INTERNATIONAL MONETARY FUND

IMF Country Report No. 21/176

TUVALU

August 2021

2021 ARTICLE IV CONSULTATION—PRESS RELEASE; STAFF REPORT; AND STATEMENT BY THE EXECUTIVE DIRECTOR FOR TUVALU

Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. In the context of the 2021 Article IV consultation with Tuvalu, the following documents have been released and are included in this package:

- A **Press Release** summarizing the views of the Executive Board as expressed during its July 19, 2021 consideration of the staff report that concluded the Article IV consultation with Tuvalu.
- The **Staff Report** prepared by a staff team of the IMF for the Executive Board's consideration on July 19, 2021, following discussions that ended on April 25, 2021, with the officials of Tuvalu on economic developments and policies. Based on information available at the time of these discussions, the staff report was completed on July 1, 2021.
- An **Informational Annex** prepared by the IMF staff.
- A **Debt Sustainability Analysis** prepared by the staffs of the IMF and the World Bank.
- A **Statement by the Executive Director** for Tuvalu.

The IMF's transparency policy allows for the deletion of market-sensitive information and premature disclosure of the authorities' policy intentions in published staff reports and other documents.

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Washington, D.C.

PRESS RELEASE

PR21/244

IMF Executive Board Concludes 2021 Article IV Consultation with Tuvalu

FOR IMMEDIATE RELEASE

Washington, DC – August 4, 2021: The Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation[1] with Tuvalu.

The containment measures swiftly implemented by the Tuvaluan authorities at the onset of the pandemic helped keep Tuvalu COVID-free, though they have taken a toll on economic activity, impacting construction and tourism-related activities. However, inflow of COVID-related grants from international donors and buoyant domestic revenues from fishing license fees allowed the authorities to maintain current spending as planned and to extend additional support to the population and businesses through the COVID-19 relief package. As a result, the economy is estimated to have grown 1 percent in 2020, compared to 13.9 percent in 2019, with 1.6 percent inflation.

The Tuvaluan economy is expected to recover in 2021. The vaccine rollout that started in April will support domestic activity and eventually allow border reopening, even though securing enough vaccines to inoculate the entire population will take time. With higher current spending and a gradual resumption of infrastructure projects, GDP growth is projected at 2.5 percent in 2021. Full resumption of travel in 2022, continued high public spending, and further implementation of infrastructure projects is forecast to increase growth to 3.5 percent by 2022. Inflation is expected to gradually increase to 2.2 percent in 2021 and 2.4 percent in 2022.

Risks surrounding the outlook are high and tilted to the downside. Prolonged containment measures would delay resumption of infrastructure projects and hamper the recovery of private sector activity. Government revenues could fall short of projections. Continued lack of effective financial supervision of banks and weak balance sheets of State Owned Enterprises create contingent risks to the government and impede credit intermediation. A loss of the correspondent banking relationship would endanger Tuvalu's ability to process international payments. Tuvalu is also heavily exposed to the effects of climate change and natural disasters. Strong implementation of fiscal, financial, and structural reforms, aided by capacity building provided by international community, would help support growth going forward.

[1] Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. A staff team visits the country, collects economic and financial information, and discusses with officials the country's economic developments and policies. On return to headquarters, the staff prepares a report, which forms the basis for discussion by the Executive Board.

Executive Board Assessment[2]

Executive Directors agreed with the thrust of the staff appraisal. They commended the Tuvaluan authorities on their swift implementation of containment measures that successfully prevented a local outbreak of the pandemic. They noted that the economy avoided a recession in 2020 thanks to the flow of COVID-related support and a favorable revenue position, and is expected to grow further in 2021. Nevertheless, Directors observed that risks to the outlook are high and tilted to the downside, mainly due to the pandemic and prolonged containment measures, uncertainty about grant availability, and vulnerability to climate change.

Directors noted that COVID-related spending should depend on the path of the pandemic and any additional support should be focused on the most vulnerable. They encouraged reforms to achieve a gradual fiscal consolidation once the economy fully recovers, to preserve fiscal buffers and reduce fiscal risks, and to fund climate adaptation and infrastructure maintenance needs. Directors considered that this should be achieved through a combination of measures to mobilize domestic revenues and raise the efficiency of public spending through improved public financial management.

Directors encouraged measures to strengthen the financial sector. They stressed the importance of developing an effective prudential regulation and supervision framework to promote the health of the financial sector and improve access to credit. Given the importance of cross-border payments for Tuvalu, Directors highlighted the importance of maintaining correspondent banking relationships and enhancing the AML/CFT framework. They were also encouraged by the authorities' plans to devise a comprehensive fintech development strategy to enhance financial depth, inclusion, and efficiency.

Directors welcomed the authorities' push for structural reforms and stressed the importance of building resilience to natural disasters. They encouraged the authorities to focus their reform agenda on promoting private sector development and diversifying the growth base. This would improve employment prospects and raise potential growth. In addition, Directors encouraged the authorities to continue reforms of state-owned enterprises to improve performance.

Directors noted that the implementation of the needed policy reforms would be facilitated by strengthening capacity, including through technical assistance and training provided by the Fund and other international partners. In this regard, efforts to enhance data collection and statistical capacity were encouraged.

It is expected that the next Article IV consultation with Tuvalu will be held on the current 24-month cycle.

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[2] At the conclusion of the discussion, the Managing Director, as Chairman of the Board, summarizes the views of Executive Directors, and this summary is transmitted to the country's authorities. An explanation of any qualifiers used in summings up can be found here: http://www.IMF.org/external/np/sec/misc/qualifiers.htm.

Table 1. Tuvalu: Selected Social and Economic Indicators, 2017–2022

Population (2021 est.): 11,093 | Poverty rate (2017): 26 percent
Per capita GDP (2021 est.): AU$6537 | Life expectancy (2021): 68 years
Main export: Fish | Primary school enrollment (2019, gross): 109 percent
Key export markets: Fiji, China, Australia, Japan, New Zealand | Secondary school enrollment (2018, net): 67 percent

	2017	2018	2019	2020	2021	2022
				Est.	Proj.	
Real sector			(Percent change)			
Real GDP growth	3.4	1.6	13.9	1.0	2.5	3.5
Consumer price inflation (period average)	4.1	2.2	3.5	1.6	2.2	2.4
Government finance			(In percent of GDP)			
Revenue and grants	108.6	156.1	111.7	121.5	122.3	107.3
Revenue	86.6	118.1	82.9	89.6	86.7	74.7
of which: Fishing license fees	44.1	79.8	48.9	55.6	43.5	41.5
Grants	21.9	38.0	28.9	31.9	35.7	32.6
Total expenditure	106.5	125.8	112.8	116.5	129.4	110.1
Current expenditure	84.0	81.8	70.8	75.0	88.0	89.0
Capital expenditure 1/	22.4	43.9	42.0	41.5	41.4	21.1
Overall balance	2.1	30.3	-1.1	5.0	-7.0	-2.9
Overall balance (excl. grants)	-19.8	-7.7	-29.9	-26.9	-42.7	-35.4
Domestic Current balance 2/	-41.5	-43.6	-36.8	-41.0	-55.7	-55.9
Financing	-2.1	-30.3	1.1	-5.0	7.0	2.9
Foreign (net)	-0.2	-1.0	-0.9	-1.1	-0.6	-0.6
Consolidated Investment Fund (net, -=increase)	-1.9	-29.3	2.0	-3.9	7.7	3.4
Tuvalu Trust Fund (in percent of GDP)	292.8	279.9	237.0	241.4	232.8	217.8
Consolidated Investment Fund (in percent of GDP)	47.2	55.6	47.3	54.4	52.2	48.3
Tuvalu Survival Fund (in percent of GDP)	8.5	7.8	6.4	6.3	7.2	6.8
Monetary Sector						
Credit growth (percent change) 3/	2.1	2.0	0.4	-0.5	1.1	2.9
Balance of payments (in percent of GDP)			(In percent of GDP, unless otherwise indicated)			
Current account balance	11.5	53.9	-16.9	3.8	-4.1	-4.1
Goods and services balance	-107.5	-106.0	-118.8	-115.3	-105.8	-101.5
Capital and financial account balance	-9.4	-49.1	35.4	-8.9	4.4	12.7
Overall balance	4.6	9.3	37.1	2.0	0.2	8.7
Gross reserves 4/						
In $A million	78.2	86.4	89.4	90.9	91.1	98.9
In months of prospective imports of goods and services	12	10	11	11	11	11
Debt indicators			(In percent of GDP, unless otherwise indicated)			
Gross public debt	12.0	11.8	11.5	7.3	6.1	5.0
External	9.8	8.4	9.4	5.5	4.5	3.6
Domestic SOE debt	2.3	3.5	2.2	1.8	1.5	1.3
Nominal GDP (In $A million)	59.1	64.4	77.9	79.6	83.4	88.7

Sources: Tuvalu authorities; PFTAC; SPC; ADB; World Bank; 2018 IMF's BOP TA; and IMF staff estimates and projections.
1/ Includes Special Development Expenditures (SDEs) and infrastructure investment
2/ Domestic current balance excludes fishing revenue, grants, and capital expenditure.
3/ Banks' and pension fund lending to non-government domestic sector.
4/ The sum of liquid assets of the National Bank of Tuvalu, Consolidated Investment Fund, and SDR holdings.

INTERNATIONAL MONETARY FUND

TUVALU

STAFF REPORT FOR THE 2021 ARTICLE IV CONSULTATION

July 1, 2021

KEY ISSUES

Context. Swift implementation of containment measures, limited spillovers from tourism, and COVID-related fiscal spending financed by buoyant fishing revenues and donor grants have allowed Tuvalu—a fragile Pacific micro-state—avoid a recession in 2020. The economy is expected to expand by 2.5 percent in 2021, supported by fiscal expenditures and resumption of infrastructure projects. But significant challenges remain: Tuvalu is vulnerable to the effects of climate change, its economy is dominated by the public sector, and its revenue base is narrow. Uncertainty around donor commitments complicates fiscal planning.

Main policy recommendations:

- Maintain COVID-related fiscal measures conditional on the stage of the pandemic. In case of an outbreak, expand support to vulnerable population and the private sector. Work with development partners to procure sufficient vaccines to inoculate the entire population.
- Once the economy fully recovers, implement reforms to (i) achieve gradual fiscal consolidation to preserve fiscal buffers needed to guard against future shocks, especially natural disasters; and (ii) fund climate adaptation and infrastructure maintenance needs. Use a combination of measures to mobilize domestic revenues and raise the efficiency of public spending through improved public financial management.
- Develop effective prudential regulation and supervision of the financial system to promote health of the financial institutions and improve financial intermediation.
- Continue implementation of structural reforms to encourage diversification away from the public sector and improve access to credit.
- Strengthen the institutional capacity of domestic institutions to produce high-quality statistics to improve the policy making process.

Approved By
Helge Berger and Kevin Fletcher

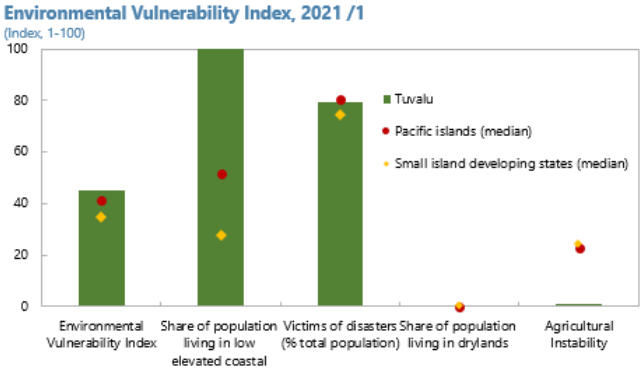
The discussions, conducted via videoconference, took place between April 12-25, 2021. The staff team comprised Emilia Jurzyk (Head), Jeanne Verrier (both APD); Majid Bazarbash (MCM); and Huy Nguyen (FIN). Briar Ferguson, David Kloeden, Rajinder Kumar, Paul Seeds (all PFTAC) also participated in some of the discussions. Demet Kaya and Tuimasi Ulu (both World Bank) joined some of the technical meetings. Chang Huh and Talavai Iona (both OED) also attended the meetings. The mission met with Minister for Finance Seve Paeniu, Minister for Justice, Communication and Foreign Affairs Simon Kofe, Acting Secretary for Finance Niuatui Niuatui, Secretary of Education Tufoua Panapa, Secretary of Local Government and Agriculture Taufia Patolo, Secretary of Health Nikolasi Apinelu, Secretary of Transport, Energy and Tourism Avafoa Irata, Acting Secretary of Public Works, Infrastructure, Environment, Labour, Meteorology an Disaster Management Palipa Lauti, Secretary of Fisheries and Trade Falasese Tupau, Secretary to Government Tapugao Falefou, other senior government officials, and representatives of the private sector. Alizeh Amer, Enakshi Das, and Kristine Laluces (all APD) provided excellent research and editorial assistance in preparation of this report.

CONTENTS

APPENDICES

CONTEXT

1. Tuvalu—a fragile South Pacific micro-state—encountered the pandemic following a period of relatively strong growth. The economy expanded 6.3 percent on average between 2017-2019, reflecting high public spending on infrastructure and new housing prior to the 2019 Pacific Islands Forum, and an elevated public sector wage bill. Close engagement with donors, guided by the mutually-agreed reform agenda outlined in the Policy Reform Matrix (PRM) helped ensure the steady inflow of budget support grants. Infrastructure investment funded by donors also contributed to growth. Due to buoyant fishing revenues and grants, Tuvalu's budget registered surpluses in most years, leaving its fiscal buffers well replenished and debt levels low ahead of the pandemic. The authorities also made progress on public financial management reforms.



1/ The Environmental Vulnerability Index (EVI) is calculated as 1/4 of the share of population in low elevated coastal zones, 1/4 of the victims of disasters, 1/4 of the share of population living in drylands and 1/4 of the agricultural instability. A high EVI represents high vulnerability. A high agricultural instability score is indicative of high vulnerability to natural shocks. Victims of disasters are defined as people killed or affected by natural shocks in a given year and the associated indicator represents the 20-year average.
Source: United Nations Committee for Development Policy Secretariat. Triennial review dataset 2000-21.

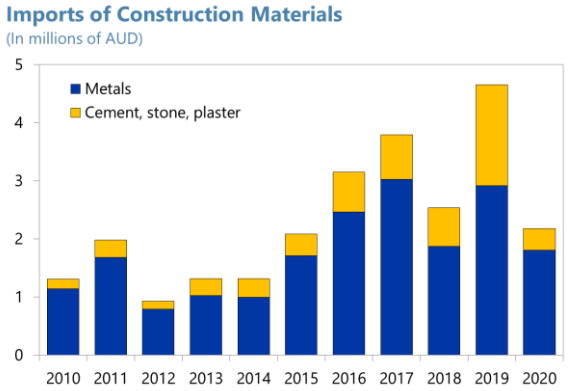
2. However, the country continues to face significant structural challenges. Due to its low elevation, Tuvalu is vulnerable to the threat of rising sea levels and to natural disasters, thus requiring significant funds to climate-proof its infrastructure. Tuvalu's very small size (26 square km) and remoteness raise the cost of doing business, hindering private sector growth and diversification of the economy away from state-owned enterprises. Employment opportunities are scarce. Climate change is a risk and changing weather patterns pose a threat to tuna stock, threatening Tuvalu's largest source of revenue. Uncertainty around donor commitments complicate fiscal planning. A narrow revenue base and increasing spending on public sector wages, Tuvalu Medical Treatment Scheme (TMTS), and overseas scholarships further threaten long-term fiscal sustainability. The authorities' new National Strategy for Sustainable Development 2021-2030, *Te Kete*, aims to address many of these challenges.

COVID-19: IMPACT, OUTLOOK, AND RISKS

3. Due to the swift implementation of containment measures, Tuvalu has remained COVID-free as of June 25, 2021. Aware of the significant toll that the pandemic would take on their remote community, Tuvaluan authorities reacted swiftly to the outbreak. Immediately after the first cases of COVID-19 were confirmed in Fiji—the travel gateway to Tuvalu—the authorities declared a State of Emergency, banning all travel except for the delivery of essential items and repatriation flights (subject to a mandatory two-week quarantine). They prepared a response plan and swiftly

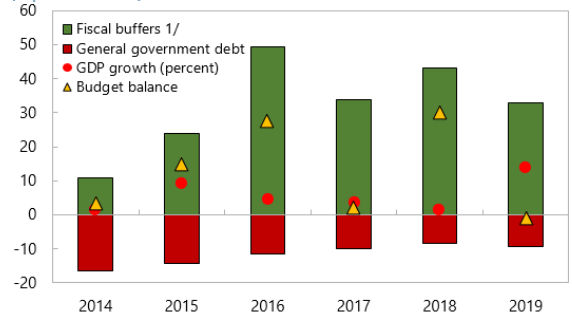
engaged with international donors who provided emergency funding that helped shore up health infrastructure, secure repatriation and medical supply flights, and fund an economic stimulus plan.[3]

4. Border closures and containment measures have taken a toll on economic activity, but government spending helped avoid a recession in 2020. Many infrastructure projects came to a halt as the pandemic prevented travel of international experts and impacted imports of materials. The small hospitality sector was almost entirely shut down due to the lack of tourists and business arrivals, with no domestic demand available to fill the gap. However, a favorable revenue position allowed the authorities to maintain current spending as planned and to extend additional support to the population and businesses through the COVID-19 relief package. As a result, the economy is estimated to have grown 1 percent in 2020, compared to 13.9 percent in 2019, with 1.6 percent inflation.[4]

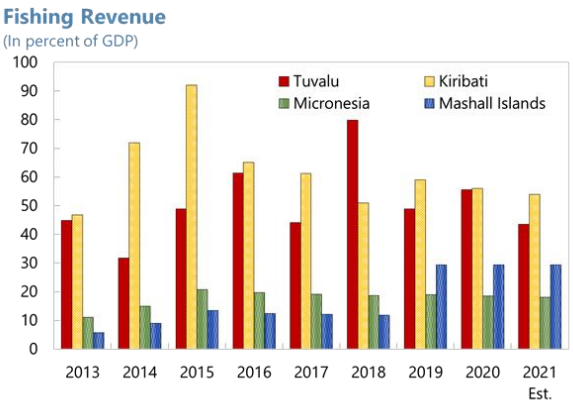


Source: Tuvalu Statistical Office.

5. Despite elevated COVID-related spending, the 2020 budget closed with a surplus. Revenues from the sale of fishing licenses—the main source of government revenues—stood at 56 percent of GDP, almost 30 percent higher than budgeted, as demand for Tuvalu-fished canning tuna soared. International donors provided additional AUD6.8 million (or 8.6 percent of GDP) of COVID-related support. That, combined with underspending on infrastructure projects and travel, allowed Tuvalu to close the 2020 fiscal year with a 5.0 percent of GDP surplus. Total public debt remained low, at 5.5 percent of GDP.



1/ Fiscal buffers consist of the stock of Consolidated Investment Fund and Tuvalu Survival Fund. Tuvalu Trust Fund is not included, as it is not fully sovereign.
Sources: Tuvaluan authorities; and IMF staff estimates.



Sources: Tuvaluan authorities; and IMF staff estimates.

[3] See Appendix I, "Tuvalu's Response to COVID-19 Pandemic"

[4] Historical GDP data has been revised and re-based in April 2021 following a Technical Assistance mission from PFTAC. That resulted in an upward revision of 2019 nominal GDP level by 14.6 percent compared to earlier estimates.

6. Under current policies, Tuvalu will face increasing budget deficits going forward. In 2021, after the passage of the supplementary budget, the fiscal balance is projected to shift to a deficit of 7.0 percent of GDP as a result of significant increases in recurrent spending on goods and services and public sector wage bill, and higher capital spending, mostly due to expenditures related to a planned national airline (at AUD13mln or 16 percent of GDP). Recent delays in agreeing on the PRM with the donor community post risk to 2021 grant availability. In the medium-term, fishing revenues are projected to plateau at 40 percent of GDP due to uncertain weather patterns and the already-high price of fishing licenses that make large future increases unlikely. Fees from Tuvalu's .tv license are projected to fall given the increasing use of other domains for livestreaming, and so are foreign grants due to uncertainty surrounding donor commitments. Spending on public sector wages, TMTS, and overseas scholarships is projected to stay elevated, widening the general government deficit to 4.6 percent of GDP by 2026 and gradually crowding out capital expenditure.

7. The external position has temporarily improved. The current account (CA) balance is projected to have reached 3.8 percent of GDP surplus in 2020 as the trade deficit was offset by inflows from grants and fishing revenues and returns from the Tuvalu Trust Fund (TTF) and Consolidated Investment Fund (CIF). In 2021, the CA balance is projected to deteriorate to a 4.1 percent deficit as the projected narrowing in the trade balance from elevated COVID-related levels will be outweighed by lower fishing revenues and investment income. While the lack of recent data and the high volatility of balance-of-payments flows complicate the analysis, the external position in 2020 is assessed to be broadly in line with fundamentals and desirable policy settings.[5] International reserves also appear sufficient, at 11 months of goods and services imports in 2020.

8. The economy is expected to rebound in 2021. The vaccine rollout has started in April but securing enough vaccines to inoculate the entire population will take time. Consequently, partial border reopening is expected at the end of 2021 at the earliest. Nonetheless, higher current spending and gradual resumption of infrastructure projects is projected to raise growth to 2.5 percent in 2021. Full resumption of travel in 2022, continued high public spending, and further implementation of infrastructure projects is forecast to increase growth to 3.5 percent by 2022. Inflation is expected to gradually increase to 2.2 percent in 2021 and 2.4 percent in 2022.

9. Over the longer term, the baseline scenario incorporates the impact of natural disasters and climate change. While the years 2021-26 are projected to be disaster-free to simplify policy discussions, from 2027 on, the baseline scenario incorporates a cost of natural disasters and climate change at 1 percent of GDP on average. Real growth is projected to moderate to 2 percent in the long run. In addition to the impact of climate change, growth is expected to be weighed down by the dominance of inefficient public enterprises in the economy, capacity constraints, and weak external competitiveness.[6]

[5] See Appendix II, "Tuvalu: External Sector Assessment"

[6] See Lee, D., Zhang, H., and Nguyen, C. (2018). "The economic impact of natural disasters in Pacific Island countries: Adaptation and preparedness." IMF Working Paper No 18/108, International Monetary Fund, Washington; and "First Resilience Development Policy Operation with a CAT-DDO (P170558)", Report No. PGD101, The World Bank.

10. Risks to the outlook are high and tilted to the downside.[7] Prolonged containment measures would delay resumption of infrastructure projects and hamper the already-limited private sector activity. Government revenues could fall short of projections given significant risks, including from delays in agreeing on reform priorities with donors; changes in weather patterns which could shift tuna stocks and negatively affect fishing revenues; or an unforeseen drop in returns from the Tuvalu Trust Fund given uncertain global financial conditions. Continued lack of effective financial supervision of banks and weak balance sheets of State Owned Enterprises (SOEs) create contingent risks to the government and impede credit intermediation. A loss of the correspondent banking relationship would endanger Tuvalu's ability to process international payments. Finally, Tuvalu is heavily exposed to the effects of climate change and natural disasters.

Authorities' Views

11. The authorities broadly agreed with staff's assessment of the macroeconomic outlook and risks. They noted that risks to growth in 2021 remain elevated due to the uncertainty surrounding the path of the COVID-19 pandemic, uneven vaccination rates between countries, and continued cargo shipments delays, which impact construction and domestic trade. They noted that travel restrictions also pose risks to the seasonal worker schemes with Australia and New Zealand, potentially impacting household incomes. To protect the population, comprehensive measures implemented to keep Tuvalu COVID-free will remain in place for now. The authorities hope to receive further vaccine allotments from the COVAX program and development partners, to fully inoculate all eligible population in 2021 and to enable the opening of borders.

12. The authorities expected more favorable fiscal outturns. They noted that continued close collaboration with development partners should allow them to receive budget support grants as planned. At the same time, any temporary delays in grant disbursements would not pose risk to the budget due to the large reserve assets accumulated by the government. They also expect the continued travel restrictions to result in some underspending of both the current and the capital budget, leading to a small budget surplus for 2021. Going forward, the existing sources of revenue, together with donor grants, should help support public finances.

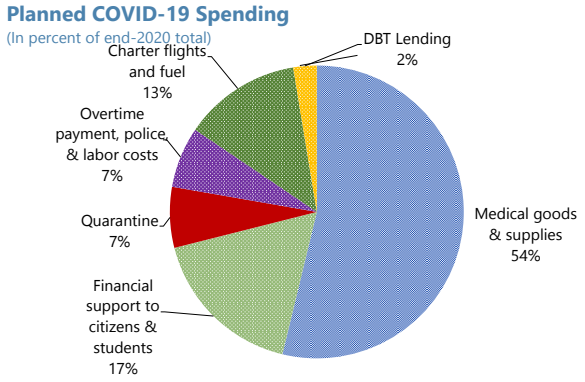
SECURING GREEN AND SUSTAINABLE RECOVERY IN A POST-COVID WORLD

A. Recovering from the Pandemic

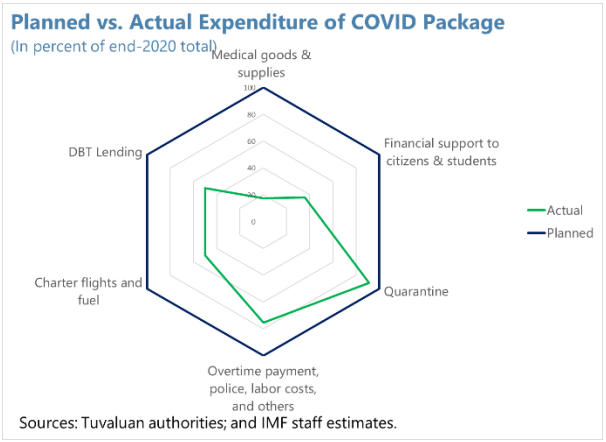
13. At the start of the pandemic, the authorities swiftly put together a large fiscal stimulus package of AUD23.3 million (29 percent of GDP). It included expenditures on medical equipment and vaccines, quarantine facilities, and support to the population and the private sector. In addition, the island communities were allowed to use their development grants (AUD4 million total, or

[7] See Appendix III, "Tuvalu: Risk Assessment Matrix"

5 percent of GDP) for COVID-related support to local populations, and residents were granted partial access to their retirement savings. Around a third of the planned amount of the relief package was implemented, with the underspending explained by the suspension of the universal cash payments and targeted cash assistance after the first three months with no infections, and lower than expected demand for repatriation flights which reduced quarantine expenditures. Difficulty in procuring medical equipment and supplies, as well as Tuvalu's COVID-free status, explained most of the underspending on health. The 2021 budget includes AUD1.1 million (or 1.3 percent of GDP) appropriations for COVID-related spending.



Sources: Tuvaluan authorities; and IMF staff estimates.



Sources: Tuvaluan authorities; and IMF staff estimates.

14. Going forward, the fiscal response should continue to depend on the path of the pandemic. Any additional fiscal support in case of an outbreak would best be focused on the vulnerable population and the private sector. The authorities should continue working with development partners to seek flexibility in the use of the remaining grants, including to secure additional vaccines and medical equipment needed for inoculations, and to maintain buffers given the uncertainty surrounding the pandemic. All COVID-related spending should be conducted in line with the procurement rules, with details published on the website of the Ministry of Finance, to improve transparency and accountability. In this context, the planned audit of the COVID expenditures by the INTOSAI Development Initiative and the Pacific Association of Supreme Audit Institutions, and the Office of the Auditor General of Tuvalu are welcome developments.

Authorities' views

15. The authorities stressed that their policy response helped prevent the emergence of the pandemic in Tuvalu and ensured support to the population, and such policy will continue. They noted that COVID-related measures in the 2021 budget are tailored to the country's situation, focusing on repatriation flights and support to the essential personnel. The authorities plan to work closely with development partners to utilize the existing grants and procure vaccines. They also recognized the need for transparency in pandemic-related spending and intend to publish the information on the website of the Ministry of Finance.

B. Securing Resources for Green and Sustainable Growth

16. Going forward, significant resources are needed for climate adaptation and to build buffers against future shocks, especially natural disasters. Staff analysis indicates that to reach sustainable development goals in energy, roads, and water/sanitation/hygiene (WASH), Tuvalu will need to increase spending by around 2.3 percent of GDP annually until 2030.[8] Domestic resources will likely be needed to co-finance these projects (e.g., around 6 percent of 2019 GDP for the Tuvalu Coastal Adaptation Project by the Green Climate Fund). In addition, buffers are required to cover cost of future natural disasters—for example, reconstruction after the 2015 cyclone Pam cost over 30 percent of GDP.

17. Once the economy fully recovers, a gradual fiscal consolidation will be necessary to secure fiscal sustainability and reduce risks.

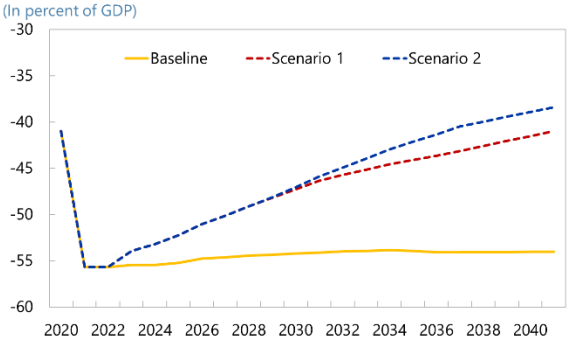
- *Fiscal anchor. Given* the volatility and the largely exogenous nature of fishing revenues and grants and the longer-term nature of capital expenditures, the domestic current fiscal balance—defined as current revenues excluding grants and fishing license fees less current expenditures—would provide an appropriate anchor. Targeting a domestic current deficit of around 40 percent of GDP through a combination of expenditure restraint and revenue mobilization would reduce the need for a rapid adjustment if shocks occur. It would also help secure fiscal buffers through the Consolidated Investment Fund and the Tuvalu Survival Fund and protect government's net financial worth over the medium term, offsetting a potential decline in fishing revenues or natural disaster costs.[9] Additional fiscal space would also help ensure sufficient resources to achieve the government's development goals, including on infrastructure investment and maintenance, and to finance climate adaptation needs.

- *Impact of consolidation on fiscal outcomes.* On staff's numbers, a gradual adjustment to achieve a current deficit of 40 percent by 2041 would raise fiscal buffers to over 70 percent of GDP and eliminate debt (Scenario 1). Such buffers would be sufficient to cover most shocks, including a sharp fall in fishing revenues (40 percent of GDP) and a natural disaster (30 percent of GDP). Structural reforms to maintain 3 percent average growth post 2027 (a ten-year average, ¾ percentage points above the baseline) added to the adjustment would allow for a quicker attainment of the 40 percent deficit target (Scenario 2).

[8] See Appendix IV, "Fostering Inclusive Growth While Building Climate Resilience: Fiscal Costs and Financing Options"

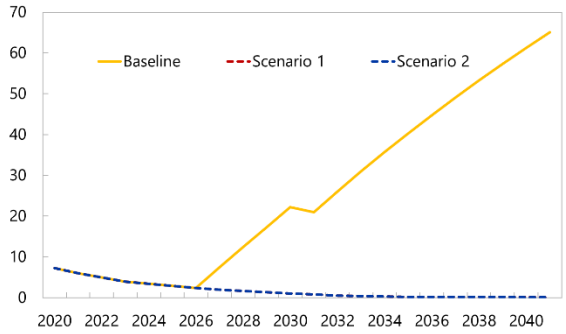
[9] See Appendix V for a discussion of Tuvalu's trust funds.

General Government Current Balance under Alternative Scenarios
(In percent of GDP)



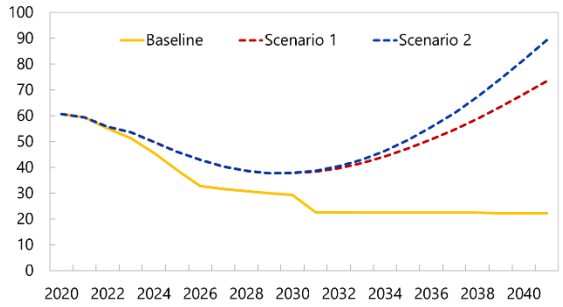
Sources: Tuvaluan authorities; and IMF staff estimates.

General Government Debt under Alternative Scenarios
(In percent of GDP)



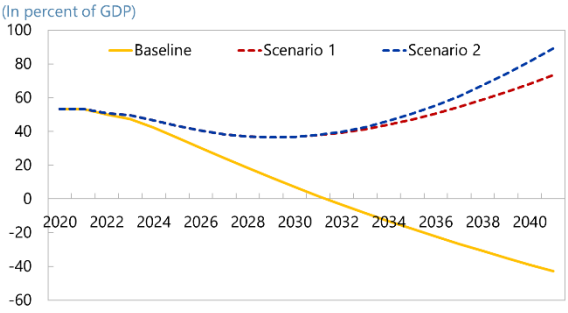
Sources: Tuvaluan authorities; and IMF staff estimates.

Government Fiscal Buffers under Alternative Scenarios 1/
(In percent of GDP)



1/ Sum of Consolidated Investment Fund and Tuvalu Survival Fund.
Sources: Tuvaluan authorities; and IMF staff estimates.

Government Net Financial Worth under Alternative Scenarios 1/
(In percent of GDP)

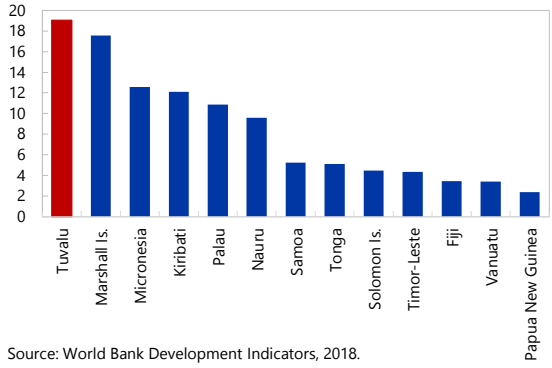


1/ Sum of Consolidated Investment Fund and Tuvalu Survival Fund less public debt.
Sources: Tuvaluan authorities; and IMF staff estimates.

18. A combination of measures to increase spending efficiency and mobilize domestic revenues would help achieve fiscal consolidation. The 2021 Debt Sustainability Analysis indicates that Tuvalu remains at a high risk of debt distress, underscoring the need to implement reforms.[10]

- *Disciplining expenditure.* Policies to restrain current spending include: (i) a review of public sector wage bill and establishing clear criteria linking wage increases to performance, fiscal revenues, and inflation; (ii) lowering spending on Tuvalu Medical Treatment Scheme (by improving preventive programs for non-communicable diseases and developing early care, systematically tracking expenditure by beneficiary and expense type, and rationalizing travel of family members); (iii) rationalizing spending on overseas scholarships (by developing a

Expenditure on Health, 2018
(In percent of GDP)



Source: World Bank Development Indicators, 2018.

[10] See Annex I, "Tuvalu: Debt Sustainability Analysis"

comprehensive strategy across ministries to ensure that obtained degrees align with Tuvalu's needs and reviewing scholarship award criteria, systematically monitoring outcomes of the scholarship programs—including completion rates, repatriation to Tuvalu, job placement—and tracking costs, providing incentives to complete studies on time and with honors, enforcing mandatory service periods for returning students, and enforcing loan repayment agreements); (iv) reviewing SOE subsidies; (v) improving cost effectiveness and control of the government's travel budget; and (vi) conducting a detailed analysis of the commercial viability of the planned new airline, making realistic budgetary provisions for the associated investment and maintenance costs over the medium-term, and establishing a robust legal framework to limit public liability and ensure high governance standards around the airline. Given that national airlines in the region are often lossmaking, it will be crucial that best practices in public financial management (PFM) are drawn upon to limit risks.[11]

- *Mobilizing revenues*. Policies to mobilize revenues include: (i) eliminating tax exemptions, including those for projects financed by development partners; (ii) improving tax compliance, especially among the corporates (as currently only 2 out of 21 registered large taxpayers pay corporate taxes, constituting around 80 percent of total tax revenue), by ensuring sufficient staff resources and training to improve tax arrears management and enable a conduct of audits; (iii) improving taxpayer services; and (iv) strengthening revenue administration by implementing effective risk management practices. Given the potential impact of the ratification of the PACER Plus trade agreement on Tuvalu's revenues, a comprehensive review of the taxation system should be considered.[12] Diversification of Tuvalu's economy would also help raise revenues.

19. Strengthening PFM is necessary to raise the efficiency of public spending. Completing the Public Expenditure and Financial Accountability (PEFA) self-assessment would be a welcome first step, followed by an adoption of a 2021-24 PFM Roadmap.[13] Reforms could be achieved through:

- *Improving the budget preparation process* by developing high-quality projections of grants, tax revenues, and current and infrastructure spending, and ensuring that classification and presentation of budgets and fiscal reports follows the 2014 Government Finance Statistics Manual (GFSM) format. Full implementation of the new Financial Management Information System should help improve processes. Supplementary budgets should be avoided.

[11] See Appendix V "National Airlines in Pacific Island Countries".

[12] The Pacific Agreement on Closer Economic Relations (PACER) Plus is a free trade agreement between Australia, New Zealand and six of the Pacific Island Countries (Cook Islands, Kiribati, Niue, Samoa, Solomon Islands and Tonga) that entered into force in December 2020. It builds on existing trade agreements: the South Pacific Regional Trade and Economic Cooperation Agreement (SPARTECA) of 1980 and the original PACER agreement of 2001. Tuvalu, along with two other Least Develop Countries (Nauru and Vanuatu), has signed but not yet ratified the agreement.

[13] Progress on the PFM roadmap and the PEFA self-assessment was delayed because of the pandemic. The authorities are planning to seek support from PFTAC to conduct a PEFA self-assessment this year; this will be an input to the revised PFM roadmap.

- *Re-instituting in-year revenue and spending controls* by resuming compilation and publication of quarterly budget outcomes, standardizing fiscal accounts classification, and reporting data based on the 2014 GFSM. The resumption of annual audits of government accounts is welcome and should continue in a timely manner.

- *Improving the procurement process* to ensure better transparency and control of awarded contracts, including by publishing annual reports by the Central Procurement Unit that includes a list of successful/unsuccessful bidders for public contracts and their beneficial owners, the amount of each awarded contract, contract type, types of goods/services provided; and undertaking periodic internal audits of public procurement.

- *Developing* a *medium-term infrastructure maintenance plan* based on the 2017 asset register to ensure sufficient funds for the maintenance and replacement of needed public assets, with a clear delineation between routine (operating) maintenance and capital maintenance (overhaul) in accordance with 2014 GFSM classifications. The maintenance plan should be linked to the budget processes, and annual appropriations should account for high depreciation of domestic infrastructure due to climate events.

20. Given limited fiscal space, the authorities are actively seeking to mobilize international resources for building resilience to climate change. After a six-year process, in 2019 Tuvalu became the second Pacific country accredited for direct access with the Adaptation Fund, a multilateral climate finance facility.[14] This gives Tuvalu more control over project management and implementation once a project proposal is approved. Accreditation with the Adaptation Fund should facilitate accreditation with other international climate finance facilities, and fast-track accreditation with the Green Climate Fund.[15] However, there is an urgent need for a comprehensive approach that increases local capacity to develop a pipeline of prioritized climate projects, navigates the complex landscape of climate finance to ensure the selection of the most suitable sources of financing, and ensures the continuity of multi-sector and multi-year projects. A Climate Finance Unit, to be established by June 2022 under the Ministry of Finance, would help coordinate the preparation of project proposals. In addition to mobilizing international climate finance, the authorities should continue their efforts to explore multilateral risk-sharing mechanisms such as the Pacific Island Insurance Facility.

[14] The Adaptation Fund was established in 2001 under the Kyoto Protocol of the UN Framework Convention on Climate Change to finance concrete adaptation projects in developing countries that are particularly vulnerable to climate change.

[15] The Green Climate Fund—a key element of the Paris Agreement—is a major multilateral climate fund. It was established by the UN Framework Convention on Climate Change at the COP16 in 2010 to invest in low-emission and climate-resilient projects and programs in developing countries. It is mandated to invest at least 50 percent of its resources in mitigation and 50 percent in adaptation, more than half of which should be dedicated to Least Developed Countries, Small Island Developing States and African States.

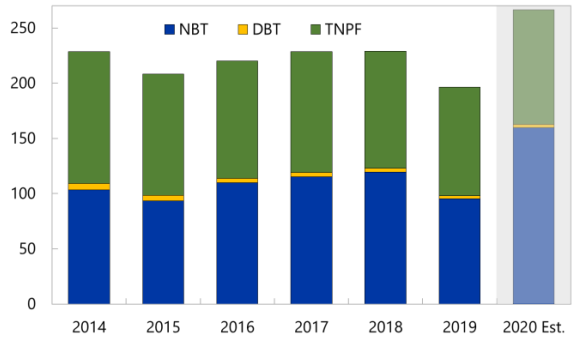
Authorities' Views

21. The authorities agreed with staff's proposed structural adjustment policies and with the need to step up investment in physical infrastructure to sustain an inclusive and green growth. As a first step, they are currently implementing a new Financial Management Information System to improve budget formulation, execution, and reporting. They also intend to work with the PFTAC experts to strengthen fiscal forecasting, including by identification of fiscal ratios to be used in long-term policy planning. The authorities are considering a review of the public sector salary structure, potentially with assistance of the World Bank. They underlined that the scholarship programs to study abroad and the Tuvalu Medical Treatment Scheme are two key benefits they plan to preserve. Although they agreed that some degree of rationalization of expenses would be warranted, they stressed that implementation would be difficult. They noted that a domestic airline is needed to improve inter-island connectivity. The authorities are committed to exploring all possible options regarding access to international climate financing facilities.

C. Improving Efficiency of the Financial Sector, Including by Adopting Fintech

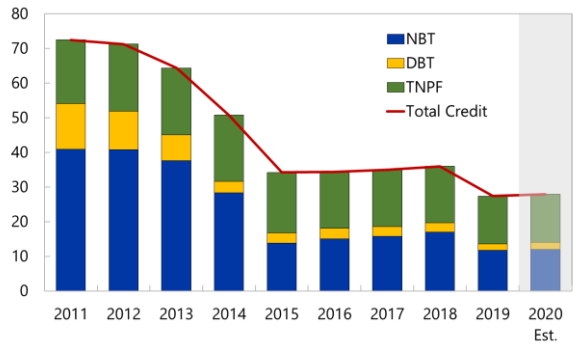
22. Although three financial institutions operate in Tuvalu, access to credit remains limited, especially for businesses. The state-owned National Bank of Tuvalu (NBT) is large (in 2020, its assets stood at AUD128 million, or 160 percent of GDP), profitable, and well capitalized. However, most of its assets are held as cash and deposits with foreign banks, while its lending portfolio is small and consists mostly of personal and housing loans, and credit to SOEs. The NBT's profits are mostly derived from FX transactions, as NBT is the only bank able to conduct international transactions. The Development Bank of Tuvalu (DBT), a much smaller bank, was set up by the government to lend to businesses, especially SMEs. While its liquidity and capitalization ratios remain high, its lending portfolio is encumbered with non-performing loans, and it faces challenges securing deposit funding to expand credit. The government-run Tuvalu National Provident Fund (TNPF), the nation's only pension fund, is well-managed and profitable, and is also active in consumer lending, but does not provide business loans. Its lending is virtually risk-free as it is only extended to members and against their TNPF balances, and TNPF has seniority over NBT and DBT in collecting TNPF balances put up as collateral.

Asset Composition of the Financial Sector
(In percent of GDP)



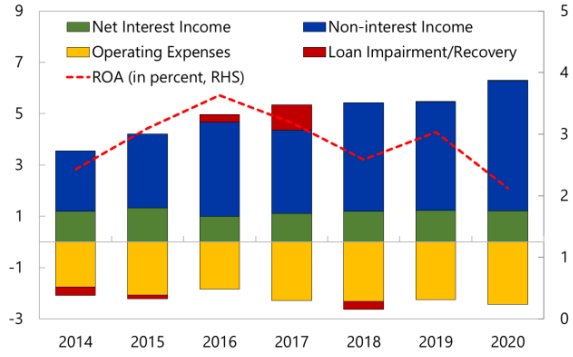
Sources: Financial reports of NBT, DBT and TNPF; and IMF staff estimates.

Lending by the Financial Sector
(In percent of GDP)



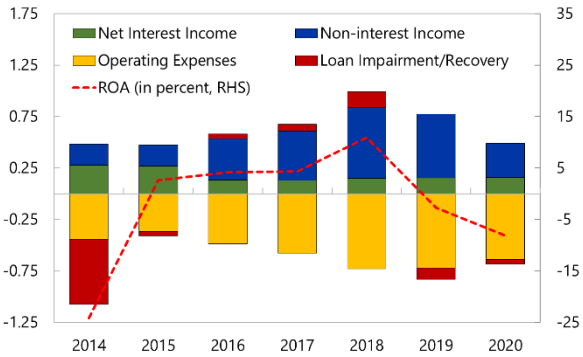
Sources: Financial reports of NBT, DBT and TNPF; and IMF staff estimates.

NBT's Income and Expenses
(In millions of AUD)



Sources: NBT's Financial Statements and IMF staff estimates.

DBT's Income and Expenses
(In millions of AUD)



Sources: DBT's Financial Statements and IMF staff estimates.

23. Going forward, Tuvaluan businesses and citizens would benefit from better access to credit. Financial intermediation could be improved through:

- *Upgrading the credit assessment capacity of banks.* A centralized credit registry system that collects up-to-date customer information from various sources, including income, tax payments, TNPF contributions, obligations, pledged assets, and credit history would be a good first step. All three lending institutions should report and have access to the registry (ideally in a digital form) and use the information to assess repayment capacity of borrowers when making credit decisions. Going forward, bank supervision should require model-based underwriting practices by banks to ensure prudent lending standards.

- *Risk-based loan pricing and adjustment of loan rates in accordance with the economic cycle.* Loan rates have remained unchanged for more than a decade despite changes in macroeconomic conditions and varying borrower-specific risks. Risk-based pricing could facilitate more efficient allocation of credit and account for customers' capacity to repay, especially for business borrowers. A credit registry, together with strong loan assessment standards, could facilitate smooth transitioning to risk-based pricing.

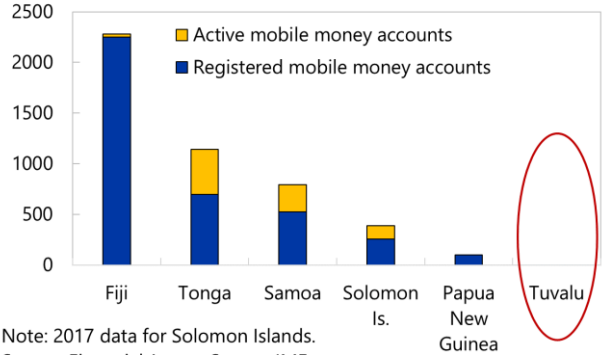
- *Introduction of a collateral framework and resolution regime for non-performing loans to boost financial institutions' ability to expand credit to individuals and businesses.* Reviewing the existing Memorandum of Understanding (MoU) between financial institutions to establish clear rules governing collateral seniority and recourse, especially with respect to the TNPF funds, and codifying it to ensure enforcement, would be a welcome first step. Given that the MoU includes rules related to the debt service-to-income ratio, such codification would also allow the supervisory authority to periodically review its adequacy. The authorities should also review the rule that bars banks from accessing TNPF balances of members with defaulted obligations until these members retire, as it exposes banks to liquidity risks. A bankruptcy legislation for households and firms should be developed to facilitate recovery of non-performing loans in a reasonable timeframe, supplemented by customer rights protection.

- *Continuing efforts to modernize the financial system by providing online banking services.* The DBT is currently pursuing a three-stage digitalization plan, which will allow clients to view their balance online (implemented in May 2021), facilitate online applications (by end July 2021), and enable online money transfer (by 2022). NBT is exploring options to upgrade its system to provide online banking services and offer ATM, debit, and credit card services. The government has allocated AUD1 million to support NBT's initiatives.

24. Development of effective prudential regulation and supervision would help promote the health of financial institutions in Tuvalu. The Banking Commission Act of 2011 established the Banking Commission, with the Permanent Secretary of the Ministry of Finance tasked as the Commissioner and the prudential supervision authority given to the Public Enterprise Reporting and Monitoring Unit (PERMU). It is critical that the supervisory framework covers both the banks and TNPF, given its role in extending credit to the economy. Improving capacity in PERMU to ensure periodic financial analysis of banks to assess their financial soundness and identify their vulnerabilities would be an important step. Banks' quarterly prudential reports should be simplified and the submission process to the banking commission streamlined, to facilitate timely analysis. The close cooperation with technical assistance partners to further upgrade staff skills should continue.

25. Given the significance of cross-border payments for Tuvalu, ensuring robust correspondent banking relationships (CBRs) for NBT remains a priority. The NBT lost its CBR with Australian banks in April 2020. While the NBT established a new relationship with the BRED bank in Fiji and maintained the CBR with the Bank of Hawaii, loss of CBRs remains a risk given tight international regulatory landscape. Loss of CBRs would hamper the authorities' ability to receive fishing license payments and donor grants and disrupt international commerce and the flow of remittances, and reduce NBT's FX

Mobile Money Accounts, 2018
(Per 1,000 adults)



Note: 2017 data for Solomon Islands.
Source: Financial Access Survey, IMF.

trading profits. The authorities are planning to set up a domestic Financial Intelligence Unit (FIU), building on the experience of other countries in the region. They are cooperating with the Asia-Pacific Group on Anti-Money Laundering to review the existing Anti-Money Laundering and Countering Financing of Terrorism (AML/CFT) legislation. They are also engaged with the Fiji Financial Intelligence Unit to devise a possible organizational structure and job descriptions for a domestic FIU.

26. The authorities' plans to utilize Fintech solutions for digital citizenship, mobile money, and e-transactions should best be developed in a context of a broader digital strategy.[16] The authorities are considering using a national digital ledger to create a paperless society. A comprehensive fintech strategy should be developed and include (i) strengthening technological infrastructure, such as inclusive and affordable access to high-speed internet and electronic devices; (ii) improving IT and finance expertise in Tuvalu's labor market; (iii) enhancing financial literacy of citizens; and (iv) developing a secured and easy-to-access digital national identity system. Three key applications are likely to provide the highest benefits for Tuvalu's citizens: (i) mobile money; (ii) cross-border payments; and (iii) internet banking. Regulations to address fintech specific risks, including operational risks such as cybersecurity, ensuring security of customer funds, sound data management practices, and consumer rights, should be developed in parallel.

27. Prospects for success in implementing digital solutions would be enhanced by selecting partners with a strong track record and avoiding technology or vendor lock-ins. Care should be taken to select a private partner with a proven record of implementing such projects in similar countries and the established ability to upgrade and reliably maintain such systems over time. Such selection should be based on a careful cost-benefit analysis to ensure the investment cost, including the ongoing cost of maintenance and technical support, is justified by expected benefits given the limited size of Tuvalu's market. Moreover, it is critical that the chosen technological architecture is open, promotes innovation, and avoids technology and vendor lock-in.

Authorities' Views

28. The authorities recognized the need to strengthen the financial sector and improve banking supervision. They noted that domestic labor shortages impede the process of hiring qualified personnel to fulfill banking supervision duties. They intend to collaborate closely with PFTAC to build capacity in the financial supervision unit in PERMU. They recognized the need to improve access to credit, especially to businesses, and are currently working towards improving the technological capacity of the financial institutions.

29. The authorities acknowledged that fintech can help increase the efficiency of the financial sector and noted challenges in identifying the optimal strategy. They concurred that identification of digital needs in financial sector services should precede the choice of technology. They recognize the need to develop financial sector services to improve financial depth and inclusion. Currently, their work on digital solutions is in the discovery phase, and they are conducting

[16] See Appendix VI. Financial Development in Tuvalu and the Role of Fintech.

a feasibility study to better understand benefits and challenges of using different platforms, including Bitcoin SV, for a national identity system.

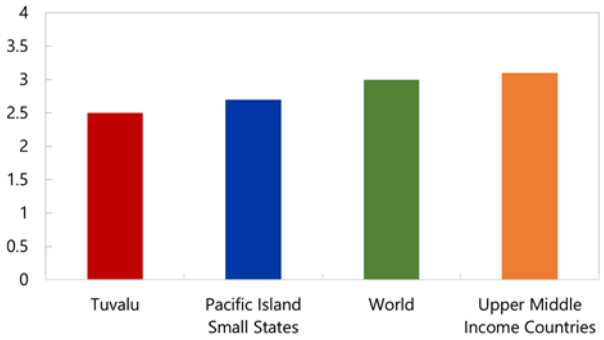
D. Diversifying the Economy to Raise Growth

30. Structural reforms to promote private sector development would help diversify the economy, improve employment prospects, and raise growth. The National Strategy for Sustainable Development aims to address the main structural issues.[17] Efforts should focus on two main areas:

- *Diversifying Tuvalu's growth base*. Tuvalu's economy is dependent on fishing revenues and external aid. Exports are very limited (0.2 percent of GDP in 2020) and reliance on imports high (nearly 70 percent of GDP). Tourism activity remains small due to poor connectivity, infrastructure, and amenities. Tuvalu would benefit from policies to diversify its growth base, including (i) supporting small-scale production of goods for local consumption, a first step toward exports diversification; (ii) developing subsistence agriculture to reduce dependence on foreign food sources, increase food security and promote healthy eating habits; (iii) developing tourism sector through niche markets, such as small cruise ships for eco-tourism; (iv) supporting the sustainable use of ocean resources ("Blue Economy"); and (v) exploring alternative sources of revenues such as the development of a citizenship-by-investment scheme, following best practices from other countries' experiences. Infrastructure investment should support these policies.[18]

- *Supporting private enterprises.* Private firms consist mainly of micro-enterprises, more than 90 percent of which are less than three years old. Remoteness and limited economies of scale drive up costs of doing business. The weak business regulatory environment, reflected in the low CPIA score, further hampers private sector development. Strong support to small businesses is needed in areas like registering businesses, training in bookkeeping, business operations and management, licensing, taxation, and customs requirements. Supporting entrepreneurship through business incubators could also be explored. Labor mobility programs with other countries, especially in areas where skills gaps among the

Country Policy and Institutional Assessment (CPIA) Business Regulatory Environment Rating, 2019
(Scale 0-6)



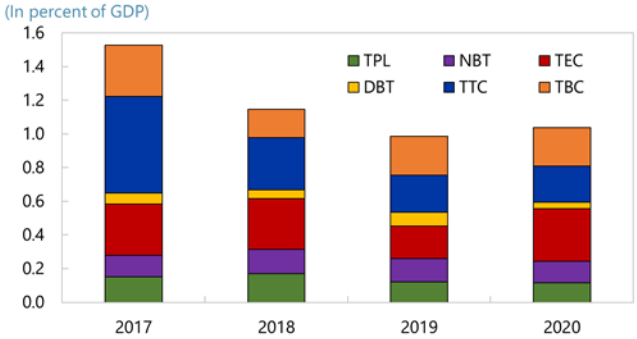
Source: World Bank

[17] See Annex VII: "The National Strategy for Sustainable Development, 2021-2030 (*Te Kete*)"

[18] The revised Priority Infrastructure and Investment Plan 2020-2025 lists the development of an international runway and the establishment of domestic air service as two of the fourteen high-priority projects.

Tuvaluans are the most pronounced (e.g. construction or healthcare) would improve employability of workers and help raise growth.

31. Significant progress has been achieved in improving SOE performance, but further reforms are needed. Tuvalu's economy is dominated by the public sector. Six public enterprises operate under the Public Enterprises Performance and Accountability Act of 2009 and the new government-owned domestic airline is expected to start operations in the second half of 2021. SOE performance remains weak, with non-financial SOEs repeatedly reporting losses, and relying on government support. Recent reforms include clarification of the legal status of SOEs, regulation of the appointments of directors, preparing corporate plans (though not by all SOEs), and improving financial reporting. Steps are also being taken to introduce performance-based management and improve governance through the establishment of an informal directors' institute. However, further reforms are required on several fronts:



Note: TPL: Tuvalu Post Limited, NBT: National Bank of Tuvalu, TEC: Tuvalu Electricity Corporation, DBT: Development Bank of Tuvalu, TTC: Tuvalu Telecom Corporation, TBC: Tuvalu Broadcasting Corporation
Sources: Tuvaluan authorities; and IMF staff calculations.

- *Finalize SOE reforms to improve performance*. Corporate plans should be completed for all SOEs. Implementation of tiered electricity tariffs is a step in the right direction to improve financial outcomes of Tuvalu Electricity Company. Over time, the structure of electricity tariffs should be reviewed to ensure cost recovery and link to oil prices. Pre-payment options for electricity consumers should be introduced (e.g., meters, pre-payment lump sums), as well as competitive bidding for fuel suppliers. Implementation of the solar energy program should improve supply and bring down electricity prices. The remaining joint venture operating under the NAFICOT should be closely monitored given a history of losses of the joint ventures. Timeliness of corporate reporting and audits of financial statements should be enforced, including to improve tax payments.

- *Clarify relationship of SOEs with the public sector*. A rules-based system of allocating Community Service Obligations (CSOs) should be adopted, to compensate SOEs for losses incurred from prices set below cost recovery levels. The CSO amounts should be lowered over time, and prices brought to cost recovery levels. Government's outstanding payment obligations towards SOEs should be resolved, and SOEs should be mandated to repay their tax arrears.

Net Profits/Losses of SOEs									
	SOEs	2013	2014	2015	2016	2017	2018	2019 2/	2020 2/
		In percent of GDP							
Non-financial SOEs	NAFICOT	-	-	-	-	-	-	-	-
	Tuvalu Electricity Corporation (TEC)	-3.2	-0.4	3.4	0.7	0.0	-0.6	2.1	0.2
	Telecommunications Corporation (TTC) 1/	0.5	-0.3	-0.1	-0.5	0.2	0.1	-	-
	Vaiaku Lagi Hotel Limited (VLHL) 1/	0.1	0.7	0.3	0.0	-	-	-	-
	Tuvalu Post Limited (TPL) 2/	-	0.1	0.2	-0.2	-0.2	0.1	-0.1	-
	Tuvalu Maritime Training Institute (TMTI) 2,	-0.1	0.5	-0.2	0.1	-0.1	0.0	0.0	0.0
Financial SOEs	National Bank of Tuvalu (NBT)	6.6	2.5	2.9	4.0	3.7	3.1	7.7	3.4
	Development Bank of Tuvalu (DBT)	-1.1	-1.4	0.1	0.2	0.2	0.4	-0.1	-0.2
Source: Public Enterprise Reform Management Unit (PERMU)									
1/ No longer operating under the Pulic Enterprises Performance and Accountability Act of 2009									
2/ Not audited									

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Authorities' Views

32. The authorities supported the proposed structural reforms to promote private sector development and diversify the growth base. They noted that staff's policy recommendations are well aligned with the government's development strategy, which will be transposed into detailed operating plans in the near future. Reforms to improve the performance of SOEs are underway but are subject to domestic capacity constraints. The authorities see limited scope for benefiting from the PACER Plus trade agreement in the short-term given minimal exports and a high reliance on imports. They consider the two aviation projects—a domestic airline and the establishment of a new international runway—a strategic priority.

E. Strengthen Policy Making Through Capacity Development

33. Continued efforts to enhance statistical capacity will improve the decision-making process and ensure that policies respond to changing economic circumstances in a timely manner. Data shortcomings are prevalent especially in real sector and balance of payments statistics, government finance, and financial sector data, with agencies responsible for compiling data often understaffed, thus requiring IMF TA to play a supplementary role. Strengthening institutional capacity through hiring of essential statistical personnel, ensuring their training, and succession planning given frequent turnover is needed. Continued close cooperation with PFTAC and other agencies providing technical assistance will be essential in this regard.

Authorities' views

34. The authorities expressed their appreciation for technical assistance received from PFTAC. They reiterated the commitment to improving domestic capacity, especially in government statistics, PFM reforms, revenue administration, and financial sector supervision. In the near future, they plan to continue relying on TA experts to compile national accounts and BOP statistics. They

encouraged close cooperation between PFTAC and development partners to identify capacity development needs and provide coordinated technical assistance.

STAFF APPRAISAL

35. The authorities' swift policy response helped prevent an outbreak of the COVID-19 pandemic and cushioned the impact on the Tuvaluan economy. While border closures took a toll on economic activity, a favorable revenue position and additional donor support allowed the authorities to extend support to the population and businesses through a fiscal relief package. Growth is expected to rebound in 2021 and beyond, driven by the resumption of infrastructure projects and elevated fiscal spending, but adverse risks to the outlook remain.

36. Further policy support should remain conditional on the stage of the pandemic. In case of an outbreak, any additional fiscal support should be focused on the vulnerable population and the private sector. Continued close cooperation with development partners to secure flexible use of the remaining grants, and to procure vaccinations and medical equipment for inoculations will help protect the population and ensure sufficient buffers in case risks materialize.

37. Once the economy fully recovers, implement reforms to (i) achieve gradual fiscal consolidation to preserve fiscal buffers needed to guard against future shocks, especially natural disasters; and (ii) fund climate adaptation and infrastructure maintenance needs. Tuvalu's dependence on volatile and largely exogenous sources of revenue—fishing licenses and donor grants—underscores the need for prudent fiscal policy, and for maintaining sufficient cash buffers. The authorities' multi-year budget planning could be enhanced by targeting the domestic current fiscal balance. Prudent fiscal management would help build fiscal buffers necessary to achieve government's development goals, and to finance climate adaptation needs. With limited fiscal space, efforts should continue to mobilize international resources to finance climate-related projects. Continuing public financial management reforms would help raise efficiency of public spending.

38. Development of effective prudential regulation and supervision would help promote the health of Tuvalu's financial institutions and improve access to credit. Improving capacity of PERMU, including through close cooperation with PFTAC, to ensure effective supervision going forward is key. The TNPF should be included under the supervisory framework, given its role in extending credit to the economy. Upgrading the credit assessment capacity of banks as well as the introduction of risk-based loan pricing, a collateral framework, and resolution regime for non-performing loans would help improve access to credit. The authorities' plans to utilize Fintech solutions for digital citizenship, mobile money, and e-transactions should best be developed in the context of a broader digital strategy. Given the significance of cross-border payments for Tuvalu, ensuring robust correspondent banking relationships remains a priority.

39. Continued implementation of structural reforms will help promote private sector development and diversify the economy, raising employment and growth. Training provided to

owners of micro-enterprises would promote formation of private firms. Policies to diversify Tuvalu's growth base through production of local goods, subsistence agriculture, and niche tourism should also be pursued. A national strategy for financial literacy and education would promote financial inclusion, help citizens make prudent financial decisions and unlock economic opportunities. Implementing the *Te Kete* development plan should help secure these goals**.**

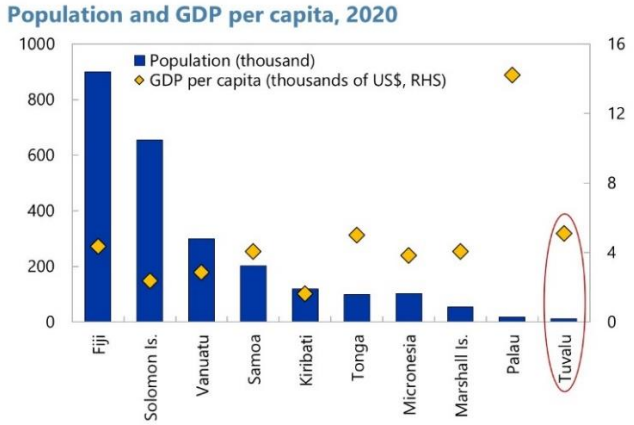
40. Significant progress has been achieved in improving SOE performance, but reforms should continue. Recent actions to improve SOE performance are welcome, and next steps should include finalizing SOE corporate plans and improving corporate governance of SOEs. Clear rules governing relationship of the SOEs with the public sector should also be adopted, and cross-obligations between SOEs and the public sector should be resolved in a timely manner, including repayment of tax arrears.

41. Continued efforts to enhance statistical capacity are needed to improve the decision-making process and ensure timely policy responses to changing economic circumstances. Strengthening institutional capacity through hiring of essential statistical personnel, ensuring their training, and succession planning given frequent turnover is needed. Continued close cooperation with PFTAC and other agencies providing technical assistance will be essential in this regard.

42. It is recommended that the next Article IV consultation take place on the current 24-month cycle.

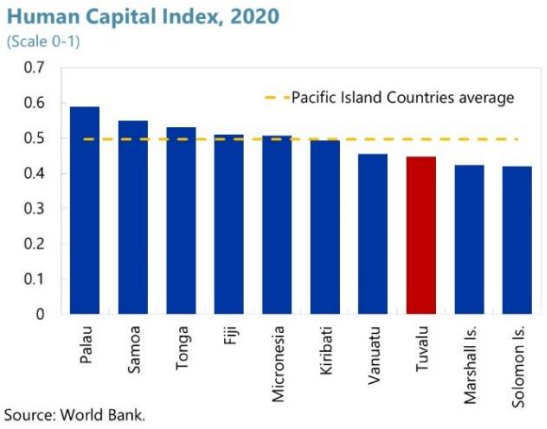
Figure 1. Tuvalu: The Setting in a Cross-Country Context

Tuvalu is among the least populated countries in the world.



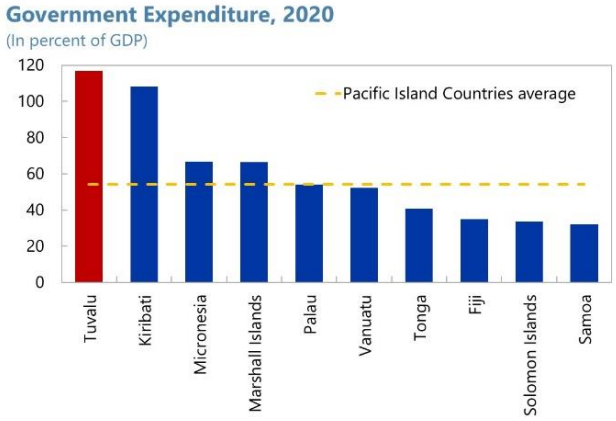
Source: IMF, *World Economic Outlook*.

… and is characterized by low human capital.



Source: World Bank.

The public sector is large and dominates the economy…

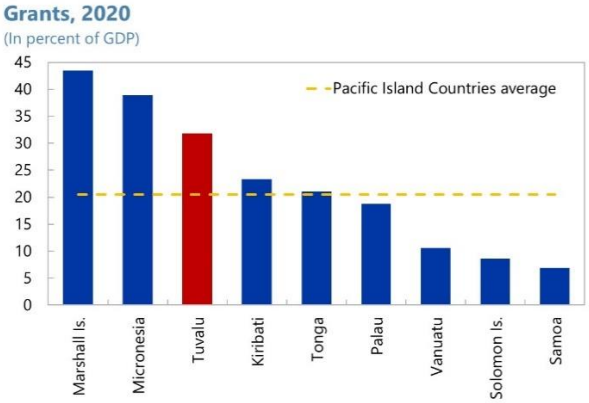


Sources: Country authorities; and IMF, *World Economic Outlook*.

Its population is entirely located in coastal areas, vulnerable to climate change…

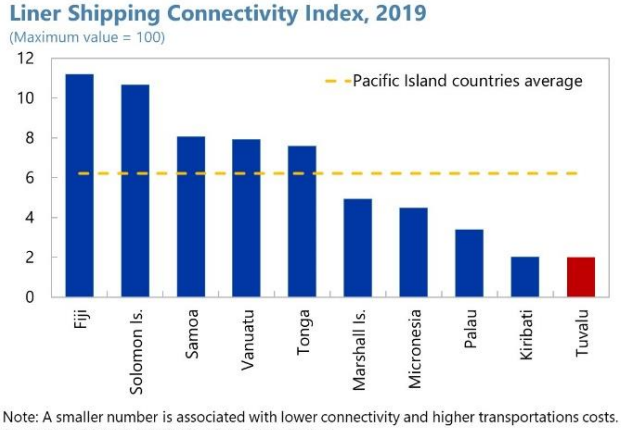
Note: Population as per most recent census.
Sources: Andrew et al. (2019), IMF staff estimates.

The country relies heavily on grants from development partners, which are high compared to Pacific peers.



Sources: Country authorities; and IMF, *World Economic Outlook*.

…and private sector development is hampered by weak connectivity to global shipping networks.

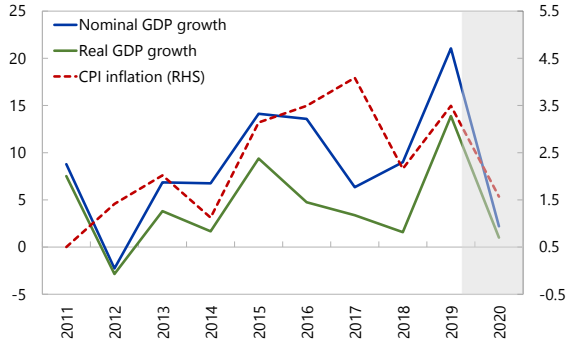


Note: A smaller number is associated with lower connectivity and higher transportations costs.
Source: World Bank, *World Development Indicators*.

Figure 2. Tuvalu: Economic Developments

After a few years of rapid growth, economic activity slowed in 2020.

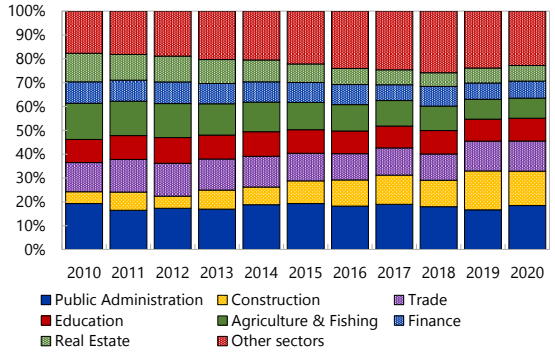
Economic Growth and Inflation
(In percent, year on year)



Sources: Tuvaluan authorities, PFTAC; and IMF staff estimates.

Public sector, construction, and trade continued to dominate the economy.

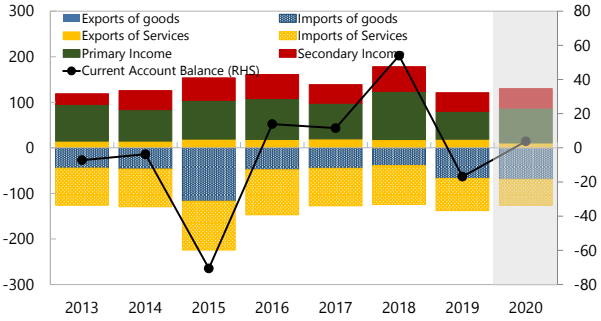
Main Economic Sectors
(In percent of nominal GDP)



Sources: Tuvaluan authorities, PFTAC; and IMF staff estimates.

The current account is driven by imports, income from fishing revenues, and grants by development partners.

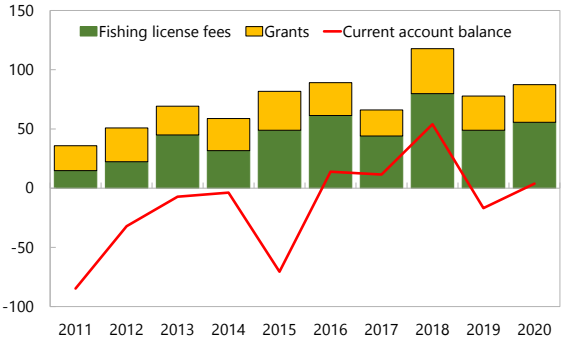
Current Account Balance
(In percent of GDP)



Sources: Tuvaluan authorities, PFTAC; and IMF staff estimates. Year 2020 represents estimates.

Fishing license revenue increased in recent years, reflecting favorable weather patterns and a new regional agreement.

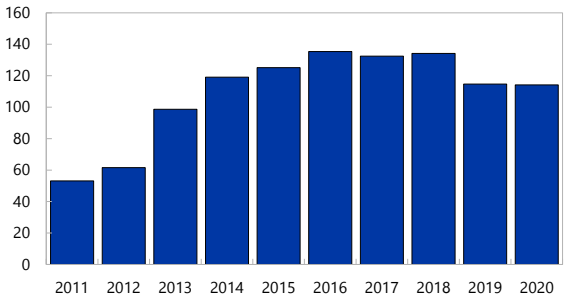
Main Balance of Payment Receipts
(In percent of GDP)



Sources: Tuvaluan authorities; and IMF staff estimates.

Gross international reserves remain high.

Gross Reserves 1/
(In percent of GDP)

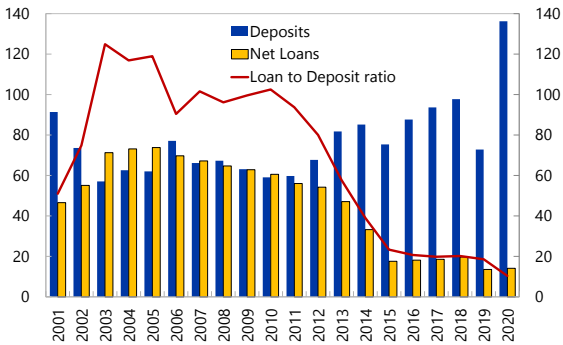


Sources: Tuvaluan authorities; and IMF staff estimates.

1/ Defined as the sum of foreign assets of the National Bank of Tuvalu, Consolidated Investment Fund, and SDR holdings.

Despite a significant increase in banks' liquidity, lending has continued to decline.

Bank Loans and Deposits
(In percent of GDP)

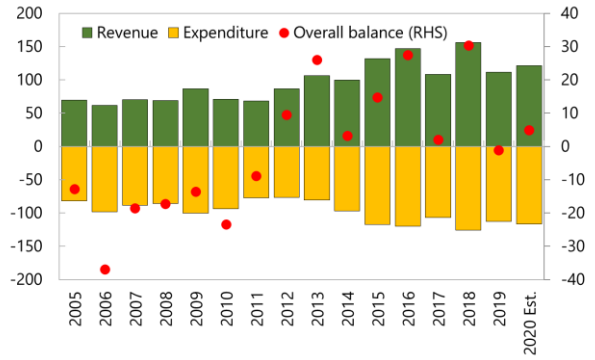


Sources: Financial Discolsures by NBT and DBT; IMF staff estimates.

Figure 3. Tuvalu: Fiscal Developments

In 2020, fiscal balance registered a surplus.

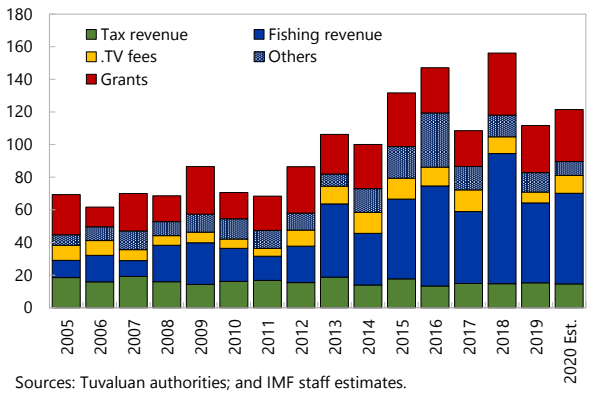
Fiscal Balance
(In percent of GDP)



Sources: Tuvaluan authorities; and IMF staff estimates.

Non-tax revenue, driven by high fishing revenue and .tv fees, remains a dominant source of income

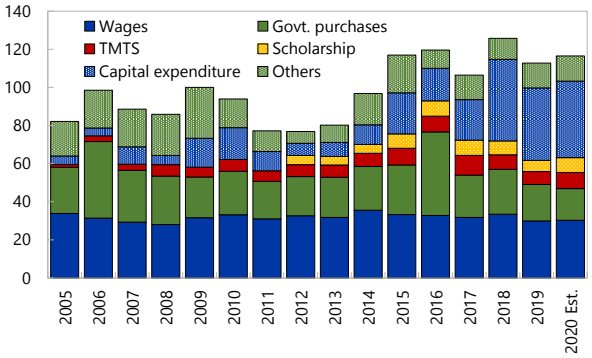
Government Revenue
(In percent of GDP)



Sources: Tuvaluan authorities; and IMF staff estimates.

Fiscal expenditures remain elevated.

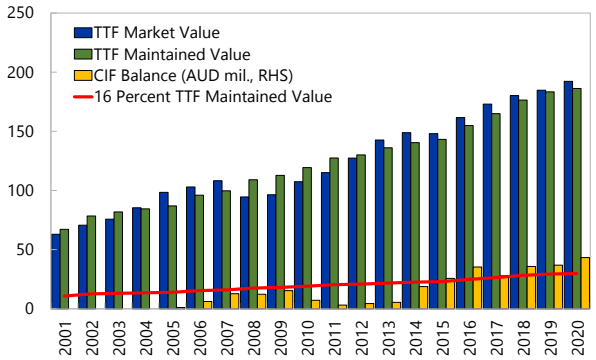
Government Expenditure
(In percent of GDP)



Sources: Tuvaluan authorities; and IMF staff estimates.

Good performance of TTF investment allowed for a positive contribution to CIF…

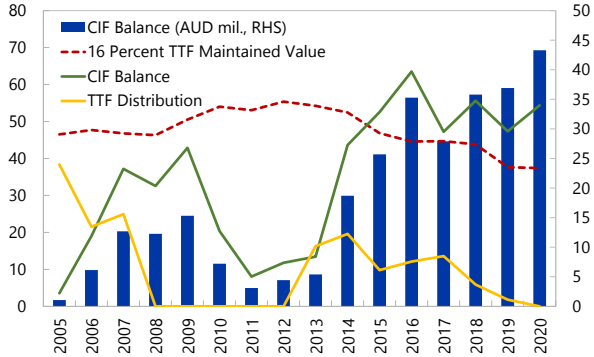
Tuvalu Trust Fund
(In millions of Australian Dollars)



Sources: Tuvaluan authorities; and IMF staff estimates.

…and, together with fiscal surplus, helped raise CIF balance.

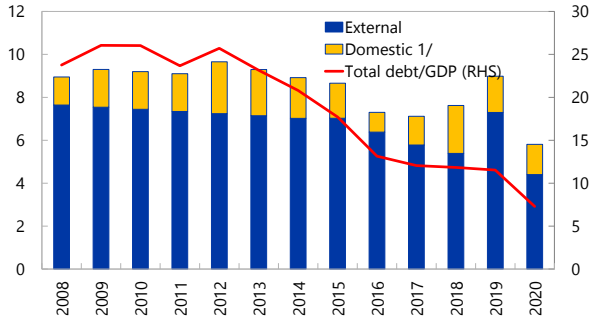
Consolidated Investment Fund
(In percent of GDP)



Sources: Tuvaluan authorities; and IMF staff estimates.

Public debt continued to decline.

Public Debt
(In millions of Australian dollars)



Sources: Tuvaluan authorities; and IMF staff estimates.
1/ Tuvalu government does not have domestic debt after 2017. Implicitly guaranteed SOE debts are shown after 2017.

Table 1. Tuvalu: Selected Social and Economic Indicators, 2017–2022

Population (2021 est.): 11,093
Per capita GDP (2021 est.): AU$6537
Main export: Fish
Key export markets: Fiji, China, Australia, Japan, New Zealand

Poverty rate (2017): 26 percent
Life expectancy (2021): 68 years
Primary school enrollment (2019, gross): 109 percent
Secondary school enrollment (2018, net): 67 percent

	2017	2018	2019	2020	2021	2022
				Est.	Proj.	
			(Percent change)			
Real sector						
Real GDP growth	3.4	1.6	13.9	1.0	2.5	3.5
Consumer price inflation (period average)	4.1	2.2	3.5	1.6	2.2	2.4
Government finance			(In percent of GDP)			
Revenue and grants	108.6	156.1	111.7	121.5	122.3	107.3
Revenue	86.6	118.1	82.9	89.6	86.7	74.7
of which: Fishing license fees	44.1	79.8	48.9	55.6	43.5	41.5
Grants	21.9	38.0	28.9	31.9	35.7	32.6
Total expenditure	106.5	125.8	112.8	116.5	129.4	110.1
Current expenditure	84.0	81.8	70.8	75.0	88.0	89.0
Capital expenditure 1/	22.4	43.9	42.0	41.5	41.4	21.1
Overall balance	2.1	30.3	-1.1	5.0	-7.0	-2.9
Overall balance (excl. grants)	-19.8	-7.7	-29.9	-26.9	-42.7	-35.4
Domestic Current balance 2/	-41.5	-43.6	-36.8	-41.0	-55.7	-55.9
Financing	-2.1	-30.3	1.1	-5.0	7.0	2.9
Foreign (net)	-0.2	-1.0	-0.9	-1.1	-0.6	-0.6
Consolidated Investment Fund (net, -=increase)	-1.9	-29.3	2.0	-3.9	7.7	3.4
Tuvalu Trust Fund (in percent of GDP)	292.8	279.9	237.0	241.4	232.8	217.8
Consolidated Investment Fund (in percent of GDP)	47.2	55.6	47.3	54.4	52.2	48.3
Tuvalu Survival Fund (in percent of GDP)	8.5	7.8	6.4	6.3	7.2	6.8
Monetary Sector						
Credit growth (percent change) 3/	2.1	2.0	0.4	-0.5	1.1	2.9
			(In percent of GDP, unless otherwise indicated)			
Balance of payments (in percent of GDP)						
Current account balance	11.5	53.9	-16.9	3.8	-4.1	-4.1
Goods and services balance	-107.5	-106.0	-118.8	-115.3	-105.8	-101.5
Capital and financial account balance	-9.4	-49.1	35.4	-8.9	4.4	12.7
Overall balance	4.6	9.3	37.1	2.0	0.2	8.7
Gross reserves 4/						
In $A million	78.2	86.4	89.4	90.9	91.1	98.8
In months of prospective imports of goods and services	12	10	11	11	11	11
			(In percent of GDP, unless otherwise indicated)			
Debt indicators						
Gross public debt	12.0	11.8	11.5	7.3	6.1	5.0
External	9.8	8.4	9.4	5.5	4.5	3.6
Domestic SOE debt	2.3	3.5	2.2	1.8	1.5	1.3
Nominal GDP (In $A million)	59.1	64.4	77.9	79.6	83.4	88.7

Sources: Tuvalu authorities; PFTAC; SPC; ADB; World Bank; 2018 IMF's BOP TA; and IMF staff estimates and projections.

1/ Includes Special Development Expenditures (SDEs) and infrastructure investment
2/ Domestic current balance excludes fishing revenue, grants, and capital expenditure.
3/ Banks' and pension fund lending to non-government domestic sector.
4/ The sum of liquid assets of the National Bank of Tuvalu, Consolidated Investment Fund, and SDR holdings.

Table 2. Tuvalu: Medium Term Baseline Scenario, 2017–2026

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
				Est.			Proj.			
				(Percent change)						
Growth and inflation										
Real GDP growth	3.4	1.6	13.9	1.0	2.5	3.5	3.8	4.0	3.8	3.7
CPI inflation (period average)	4.1	2.2	3.5	1.6	2.2	2.4	2.9	3.0	3.2	3.1
				(In percent of GDP)						
Fiscal accounts										
Total revenue and grants	108.6	156.1	111.7	121.5	122.3	107.3	107.2	106.3	104.9	103.8
Revenue	86.6	118.1	82.9	89.6	86.7	74.7	73.7	73.7	73.7	73.7
Grants	21.9	38.0	28.9	31.9	35.7	32.6	33.5	32.6	31.3	30.1
Total expenditure	106.5	125.8	112.8	116.5	129.4	110.1	109.8	109.5	109.1	108.3
Overall balance (including grants)	2.1	30.3	-1.1	5.0	-7.0	-2.9	-2.6	-3.2	-4.1	-4.6
				(In percent of GDP)						
Balance of payments										
Current account	11.5	53.9	-16.9	3.8	-4.1	-4.1	-3.2	-3.1	-3.0	-2.9
Exports	1.5	0.6	1.2	0.2	0.2	0.4	0.3	0.3	0.3	0.2
Imports	45.0	38.8	67.2	69.0	59.5	58.5	57.6	56.6	54.6	52.6
Capital and financial account	-9.4	-49.1	35.4	-8.9	4.4	12.7	6.6	-4.2	-8.4	-8.3
Overall balance	4.6	9.3	37.1	2.0	0.2	8.7	3.4	-7.3	-11.4	-11.2
Memorandum items										
Gross external public debt (percent of GDP)	9.8	8.4	9.4	5.5	4.5	3.6	2.9	2.5	2.1	1.8
External debt service (percent of GDP)	0.2	1.1	1.1	1.2	0.7	0.6	0.6	0.2	0.2	0.2
Gross reserves ($A million) 1/	78.2	86.4	89.4	90.9	91.1	98.8	102.0	94.6	82.1	68.9
(In months of prospective imports)	11.7	9.7	10.7	11.2	10.7	10.9	10.4	9.1	7.5	6.0
Tuvalu Trust Fund (percent of GDP)	292.8	279.9	237.0	241.4	232.8	217.8	207.1	196.4	186.8	178.7
Consolidated Investment Fund (percent of GDP)	47.2	55.6	47.3	54.4	52.2	48.3	44.0	38.7	32.7	26.8
Credit growth (y/y percent change) 2/	2.1	2.0	0.4	-0.5	1.1	2.9	3.4	3.9	4.2	4.1

Sources: Data provided by the Tuvalu authorities and IMF staff estimates and projections.
1/ Defined as the sum of foreign assets of the National Bank of Tuvalu, Consolidated Investment Fund, and SDR holdings.
2/ Banks' and pension fund lending to non-government domestic sector.

Table 3. Tuvalu: Summary Operations of the General Government, 2017–2026

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
							Proj.			
					(In percent of GDP)					
Total revenue and grants	108.6	156.1	111.7	121.5	122.3	107.3	107.2	106.3	104.9	103.8
Revenue	86.6	118.1	82.9	89.6	86.7	74.7	73.7	73.7	73.7	73.7
Tax revenue	14.9	14.7	15.3	14.6	16.2	17.0	17.5	17.5	17.5	17.5
of which: Personal income tax	3.8	5.7	5.8	4.6	4.9	5.3	5.8	5.8	5.8	5.8
of which: Corporate income tax	2.8	1.8	1.1	3.2	4.5	4.7	4.7	4.7	4.7	4.7
of which: Consumption tax	3.3	2.8	2.5	2.6	2.3	2.3	2.3	2.3	2.3	2.3
Nontax revenue	71.7	103.4	67.6	75.0	59.6	57.6	56.1	56.1	56.1	56.1
of which: Fishing license fees	44.1	79.8	48.9	55.6	43.5	41.5	40.0	40.0	40.0	40.0
of which: License fees for .TV domain 1	13.3	10.3	6.6	10.9	8.5	8.5	8.5	8.5	8.5	8.5
Capital revenue	0.0	0.0	0.0	0.0	10.8	0.0	0.0	0.0	0.0	0.0
Grants	21.9	38.0	28.9	31.9	35.7	32.6	33.5	32.6	31.3	30.1
Total expenditure	106.5	125.8	112.8	116.5	129.4	110.1	109.8	109.5	109.1	108.3
Current expenditure	84.0	81.8	70.8	75.0	88.0	89.0	89.1	89.1	88.9	88.4
of which: Wages and salaries	31.8	33.4	29.9	30.3	32.2	32.2	32.2	32.2	32.2	32.2
of which: Goods and service purchases	22.2	23.6	19.2	16.6	22.2	22.2	22.2	22.2	22.2	22.2
of which : TMTS	10.4	7.7	6.8	8.5	6.6	6.9	6.9	6.9	6.9	6.9
of which: Scholarship programs	8.0	7.3	5.8	7.7	7.6	7.6	7.6	7.6	7.6	7.6
Capital expenditure	22.4	43.9	42.0	41.5	41.4	21.1	20.7	20.4	20.1	19.9
Infrastructure	12.6	26.8	23.1	9.5	26.7	9.0	8.9	8.9	8.8	8.7
Special development expenditure	8.7	16.0	14.9	30.6	11.4	10.6	10.4	10.2	10.0	9.8
Overall balance (incl. grants)	2.1	30.3	-1.1	5.0	-7.0	-2.9	-2.6	-3.2	-4.1	-4.6
Overall balance (excl. grants)	-19.8	-7.7	-29.9	-26.9	-42.7	-35.4	-36.2	-35.9	-35.4	-34.7
Domestic current balance 2/	-41.5	-43.6	-36.8	-41.0	-55.7	-55.9	-55.5	-55.4	-55.3	-54.8
Financing	-2.1	-30.3	1.1	-5.0	7.0	2.9	2.6	3.2	4.1	4.6
Foreign (net)	-0.2	-1.0	-0.9	-1.1	-0.6	-0.6	-0.5	-0.2	-0.2	-0.2
Domestic (net)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CIF (net, -=increase)	-1.9	-29.3	2.0	-3.9	7.7	3.4	3.2	3.4	4.3	4.7
Memorandum items:										
External public debt (in percent of GDP)	9.8	8.4	9.4	5.5	4.5	3.6	2.9	2.5	2.1	1.8
Domestic SOE debt (in percent of GDP)	2.3	3.5	2.2	1.8	1.5	1.3	1.1	0.9	0.7	0.6
TTF market value (in percent of GDP)	292.8	279.9	237.0	241.4	232.8	217.8	207.1	196.4	186.8	178.7
Stock of CIF (in percent of GDP) 3/	47.2	55.6	47.3	54.4	52.2	48.3	44.0	38.7	32.7	26.8
Stock of TSF (in percent of GDP)	8.5	7.8	6.4	6.3	7.2	6.8	7.4	6.9	6.4	6.0
Nominal GDP ($A million)	59.1	64.4	77.9	79.6	83.4	88.7	94.9	102.1	109.9	117.6

Sources: Tuvalu authorities; and IMF staff estimates and projections.

1/ .TV is an internet domain.

2/ Excludes fishing license fees and grants, and capital expenditure.

3/ Balance after projected fiscal deficit financing/fiscal surplus contribution.

Table 4. Tuvalu: Balance of Payments, 2017–2026

	2017	2018	2019	2020	2021	2022	2023 Proj.	2024	2025	2026
					(in percent of GDP)					
Current account balance										
including official grants	11.5	53.9	-16.9	3.8	-4.1	-4.1	-3.2	-3.1	-3.0	-2.9
excluding official grants	-29.0	0.2	-57.3	-38.0	-51.1	-46.9	-47.3	-46.0	-44.0	-42.3
Goods and services balance	-107.5	-106.0	-118.8	-115.3	-105.8	-101.5	-101.2	-101.0	-99.4	-97.4
Goods balance	-44.0	-38.4	-66.3	-68.9	-59.3	-58.2	-57.3	-56.3	-54.3	-52.3
Exports of goods, f.o.b.	0.9	0.4	0.9	0.2	0.2	0.3	0.3	0.3	0.3	0.3
Imports of goods, f.o.b.	45.0	38.8	67.2	69.0	59.5	58.5	57.6	56.6	54.6	52.6
Services balance	-63.5	-67.6	-52.5	-46.4	-46.4	-43.2	-43.9	-44.7	-45.1	-45.1
Exports of services	18.7	17.8	18.0	10.6	10.6	13.6	13.6	13.6	13.6	13.6
Imports of services	82.2	85.4	70.5	57.0	57.0	56.8	57.5	58.3	58.7	58.6
Primary income balance	78.2	105.9	61.2	76.5	53.6	53.4	52.7	53.9	54.3	54.0
Inflows	78.5	106.1	61.4	76.6	53.7	53.6	52.8	54.0	54.4	54.1
Fishing license fees	44.1	79.8	48.9	55.6	43.5	41.5	40.0	40.0	40.0	40.0
Compensation of employees	1.9	1.7	1.4	0.4	0.4	0.6	0.8	1.1	1.1	1.1
Investment income	21.1	16.8	8.8	9.7	1.3	3.0	3.5	4.4	4.8	4.5
Outflows	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Secondary income balance	40.8	54.1	40.7	42.6	48.0	44.0	45.3	44.0	42.1	40.5
Inflows	42.4	56.5	42.0	43.9	49.3	45.3	46.6	45.3	43.5	41.8
Official	42.1	56.2	41.8	43.1	48.3	44.1	45.4	44.2	42.3	40.7
of which: grants on budget	21.9	39.6	30.8	31.9	35.7	32.6	33.5	32.6	31.3	30.1
Private	0.3	0.3	0.2	0.8	1.1	1.2	1.2	1.2	1.1	1.0
of which: remittances	0.3	0.3	0.2	0.7	0.9	1.0	1.1	1.0	1.0	0.9
Outflows 1/	1.5	2.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Capital account balance	20.1	21.5	47.3	4.7	4.4	14.6	13.7	3.6	0.0	0.0
Net lending/borrowing (Current+Capital accounts)	31.7	75.5	30.5	8.5	0.3	10.6	10.5	0.5	0.0	0.0
Financial account balance (assets - liabilities)	29.6	70.7	11.9	13.5	0.1	1.9	7.1	7.8	8.4	8.3
Errors and omissions	2.4	4.5	18.6	7.0	0.0	0.0	0.0	0.0	0.0	0.0
Memorandum items:										
Gross official reserves 2/	78.2	86.4	89.4	90.9	91.1	98.8	102.0	94.6	82.1	68.9
(in months of imports of goods and services)	11.7	9.7	10.7	11.2	10.7	10.9	10.4	9.1	7.5	6.0

Sources: Tuvalu authorities, PFTAC, and IMF staff estimates.
1/ Includes government's overseas contributions.
2/ Defined as sum of foreign assets of the National Bank of Tuvalu, the Consolidated Investment Fund, and SDR holdings.

Table 5. Tuvalu: Financial Soundness Indicators, 2014–2020

	2014	2015	2016	2017	2018	2019	2020
Capital Adequacy							
Capital to Risk Weighted Assets (CAR) 1/	50.0	52.3	50.5	53.0	51.0	69.1	52.5
Capital to Deposits	28.4	30.6	30.4	29.6	26.3	34.7	19.9
Capital to Total Assets	21.7	23.0	20.9	20.5	19.4	24.9	15.8
Asset Quality							
Gross NPLs to Gross Loans 2/	0.0	0.0	0.0	0.0	11.9	13.4	15.0
Provisions to NPLs 2/	0.0	0.0	0.0	0.0	237.0	243.2	221.2
Provisions to Gross Loans	49.1	45.7	39.6	31.3	28.1	32.5	33.1
Earnings & Profitability							
Return on Equity (ROE)	7.6	13.1	18.1	16.3	16.1	12.0	13.4
Return on Assets (ROA)	1.0	3.1	3.7	3.2	3.2	2.9	1.9
Interest margin to gross income	34.8	32.5	21.5	25.4	21.8	22.3	19.5
Non-interest expenses to gross income	51.7	50.4	41.0	53.6	44.0	42.6	40.5
Liquidity							
Liquid Assets to Total Assets	80.8	80.2	80.3	81.4	81.3	81.5	88.1
Liquid Assets to Total Deposits	105.7	106.9	103.5	102.7	101.6	109.1	104.8
Total Loans to Total Deposits	18.4	19.7	25.9	24.7	23.2	20.4	11.9
Credit 3/							
annual growth rate	-8.4	-4.0	8.9	2.1	2.0	0.4	-0.5
in percent of GDP	50.8	34.2	34.4	35.0	36.0	27.4	28.0

Sources: Financial statements of NBT and DBT .

1/ IMF Staff calculations based on capital to net loans ratio and 20 percent of other assets.

2/ Based on NBT data only. Data was not available for DBT.

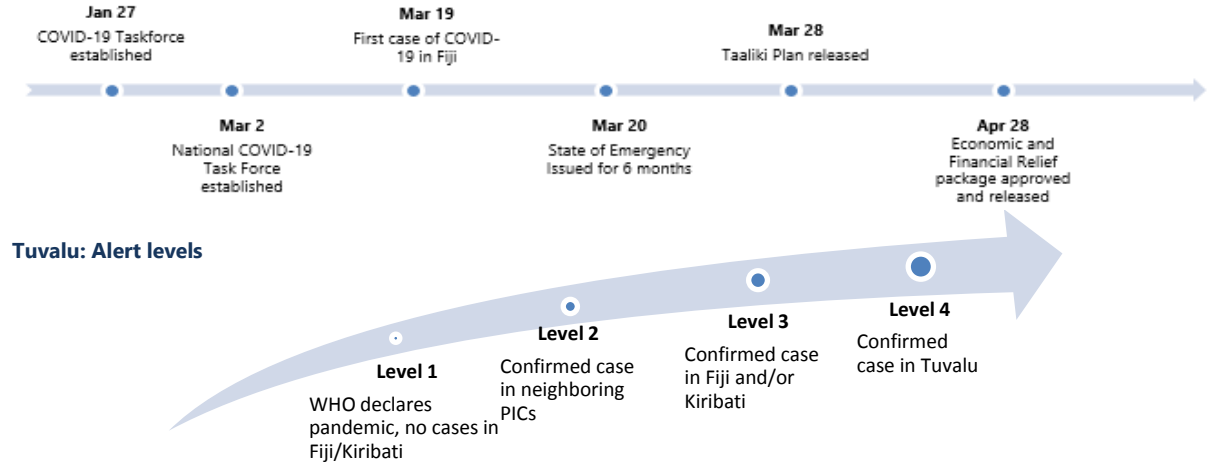
3/ includes lending by TNPF.

Appendix I. Tuvalu's Response to COVID-19 Pandemic[1]

Tuvalu's government swift reaction to the COVID-19 pandemic helped prevent an outbreak in Tuvalu. The pandemic still affected Tuvalu's economy by halting infrastructure investment and shutting down the already-limited tourism sector. A large response package of around 30 percent of GDP was necessitated by limited social and health services available to the Tuvaluans. The package garnered support of the international donor community who provided around 8.6 percent of GDP in additional funds and allowed for the repurposing of existing grants. Only around a third of the package was implemented, largely due to the lack of COVID-19 cases in Tuvalu. Going forward, a review of the social protection system and establishment of an effective banking supervision would help Tuvalu address the issues brought to the fore by the pandemic.

A. Introduction

1. The Tuvaluan authorities responded swiftly to the emergence of COVID-19 pandemic. In late January, the authorities established a task force and charged it with preparing a detailed pandemic response plan. After the first case of COVID-19 was confirmed in Fiji on March 19, a State of Emergency was declared in Tuvalu. All travel was banned except for the delivery of essential items and repatriation flights (subject to a mandatory two-week quarantine). The authorities introduced food rationing, social distancing rules, and closed schools and public spaces. Citizens were encouraged to leave the capital of Funafuti for their home islands. On March 28, the authorities released a comprehensive worst-case scenario plan (*Talaaliki* Plan) that contained plans for actions in five areas (governance, health, food security, fuel, and education) for the following two, four, six months and beyond, depending on the progress of the pandemic. On April 28 2020, the government also released a new economic and financial policy relief package, estimated at AUD23.3 million (30 percent of GDP) aimed at maintaining economic growth and protecting welfare of citizens. The development partners planned to finance AUD12.5 million of that package. In 2021, the authorities announced the additional AUD 1.15 million (1 percent of GDP) for COVID-related spending in the 2021 national budget for quarantine-related activities.



[1] Prepared by Huy Nguyen.

2. The swift response to the pandemic was necessitated by limited health and social protection services available on the island.

- ***Health services*.** Tuvalu has one hospital and two health clinics in Funafuti and eight health centers on outer islands. These facilities are staffed by nurses who mainly provide primary health care, dental and pharmaceutical services, and preventive services. Patients needing advanced clinical care travel overseas through the Tuvalu Medical Treatment Scheme. Non-governmental organizations also assist with health services, such as the Tuvalu Red Cross Society, Fusi Alofa for Persons with Disabilities, the Tuvalu Family Health Association, and the Tuvalu Diabetic Association. Non-communicable diseases (heart conditions, diabetes, and high blood pressure) remain biggest health concerns among Tuvalu citizens.

- ***Social insurance*.** Social protection consists of the Senior Citizen Scheme and financial assistance to the disabled. Social insurance excludes workers operating in the informal economy. The Tuvalu National Provident Fund is the country's largest financial institution, collecting compulsory contributions from all working employees and providing them with retirement benefits (payable either as a lump sum or as pension), and medical, disability and death benefits. TNPF also extends loans to its members, secured against member's own TNPF contributions.

B. COVID-19 Response Package

Health measures

3. Over half of the relief package (AUD 12.5 million or 15.8 percent of GDP) was devoted to procuring medical equipment and improving health facilities in Tuvalu. Tuvalu's population is highly vulnerable to COVID-19 due to high incidence of non-communicable diseases and limited domestic medical services. Recognizing the seriousness of the situation, the government requested USD2.5million of funds from the World Bank to procure medical equipment for emergency rooms, ICU and operating rooms, and pediatric care, and fuel. Tuvalu also received personal protective equipment and sterilization bags from the ADB and UNICEF, and COVID testing kits and personal protective equipment from the Taiwan Province of China. New Zealand assisted with renovating and upgrading the Funafuti clinics. Between March 2020 and March 2021, the government spent around AUD2.75 million on essential medical equipment and supplies and recruitment of emergency health workers, and about AUD0.3 million of the World Bank's fuel fund.

4. Another 20 percent of the package (AUD 4.6 million or around 5.8 percent of GDP) was earmarked for repatriation and medical-supply flights and provision of quarantine facilities. Repatriation flights were established both from Fiji and from Funafuti to outer islands to reduce transmission risk in the capital and to increase labor supply in the outer islands. Returning citizens were subject to mandatory two-week quarantine, with facilities set up in Funafuti schools and government buildings. As of end-March 2021, the government has spent about 75 percent of the allocation on these activities.

Support to the population

5. About 15 percent of the package (AUD 3.7 million or around 4.6 percent of GDP) was allocated to direct cash transfers to the population.

- *Direct cash transfers to all citizens*. The relief package included direct cash transfers, made contingent on the alert level. Confirmation of COVID-19 cases in Fiji triggered alert level 3, which entitled all citizens to one direct cash payout of AU$80 (estimated based on Tuvalu poverty line of AU$1.47 per day). Household members of households with total earnings of below AU80 per month received second cash transfer of AUD80 in June. Overseas students received limited-time financial assistance from AU$100 to AU$200 per month for two months, depending on their sponsoring status. Support was also extended to civil servants (both on leave and on duty travel) and sports teams who could not travel back to Tuvalu from Fiji.

- *Support from the Tuvalu National Provident Fund (TNPF)*. Under alert level 3, TNPF members could withdraw up to AU$500 per month for three months from their savings accounts, depending on the extent of their income loss due to the State of Emergency, and were given an option to defer, reduce, or suspend repayments on existing loans. Under alert level 3, customers of the National Bank of Tuvalu were also allowed to apply for restructuring of their loans, to reduce and/or suspend repayments of principal and interest from May to October.

Support to the economy

6. The authorities also put in place relief measures to ensure food security and to help struggling small businesses. A DFAT-financed grant of a AUD0.3 million (or 0.4 percent of GDP) was transferred to the Development Bank of Tuvalu to establish a new concessional lending facility. The facility was designed to assist canteens and new agricultural businesses to improve food production in the outer islands. Due to high demand for concessional loans from canteens, the DBT augmented the initial amount (AU$ 0.12 million) by AUD0.056 million, which was transferred from the allocated agricultural lending amount (AUD0.105 million). The facility allowed agricultural and food security businesses to borrow up to $7,000 per business. DBT administration costs (AU$ 0.075 million) were also covered by this grant.

Execution of the package

7. As of end-March 2021, around a third of the planned package, or 11.5 percent of GDP was implemented. The underspending occurred due to the suspension of universal cash payments and targeted cash assistance after the first few months with no infections, and lower than expected demand for repatriation flights, which reduced quarantine expenditures. The underspending on health occurred mostly due to the COVID-free status of Tuvalu, which translated into lower than envisaged spending on COVID19 testing, contact tracing, isolation and hospitalization. Around quarter of the expenditures was spent on medical supplies, followed by quarantine activities (22 percent), and charter flights and fuel (20 percent). Two-time direct cash transfers accounted for 16

percent of the spending, slightly higher than spending on additional wages for emergency personnel (13 percent).

C. Policy Implications

8. Tuvalu's swift policy response allowed it to remain one of ten COVID-free countries in the world. The size of the planned policy package—one of the largest among the Pacific Island Countries—was necessitated by the uncertainty related to the potential path of the pandemic and the significant toll that COVID-19 could inflict on the remote island community. Tuvalu's plan allowed the government to effectively engage with the donor community and secure necessary resources. Effective communication and securing public support for some of the more controversial measures, like relocating citizens out of Funafuti to their home islands and terminating repatriation flights, are also important factors in this success.

9. The termination of universal cash transfers was the right policy response given the lack of infections. Cash transfers were one of the most common policy responses implemented worldwide during the COVID-19 pandemic, and Tuvalu was one of the few countries where cash transfers covered the entire population. Given the lack of a social protection scheme that would allow for quick identification of the vulnerable, there were no practical alternatives to universal transfers.

10. Going forward, a review of the social protection system should be conducted to ensure support to the vulnerable.

- While cash transfers were limited, Tuvalu has an important cultural-based social safety net, based on sharing and caring for one another. However, this safety may not be sufficient going forward.

- A rapid assessment of the social-economic impact of the State of Emergency on Funafuti inhabitants conducted by the government found that border closures caused income losses in 63 percent of women-owned businesses. Around 30 percent of citizens reported having no income sources for their families. In the outer islands, residents reported a lack of access to drinking water, transportation, electricity and medical supplies and clinics, and women reported rising incidence of domestic violence. Anecdotal evidence suggests, however, that at least in part, this survey measured not only the impact of the pandemic but also reflected long-standing issues related to poverty and unemployment (at 28.5 percent in 2017, latest available data). While the relief package has temporarily addressed several issues found in the assessment, a thorough social-economic assessment of impact of the pandemic and a review of the social protection system is needed to ensure the needs of the poor and vulnerable groups are properly addressed in the future.

- Tuvalu's only insurance fund, TNPF, provides limited social insurance benefits but only to formal public sector employees, excluding workers who operate in the informal economy.

This program could be further expanded and strengthened via technical assistance and grants from development partners.

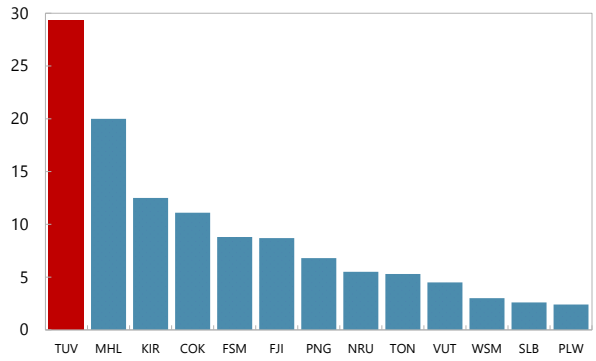
11. Medical care scheme also requires a review. The TMTS, which refers patients with advanced clinical needs to overseas treatments, is very costly. Rationalizing spending on TMTS (by developing early care, systematically tracking expenditure by beneficiary and expense type, and rationalizing travel of family members) while focusing on prevention of non-communicable diseases and improving the quality of secondary care in Tuvalu should be pursued, as outlined in the *Te Kete* plan. Large inflow of donor grants during the COVID-19 pandemic directed to improving the medical systems also represents an opportunity to step up efforts towards better clinical and non-clinical health system capacity and to reduce reliance on external treatment in the future.

12. Loan moratoria have also been widely used in other countries. Going forward, there is an even bigger need to establish effective prudential supervision of the banks, and closely monitor the impact of the pandemic on banks' asset quality. Loan restructuring guidelines will be needed for borrowers unable to service their obligations, stemming both from the pandemic, and from earlier defaults.

Figure 1.Tuvalu: Covid-19 Relief Package

Size of COVID-19 Relief Package

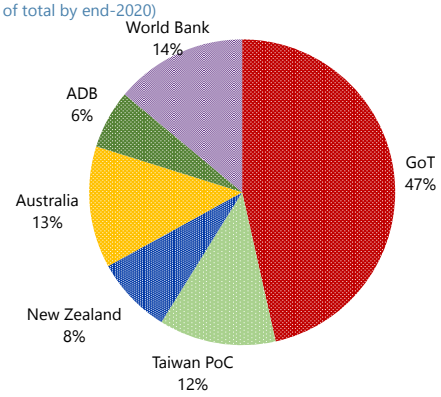
(In percent of GDP)



Sources: UNESCAP; and IMF staff estimates.

Funding Sources of COVID Package

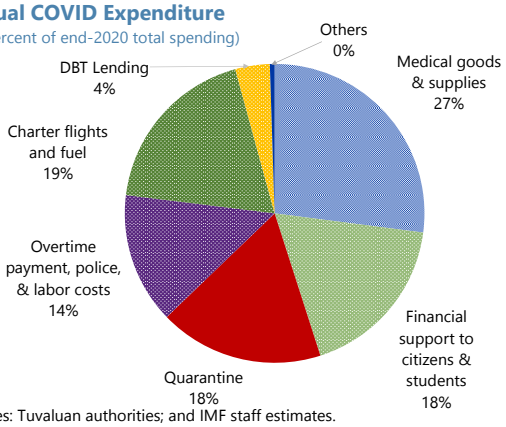
(In percent of total by end-2020)



Sources: Tuvaluan authorities; and IMF staff estimates.

Actual COVID Expenditure

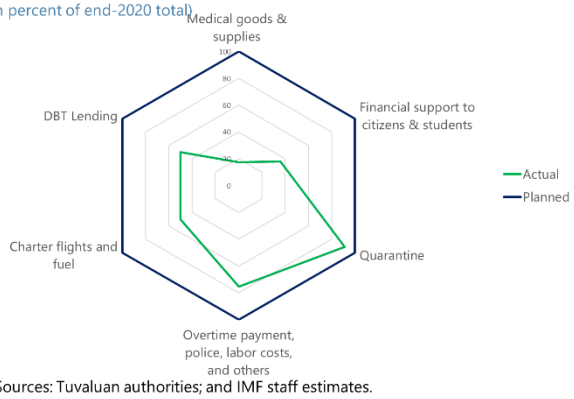
(In percent of end-2020 total spending)



Sources: Tuvaluan authorities; and IMF staff estimates.

Planned vs. Actual Expenditure of COVID Package

(In percent of end-2020 total)



Sources: Tuvaluan authorities; and IMF staff estimates.

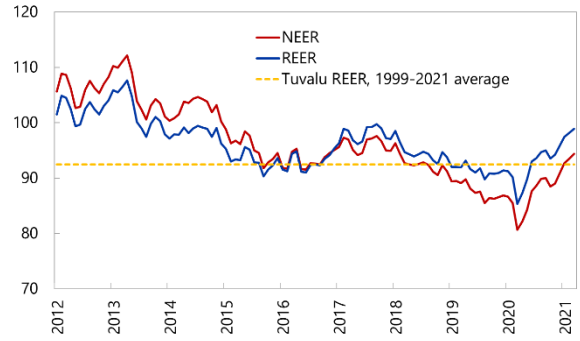
Appendix II. External Sector Assessment[1]

The external position in Tuvalu in 2020 was broadly in line with the level implied by medium-term fundamentals and desirable policies. However, there remains substantial uncertainty around the assessment due to data limitations and the volatile nature of balance of payment flows. Staff recommends keeping the fiscal deficit in check and pursuing structural reforms to avoid external imbalances in the medium-term.

1. The current account is estimated to have recorded a surplus in 2020, but substantial uncertainty surrounds this assessment. Staff estimates that the current account recorded a surplus of 3.8 percent of GDP in 2020 as the trade deficit was offset by inflows from grants and fishing revenues and returns from the Tuvalu Trust Fund (TTF) and Consolidated Investment Fund (CIF). In 2021, the CA balance is projected to deteriorate to a 4.1 percent deficit as the projected narrowing in the trade deficit following from the elevated COVID-related levels will be outweighed by lower fishing revenues and investment income. In the medium-term, the current account deficit is projected to narrow somewhat, to below 3 percent of GDP. However, substantial uncertainty surrounds this assessment given that current account flows in Tuvalu are very volatile and that the detailed balance of payments data are available only with significant delay. An analysis based on the EBA-lite methodology is not feasible in this context.

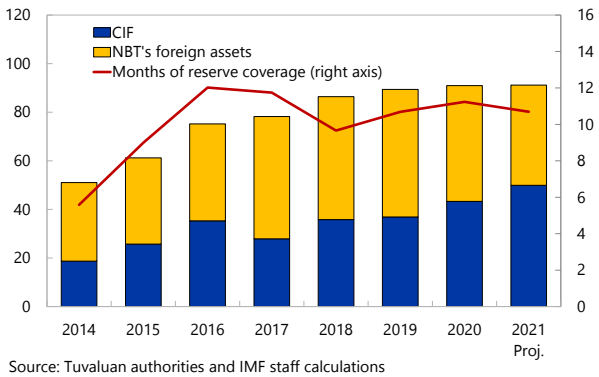
2. There is no sign of real exchange rate misalignment. The REER appreciated by 16 percent between March 2020 and March 2021, reflecting the appreciation of the NEER, and now exceeds its 20-year average level by 7 percent. Although the main drivers of the current account balance (grants and revenues from fishing licenses) are exogenous and the REER has a limited role in closing the current account gap, there are no signs of exchange rate misalignment in the longer run.

Real and Nominal Effective Exchange Rates
(Index, 2010 = 100)



Sources: Information Notice System (INS); and IMF staff calculations.

International Reserves
(In millions of AUD unless otherwise specified)



Source: Tuvaluan authorities and IMF staff calculations

3. International reserves appear sufficient. Thanks to the large current account surplus, international reserves have held up in 2020 and stood at around AUD 91 million (11 months of

[1] Prepared by Jeanne Verrier

imports) at year-end. Reserve coverage appears sufficient given that, in a dollarized economy, their main function is to prevent liquidity crises. Although international reserves are expected to decline to 9 months of imports on average in the next five years due to a widening fiscal deficit, they remain well above the adequate level of one month of government spending (Wiegand, 2013).

4. Pursuing prudent fiscal policy over the medium term would help maintain fiscal buffers and preserve external balance. Tuvalu relies on fiscal policy and structural reforms to achieve external balance. Thus, a gradual fiscal consolidation in line with staff's recommendations would help preserve fiscal buffers and build up government's net worth, ensuring external sustainability. Fiscal adjustment would also allow Tuvalu pursue project in line with its development goals, and with climate adaptation needs.

5. Structural reforms. Tuvalu suffers from long-term structural weaknesses due to its size and remoteness which drive up transportation and transaction costs. Weak human capital compared to its peers also contributes to low competitiveness. Tuvalu's World Bank Human Capital Index, which reflects the contribution of health and education to worker productivity, is 9 percent below the average for its Pacific Islands peers. Staff reiterates its recommendation to pursue efforts to build human capital and promote private sector development. In addition, diversification of the economy would reduce reliance on imports and further support rebalancing.

6. The use of Australian dollar as a legal remains appropriate for Tuvalu. Tuvalu's ability to adopt an independent currency remains limited, and Australian dollar provides a strong nominal anchor, which is appropriate given Tuvalu's strong links with Australia through real and financial flows.

Appendix III. Risk Assessment Matrix*[1]

Source of Risks	Relative Likelihood	Expected Impact on Economy	Policy Response
Potential External Shocks			
Unexpected shifts in the Covid-19 pandemic	**Medium:** ***Asynchronous progress***. Limited access to, and longer-than-expected deployment of, vaccines in some countries—combined with dwindling policy space—prompt a reassessment of their growth prospects. ***Prolonged pandemic***. The disease proves harder to eradicate requiring costly containment efforts and prompting persistent behavioral changes rendering many activities unviable. ***Faster containment***. Pandemic is contained faster than expected due to the rapid production and distribution of vaccines.	**High: Asynchronous progress**. Prolonged border closures could further disrupt infrastructure projects and hamper the already-limited private sector activity. **Faster containment**. Faster containment would translate into reopening of borders and faster normalization of economic activity.	▪ Secure vaccines for all citizens and prepare for swift vaccinations as soon as vaccines become available. ▪ Continue strict quarantine measures for international visitors ▪ Strengthen health security ▪ Mobilize more donor grants if needed
Sharp rise in global risk premia lowering TTF returns	**Medium** A reassessment of market fundamentals triggers a widespread risk-off event. Risk asset prices fall sharply and volatility spikes, leading to significant losses in major non-bank financial institutions. Higher risk premia generate financing difficulties for leveraged firms (including those operating in unviable activities) and households, and a wave of bankruptcies erode banks' capital buffers. Financing difficulties extend to sovereigns with excessive public debt, leading to cascading debt defaults.	**High.** Abrupt market adjustment could reduce the net asset value and returns of TTF thereby reducing CIF transfers to the government.	▪ Increase buffers by saving the transfers from TTF to CIF ▪ Ensure that the minimum balance target of the CIF is maintained ▪ Increase expenditure efficiency by identifying areas where savings could be achieved while maintaining capital expenditures ▪ Review riskiness of foreign investments
Higher frequency and severity of natural disasters related to climate change	**High** Natural disasters could cause severe economic damage to smaller economies susceptible to disruptions and accelerate emigration from these economies (medium probability). A sequence of severe events in large economies reduces global GDP and prompts a recalculation of risk and growth prospects. Disasters hitting key infrastructure	**High.** Increased incidence of natural disasters with large fiscal costs for recovery efforts would put pressure on the fiscal balance leading to depletion of reserves depletion and lowering of potential output. Recovery after cyclone Pam was estimated at above 30 percent of GDP in 2015.	▪ Strengthen fiscal buffers ▪ Increase infrastructure investment that bolsters resistance to rising sea levels and cyclones ▪ Build institutional capacity and strengthening the PFM framework.

[1] Prepared by Majid Bazarbash

* The Risk Assessment Matrix (RAM) shows events that could materially alter the baseline path (the scenario most likely to materialize in the view of IMF staff). The relative likelihood is the staff's subjective assessment of the risks surrounding the baseline ("low" is meant to indicate a probability below 10 percent, "medium" a probability between 10 and 30 percent, and "high" a probability between 30 and 50 percent). The RAM reflects staff views on the source of risks and overall level of concern as of the time of discussions with the authorities. Non-mutually exclusive risks may interact and materialize jointly. "Short term" and "medium term" are meant to indicate that the risk could materialize within 1 year and 3 years, respectively.

	or disrupting trade raise commodity price levels and volatility (low probability).		
Accelerating de-globalization	**High**: Despite renewed efforts to reach multilateral solutions to existing tensions, geopolitical competition leads to further fragmentation. Reshoring and less trade reduce potential growth.	Given Tuvalu's narrow domestic production base and reliance on imports, trade disruptions and FX volatility would impact inflation and growth.	▪ Seek to diversify the economy ▪ Prudent management of tuna resources
Potential Domestic Shocks			
Lack of strong commitment to PRM and poor engagement with Development Partners	**High** Government relies on grants from development partners to fund both current and infrastructure spending.	**High.** Lack of commitment to reforms outlined in PRM could destabilize donor funding instable, impacting budget execution and lowering growth. Poor relations with DPs could affect future funding.	▪ Strengthen accountability and transparency regarding implementation of previous PRM ▪ Work closely with DPs and continue discussions on a realistic PRM
Heavy Fiscal Reliance on Volatile Fishing Revenues	**High** Fishing license fees—the main source of government revenues—are volatile, and vulnerable to changes in climate patterns	**High**: Protracted decline in fishing revenues would endanger long-run fiscal sustainability. Fiscal buffers could mitigate the shock, if the decline is temporary.	▪ Continue implementation of the medium-term fiscal framework and save excess fishing revenue. ▪ Broaden revenue base and conduct fiscal consolidation.
Poor performance of state-owned banks and non-financial enterprises	**High** Poor governance of SOE governance, lack of effective bank supervision would lead to a high NPLs constraining banks' lending capacity and increasing reliance on government support.	**High.** The constrained bank lending capacity would hinder financial inclusion, hurting potential growth. Weak financial performance of SOEs creates contingent liabilities to the government.	▪ Introduce contingencies for continued subsidies. Implement regulation and supervision of banks ▪ Advance SOE reforms ▪ Develop a fintech strategy

Appendix IV. Fostering Sustainable Inclusive Growth and Building Climate Resilience: Fiscal Costs and Financing Options[1]

The authorities are committed to progressing towards inclusive growth while simultaneously improving resilience to climate change. The challenges are substantial. To meet their goals, the authorities would need additional spending on physical infrastructure and large efficiency gains in key social development sectors (health, education). The pandemic crisis is expected to have a limited health and economic impact in Tuvalu and offers an opportunity for the country to re-prioritize spending in health and invest in medical infrastructures. Given restricted fiscal space and limited scope to raise tax revenues, staff supports the authorities' action plan mapped out in the National Strategy for Sustainable Development (NSSD) for 2021-30 to secure increased funding from global climate financing facilities.

1. The authorities are committed to fostering inclusive growth and progress towards building resilience to climate change. The road to meet the UN Sustainable Development Goals by 2030 is long. Tuvalu is one of the three Pacific Islands Countries in 2021 be classified by the United Nations as "Least Developed Countries", based on Gross National Income per capita, the level of human assets as measured by the UN's Human Assets Index, and vulnerability to economic shocks as measured by the UN's Economic Vulnerability Index. The population, entirely situated within 1 km from the coast, is also highly vulnerable to natural disasters and rising sea levels. However, the authorities show a commitment to make progress on both fronts. The NSSD lays out a 10-year plan for a "peaceful, resilient and prosperous Tuvalu", which ambitions to increase adaptive capacity while making progress towards poverty reduction and inclusive growth.

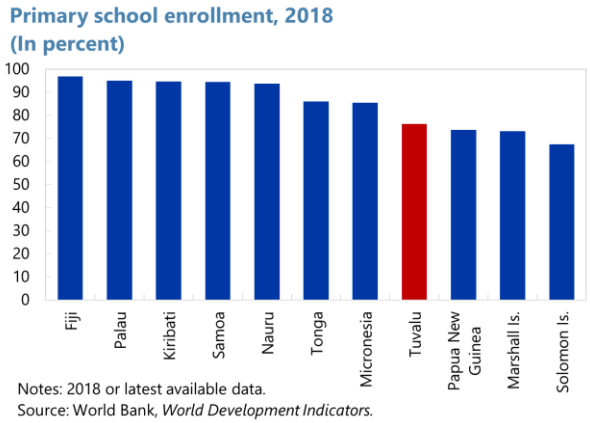
2. To meet their goals, the authorities would need to increase spending on physical infrastructure. The size and remoteness of the country, as well as the dispersion of the population across islands, make the delivery of physical infrastructure very costly. The vulnerability of the country to climate change adds yet another layer of challenges by increasing the cost of maintenance and depreciation. Building resilient infrastructure, a priority in the NSSD, requires substantial investment compared to upper-middle income peers. IMF staff estimates that, to be able to meet selected SDGs by 2030, the authorities would need to increase annual spending associated with energy, roads and the water, sanitation and hygiene (WASH) sector by 1.2, 1.0, and 0.1 percent of 2030 GDP, respectively.[2]

3. Key social development sectors would also need reprioritization of spending and efficiency gains. Health and education spending (as a share of GDP) in Tuvalu is very high compared to other Pacific Island Countries and better-performing peers. This comes with poor outcomes: school enrollment rates are relatively low and the World Bank's Human Capital Index (HCI), reflecting

[1] Prepared by Jeanne Verrier

[2] Tiedemann, Johanna, Veronica Piatkov, Dinar Prihardini, Juan Carlos Benitez and Aleksandra Zdzienicka (2021), "Meeting the Sustainable Development Goals in Small Developing States with Climate Vulnerabilities: Cost and Financing", IMF Working Paper 21/62

the contribution of health and education to worker productivity, is 9 percent below the average for the region. Staff estimates also show that health and education spending in Tuvalu is about 10 and 6 percentage points of GDP higher than in better-performing countries across the globe. Although these results are subject to data limitations and comparisons with countries that do not face the same geographical challenges are inherently difficult, they nevertheless signal an urgent need to improve the efficiency of spending in these two sectors. While staff supports the NSSD's action plan of focusing on non-communicable diseases prevention and improving the quality of secondary health care, efficiency measures are necessary. These include rationalizing spending on Tuvalu Medical Treatment Scheme and on overseas education scholarships while improving the quality of primary and secondary education on the island. Spending on TMTS and overseas scholarships has been growing steadily over the years, reaching an estimated 16 percent of GDP in 2020.



4. The pandemic, while representing an unprecedented challenge to poverty reduction across the world, is expected to have a limited impact on Tuvalu. The country is among the ten countries in the world that have not yet reported any COVID-19 cases. However, the fear of the disastrous consequences that the virus would cause in a remote island with low preparedness and a high prevalence of non-communicable diseases prompted a large inflow of additional external grants to fight the pandemic (an estimated 8.6 percent of GDP). While it is too early to assess the impact quantitatively, the large inflow of donor money directed to the health sector represents an opportunity to step up efforts towards better health infrastructure and public financial management (PFM). The first Supplementary Budget allocated A$5.7 million (7.2 percent of GDP) to the Ministry of Health and Social Welfare, some of which will go to much-needed investment in medical infrastructures.

5. Given the narrow and volatile revenue base and limited fiscal space, staff supports the authorities' efforts to secure increased funding from global climate financing facilities. The government's revenue base is narrow, consisting mostly of volatile fishing revenues and grants, and there is limited scope to increase it. There is also little fiscal space to finance the SDGs through debt financing. A simulation of debt sustainability with an increase in infrastructure spending of 2.3 percent of 2030 GDP causes the public debt-to-GDP level to breach the threshold for a high-risk rating 5 years earlier than the counterfactual. In this context, staff emphasizes the urgent need to translate public investment into productive capital by improving PFM practices. Staff also supports the authorities' sustained efforts to increase access to multilateral climate finance, through regional insurance schemes and climate funds such as the Green Climate Fund.

Appendix V. Structure of Tuvalu's Trust Funds[1]

1. Tuvalu Trust Fund (TTF) serves as a source of budgetary revenues for the government of Tuvalu. TTF was established in 1987 by the governments of Tuvalu, Australia, New Zealand, and the U.K. Since then, TTF has grown due to the contributions of the initial signatories, other development partners, and from reinvested market earnings. The TTF is administered by an international Board and the government of Tuvalu, hence it is not considered fully sovereign. When TTF's value exceeds its "maintained value", linked to the Australian CPI, the excess funds are transferred to the Consolidated Investment Fund (CIF, below), and can be freely drawn upon by the Tuvalu's government to finance budgetary expenditures. Any additional transfers from TTF to CIF can only be done with the agreement of the two-thirds of the TTF's Board (no such distribution has been done thus far). At the end of 2020, TTF's market value stood at AUD192 million, or 241 percent of GDP.

2. The TTF is managed by international investment funds. The TTF's daily operations are managed by two Sydney-based global investment funds (AMP Capital and Schroders) and overseen by Russell Investments, which acts as a Fund Monitor and Investment Advisor. Since 2012, Tuvalu has been pursuing an Objective-based Asset Allocation strategy. The strategy delegates the decision on asset allocation from the Board to the asset managers with the view that the latter would be in a better position to deliver superior returns. Over the last 10 years, an average of 45 percent of TTF were allocated into defensive assets, 35 percent into growth assets, and 20 percent into diversified assets. A World Bank's study[2] finds that returns of TTF's investment strategy are lower than those achieved by funds of other three Pacific Island Countries and investment alternatives.

3. The CIF is a buffer fund under a full control of the Tuvaluan government. It was established in 1993 by the Public Finance Act, and serves as a repository of TTF's automatic distributions. The government targets a CIF balance of a minimum of 16 percent of TTF maintained value as a precaution against sustained downturns that can lower TTF's market value. Such a target (although not legally binding) has been established to cover four years without TTF distributions (as it took place in 2001-03 and 2008-12). In 2016, the government has set a goal in its national development strategy (Te Kakeega III) to save at least 2 percent of GDP into the CIF annually. During 2016-2020, the government was able to save on average 6.6 percent of GDP into the CIF.

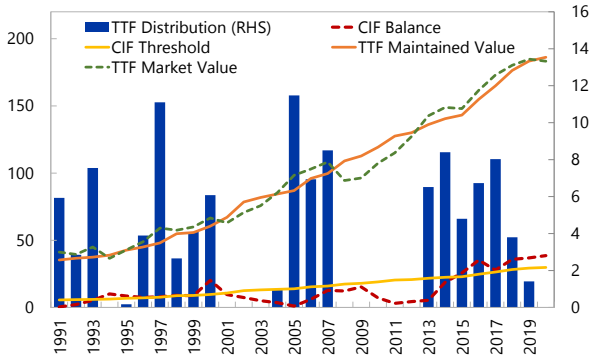
4. Tuvalu Survival Fund (TSF) is a climate adaptation fund. It was established in 2015 by Tuvalu's government to finance recovery and rehabilitation from natural disasters as well as investments in mitigation and adaptation projects. The TSF is to be used to augment multilateral funding for climate change investments and environmental protection, e.g. the Adaptation Fund (AF) or the Global Environment Fund (GEF). As of end-2020, TSF balance stood at estimated at AUD5 million (6.3 percent of GDP).

[1] Prepared by Huy Nguyen.
[2] World Bank (2019). Analysis of Pacific National Funds Investment Strategies and Results: Regional Comparative Note.

Figure 1. Tuvalu: Developments of the Trust Funds

Tuvalu Trust Fund and Consolidated Investment Fund

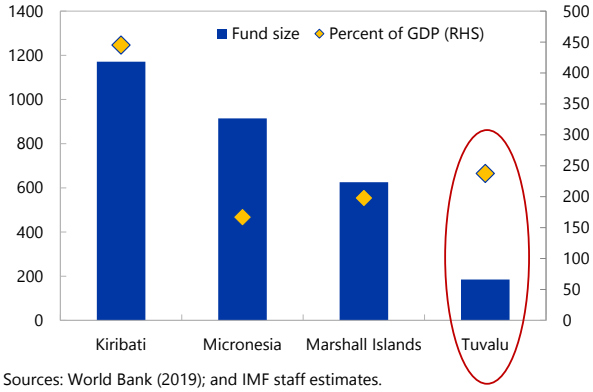
(In millions of Australian Dollars)



Sources: Tuvaluan authorities; and IMF staff estimates.

Trust Funds in Pacific Island Countries

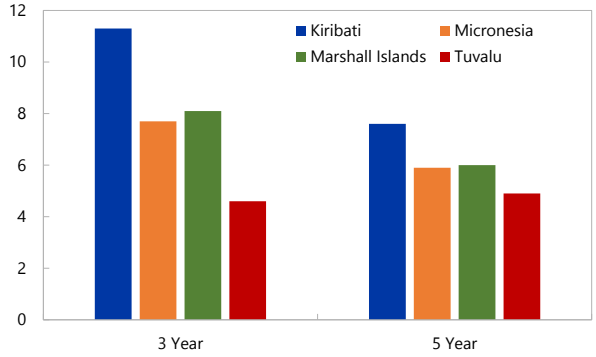
(In millions of Australian Dollars)



Sources: World Bank (2019); and IMF staff estimates.

Pacific Funds 3-year and 5-year Net Returns

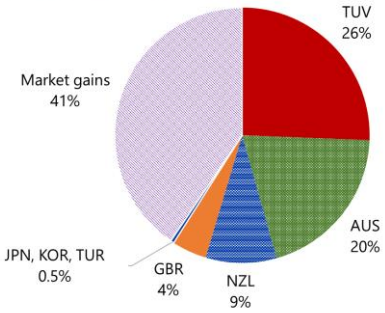
(In percent)



Source: World Bank (2019)

Contributions to TTF Value Since Establishment

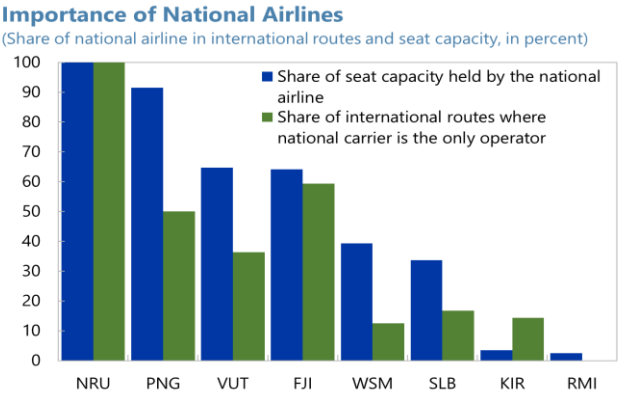
(In percent of total contributions)



Sources: Tuvaluan authorities; and IMF staff estimates.

Appendix VI. National Airlines in Pacific Island Countries[1]

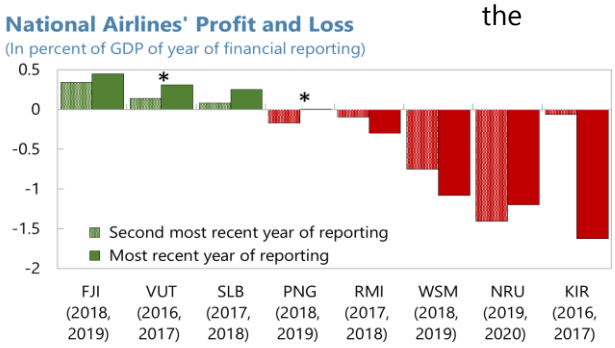
1. Most island countries in the region have their own national carrier, which is often the major operator on international routes and the only domestic operator. National airlines are expected to guarantee the provision of air transport services, which the private sector may struggle to provide in a profitable manner. They are also considered strategic for tourism (e.g. in Fiji, Vanuatu), and often carry an element of national prestige.



Source: Balasundharam et al. (2021)

2. However, financial losses in national airlines add to fiscal risks. Even before the pandemic, low demand for passenger and freight transportation in the region have resulted in weak financial performance, which has necessitated strong government support. Thus, airlines represent a direct diversion of resources from other development projects. Relative to GDP, the investment required in national airlines can be significant, and some airlines carry large balance sheet liabilities. The COVID-19 pandemic and consequent closure of borders in the region have exacerbated financial difficulties, leading to job losses, as well as further levels of government support.

3. Public Financial Management best practices can help contain fiscal risks. They include: (i) a strong legislative framework defining clearly the ownership, governance, and dividend policy; (ii) corporate plans approved by the government detailing borrowing and investment plans, leases, and proposed guarantees; (iii) fiscal support allocated transparently manner (iv) requiring airlines to provide early notification of any significant anticipated deviation from their corporate plan; (v) promoting a culture of compliance and holding the board accountable for good governance and performance of their mandate and responsibilities.



Notes: Asterisks denote media reports used for Vanuatu and PNG, in absence of recently published financial statements. Reporting years are in brackets. Excludes government subsidy/CSO payments.
Source: Balasundharam et al. (2021)

[1] Prepared by Jeanne Verrier. This note draws on a forthcoming IMF Working Paper by Balasundhuram, V, L.Hunter, I. Lavea, and P. Seeds, "Managing Fiscal Risks in National Airlines in Pacific Island Countries".

Appendix VII. The National Strategy for Sustainable Development, 2021-2030 (*Te Kete*)[1]

1. The authorities recently unveiled their National Strategy for Sustainable Development (NSSD) 2021-2030, *Te Kete*. The NSSD is Tuvalu's 10th development plan and sets the national agenda for the next ten years, with the ultimate goal to build a "Peaceful, Resilient and Prosperous Tuvalu" in the post-pandemic world.

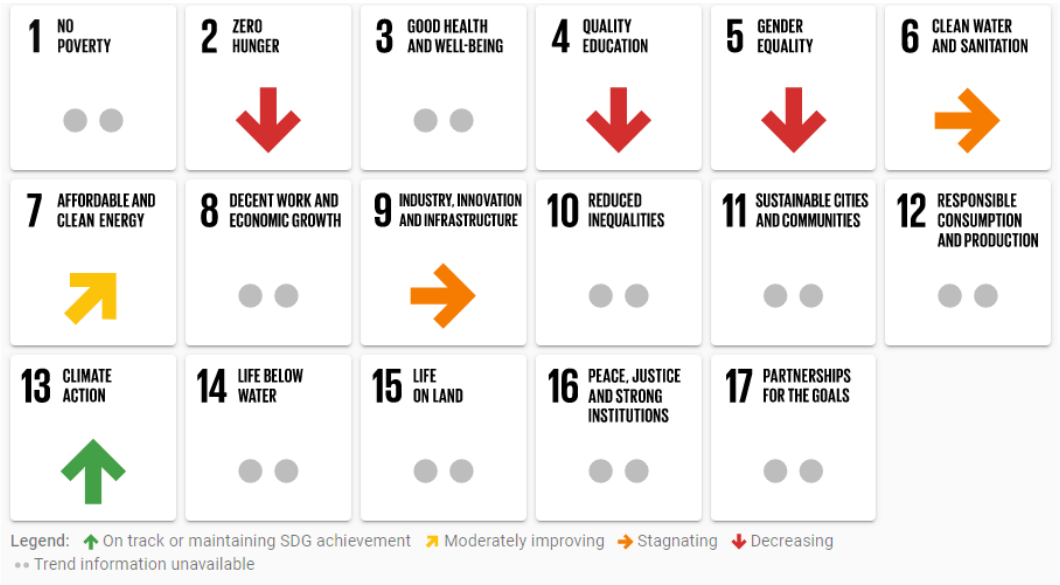
2. *Te Kete*'s cross-cutting objectives cover all main structural issues that the country is facing. They are organized around five mutually-reinforcing strategic priorities: an Enabling environment, Economic development, Social development, Island and culture development, and Infrastructure development. The proposed actions include lifting growth and achieving sustainable fiscal and external balances (National Outcome 6), fostering private sector and financial development (NO 9), addressing challenges in the areas of climate change adaptation (NO 4 and 17), improving health and education outcomes (NO 10 and 11), developing digital infrastructure (NO 1) and clean water and sanitation facilities (NO 20), and improving governance (NO 3).

3. The plan, while ambitious, does not include yet a clear accountability framework. To achieve *Te Kete*'s goals, each ministry will have to develop an operational plan detailing the proposed actions, setting annual implementation targets and measuring progress against clearly defined performance indicators. In a general effort to contain expenditures, ministries should also consider linking their operating plans to the annual budget process. Developing data collection processes to track progress will be key.

4. While developing a monitoring framework for the NSSD the authorities could consider linking it with the UN Sustainable Development Goals. Many actions proposed by the *Te Kete* are also consistent with the 2030 UN Agenda, but they have not been mapped into the Sustainable Development Goals. The mapping would allow easier coordination with the donors who provide grants and technical expertise to help Tuvalu achieve the SDGs. Since their adoption in 2015, Tuvalu has recorded progress on only two of the SDGs – Climate Action (SDG 13) and Affordable and Clean Energy (SDG 7) – while negative trends are being recorded in the Fight Against Hunger (SDG 2), Quality Education (SDG 4) and Gender Equality (SDG 5). The lack of data does not allow to measure progress in the other areas.

[1] Prepared by Jeanne Verrier

Figure 1. Tuvalu: Progress in Achieving the Sustainable Development Goals



Source: SDG Dashboard (based on Sachs, J., Schmidt-Traub, G., Kroll, C., Lafortune, G., Fuller, G., Woelm, F. 2020. The Sustainable Development Goals and COVID-19. Sustainable Development Report 2020. Cambridge: Cambridge University Press.)

Appendix VIII. Financial Development in Tuvalu and the Role of Fintech[1]

A relatively low level of financial development has left Tuvalu with important gaps in financial depth, financial inclusion, and financial efficiency, with banks providing inadequate support for private sector-led economic growth. Financial technology (fintech) strategy could help fill some of these gaps. Three potential solutions could be considered: mobile money, e-money and internet banking, and cross border payments. Developing an enabling environment would help reap benefits of these solutions. A digital national ID would facilitate identification of parties engaged in financial contract, but care should be taken when deciding on best technology to develop it. In this context, there is also a need for prudential regulation and supervision that accounts for fintech solutions to mitigate risks related to operations, concentration, regulatory arbitrage, and consumer rights.

A. Tuvalu's Financial Development

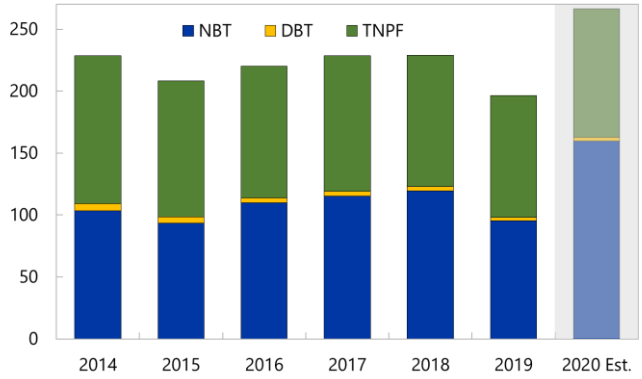
Tuvalu's financial system comprises of the National Bank of Tuvalu (NBT), the Development Bank of Tuvalu (DBT), and Tuvalu National Provident Fund (TNPF). Financial development in Tuvalu has been slow, as evidenced by low financial depth, inclusion, and efficiency. While the financial sector is large compared to the size of the economy, credit to the private sector has remained low. All transactions are conducted using cash, no ATMs exists, and as a result many citizens, especially in geographically remote areas, are financially underserved. Low efficiency of the financial system has manifested itself in costly and inefficient domestic and cross-border payments and poor lending quality.

National Bank of Tuvalu

1. The NBT is the largest financial institution in the country but its lending portfolio is small, and its assets are mostly funded by government deposits. The NBT offers all banking services, including FX transactions. In 2020, the NBT's assets stood at AUD128 million (160 percent of GDP). Almost 90 percent of NBT's assets are cash and deposits in foreign banks. Its loan portfolio is very small and comprises of personal and housing loans and loans to SOEs while the exposure to the private firms is minimal as the bank perceives such loans as too risky. The NBT's assets are mostly funded by customer deposits, the majority of which are government deposits. Given significant fluctuations of government deposits over time, the bank does not perceive them as a stable source of funding, and invests them in liquid assets.

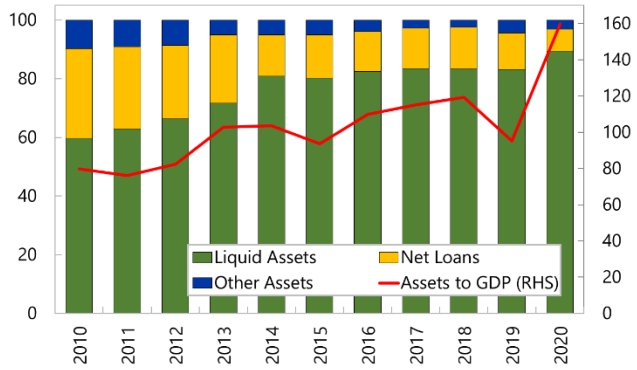
[1] Prepared by Majid Bazarbash

Asset Composition of the Financial Sector
(In percent of GDP)



Sources: Financial reports of NBT, DBT and TNPF; and IMF staff estimates.

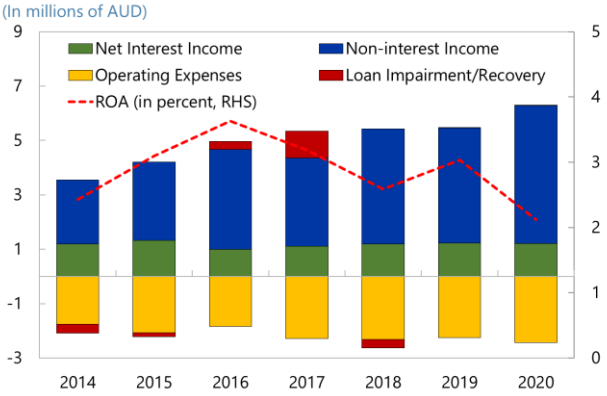
NBT's Asset Composition
(In percent of total assets)



Sources: NBT's Financial Statements and IMF staff calculations.

2. The NBT is profitable, and the FX transactions constitute its main source of income. The NBT is the only institution in Tuvalu able to conduct international transactions and transmit remittances.[1] Given the limited production capacity of the economy, most goods sold domestically are imported, and government's main sources of income (fishing license fees and grants by development partners) are denominated in foreign currencies, necessitating FX services. The bank is profitable (its return on assets averaged 3 percent over the last five years).

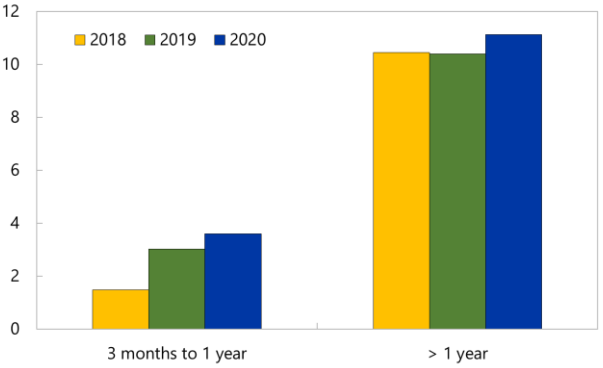
NBT's Income and Expenses
(In millions of AUD)



Sources: NBT's Financial Statements and IMF staff estimates.

3. The quality of NBT's lending portfolio remains low, reflecting poor underwriting standards and difficulties in resolving legacy defaulted loans. In 2020, the non-performing loans (NPLs) stood at 15 percent of total loans up from 12 percent in 2018. Almost two-thirds of NPLs have been past due for more than one year. However, the increasing share of NPLs past due for more than 3 months and less than a year suggests that the bank is still struggling with underwriting standards. Given that lending is not the main source of bank's income and the bank takes a cautious approach in provisioning for loan losses (all NPLs are fully provisioned), additional risks stemming from the NPL portfolio are contained.

NBT's Non-Performing Loans
(In percent of gross loans)



Sources: National Bank of Tuvau; and IMF staff calculations.

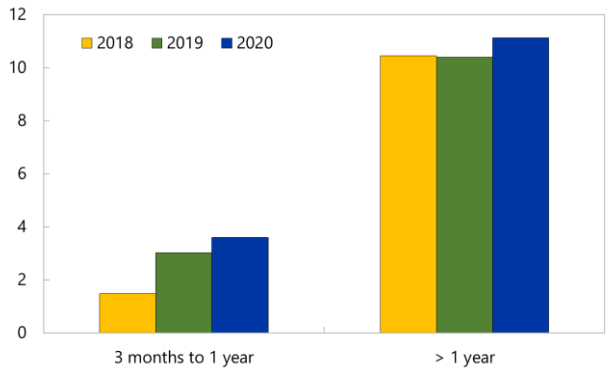
[1] Official statistical data for remittances does not exist due to difficulties in identifying which incoming international transactions satisfy remittances versus other purposes.

Development Bank of Tuvalu

4. The DBT is a small bank that has been established to offer loans to small businesses to support private sector development. The DBT's assets stood at 3 percent of GDP in 2020, down from 6 percent in 2014. Around 70 percent of the DBT's assets are loans as bank primarily lends to small businesses and, more recently, to individuals, but not to SOEs. Most of the DBT's borrowers are from the retail trade sector (especially those distributing food in the outer islands). In 2020, the DBT extended small agricultural loans totaling AUD 300 thousand funded by the government in response to the pandemic. The DBT has traditionally offered financial literacy services to business owners to improve their business model evaluation skills and reporting quality.

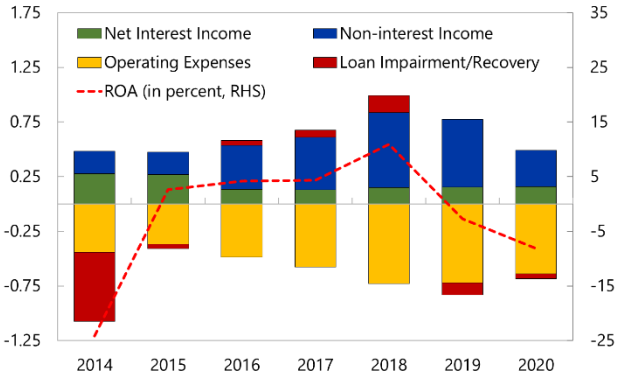
5. The DBT has been lossmaking in the past due to poor asset quality, which has weakened its ability to attract deposits. In 2018 (latest available data), NPLs constituted around 17 percent of total loans. NPLs were not adequately provisioned: in 2020, bank's provisions covered only around a quarter of NPLs). Despite the large share of loans in DBT's assets, net interest income averaged less than a quarter of DBT's gross income, suggesting collection issues. The share of DBT's operating expenses to gross income averaged 100 percent in the past five years underscoring large operational inefficiencies. To increase its liquidity sources, DBT plans to offer savings deposit accounts, including student savings plus and business savings, and will use the proceeds to invest in short-term business loans, personal loans, and asset-based personal loans.

NBT's Non-Performing Loans
(In percent of gross loans)



Sources: National Bank of Tuvau; and IMF staff calculations.

DBT's Income and Expenses
(In millions of AUD)



Sources: DBT's Financial Statements and IMF staff estimates.

Tuvalu National Provident Fund

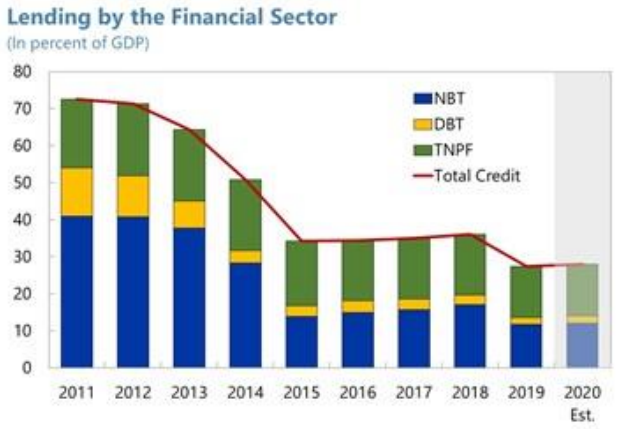
6. The TNPF—Tuvalu's pension fund—is well-managed, profitable and also active in consumer lending to its members. The TNPF's assets stood at AUD80 million (100 percent of GDP) in 2020. The fund has above 7000 registered members, of which 4800 are actively contributing. Over 80 percent of the TNPF's assets are invested offshore, with the rest comprising personal loans (7 percent) and Funafuti Lagoon hotel, and cash (10 percent). The TNPF plays a key role in the financial sector because its member balances are the only form of collateral in Tuvalu. As TNPF has seniority over member balances, its loans have been almost free of credit risk.

7. Tuvalu's banks currently report to the Public Enterprise Reporting and Monitoring Unit (PERMU). Banking Commission Act of 2011 established the Banking Commission, with the Permanent Secretary of the Ministry of Finance tasked as the Commissioner and the prudential supervision authority given to the PERMU. Banks report financial returns to PERMU on a quarterly basis for monitoring. However, prudential regulation and supervision of banks has been limited.

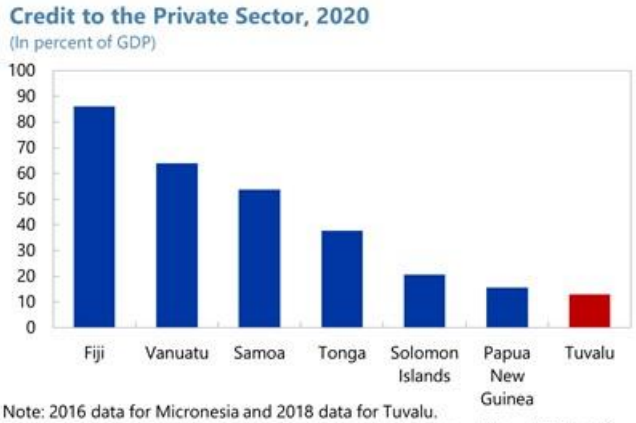
8. Financial development is assessed along three dimensions: financial depth, financial inclusion, and financial **efficiency.** Financial depth captures the size and liquidity of the market where financial services are provided. Financial inclusion denotes population's access to financial services. Financial efficiency evaluates the cost and efficiency of providing financial services to users (see Sahay and others, 2015 and Svirydzenka, 2016 for a methodological explanation).

Financial Depth

9. Financial depth in Tuvalu has declined to low levels, particularly in the business sector. Total loans provided by the two banks and the TNPF reached 28 percent of GDP in 2020, down from 73 percent of GDP in 2011. This decline was driven by banks, which cut lending by 3/4, while TNPF's lending also declined but by less (around 25 percent). The outstanding credit to the private sector is also noticeably lower than in peer countries in the region. Risky credit environment, together with gaps in banks' ability to assess the borrowers' business models and their capacity to make timely payments are mostly responsible for low financial depth.



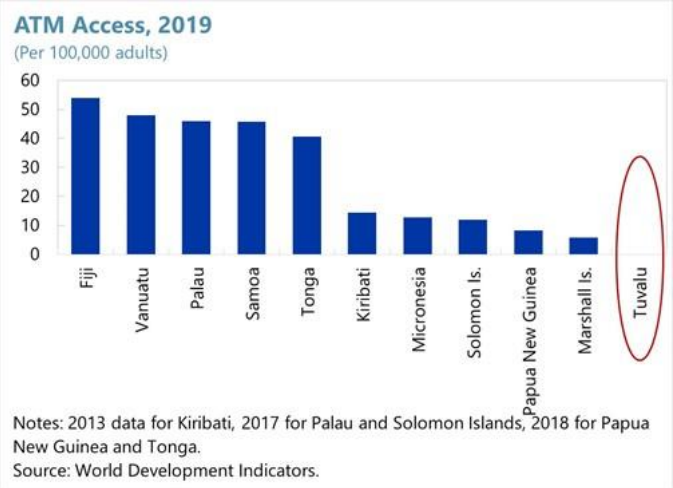
Sources: Financial reports of NBT, DBT and TNPF; and IMF staff estimates.



Note: 2016 data for Micronesia and 2018 data for Tuvalu.
Sources: Country authorities, *International Financial Statistics (IFS)*; and IMF staff estimates.

Financial Inclusion

10. Financial inclusion in Tuvalu is facing challenges due to geographical barriers, lack of alternatives to cash transactions, and lack of branchless services. All banking services require personal visits at bank branches, making bank services time-consuming and difficult in peak times and for residents of outer islands. All transactions are done with cash and there are no card arrangements, imposing significant liquidity constraints on citizens. Unlike its peers, there are no ATMs in Tuvalu. The lack of data precludes assessment of financial inclusion by residents, but anecdotal evidence suggests that the share of unbanked individuals remains high.



11. Poor underwriting standards have led to low access to credit. Verification of financial conditions of the borrowers is a challenge for banks, as there is not an established national ID for recording financial status and credit history of borrowers. The NBT has established an ID for each customer to partly overcome these challenges but its inefficiency in identifying risks, reflected by high NPLs, shows that information collection is inadequate. Similarly, information using tax ID is not available to the bank for assessing business customers, which has led to lower business lending in recent years. The problem is exacerbated by low financial literacy of borrowers, particularly in the business segment, where owners have difficulties to accurately describe their business models and provide standard accounting reports to allow banks assess their cash generating capacity.

Financial Efficiency

12. The efficiency of financial institutions in providing affordable financial services remains low. High loan-deposit spread, high share of operating expenses to gross income, particularly for the DBT, poor asset quality, and large share of fees and commissions in gross income of banks indicate that the banking sector's efficiency remains low. Loan pricing is not risk-based, with a flat rate applied to a large pool of borrowers regardless of their repayment capacity and collateral. While quantitative analysis would be required to draw definite conclusions, lack of competition, high profitability due to buoyant FX income received by the NBT, and public ownership and support (especially in case of the DBT) in conjunction with lack of prudential regulations and supervision likely contribute to the low efficiency of the banking system.

13. Low lending efficiency is reflected in poor asset quality, arising from lack of robust credit information about borrowers. The substantially high NPL ratios of the NBT and the DBT but very low NPLs of the TNPF signifies lack of sufficient information by the two banks to verify borrowers' cashflow-generating ability and collections difficulties. There is no central credit registry

in Tuvalu to keep records of credit history of borrowers, contributing to lower financial efficiency in lending. Similarly, there is no collateral registry, assets eligible to be used as collateral are very limited, and collateral recovery is inefficient.

14. Improving the efficiency of cross border transactions would also help, especially to develop international trade. Given the small size of the economy and limited production base, citizens' needs are mostly met by imports, leading to significant demand for FX transactions by large importers. Similarly, the public sector executes a large volume of FX transactions as a large recipient of grants by development partners and fishing licenses. NBT is currently the main institution that offers FX services, which is the main driver of the bank's profits. However, FX transactions are both costly and time-consuming, which create friction in international trade by domestic businesses rather than being a facilitator. The additional financial burden along with fundamental challenges, such as remoteness and limited production capacity, have led to almost non-existent exports; export of goods was 0.1 percent of GDP in 2020.

B. Promising Fintech Applications for Tuvalu

Financial technology (Fintech) solutions could help overcome gaps in the financial development of Tuvalu by improving financial depth, inclusion, and efficiency. Fintech services build on digital technology to increase efficiency, reduce the processing time, and lower the cost of financial services. Fintech could support economic activity by enhancing efficiency of domestic payments and cross-border transactions, particularly FX transactions. Such developments—properly regulated and supervised (see Section D)—could be the base for developing more advanced financial products, such as digital credit investment and insurance.

15. Tuvalu should start with the most reliable fintech models and gradually integrate more sophisticated ones. Fintech development needs considerations across both the financial and technological aspects. Given the under-supply of technologically skilled labor, low internet speed and strength of cellular network, in the short-run the country could reap fintech benefits by following models tested in countries with similar circumstances. In this context, Tuvalu could use three fintech models.

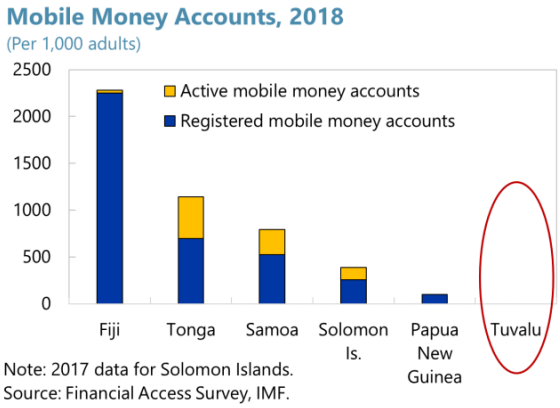
Model 1: Mobile Money

16. Mobile money builds on the large cellular network to offer payment services to citizens, especially those living in outer islands. Mobile money is a service that allows monetary value to be stored on a mobile phone and sent to other users via text messages. The main advantage of mobile money is that it only uses a basic utility phone and has proven to fill the financial inclusion gap in countries with geographical barriers (Sahay and others, 2020).

17. The benefits of mobile money include convenience of transferring funds, convenience of paying for goods and services, and storage of money for savings. Mobile money allows for the convenient, secure, and affordable transfer of funds between users without physical presence of sender and receiver of funds in the same geographical location. Mobile money could even be used

for paying salaries. By reducing the need for carrying cash, mobile money offers greater safety by keeping the money in the e-wallet and make money transfer directly to the vendor without the need for handling and keeping cash. Funds on mobile money can be accessed via a PIN number, which adds a layer of security if the phone is stolen. Finally, funds loaded to the mobile money account can be a savings mechanism (Reserve Bank of Fiji, 2019).

18. Successful rollouts of mobile money promoted financial inclusion in developing and emerging economies. For example, mobile money in Kenya raised access to formal banking services from 27 percent in 2006 to 83 percent in 2019 (Kenya 2019 FinAccess household survey). Kenya was able to significantly improve the efficiency of distribution of government transfers building on the mobile money network. Suri and Jack (2016) show that expansion of mobile money in Kenya led to a significant decline in poverty rate and increased occupational choice, especially for women who could move to business positions in the services sector from agriculture.



Note: 2017 data for Solomon Islands.
Source: Financial Access Survey, IMF.

19. Mobile money has been successfully adopted by some countries in the Pacific region. In Fiji, according to Reserve Bank of Fiji (RBF), mobile money transactions increased from 0.3 million in 2011 to 2.3 million in 2019 (Xinhua, 2021). In 2018, the value of mobile money transactions in Tonga and Samoa reached 2.8 and 1.1 percent of GDP, respectively (Davidovic and others, 2019).

Model 2: E-money and Internet Banking

20. The relatively large internet use by citizens of Tuvalu creates a prime opportunity for banks to improve efficiency of their services by automating them. Such services include obtaining information about account balances and digitally providing information and documents required for banking services. Banks could offer electronic money services to reduce the need for cash in daily transactions.

21. Banks can also take advantage of digital solutions to move toward internet banking and to offer e-money. Electronic money or e-money refers to money that exists in the banks' computer system and could facilitate electronic transactions. E-money comes in two forms: smart cards and network money, allowing, for example, to make payments online or via a mobile app (Cohen, 2001). While it can be converted into fiat currency (a feature that distinguishes it from cryptocurrency), e-money is primarily used for digital payments. E-money can overcome inefficiencies involved with cash handling and provide a suitable platform for keeping track of historical transactions. It reduces the need for customers to visit branches and is always available. E-money can be more secure and transparent than fiat money, but as it exists in the cyber space, it is exposed to cybersecurity risks (Adrian and Mancini-Griffoli, 2019).

22. Once e-money and internet banking are widely adopted, transaction history could be developed to pave the way for more data-intensive services. For example, in case of relationship building with businesses, banks can start with small loans and monitor the performance of borrower's business. Banks can then proceed with offering greater credit to customers with good track records. Database of digital footprints of the customer could also be a good input in assessment of borrower's performance (Bazarbash, 2019).

23. Banks can leverage cellular network for mobile payments. Mobile payments facilitate transfers and payments using bank accounts rather than mobile money account. This approach, widely used in China, typically involves scanning a QR code with the phone and using a secure identification provided by SIM cards to allow users make uniquely identifiable payments (Davidovic, 2019).

Model 3: Cross-border Payments

24. Building on mobile money or e-money solutions, digital payment solutions facilitate less expensive cross-border transactions for businesses, international trade, and remittances. With large demand for international transactions in Tuvalu, this option can play an important role in increasing the efficiency of payments by reducing the duration of transactions and lowering FX transaction fees. More efficient cross-border payment services can be an important driver of international e-commerce and can boost trade by alleviating financial frictions faced by firms.

25. Compliance with AML/CFT regulations via a reliable know-your-customer (KYC) process is an important element of international transactions. In addition to the standard digital payment platform offered by mobile money, a reliable digital system of KYC should be developed to increase the efficiency and efficacy of making cross-border transactions. A national digital ID could play an important role in identity verification and detection of suspicious transactions and in developing a functioning financial intelligence unit.

Public Services and Advanced Fintech Models Building on Fintech Payments

26. The public sector can leverage the digital payment network to enhance public services, once fintech payment models are established. Digital payments by the government could facilitate confidential, timely, and convenient cash transfers to vulnerable population. Digital government-to-person transactions can substantially reduce costs, increase efficiency and transparency, and enhance financial inclusion for the unbanked population (Klapper and Singer, 2017 and Davidovic and others, 2020). Success stories, such as the use of a mobile money platform to efficiently distribute public transfers during the pandemic by Kenya, shows great potential for the use of digital payments in offering public services. This could facilitate digitalized government payments and improve the efficiency of a revamped social protection system (The Governor of the Central Bank of Kenya's speech, 2020).

27. Building on digital payments, more advanced models such as digital credit, investment, and insurance could be developed in the future. Once payment systems are established and

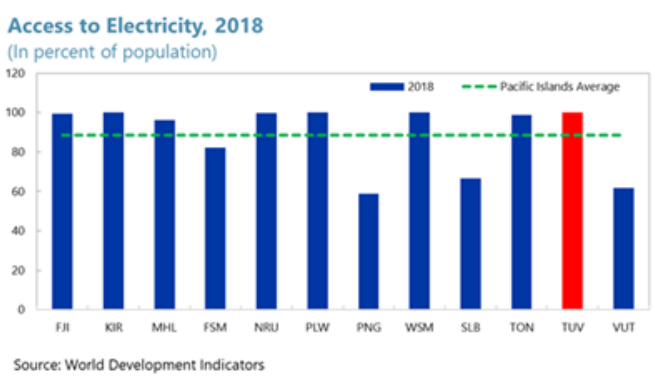
required infrastructure to develop them are tested, more advanced models could be explored to help financial development. Data from transaction activity could be used to supplement other information in evaluation of users' financial capacity and to pave the path to offering digital credit (starting with small amounts and short maturity) to families and businesses (Gupta and others, 2017).

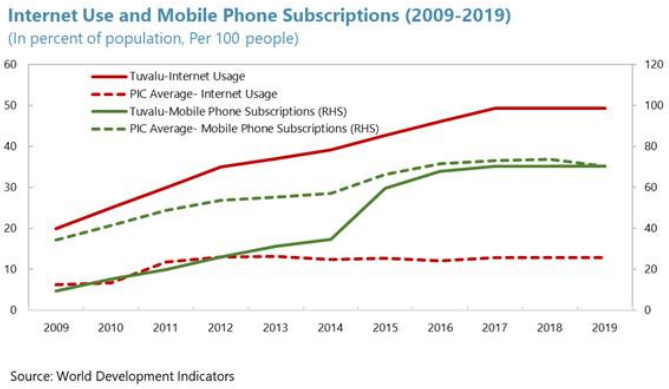
C. Developing an Enabling Environment

To implement the proposed fintech models, basic elements of an enabling environment should be put in place. Such an enabling environment involves technological infrastructure, availability of IT experts, digital and financial literacy of users, a digital national identity, and supportive and prudent policies and regulations. Tuvalu's technological infrastructure (cellular coverage and internet use) is reasonably adequate to develop proposed fintech models. The primary education level is also high in Tuvalu, providing a strong base for raising financial literacy. For digital identity, the country should carefully assess whether a blockchain-based digital national ID or a standard national digital identity managed by the government is suitable.

Technological Infrastructure

28. Tuvalu's technological infrastructure and literacy rate are adequate for adopting fintech. Internet usage in Tuvalu has increased from 20 percent to 50 percent in 2019 during the past decade, which is substantially larger than the average access to internet among the Pacific Island Countries. Similarly, Tuvalu has experienced a rapid increase in mobile phone subscriptions, rising from 10 percent in 2009 to 70 percent in 2019 and closing the gap with other countries in the region. The country provides high access to electricity, covering almost all residents.





Information Technology Expertise

29. While primary education level is high in Tuvalu, technical education may be needed to supply technical staff to support IT-based business models, such as fintech. Primary education is compulsory and free in Tuvalu and has successfully led to almost 100 percent literacy rate. Tuvaluan government offers scholarships for studies in international institutions. With digitalization as a top priority, some of the scholarships could be earmarked for IT students, to gain expertise for the fintech sector. The country could also seek support in its digitalization strategy from the

development partners. Skilled labor is needed to support hardware know-how, cloud services, and data analytics. This is also a crucial step in mitigating exposure to cyber risks as well as operationalizing fintech business models without relying on foreign experts.

30. Developing IT expertise is not only beneficial for fintech but also for e-commerce and digital service-based businesses. This is reinforced by ongoing initiatives by the Government of Tuvalu to expand cellular and high-speed internet access to citizens, which is expected to create a prime environment for flourishing trade and commerce sectors. Investing in IT expertise would be a complementary element, given that e-service would inevitably need a safe and secure digital payment medium.

Financial Literacy of Users

31. Going forward, Tuvalu will need to invest in financial and technological literacy of users. As a fundamental element of financial development to more advanced services, users should be aware of potential consequences of using financial services, including implicit fees, when entering contracts. This becomes even more important when users are expected to train themselves when using financial services that are digitized and, like a credit, investment and insurance contracts, have obligations over time. As a result, raising financial literacy should be an important building block of fintech development strategy.

National ID and Credit Registry

32. A national digital identity system can play an important role in sustainable development of fintech in Tuvalu. A digital identity is a set of validated digital attributes and credentials for the digital environment that is similar to a person's identity in the real world. Compliance with AML/CFT obligations in international transactions requires identification and verification at the originator and beneficiary sides. A digital identity could facilitate more efficient compliance with the relevant AML/CFT standards as set out by the Financial Action Task Force. As one of the main objectives of Tuvalu's fintech development strategy is to facilitate international trade, establishing a reliable national ID is a fundamental step. Care should also be taken before issuing Tuvalu's digital identity to non-residents, to account for AML/CFT risks.

33. Digital footprint data could be used in other financial services. For example, data from payment activity could be stored to establish history of transaction activity, which can then be used as an input in credit history of the user for more advanced services such as credit and insurance. Tuvalu should move towards establishing a secured national ID for all citizens and continue generating new IDs at birth. A central data repository akin to a credit registry should be available to financial institutions interested in offering financial services in Tuvalu. Access to reliable credit information is one of the challenges that banks in Tuvalu are grappling with when making loans that has significantly undermined their ability to extend high quality loans. This proposal could assist them in making lending decisions.

Box 1. Using BSV for National Digital Ledger to Create Paperless Society/1

The authorities are currently reviewing a proposal for citizenship registry that builds on Bitcoin SV (BSV) as a medium to store citizenship personal and financial data. This box provides a broad assessment of this approach.

Background. Two main technologies that can be used for building a citizenship registry are a public "permissionless" Distributed Ledger Technology (DLT) or blockchain, and a private "permissioned" DLT. Bitcoin, Bitcoin SV (BSV) or Ethereum are the examples of the "permissionless" technology. They could be compared to a distributed database, encrypted to protect privacy. They do not need any central authority to validate transactions, thanks to various built-in protocols ("Proof-of-work" being the most popular, but also the most controversial for its energy consumption). The data is replicated, and users' transactions are verified across multiple anonymous computers (or pools of computers), called validators, which can be run by anyone anywhere in the world. It's called a *trustless model* because no one, not even the original developers, can modify the way transactions are controlled, so trust in "people" is not necessary./2 Bitcoin is considered a first generation blockchain (limited in programmability or scalability), while Ethereum or BSV are examples of more advanced technologies. BSV also allows a high number of transactions per second. "Permissioned" DLT gives selected participants, such as a Central Bank or a Government agency, full control over the network, allowing them to see transaction details or to establish transaction rules.

Considerations. Both technologies have advantages and shortcomings. Projects which opt for the "permissionless" technology (such as BSV) often aim to avoid central control by the authorities. The "permissioned" DLT requires higher investment cost, but eliminates some of the risk of not allowing any control. Almost all countries using blockchain as part of their digital strategy have opted for a "permissioned" DLT, rather than "permissionless" BSV. The choice of technology is typically the outcome of a thorough business requirement phase (which does not involve any technology), followed by a market assessment to identify the affected architectures, security requirements, stakeholders and success metrics. For example, national Digital Identity projects that several countries have embarked upon in recent years, involve many technologies (hardly ever blockchain), and require that countries first adapt their internal processes, cybersecurity and regulations, before proceeding further. Such a sequence allows governments to formulate and publish a call for tenders, where bidders have to prove a track record of successful implementation of digital identity projects.

Risks. While BSV presents some clear advantages over older "permissionless" technologies, there are risks inherent to any "permissionless" blockchain, which can be avoided by adopting a "permissioned" blockchain, or another traditional technology. Moreover, legal arguments should be considered regarding management of privacy (for example, data privacy laws in Europe don't allow storing of private information on public blockchain because the information cannot be erased). The sovereignty of the country's data on a "permissionless" distributed ledger should be assessed. Additionally, BSV uses the same consensus protocol as Bitcoin, which consumes considerable energy. Given its well-known exposure to climate change, Tuvalu may face reputational risks, especially when greener permissioned blockchain alternatives are available.

Alternatives. While some experts consider DLT as an important technology for managing identities, research is still ongoing, and standards have yet to be widely adopted. Meanwhile, so-called "traditional technologies" (encrypted databases and data management models) are readily available to achieve the objectives of digital identity and could be considered in the short term. Widely used and field-tested open-source solutions, such as the Gates Foundation's Modular Open Source Identity Platform (MOSIP) would allow rapid implementation of digital identity, while the relevance and risk mitigation associated to DLT are further analyzed.

/1 Prepared by M. Bazarbash, S. Nunhuck, and H. Tourpe.

/2 An important exception exists: 51% of the validators could in theory coalesce to game the system. It has happened in several "permissionless" DLT in the past, but not yet in Bitcoin nor Bitcoin SV.

D. Safeguarding Integrity and Stability of the Financial System

34. Appropriate regulation and supervision of the entire financial system should be put in place to safeguard integrity and stability of the system against risks that may arise from fintech solutions. Since the economy is small, an otherwise small shock to the financial system could have significant economic consequences. Therefore, as part of the fintech strategy, financial sector and technological regulation and supervision should be developed that controls major risks and simultaneously enables fintech to grow. Finech regulation should be integrated with the banking supervision, currently placed in PERMU, and cover operational and concentration, regulatory arbitrage, and consumer rights.

- *Operational risks arising from fintech, including cyberattacks, should be addressed and monitored.* Technology is the main advantage of fintech since it enhances the efficiency of service delivery. Fintech companies should have sufficient capacity to execute payment orders at peak times, record transactions, verify the identity of the payer and the payee, and thereby to comply with AML/CFT requirements. Digital payment providers should maintain resources and infrastructure needed to minimize operational risks, including those from cyber-attacks.

- *Concentration risks.* Since fintech solutions pay off only when they are widely adopted, they are expected to become a systemic component of the financial system. Therefore, their failure could have severe consequences for citizens. To minimize the risk of failure, high operational standards and stringent regulations should be in place. Thus, firms offering fintech solutions should be monitored to ensure they offer a fair price and avoid large markups on their services.

- *Regulatory arbitrage*. When fintech develops in parallel to banks, there is the risk of asymmetric regulations that may result in an uneven playing field across financial institutions. Therefore, regulations of payment systems should be technology neutral and facilitate a fair competitive environment between service providers.

- *Consumer protection.* Regulators should be vigilant to ensure that consumer funds are protected. This includes strict enforcement of regulations requiring mobile money providers to establish trust accounts with commercial banks against customer funds, segregated from the service provider's own funds. Payment providers should be required to hold a minimum level of capital in proportion to the total size of total value of transactions that they facilitate, regularly reconcile trust accounts with total transactions, and regularly report the turnover to regulators (Bazarbash and others, 2020).

35. Going forward, Tuvaluan businesses and citizens would benefit from better access to credit. Financial intermediation could be improved through upgrading the credit assessment capacity of banks. A centralized credit registry system that collects updated customer information from various sources, including income, tax payments, TNPF contributions, obligations, pledged assets, and credit history would be a good first step. All three lending institutions should report and

have access to the registry (ideally in a digital form) and use the information to assess repayment capacity of borrowers when making credit decisions. Going forward, bank supervision should require model-based underwriting practices by banks to ensure prudent lending standards.

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INTERNATIONAL MONETARY FUND

TUVALU

STAFF REPORT FOR THE 2021 ARTICLE IV CONSULTATION—INFORMATIONAL ANNEX

July 1, 2021

Prepared By

Asia and Pacific Department
(In consultation with other departments)

CONTENTS

FUND RELATIONS

(As of May 31, 2021)

Membership Status
Joined June 24, 2010; Article VIII

General Resource Account

	SDR Million	% Quota
Quota	2.50	100.00
Fund holdings of currency (Exchange Rate)	1.89	75.72
Reserve Tranche Position	0.61	24.32

SDR Department

	SDR Million	% Allocation
Net cumulative allocation	1.69	100.00
Holdings	1.08	64.22

Outstanding Purchases and Loans: None

Financial Arrangements: None

Projected Payments to the Fund: None

Exchange Arrangements
Tuvalu's legal tender is the Australian dollar. There is no central monetary institution. The National Bank of Tuvalu (NBT) is the only commercial bank in Tuvalu handling foreign exchange transactions. Tuvalu is an Article VIII member and does not maintain exchange restrictions or multiple currency practices subject to Fund approval under Article VIII, Sections 2(a) and 3, respectively.

Article IV Consultation
The previous Article IV consultation discussions were held in Funafuti in May 2016. The staff report (IMF Country Report No. 16/323) was discussed by the Executive Board on September 12, 2016. Tuvalu is on a 24-month consultation cycle.

Technical Assistance
Pacific Financial Technical Assistance Centre (PFTAC) has provided assistance on tax policy and administration (2007, 2008, 2010, 2016, 2017); financial sector supervision (2008, 2016, and 2017); and balance of payments and national accounts statistics (2006, 2008-10, 2012-18).

Resident Representative
The Regional Resident Representative Office for Pacific Islands is based in Suva, Fiji and was opened on September 13, 2010. The office covers Fiji, Kiribati, Marshall Islands, Micronesia, Nauru, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu. Ms. Leni Hunter is the current resident representative.

RELATIONS WITH OTHER INTERNATIONAL FINANCIAL INSTITUTIONS

World Bank Group:

http://projects.worldbank.org/search?lang=en&searchTerm=&countrycode_exact=TV

Asian Development Bank: https://www.adb.org/countries/tuvalu/main

Pacific Financial Technical Assistance Center:
https://www.pftac.org/content/PFTAC/en1/reports11.html#tab_5

RELATIONS WITH PACIFIC FINANCIAL TECHNICAL ASSISTANCE CENTRE (PFTAC)

(As of May 2021)

Technical assistance is provided by the Pacific Financial Technical Assistance Center (PFTAC). Given its small size and limited absorptive capacity, Tuvalu has been a moderate recipient of technical assistance but the numbers of days provided by PFTAC rose from 61 days in FY2018 to 96 days in FY2019 and has remained broadly at the same level in subsequent years. PFTAC has recently provided assistance on Macroeconomic Management, Real Sector and Finance Statistics, Public Financial Management and Revenue Administration, and Financial Sector Supervision.

Technical assistance was delivered throughout the COVID-19 pandemic. All PFTAC operations in Tuvalu have been conducted remotely in FY2021 and some planned missions on Financial Sector Supervision, Public Financial Management and Macroeconomic Programming had to be delayed. However, a total of 94 days of technical assistance were provided, up slightly from 89 days in FY2020.

The workplan for FY2022 focuses on the same areas as in previous years. It includes missions to (i) follow up on the enhancement of prudential and risk management standard and review off-site financial risks analysis, (ii) update External Sector Statistics and GDP data, and support GDP forecasting, (iii) update capital spending classification, and implement arrears management and commitment controls, and (iv) improve tax audits and revenue administration by enhancing the Computer Information System.

Tuvalu: Capacity Development Activities

Year	TA area	Activities	Advisors
FY 2021 (May 2020 - Apr 2021)		**94 days of TA**	
	Real Sector Statistics	Rebase and update GDP(P) and train staff in National Accounts methods and data sources	PFTAC
	External Sector Statistics	Compile and disseminate external sector statistics for 2017-2020	PFTAC
	Revenue Administration	Three separate TA missions to develop tax administration by reviewing the compliance improvement strategy and development of a Corporate Plan and Business Continuity Plans.	PFTAC
FY 2020 (May 2019 - Apr 2020)		**89 days of TA**	
	Financial Sector Supervision	Develop a banking supervision framework	PFTAC
	Real Sector Statistics	Assist with National Accounts rebasing	PFTAC
	External Sectror Statistics	Improve BOP coverage and methodology	PFTAC
	Macroeconomic Management	Support GDP forecasting	PFTAC
	Public Financial Management	Improve the multiyear budget process for infrastructure and capital	PFTAC/PRIF
	Revenue Administration	Develop tax administration by reviewing the compliance improvement strategy and modernization plan, improving on-time filing/payments and taxpayer services, and rolling out a VAT audit toolbox.	PFTAC
FY 2019 (May 2018 - Apr 2019)		**96 days of TA**	
	Financial Sector Supervision	Assistance to develop a banking supervision framework	PFTAC
	Government Finance Statistics	Compile, review and disseminte data to the IMF statistics Department	PFTAC
	Real Sector Statistics	Create the Tuvalu Economic Indicators (TEI) database use it to estimate real GDP with industry from world prices and components of the consumer price index. Update GDP estimates with the incorporation of the new HIES 2016 data.	PFTAC
	Macroeconomic Programming and Analysis	Develop GDP forecasting and enhance the medium-term fiscal framework	PFTAC
	Revenue Administration	Develop tax administration by reviewing core tax functions, strenghtening on-time filing/payments and taxpayer services, developing a modernization plan, designing a compliance improvement strategy and reviewing the current IT system.	PFTAC

STATISTICAL ISSUES

(As of June 28, 2021)

I. Assessment of Data Adequacy for Surveillance
General: Data provided to the Fund have serious shortcomings that significantly hamper surveillance. Shortcomings are the most serious in the national accounts and monetary statistics. PFTAC and STA have provided TA to the Central Statistics Division (CSD) of the Ministry of Finance (MoF) to help compile statistics for surveillance and the authorities' own policy analysis and formulation. The CSD will need to train additional staff to improve data provisioning.
National accounts: With PFTAC assistance, the compilation methodology for the national accounts has been gradually improving but capacity weakness hinders timely dissemination. Attention needs to be paid to improving source data to reduce the reliance on fixed ratios and other assumptions over long periods of time. GDP has been recently rebased to 2016 and updated to 2019.
Price statistics: The CPI is the only price index compiled in Tuvalu. The CSD produces a quarterly CPI, which of reasonable quality, but with long lags and very poor dissemination. The CPI expenditure weights were revised in 2011, based on the 2010 Household Income and Expenditure Survey. Ideally, weights should be adjusted every five years to ensure that the index remains representative of current expenditure patterns but the next HIES is not scheduled until 2021.
Government finance statistics (GFS): Tuvalu neither compiles nor publishes GFS data. However, the MoF issue monthly fiscal statements (of central government data) for budget analysis and control, and apply IPSAS (cash) and IFRS (accrual) accounting standards for public sector entities. The classification of current, capital and special development expenditures need to be improved to be in line with international standards. A GFS TA mission in March 2018 assisted in the review and update of bridge tables for economic classification and the Classification of the Functions of Government (COFOG) for budgetary central government. A new financial management information system (FMIS) using GFS classification is being implemented. Specific focus and attention should be given to fill existing gaps in debt and aid data sources, particularly the operation of the Tuvalu Development Fund. Staff resource levels remain an impediment to efficient and effective GFS data compilation. With continued PFTAC support and supplementation and full operation of the new FMIS around July 2021, the CSD may compile and disseminate annual GFS for the upcoming GFS yearbook and quarterly GFS in the near term.
Monetary and financial statistics: Tuvalu uses the Australian dollar as its legal tender and does not have a central bank. Monetary and financial statistics are currently not produced in Tuvalu. The National Bank and the Development Bank provided the Article IV mission with their balance sheets, which were used to produce the monetary data on the two banks. **Financial sector surveillance:** Financial Soundness Indicators (FSIs): Tuvalu does not compile FSIs.
Balance of payments (BOP) and International Investment Position (IIP): Currently, the CSD only compiles data on trade in goods but does not compile Balance of Payments Statistics. A TA mission was held in April 2021 and the TA expert compiled the BOP data till 2019.

II. Data Standards and Quality	
Tuvalu began participating in the General Data Dissemination System (GDDS) in 2013 and joined the enhanced GDDS (e-GDDS) as of May 2015.	No Reports on the Observance of Standards and Codes (ROSC) for Tuvalu are available.

III. Reporting to STA
Annual balance of payments and IIP statements, both in BPM6 format, were submitted to STA in April 2021 for the first time.

Tuvalu: Table of Common Indicators Required for Surveillance
(As of April 30, 2021)

	Date of Latest Observation	Date Received	Frequency of Data[8]	Frequency of Reporting[8]	Frequency of Publication[8]
Exchange rates[1]	04/2021	04/2021	D	NA	NA
International reserve assets and reserve liabilities of the monetary authorities[2]	12/2020	04/2020	A	I	NA
Reserve/base money[3]	NA	NA	NA	NA	NA
Broad money[3]	NA	NA	NA	NA	NA
Central bank balance sheet[3]	NA	NA	NA	NA	NA
Consolidated balance sheet of the banking system	12/2020	04/2021	A	I	NA
Interest rates	NA	NA	NA	NA	NA
Consumer price index	Q1/2020	05/2020	Q	Q	NA
Revenue, expenditure, balance and composition of financing[4]—general government[5]	NA	NA	NA	NA	NA
Revenue, expenditure, balance and composition of financing[4]—central government	12/2020	04/2021	Q	Q	Q
Stocks of central government and central government-guaranteed debt[6]	12/2020	04/2021	A	A	NA
External current account balance	12/2019	04/2021	A	A	A
Exports and imports of goods and services	12/2019	04/2021	A	A	A
GDP/GNP	12/2019	04/2021	A	A	NA
Gross external debt	12/2021	04/2021	A	A	NA
International investment position[7]	12/2019	04/2021	A	A	A

[1]Tuvalu uses the Australian dollar as its legal tender.
[2] Any reserve assets that are pledged or otherwise encumbered should be specified separately. Also, data should comprise short-term liabilities linked to a foreign currency but settled by other means as well as the notional values of financial derivatives to pay and to receive foreign currency, including those linked to a foreign currency but settled by other means.
[3]Tuvalu does not have a monetary authority. Foreign assets of National Bank of Tuvalu and the Consolidated Investment Fund constitute the official reserves of Tuvalu.
[4] Foreign, domestic bank, and domestic nonbank financing.
[5]The general government consists of the central government (budgetary funds, extra budgetary funds, and social security funds) state and local governments. Data on local government operations (kaupules) are not compiled but constitute a very small portio general government operations. For analytical purposes, central government data are a close proxy to general government operatio
[6] Including currency and maturity composition.
[7] Includes external gross financial asset and liability positions vis-à-vis nonresidents.
[8]Daily (D); weekly (W); monthly (M); quarterly (Q); annually (A); irregular (I); and not available (NA).

INTERNATIONAL MONETARY FUND

TUVALU

STAFF REPORT FOR THE 2021 ARTICLE IV CONSULTATION—DEBT SUSTAINABILITY ANALYSIS

July 1, 2021

Approved By
Helge Berger (IMF)
Marcello Estevão and Alma Kanani (IDA)

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

Tuvalu remains at a high risk of debt distress, unchanged from the 2018 Debt Sustainability Analysis (DSA). While government's fiscal position in 2020 remained in surplus, under the current policies Tuvalu is projected to face persistent fiscal deficits going forward. To adequately capture Tuvalu's vulnerability to natural disasters and the effects of climate change, the projection horizon was extended to 20 years, as opposed to the standard ten years. Present Value (PV) of external and total public debt-to-GDP ratios currently remain below their respective thresholds. However, these ratios are projected to breach the thresholds under the baseline scenario in the long-run. Elevated current spending, high reliance on fishing revenues (which remain volatile and subject to changing weather patterns) and grants (projected to decline in the future given uncertainty of donor commitments), and risks of natural disasters pose a risk to Tuvalu's debt sustainability outlook. This underscores the importance of reigning in fiscal deficits, improving public financial management and implementing structural reforms in order to ensure good cooperation with international donors and securing grants needed to fulfill country's large development needs. Thus, Tuvalu is assessed to be at a high risk of external and public debt distress on the basis of judgment due to its exposure to climate shocks. Despite upward trending debt burden indicators, Tuvalu's debt is assessed as sustainable. This assessment is based on the assumption of a continued access to external budget support on concessional terms from the development partners, low debt service ratios throughout the projection horizon, and significant cash buffers in Consolidated Investment Fund (CIF).

Tuvalu Joint Bank-Fund Debt Sustainability Analysis	
Risk of external debt distress	*High*
Overall risk of debt distress	*High*
Granularity in the risk rating	*Sustainable*
Application of judgment	*Yes*

PUBLIC DEBT: COVERAGE AND RECENT DEVELOPMENTS

1. Tuvalu's liabilities covered in this DSA comprise of concessional debt of the central government and debt of the State-Owned Enterprises (SOEs) (Text Table 1). Total official public debt (incl. SOEs) stood at 7.3 percent of GDP in 2020 (Text Table 2). The official public debt (excl. SOEs), consisting only of external debt with an average maturity of 29 years, stood at 5.5 percent of GDP (there is no domestic public debt). About 60 percent of the debt is denominated in U.S. dollar (after accounting for its weight in SDR). Debt incurred by public entities that has been explicitly guaranteed by the government has been repaid in full in 2018. In 2020, the authorities begun reporting debt of the SOEs that has been implicitly guaranteed by the government. This debt is domestic, incurred to the National Bank of Tuvalu (NBT) in the form of lines of credit, and in 2020 it stood at AUD1.4 million, or 1.8 percent of GDP.[29] While SOE loans do not carry an explicit government guarantee, the authorities may be asked to step in and cover these obligations if an SOE were unable to fulfill it, given that these corporations are wholly owned by the government. That justifies its inclusion in the baseline definition of government debt rather than as a contingent liability (Text Table 3). Bilateral donors provide only grant assistance, while multilateral development institutions (like ADB) provide both grants and concessional lending. There are no sub-government structures in Tuvalu able to contract debt and no central bank and the coverage of public debt in the baseline is deemed complete according to staff knowledge.

2. Between 2018 and 2020, Tuvalu's total debt has declined from 13.1 to 7.3 percent of GDP. The total public and publicly guaranteed debt declined from 9.6 to 5.5 percent of GDP as the authorities repaid the remaining portion of the EIB loan and continued repayment of their loans to ADB. Currently, the concessional debt to AIB accounts for all of the government's external debt. In 2019, the International Cooperation and Development Fund (ICDF) from Taiwan Province of China extended to the authorities a ten year loan of USD2.4 million for the construction of Tuvalu Convention Center. That loan was paid off in 2020 as the Taiwan Province of China's authorities reduced the annual grant to Tuvalu by the loan amount.

3. Tuvalu's external assets remain sizable, but are not fully sovereign. The market value of the Tuvalu Trust Fund (TTF) increased to around 240 percent of GDP in 2020 from 143 percent in 2013. The TTF is administered by a Board consisting of representatives from Tuvalu, Australia, and New Zealand, and is not fully sovereign. When the market value of TTF exceeds its "maintained value" (indexed to the Australian CPI), the excess funds are transferred to the CIF. The CIF is controlled by the Tuvaluan authorities, and is used as a cash buffer to finance fiscal expenditures.

[29] Prior to 2020, the public debt does exclude non-guaranteed debt contracted by SOEs.

Text Table 1. Tuvalu: Debt Coverage

	Subsectors of the public sector	Sub-sectors covered
1	Central government	X
2	State and local government	N/A
3	Other elements in the general government	N/A
4	o/w: Social security fund	
5	o/w: Extra budgetary funds (EBFs)	
6	Guarantees (to other entities in the public and private sector, including to SOEs)	X
7	Central bank (borrowed on behalf of the government)	N/A
8	Non-guaranteed SOE debt	X

Text Table 2. Tuvalu's Public, Publicly Guaranteed, and SOE Debt

Public Debt

	2018	2019	2020	2018	2019	2020
Lender	(In millions of AUD)			(Percent of GDP)		
ADB	5.7	5.2	4.4	8.9	6.6	5.5
EIB	0.5	0.0	0.0	0.7	0.0	0.0
ICDF (Taiwan Province of China)	0.0	3.1	0.0	0.0	4.0	0.0
Total	6.2	8.3	4.4	9.6	10.6	5.5
Loan currency[1]	(In millions of AUD)			(Percent of GDP)		
USD	1.9	4.7	1.2	3.0	6.1	1.5
EUR	1.7	1.1	1.0	2.6	1.4	1.2
RMB	0.4	0.4	0.3	0.6	0.5	0.4
JPY	0.3	0.3	0.3	0.5	0.4	0.3
GBP	0.3	0.3	0.3	0.5	0.4	0.3
Total	6.2	8.3	4.4	9.6	10.6	5.5

Publicly Guaranteed Debt

Lender	(In millions of AUD)			(Percent of GDP)		
EIB (DBT Global Loan)	0	0	0	0	0	0

SOE Debt (Implicitly Guaranteed by the Government)

Borrower	(In millions of AUD)			(Percent of GDP)		
Tuvalu Electric Corporation	0.8	0.3	0.2	1.3	0.4	0.3
Tuvalu Telecom Corporation	1.3	1.3	1.1	2.1	1.7	1.4
Tuvalu Broadcasting	0.0	0.0	0.0	0.0	0.0	0.0
Tuvalu Philatelic	0.1	0.1	0.0	0.1	0.1	0.1
Total	2.2	1.7	1.4	3.5	2.2	1.8
Total Debt	**8.4**	**10.0**	**5.8**	**13.1**	**12.8**	**7.3**

Sources: Tuvaluan authorities; and IMF staff estimates.

[1] The two loans to the ADB in SDR have been decomposed into the underlying currencies.

Text Table 3. Tuvalu: Contingent Liabilities

1	**The country's coverage of public debt**	The central government, government-guaranteed debt, non-guaranteed SOE debt			
		Default		**Used for the analysis**	**Reasons for deviations from the default settings**
2	Other elements of the general government not captured in 1.	0	percent of GDP	0.0	
3	SoE's debt (guaranteed and not guaranteed by the government) 1/	2	percent of GDP	0.0	All SOE debt is included in the baseline
4	PPP	35	percent of PPP stock	0.0	There are no PPPs in Tuvalu
5	Financial market (the default value of 5 percent of GDP is the minimum value)	5	percent of GDP	5.0	
	Total (2+3+4+5) (in percent of GDP)			5.0	

1/ The default shock of 2% of GDP will be triggered for countries whose government-guaranteed debt is not fully captured under the country's public debt definition (1.). If it is already included in the government debt (1.) and risks associated with SoE's debt not guaranteed by the government is assessed to be negligible, a country team may reduce this to 0%.

COUNTRY CLASSIFICATION

4. Tuvalu's debt-carrying capacity is classified as weak (Text Table 4). The rating is based on the Composite Indicator (CI) index, calculated using the October 2020 WEO data for macroeconomic indicators and the World Bank's 2019 Country Policy and Institutional Assessment (CPIA). The CI stands at 2.62, indicating that the country's debt-carrying capacity is weak in the LIC-DSA framework. The CI index, calculated based on the 2018 DSA vintage was 2.7, indicating medium debt carrying capacity. Compared to the 2018 DSA, carried out under the previous LIC framework,[30] the debt-carrying capacity of Tuvalu has been downgraded. This is largely due to newly added variables (real GDP growth, remittances, reserves, and world growth) that lowered the CPIA score.

Text Table 4. Tuvalu: Country Policy and Institutional Assessment Rating

Components	Coefficients (A)	10-year average values (B)	CI Score components (A*B) = (C)	Contribution of components
CPIA	0.385	2.866	1.10	42%
Real growth rate (in percent)	2.719	4.160	0.11	4%
Import coverage of reserves (in percent)	4.052	57.588	2.33	89%
Import coverage of reserves^2 (in percent)	-3.990	33.164	-1.32	-50%
Remittances (in percent)	2.022	0.000	0.00	0%
World economic growth (in percent)	13.520	2.928	0.40	15%
CI Score			2.62	100%
CI rating			Weak	

5. Based on the CI score, Tuvalu's debt is assessed against the lowest threshold designated in the context of the LIC DSA (Text Table 5). For the purposes of the DSA, to ensure relevance of the PV of public and publicly guaranteed (PPG) external debt-to-exports ratio and the PPG external debt service-to-exports ratio and to adequately capture FX risks, fishing revenues are included in exports rather than in primary income as under conventional balance of payments statistics.

[30] See IMF Country Report 18/209.

Text Table 5. Tuvalu: Debt Thresholds

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

MACROECONOMIC FORECASTS AND DETERMINATION OF SCENARIO STRESS TESTS

6. The baseline macroeconomic and fiscal assumptions underpinning the DSA are as follows (Text Table 7):

- **Economic growth**. After a pandemic-induced slowdown in growth in 2020 to 1 percent, the economy is expected to rebound to 2.5 percent in 2021, supported by elevated current spending and gradual resumption of infrastructure projects. This forecast assumes reopening of borders will start at the end of 2021 at the earliest, in line with expectations of Tuvalu's major international donors involved in infrastructure investment, and full disbursement of donor funding. Real GDP growth is then projected to peak at 4 percent in 2024, factoring in full resumption of international travel, continued high public spending, and full implementation of planned infrastructure projects, including those financed directly by the Green Climate Fund.[31] Over the long-term, the baseline scenario incorporates the impact of natural disasters and climate change. While the years 2021-26 are projected to be disaster-free to simplify policy discussions, from 2027 on, the baseline scenario incorporates a cost of natural disasters and climate change at 1 percent of GDP per year on average. Real growth is projected to moderate to 2 percent towards the end of the projection horizon. In addition to the impact of climate change, growth is expected to be weighed down by the dominance of inefficient public enterprises in the economy, capacity constraints, and weak competitiveness.[32]

- **Inflation**. Elevated current spending, rising public sector wages, married with a resumption of infrastructure investment and a weakening Australian dollar is projected

[31] Green Climate Fund-financed projects are extrabudgetary and they do not affect debt levels.

[32] See Lee, D., Zhang, H., & Nguyen, C. (2018). "The economic impact of natural disasters in Pacific Island countries: Adaptation and preparedness." IMF Working Paper No 18/108, International Monetary Fund, Washington; and "First Resilience Development Policy Operation with a CAT-DDO (P170558)", Report No. PGD101, The World Bank.

to raise inflation to 3.1 percent by 2026. Inflation is projected to moderate to 2 percent in the long run, similar to the 2018 DSA.

- **Balance of payments.** Under the baseline scenario, Tuvalu's current account balance is expected to swing from an estimated 3.8 percent of GDP surplus in 2020 to 4.1 percent deficit in 2021. Over the medium-term, the current account deficit is projected at around 3 percent of GDP on average. The deficit is driven by elevated imports: while imports are projected to fall from their peak 2020, they are expected to remain elevated due to lack of domestic production capacity and ongoing infrastructure investment. Revenues from fishing license fees are projected to stabilize at around 40 percent of GDP, a ten-year average. Exports of goods and services are projected to remain modest, at around 11 percent of GDP in the medium and long term, and foreign direct investment is projected to remain limited. No significant inflows from privatization of SOEs are assumed as the authorities were not successful so far in attracting foreign investors.

- **Fiscal balance**. The 2020 budget closed with 5 percent of GDP surplus as high fishing revenues and additional donor grants, combined with underspending on infrastructure and travel, helped offset COVID-related spending. In 2021, general government balance is projected to shift to a deficit of 7 percent of GDP as a result of significant increases in recurrent spending on goods and services and public sector wage bill, and higher capital spending, mostly due to expenditures related to a planned national airline (at AUD13mln or 16 percent of GDP).[33] A significant increase in current spending on goods and services and public sector wage bill, and higher capital spending, mostly due to expenditures related to a planned national airline (AUD13mln or 16 percent of GDP) are expected to drive the deficit. In the long-term, fishing revenues are projected to plateau at 40 percent of GDP due to uncertain weather patterns and the already-high price of fishing licenses that make large future increases unlikely. Fees from the DotTv license are projected fall to 7 percent of GDP given the increasing use of other internet domains. Foreign grants are projected to decline to 22 percent of GDP due to the conclusion of the existing investment projects and uncertainty surrounding long-term donor commitments. With falling revenues, total expenditures would gradually decline from around 116 percent of GDP (five-year average) to around 100 percent of GDP. Spending on public sector wages, TMTS, and scholarship programs is projected to stay elevated, crowding out infrastructure investment, and leading to widening of general government deficit to 4.6 percent of GDP in the medium term and 6.0 percent of GDP by 2041 and the domestic current balance to 54 percent of GDP by 2041. [34]

[33] The public debt dynamics incorporate projected SOE income that could be used to repay their debt service.

[34] The domestic current balance excludes fishing revenues, grants, and capital expenditure.

- **Deficit financing.** The authorities are expecting to receive at least USD7.5 million in FY 2021 and 2022 in grants from the ongoing IDA budget support operation of the World Bank. Over the long-term, that support is projected to average USD5 million annually at minimum. Outside the budget support, the average annual IDA net flows are expected to be around USD13 million over the long-term. Continued support from other development partners (ADB, Australia, New Zealand, and the Taiwan Province of China) is also envisaged, though total grants are projected to decline as a share of GDP. Government is projected to fund fiscal deficits with transfers from the CIF first, subject to the existing rule of leaving at least 16 percent of the TTF maintained value in the CIF (since 2012, the authorities used CIF to finance budget deficit only in 2019, at AUD1.6 million, or 2 percent of GDP).[35] When CIF transfers are insufficient to fund the deficit, the authorities are projected to borrow, initially fully on concessional terms, with additional commercial borrowing assumed at the end of the projection horizon. Under the baseline scenario, no CIF transfers are projected after 2031 as the Fund does not hold sufficient assets. No domestic borrowing by the government is envisaged due to the lack of domestic financial markets.

7. Realism tools suggests that projections are reasonable (Figures 3 and 4). Although the public debt trajectory debt differs from the 2018 DSA, it remains below the 2016 DSA assumptions, with a similar trajectory. The difference with 2018 DSA can be explained by early repayment of NAFICOT and ICDF loans which resulted in lower than projected debt outcome in 2020, as well as changes in macro-fiscal assumptions over the projection horizon. Both the current account and the fiscal balance are highly volatile in the small economy like Tuvalu, and changes to both the forecast and the historical data explain changes in the debt dynamics and the larger average forecasting errors than those of LICs. Large residuals in the public debt are explained by financing of the budget deficit by transfers from the CIF, before resorting to external borrowing (no domestic borrowing is assumed). Drawdown of reserves explain residuals in the external debt dynamics. Staff baseline macroeconomic projections incorporate the impact of the COVID-19 pandemic: in 2021, growth is projected to be at the lower range of the realism tools as it assumes that the reopening of the economy will start at the end of 2021 at the earliest. In 2022, staff assumes full reopening of the economy, and incorporates the impact of a full resumption of the Green Climate Fund project, financed directly by the UNDP. Implementation of capital investment projects is higher than assumed in the 2018 DSA as past execution was higher than projected. Due to finalization of existing projects and uncertainty surrounding donor commitments, public infrastructure is expected to decline gradually over the years.

[35] Projected transfers from the CIF are captured by the residuals in the debt dynamics (Table 2).

Text Table 7. Tuvalu: Macro-financial Assumptions, 2018 vs. 2021 DSA

	2018 DSA Average over 2017-37	2021 DSA Average over 2021-41
Real GDP growth	2.7	2.7
Deflator	1.7	2.4
Current account balance (% GDP)	-4.2	-2.0
Fiscal balance (% GDP)	-6.7	-5.4

8. Alternative scenarios are also considered to examine the impact of potential upside and downside risks on Tuvalu's debt profile. They reflect a combination of tailored stress tests and fully customized scenarios:

- **Tailored stress test – commodity price decline**. Under this scenario, price of fishing license fees (main export commodity of Tuvalu) is projected to decline by 30 percent.

- **Adjustment scenarios:** In the adjustment scenarios, the authorities implement reforms to necessary increase efficiency of public spending on TMTS and overseas education scholarships, align public sector wage growth with productivity gains, and continue public enterprise reform. Under both scenarios, they target the current deficit of 40 percent of GDP, attaining it in 2041 (scenario 1). This adjustment allows for a buildup of fiscal buffers for essential investment in climate infrastructure and for the impact of natural disasters. The scenarios cover the entire projected horizon.

- **Fishing revenue shock.** In this scenario, fishing revenue is assumed to decline to 35 percent of GDP after 2031 due to changes in weather patterns. Revenue shortfall would widen the fiscal deficit to 12 percent of GDP by 2041.

- **Natural disaster**. A cyclone similar to the 2015 Pam is projected to hit the island in 2022, causing a damage of 30 percent of GDP. Recovery and rehabilitation programs are projected to take five years, and widen the fiscal deficit to 11 percent of GDP in 2031, (compared to a 6 percent of GDP baseline) and add around 1 percent to the deficit in 2032-36. The need for additional spending to rebuild infrastructure is largely met by the donor community, mitigating the impact on deficit and debt to 10 percent of GDP. The higher fiscal deficits would accelerate the depletion of fiscal buffers, causing the present value of debt-to-GDP to breach its threshold earlier than in the baseline.

- **Positive grant shock.** In an upside scenario, grants are assumed to remain high due to continued progress on Policy Reform Matrix discussions with donors and on favorable global economic and financial conditions. Under this scenario, grants are projected to remain at 30 percent of GDP (average over the last five years).

RISK RATINGS AND VULNERABILITIES

F. Baseline Scenario

9. Tuvalu's mechanical risk ratings for both external and public debt are moderate, but the final risks of debt distress is rated as high, applying staff's judgement. [36] To fully evaluate Tuvalu's risk of debt distress, the projection horizon has been extended to 20 years from the standard ten years, to account for Tuvalu's exposure to natural disasters and the effects of climate, as well as the volatility of the macroeconomic outcomes and uncertainty about the data. Longer horizon also allows to account for a protracted breach of the threshold under the baseline scenario.

10. The external and public debt-to-GDP ratios are projected to breach their relevant thresholds in 2038 and 2039, respectively. Both debt trajectories show steady increases that reflect persistent deficits due to elevated current spending and the need for external funding for infrastructure projects amid declining revenues. Staff assumes that the authorities maintain the minimum buffer of 16 percent of the TTF value in the CIF account, and any funds above that threshold are used to finance deficits. All borrowing is external, given small size and persistently low asset quality of the domestic banking system and lack of a domestic financial market. Borrowing is projected to be conducted on concessional terms. As a result, the debt service-to-revenue and debt service-to-export ratios remain low, below the respective DSA thresholds.

11. Stress tests to both external and public sector debt indicate that debt ratios are highly sensitive to exports and commodity price shocks. One standard deviation shock to export growth would cause the external debt-to-GDP ratio to breach the indicative threshold in 2023. A standard shock to exports also results in a breach of the debt-to-export and debt service-to-exports thresholds. A one-time 30 percent decline in prices of agricultural commodities would cause the public debt-to-GDP ratio to breach the indicative threshold in 2025 and stay above it throughout the projection period. In all cases, the debt indicators show an exponential trend.

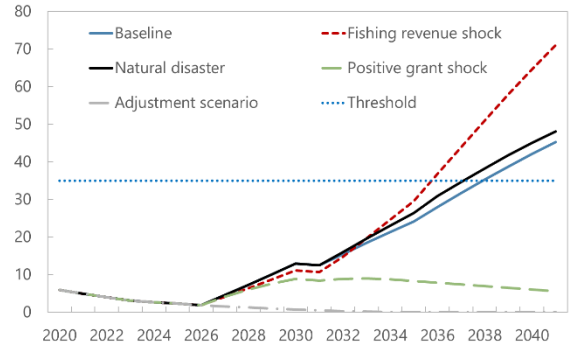
G. Alternative Scenarios

12. Alternative scenarios show high susceptibility of Tuvalu's projections to macro-fiscal assumptions. Under the adjustment scenarios, where fiscal policy is anchored by an appropriate fiscal target, the risk of debt distress is eliminated while Tuvalu manages to

[36] The rating and application of judgement is in line with paragraph 87 of the LIC DSF Guidance Note (2018), which states that in exceptional circumstances, threshold breaches in years 11-20 may provide a rationale to change the risk rating. It is possible to consider a change in rating when (i) breaches are expected to be large, persistent, and thus resulting in significant differences relative to historical averages; and (ii) occur with a high probability despite occurring in the distant future. Such a situation could arise from trends that are not easily influenced by policy interventions, such as climate change (as in Tuvalu's case).

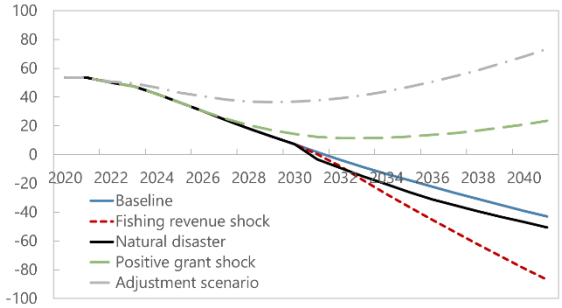
preserve fiscal space to improve climate change resilience. A natural disaster or fishing revenue shocks would have the opposite effect, causing the PV of debt-to-GDP ratio to breach its threshold one and two years earlier, respectively, earlier than under the baseline. Finally, higher grants would cause the debt-to-GDP ratio to remain well below the indicative threshold (Text Figures 1-2).

Tuvalu: PV of Debt-to-GDP Ratio, Alternative Scenarios
(Percent of GDP)



Sources: Tuvalu authorities; and IMF staff calculations.

Tuvalu: Government's Net Financial Worth Under Alternative Scenarios
(Percent of GDP)



Sources: Tuvalu authorities; and IMF staff calculations

RISK RATING AND VULNERABILITIES

13. Tuvalu remains at high risk of debt distress, unchanged from the conclusions of the 2018 DSA. Under the baseline scenario, Tuvalu would face persistent budget deficits due to elevated current spending and the need to maintain infrastructure spending amid declining fishing revenues and grants. In the long term, existing buffers would be insufficient to finance deficits, thus necessitating external borrowing. The debt trajectory highlights the importance of targeting a small fiscal surplus to lower the risk of debt distress while maintaining fiscal space to maintain buffers and allow for climate adaptation efforts, and of continuing structural reforms to ensure donor support in the form of grants. Higher spending efficiency and domestic revenue mobilization efforts would help.

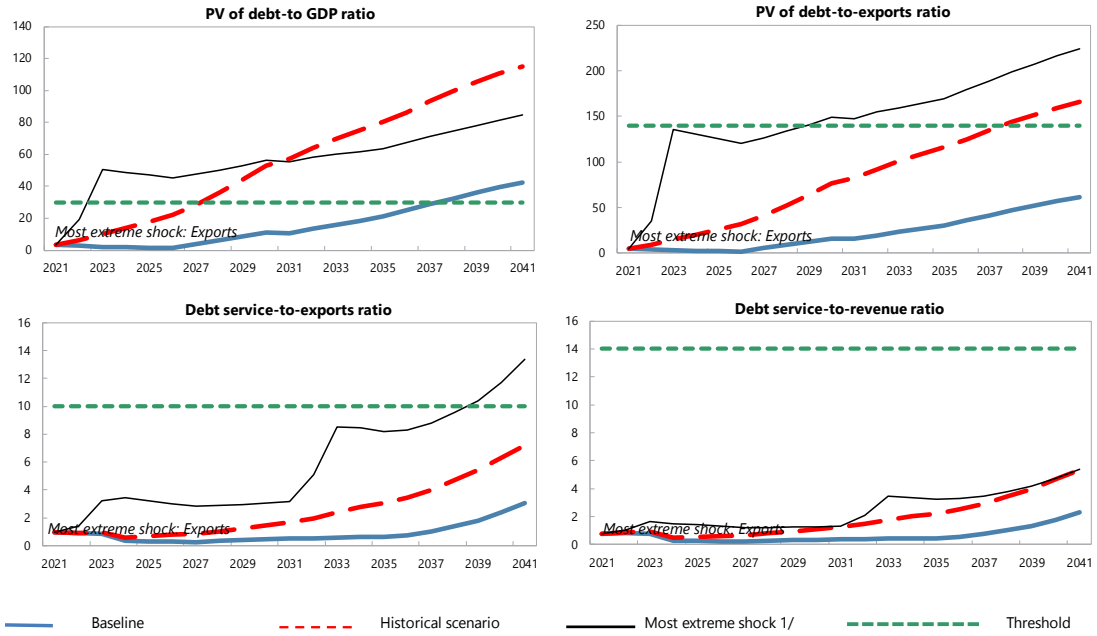
14. Despite high risk rating, Tuvalu's debt is rated as sustainable. Several factors mitigate Tuvalu's debt vulnerability. First, Tuvalu currently only receives budget support in the form of grants from development partners while the DSA assumes debt financing in the medium-term. Second, the authorities have significant cash buffers, and could, in principle, allow a drawdown of the CIF below the threshold of 16 percent of TTF.

H. Authorities' Views

15. The authorities agreed with the DSA assessment. They noted that, to mitigate risks, they have decided not to incur any new debt, either in concessional or commercial terms, over short- to medium-term. To fully account for debt-related risks, their latest budget included an

assessment of risks stemming from explicit and implicit government guarantees. The authorities plan to rely on grants from development partners to fund infrastructure projects, which would help contain fiscal risks. Planned reforms to the budget formulation, execution, and reporting processes should help improve fiscal planning and ensure that expenditures are kept within the planned budgetary allocations.

Figure 1. Tuvalu: Indicators of Public and Publicly Guaranteed External Debt under Alternative Scenarios, 2021-2041



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

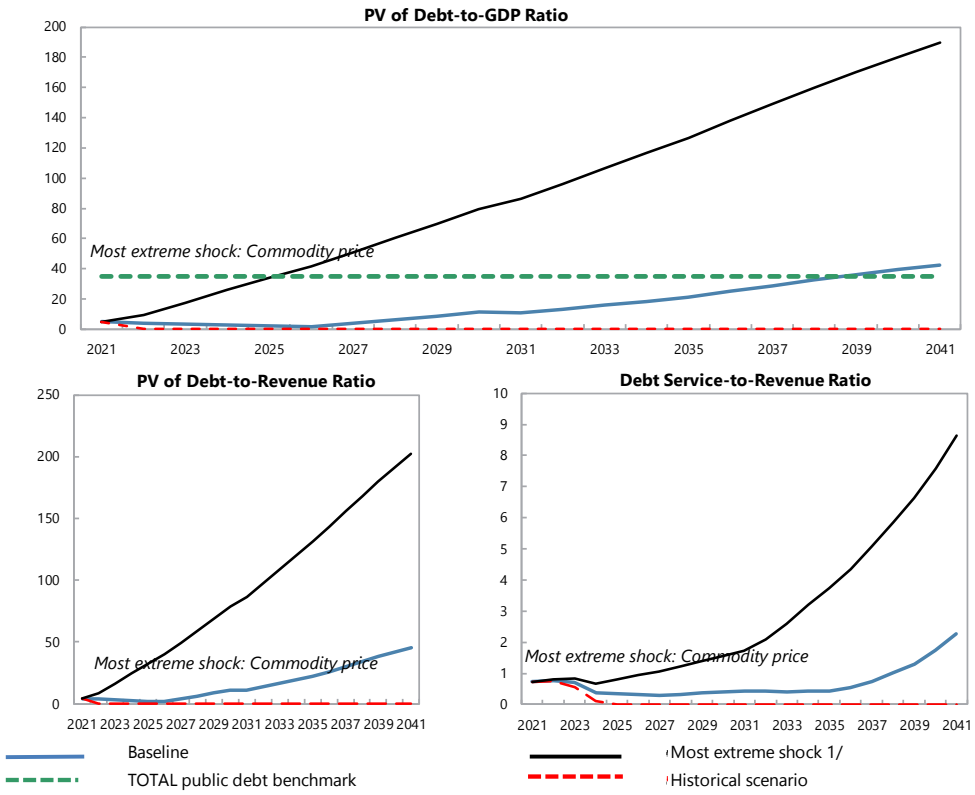
Note: "Yes" indicates any change to the size or interactions of the default settings for the stress tests. "n.a." indicates that the stress test does not apply.

Borrowing assumptions on additional financing needs resulting from the stress tests*		
	Default	User defined
Shares of marginal debt		
External PPG MLT debt	100%	
Terms of marginal debt		
Avg. nominal interest rate on new borrowing in USD	1.1%	1.1%
USD Discount rate	5.0%	5.0%
Avg. maturity (incl. grace period)	36	36
Avg. grace period	9	9

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

Sources: Country authorities; and staff estimates and projections.
1/ The most extreme stress test is the test that yields the highest ratio in or before 2031. The stress test with a one-off breach is also presented (if any), while the one-off breach is deemed away for mechanical signals. When a stress test with a one-off breach happens to be the most exterme shock even after disregarding the one-off breach, only that stress test (with a one-off breach) would be presented.
2/ The magnitude of shocks used for the commodity price shock stress test are based on the commodity prices outlook prepared by the IMF research department.

Figure 2. Tuvalu: Indicators of Public Debt Under Alternative Scenarios, 2021-2041



Borrowing assumptions on additional financing needs resulting from the stress tests*	Default	User defined
Shares of marginal debt		
External PPG medium and long-term	100%	100%
Domestic medium and long-term	0%	0%
Domestic short-term	0%	0%
Terms of marginal debt		
External MLT debt		
Avg. nominal interest rate on new borrowing in USD	1.1%	1.1%
Avg. maturity (incl. grace period)	36	36
Avg. grace period	9	9
Domestic MLT debt		
Avg. real interest rate on new borrowing	-2.9%	-2.9%
Avg. maturity (incl. grace period)	12	12
Avg. grace period	0	0
Domestic short-term debt		
Avg. real interest rate	0.0%	0.0%

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

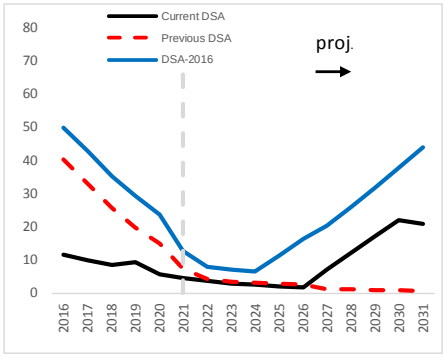
Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio in or before 2031. The stress test with a one-off breach is also presented (if any), while the one-off breach is deemed away for mechanical signals. When a stress test with a one-off breach happens to be the most exterme shock even after disregarding the one-off breach, only that stress test (with a one-off breach) would be presented.

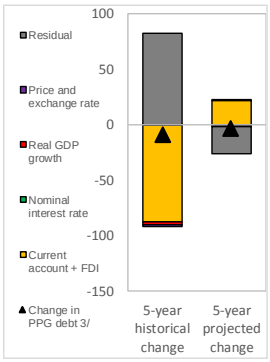
Figure 3. Tuvalu: Drivers of Debt Dynamics: External Scenario

External debt

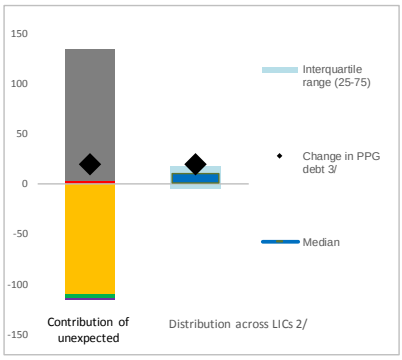
Gross Nominal PPG External Debt
(in percent of GDP; DSA vintages)



Debt-creating flows
(percent of GDP)

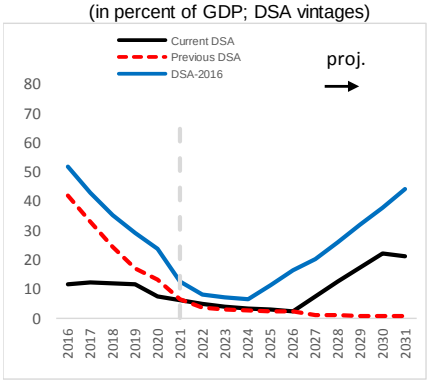


Unexpected Changes in Debt 1/
(past 5 years, percent of GDP)

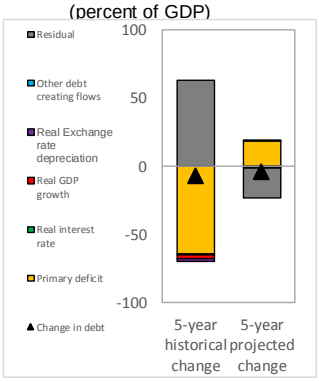


Public debt

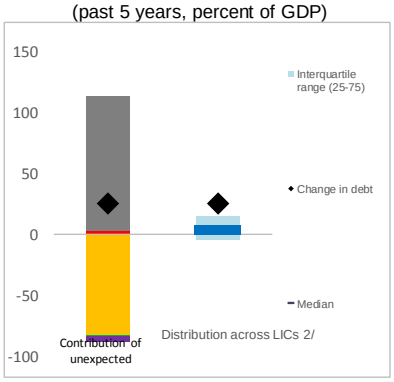
Gross Nominal Public Debt
(in percent of GDP; DSA vintages)



Debt-creating flows
(percent of GDP)



Unexpected Changes in Debt 1/
(past 5 years, percent of GDP)



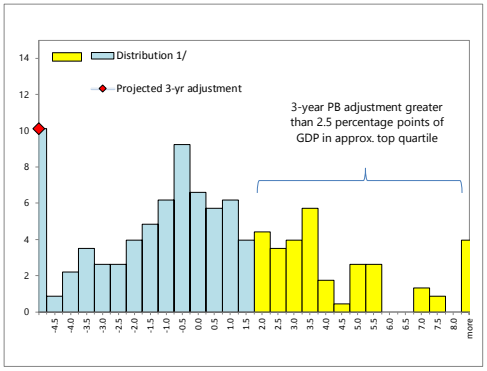
1/ Difference between anticipated and actual contributions on debt ratios.

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

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

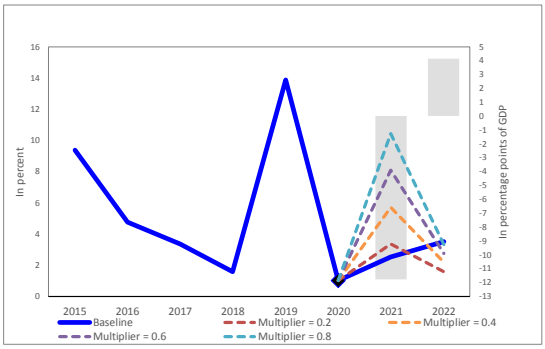
Figure 4. Tuvalu: Realism Tools

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



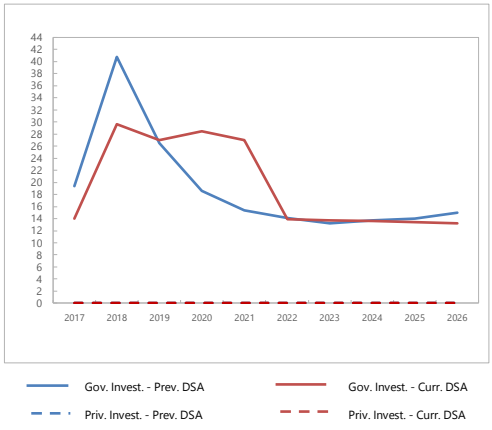
1/ Data cover Fund-supported programs for LICs (excluding emergency financing) approved since 1990. The size of 3-year adjustment from program inception is found on the horizontal axis; the percent of sample is found on the vertical axis.

Fiscal Adjustment and Possible Growth Paths 1/



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

Public and Private Investment Rates
(percent of GDP)



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

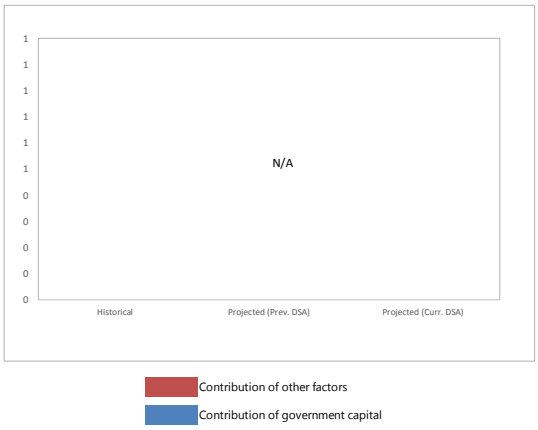
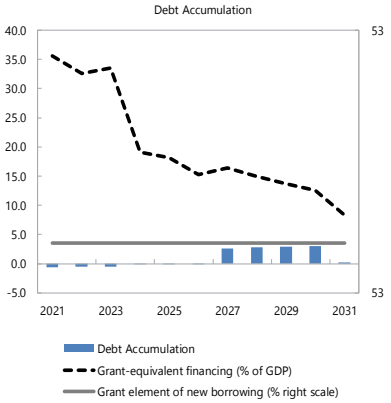


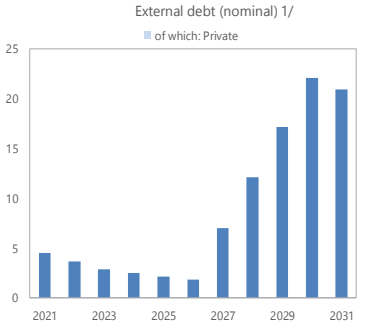
Table 1. Tuvalu: External Debt Sustainability Framework, Baseline Scenario, 2018-2041

(in percent of GDP, unless otherwise indicated)

	Actual			Projections								Average 8/	
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2031	2041	Historical	Projections
External debt (nominal) 1/	**8.4**	**9.4**	**5.5**	**4.5**	**3.6**	**2.9**	**2.5**	**2.1**	**1.8**	**20.9**	**65.2**	**13.1**	**8.8**
of which: public and publicly guaranteed (PPG)	**8.4**	**9.4**	**5.5**	**4.5**	**3.6**	**2.9**	**2.5**	**2.1**	**1.8**	**20.9**	**65.2**	**13.1**	**8.8**
Change in external debt	-1.4	1.0	-3.8	-1.0	-0.9	-0.8	-0.4	-0.4	-0.3	-1.1	3.9		
Identified net debt-creating flows	**-72.7**	**23.3**	**-5.6**	**5.3**	**5.1**	**4.0**	**3.9**	**3.7**	**3.6**	**1.2**	**2.7**	**12.5**	**2.8**
Non-interest current account deficit	**-72.2**	**24.1**	**-5.6**	**5.3**	**5.2**	**4.1**	**4.0**	**3.8**	**3.7**	**1.5**	**2.8**	**12.9**	**2.9**
Deficit in balance of goods and services	35.0	100.5	86.5	80.8	77.1	78.4	78.3	76.4	73.9	61.7	53.9	**97.8**	**71.9**
Exports	130.9	97.6	96.0	70.2	71.2	68.9	69.0	69.3	69.4	69.4	69.4		
Imports	166.0	198.1	182.6	151.0	148.2	147.3	147.3	145.7	143.3	131.1	123.3		
Net current transfers (negative = inflow)	-72.3	-58.6	-61.7	-62.3	-56.5	-57.9	-56.5	-54.2	-52.1	-43.9	-36.8	**-54.4**	**-52.2**
of which: official	-71.9	-58.2	-60.6	-60.9	-55.0	-56.4	-55.0	-52.8	-50.8	-42.9	-36.1		
Other current account flows (negative = net inflow)	-35.0	-17.8	-30.4	-13.2	-15.4	-16.4	-17.8	-18.5	-18.1	-16.3	-14.3	**-30.6**	**-16.8**
Net FDI (negative = inflow)	**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**
Endogenous debt dynamics 2/	**-0.5**	**-0.8**	**-0.1**	**0.0**	**-0.1**	**-0.1**	**-0.1**	**-0.1**	**0.0**	**-0.3**	**-0.1**		
Contribution from nominal interest rate	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.2	1.1		
Contribution from real GDP growth	-0.1	-1.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.5	-1.2		
Contribution from price and exchange rate changes	-0.4	0.1	0.0	...	...	...	...	...	...	...	...		
Residual 3/	**71.3**	**-22.3**	**1.8**	**-6.3**	**-5.9**	**-4.8**	**-4.3**	**-4.1**	**-3.9**	**-2.4**	**1.2**	**-14.0**	**-1.4**
of which: exceptional financing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Sustainability indicators													
PV of PPG external debt-to-GDP ratio	**...**	**...**	**4.5**	**3.4**	**2.7**	**2.0**	**1.8**	**1.5**	**1.3**	**10.7**	**42.6**		
PV of PPG external debt-to-exports ratio	**...**	**...**	**4.7**	**4.8**	**3.8**	**3.0**	**2.6**	**2.2**	**1.9**	**15.4**	**61.4**		
PPG debt service-to-exports ratio	**0.8**	**1.1**	**1.3**	**1.0**	**0.9**	**0.8**	**0.3**	**0.3**	**0.3**	**0.5**	**3.1**		
PPG debt service-to-revenue ratio	**0.9**	**1.3**	**1.4**	**0.8**	**0.8**	**0.8**	**0.3**	**0.2**	**0.2**	**0.4**	**2.3**		
Gross external financing need (Million of U.S. dollars)	-34.3	13.6	-2.4	3.9	4.0	3.5	3.4	3.4	3.5	2.3	8.8		
Key macroeconomic assumptions													
Real GDP growth (in percent)	1.6	13.9	1.0	2.5	3.5	3.8	4.0	3.8	3.7	2.4	2.0	**4.4**	**3.3**
GDP deflator in US dollar terms (change in percent)	4.7	-1.2	0.4	14.2	3.6	3.4	3.2	3.3	3.1	2.2	1.8	**1.3**	**4.0**
Effective interest rate (percent) 4/	1.3	2.0	0.8	1.5	1.4	1.3	1.3	1.3	1.3	1.1	1.8	**1.9**	**1.2**
Growth of exports of G&S (US dollar terms, in percent)	67.6	-16.1	-0.2	-14.3	8.6	4.1	7.5	7.6	7.1	4.7	3.9	**21.7**	**4.5**
Growth of imports of G&S (US dollar terms, in percent)	6.5	34.3	-6.5	-3.1	5.2	6.8	7.3	6.1	5.1	4.7	3.5	**10.8**	**4.3**
Grant element of new public sector borrowing (in percent)	...	...	...	52.6	52.6	52.6	52.6	52.6	52.6	52.6	31.6	**...**	**52.6**
Government revenues (excluding grants, in percent of GDP)	118.1	82.9	89.6	86.8	74.9	73.8	87.3	86.9	88.6	90.4	93.3	**85.6**	**86.1**
Aid flows (in Million of US dollars) 5/	18.3	15.6	17.5	23.0	22.5	24.8	15.2	15.6	14.0	10.1	8.5		
Grant-equivalent financing (in percent of GDP) 6/	...	...	...	35.6	32.6	33.5	19.1	18.2	15.3	8.4	2.7	**...**	**20.0**
Grant-equivalent financing (in percent of external financing) 6/	...	...	...	100.0	100.0	100.0	100.0	100.0	100.0	100.0	35.5	**...**	**94.2**
Nominal GDP (Million of US dollars)	48	54	55	64	69	74	80	85	91	121	178		
Nominal dollar GDP growth	6.3	12.5	1.5	17.1	7.2	7.4	7.3	7.3	6.9	4.7	3.9	**5.7**	**7.5**
Memorandum items:													
PV of external debt 7/	...	...	4.5	3.4	2.7	2.0	1.8	1.5	1.3	10.7	42.6		
In percent of exports	...	...	4.7	4.8	3.8	3.0	2.6	2.2	1.9	15.4	61.4		
Total external debt service-to-exports ratio	0.8	1.1	1.3	1.0	0.9	0.8	0.3	0.3	0.3	0.5	3.1		
PV of PPG external debt (in Million of US dollars)			2.5	2.2	1.8	1.5	1.4	1.3	1.2	12.9	75.9		
(PVt-PVt-1)/GDPt-1 (in percent)				-0.6	-0.5	-0.5	-0.1	-0.1	-0.1	0.2	4.9		
Non-interest current account deficit that stabilizes debt ratio	-70.8	23.1	-1.7	6.3	6.0	4.9	4.4	4.1	4.0	2.7	-1.1		

Definition of external/domestic debt	Residency-based
Is there a material difference between the two criteria?	Yes





Sources: Country authorities; and staff estimates and projections.

1/ Includes both public and private sector external debt.

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

3/ Includes exceptional financing (i.e., changes in arrears and debt relief); changes in gross foreign assets; and valuation adjustments. For projections also includes contribution from price and exchange rate changes.

4/ Current-year interest payments divided by previous period debt stock.

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

6/ Grant-equivalent financing includes grants provided directly to the government and through new borrowing (difference between the face value and the PV of new debt).

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

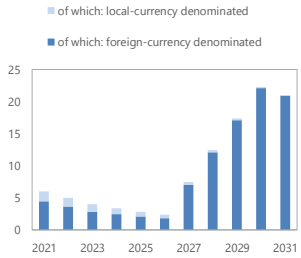
8/ Historical averages are generally derived over the past 10 years, subject to data availability, whereas projections averages are over the first year of projection and the next 10 years.

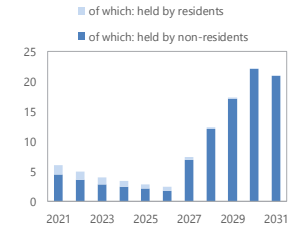
Table 2. Tuvalu: Public Sector Debt Sustainability Framework, Baseline Scenario, 2018-2041
(In percent of GDP, unless otherwise indicated)

	Actual			Projections								Average 6/	
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2031	2041	Historical	Projections
Public sector debt 1/	**11.8**	**11.5**	**7.3**	**6.1**	**5.0**	**4.0**	**3.4**	**2.9**	**2.4**	**21.0**	**65.2**	**14.1**	**9.5**
of which: external debt	**8.4**	**9.4**	**5.5**	**4.5**	**3.6**	**2.9**	**2.5**	**2.1**	**1.8**	**20.9**	**65.2**	**13.1**	**8.8**
Change in public sector debt	-0.2	-0.3	-4.2	-1.2	-1.1	-1.0	-0.6	-0.5	-0.5	-1.2	3.9		
Identified debt-creating flows	**-30.7**	**-0.7**	**-6.0**	**6.6**	**2.4**	**2.2**	**2.9**	**3.8**	**4.3**	**5.2**	**3.7**	**-11.5**	**4.3**
Primary deficit	**-30.4**	**0.9**	**-5.0**	**6.7**	**2.6**	**2.4**	**3.0**	**3.9**	**4.4**	**5.9**	**5.1**	**-11.2**	**4.6**
Revenue and grants	156.1	111.7	121.5	122.5	107.4	107.3	106.4	105.1	103.9	98.7	93.7	**113.8**	**105.1**
of which: grants	38.0	28.9	31.9	35.6	32.6	33.5	19.1	18.2	15.3	8.4	0.4		
Primary (noninterest) expenditure	125.6	112.6	116.5	129.2	110.0	109.7	109.5	109.0	108.3	104.6	98.8	**102.6**	**109.7**
Automatic debt dynamics	**-0.3**	**-1.6**	**-1.0**	**-0.2**	**-0.2**	**-0.2**	**-0.2**	**-0.1**	**-0.1**	**-0.7**	**-1.3**		
Contribution from interest rate/growth differential	-0.4	-1.6	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.7	-1.3		
of which: contribution from average real interest rate	-0.3	-0.2	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	-0.1		
of which: contribution from real GDP growth	-0.2	-1.4	-0.1	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.5	-1.2		
Contribution from real exchange rate depreciation	0.1	0.0	-0.8	...	...	...	...	...	...	...	...		
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**	**0.0**	**0.0**
Privatization receipts (negative)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Recognition of contingent liabilities (e.g., bank recapitalization)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Debt relief (HIPC and other)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Other debt creating or reducing flow (please specify)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Residual	**30.5**	**0.4**	**1.8**	**-7.8**	**-3.5**	**-3.2**	**-3.5**	**-4.3**	**-4.8**	**-6.4**	**0.1**	**10.1**	**-3.1**
Sustainability indicators													
PV of public debt-to-GDP ratio 2/	**...**	**...**	**5.9**	**4.9**	**4.0**	**3.2**	**2.7**	**2.3**	**1.9**	**10.8**	**42.6**		
PV of public debt-to-revenue and grants ratio	**...**	**...**	**4.9**	**4.0**	**3.7**	**2.9**	**2.5**	**2.1**	**1.8**	**10.9**	**45.5**		
Debt service-to-revenue and grants ratio 3/	**0.7**	**1.0**	**1.1**	**0.7**	**0.8**	**0.7**	**0.4**	**0.3**	**0.3**	**0.4**	**2.3**		
Gross financing need 4/	-29.4	2.0	-3.8	7.7	3.4	3.2	3.4	4.3	4.7	6.3	7.2		
Key macroeconomic and fiscal assumptions													
Real GDP growth (in percent)	1.6	13.9	1.0	2.5	3.5	3.8	4.0	3.8	3.7	2.4	2.0	**4.4**	**3.3**
Average nominal interest rate on external debt (in percent)	1.3	2.1	0.8	1.4	1.4	1.3	1.3	1.3	1.3	1.1	1.8	**1.9**	**1.2**
Average real interest rate on domestic debt (in percent)	-6.8	-5.9	-1.2	2.7	2.3	1.9	1.6	1.3	1.7	2.7	-1.8	**-2.4**	**2.0**
Real exchange rate depreciation (in percent, + indicates depreciation)	1.5	0.1	-8.5	...	...	...	...	...	...	...	...	**0.8**	**...**
Inflation rate (GDP deflator, in percent)	7.3	6.3	1.2	2.2	2.7	3.1	3.3	3.7	3.2	2.2	1.8	**4.0**	**2.9**
Growth of real primary spending (deflated by GDP deflator, in percent)	20.0	2.1	4.4	13.8	-11.8	3.6	3.8	3.4	3.0	1.7	1.5	**7.5**	**2.4**
Primary deficit that stabilizes the debt-to-GDP ratio 5/	-30.2	1.2	-0.8	8.0	3.7	3.4	3.6	4.5	4.9	7.1	1.2	**-9.9**	**3.3**
PV of contingent liabilities (not included in public sector debt)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		

Definition of external/domestic debt	**Residency-based**
Is there a material difference between the two criteria?	**Yes**

Public sector debt 1/





Sources: Country authorities; and staff estimates and projections.

1/ Coverage of debt: The central government, government-guaranteed debt, non-guaranteed SOE debt . Definition of external debt is Residency-based.

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

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

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

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

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

Table 3. Tuvalu: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2021-2041 (In percent of GDP, unless otherwise indicated)

	Projections 1/																				
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
PV of debt-to GDP ratio																					
Baseline	3	3	2	2	2	1	4	6	9	11	11	13	16	18	21	25	29	**32**	**36**	**39**	**43**
A. Alternative Scenarios																					
A1. Key variables at their historical averages in 2021-2031 2/	3	6	10	14	18	22	29	**36**	**44**	**53**	**57**	**64**	**70**	**75**	**80**	**86**	**93**	**100**	**105**	**110**	**115**
B. Bound Tests																					
B1. Real GDP growth	3	3	2	2	2	1	4	7	10	13	12	15	19	21	25	29	**33**	**38**	**42**	**46**	**49**
B2. Primary balance	3	9	15	14	13	13	15	17	19	22	21	24	26	28	**31**	**34**	**38**	**41**	**45**	**48**	**51**
B3. Exports	3	19	**51**	**49**	**47**	**45**	**48**	**50**	**53**	**56**	**55**	**58**	**60**	**62**	**64**	**67**	**71**	**75**	**78**	**81**	**84**
B4. Other flows 3/	3	11	19	19	18	17	19	21	23	26	25	28	29	**31**	**33**	**36**	**40**	**43**	**46**	**48**	**51**
B5. Depreciation	3	3	-9	-9	-8	-8	-5	-2	1	4	4	7	11	15	19	24	29	**34**	**39**	**43**	**48**
B6. Combination of B1-B5	3	18	21	20	19	18	21	23	26	28	28	**30**	**33**	**35**	**37**	**41**	**45**	**48**	**52**	**55**	**58**
C. Tailored Tests																					
C1. Combined contingent liabilities	3	5	4	4	4	3	6	8	11	13	13	15	18	20	23	27	**31**	**34**	**38**	**41**	**45**
C2. Natural disaster	3	18	18	18	18	18	21	24	27	**30**	**30**	**34**	**37**	**41**	**45**	**50**	**54**	**59**	**64**	**68**	**73**
C3. Commodity price	3	3	3	1	-1	-4	-4	-3	-3	-2	-4	-4	-3	-2	-1	1	3	6	8	11	13
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Threshold	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
PV of debt-to-exports ratio																					
Baseline	5	4	3	3	2	2	5	9	12	16	15	19	23	27	30	36	41	47	52	57	61
A. Alternative Scenarios																					
A1. Key variables at their historical averages in 2021-2031 2/	5	9	15	20	26	32	41	52	64	76	82	92	101	108	116	124	134	**144**	**152**	**159**	**166**
B. Bound Tests																					
B1. Real GDP growth	5	4	3	3	2	2	5	9	12	16	15	19	23	27	30	36	41	47	52	57	61
B2. Primary balance	5	13	21	20	19	18	21	25	28	31	31	34	38	41	44	50	55	60	65	69	74
B3. Exports	5	35	136	130	125	121	127	133	**141**	**149**	**147**	**155**	**159**	**164**	**169**	**179**	**189**	**198**	**208**	**216**	**224**
B4. Other flows 3/	5	16	28	27	26	25	28	31	34	37	36	40	42	45	48	53	57	62	66	70	74
B5. Depreciation	5	4	-10	-10	-10	-10	-6	-2	1	5	5	9	13	17	21	27	33	39	45	50	55
B6. Combination of B1-B5	5	28	26	38	36	35	39	44	49	54	53	57	62	66	70	78	85	92	98	105	111
C. Tailored Tests																					
C1. Combined contingent liabilities	5	7	6	6	5	5	8	12	15	19	18	22	26	30	33	39	44	50	55	60	64
C2. Natural disaster	5	26	26	26	26	26	30	35	39	44	44	50	55	60	65	73	80	86	93	100	106
C3. Commodity price	5	4	4	1	-2	-6	-5	-5	-4	-3	-6	-5	-4	-3	-2	1	5	8	12	15	19
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Threshold	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140
Debt service-to-exports ratio																					
Baseline	1	1	1	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	2	2	3
A. Alternative Scenarios																					
A1. Key variables at their historical averages in 2021-2031 2/	1	1	1	1	1	1	1	1	1	1	2	2	2	3	3	3	4	5	5	6	7
B. Bound Tests																					
B1. Real GDP growth	1	1	1	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	2	2	3
B2. Primary balance	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	3	3	4
B3. Exports	1	1	3	3	3	3	3	3	3	3	3	5	9	8	8	8	9	10	**10**	**12**	**13**
B4. Other flows 3/	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	3	3	3	4
B5. Depreciation	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	3
B6. Combination of B1-B5	1	1	2	1	1	1	1	1	1	1	1	2	3	3	3	3	3	4	4	5	6
C. Tailored Tests																					
C1. Combined contingent liabilities	1	1	1	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	2	2	3
C2. Natural disaster	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	3	4
C3. Commodity price	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Threshold	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Debt service-to-revenue ratio																					
Baseline	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	2	2
A. Alternative Scenarios																					
historical averages in 2021-2031 2/	1	1	1	0	1	1	1	1	1	1	1	1	2	2	2	3	3	3	4	5	5
B. Bound Tests																					
B1. Real GDP growth	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	2	2	3
B2. Primary balance	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	2	2	2	3
B3. Exports	1	1	2	1	1	1	1	1	1	1	1	2	3	3	3	3	3	4	4	5	5
B4. Other flows 3/	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	3	3
B5. Depreciation	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
B6. Combination of B1-B5	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	2	2	2	2	3	3
C. Tailored Tests																					
C1. Combined contingent liabilities	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	2	2
C2. Natural disaster	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	3
C3. Commodity price	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Threshold	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14

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

Table 4. Tuvalu: Sensitivity Analysis for Key Indicators of Public Debt, 2021-2041 (In percent)

	Projections 1/																				
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
PV of Debt-to-GDP Ratio																					
Baseline	5	4	3	3	2	2	4	6	9	11	11	13	16	19	21	25	29	32	**36**	**39**	**43**
A. Alternative Scenarios																					
A1. Key variables at their historical averages in 2021-2031 2/	5	-3	-10	-17	-24	-30	-35	-39	-43	-47	-53	-56	-59	-62	-64	-66	-67	-68	-70	-71	-72
B. Bound Tests																					
B1. Real GDP growth	5	7	13	19	25	31	**39**	**48**	**58**	**67**	**73**	**83**	**93**	**104**	**114**	**126**	**137**	**148**	**159**	**169**	**179**
B2. Primary balance	5	10	16	15	14	13	15	17	20	22	21	24	26	28	31	34	**38**	**41**	**45**	**48**	**51**
B3. Exports	5	17	**37**	**35**	34	32	34	**36**	**37**	**39**	**39**	**41**	**42**	**43**	**45**	**47**	**50**	**52**	**55**	**57**	**59**
B4. Other flows 3/	5	12	21	20	19	18	20	22	24	26	25	28	29	31	33	**37**	**40**	**43**	**46**	**48**	**51**
B5. Depreciation	5	3	1	-2	-4	-7	-8	-9	-10	-11	-14	-15	-16	-17	-18	-17	-16	-16	-15	-14	-14
B6. Combination of B1-B5	5	11	10	3	3	2	4	7	9	12	11	14	16	19	22	26	29	33	**37**	**40**	**43**
C. Tailored Tests																					
C1. Combined contingent liabilities	5	6	6	5	4	4	6	8	11	13	13	15	18	20	23	27	31	34	**38**	**41**	**45**
C2. Natural disaster	5	19	19	19	19	19	21	24	27	30	31	34	**38**	**41**	**45**	**50**	**55**	**59**	**64**	**68**	**73**
C3. Commodity price	5	9	17	26	34	**41**	**51**	**60**	**70**	**79**	**86**	**96**	**106**	**117**	**127**	**138**	**149**	**160**	**170**	**180**	**190**
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
TOTAL public debt benchma	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
PV of Debt-to-Revenue Ratio																					
Baseline	4	4	3	3	2	2	4	6	9	11	11	14	16	19	22	26	30	34	38	42	45
A. Alternative Scenarios																					
A1. Key variables at their historical averages in 2021-2031 2/	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B. Bound Tests																					
B1. Real GDP growth	4	7	11	17	23	29	38	47	56	66	73	84	95	106	118	130	143	155	167	179	191
B2. Primary balance	4	10	15	14	13	13	15	17	19	22	22	24	27	29	32	36	40	44	47	51	54
B3. Exports	4	16	34	33	32	31	33	35	37	40	39	42	43	45	46	49	52	55	58	60	63
B4. Other flows 3/	4	12	19	18	18	17	19	21	24	26	26	28	30	32	34	38	41	45	48	51	55
B5. Depreciation	4	3	1	(2)	(4)	(6)	(8)	(9)	(10)	(11)	(14)	(15)	(17)	(18)	(19)	(18)	(17)	(16)	(16)	(15)	(15)
B6. Combination of B1-B5	4	10	9	3	2	2	4	7	9	12	11	14	17	20	22	27	31	35	39	42	46
C. Tailored Tests																					
C1. Combined contingent liabilities	4	6	5	5	4	4	6	8	11	13	13	16	18	21	24	28	32	36	40	44	48
C2. Natural disaster	4	18	17	18	18	18	21	24	27	30	31	35	38	42	46	52	57	62	67	72	77
C3. Commodity price	4	9	16	25	32	40	49	59	69	79	87	98	109	120	131	144	156	168	180	191	202
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Debt Service-to-Revenue Ratio																					
Baseline	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	2	2
A. Alternative Scenarios																					
A1. Key variables at their historical averages in 2021-2031 2/	1	1	1	0	(0)	(0)	(0)	(0)	(1)	(1)	(1)	(1)	(1)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
B. Bound Tests																					
B1. Real GDP growth	1	1	1	1	1	1	1	1	1	1	2	2	2	3	3	4	4	5	6	7	8
B2. Primary balance	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	3
B3. Exports	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	3	3	3	4
B4. Other flows 3/	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	3	3
B5. Depreciation	1	1	1	0	0	0	(0)	(0)	(0)	(0)	(0)	(1)	(1)	(1)	(1)	(2)	(2)	(2)	(2)	(1)	(1)
B6. Combination of B1-B5	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	2	2
C. Tailored Tests																					
C1. Combined contingent liabilities	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	2	2
C2. Natural disaster	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	3
C3. Commodity price	1	1	1	1	1	1	1	1	1	2	2	2	3	3	4	4	5	6	7	8	9
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Sources: Country authorities; and staff estimates and projections.
1/ A bold value indicates a breach of the benchmark.
2/ Variables include real GDP growth, GDP deflator and primary deficit in percent of GDP.
3/ Includes official and private transfers and FDI.

Statement by Mr. Huh and Mr. Iona on Tuvalu

July 19, 2021

Our Tuvaluan authorities are deeply appreciative of the open and useful engagement with the mission team during the 2021 Article IV virtual consultations. The authorities broadly concur with staff's assessment and their analysis and tailored policy recommendations.

Tuvalu is the Fund's smallest member and one of the most geographically remote—the population is just 11 thousand located on an isolated network of islands in the Pacific Ocean around five thousand kilometers from the nearest continent. The country is highly vulnerable to external economic shocks due to its narrow production base, lack of economies of scale, inadequate institutional capacity and high dependence on imports and external assistance. Exposure to natural disasters and the effects of climate change makes the Tuvaluan economy exceptionally fragile. The authorities attach significant value to the high-quality policy advice and CD/TA that it enjoys through its Fund membership.

COVID-19 Response, Recent Developments and Outlook

With early stringent border controls and quarantine procedures, helped by bordering only the ocean, Tuvalu has so far managed to stave off the coronavirus. As a result of preventative measures, economic activity was dampened, most notably through a slow-down in infrastructure projects due to disruption to the import of construction materials. However, thanks to the authorities' strong fiscal response package and the country's low dependency on tourism, the economy grew by 1 percent in 2020.

The authorities are cognizant of the weak capacity to deal with a local outbreak and therefore are determined to spare no effort in keeping Tuvalu free of the virus. As of July 1, 2021, Tuvalu has received sufficient vaccines for the entire adult population with the help of the COVAX Advance Market Commitment and donations from Australia and New Zealand. The authorities aim to vaccinate all over-18s with a second dose of the AstraZeneca by early October 2021.

While the authorities agree with staff's projection of a 3.5 percent recovery in GDP growth in 2022, they are also mindful of the negative impact of continued border closures that may further delay the resumption of infrastructure projects. The likelihood of this downside risk is increasing following the

second and much worse wave of infections in Fiji (the main aerial transport hub to Tuvalu). All international flights were once again suspended in April this year, bar the transport of priority medical supplies. The COVID response alert level has been elevated, the State of Emergency has been extended to the end of 2021, and the authorities stepped up their support of the Tuvaluans on temporary educational and medical travel in Fiji. The authorities are committed to work with development partners on the flexible utilization of remaining COVID grants within the context of the pandemic response plan (*Talaaliki Plan*), and to the publication of audited COVID spending on the Ministry of Finance's and Auditor General's websites.

The authorities expect a small budget surplus for 2021 due to likely savings from both the current and capital budgets, driven mainly by continued travel restrictions. The authorities are working closely with development partners through the well-established Policy Reform Matrix mechanism to ensure disbursement of planned budget support before the end of the fiscal year. Any shortfall in revenues will be compensated by reserves in the Consolidated Investment Fund.

Fiscal Policy

The authorities agree with staff on the need to establish a long-term fiscal anchor to support fiscal and debt sustainability, and that a domestic current deficit of 40 percent of GDP is an appropriate target. This will also facilitate reserves accumulation to help the economy withstand potential revenue shocks (for instance a fall in fishing revenues or budget support) or a natural disaster.

The authorities are committed to pursue reforms that will enhance the efficiency of the major spending items including the wage bill, Tuvalu Medical Treatment Scheme, tertiary scholarships, SOE Community Service Obligations (CSOs) and government travel. The authorities will also continue the momentum of domestic revenue mobilization progress through further strengthening tax administration and compliance. In support of these efforts, a revised PFM Roadmap will be adopted later this year. This will guide the authorities in improving the budget preparation process using the 2014 Government Finance Statistics Manual (GFSM) format, support resumption of publication of quarterly budget outturns, and ensure timely audits of government annual accounts. Improved transparency of the procurement process

is also planned under the roadmap, as is the development of a medium-term infrastructure maintenance plan.

Tuvalu remains critically vulnerable to climate change and the authorities are aggressively pursuing multilateral climate resources for adaptation and resilience building. A Climate Finance Unit will be established to coordinate efforts to mobilize international climate finance. The IMF could play an important role in unlocking climate finance through possible engagement with the authorities to improve institutions, integrate climate change resilience into the macroeconomic framework and to fulfill the requirements of multilateral climate funds. In this vein, the authorities have indicated an interest in the Fund's CCPA (now known as the CMAP), ideally within the next two years, and they look forward to benefiting from further engagements under the Fund's new Climate Strategy. However, none of these mitigation strategies will change the geographic location of Tuvalu or that the highest point on the main island is just 5 meters above sea level.

Financial Sector

The country uses Australian dollars as its legal tender and has no central bank.

The authorities recognize the importance of an effective supervisory framework for the banking sector and they appreciate the continued engagement with PFTAC to enhance capacity in this space. Following the sudden loss of the National Bank of Tuvalu's Correspondent Banking Relationship (CBR) with an Australian bank earlier this year, the authorities sought the assistance of the Asia Pacific Group on Anti-Money Laundering and the Fiji Financial Intelligence Unit to support its AML/CFT efforts. The authorities also look to the IMF as a key partner in addressing CBR challenges given that there is a real danger that Tuvalu could be entirely cut off from the international payments system.

As part of its national ICT policy, the authorities are exploring options of Fintech solutions to address legacy challenges related to financial deepening and inclusion. They are carefully studying the potential benefits and risks of various platforms based on the experiences of other countries and are considering the establishment of a national digital ledger, possibly via the Bitcoin SV platform. The authorities will engage with relevant partners during this exploratory stage, including IMF's ITD, for guidance and technical advice.

Structural reforms

Guided by the recently launched national development plan (*Te Kete*), the authorities are embarking on a number of structural reform initiatives aimed at diversifying the economy away from fishing revenues and budget support. They see the domestic airline as a key priority in stimulating inter-island trade and creating opportunities for small-scale production of goods for local consumption, including in the agricultural sector. The authorities are also considering a citizenship-by-investment scheme to boost infrastructure spending, learning from the best practices in other countries and ensuring safeguards consistent with AML/CFT requirements are in place.

SOE reforms have made good progress over the past decade, but more can be done. The authorities are developing performance-based management of General Managers' and Board of Directors' contracts in an effort to enhance accountability through improved corporate planning and reporting. CSOs paid to SOEs remain a burden on the government budget. The authorities aim to contain this cost, including through a rules-based system of determining the compensation level for non-profitable services delivered under Ministerial directives.

Capacity Development

The authorities reiterate their appreciation for Fund TA. They look to the Fund to take a leading role in CD coordination among partners, especially in the areas of the Fund's core expertise, including statistics, PFM and the financial sector. During the consultations, the authorities requested PFTAC's assistance on budget preparation, including a review of fiscal ratios for long-term policy planning. They are looking to enhance succession planning to strengthen institutional capacity despite the high staff turnover problem associated with small administrations.

As Tuvalu's AIV consultation is on a 24-month cycle, the authorities requested an annual update of staff's macroeconomic forecasts in between AIV missions to support planning and budget preparation processes