## EXECUTIVE SUMMARY


- **The tsunami that hit Samoa on September 29, 2009, has been the worst natural disaster since independence in 1962.** The death toll has risen to 143, while almost 5,300 people—some 2½ percent of Samoa's population—have lost their homes, many of them in poor rural areas. Beyond the human suffering, the fiscal cost of infrastructure rehabilitation, resettlement, and maintaining access to social services could well exceed 15 percent of GDP.

- **The disaster has undercut Samoa's economic resilience and prospects for a quick recovery from the global recession.** In particular the impact on Samoa's tourism sector, the main commercial foreign exchange earner, could be severe. As a result, real GDP is likely to contract in 2010 and the current account deficit is set to widen, with reconstruction-related imports rising sharply. The outlook is subject to considerable uncertainty, given the unprecedented scale of the damage.

- **The authorities' immediate disaster response has been swift and measures are now shifting toward economic recovery and social protection while ensuring fiscal sustainability.** A supplementary budget for FY 2009/10, which could bring the overall fiscal deficit to nearly 12 percent of GDP, will be fully funded by grants and concessional loans. It will focus on the most urgent task of humanitarian relief and repairs to infrastructure that are key to resuscitating growth. The authorities are also reviewing existing development spending for synergies with infrastructure rehabilitation, and are committed to finance any remaining financing gap through external grants and concessional borrowing. Furthermore, they intend to reduce the fiscal deficit to less than 3 percent over the medium term to stabilize public debt at prudent levels.

- **The authorities have requested a disbursement equivalent to 50 percent of quota (SDR 5.8 million) under the Rapid-Access Component of the Fund's Exogenous Shocks Facility (ESF-RAC).** The staff supports the request on Samoa's low public debt and credible commitment to sound macroeconomic policies.

## I. Background

1. **The earthquake and tsunami of September 29, 2009, has been the worst natural disaster since Samoa's independence in 1962.** The death toll has risen to 143, while almost 5,300 people—some 2½ percent of Samoa's population—have lost their homes, many of them in poor rural areas. There is widespread structural damage to infrastructure, although the main government buildings and the airport in Apia have remained intact. Beyond the human cost, the physical damage is estimated by the UNDP and World Bank at US$60 million (over 10 percent of GDP), but the cost of infrastructure rehabilitation, strengthening social safety nets, and investing in disaster protection, including resettlement, is expected to be significantly higher.

2. **The government's disaster response was swift.** Immediate humanitarian relief has already been provided under the overall coordination of the government's Disaster Advisory Council and with support from international aid agencies. Moreover, the National Disaster Management Office is working closely with international donors on designing and implementing a recovery framework that focuses on maintaining access to basic health and education services, infrastructure rehabilitation, resettlement, and investments in disaster risk reduction. Given the poverty implications of the disaster, the framework will be integrated with the *Strategy for the Development of Samoa (SDS) 2008–12*, Samoa's blue-print for poverty reduction and growth.

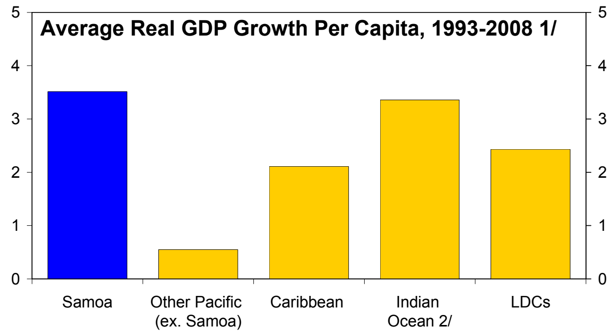
3. **The authorities have requested a disbursement equivalent to 50 percent of quota (SDR 5.8 million) under the Rapid-Access Component of the Fund's Exogenous Shocks Facility (ESF-RAC).** In the attached letter, Finance Minister Lee Hang describes the harm caused by the earthquake and tsunami to Samoa's people, physical infrastructure, and the economy, including the country's balance of payments (Attachment I). He also explains the government's policies to safeguard Samoa's social and economic progress and maintain macroeconomic stability, in particular fiscal sustainability. The Fund's emergency assistance will bolster Samoa's external reserves amid shortfalls in export earnings and increased imports related to infrastructure rehabilitation, and help catalyze significant donor support by signaling the authorities' commitment to sound macroeconomic policies.

## II. Economic Performance Prior to the Tsunami

4. **Despite strong economic performance for over a decade, Samoa was not immune to the global recession** (Table 1 and Figure 1). Real per-capita income growth since the mid-1990s has been significantly higher than for any relevant peer group, in particular other Pacific Islands. Prudent fiscal policies, guided by the government's annual targets for deficit (3½ percent of GDP) and net debt (40 percent of GDP) and steadfast structural reforms underpinned this performance. However, the global recession hit parts of the economy severely, notably manufacturing where the downsizing of a plant for automotive parts led to a collapse in output and formal sector employment. According to official estimates, real GDP fell 5½ percent in FY 2008/09, recording the worst slump in two decades.

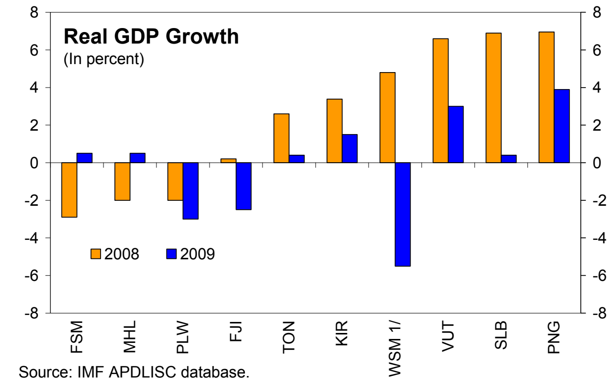
## Figure 1: Samoa and its Peers During the Global Recession

*Despite strong macroeconomic performance over the last two decades, …*



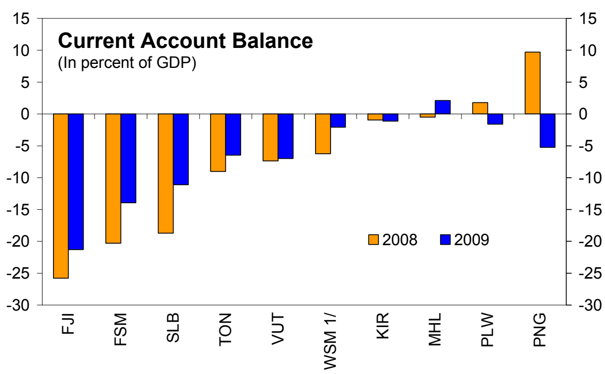

Sources: IMF, World Economic Outlook database; and Fund staff calculations.
1/ Simple averages.
2/ Mauritius, Seychelles and Maldives.

*… Samoa was not immune to the global recession. Manufacturing output and processing trade collapsed.*



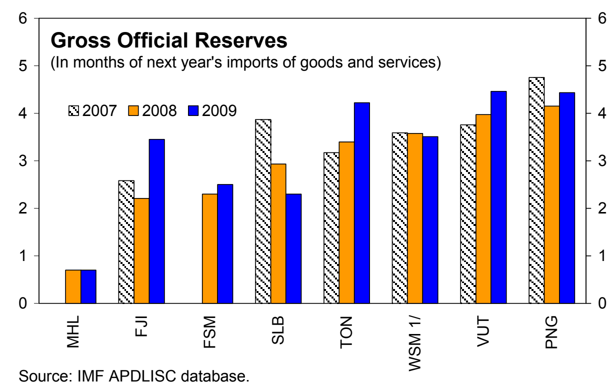

Source: IMF APDLISC database.
1/ In fiscal year July/June.

*However, thanks to resilient tourism receipts and remittances, the current account balance improved …*



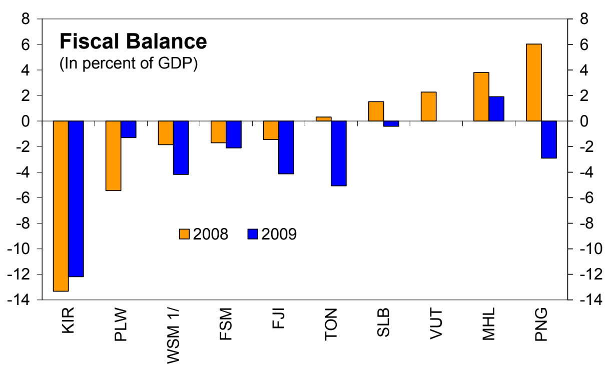

Source: IMF APDLISC database.
1/ In fiscal year July/June.

*… and official reserves remained stable.*



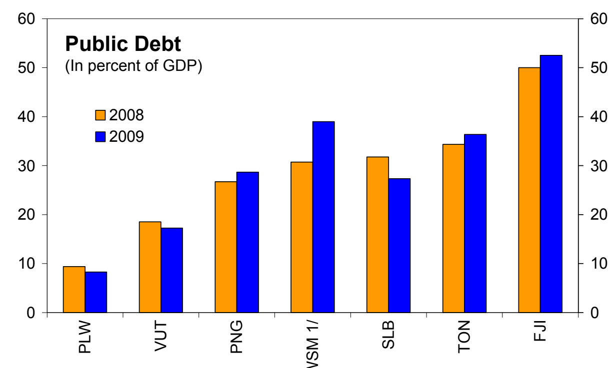

Source: IMF APDLISC database.
1/ In fiscal year July/June.

*Moreover, with the 2008/09 budget, the authorities shifted to an expansionary fiscal stance, mainly through an increase in development spending …*



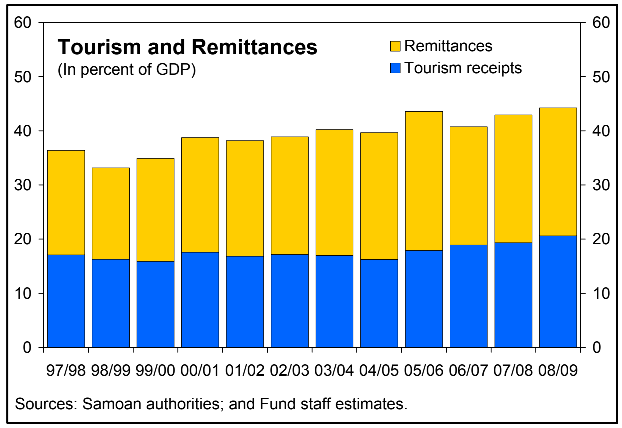

Source: IMF APDLISC database.
1/ In fiscal year July/June.

*… while seeking concessional external financing to keep public debt within sustainable thresholds.*

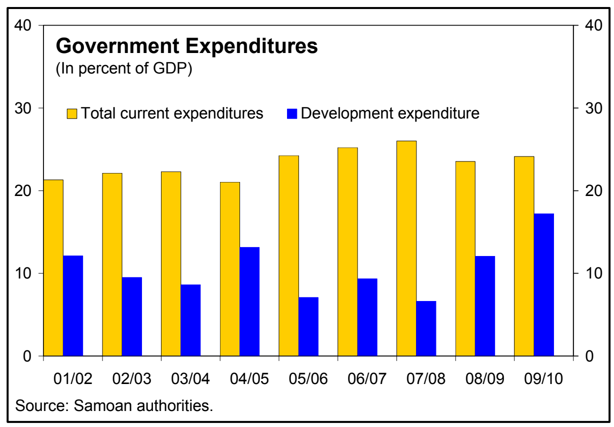



Source: IMF APDLISC database.
1/ In fiscal year July/June.

5. **Yet, indicators of external vulnerability remained low.** The current account deficit narrowed, as remittances and tourism receipts, Samoa's main foreign exchange earners equivalent to about ⅓ and ¼ of GDP, respectively, continued to grow. Official reserves remained stable, above the central bank's target of four months of current goods' imports. With the credibility of the exchange-rate basket peg intact, inflation expectations remained well anchored, allowing headline inflation to subside quickly, after peaking in late 2008, in line with global prices for food and commodities.




6. **The authorities responded early in the global recession with monetary and fiscal stimulus.** The Central Bank of Samoa (CBS) has lowered policy rates by nearly 300 bps since August 2008. However, the pass-through to commercial lending rates has been limited as banks tightened risk management and built excess liquidity. The government has started to increase development spending since 2008, consistent with the objectives in the SDS and as part of an economic stimulus package in the wake of the global recession. The deficit was budgeted to double to over 10 percent of GDP in FY 2009/10, largely financed by grants and concessional loans.




## III. Economic Outlook and Policy Framework

### A. Impact of the Tsunami

7. **In addition to the significant rehabilitation costs, the tsunami has undercut Samoa's economic resilience and prospects for a quick recovery from the global recession.** The scale of the damage to physical infrastructure is of unprecedented proportions

**Impact of Natural Disasters in Asia**

| | 2004 Tsunami | | | 2007 Floods | 2009 Tsunami |
|---|---|---|---|---|---|
| | Sri Lanka | Maldives | Indonesia | Bangladesh | Samoa |
| Deaths | 31,000 | 82 | 225,000 | 4,400 | 143 |
| Displaced | 1 million | 14,000 | 0.5 million | 8.7 million | 5,300 |
| (In percent of population) | 4.8 | 3.5 | 0.3 | 6.2 | 2.7 |
| Damage (US$ million) | 1,500 | 304 | 4,000-5,000 | 2,700 | 60 |
| (In percent of GDP) | 7.5 | 35.0 | 2.0 | 3.7 | 10.5 |
| Fund support (In percent of quota) | 25 | 50 | … | 25 | 50 [proposed] |

Sources: IMF country reports; and Fund staff estimates.

for Samoa and also stands out by international comparison. In particular, the impact on Samoa's fledgling tourism sector could be severe. Tourism receipts in FY 2008/09 accounted for 65 percent of all export earnings and the sector is estimated to contribute directly and indirectly (through domestic suppliers) about 14 percent of GDP. About a quarter of the tourism sector's capacity has been destroyed by the tsunami. Based on cross-country recovery experience and Samoa-specific seasonal and structural patterns of tourism demand, this means that about 1½–3½ percent of GDP could be lost in the first year after the tsunami (Box I).

8. **As a result, the incipient recovery is likely to stall and real GDP to contract in 2010 by about 3 percent** (Table 2). Tentative staff estimates indicate that GDP growth would fall up to 5 percentage points short of the pre-tsunami baseline. Beyond tourism, the widespread damage to physical infrastructure implies that other key sectors such as commerce, transport, communication, and agriculture are also directly hit. With economic activity returning to normal from a low base and infrastructure rehabilitation spending providing a further boost, growth could exceed the baseline by 2 percentage points in 2011 before converging to potential.

9. **At the same time, the current account deficit is set to widen** (Table 3). Before the tsunami, the current account deficit was already expected to deteriorate substantially, mainly as a result of the sizeable fiscal stimulus envisaged in the 2009/10 budget and increased private sector activity. In addition, as a result of the tsunami, shortfalls in tourism receipts of about US$20 million in FY 2009/10 (subject to a wide margin of error) would only partly be offset by lower imports of the tourism sector, while the increase in capital goods and other imports related to infrastructure rehabilitation would more than offset any decline from an initially weaker economy. However, a strong response from private overseas remittances would help reduce external financing pressures, as would insurance payments to international resorts. Both are currently difficult to gauge with precision.

10. **The outlook is subject to considerable uncertainty.** This relates above all to the unprecedented scale of the damage making predictions of a systematic rehabilitation and growth recovery challenging. Moreover, estimates are subject to weaknesses in Samoa's national accounts data. In addition, a key downside risk is that the reputational damage for Samoa's image as a safe destination could last longer than is usually the case, especially if the island is hit by another significant natural disaster.

### B. Fiscal Management: From Rebuilding to Maintaining Sustainability

11. **The fiscal cost of emergency relief and rehabilitation will be significant.** Based on estimates by UNDP and World Bank missions, the government considers an economic recovery framework with a fiscal cost of about US$100 million (18 percent of GDP). This estimate is higher than the estimated damage to existing infrastructure, as the recovery framework would not only include resettlement to safer areas and repair of infrastructure to

allow access to basic social services, but also provide for social safety nets, and investments in disaster risk reduction. The recovery framework would build on the government's *Strategy for Development of Samoa* (SDS), the blue-print for poverty reduction, and sustained high growth over the medium-term.

12. **Therefore, a widening of the fiscal deficit to 12 percent of GDP in FY 2009/10 to accommodate Samoa's rehabilitation needs is unavoidable** (Table 4). The government has already identified 60 percent of the funding needs for the recovery framework in new grants and concessional financing. Staff and the authorities agreed that the highest spending priority should be on infrastructure that is key to resuscitate growth, such as utilities and tourism, as well as basic social needs. Accordingly, the government is preparing a supplementary budget for FY 2009/10 which would cover about a quarter of the recovery framework and focuses on the most urgent tasks, including humanitarian relief, road repair, maintaining access to priority social services, in particular to the most vulnerable segments of society in affected village communities, as well as water and electricity.

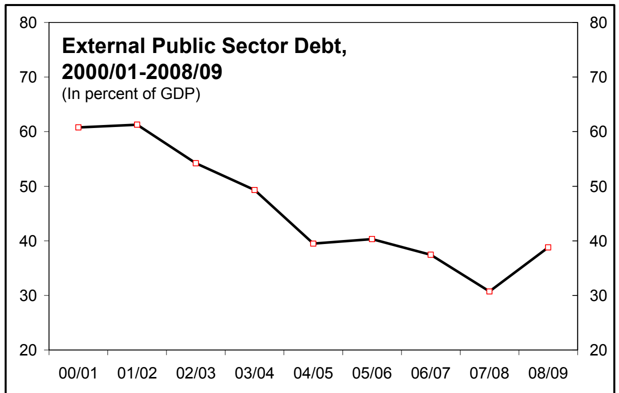
Samoa: Fiscal cost of tsunami and financing
(In percent of post-tsunami GDP)

| | 2009/10 | 2010/11 | 2011/12 | 20012/13 |
|---|---|---|---|---|
| Fiscal cost of tsunami | 6.1 | 5.0 | 3.4 | 3.0 |
| Revenue impact | 1.7 | 0.5 | -0.2 | -0.7 |
| Cost of recovery plan | 4.4 | 4.5 | 3.6 | 3.7 |
| Current aid pledges | 4.4 | 4.5 | 0.9 | 0.0 |
| Grants | 2.2 | 1.1 | 0.0 | 0.0 |
| Concessional external financing | 2.2 | 3.5 | 0.9 | 0.0 |
| Change in domestic financing | 1.7 | 0.0 | 0.0 | 0.0 |
| Remaining financing need | 0.0 | 0.5 | 2.5 | 3.0 |
| Memorandum item: | | | | |
| Overall fiscal deficit (including grants) | 11.7 | 8.8 | 5.9 | 5.7 |

Source: Samoan authorities; Fund staff estimates.

13. **The government is committed to minimize the overall fiscal burden and capacity risks arising from its rehabilitation program.** Going beyond the supplementary budget, the government and staff agreed that it will be important to carefully review existing medium-term development spending plans in consultation with key donors, with a view to identify synergies with the recovery framework and re-direct to the extent possible funds to infrastructure rehabilitation. This could not only go a long way in closing the still unidentified tsunami-related financing in the outer years, but it would also mitigate likely capacity constraints related to both government administration and the economy. In this context, the authorities have welcomed offers of technical assistance from donors involved in key investment projects to help ensure the recovery framework is appropriately prioritized and can be effectively implemented in line with existing capability constraints.

14. **Results from a debt sustainability analysis suggest that even after taking into account the large deficits envisaged in 2009/10 through 2011/12, the debt outlook remains favorable** (Attachment II). Samoa's Public Debt Management Strategy has served the country well in achieving a low level of risk to fiscal sustainability. Between FY 2001/02 and FY 2007/08 public debt was nearly halved, falling to about 30 percent of GDP. However, it has risen since then on account of the government's expansionary fiscal policies in response to the global recession. Moreover, the government has virtually no domestic debt. As a result, the net present value of public debt stood at 28 percent of GDP as of June 2009, significantly below sustainability thresholds indicated for low income countries. However, maintaining fiscal sustainability is key for a small island such as Samoa that is susceptible to severe external shocks. Moreover, publicly guaranteed debt, which on partial data may amount to about 4 percent of GDP, constitutes an additional risk.



Source: Samoan authorities; and Fund staff calculations.

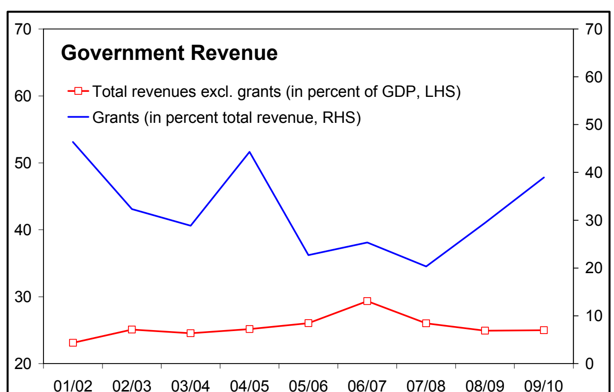
External Debt Outlook: Before and After the Tsunami 1/

| | 2010 | | 2012 | | 2014 | | 2016 | | 2018 | | 2020 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Pre | Post | Pre | Post | Pre | Post | Pre | Post | Pre | Post | Pre | Post |
| External debt 2/ | 45.7 | 52.7 | 47.2 | 59.4 | 44.8 | 57.8 | 43.8 | 54.3 | 41.5 | 50.5 | 39.4 | 47.1 |
| NPV 2/ | 32.5 | 36.5 | 33.8 | 39.9 | 32.2 | 38.8 | 31.7 | 36.9 | 30.1 | 34.6 | 28.6 | 32.4 |
| Debt service 3/ | 5.6 | 6.4 | 5.1 | 5.4 | 5.2 | 5.5 | 4.9 | 4.9 | 4.7 | 4.9 | 4.6 | 4.7 |

Source: Fund staff estimates.

1/ Fiscal year ending in June.
2/ In percent of GDP.
3/ In percent of exports.

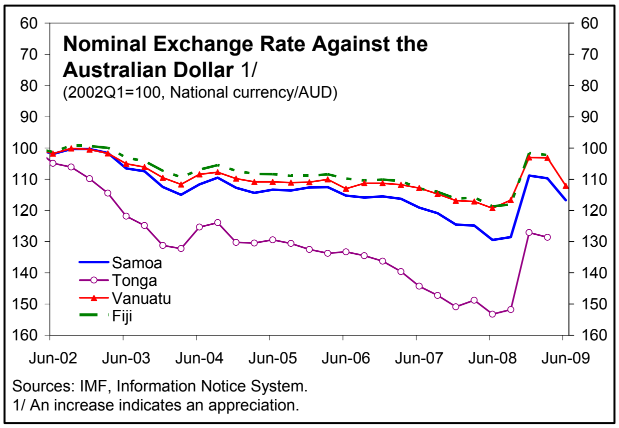
15. **In order to ensure fiscal sustainability, the government and the staff team agreed that any remaining financing needs should be met primarily through external grants or highly concessional borrowing.** Moreover, the authorities intend to reduce the fiscal deficit to less than 3 percent of GDP over the medium term once tsunami-related reconstruction is completed. This would stabilize the net present value of public debt below 40 percent of GDP—a comfortable level, providing room to absorb future shocks. Exercising post-reconstruction expenditure restraint will be all the more important in light of Samoa's already high revenue-to-GDP ratio.



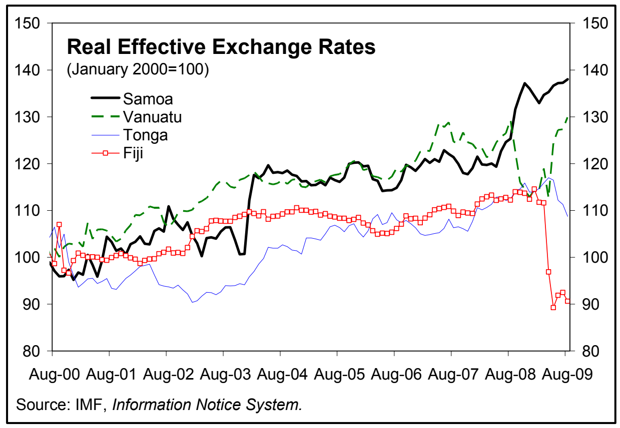
Source: Samoan authorities.

## C. Monetary and Exchange Rate Policy: Maintaining a Sound Framework

16. **Staff and the government agreed that the tala exchange-rate basket peg has proved to be an effective anchor of long-term competitiveness.** The basket is composed of six currencies, with weights appropriately reflecting tourism and remittance flows. Given large swings over the past 12 months of U.S. dollar vis-à-vis key currencies, the bilateral tala exchange rate has also been subject to large swings, including relative to the Australian dollar, both in nominal and real terms. Nonetheless, over a longer horizon, the tala does not appear out of line with economic fundamentals, although its real effective exchange rate has appreciated over the last 12 months. Goods exports, such as fish, are mostly supply driven and the far more important tourism receipts continued to rise steadily over the same period, notwithstanding heightened global uncertainty.[1] This assessment assumes that the shock to tourism, emanating from the 2009 tsunami, is transitory.



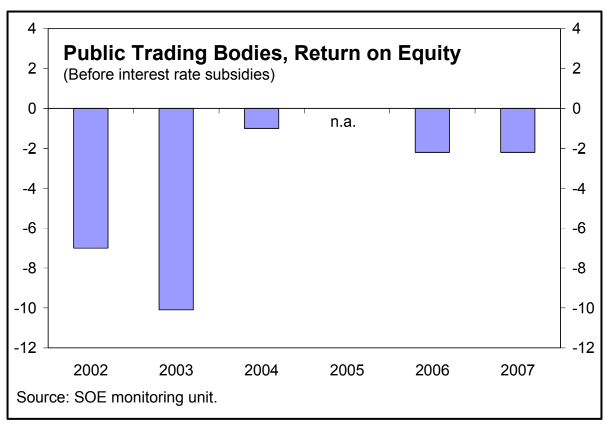
Sources: IMF, Information Notice System.
1/ An increase indicates an appreciation.



Source: IMF, *Information Notice System.*

## D. Structural Reform: Enabling the Private Sector

17. **Continued efforts to reform state-owned enterprises remain key to improve economic efficiency and protect the budget.** The State continues to play a substantial role in the Samoan economy, with a large range of commercial businesses employing 10 percent of the workforce. Notwithstanding progress in SOE reform, including by the divestiture of 21 companies during 1987–96, and putting remaining SOEs on a commercial footing,



Source: SOE monitoring unit.

[1] CGER type analysis using the macroeconomic balance approach and encompassing a sample of 55 low-income countries, also suggests that Samoa's current account deficit moved broadly in line with its structural savings-investment norm.

public enterprises continue to be a drag on the budget, and potentially crowd out private-sector activity. Adjusted for interest rate subsidies, the return on equity of SOEs has averaged -4 percent since 2002, well below the government's own target of 7 percent. The government has continued to push forward SOE reform by further enhancing corporate governance and accountability, and a 2007 Cabinet decision to clearly identify cost and contract community services obligations.

18. **While Samoa's financial system appears stable and supervision has improved markedly in recent years, it lacks depth** (Figure 2). The degree of interest rate pass-through in the latest easing cycle has been low.[2] At the same time, banks' excess reserves rose sharply, tripling in the 12 months after the Lehman collapse. Heightened risk aversion of banks appears to have been amplified by structural weaknesses that has hampered credit intermediation in Samoa for some time. Chief among them are lingering uncertainties in the enforcement of land-related collateral and the lack of adequate information sharing among creditors. The government has continued its efforts at removing legal impediments to effectively collateralizing land-use rights, including by setting-up an electronic land-registry in August 2009, and is also working with the Samoan Bankers' Association to establish a credit information bureau. Moreover, in order to improve access to finance of businesses hurt by the tsunami, notably in the tourism sector, the government is preparing a subsidized loan program through the Development Bank of Samoa, which will be funded by borrowing from the CBS against collateral. In addition, further strengthening financial system supervision and regulation in line with the recommendations of the 2007 IMF assessment is high on the authorities' agenda.[3]

19. **Building on improvements in compilation and dissemination of key economic statistics will serve to further enhance policy credibility and reduce uncertainty for the private sector.** Samoa is the only Pacific island which disseminates monthly and quarterly economic statistics through government websites. Yet data are subject to frequent revisions, owing to weaknesses in compilation, and coverage, complicating economic analysis, especially in times of crisis like the current one. The staff team and the government agreed that full use of STA technical assistance, including through PFTAC, to improve national accounts, and enhancing coverage of BOP data are key priorities in this regard.

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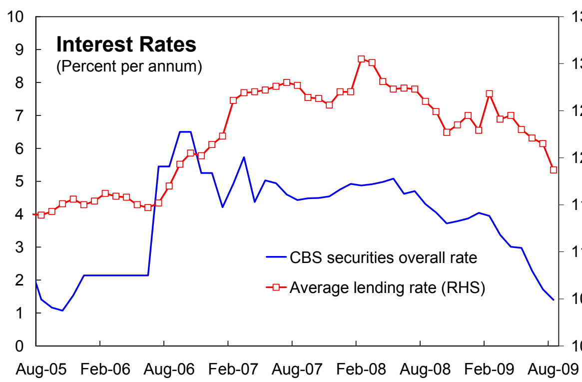
[2] Based on data for 2005–09, staff estimates the long-run interest rate pass-through at 0.42, compared with a range for East Asia of 0.3–1.2.

[3] *Samoa: Assessment of Financial Sector Supervision and Regulation including Report on the Observance of Standards and Codes on Banking Supervision,* IMF Country Report No. 07/221, June 2007.

## Figure 2: Selected Monetary and Financial Indicators

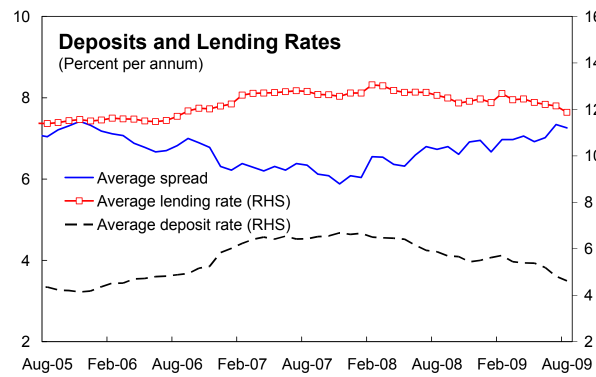
**Main message:** The central bank aggressively cut interest rates, but transmission to bank lending and deposit rates remained limited given Samoa's shallow financial system and increased risk aversion of banks, resulting in liquidity hoarding.

*The central bank lowered policy rates early in the crisis, but lending rates did not follow…*



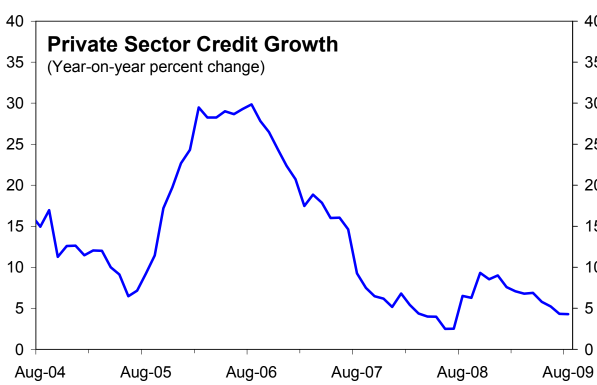

Source: Samoan authorities.

*…as deposit-lending spreads widened.*



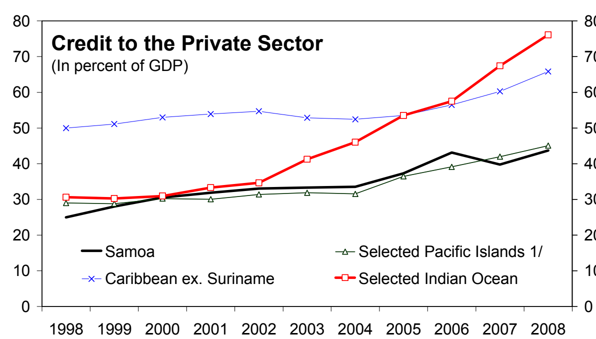

Source: Samoan authorities.

*Credit growth to the private sector has remained on its downward trend…*



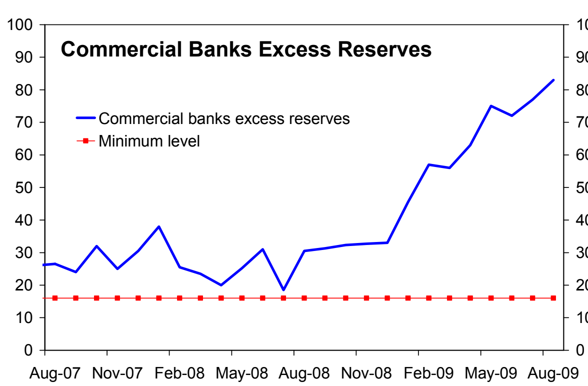

Source: Samoan authorities.

*…and bank intermediation levels are still low by international standards.*



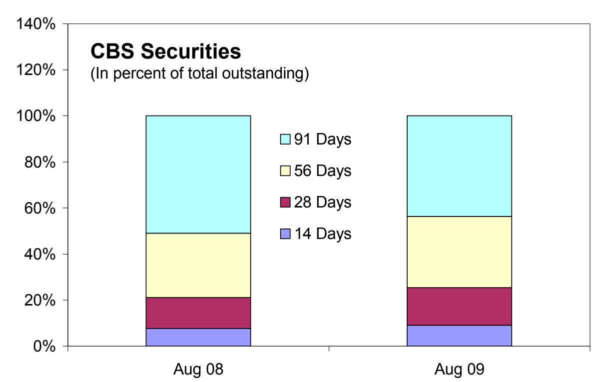

Source: Samoan authorities; IMF, *International Financial Statistics.*
1/ Comprises Fiji, Papua New Guinea, Samoa, Solomon Islands, Tonga and Vanuatu.

*At the same time, excess reserves rose to record highs.*




Sources: Samoan authorities; and Fund staff estimates.

*The structure of CBS securities holdings by banks has shifted in favor of shorter maturities.*




Sources: Samoan authorities; and Fund staff estimates.

## IV. Access and Risks

20. **The authorities have requested Fund financing as a result to the exogenous shock in an amount of SDR 5.8 million (50 percent of quota).** The Fund financing would help keep Samoa's official reserves at about 3½ months of prospective imports, in line with past trends and the official target of 4 months of current imports. The amount represents about 1¾ percent of GDP and covers about one tenth of the tsunami's cumulative gross impact on the balance of payments during FY 2009/10–2012/13. It would also be key in catalyzing financial assistance from the Asian Development Bank, the World Bank, and other donors (Attachment II). Preliminary indications are that a further increase of donor assistance in line with the remaining fiscal financing needs in 2011/12 and 2012/13, and a further temporary lowering of the reserves target to 3 months of imports would be sufficient in closing the financing gap. The SDR allocation in 2009 (10 million) is intended to bolster Samoa's official reserves and not considered a substitute for concessional loans and grants.

Samoa: Cumulative Impact of Tsunami on Balance of Payments over 2009/10-2012/13
(In millions of U.S. dollars, unless otherwise indicated) 1/

| | Pre-Tsunami | Post-Tsunami | Difference |
|---|---|---|---|
| Current Account | -300 | -424 | -123 |
| Of which | | | |
| (A) Exports | 59 | 57 | -1 |
| Imports | -1226 | -1335 | -109 |
| Of which related to | | | |
| (B) Reconstruction | 0 | -81 | -81 |
| (C) Tourism sector | -158 | -150 | 8 |
| (D) Tourism receipts | 525 | 500 | -25 |
| (E) Private Transfers | 599 | 599 | 0 |
| Capital and Financial Account | 346 | 384 | 39 |
| Of which | | | |
| Private investment | 75 | 72 | -3 |
| Official financing (net) | 272 | 317 | 45 |
| Overall balance | 46 | -39 | … |
| Change in reserves 2/ | -46 | -45 | … |
| Request for Fund support | 0 | 9 | … |
| Financing gap | 0 | 75 | … |
| (F) Gross impact (A+B+D) | … | … | -107 |
| (G) Net impact (F+C) | … | … | -100 |
| Memorandum items: | | | |
| Fund support (in percent of GDP in 2009/10) | | 2 | |
| Fund support (in percent of gross impact) | | 8 | |
| Fund support (in percent of net impact) | | 9 | |

Source: Fund staff estimates.

1/ After SDR allocation (10 million) in 2009.
2/ Assumes target is 3.5 months of prospective imports of goods and non-factor services in line with the average during 2006-2009.

21. **Samoa's capacity to repay the Fund is adequate and it is expected it will be able to discharge its obligations to the Fund in a timely manner.** Samoa has an exemplary debt servicing record and a strong track record of prudent fiscal management. It has maintained macroeconomic stability in spite of repeated natural disasters. With no pre-existing commitments, Samoa's debt service obligations to the Fund will remain small (Table 5). Moreover, in line with Fund policy, the authorities are committed to undergo a safeguards assessment and CBS has already authorized its external auditor to hold discussions with Fund staff and give access to the most recent external audit reports.

## V. Staff Appraisal

22. **Samoa has suffered a severe economic and social shock from the earthquake and tsunami in September 2009.** Economic growth could fall several percentage points short of the pre-tsunami baseline in FY 2009/10. A significant share of the population lost their

homes, many of them in poor rural areas depending on subsistence production. Balance of payments pressures, mainly from a shortfall in tourism receipts and a sharp increase in reconstruction imports, constitute a serious drag on official reserves.

23. **The authorities' response to the disaster has been swift and recovery plans are consistent with safeguarding Samoa's social and economic progress, as well as macroeconomic stability.** Samoa's National Disaster Management Office is working closely with the international donors on designing and implementing a recovery framework that is fully integrated with Samoa's *Strategy for the Development of Samoa (SDS) 2008–12*, the nation's blue-print for poverty reduction and sustainable growth. Furthermore, the authorities are committed to minimize the risks to fiscal sustainability and aid effectiveness that arise from the massive rehabilitation needs. Fiscal policies are appropriately focused on allocating development spending to infrastructure rehabilitation, and nonpriority current spending to providing basic social services. The authorities' commitment to their public debt management strategy and to filling remaining financing needs primarily through concessional external financing and grants will provide an important anchor for macroeconomic stability. However, with still significant unidentified fiscal financing over the medium-term, additional fiscal adjustment may be required, if concessional resources are not forthcoming.

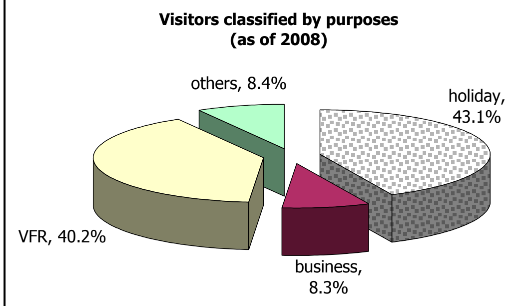
24. **Moreover, the authorities remain committed to build on structural reform that would enable a more vibrant private sector.** The staff looks forward to further discuss key strategies for SOE reform, deepening the financial system and enhancing financial supervision during the 2009 Article IV consultation which has been postponed to early 2010.

25. **The staff supports the authorities' request for Fund financing under the RAC-ESF in the amount of SDR 5.8 million (50 percent of quota).** The support is based on the severity of the natural disaster and its balance of payments impact, the authorities' good track record in pursuing prudent fiscal policies and steadfast structural reform. Samoa has not had financial assistance from the Fund for over two decades, while policies have been consistent with Fund advice provided during Article IV consultations. The authorities are committed to continued close cooperation with the Fund.

**BOX I. SAMOA: THE IMPACT OF THE 2009 TSUNAMI ON TOURISM AND THE ECONOMY**[1]

**Tourism is the single largest commercial earner of foreign exchange in Samoa.** Over the past decade, visitor arrivals have increased nearly 80 percent to over 120,000 in 2008, with tourism receipts growing to about 20 percent of GDP. The estimated total contribution to Samoa's GDP, directly from value-added in hotels and restaurants and indirectly from related sectors is around 14 percent.[2]

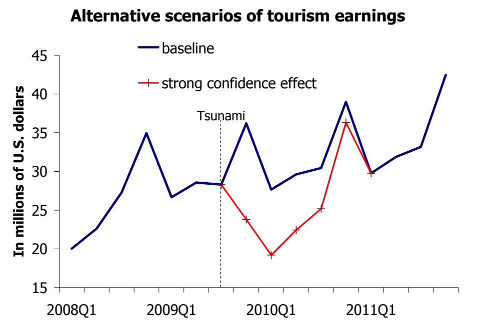
**The impact of the tsunami depends on three factors:**



Source: Central Bank of Samoa and IMF staff calculations.

1. ***Damage to capacity.*** About 25 percent of hotels and lodges, concentrated in one of Samoa's most popular destinations, have been destroyed, but the airport has remained intact.
2. ***Demand patterns.*** Tourism consists of two broad categories, visiting friends and relatives (VFR), and holiday makers. The tsunami struck just after the peak season for holiday makers, June/July, but before the festive season, December, when the majority of VFR arrives.
3. ***International experience.*** Beyond the damage to physical infrastructure, Samoa's desirability as a holiday destination may have been hurt. Based on the Thai, Indonesian and the Maldives post-tsunami experience, it may take 4–6 quarters for confidence to return. In fact, some Samoan hotels have already reported booking cancellations of around 60–70 percent for the rest of 2009.

**Based on these factors we consider two scenarios**. The baseline assumes the long-run industry growth trend. Scenario 1 for a medium confidence effect with a recovery over four quarters and scenario 2 for strong confidence effect with a slower recovery after six quarters. A peak reduction of 50 and 75 percent (y/y) in the first quarter after the tsunami of non-VFR visitors are assumed in scenarios 1 and 2, respectively. In all scenarios, VFR arrivals are assumed to be unaffected while tourism spending per head remains constant in real terms across all categories.



Source: IMF staff calculations.

**Under the alternative scenarios, the impact on tourism earnings, economic activity and the current account deficit would be substantial.** The loss in tourism earnings in FY 2009/10 varies between US$15–30 million, taking about 1½–3½ percent off Samoa's GDP in FY 2009/10. At the same time, the current account deficit would widen, but not by the full amount of the projected shortfall in tourism receipts as around 30 percent of receipts are related to imported intermediate goods. The net effect on the current account would range from US$10–20 million in FY 2009/10.

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[1] Prepared by Runchana Pongsaparn (APD) and Dominic Mellor (AsDB).

[2] Based on the imputed value-added for tax assessments in Samoa's hotel and restaurant sector, and cross-country experience, including estimates by the World Trade and Tourism Council for Tonga, Maldives and Fiji.

Table 1. Samoa: Selected Economic and Financial Indicators, 2004/05–2009/10 1/

Population (2008): 219,998
Main Exports: Tourism, Fish
GDP per capita (2007/08): US$ 2,794
Quota: SDR 11.6 million

| | 2004/05 | 2005/06 | 2006/07 | 2007/08 | 2008/09 Est. | Proj. 2009/10 Pre-tsunami | Proj. 2009/10 |
|---|---|---|---|---|---|---|---|
| | | | (12-month percent change) | | | | |
| Output and inflation | | | | | | | |
| Real GDP growth | 8.6 | 2.2 | 2.3 | 5.0 | -5.5 | 1.5 | -3.0 |
| Nominal GDP | 11.9 | 8.6 | 9.4 | 10.1 | 3.7 | 5.9 | 1.0 |
| Change in CPI (end period) | 1.0 | 2.1 | 8.0 | 8.8 | 9.8 | 4.0 | 4.0 |
| Change in CPI (period average) | 7.8 | 3.2 | 4.5 | 6.2 | 14.4 | 5.0 | 5.0 |
| | | | (In percent of GDP) | | | | |
| Central government budget | | | | | | | |
| Revenue and grants | 36.3 | 31.8 | 36.4 | 30.9 | 32.2 | 34.3 | 36.3 |
| Expenditure and net lending | 36.1 | 32.3 | 35.8 | 32.7 | 36.1 | 41.4 | 47.9 |
| Of which: Development | 13.1 | 7.1 | 9.3 | 6.5 | 11.9 | 16.8 | 21.3 |
| Overall balance | 0.3 | -0.5 | 0.6 | -1.8 | -3.9 | -7.1 | -11.7 |
| External financing | 1.4 | 0.5 | -1.1 | 0.8 | 2.9 | 9.5 | 12.1 |
| Domestic financing | -1.7 | 0.0 | 0.4 | 1.0 | 0.9 | -2.4 | -0.5 |
| | | | (12-month percent change) | | | | |
| Money and credit | | | | | | | |
| Broad money (M2) | 15.0 | 13.0 | 8.7 | 12.3 | 7.6 | ... | ... |
| Net foreign assets | 34.4 | -20.2 | 7.8 | 14.4 | 9.0 | ... | ... |
| Net domestic assets | -0.7 | 79.8 | -0.5 | 1.3 | 6.7 | ... | ... |
| Private sector credit | 6.8 | 28.2 | 11.7 | 6.5 | 5.2 | ... | ... |
| | | | (In millions of U.S. dollars) | | | | |
| Balance of payments | | | | | | | |
| Current account balance | -39.1 | -50.3 | -83.1 | -31.3 | -11.4 | -74.8 | -112.7 |
| (In percent of GDP) | -9.6 | -11.1 | -15.9 | -6.2 | -2.1 | -12.7 | -20.1 |
| Merchandise exports, f.o.b. | 12.8 | 11.0 | 12.2 | 11.2 | 10.2 | 10.1 | 9.0 |
| Merchandise imports, c.i.f. | -168.2 | -204.6 | -241.1 | -204.3 | -227.6 | -280.1 | -299.9 |
| Services (net) | 59.7 | 69.9 | 79.3 | 87.1 | 98.0 | 97.2 | 77.4 |
| Income (net) | -34.1 | -36.2 | -37.5 | -38.0 | -17.4 | -32.3 | -32.2 |
| Current transfers | 90.8 | 109.6 | 103.9 | 112.8 | 125.4 | 130.4 | 133.0 |
| External reserves and debt | | | | | | | |
| Gross official reserves | 84.2 | 64.4 | 80.9 | 87.6 | 96.6 | 119.2 | 119.6 |
| (In months of next year's imports of GNFS) | 3.7 | 2.4 | 3.6 | 3.6 | 3.5 | 3.8 | 3.5 |
| External debt (in percent of GDP) | 39.5 | 40.1 | 37.1 | 30.3 | 38.3 | 46.9 | 52.7 |
| Public external debt-service ratio (in percent) | 9.3 | 9.8 | 5.2 | 3.9 | 5.1 | 5.6 | 6.4 |
| Exchange rates | | | | | | | |
| Market rate (tala/U.S. dollar, period average) | 2.7 | 2.8 | 2.6 | 2.6 | 2.8 | ... | ... |
| Market rate (tala/U.S. dollar, end period) | 2.8 | 2.7 | 2.6 | 2.9 | 2.8 | ... | ... |
| Nominal effective exchange rate (2000 = 100) 2/ | 101.6 | 100.7 | 100.5 | 98.1 | 99.3 | ... | ... |
| Real effective exchange rate (2000 = 100) 2/ | 120.2 | 120.0 | 123.4 | 129.3 | 139.9 | ... | ... |
| *Memorandum items:* | | | | | | | |
| Nominal GDP (in millions of tala) | 1,124 | 1,221 | 1,336 | 1,472 | 1,526 | 1,616 | 1,541 |
| Nominal GDP (in millions of U.S. dollars) | 407 | 455 | 522 | 507 | 555 | 588 | 560 |
| GDP per capita (U.S. dollars) | 2,272 | 2,540 | 2,918 | 2,831 | 3,055 | 3,187 | 3,039 |

Sources: Data provided by the Samoan authorities and Fund staff estimates.

1/ Fiscal year beginning July 1.
2/ IMF, Information Notice System (calendar year). For 2009, latest as of June quarter.

Table 2. Samoa: Illustrative Medium-Term Baseline Scenario, 2005/06-2013/14

| | | | | | Projections (Pre-Tsunami versus Post-Tsunami) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2005/06 | 2006/07 | 2007/08 | 2008/09 | 2009/10 | | 2010/11 | | 2011/12 | | 2012/13 | | 2013/14 | |
| | | | | Est. | Pre | Post | Pre | Post | Pre | Post | Pre | Post | Pre | Post |
| Growth and inflation | | | | | | | | | | | | | | |
| Real GDP growth | 2.2 | 2.3 | 5.0 | -5.5 | 1.5 | -3.0 | 1.1 | 3.0 | 2.3 | 2.2 | 2.6 | 2.6 | 3.0 | 3.0 |
| CPI inflation (period average) | 3.2 | 4.5 | 6.2 | 14.4 | 5.0 | 5.0 | 4.5 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| | | | | | | (In percent of GDP) | | | | | | | | |
| Fiscal accounts | | | | | | | | | | | | | | |
| Total revenue and grants | 31.8 | 36.4 | 30.9 | 32.2 | 34.3 | 36.3 | 33.0 | 33.9 | 32.2 | 32.6 | 31.2 | 32.2 | 30.4 | 30.7 |
| Total revenue | 25.9 | 29.1 | 25.7 | 25.0 | 24.9 | 24.2 | 24.9 | 24.5 | 25.0 | 25.2 | 25.0 | 25.7 | 25.0 | 25.1 |
| External grants | 5.9 | 7.4 | 5.2 | 7.3 | 9.5 | 12.1 | 8.1 | 9.4 | 7.1 | 7.3 | 6.3 | 6.4 | 5.5 | 5.6 |
| Total expenditure and net lending | 32.3 | 35.8 | 32.7 | 36.1 | 41.4 | 47.9 | 37.7 | 42.7 | 34.4 | 38.5 | 33.7 | 37.9 | 32.9 | 33.3 |
| Overall balance (including grants) | -0.5 | 0.6 | -1.8 | -3.9 | -7.1 | -11.7 | -4.7 | -8.8 | -2.3 | -5.9 | -2.5 | -5.7 | -2.4 | -2.6 |
| | | | | | | (Annual percentage change) | | | | | | | | |
| Monetary survey | | | | | | | | | | | | | | |
| Broad money | 13.0 | 8.7 | 12.3 | 7.6 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Private sector credit 1/ | 28.2 | 11.7 | 6.5 | 5.2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | | | | | (In millions of U.S. dollars) | | | | | | | | |
| Balance of payments | | | | | | | | | | | | | | |
| Current account | -50.3 | -83.1 | -31.3 | -11.4 | -74.8 | -112.7 | -78.4 | -117.5 | -78.0 | -97.5 | -68.9 | -95.8 | -64.5 | -65.5 |
| (In percent of GDP) | -11.1 | -15.9 | -6.2 | -2.1 | -12.7 | -20.1 | -12.6 | -19.3 | -11.8 | -15.1 | -9.7 | -13.9 | -8.5 | -8.8 |
| Merchandise trade balance | -193.6 | -228.9 | -193.2 | -217.4 | -270.1 | -290.9 | -284.5 | -315.3 | -299.2 | -321.2 | -313.4 | -350.3 | -330.3 | -344.1 |
| Exports, f.o.b. | 11.0 | 12.2 | 11.2 | 10.2 | 10.1 | 9.0 | 13.4 | 13.4 | 16.8 | 16.6 | 18.5 | 18.4 | 20.5 | 20.3 |
| (Annual percent change) | -13.5 | 10.7 | -8.7 | -8.3 | -1.4 | -11.9 | 33.4 | 49.1 | 24.8 | 23.8 | 10.6 | 10.6 | 10.4 | 10.4 |
| Imports, c.i.f. | -204.6 | -241.1 | -204.3 | -227.6 | -280.1 | -299.9 | -297.9 | -328.7 | -316.0 | -337.9 | -331.9 | -368.7 | -350.8 | -364.4 |
| (Annual percent change) | 21.6 | 17.8 | -15.2 | 11.4 | 23.1 | 31.7 | 6.3 | 9.6 | 6.1 | 2.8 | 5.0 | 9.1 | 5.7 | -1.2 |
| Services | 69.9 | 79.3 | 87.1 | 98.0 | 97.2 | 77.4 | 103.7 | 93.6 | 111.2 | 102.7 | 117.4 | 110.4 | 125.0 | 119.6 |
| Current transfers, net | 109.6 | 103.9 | 112.8 | 125.4 | 130.4 | 133.0 | 146.8 | 148.8 | 160.0 | 164.0 | 174.1 | 178.1 | 191.7 | 195.7 |
| External debt and reserves | | | | | | | | | | | | | | |
| Gross external public debt (percent of GDP) | 40.1 | 37.1 | 30.3 | 38.3 | 46.9 | 52.7 | 49.7 | 57.9 | 49.0 | 59.4 | 47.8 | 59.7 | 46.4 | 57.8 |
| External debt-service ratio 2/ | 9.8 | 5.2 | 3.9 | 5.1 | 5.6 | 6.4 | 5.5 | 5.8 | 5.1 | 5.4 | 5.3 | 5.6 | 5.2 | 5.5 |
| Gross official reserves (millions of U.S. dollars) | 64.4 | 80.9 | 87.6 | 96.6 | 119.2 | 119.6 | 124.5 | 124.6 | 127.9 | 136.9 | 142.5 | 141.1 | 163.8 | 152.9 |
| (In months of next year's imports of GNFS) | 2.4 | 3.6 | 3.6 | 3.5 | 3.8 | 3.5 | 3.7 | 3.5 | 3.6 | 3.5 | 3.7 | 3.5 | 4.0 | 3.6 |

Sources: Data provided by the Samoan authorities and Fund staff projections.

1/ Total credit growth (including credit extended by nonbank financial institutions).
2/ In percent of GNFS exports.

Table 3: Samoa: Balance of Payments, 2004/05–2010/11
(In million of U.S. dollars, unless otherwise indicated)

| | 2004/05 | 2005/06 | 2006/07 | 2007/08 | 2008/09 Est. | Projections 2009/10 Pre-Tsunami | 2009/10 | 2010/11 |
|---|---|---|---|---|---|---|---|---|
| Current account | -39.1 | -50.3 | -83.1 | -31.3 | -11.4 | -74.8 | -112.7 | -117.5 |
| Trade balance | -155.5 | -193.6 | -228.9 | -193.2 | -217.4 | -270.1 | -290.9 | -315.3 |
| Exports, fob | 12.8 | 11.0 | 12.2 | 11.2 | 10.2 | 10.1 | 9.0 | 13.4 |
| Imports, cif | -168.2 | -204.6 | -241.1 | -204.3 | -227.6 | -280.1 | -299.9 | -328.7 |
| Of which: Tsunami-related reconstruction 1/ | ... | ... | ... | ... | ... | ... | -25.1 | -23.2 |
| Services | 59.7 | 69.9 | 79.3 | 87.1 | 98.0 | 97.2 | 77.4 | 93.6 |
| Investment income | -34.1 | -36.2 | -37.5 | -38.0 | -17.4 | -32.3 | -32.2 | -44.6 |
| Current transfers | 90.8 | 109.6 | 103.9 | 112.8 | 125.4 | 130.4 | 133.0 | 148.8 |
| Official transfers | 1.3 | 0.2 | 1.9 | 2.2 | 4.0 | 4.0 | 6.6 | 6.0 |
| Private transfers | 89.5 | 109.4 | 102.0 | 110.7 | 121.4 | 126.4 | 126.4 | 142.8 |
| Capital account | 40.0 | 22.8 | 49.1 | 21.0 | 34.0 | 48.0 | 57.7 | 47.9 |
| Official | 42.0 | 24.2 | 49.3 | 23.4 | 34.7 | 50.0 | 59.7 | 48.9 |
| Private | -2.0 | -1.4 | -0.2 | -2.4 | -0.6 | -2.0 | -2.0 | -1.0 |
| Financial account | 2.6 | -3.5 | 25.4 | 21.7 | 14.8 | 49.5 | 53.8 | 63.1 |
| Direct investment | 1.4 | 4.8 | 31.4 | 4.0 | 6.7 | 8.1 | 6.0 | 14.8 |
| Portfolio investment | -1.4 | -2.6 | 0.0 | -0.2 | 1.0 | -0.5 | -4.3 | 2.0 |
| Other investment | 2.6 | -5.7 | -6.0 | 17.8 | 7.1 | 41.8 | 52.1 | 46.3 |
| Net errors and omissions | 9.7 | 12.6 | 19.6 | 4.9 | -33.4 | 0.0 | 0.0 | 0.0 |
| Overall balance | 13.3 | -18.4 | 11.0 | 16.3 | 4.0 | 22.7 | -1.2 | -6.5 |
| Financing | -13.3 | 18.4 | -11.0 | -16.3 | -4.0 | -22.7 | -14.0 | -5.0 |
| Change in gross official reserves | -13.3 | 18.4 | -11.0 | -16.3 | -4.0 | -22.7 | -23.0 | -5.0 |
| Fund financing | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 9.0 | 0.0 |
| Financing gap | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 15.2 | 11.6 |
| Memorandum Items: | | | | | | | | |
| Gross official reserves (in million of U.S. dollars) 2/ | 84.2 | 64.4 | 80.9 | 87.6 | 96.6 | 119.2 | 119.6 | 124.6 |
| (In months of prospective imports of GNFS) | 3.7 | 2.4 | 3.6 | 3.6 | 3.5 | 3.8 | 3.5 | 3.5 |
| Exports (annual percentage change) | -16.5 | -13.5 | 10.7 | -8.7 | -8.3 | -1.4 | -11.9 | 49.1 |
| Imports (annual percentage change) | 10.5 | 21.6 | 17.8 | -15.2 | 11.4 | 23.1 | 31.7 | 9.6 |
| Current account balance (in percent of GDP) | -9.6 | -11.1 | -15.9 | -6.2 | -2.1 | -12.7 | -20.1 | -19.3 |

Sources: Data provided by the Samoan authorities and Fund staff estimates.

1/ Based on the government's recovery framework with a total cost for rebuilding and resettlement of US$120 million to be phased over four years with import content of about two-thirds.

2/ Includes 2009 SDR allocation (10 million).

Table 4. Samoa: Financial Operations of the Central Government, 2005/06–2010/11

| | 2005/06 | 2006/07 | 2007/08 | 2008/09 | | 2009/10 | Staff Projections | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Budget | Prel. | Budget | 2009/10 Pre-Tsunami | 2009/10 | 2010/11 |
| | | | | (In millions of tala) | | | | | |
| Total revenue and grants | 388.2 | 486.7 | 454.9 | 510.8 | 492.0 | 511.0 | 554.5 | 558.9 | 568.2 |
| Total revenue | 316.4 | 388.3 | 378.0 | 400.1 | 381.4 | 358.2 | 401.7 | 372.3 | 411.3 |
| Tax revenue | 272.9 | 334.1 | 330.2 | 340.6 | 324.7 | 321.8 | 362.3 | 335.8 | 370.1 |
| Nontax revenue | 43.5 | 54.2 | 47.8 | 59.6 | 56.7 | 36.4 | 39.4 | 36.4 | 41.2 |
| External grants | 71.8 | 98.5 | 76.9 | 110.7 | 110.7 | 152.8 | 152.8 | 186.7 | 157.0 |
| *Of which:* Tsunami-related 1/ | … | … | … | … | … | … | … | 33.9 | 17.7 |
| Other | … | … | … | … | … | … | … | 152.8 | 139.3 |
| Total expenditure and net lending | 394.6 | 478.3 | 481.9 | 594.8 | 551.0 | 671.8 | 668.8 | 738.9 | 716.2 |
| Current expenditure | 294.7 | 333.6 | 377.8 | 378.4 | 356.7 | 388.1 | 385.0 | 398.6 | 471.9 |
| Development expenditure | 86.1 | 123.7 | 96.2 | 216.1 | 182.1 | 271.2 | 271.2 | 327.7 | 231.7 |
| *Of which:* Tsunami-related 1/ | … | … | … | … | … | … | … | 56.5 | 75.7 |
| Other | … | … | … | … | … | … | … | 271.2 | 156.0 |
| Net lending | 13.8 | 21.1 | 7.8 | 0.4 | 12.3 | 12.5 | 12.5 | 12.5 | 12.5 |
| Overall fiscal balance | -6.3 | 8.4 | -27.0 | -84.0 | -59.0 | -160.8 | -114.3 | -179.9 | -147.9 |
| Financing | 6.3 | -8.4 | 27.0 | 84.0 | 59.0 | 160.8 | 114.3 | 179.9 | 141.1 |
| External financing, net | 6.3 | 7.4 | 12.5 | 91.5 | 44.6 | 151.7 | 153.1 | 187.0 | 143.1 |
| Disbursements | 19.2 | 14.0 | 28.5 | 105.4 | 60.4 | 172.0 | 172.0 | 205.9 | 164.1 |
| *Of which:* Tsunami-related | … | … | … | … | … | … | … | 33.9 | 58.1 |
| Other | … | … | … | … | … | … | … | 172.0 | 106.0 |
| Amortization | 12.8 | 6.6 | 16.0 | 13.9 | 15.8 | 20.3 | 18.9 | 18.9 | 21.0 |
| Domestic financing, net | 0.0 | 5.9 | 14.5 | -7.5 | 14.4 | 9.1 | -38.8 | -7.1 | -2.0 |
| Banking system | 11.0 | -4.5 | 11.9 | 0.0 | 2.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Other | -11.0 | 10.5 | 2.6 | -7.5 | 12.2 | 9.1 | -38.8 | -7.1 | -2.0 |
| Financing gap | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 6.9 |
| | | | | (In percent of GDP) | | | | | |
| Total revenue and grants | 31.8 | 36.4 | 30.9 | 33.3 | 32.2 | 32.7 | 34.3 | 36.3 | 33.9 |
| Total revenue | 25.9 | 29.1 | 25.7 | 26.1 | 25.0 | 22.9 | 24.9 | 24.2 | 24.5 |
| Tax revenue | 22.4 | 25.0 | 22.4 | 22.2 | 21.3 | 20.6 | 22.4 | 21.8 | 22.1 |
| Nontax revenue | 3.6 | 4.1 | 3.2 | 3.9 | 3.7 | 2.3 | 2.4 | 2.4 | 2.5 |
| External grants | 5.9 | 7.4 | 5.2 | 7.2 | 7.3 | 9.8 | 9.5 | 12.1 | 9.4 |
| *Of which:* Tsunami-related | … | … | … | … | … | … | … | 2.2 | 1.1 |
| Other | … | … | … | … | … | … | … | 9.9 | 8.3 |
| Total expenditure and net lending | 32.3 | 35.8 | 32.7 | 38.8 | 36.1 | 42.9 | 41.4 | 47.9 | 42.7 |
| Current expenditure | 24.1 | 25.0 | 25.7 | 24.7 | 23.4 | 24.8 | 23.8 | 25.9 | 28.2 |
| Development expenditure | 7.1 | 9.3 | 6.5 | 14.1 | 11.9 | 17.3 | 16.8 | 21.3 | 13.8 |
| *Of which:* Tsunami-related | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.7 | 4.5 |
| Other | 7.1 | 9.3 | 6.5 | 14.1 | 11.9 | 17.3 | 16.8 | 17.6 | 9.3 |
| Net lending | 1.1 | 1.6 | 0.5 | 0.0 | 0.8 | 0.8 | 0.8 | 0.8 | 0.7 |
| Overall fiscal balance | -0.5 | 0.6 | -1.8 | -5.5 | -3.9 | -10.3 | -7.1 | -11.7 | -8.8 |
| Overall balance (excluding grants) | -6.4 | -6.7 | -7.1 | -12.7 | -11.1 | -20.0 | -16.5 | -23.8 | -18.2 |
| Financing | 0.5 | -0.6 | 1.8 | 5.5 | 3.9 | 10.3 | 7.1 | 11.7 | 8.8 |
| External financing, net | 0.5 | -1.1 | 0.8 | 6.0 | 2.9 | 9.7 | 9.5 | 12.1 | 8.5 |
| Disbursement | 1.6 | 1.0 | 1.9 | 6.9 | 4.0 | 11.0 | 10.6 | 13.4 | 9.8 |
| *Of which:* Tsunami-related | … | … | … | … | … | … | … | 2.2 | 3.5 |
| Other | … | … | … | … | … | … | … | 11.2 | 6.3 |
| Amortization | 1.1 | 0.5 | 1.1 | 0.9 | 1.0 | 1.3 | 1.2 | 1.2 | 1.3 |
| Domestic financing, net | 0.0 | 0.4 | 1.0 | -0.5 | 0.9 | 0.6 | -2.4 | -0.5 | -0.1 |
| Banking system | 0.9 | -0.3 | 0.8 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Other | -0.9 | 0.8 | 0.2 | -0.5 | 0.8 | 0.6 | -2.4 | -0.5 | -0.1 |
| Financing gap | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 |
| *Memorandum items:* | | | | | | | | | |
| Nominal GDP (in millions of Tala) | 1,221 | 1,336 | 1,472 | 1,532 | 1,526 | 1,565 | 1,616 | 1,541 | 1,676 |

Sources: Data provided by the Samoan authorities and Fund staff estimates.

1/ Based on the government's recovery framework with a fiscal cost of US$100 million.

Table 5. Samoa: Indicators of Capacity to Repay the Fund, 2008–19

| | 2008/09 | 2009/10 | 2010/11 | 2011/12 | 2012/13 | 2013/14 | 2014/15 | 2015/16 | 2016/17 | 2017/18 | 2018/19 | 2019/20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Projections | | | | | |
| Fund obligations based on existing credit | | | | | | | | | | | | |
| (In millions of SDRs) | | | | | | | | | | | | |
| Principal | - | - | - | - | - | - | - | - | - | - | - | - |
| Charges and interest 1/ | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Fund obligations based on existing and prospective credit 2/ | | | | | | | | | | | | |
| (In millions of SDRs) | | | | | | | | | | | | |
| Principal | - | - | - | - | - | - | - | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| Charges and interest 1/ | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total obligations based on existing and prospective credit 2/ | | | | | | | | | | | | |
| In millions of SDRs | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| In millions of U.S. dollars | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.9 | 1.9 | 1.9 | 1.8 | 1.8 |
| In percent of gross international reserves | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.9 | 0.7 | 0.6 | 0.5 |
| In percent of government revenue | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 | 0.7 | 0.6 | 0.6 | 0.5 |
| In percent of exports of goods and services | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 | 0.6 | 0.5 | 0.5 | 0.4 |
| In percent of debt service 3/ | 0.0 | 0.0 | 0.4 | 0.4 | 0.4 | 0.3 | 0.3 | 12.6 | 10.7 | 10.4 | 9.5 | 8.9 |
| In percent of GDP | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| In percent of quota | 0.0 | 0.0 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 10.3 | 10.2 | 10.2 | 10.1 | 10.0 |
| Outstanding Fund credit | | | | | | | | | | | | |
| In millions of SDRs | 0.0 | 5.8 | 5.8 | 5.8 | 5.8 | 5.8 | 5.8 | 4.6 | 3.5 | 2.3 | 1.2 | 0.0 |
| In millions of U.S. dollars | 0.0 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 9.2 | 7.3 | 5.5 | 3.7 | 1.8 | 0.0 |
| In percent of gross international reserves | 0.0 | 7.7 | 7.4 | 6.7 | 6.5 | 6.0 | 5.4 | 3.8 | 2.5 | 1.4 | 0.6 | 0.0 |
| In percent of government revenue | 0.0 | 4.5 | 4.6 | 4.3 | 4.1 | 4.0 | 3.7 | 2.8 | 2.0 | 1.2 | 0.6 | 0.0 |
| In percent of exports of goods and services | 0.0 | 5.8 | 4.9 | 4.4 | 4.0 | 3.6 | 3.3 | 2.4 | 1.6 | 1.0 | 0.5 | 0.0 |
| In percent of debt service | 0.0 | 89.9 | 83.7 | 80.5 | 70.7 | 65.7 | 63.4 | 49.1 | 31.6 | 20.4 | 9.5 | 0.0 |
| In percent of GDP | 0.0 | 1.6 | 1.5 | 1.4 | 1.3 | 1.2 | 1.2 | 0.9 | 0.6 | 0.4 | 0.2 | 0.0 |
| In percent of quota | 0.0 | 50.0 | 50.0 | 50.0 | 50.0 | 50.0 | 50.0 | 40.0 | 30.0 | 20.0 | 10.0 | 0.0 |
| Net use of Fund credit (millions of SDRs) | - | - | - | - | - | - | - | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| Disbursements | - | 5.8 | - | - | - | - | - | - | - | - | - | - |
| Repayments and repurchases | - | - | - | - | - | - | - | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| *Memorandum items:* | | | | | | | | | | | | |
| Nominal GDP (in millions of U.S. dollars) | 555 | 560 | 609 | 648 | 691 | 740 | 783 | 838 | 896 | 959 | 1,026 | 1,098 |
| Exports of goods and services (in millions of U.S. dollars) | 175 | 158 | 188 | 209 | 230 | 253 | 278 | 306 | 336 | 366 | 400 | 437 |
| Gross International Reserves (in millions of U.S. dollars) | 97 | 120 | 125 | 137 | 141 | 153 | 169 | 192 | 219 | 256 | 302 | 356 |
| Government revenue (in millions of U.S. dollars) | 179 | 203 | 200 | 211 | 222 | 227 | 245 | 262 | 281 | 300 | 321 | 344 |
| Debt service (in millions of U.S. dollars) | 8.8 | 10.2 | 10.9 | 11.4 | 13.0 | 14.0 | 14.5 | 14.9 | 17.4 | 18.0 | 19.4 | 20.6 |
| U.S. dollars/SDR (period average) | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 |

Sources: Fund staff estimates and projections.

1/ No temporary interest relief assumed pending receipt of required consents to the LIC reforms from lenders and contributors to the PRGF-ESF Trust.
2/ Assuming a disbursement of the entire amount of requested Fund financing (SDR 5.8 million; 50 percent of quota).
3/ Total debt service includes IMF repurchases and repayments.

## ATTACHMENT I. LETTER OF INTENT
## GOVERNMENT OF SAMOA, OFFICE OF THE MINISTER OF FINANCE

18 November 2009

Mr. Dominique Strauss-Kahn
Managing Director
International Monetary Fund
700 19th Street, N.W.
Washington, D.C. 20431, USA

Dear Mr. Strauss-Kahn:

On September 29, 2009, Samoa was hit by an earthquake and tsunami that resulted in the worst human suffering and damage to physical infrastructure in the history of our nation. Nearly 150 people were killed, and about 5,300 made homeless, which is 2½ percent of our entire population. The damage to physical infrastructure is estimated at Tala 160 million (over 10 percent of GDP), but the cost of implementing a recovery framework could be substantially higher, as we need to maintain access to basic social services and livelihood opportunities, provide for resettlement, and invest in greater disaster protection.

The tsunami has set back our hopes for a swift recovery from the global recession. In particular, our tourism sector has been hit hard, with a quarter of hotel capacity destroyed in some of our most popular destinations. As a result, we expect our economy to experience a severe contraction in FY 2009/10. This follows a contraction of 5½ percent in real GDP in FY 2008/09 as the global recession not only hit our manufacturing sector, but many Samoans also lost their jobs in the fish processing industry in neighboring American Samoa. At the same time, the current account deficit is expected to widen sharply, primarily because of the shortfall in tourism revenues and the increase in reconstruction-related imports.

Our efforts at reducing poverty have also suffered a serious setback. The tsunami has primarily affected some 5,300 people on the South Eastern coast of Upolu island, where average weekly per-capita spending is nearly 20 percent below the national average, and poverty levels have increased relative to the national average since 2002.

Our government is working closely with international donors on designing and implementing a recovery framework that focuses on access to basic social services, infrastructure rehabilitation, resettlement, and investments in disaster risk reduction. Given the poverty implications of the disaster, the framework will be integrated with our *Strategy for the Development of Samoa (SDS) 2008-12*, which aims at ensuring sustainable economic and social progress. A key goal of the SDS is to improve social services in our village communities that still largely rely on subsistence production. Many of these communities are in the areas affected by the 2009 Tsunami.

The higher expenditure will result in a temporary widening of the fiscal deficit. We currently anticipate that the total fiscal cost of the recovery framework would amount to about Tala 270 million, about 18 percent of GDP. We have already received pledges and identified about Tala 160 million of funding in grants and concessional financing so far, which is expected to cover Tsunami-related financing needs through FY 2010/11. About a quarter of the recovery framework cost will be covered in a supplementary budget for this fiscal year to focus on the most urgent tasks, including humanitarian relief, road repair, continued access to health and education, as well as water and electricity.

To limit the adverse impact on Samoa's fiscal position and debt sustainability we are carefully reviewing existing development spending plans with a view to identify synergies with the recovery framework and re-allocate to the extent possible funds to infrastructure rehabilitation. We will also seek savings of non-priority current expenditure to provide for basic social needs. We are committed to closing any remaining Tsunami-related fiscal financing gap through external grants and concessional borrowing.

We remain committed to our public debt management strategy which has served us well in halving our public debt between 2000 and 2008 to some 30 percent of GDP, and achieving a favorable debt outlook. Consistent with this strategy and the objective to stabilize the net present value of public debt below 40 percent of GDP, we intend to reduce the fiscal deficit to less than 3 percent over the medium-term.

Moreover, we are committed to maintain the tala exchange-rate basket peg, which has proved a credible anchor during the recent global financial turmoil and helped inflation to subside quickly after the food and commodity price hikes in 2008.

Against this background, the Government of Samoa requests a disbursement of SDR 5.8 million (50 percent of quota) under the rapid access component of the Fund's Exogenous Shocks Facility. The disbursement would help ease pressures on our official external reserves and help catalyze further financial assistance from international donors necessary to rehabilitate our damaged economy.

The Government of Samoa will continue to cooperate with the Fund in an effort to strengthen Samoa's balance of payments and maintain economic stability. We do not intend to impose new or intensify existing restrictions on the making of payments and transfers for current international transactions, introduce new or intensify trade restrictions for balance of payments purposes, or enter into bilateral payments agreements which are inconsistent with Article VIII of the Fund's Articles of Agreement. Furthermore, we are committed to undergo a safeguards assessment and have already authorized the external auditor of the Central Bank of Samoa to share relevant documents and hold discussions with Fund staff.

Sincerely yours,

/sd/

The Hon Nickel Lee Hang
Minister of Finance, Government of Samoa

## ATTACHMENT II. SAMOA: DEBT SUSTAINABILITY ANALYSIS[1]

**Main message:**

- *Samoa continues to be at low risk of external debt distress. Although the debt ratios will rise significantly over the next three to four years as the government receives foreign financing to recover from the recent tsunami, the debt outlook is expected to improve over the medium and long term.*

- *This scenario is predicated on the assumption that the government of Samoa continues to manage its existing debt well and contracts new debt on concessional terms.*

- *Going forward, it would also be important to develop a domestic treasury-bill and bond market.*

### *Background*

1. **Samoa's stock of external debt as of June 2009 was estimated at about US$200 million (or nearly 40 percent of GDP)**. In net-present-value (NPV) terms, the external debt stock was below 30 percent of GDP—a relatively low ratio for a low-income country. External private debt statistics are non available. Newly received partial information suggests that publicly guaranteed debt to SOEs could amount to about 4 percent of GDP. Most of Samoa's public debt is external, with about 85 percent contracted with multilateral creditors on concessional terms, and the remainder with official bilateral creditors.

Samoa: Structure of the External Public Debt, 2009 1/

| | In millions of US$ | In percent of GDP | NPV in percent of GDP |
|---|---|---|---|
| Public debt | 212.8 | 38.3 | 28.2 |
| Multilaterals | 178.5 | 32.2 | 23.2 |
| IMF | 0.0 | 0.0 | 0.0 |
| World Bank | 79.6 | 14.3 | 9.3 |
| AsDB | 87.1 | 15.7 | 12.2 |
| Other multilaterals | 11.8 | 2.1 | 1.8 |
| Official bilateral | 34.3 | 6.2 | 5.0 |
| Paris Club | 0.7 | 0.1 | 0.1 |
| Non-Paris Club | 33.6 | 6.1 | 4.9 |
| Commercial | 0.0 | 0.0 | 0.0 |

Sources: Samoan Ministry of Finance, AsDB, World Bank; and Fund staff estimates.

1/ Fiscal year ending in June.

2. **Samoa has made significant progress in reducing its public debt burden over the last several years.** This improvement reflects prudent fiscal and debt management policies (Attachment Box I), and robust growth. During 2002–08 the external debt indicators improved remarkably: the external debt felt from over 60 percent of GDP to 30 percent of GDP. The ratio of debt service to exports dropped to 4 percent in 2008 from over 10 percent back in 2002.

[1] Prepared by Patrizia Tumbarello (APD).

**Attachment Box 1. Samoa: Public Debt Management Strategy**

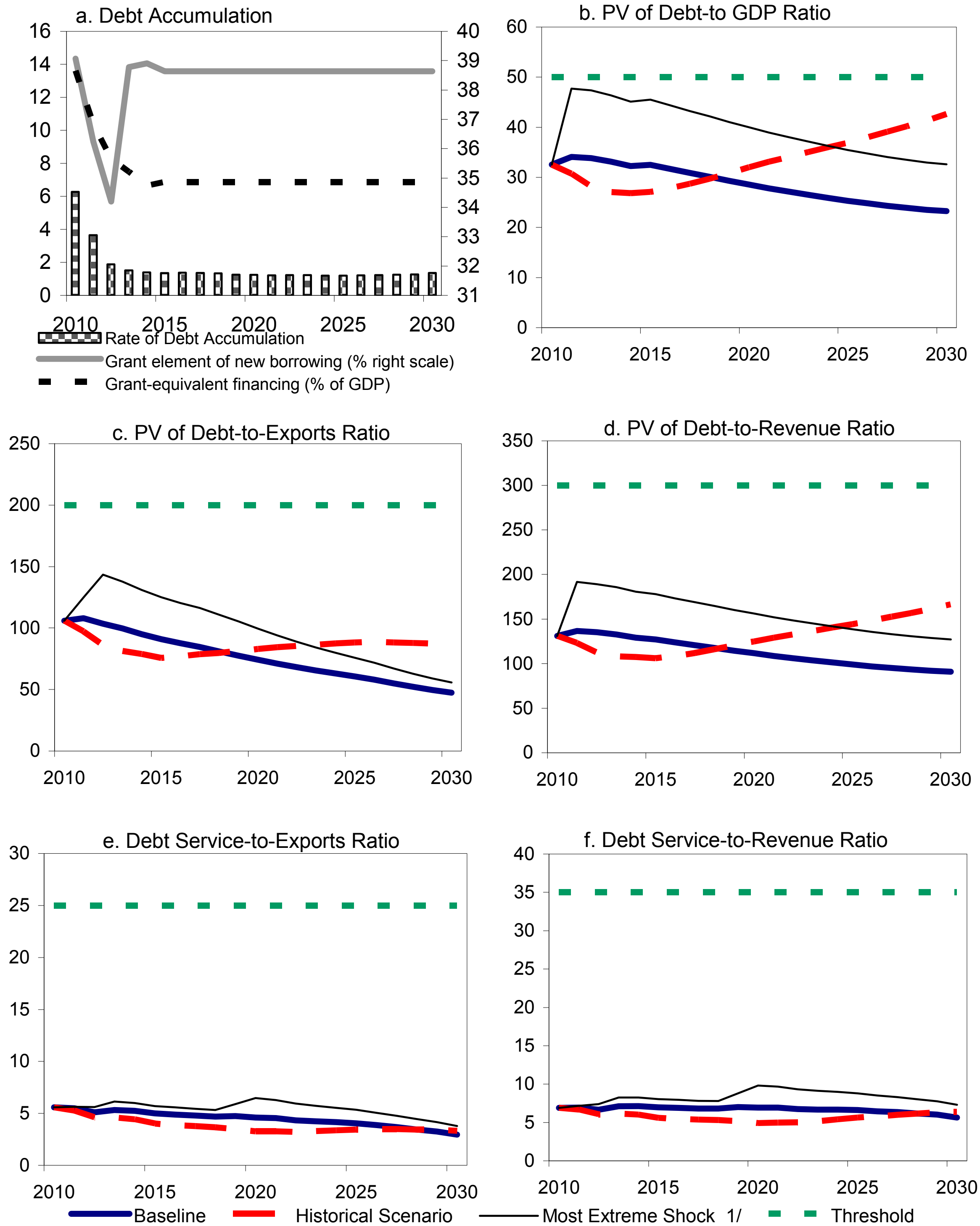
**The government of Samoa's public debt management strategy is part of the annual budget submitted to parliament.** The key quantitative targets include: (1) avoiding a fiscal deficit in excess of 3.5 percent of GDP, and (2) keeping public net debt at less then 40 percent of GDP. Moreover, the government is committed to obtaining concessional borrowing with a grant element of at least 35 percent. With these commitments, the government intends to maintain debt at prudent levels to provide a buffer against shocks and constrain the growth in debt service to maintain its capacity of improving public service delivery. The DSA provided in Article IV Consultations serves as input to regular updates and reviews of Samoa's attainment of the objectives set out in its debt management strategy.

***Baseline/Pre-tsunami Debt Outlook***

3. **The pre-tsunami debt outlook envisaged a deterioration of the debt indicators, both in nominal and in NPV terms through 2012.** This reflected the large fiscal stimulus package already present in the 2008/09 budget before the global recession hit Samoa, as well as the additional fiscal stimulus envisaged in the 2009/10 budget, as a response to the global crisis. The bulk of the stimulus was to be delivered through higher development expenditure.

4. **However, all debt burden indicators would remain well below sustainability thresholds in the baseline scenario and would decline in the medium and long run, as the fiscal stimulus unwinds.** Despite the large increase in the financing requirement to meet the budgeted expenditure plans, the NPV of the external debt was expected to peak at 35 percent of GDP in 2011 before moderating to 23 percent in 2030. All external debt and debt service indicators remained below the policy-dependent debt burden thresholds under the baseline scenario (Figure 1). The standard alternative scenarios suggest that that the projected debt path was particularly sensitive to key variables remaining at historical averages, mainly reflecting the large current account deficits of recent years.

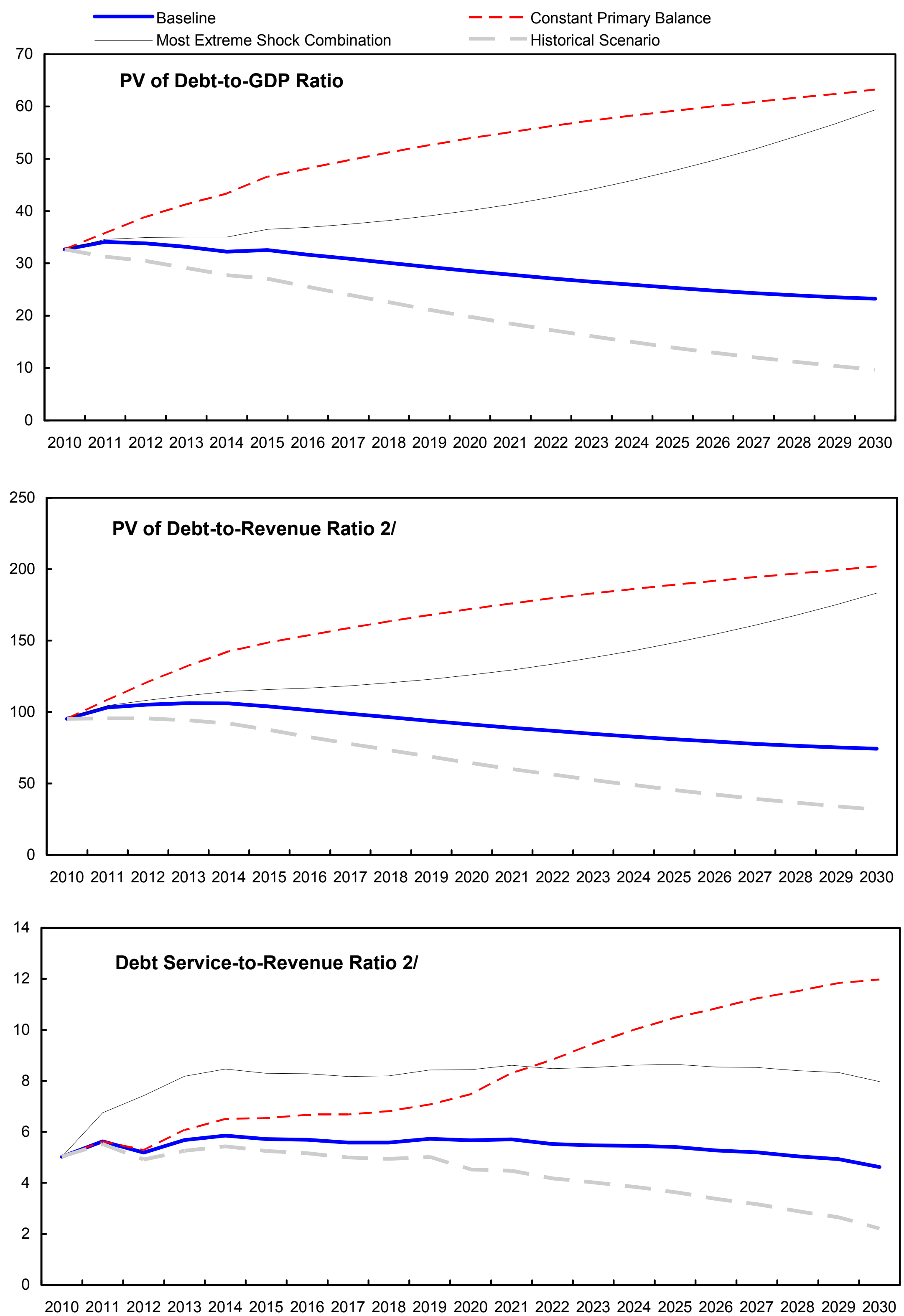
Figure 1. Samoa: Indicators of Public and Publicly Guaranteed External Debt Under Alternatives Scenarios, 2010-2030 Pre-Tsunami Scenario 1/




Sources: Samoan authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio in 2020. In figures b. and d. it corresponds to a one-time depreciation shock (30 percent in real terms); and in all others to a combination shock (GDP growth and the primary balance fall by 1 standard deviation from their historical average).

Figure 1a. Samoa: Indicators of Public Debt Under Alternative Scenarios (Pre-Tsunami), 2010-2030 1/



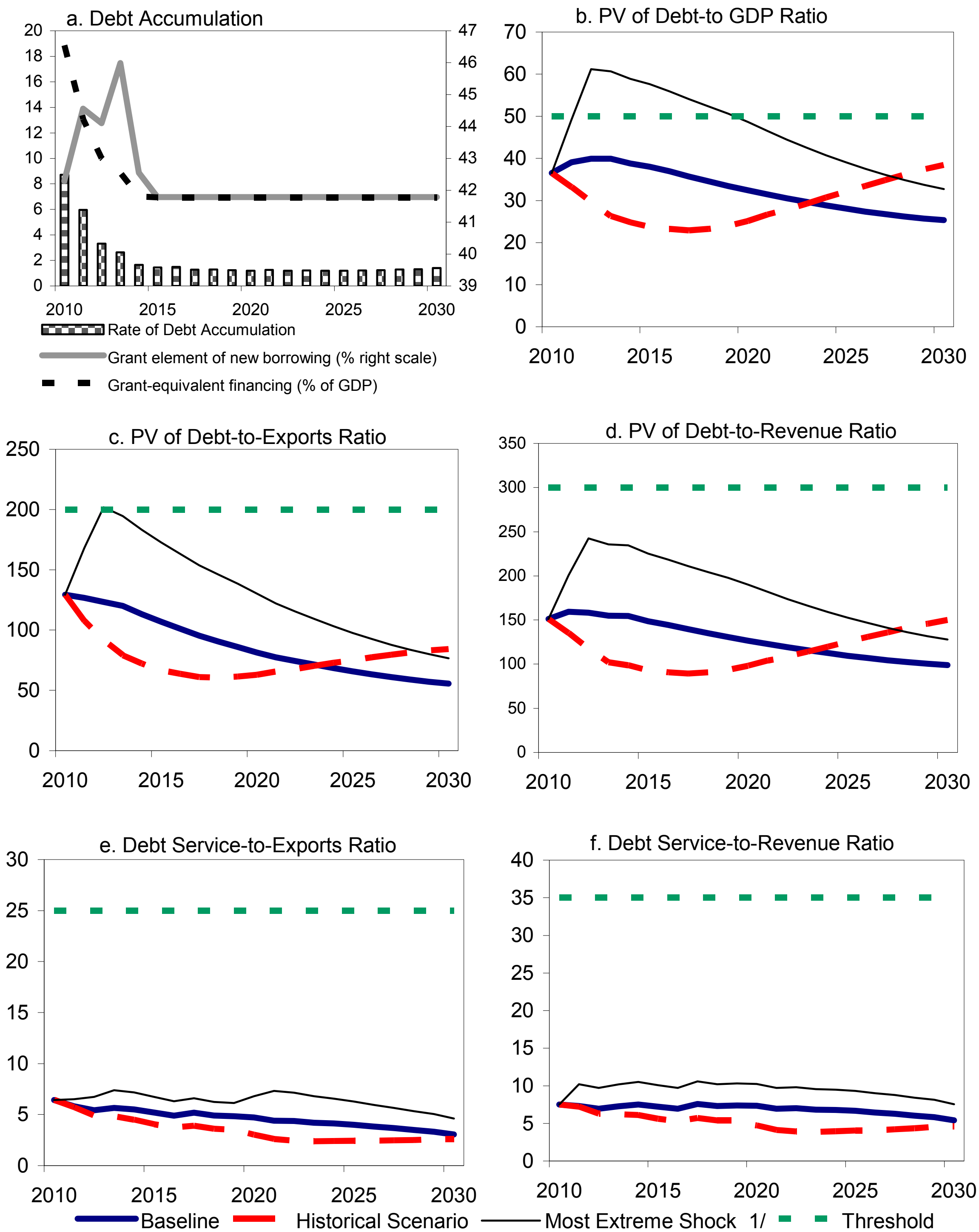

Sources: Samoan authorities; and staff estimates and projections.
1/ The most extreme stress test is the test that yields the highest ratio in 2020.
2/ Revenues are defined inclusive of grants.

***Post-tsunami Debt-sustainability: A Preliminary Assessment***

5. **The near-term debt outlook will be adversely affected by the severe exogenous natural disaster shock Samoa has suffered.** The financing needs are assumed to be addressed by the proposed US$9 million (SDR 5.8 million) IMF *Rapid-Access Component of the Exogenous Shocks Facility (ESF-RAC*), and additional support from other international financial institutions, mainly the World Bank (up to US$40 million) and the Asian Development Bank (accelerated disbursement of US$26 million budget support), and bilateral donors (Australia, New Zealand, and the EU, about US$7 million each). To cover unidentified financing in 2009/10–2012/13, the authorities intend to approach donors to request additional support, in the form of grants and concessional loans, and also consider to temporarily lower the reserve-to-import cover to about three months. Despite the additional financing needs, bound tests suggest that the external debt would remain manageable under the shocks considered, assuming that the remaining financing gap will be filled by concessional lending and grants.

6. **Going forward, it would be important to develop a domestic bond market.** The lack of a domestic government securities market is a major shortcoming. Currently, only 0.4 percent of Samoa's public debt is domestic. Diversifying the government's low risk funding options has become increasingly important, as Samoa may graduate from less-developed country status over the medium to long term. The potentially large financing needs arising from the 2009 tsunami further underscore the benefits of developing a domestic treasury-bill and bond market. Given the support by commercial banks and the National Provident Fund to develop a domestic securities market, the government set up a working group earlier this year. Including private sector financial market participants, the objective is to reach agreement on the basic structure of a treasury-bill program for 2009–10, and introduce a bond program over the medium term.

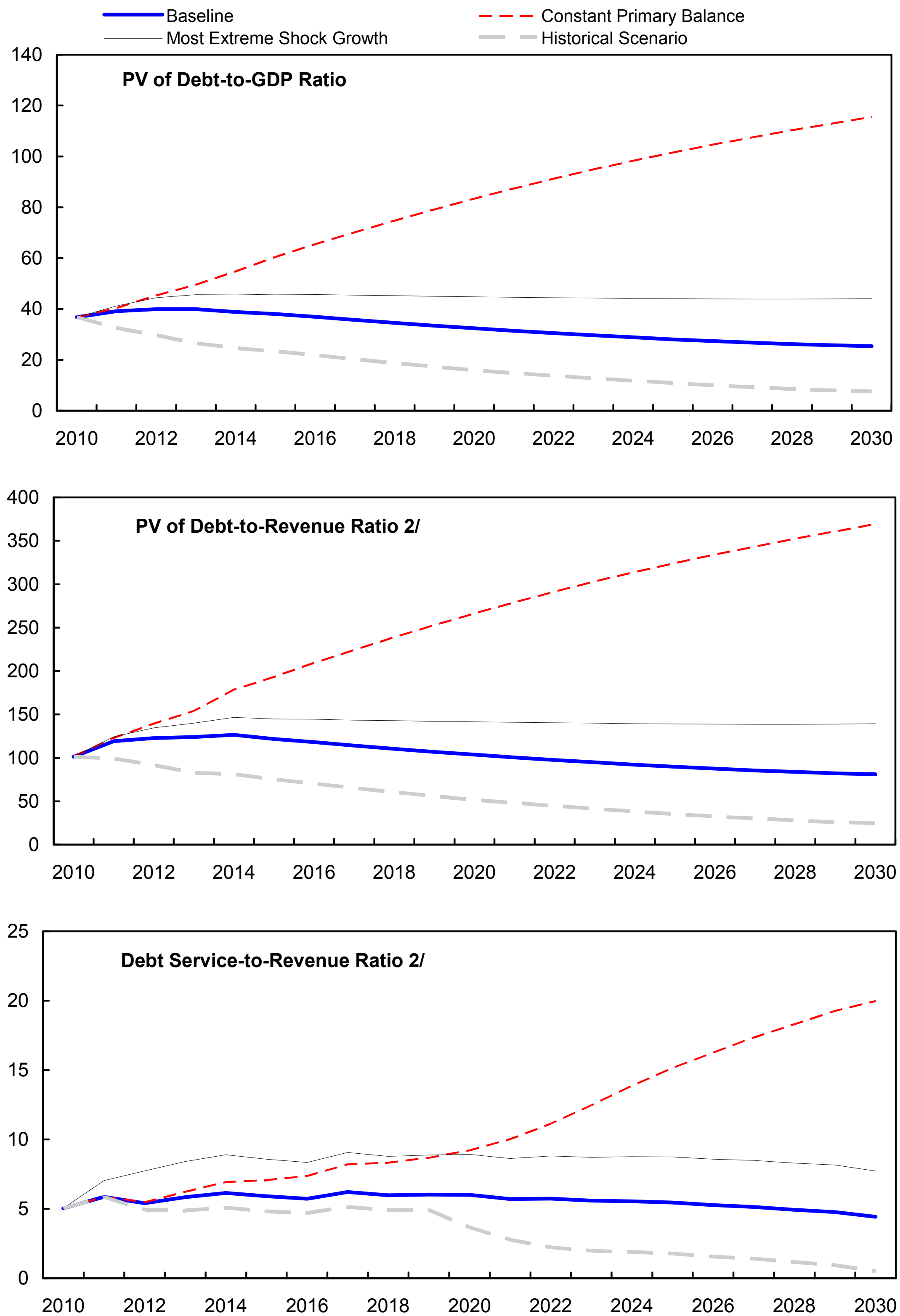
Figure 2. Samoa: Indicators of Public and Publicly Guaranteed External Debt
Under Alternatives Scenarios, Post-Tsunami 2010-2030 1/




Sources: Samoan authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio in 2020. In figures b. and d. it corresponds to a one-time depreciation shock (30 percent in real terms); and in all others to a combination shock (GDP growth and the primary balance fall by 1 standard deviation from their historical average).

Figure 2a. Samoa: Indicators of Public Debt Under Alternative Scenarios, Post-Tsunami 2010-30 1/




Sources: Samoan authorities; and staff estimates and projections.
1/ The most extreme stress test is the test that yields the highest ratio in 2020.
2/ Revenues are defined inclusive of grants.

Table 1a. Samoa: Public Sector Debt Sustainability Framework, Baseline Scenario, Post-Tsunami 2007-2030
(In percent of GDP, unless otherwise indicated)

| | Actual | | | | | Projections | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2007 | 2008 | 2009 | Average | Standard Deviation | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2010-15 Average | 2020 | 2030 | 2016-30 Average |
| **Public sector debt 1/** | 37.1 | 30.3 | 38.5 | | | 52.9 | 58.0 | 59.5 | 59.7 | 57.8 | 56.3 | | 47.1 | 36.9 | |
| o/w foreign-currency denominated | 37.1 | 30.3 | 38.3 | | | 52.7 | 57.9 | 59.4 | 59.7 | 57.8 | 56.3 | | 47.1 | 36.9 | |
| Change in public sector debt | -3.0 | -6.8 | 8.2 | | | 14.4 | 5.1 | 1.5 | 0.3 | -1.9 | -1.5 | | -1.6 | -0.5 | |
| Identified debt-creating flows | -6.2 | -1.2 | 3.9 | | | 11.3 | 5.6 | 2.5 | 2.0 | -1.4 | -0.9 | | -1.0 | -0.2 | |
| Primary deficit | -1.4 | 1.6 | 3.4 | 0.6 | 1.8 | 11.1 | 9.3 | 5.3 | 5.1 | 2.0 | 1.7 | 5.8 | 1.8 | 1.9 | 1.9 |
| Revenue and grants | 36.4 | 30.9 | 32.2 | | | 36.3 | 32.9 | 32.6 | 32.1 | 30.7 | 31.3 | | 31.3 | 31.3 | |
| *of which: grants* | 7.4 | 5.2 | 7.3 | | | 12.1 | 8.3 | 7.3 | 6.4 | 5.6 | 5.7 | | 5.7 | 5.7 | |
| Primary (noninterest) expenditure | 35.1 | 32.5 | 35.6 | | | 47.3 | 42.2 | 37.9 | 37.3 | 32.7 | 33.0 | | 33.1 | 33.2 | |
| Automatic debt dynamics | -4.8 | -2.8 | 0.6 | | | 0.2 | -3.7 | -2.9 | -3.1 | -3.4 | -2.6 | | -2.8 | -2.1 | |
| Contribution from interest rate/growth differential | -1.3 | -2.6 | 1.5 | | | 1.2 | -1.9 | -1.7 | -2.0 | -2.3 | -2.2 | | -1.9 | -2.0 | |
| *of which: contribution from average real interest rate* | -0.4 | -0.8 | -0.3 | | | 0.0 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | | -0.5 | -0.4 | |
| *of which: contribution from real GDP growth* | -0.9 | -1.8 | 1.8 | | | 1.2 | -1.5 | -1.3 | -1.5 | -1.7 | -1.7 | | -1.4 | -1.7 | |
| Contribution from real exchange rate depreciation | -3.6 | -0.2 | -0.9 | | | -0.9 | -1.7 | -1.1 | -1.2 | -1.2 | -0.4 | | ... | ... | |
| Other identified debt-creating flows | 0.0 | 0.0 | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Privatization receipts (negative) | 0.0 | 0.0 | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Recognition of implicit or contingent liabilities | 0.0 | 0.0 | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Debt relief (HIPC and other) | 0.0 | 0.0 | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Other (specify, e.g. bank recapitalization) | 0.0 | 0.0 | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Residual, including asset changes | 3.2 | -5.5 | 4.2 | | | 3.1 | -0.5 | -1.0 | -1.7 | -0.5 | -0.5 | | -0.7 | -0.3 | |
| **Other Sustainability Indicators** | | | | | | | | | | | | | | | |
| **PV of public sector debt** | 0.0 | 0.0 | 28.3 | | | 36.7 | 39.1 | 39.9 | 39.9 | 38.8 | 38.0 | | 32.4 | 25.4 | |
| o/w foreign-currency denominated | 0.0 | 0.0 | 28.2 | | | 36.5 | 39.1 | 39.9 | 39.9 | 38.8 | 38.0 | | 32.4 | 25.4 | |
| o/w external | ... | ... | 28.2 | | | 36.5 | 39.1 | 39.9 | 39.9 | 38.8 | 38.0 | | 32.4 | 25.4 | |
| PV of contingent liabilities (not included in public sector debt) | ... | ... | ... | | | ... | ... | ... | ... | ... | ... | | ... | ... | |
| Gross financing need 2/ | 0.3 | 2.8 | 4.9 | | | 12.9 | 11.3 | 7.1 | 7.0 | 3.9 | 3.5 | | 3.7 | 3.3 | |
| PV of public sector debt-to-revenue and grants ratio (in percent) | 0.0 | 0.0 | 87.9 | | | 101.2 | 119.1 | 122.7 | 124.1 | 126.5 | 121.6 | | 103.5 | 81.0 | |
| PV of public sector debt-to-revenue ratio (in percent) | 0.0 | 0.0 | 113.5 | | | 151.9 | 159.4 | 158.2 | 155.0 | 154.7 | 148.6 | | 126.5 | 99.0 | |
| o/w external 3/ | … | … | 112.8 | | | 151.3 | 159.3 | 158.1 | 155.0 | 154.6 | 148.5 | | 126.5 | 99.0 | |
| Debt service-to-revenue and grants ratio (in percent) 4/ | 4.7 | 4.1 | 4.9 | | | 5.0 | 5.9 | 5.4 | 5.8 | 6.2 | 5.9 | | 6.0 | 4.4 | |
| Debt service-to-revenue ratio (in percent) 4/ | 5.8 | 4.9 | 6.4 | | | 7.6 | 7.9 | 7.0 | 7.3 | 7.5 | 7.2 | | 7.3 | 5.4 | |
| Primary deficit that stabilizes the debt-to-GDP ratio | 1.7 | 8.3 | -4.8 | | | -3.3 | 4.2 | 3.9 | 4.9 | 4.0 | 3.2 | | 3.4 | 2.4 | |
| **Key macroeconomic and fiscal assumptions** | | | | | | | | | | | | | | | |
| Real GDP growth (in percent) | 2.3 | 5.0 | -5.5 | 3.6 | 4.2 | -3.0 | 3.0 | 2.2 | 2.6 | 3.0 | 3.0 | 1.8 | 3.0 | 4.6 | 3.1 |
| Average nominal interest rate on forex debt (in percent) | 2.2 | 0.7 | 1.7 | 1.7 | 2.2 | 1.6 | 1.1 | 1.1 | 1.0 | 1.0 | 1.0 | 1.1 | 0.9 | 0.9 | 0.9 |
| Average real interest rate on domestic debt (in percent) | ... | ... | ... ... | ... | ... | 1.3 | -2.3 | 2.4 | 2.4 | 2.4 | 3.7 | 1.7 | 3.0 | ... | 2.4 |
| Real exchange rate depreciation (in percent, + indicates depreciation) | -9.2 | -0.6 | -2.9 | -5.2 | 5.9 | -2.4 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Inflation rate (GDP deflator, in percent) | 7.0 | 4.9 | 9.8 | 3.9 | 4.6 | 4.1 | 5.6 | 4.0 | 4.0 | 4.0 | 2.7 | 4.0 | 3.9 | 2.3 | 3.8 |
| Growth of real primary spending (deflated by GDP deflator, in percent) | 0.2 | 0.0 | 0.0 | 0.0 | 0.1 | 0.3 | -0.1 | -0.1 | 0.0 | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Grant element of new external borrowing (in percent) | ... | ... | ... | … | … | 42.3 | 44.6 | 44.1 | 46.0 | 42.6 | 41.8 | 43.5 | 41.8 | 41.8 | ... |

Sources: Samoan authorities; and staff estimates and projections.

1/ Excludes publicly guaranteed debt tentatively estimated at 4 percent of GDP.

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

3/ Revenues excluding grants.

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

5/ Historical averages and standard deviations are for the past 10 years.

Table 2a.Samoa: Sensitivity Analysis for Key Indicators of Public Debt Post-Tsunami 2010-2030

| | Projections | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2020 | 2030 |
| **PV of Debt-to-GDP Ratio** | | | | | | | | |
| **Baseline** | 37 | 39 | 40 | 40 | 39 | 38 | 32 | 25 |
| **A. Alternative scenarios** | | | | | | | | |
| A1. Real GDP growth and primary balance are at historical averages | 37 | 33 | 30 | 26 | 25 | 23 | 16 | 8 |
| A2. Primary balance is unchanged from 2010 | 37 | 40 | 45 | 50 | 55 | 61 | 83 | 116 |
| A3. Permanently lower GDP growth 1/ | 37 | 40 | 41 | 42 | 42 | 42 | 44 | 62 |
| **B. Bound tests** | | | | | | | | |
| B1. Real GDP growth is at historical average minus one standard deviations in 2011-2012 | 37 | 41 | 44 | 46 | 46 | 46 | 45 | 44 |
| B2. Primary balance is at historical average minus one standard deviations in 2011-2012 | 37 | 34 | 33 | 33 | 32 | 32 | 27 | 22 |
| B3. Combination of B1-B2 using one half standard deviation shocks | 37 | 34 | 32 | 33 | 32 | 32 | 30 | 28 |
| B4. One-time 30 percent real depreciation in 2011 | 37 | 52 | 51 | 50 | 48 | 47 | 38 | 28 |
| B5. 10 percent of GDP increase in other debt-creating flows in 2011 | 37 | 46 | 47 | 47 | 45 | 45 | 38 | 28 |
| **PV of Debt-to-Revenue Ratio 2/** | | | | | | | | |
| **Baseline** | 101 | 119 | 123 | 124 | 126 | 122 | 103 | 81 |
| **A. Alternative scenarios** | | | | | | | | |
| A1. Real GDP growth and primary balance are at historical averages | 101 | 99 | 92 | 83 | 81 | 75 | 52 | 25 |
| A2. Primary balance is unchanged from 2010 | 101 | 123 | 139 | 154 | 178 | 193 | 266 | 369 |
| A3. Permanently lower GDP growth 1/ | 101 | 120 | 126 | 130 | 136 | 134 | 139 | 191 |
| **B. Bound tests** | | | | | | | | |
| B1. Real GDP growth is at historical average minus one standard deviations in 2011-2012 | 101 | 124 | 135 | 140 | 147 | 145 | 141 | 139 |
| B2. Primary balance is at historical average minus one standard deviations in 2011-2012 | 101 | 104 | 101 | 103 | 105 | 101 | 86 | 71 |
| B3. Combination of B1-B2 using one half standard deviation shocks | 101 | 103 | 98 | 102 | 105 | 103 | 94 | 88 |
| B4. One-time 30 percent real depreciation in 2011 | 101 | 159 | 158 | 156 | 157 | 150 | 123 | 88 |
| B5. 10 percent of GDP increase in other debt-creating flows in 2011 | 101 | 141 | 145 | 146 | 148 | 142 | 121 | 91 |
| **Debt Service-to-Revenue Ratio 2/** | | | | | | | | |
| **Baseline** | 5 | 6 | 5 | 6 | 6 | 6 | 6 | 4 |
| **A. Alternative scenarios** | | | | | | | | |
| A1. Real GDP growth and primary balance are at historical averages | 5 | 6 | 5 | 5 | 5 | 5 | 4 | 1 |
| A2. Primary balance is unchanged from 2010 | 5 | 6 | 5 | 6 | 7 | 7 | 9 | 20 |
| A3. Permanently lower GDP growth 1/ | 5 | 6 | 5 | 6 | 6 | 6 | 7 | 9 |
| **B. Bound tests** | | | | | | | | |
| B1. Real GDP growth is at historical average minus one standard deviations in 2011-2012 | 5 | 6 | 6 | 6 | 7 | 7 | 7 | 8 |
| B2. Primary balance is at historical average minus one standard deviations in 2011-2012 | 5 | 6 | 5 | 5 | 6 | 6 | 5 | 3 |
| B3. Combination of B1-B2 using one half standard deviation shocks | 5 | 6 | 5 | 5 | 6 | 6 | 5 | 4 |
| B4. One-time 30 percent real depreciation in 2011 | 5 | 7 | 8 | 8 | 9 | 9 | 9 | 8 |
| B5. 10 percent of GDP increase in other debt-creating flows in 2011 | 5 | 6 | 6 | 7 | 7 | 6 | 8 | 6 |

Sources: Samoan authorities; and staff estimates and projections.

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

Table 3a. Samoa: External Debt Sustainability Framework, Baseline Scenario, Post-Tsunami 2007-2030 1/
(In percent of GDP, unless otherwise indicated)

| | Actual | | | Historical Average | Standard Deviation | Projections | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2007 | 2008 | 2009 | | | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2010-2015 Average | 2016 | 2017 | 2018 | 2019 | 2020 | 2030 | 2016-2030 Average |
| **External debt (nominal) 1/** | **37.1** | **30.3** | **38.3** | | | **52.7** | **57.9** | **59.4** | **59.7** | **57.8** | **56.3** | | **54.3** | **52.3** | **50.5** | **48.7** | **47.1** | **36.9** | |
| o/w public and publicly guaranteed (PPG) | 37.1 | 30.3 | 38.3 | | | 52.7 | 57.9 | 59.4 | 59.7 | 57.8 | 56.3 | | 54.3 | 52.3 | 50.5 | 48.7 | 47.1 | 36.9 | |
| Change in external debt | -3.0 | -6.8 | 8.0 | | | 14.4 | 5.2 | 1.5 | 0.3 | -1.9 | -1.5 | | -2.0 | -2.0 | -1.8 | -1.8 | -1.6 | -0.5 | |
| Identified net debt-creating flows | -4.7 | 1.9 | -8.1 | | | 9.5 | 7.4 | 4.1 | 3.0 | -1.7 | -2.6 | | -3.3 | -3.6 | -4.6 | -5.3 | -5.8 | -7.2 | |
| **Non-interest current account deficit** | **15.2** | **5.9** | **1.5** | **7.1** | **4.0** | **19.5** | **18.7** | **14.5** | **13.3** | **8.3** | **7.7** | 13.7 | **7.2** | **7.0** | **6.7** | **6.6** | **6.7** | **6.6** | 6.8 |
| Deficit in balance of goods and services | 28.6 | 20.9 | 21.5 | | | 38.1 | 36.4 | 33.7 | 34.7 | 30.3 | 29.5 | | 28.3 | 27.5 | 26.2 | 25.4 | 24.7 | 18.2 | |
| Exports | 32.7 | 32.4 | 31.5 | | | 28.2 | 30.9 | 32.3 | 33.2 | 34.3 | 35.6 | | 36.5 | 37.5 | 38.2 | 39.0 | 39.8 | 45.6 | |
| Imports | 61.3 | 53.4 | 53.0 | | | 66.3 | 67.3 | 66.1 | 68.0 | 64.6 | 65.0 | | 64.8 | 65.0 | 64.4 | 64.3 | 64.5 | 63.8 | |
| Net current transfers (negative = inflow) | -19.9 | -22.3 | -22.6 | -21.4 | 1.7 | -23.7 | -24.4 | -25.3 | -25.8 | -26.4 | -26.1 | -25.3 | -25.5 | -24.9 | -24.3 | -23.8 | -23.2 | -18.5 | -21.8 |
| o/w official | -0.4 | -0.4 | -0.7 | | | -1.2 | -1.0 | -0.9 | -0.9 | -0.8 | -0.8 | | -0.7 | -0.7 | -0.6 | -0.6 | -0.5 | -0.3 | |
| Other current account flows (negative = net inflow) | 6.4 | 7.2 | 2.6 | | | 5.2 | 6.8 | 6.0 | 4.3 | 4.4 | 4.4 | | 4.3 | 4.4 | 4.8 | 5.1 | 5.3 | 6.9 | |
| **Net FDI and official capital transfers (negative = inflow)** | **-15.5** | **-5.4** | **-7.4** | **-8.0** | **3.1** | **-11.7** | **-10.4** | **-9.7** | **-9.5** | **-8.9** | **-9.2** | -9.9 | **-9.4** | **-9.6** | **-10.3** | **-10.9** | **-11.5** | **-12.5** | -11.7 |
| **Endogenous debt dynamics 2/** | **-4.4** | **1.4** | **-2.2** | | | **1.7** | **-0.9** | **-0.6** | **-0.9** | **-1.1** | **-1.1** | | **-1.1** | **-1.0** | **-1.0** | **-1.0** | **-0.9** | **-1.3** | |
| Contribution from nominal interest rate | 0.8 | 0.3 | 0.5 | | | 0.6 | 0.5 | 0.6 | 0.6 | 0.6 | 0.5 | | 0.5 | 0.5 | 0.5 | 0.4 | 0.4 | 0.3 | |
| Contribution from real GDP growth | -0.8 | -1.9 | 1.5 | | | 1.1 | -1.5 | -1.2 | -1.4 | -1.7 | -1.6 | | -1.6 | -1.5 | -1.5 | -1.4 | -1.4 | -1.6 | |
| Contribution from price and exchange rate changes | -4.4 | 3.0 | -4.2 | | | … | … | … | … | … | … | | … | … | … | … | … | … | |
| **Residual (3-4) 3/** | **1.7** | **-8.7** | **16.1** | | | **4.8** | **-2.1** | **-2.6** | **-2.7** | **-0.2** | **1.1** | | **1.3** | **1.6** | **2.8** | **3.5** | **4.1** | **6.7** | |
| o/w exceptional financing | 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 | 0.0 | 0.0 | |
| PV of external debt 4/ | ... | ... | 28.2 | | | 36.5 | 39.1 | 39.9 | 39.9 | 38.8 | 38.0 | | 36.9 | 35.7 | 34.6 | 33.5 | 32.4 | 25.4 | |
| In percent of exports | ... | ... | 89.6 | | | 129.4 | 126.7 | 123.4 | 120.0 | 113.2 | 106.9 | | 101.2 | 95.2 | 90.5 | 85.9 | 81.3 | 55.6 | |
| **PV of PPG external debt** | **...** | **...** | **28.2** | | | **36.5** | **39.1** | **39.9** | **39.9** | **38.8** | **38.0** | | **36.9** | **35.7** | **34.6** | **33.5** | **32.4** | **25.4** | |
| **In percent of exports** | **...** | **...** | **89.6** | | | **129.4** | **126.7** | **123.4** | **120.0** | **113.2** | **106.9** | | **101.2** | **95.2** | **90.5** | **85.9** | **81.3** | **55.6** | |
| **In percent of government revenues** | **...** | **...** | **112.8** | | | **151.3** | **159.3** | **158.1** | **155.0** | **154.6** | **148.5** | | **144.2** | **139.4** | **135.0** | **130.7** | **126.5** | **99.0** | |
| **Debt service-to-exports ratio (in percent)** | **5.2** | **3.9** | **5.1** | | | **6.4** | **5.8** | **5.4** | **5.6** | **5.5** | **5.2** | | **4.9** | **5.2** | **4.9** | **4.8** | **4.7** | **3.0** | |
| **PPG debt service-to-exports ratio (in percent)** | **5.2** | **3.9** | **5.1** | | | **6.4** | **5.8** | **5.4** | **5.6** | **5.5** | **5.2** | | **4.9** | **5.2** | **4.9** | **4.8** | **4.7** | **3.0** | |
| **PPG debt service-to-revenue ratio (in percent)** | **5.8** | **4.9** | **6.4** | | | **7.5** | **7.3** | **7.0** | **7.3** | **7.5** | **7.2** | | **7.0** | **7.6** | **7.3** | **7.4** | **7.3** | **5.4** | |
| Total gross financing need (Billions of U.S. dollars) | 0.0 | 0.0 | 0.0 | | | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.1 | |
| Non-interest current account deficit that stabilizes debt ratio | 18.2 | 12.7 | -6.5 | | | 5.2 | 13.5 | 13.0 | 13.0 | 10.2 | 9.2 | | 9.1 | 9.0 | 8.5 | 8.4 | 8.3 | 7.1 | |
| **Key macroeconomic assumptions** | | | | | | | | | | | | | | | | | | | |
| Real GDP growth (in percent) | 2.3 | 5.0 | -5.5 | 3.6 | 4.2 | -3.0 | 3.0 | 2.2 | 2.6 | 3.0 | 3.0 | 1.8 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 4.6 | 3.1 |
| GDP deflator in US dollar terms (change in percent) | 12.3 | -7.6 | 16.0 | 6.6 | 10.9 | 4.1 | 5.6 | 4.0 | 4.0 | 4.0 | 2.7 | 4.0 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 2.3 | 3.8 |
| Effective interest rate (percent) 5/ | 2.2 | 0.7 | 1.7 | 1.7 | 2.2 | 1.6 | 1.1 | 1.1 | 1.0 | 1.0 | 1.0 | 1.1 | 1.0 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| Growth of exports of G&S (US dollar terms, in percent) | 12.8 | -3.8 | 6.2 | 11.3 | 9.8 | -9.4 | 18.8 | 11.3 | 9.6 | 10.4 | 9.8 | 8.4 | 9.8 | 9.9 | 9.1 | 9.1 | 9.4 | 8.4 | 8.8 |
| Growth of imports of G&S (US dollar terms, in percent) | 16.4 | -15.6 | 8.7 | 7.8 | 14.4 | 26.4 | 10.2 | 4.4 | 9.7 | 1.8 | 6.5 | 9.9 | 6.7 | 7.2 | 6.1 | 6.8 | 7.3 | 7.0 | 6.9 |
| Grant element of new public sector borrowing (in percent) | … | … | … | … | … | 42.3 | 44.6 | 44.1 | 46.0 | 42.6 | 41.8 | 43.5 | 41.8 | 41.8 | 41.8 | 41.8 | 41.8 | 41.8 | 41.8 |
| Government revenues (excluding grants, in percent of GDP) | 29.1 | 25.7 | 25.0 | | | 24.2 | 24.5 | 25.2 | 25.7 | 25.1 | 25.6 | | 25.6 | 25.6 | 25.6 | 25.6 | 25.6 | 25.6 | 25.6 |
| Aid flows (in Billions of US dollars) 7/ | 0.0 | 0.0 | 0.0 | | | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | |
| o/w Grants | 0.0 | 0.0 | 0.0 | | | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | |
| o/w Concessional loans | 0.00 | 0.00 | 0.00 | | | 0.08 | 0.07 | 0.04 | 0.04 | 0.03 | 0.02 | | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.06 | |
| Grant-equivalent financing (in percent of GDP) | … | … | … | | | 18.9 | 13.1 | 10.0 | 8.8 | 7.0 | 7.0 | | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| Grant-equivalent financing (in percent of external financing) | … | … | … | | | 67.2 | 68.8 | 74.6 | 75.6 | 78.4 | 79.9 | | 79.9 | 79.9 | 79.9 | 79.9 | 79.9 | 79.9 | 79.9 |
| *Memorandum items:* | | | | | | | | | | | | | | | | | | | |
| Nominal GDP (Billions of US dollars) | 0.5 | 0.5 | 0.6 | | | 0.6 | 0.6 | 0.6 | 0.7 | 0.7 | 0.8 | | 0.8 | 0.9 | 1.0 | 1.0 | 1.1 | 2.2 | |
| Nominal dollar GDP growth | 14.9 | -3.0 | 9.5 | | | 1.0 | 8.7 | 6.3 | 6.7 | 7.1 | 5.8 | 5.9 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |

Sources: Samoan authorities; and staff estimates and projections.

1/ Public external debt. Fiscal year ending in June.
2/ Derived as [r - g - ρ(1+g)]/(1+g+ρ+gρ) times previous period debt ratio, with r = nominal interest rate; g = real GDP growth rate, and ρ = growth rate of GDP deflator in U.S. dollar terms.
3/ Includes exceptional financing (i.e., changes in arrears and debt relief); changes in gross foreign assets; and valuation adjustments. For projections also includes contribution from price and exchange rate changes.
4/ Assumes that PV of private sector debt is equivalent to its face value.
5/ Current-year interest payments divided by previous period debt stock.
6/ Historical averages and standard deviations are for the past 10 years.
7/ Defined as grants, concessional loans, and debt relief.

Table 3b. Samoa: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, Post-Tsunami 2010-2030
(In percent)

| | Projections | | | | | |
|---|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | **2020** | 2030 |
| **PV of Debt-to GDP Ratio** | | | | | | |
| **Baseline** | 37 | 39 | 40 | 40 | **32** | 25 |
| **A. Alternative Scenarios** | | | | | | |
| A1. Key variables at their historical averages in 2010-2030 1/ | 37 | 33 | 30 | 26 | **25** | 38 |
| A2. New public sector loans on less favorable terms in 2010-2030 2 | 37 | 42 | 45 | 46 | **43** | 40 |
| **B. Bound Tests** | | | | | | |
| B1. Real GDP growth at historical average minus one standard deviation in 2011-2012 | 37 | 41 | 43 | 43 | **35** | 27 |
| B2. Export value growth at historical average minus one standard deviation in 2011-2012 3/ | 37 | 42 | 47 | 46 | **37** | 27 |
| B3. US dollar GDP deflator at historical average minus one standard deviation in 2011-2012 | 37 | 43 | 48 | 48 | **39** | 30 |
| B4. Net non-debt creating flows at historical average minus one standard deviation in 2011-2012 4/ | 37 | 45 | 52 | 51 | **41** | 29 |
| B5. Combination of B1-B4 using one-half standard deviation shocks | 37 | 49 | 61 | 61 | **49** | 33 |
| B6. One-time 30 percent nominal depreciation relative to the baseline in 2011 5/ | 37 | 55 | 56 | 56 | **45** | 35 |
| **PV of Debt-to-Exports Ratio** | | | | | | |
| **Baseline** | 129 | 127 | 123 | 120 | **81** | 56 |
| **A. Alternative Scenarios** | | | | | | |
| A1. Key variables at their historical averages in 2010-2030 1/ | 129 | 108 | 92 | 79 | **63** | 84 |
| A2. New public sector loans on less favorable terms in 2010-2030 2 | 129 | 137 | 139 | 139 | **108** | 88 |
| **B. Bound Tests** | | | | | | |
| B1. Real GDP growth at historical average minus one standard deviation in 2011-2012 | 129 | 127 | 123 | 120 | **81** | 56 |
| B2. Export value growth at historical average minus one standard deviation in 2011-2012 3/ | 129 | 158 | 185 | 179 | **121** | 77 |
| B3. US dollar GDP deflator at historical average minus one standard deviation in 2011-2012 | 129 | 127 | 123 | 120 | **81** | 56 |
| B4. Net non-debt creating flows at historical average minus one standard deviation in 2011-2012 4/ | 129 | 146 | 160 | 155 | **104** | 63 |
| B5. Combination of B1-B4 using one-half standard deviation shocks | 129 | 168 | 202 | 194 | **130** | 77 |
| B6. One-time 30 percent nominal depreciation relative to the baseline in 2011 5/ | 129 | 127 | 123 | 120 | **81** | 56 |
| **PV of Debt-to-Revenue Ratio** | | | | | | |
| **Baseline** | 151 | 159 | 158 | 155 | **127** | 99 |
| **A. Alternative Scenarios** | | | | | | |
| A1. Key variables at their historical averages in 2010-2030 1/ | 151 | 135 | 118 | 102 | **98** | 150 |
| A2. New public sector loans on less favorable terms in 2010-2030 2 | 151 | 172 | 178 | 180 | **167** | 156 |
| **B. Bound Tests** | | | | | | |
| B1. Real GDP growth at historical average minus one standard deviation in 2011-2012 | 151 | 165 | 169 | 165 | **135** | 106 |
| B2. Export value growth at historical average minus one standard deviation in 2011-2012 3/ | 151 | 170 | 185 | 180 | **146** | 107 |
| B3. US dollar GDP deflator at historical average minus one standard deviation in 2011-2012 | 151 | 176 | 189 | 185 | **151** | 119 |
| B4. Net non-debt creating flows at historical average minus one standard deviation in 2011-2012 4/ | 151 | 184 | 205 | 200 | **162** | 112 |
| B5. Combination of B1-B4 using one-half standard deviation shocks | 151 | 200 | 243 | 236 | **190** | 128 |
| B6. One-time 30 percent nominal depreciation relative to the baseline in 2011 5/ | 151 | 223 | 221 | 216 | **177** | 138 |

Table 3b. Samoa: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, Post-Tsunami 2010-2030 (continued)
(In percent)

| | Projections | | | | | |
|---|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | **2020** | 2030 |
| **Debt Service-to-Exports Ratio** | | | | | | |
| **Baseline** | 6 | 6 | 5 | 6 | **5** | 3 |
| **A. Alternative Scenarios** | | | | | | |
| A1. Key variables at their historical averages in 2010-2030 1/ | 6 | 6 | 5 | 5 | **3** | 3 |
| A2. New public sector loans on less favorable terms in 2010-2030 2 | 6 | 6 | 6 | 6 | **6** | 5 |
| **B. Bound Tests** | | | | | | |
| B1. Real GDP growth at historical average minus one standard deviation in 2011-2012 | 6 | 6 | 5 | 6 | **5** | 3 |
| B2. Export value growth at historical average minus one standard deviation in 2011-2012 3/ | 6 | 7 | 7 | 8 | **7** | 4 |
| B3. US dollar GDP deflator at historical average minus one standard deviation in 2011-2012 | 6 | 6 | 5 | 6 | **5** | 3 |
| B4. Net non-debt creating flows at historical average minus one standard deviation in 2011-2012 4/ | 6 | 6 | 6 | 6 | **6** | 4 |
| B5. Combination of B1-B4 using one-half standard deviation shocks | 6 | 6 | 7 | 7 | **7** | 5 |
| B6. One-time 30 percent nominal depreciation relative to the baseline in 2011 5/ | 6 | 6 | 5 | 6 | **5** | 3 |
| **Debt Service-to-Revenue Ratio** | | | | | | |
| **Baseline** | 8 | 7 | 7 | 7 | **7** | 5 |
| **A. Alternative Scenarios** | | | | | | |
| A1. Key variables at their historical averages in 2010-2030 1/ | 8 | 7 | 6 | 6 | **5** | 5 |
| A2. New public sector loans on less favorable terms in 2010-2030 2 | 8 | 7 | 7 | 8 | **9** | 8 |
| **B. Bound Tests** | | | | | | |
| B1. Real GDP growth at historical average minus one standard deviation in 2011-2012 | 8 | 8 | 7 | 8 | **8** | 6 |
| B2. Export value growth at historical average minus one standard deviation in 2011-2012 3/ | 8 | 7 | 7 | 8 | **8** | 6 |
| B3. US dollar GDP deflator at historical average minus one standard deviation in 2011-2012 | 8 | 8 | 8 | 9 | **9** | 6 |
| B4. Net non-debt creating flows at historical average minus one standard deviation in 2011-2012 4/ | 8 | 7 | 7 | 8 | **9** | 7 |
| B5. Combination of B1-B4 using one-half standard deviation shocks | 8 | 8 | 8 | 9 | **10** | 8 |
| B6. One-time 30 percent nominal depreciation relative to the baseline in 2011 5/ | 8 | 10 | 10 | 10 | **10** | 8 |
| *Memorandum item:* | | | | | | |
| Grant element assumed on residual financing (i.e., financing required above baseline) 6/ | 42 | 42 | 42 | 42 | **42** | 42 |

Sources: Samoan authorities; and staff estimates and projections.

1/ Variables include real GDP growth, growth of GDP deflator (in U.S. dollar terms), non-interest current account in percent of GDP, and non-debt creating flows.
2/ Assumes that the interest rate on new borrowing is by 2 percentage points higher than in the baseline, while grace and maturity periods are the same as in the baseline.
3/ Exports values are assumed to remain permanently at the lower level, but the current account as a share of GDP is assumed to return to its baseline level after the shock (implicitly assuming an offsetting adjustment in import levels).
4/ Includes official and private transfers and FDI.
5/ Depreciation is defined as percentage decline in dollar/local currency rate, such that it never exceeds 100 percent.
6/ Applies to all stress scenarios except for A2 (less favorable financing) in which the terms on all new financing are as specified in footnote 2.