 146 | 222 | 213 | 204 | 207 | 213 | 222 | 229 | 237 | **247** | **259** | **272** | **284** | **297** | **309** | **322** | **334** | **346** | **359** |
| **C. Tailored Tests** | | | | | | | | | | | | | | | | | | | | | |
| C1. Combined contingent liabilities | 106 | 116 | 106 | 98 | 95 | 92 | 94 | 97 | 103 | 109 | 116 | 125 | 135 | 145 | 155 | 165 | 174 | 184 | 194 | 203 | 212 |
| C2. Natural disaster | 106 | 151 | 140 | 132 | 130 | 127 | 131 | 138 | 145 | 154 | 165 | 176 | 189 | 201 | 214 | 226 | 239 | **251** | **263** | **275** | **287** |
| **Threshold** | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 240 |
| **Debt service-to-exports ratio** | | | | | | | | | | | | | | | | | | | | | |
| **Baseline** | 16 | 15 | 13 | 11 | 10 | 8 | 8 | 7 | 7 | 6 | 6 | 6 | 7 | 7 | 7 | 8 | 9 | 9 | 10 | 11 | 12 |
| **A. Alternative Scenarios** | | | | | | | | | | | | | | | | | | | | | |
| A1. Key variables at their historical averages in 2023-2033 2/ | 16 | 16 | 14 | 12 | 12 | 10 | 10 | 9 | 9 | 9 | 9 | 9 | 10 | 10 | 12 | 13 | 14 | 15 | 16 | 18 | 19 |
| **B. Bound Tests** | | | | | | | | | | | | | | | | | | | | | |
| B1. Real GDP growth | 16 | 15 | 13 | 11 | 10 | 8 | 8 | 7 | 7 | 6 | 6 | 6 | 7 | 7 | 7 | 8 | 9 | 9 | 10 | 11 | 12 |
| B2. Primary balance | 16 | 15 | 13 | 11 | 10 | 9 | 8 | 7 | 7 | 7 | 7 | 7 | 8 | 7 | 8 | 9 | 9 | 10 | 11 | 12 | 13 |
| B3. Exports | 16 | **22** | **29** | **26** | **24** | 20 | 19 | 17 | 16 | 17 | 20 | 20 | 21 | 20 | **22** | **23** | **24** | **25** | **27** | **28** | **30** |
| B4. Other flows 3/ | 16 | 15 | 14 | 12 | 11 | 9 | 9 | 8 | 8 | 9 | 10 | 10 | 10 | 10 | 11 | 11 | 12 | 12 | 13 | 14 | 14 |
| B5. Depreciation | 16 | 15 | 13 | 10 | 10 | 8 | 7 | 7 | 6 | 6 | 5 | 5 | 6 | 6 | 6 | 7 | 8 | 8 | 9 | 10 | 11 |
| B6. Combination of B1-B5 | 16 | 19 | **23** | 19 | 18 | 15 | 14 | 13 | 12 | 15 | 16 | 15 | 16 | 16 | 17 | 18 | 18 | 19 | 20 | **22** | **23** |
| **C. Tailored Tests** | | | | | | | | | | | | | | | | | | | | | |
| C1. Combined contingent liabilities | 16 | 15 | 13 | 11 | 10 | 9 | 8 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 8 | 8 | 9 | 9 | 10 | 11 | 12 |
| C2. Natural disaster | 16 | 16 | 15 | 12 | 11 | 10 | 9 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 10 | 10 | 11 | 12 | 13 | 14 |
| **Threshold** | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 |
| **Debt service-to-revenue ratio** | | | | | | | | | | | | | | | | | | | | | |
| **Baseline** | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 8 | 8 | 9 | 10 | 10 | 11 | 12 |
| **A. Alternative Scenarios** | | | | | | | | | | | | | | | | | | | | | |
| A1. Key variables at their historical averages in 2023-2033 2/ | 14 | 14 | 13 | 12 | 12 | 11 | 10 | 9 | 9 | 9 | 9 | 9 | 10 | 11 | 12 | 13 | 14 | 16 | 17 | 19 | 20 |
| **B. Bound Tests** | | | | | | | | | | | | | | | | | | | | | |
| B1. Real GDP growth | 14 | 15 | 15 | 14 | 13 | 11 | 10 | 9 | 9 | 9 | 9 | 8 | 9 | 9 | 10 | 11 | 12 | 12 | 14 | 15 | 16 |
| B2. Primary balance | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 7 | 7 | 7 | 7 | 8 | 8 | 9 | 9 | 10 | 11 | 11 | 12 | 13 |
| B3. Exports | 14 | 14 | 13 | 13 | 12 | 10 | 10 | 9 | 8 | 9 | 11 | 10 | 11 | 11 | 11 | 12 | 12 | 13 | 14 | 15 | 16 |
| B4. Other flows 3/ | 14 | 13 | 13 | 12 | 11 | 10 | 9 | 8 | 8 | 9 | 10 | 10 | 11 | 10 | 11 | 11 | 12 | 13 | 13 | 14 | 15 |
| B5. Depreciation | 14 | 17 | 15 | 13 | 12 | 11 | 10 | 9 | 8 | 8 | 7 | 7 | 7 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| B6. Combination of B1-B5 | 14 | 15 | 16 | 14 | 14 | 12 | 11 | 10 | 10 | 12 | 12 | 12 | 13 | 12 | 13 | 14 | 15 | 15 | 16 | 17 | 18 |
| **C. Tailored Tests** | | | | | | | | | | | | | | | | | | | | | |
| C1. Combined contingent liabilities | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 8 | 9 | 9 | 10 | 11 | 12 | 12 |
| C2. Natural disaster | 14 | 13 | 13 | 11 | 11 | 10 | 9 | 8 | 8 | 8 | 8 | 7 | 8 | 8 | 9 | 9 | 10 | 11 | 12 | 13 | 13 |
| **Threshold** | 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 Dept, 2023-2043

| | Projections 1/ | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 |
| | | | | | | | | | | PV of Debt-to-GDP Ratio | | | | | | | | | | | |
| **Baseline** | 35 | 34 | 33 | 33 | 33 | 32 | 33 | 34 | 35 | 37 | 40 | 42 | 45 | 48 | 51 | 54 | 57 | 60 | 63 | 66 | 69 |
| **A. Alternative Scenarios** | | | | | | | | | | | | | | | | | | | | | |
| A1. Key variables at their historical averages in 2023-2033 2/ | 35 | 34 | 34 | 33 | 32 | 31 | 31 | 30 | 30 | 30 | 29 | 29 | 30 | 30 | 30 | 30 | 31 | 31 | 32 | 32 | 33 |
| **B. Bound Tests** | | | | | | | | | | | | | | | | | | | | | |
| B1. Real GDP growth | 35 | 42 | 52 | 56 | 61 | 66 | **73** | **80** | **87** | **95** | **103** | **112** | **121** | **130** | **139** | **147** | **156** | **165** | **174** | **182** | **190** |
| B2. Primary balance | 35 | 37 | 38 | 38 | 37 | 37 | 37 | 39 | 40 | 42 | 44 | 47 | 49 | 52 | 55 | 58 | 61 | 64 | 67 | **70** | **73** |
| B3. Exports | 35 | 38 | 46 | 45 | 44 | 44 | 45 | 46 | 47 | 49 | 51 | 53 | 55 | 58 | 60 | 62 | 65 | 67 | 70 | **72** | **75** |
| B4. Other flows 3/ | 35 | 43 | 48 | 48 | 47 | 47 | 48 | 49 | 50 | 52 | 53 | 55 | 57 | 60 | 62 | 64 | 67 | 69 | **71** | **74** | **76** |
| B5. Depreciation | 35 | 39 | 35 | 32 | 30 | 28 | 26 | 26 | 25 | 25 | 25 | 26 | 27 | 28 | 29 | 31 | 32 | 33 | 35 | 36 | 37 |
| B6. Combination of B1-B5 | 35 | 37 | 37 | 37 | 37 | 38 | 39 | 40 | 42 | 44 | 47 | 50 | 53 | 57 | 60 | 63 | 66 | 70 | **73** | **76** | **79** |
| **C. Tailored Tests** | | | | | | | | | | | | | | | | | | | | | |
| C1. Combined contingent liabilities | 35 | 39 | 38 | 37 | 37 | 37 | 37 | 38 | 40 | 42 | 44 | 46 | 49 | 52 | 55 | 58 | 62 | 65 | 68 | **71** | **73** |
| C2. Natural disaster | 35 | 50 | 49 | 49 | 49 | 49 | 50 | 52 | 54 | 56 | 59 | 62 | 66 | 70 | **73** | **77** | **81** | **84** | **88** | **92** | **95** |
| **TOTAL public debt benchmark** | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 |
| | | | | | | | | | | PV of Debt-to-Revenue Ratio | | | | | | | | | | | |
| **Baseline** | 101 | 100 | 97 | 95 | 94 | 94 | 95 | 98 | 103 | 108 | 114 | 122 | 131 | 139 | 148 | 157 | 165 | 174 | 183 | 191 | 200 |
| **A. Alternative Scenarios** | | | | | | | | | | | | | | | | | | | | | |
| A1. Key variables at their historical averages in 2023-2033 2/ | 101 | 99 | 96 | 93 | 90 | 87 | 85 | 83 | 82 | 81 | 80 | 80 | 80 | 81 | 81 | 82 | 82 | 83 | 84 | 85 | 86 |
| **B. Bound Tests** | | | | | | | | | | | | | | | | | | | | | |
| B1. Real GDP growth | 101 | 118 | 143 | 155 | 169 | 183 | 200 | 219 | 239 | 261 | 283 | 307 | 332 | 357 | 381 | 406 | 430 | 454 | 477 | 501 | 524 |
| B2. Primary balance | 101 | 107 | 111 | 109 | 108 | 107 | 108 | 111 | 116 | 121 | 127 | 134 | 143 | 151 | 160 | 169 | 177 | 186 | 194 | 202 | 211 |
| B3. Exports | 101 | 112 | 132 | 130 | 129 | 128 | 129 | 132 | 137 | 142 | 147 | 152 | 159 | 166 | 173 | 181 | 188 | 195 | 202 | 209 | 216 |
| B4. Other flows 3/ | 101 | 124 | 141 | 138 | 137 | 136 | 137 | 141 | 145 | 149 | 154 | 159 | 166 | 172 | 179 | 186 | 193 | 200 | 206 | 213 | 220 |
| B5. Depreciation | 101 | 114 | 104 | 95 | 88 | 82 | 77 | 75 | 74 | 74 | 74 | 76 | 79 | 83 | 86 | 90 | 94 | 97 | 101 | 105 | 109 |
| B6. Combination of B1-B5 | 101 | 106 | 108 | 107 | 107 | 108 | 110 | 115 | 120 | 127 | 134 | 143 | 152 | 162 | 171 | 180 | 190 | 199 | 208 | 218 | 227 |
| **C. Tailored Tests** | | | | | | | | | | | | | | | | | | | | | |
| C1. Combined contingent liabilities | 101 | 113 | 110 | 108 | 107 | 106 | 108 | 111 | 115 | 120 | 127 | 134 | 143 | 152 | 160 | 169 | 178 | 187 | 195 | 204 | 212 |
| C2. Natural disaster | 101 | 144 | 142 | 141 | 141 | 141 | 144 | 149 | 155 | 162 | 170 | 179 | 189 | 200 | 211 | 221 | 232 | 243 | 253 | 264 | 274 |
| | | | | | | | | | | Debt Service-to-Revenue Ratio | | | | | | | | | | | |
| **Baseline** | 13 | 14 | 13 | 12 | 12 | 11 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 11 | 12 | 13 | 13 | 14 | 15 | 16 |
| **A. Alternative Scenarios** | | | | | | | | | | | | | | | | | | | | | |
| A1. Key variables at their historical averages in 2023-2033 2/ | 13 | 14 | 14 | 13 | 13 | 12 | 12 | 11 | 11 | 11 | 11 | 10 | 11 | 11 | 11 | 12 | 12 | 12 | 13 | 14 | 14 |
| **B. Bound Tests** | | | | | | | | | | | | | | | | | | | | | |
| B1. Real GDP growth | 13 | 15 | 16 | 16 | 17 | 16 | 17 | 17 | 18 | 20 | 21 | 22 | 25 | 26 | 28 | 30 | 32 | 34 | 36 | 38 | 41 |
| B2. Primary balance | 13 | 14 | 13 | 13 | 13 | 12 | 11 | 11 | 11 | 11 | 11 | 11 | 12 | 11 | 12 | 13 | 14 | 14 | 15 | 16 | 17 |
| B3. Exports | 13 | 14 | 13 | 13 | 12 | 11 | 11 | 10 | 10 | 11 | 13 | 12 | 13 | 13 | 13 | 14 | 15 | 15 | 16 | 17 | 18 |
| B4. Other flows 3/ | 13 | 14 | 14 | 13 | 13 | 12 | 11 | 11 | 11 | 12 | 13 | 13 | 13 | 13 | 14 | 15 | 15 | 16 | 17 | 17 | 18 |
| B5. Depreciation | 13 | 15 | 16 | 14 | 14 | 12 | 12 | 11 | 11 | 10 | 10 | 10 | 10 | 10 | 11 | 11 | 12 | 13 | 13 | 14 | 15 |
| B6. Combination of B1-B5 | 13 | 14 | 14 | 13 | 13 | 12 | 12 | 11 | 11 | 12 | 12 | 12 | 13 | 13 | 14 | 14 | 15 | 16 | 17 | 18 | 19 |
| **C. Tailored Tests** | | | | | | | | | | | | | | | | | | | | | |
| C1. Combined contingent liabilities | 13 | 14 | 14 | 13 | 13 | 12 | 11 | 11 | 11 | 11 | 11 | 10 | 11 | 11 | 12 | 12 | 13 | 14 | 14 | 15 | 16 |
| C2. Natural disaster | 13 | 14 | 15 | 15 | 15 | 14 | 14 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 14 | 14 | 15 | 16 | 17 | 18 | 19 |

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.