INTERNATIONAL DEVELOPMENT ASSOCIATION INTERNATIONAL MONETARY FUND

SOLOMON ISLANDS

Joint World Bank-IMF Debt Sustainability Analysis

June 2020

Prepared Jointly by the staffs of the International Development Association (IDA) ^{1/2/} and the International Monetary Fund (IMF)

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¹ Debt coverage has remained unchanged compared to the 2019 DSA (IMF Country Report No. 20/49).

² The updated DSA uses the rebased GDP series with 2012 as the base year. The rebased GDP level is approximately 13 percent higher than the previous GDP series with 2004 as the base year.

Solomon Islands: Joint Ban	k-Fund Debt Sustainability Analysis
Risk of external debt distress	Moderate ³
Overall risk of debt distress	Moderate
Granularity in the risk rating	Substantial space to absorb shocks
Application of judgment	No
Macroeconomic projections	The updated DSA incorporates a new set of macroeconomic assumptions reflecting the impacts of COVID-19 shock. Growth is expected to fall by 5.5 percent, as a result of a decline in logging, mining and fisheries exports, a contraction in tourism, as well as the negative impact of containment measures on domestic demand. Fiscal and current account deficits are expected to widen sharply.
Financing strategy ⁴	The RCF/RFI will help finance balance of payment needs. The World Bank has approved the first Solomon Islands transition to sustainable growth development policy operation of US\$15 million (US\$11.8 million in grant and US\$3.2 million in loan), in addition to US\$5 million under the COVID-19 Fast Track Facility expected to be approved by end May. The Asian Development Bank (ADB) has released US\$6 million from its Pacific Disaster Resilience Program and is processing an additional US\$20 million, a policy-based operation anchored on the government's COVID-19 response plan. The financing under the World Bank's COVID-19 Fast Track Facility and ADB is expected to equally comprise grant and loan disbursements.
Realism tools flagged	None
Mechanical risk rating under the external DSA	Moderate
Mechanical risk rating under the public DSA	Moderate

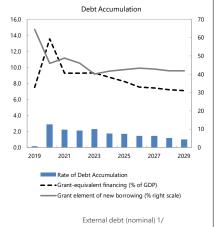
The Composite Indicator score is 2.72, which is based on the October 2019 WEO and the World Bank's 2018 CPIA, and the country's debt-carrying capacity is assessed to be medium.
 Solomon Islands has not requested participation in the G20 Debt Service Suspension Initiative (DSSI).

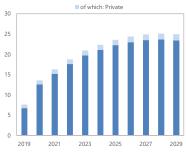
The updated DSA after the COVID-19 shock suggests Solomon Islands remains at moderate risk of debt distress for both the external and overall public debt. All external debt indicators remain below the relevant indicative thresholds under the baseline scenario but breach thresholds under the extreme stress test scenario (combination shock for the PV of debt-to-GDP and export shock for the PV of debt-to-export and the debt services to export ratio). The PV of public debt-to-GDP ratio remains below the 55 percent benchmark under the baseline scenario, and it would remain below the benchmark under the most extreme shock (real GDP growth) till 2030. A tailored natural disaster shock of similar scale to the largest shock in Solomon Islands' history would cause a spike in debt trajectory in the aftermath of the event. While the DSA suggests there is substantial space to absorb shocks, Solomon Islands often faces fiscal liquidity challenges due to weak public financial management and the cash balance is currently low. Going forward, stronger revenue mobilization measures and expenditure rationalization are needed to rebuild fiscal buffers and to enhance resilience against shocks.

	A	ctual					Proje	ctions					rage 8/
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2029	2039	Historical	Projectio
External debt (nominal) 1/	7.4	7.5	7.1	7.6	13.6	16.2	18.7	20.9	22.3	25.0	24.6	15.0	20.2
of which: public and publicly guaranteed (PPG)	6.7	6.7	6.3	6.7	12.5	15.1	17.6	19.7	21.0	23.4	22.8	10.5	18.5
Change in external debt	-2.0	0.1	-0.4	0.5	6.0	2.7	2.5	2.2	1.4	-0.1	0.6		
Identified net debt-creating flows	0.5	1.5	1.4	7.2	17.2	11.1	8.3	7.3	6.6	5.5	3.2	0.3	7.2
Non-interest current account deficit	3.4	4.2	2.9	8.8	17.7	15.7	12.9	11.6	10.8	9.0	7.0	6.7	10.6
Deficit in balance of goods and services	-85.5	-87.7	-90.1	-83.6	-71.5	-80.0	-87.1	-85.6	-82.6	-77.7	-60.9	-93.9	-82.6
Exports	40.2	41.0	42.9	36.8	26.3	32.2	36.6	36.4	35.0	33.5	25.2		
Imports	-45.4	-46.6	-47.2	-46.8	-45.2	-47.8	-50.5	-49.2	-47.6	-44.2	-35.7		
Net current transfers (negative = inflow)	-4.7	-3.6	-2.5	-1.9	-3.0	-1.4	-2.4	-2.5	-3.0	-3.4	-3.6	-9.8	-2.7
of which: official	-6.3	-5.1	-3.7	-4.0	-5.1	-2.3	-2.2	-2.2	-2.2	-2.2	-2.1		
Other current account flows (negative = net inflow)	93.6	95.5	95.6	94.4	92.2	97.2	102.4	99.7	96.3	90.1	71.6	110.4	96.0
Net FDI (negative = inflow)	-2.6	-2.5	-1.0	-1.6	-1.0	-4.1	-4.2	-3.8	-3.8	-3.1	-3.4	-5.2	-3.2
Endogenous debt dynamics 2/	-0.4	-0.3	-0.5	0.0	0.6	-0.5	-0.4	-0.4	-0.3	-0.4	-0.4		
Contribution from nominal interest rate	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.4		
Contribution from real GDP growth	-0.5	-0.4	-0.3	-0.1	0.4	-0.7	-0.6	-0.6	-0.6	-0.7	-0.8		
Contribution from price and exchange rate changes	0.0	0.0	-0.3										
Residual 3/	-2.4	-1.3	-1.8	-6.7	-11.3	-8.4	-5.8	-5.1	-5.2	-5.6	-2.7	-2.4	-5.4
of which: exceptional financing	0.0	0.0	0.0	0.0	-1.9	0.0	0.0	0.0	0.0	0.0	0.0		
Sustainability indicators													
PV of PPG external debt-to-GDP ratio			5.7	5.8	9.1	10.3	11.8	13.1	13.9	15.7	16.2		
PV of PPG external debt-to-exports ratio			13.2	15.7	34.5	32.1	32.1	36.1	39.8	46.7	64.2		
PPG debt service-to-exports ratio	1.8	1.7	1.1	1.4	1.6	1.3	1.2	1.9	2.7	3.0	4.0		
PPG debt service-to-revenue ratio	2.6	2.3	1.6	2.0	1.9	1.7	1.7	2.7	3.7	4.1	4.6		
Gross external financing need (Million of U.S. dollars)	30.9	36.5	39.3	124.7	261.5	201.2	162.4	159.4	159.6	193.3	269.5		
Key macroeconomic assumptions													
Real GDP growth (in percent)	5.9	5.3	3.9	1.2	-5.5	5.6	4.0	3.4	3.0	3.2	3.5	4.3	2.4
GDP deflator in US dollar terms (change in percent)	-0.5	0.2	4.6	-0.4	0.8	3.6	1.8	3.4	3.6	3.6	4.6	4.2	2.7
Effective interest rate (percent) 4/	1.3	1.5	1.2	1.5	1.5	1.2	1.2	1.2	1.3	1.5	1.7	2.1	1.3
Growth of exports of G&S (US dollar terms, in percent)	5.3	7.8	13.8	-13.6	-31.9	33.9	20.4	6.2	2.6	-2.4	5.9	11.9	4.9
Growth of imports of G&S (US dollar terms, in percent)	1.0	8.5	10.0	0.0	-8.1	15.7	11.9	4.1	3.2	4.4	9.9	8.0	4.8
Grant element of new public sector borrowing (in percent)				64.5	45.9	48.8	46.0	40.0	41.7	41.9	33.0		45.7
Government revenues (excluding grants, in percent of GDP)	28.4	30.2	30.1	26.1	21.4	25.0	25.8	25.7	25.3	24.5	21.9	28.5	24.9
Aid flows (in Million of US dollars) 5/	230.3	232.1	254.4	111.9	211.1	155.4	164.1	176.6	182.6	202.5	359.0		
Grant-equivalent financing (in percent of GDP) 6/				7.5	13.5	9.3	9.3	9.3	8.8	7.1	6.7		8.8
Grant-equivalent financing (in percent of external financing) 6/				95.3	81.1	81.9	82.8	80.3	81.9	85.6	77.1		83.8
Nominal GDP (Million of US dollars)	1,381	1,458	1,585	1,598	1,523	1,666	1,763	1,884	2,011	2,773	5,676		
Nominal dollar GDP growth	5.3	5.5	8.8	0.8	-4.7	9.4	5.9	6.9	6.7	6.8	8.2	8.7	5.1
Memorandum items:													
PV of external debt 7/			6.5	6.7	10.1	11.4	12.9	14.4	15.2	17.2	17.9		
In percent of exports			15.1	18.1	38.5	35.5	35.3	39.5	43.5	51.3	71.1		
Total external debt service-to-exports ratio	3.6	1.9	1.3	1.6	1.9	1.5	1.3	2.0	2.8	3.2	4.4		
PV of PPG external debt (in Million of US dollars)			89.9	92.1	138.2	172.3	207.2	247.8	280.4	434.2	919.0		
				0.1	2.9	2.2	2.4	2.2	4.7	4.0			
(PVt-PVt-1)/GDPt-1 (in percent)				0.1	2.9	2.2	2.1	2.3	1.7	1.0	1.9		

Table 1. Solomon Islands: External Debt Sustainability Framework, Baseline Scenario, 2016-2039

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





Sources: Country authorities; and staff estimates and projections.

^{1/} Includes both public and private sector external debt.

^{2/} Derived as [r - g - p(1+g) + Eα (1+r)]/(1+g+p+g) times previous period debt ratio, with r = nominal interest rate; g = real GDP growth rate, p = growth rate of GDP deflator in U.S. dollar terms, ε=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.

		ctual					Proje	ections				Average 6/		
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2029	2039	Historical	Projections	
Public sector debt 1/	7.1	8.4	8.2	8.9	15.8	19.2	22.2	24.7	26.8	35.4	46.3	14.1	25.4	
of which: external debt	6.7	6.7	6.3	6.7	12.5	15.1	17.6	19.7	21.0	23.4	22.8	10.5	18.9	
Change in public sector debt	-1.9	1.3	-0.2	0.7	6.9	3.4	2.9	2.6	2.1	1.4	2.1			
dentified debt-creating flows	3.2	1.4	-1.7	1.2	6.2	4.1	3.0	3.1	3.0	2.1	2.7	-3.5	3.0	
Primary deficit	3.4	2.0	-1.4	1.2	5.7	4.9	3.7	3.9	3.7	3.0	3.8	-2.1	3.6	
Revenue and grants	38.6	39.2	40.0	32.9	32.2	32.3	33.4	33.5	32.6	30.7	27.6	44.0	32.1	
of which: grants	10.2	9.0	9.9	6.8	10.9	7.3	7.6	7.8	7.4	6.2	5.7			
Primary (noninterest) expenditure	42.0	41.2	38.6	34.2	37.9	37.2	37.1	37.3	36.3	33.7	31.4	41.9	35.7	
Automatic debt dynamics	-0.3	-0.6	-0.3	-0.1	0.6	-0.9	-0.7	-0.7	-0.7	-0.8	-1.1			
Contribution from interest rate/growth differential	-0.5	-0.3	-0.4	-0.1	0.6	-0.9	-0.7	-0.7	-0.7	-0.8	-1.1			
of which: contribution from average real interest rate	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.2	0.4			
of which: contribution from real GDP growth	-0.5	-0.4	-0.3	-0.1	0.5	-0.8	-0.7	-0.7	-0.7	-1.0	-1.5			
Contribution from real exchange rate depreciation	0.3	-0.2	0.1											
Other identified debt-creating flows	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	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	-5.1	-0.1	1.5	-0.5	0.7	-0.6	-0.1	-0.6	-0.9	-0.7	-0.6	1.2	-0.5	
ustainability indicators														
V of public debt-to-GDP ratio 2/			7.7	8.0	12.4	14.4	16.4	18.2	19.7	27.6	39.7			
V of public debt-to-revenue and grants ratio			19.3	24.2	38.4	44.8	49.1	54.2	60.4	90.1	143.8			
ebt service-to-revenue and grants ratio 3/	3.0	2.8	2.2	3.4	4.0	3.8	4.0	4.7	5.5	6.5	10.6			
ross financing need 4/	4.5	3.0	-0.5	2.4	6.9	6.1	5.0	5.4	5.5	5.0	6.8			
ey macroeconomic and fiscal assumptions														
eal GDP growth (in percent)	5.9	5.3	3.9	1.2	-5.5	5.6	4.0	3.4	3.0	3.2	3.5	4.3	2.4	
verage nominal interest rate on external debt (in percent)	1.0	1.2	0.7	1.1	1.0	0.9	0.9	1.0	1.0	1.2	1.4	1.1	1.1	
verage real interest rate on domestic debt (in percent)	-0.7	-0.3	-0.8	-0.5	-0.5	-0.7	-0.6	-0.6	-0.5	-0.3	-0.1	-0.3	-0.5	
eal exchange rate depreciation (in percent, + indicates depreciation)	3.3	-3.9	0.8									-2.5		
nflation rate (GDP deflator, in percent)	0.0	1.4	4.2	1.3	8.0	3.6	1.8	3.4	3.6	3.6	4.6	4.4	2.9	
rowth of real primary spending (deflated by GDP deflator, in percent)	5.9	3.5	-2.7	-10.3	4.7	3.6	3.6	4.2	0.2	2.3	2.9	4.2	1.2	
rimary deficit that stabilizes the debt-to-GDP ratio 5/	5.3	0.7	-1.2	0.5	-1.2	1.5	0.7	1.3	1.6	1.6	1.7	1.6	1.1	
V 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			

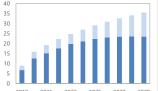
Table 2. Solomon Islands: Public Sector Debt Sustainability Framework, Baseline Scenario, 2016-2039
(In percent of GDP, unless otherwise indicated)

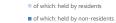
Definition of external/domestic debt	Residency- based
Is there a material difference between the two criteria?	No

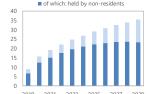


of which: local-currency denominated

 \blacksquare of which: foreign-currency denominated







Sources: Country authorities; and staff estimates and projections.

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.

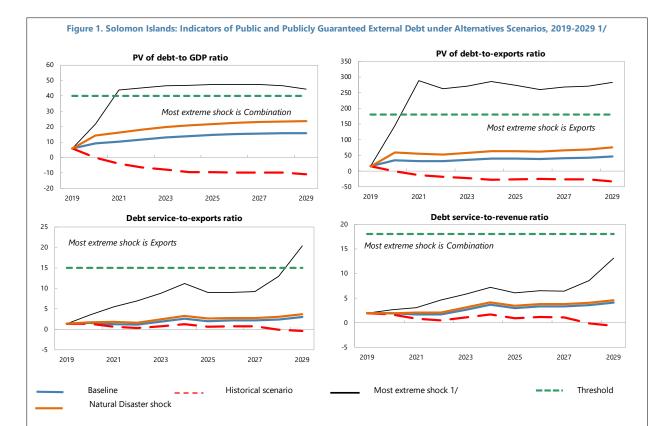
^{1/} Coverage of debt: The central government, central bank, government-guaranteed debt. Definition of external debt is Residency-based.

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

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

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

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



Customization of De	fault S	ettings
	Size	Interactions
Standardized Tests	Yes	
Tailored Tests		
Combined CLs	Yes	
Natural Disasters	Yes	Yes
Commodity Prices 2/	n.a.	n.a.
Market Financing	n.a.	n.a.

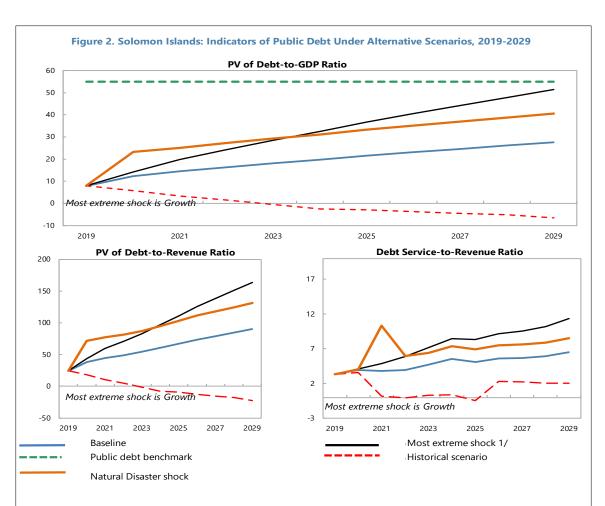
Note: "Yes" indicates any change to the size or interactions of the default settings for the stress tests. "n.a." indicates that the stress test does not apply.

Borrowing Assumptions for Stress Te	sts*	
	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	1.2%	1.2%
USD Discount rate	5.0%	5.0%
Avg. maturity (incl. grace period)	29	29
Avg. grace period	7	7

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

Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio in or before 2029. Stress tests with one-off breaches are also presented (if any), while these one-off breaches are 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-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.

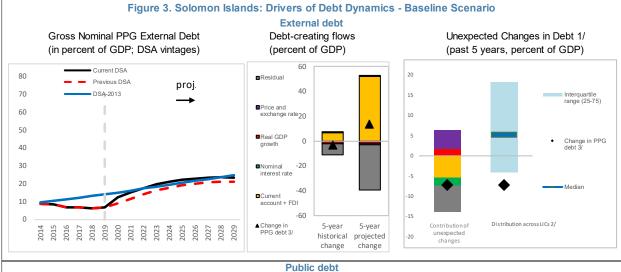


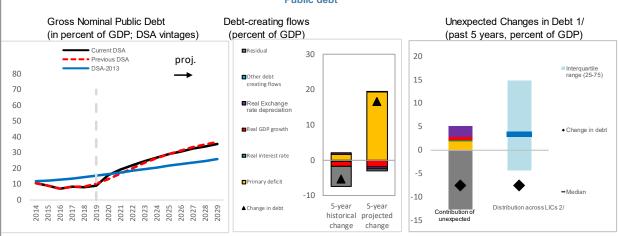
Borrowing Assumptions for Stress Tests*	Default	User defined
Shares of marginal debt		
External PPG medium and long-term	62%	62%
Domestic medium and long-term	26%	26%
Domestic short-term	13%	13%
Terms of marginal debt		
External MLT debt		
Avg. nominal interest rate on new borrowing in USD	1.2%	1.2%
Avg. maturity (incl. grace period)	29	29
Avg. grace period	7	7
Domestic MLT debt		
Avg. real interest rate on new borrowing	3.6%	3.6%
Avg. maturity (incl. grace period)	15	15
Avg. grace period	14	14
Domestic short-term debt		
Avg. real interest rate	-1%	-1%

^{*} 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.

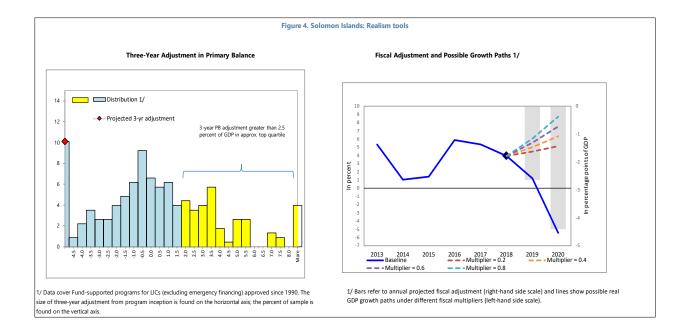
Sources: Country authorities; and staff estimates and projections.

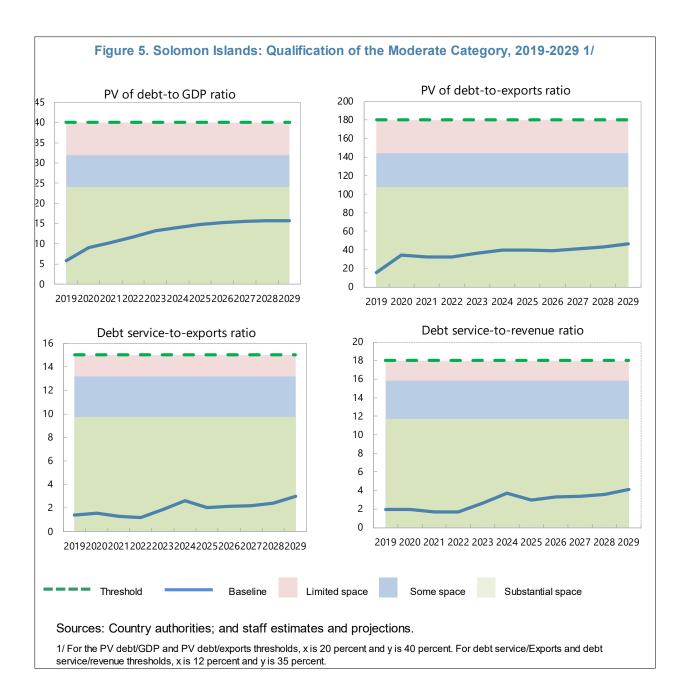
1/ The most extreme stress test is the test that yields the highest ratio in or before 2029. The stress test with a one-off breach is also presented (if any), while the one-off breach is deemed away for mechanical signals. When a stress test with a one-off breach happens to be the most exterme shock even after disregarding the one-off breach, only that stress test (with a one-off breach) would be presented.





- 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.





					Proj	ections 1	1/				
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	20
	PV of debt-to 0										
aseline . Alternative Scenarios	5.8	9.1	10.3	11.8	13.1	13.9	14.7	15.2	15.5	15.7	1
Key variables at their historical averages in 2019-2029 2/	5.8	-0.2	-4.1	-6.4	-7.9	-9.5	-9.5	-9.8	-9.8	-9.7	-1
. Bound Tests											
1. Real GDP growth	5.8	9.7	11.7	13.3	14.9	15.8	16.7	17.2	17.6	17.8	
2. Primary balance	5.8	10.2	12.7	14.3	15.7	16.4	17.2	17.7	18.0	18.1	
3. Exports 4. Other flows 3/	5.8 5.8	21.9 15.8	38.7 23.5	40.0 24.7	41.2 25.7	41.6 26.2	42.0 26.7	42.1 26.9	42.1 27.0	41.3 26.6	
6. One-time 30 percent nominal depreciation	5.8	11.5	23.2	24.8	26.3	27.0	27.8	28.2	28.4	28.5	
6. Combination of B1-B5	5.8	21.8	43.9	45.3	46.5	46.9	47.3	47.4	47.3	46.5	
. Tailored Tests											
1. Combined contingent liabilities	5.8	11.2	12.7	14.1	15.5	16.2	17.0	17.4	17.8	18.0	
2. Natural disaster 3. Commodity price	5.8	14.4 n.a.	16.3	18.1	19.7	20.8 n.a.	21.8 n.a.	22.5	23.0	23.4	
4. 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.	
hreshold	40	40	40	40	40	40	40	40	40	40	
irestiou	40	40	40	40	40	40	40	40	40	40	
	PV of debt-to-ex	ports ra									
aseline	15.7	34.5	32.1	32.1	36.1	39.8	39.8	39.1	41.3	42.9	
. Alternative Scenarios											
1. Key variables at their historical averages in 2019-2029 2/	15.7	-0.7	-12.7	-17.4	-21.7	-27.1	-25.6	-25.3	-26.2	-26.4	-:
D 17.											
. Bound Tests 1. Real GDP growth	15.7	34.5	32.1	32.1	36.1	39.8	39.8	39.1	41.3	42.9	
2. Primary balance	15.7	38.8	39.5	39.0	43.0	47.0	46.6	45.5	47.8	49.5	
3. Exports	15.7	144.4	287.8	262.1	271.2	285.0	273.2	260.6	268.1	270.4	28
4. Other flows 3/	15.7	60.1	72.9	67.3	70.7	74.9	72.4	69.4	71.7	72.6	
6. One-time 30 percent nominal depreciation 6. Combination of B1-B5	15.7 15.7	34.5 84.8	56.9 98.2	53.5 142.8	57.1 147.5	61.1 154.8	59.6 148.2	57.5 141.2	59.8 145.1	61.5 146.6	1
	13.7	04.0	30.2	142.0	147.5	134.0	140.2	141.2	145.1	140.0	
. Tailored Tests 1. Combined contingent liabilities	15.7	42.6	39.3	38.4	42.5	46.4	46.0	44.9	47.2	49.0	
2. Natural disaster	15.7	59.2	55.0	53.5	58.8	64.3	63.9	62.8	66.4	69.4	
3. Commodity price	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
hreshold	180	180	180	180	180	180	180	180	180	180	
	Daht comice to a		-41-								
aseline	Debt service-to-e	1.6	1.3	1.2	1.9	2.7	2.0	2.1	2.2	2.4	
. Alternative Scenarios	1.4	1.0	1.3	1.2	1.9	2.1	2.0	2.1	2.2	2.4	
Key variables at their historical averages in 2019-2029 2/	1.4	1.4	0.7	0.3	0.7	1.2	0.6	0.7	0.7	-0.1	
. Bound Tests											
1. Real GDP growth	1.4	1.6	1.3	1.2	1.9	2.7	2.0	2.1	2.2	2.4	
2. Primary balance 3. Exports	1.4 1.4	1.6 3.5	1.4 5.5	1.3 6.9	2.0 8.9	2.8 11.2	2.2 9.0	2.3 9.1	2.3 9.2	2.7 12.9	2
4. Other flows 3/	1.4	1.6	1.7	1.9	2.5	3.3	2.6	2.7	2.7	3.8	_
6. One-time 30 percent nominal depreciation	1.4	1.6	1.3	1.6	2.3	3.1	2.4	2.5	2.5	2.7	
6. Combination of B1-B5	1.4	2.2	2.8	3.7	4.7	6.0	4.8	4.8	4.9	6.6	
. Tailored Tests											
1. Combined contingent liabilities	1.4	1.6	1.4	1.3	2.0	2.8	2.1	2.2	2.3	2.5	
2. Natural disaster 3. Commodity price	1.4	1.8	1.8	1.6	2.4	3.3	2.6	2.7	2.8	3.0	
4. 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.	
hreshold	15	15	15	15	15	15	15	15	15	15	
	Debt service-to-re	evenue r	atio								
aseline	2.0	1.9	1.7	1.7	2.7	3.7	3.0	3.3	3.3	3.6	
. Alternative Scenarios											
1. Key variables at their historical averages in 2019-2029 2/	2.0	1.7	0.9	0.5	1.0	1.7	0.9	1.1	1.1	-0.1	
. Bound Tests	2.0	2.1	1.9	1.9	3.0	4.2	3.4	3.8	3.8	4.0	
	2.0	1.9	1.9	1.9	2.8	3.9	3.4	3.8	3.8	3.9	
. Real GDP growth 2. Primary balance	2.0	2.5	3.0	4.1	5.2	6.5	5.5	5.9	5.8	8.0	
1. Real GDP growth		2.0	2.2	2.7	3.6	4.6	3.9	4.1	4.1	5.6	
1. Real GDP growth 2. Primary balance 3. Exports 4. Other flows 3/	2.0		2.1	2.9	4.1 5.8	5.4 7.2	4.4 6.1	4.8	4.8	5.1	
1. Real GDP growth 2. Primary balance 3. Exports 4. Other flows 3/ 6. One-time 30 percent nominal depreciation	2.0	2.5	2.4			12	6.7				
1. Real GDP growth 2. Primary balance 3. Exports 4. Other flows 3/ 6. One-time 30 percent nominal depreciation 6. Combination of B1-B5		2.5	3.1	4.6	5.0			6.5	6.4	8.5	
1. Real GDP growth 2. Primary balance 3. Exports 4. Other flows 3/ 6. One-time 30 percent nominal depreciation 6. Combination of B1-B5 1. Tailored Tests	2.0 2.0	2.7									
1. Real GDP growth 2. Primary balance 3. Exports 4. Other flows 3/ 6. One-time 30 percent nominal depreciation 6. Combination of B1-B5	2.0		3.1 1.8 2.1	4.6 1.9 2.1	2.8	3.8	3.1	6.5 3.5 3.8	3.5 3.8	3.7 4.0	
1. Real GDP growth 2. Primary balance 3. Exports 4. Other flows 3/ 6. One-time 30 percent nominal depreciation 6. Combination of B1-B5 Tailored Tests 1. Combined contingent liabilities	2.0 2.0 2.0	1.9	1.8	1.9	2.8	3.8	3.1	3.5	3.5	3.7	
1. Real GDP growth 2. Primary balance 3. Exports 4. Other flows 3/ 6. One-time 30 percent nominal depreciation 6. Combination of B1-B5 1. Callored Tests 1. Combined contingent liabilities 2. Natural disaster	2.0 2.0 2.0 2.0	2.7 1.9 1.9	1.8 2.1	1.9 2.1	2.8 3.1	3.8 4.1	3.1 3.4	3.5 3.8	3.5 3.8	3.7 4.0	
1. Real GDP growth 2. Primary balance 3. Exports 4. Other flows 3/ 6. One-time 30 percent nominal depreciation 6. Combination of B1-B5 Tailored Tests 1. Combined contingent liabilities 2. Natural disaster 3. Commodity price	2.0 2.0 2.0 2.0 n.a.	2.7 1.9 1.9 n.a.	1.8 2.1 n.a.	1.9 2.1 n.a.	2.8 3.1 n.a.	3.8 4.1 n.a.	3.1 3.4 n.a.	3.5 3.8 n.a.	3.5 3.8 n.a.	3.7 4.0 n.a.	

Product Prod						Proj	ections 1/					
No. 124 144 164 162 197 215 231 246 261		2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2
New Artificial Processing New York New		P	of Debt-t	o-GDP Rat	io							
No composition at their instorical awanger in 2019-202927 8.0 5.7 3.3 1.5 0.5 0.2	aseline	8.0	12.4	14.4	16.4	18.2	19.7	21.5	23.1	24.6	26.1	
	A. Alternative Scenarios											
	1. Key variables at their historical averages in 2019-2029 2/	8.0	5.7	3.3	1.5	-0.5	-2.4	-2.9	-3.8	-4.6	-5.2	
Remark Simple S	3. Bound Tests											
	1. Real GDP growth			19.8	24.3		32.5	36.7		44.2		
A Chee from 3 / A Comment on Service A Co	-											
8.0 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.3 1.3 1.3 1.3 1.4 1.4 1.5												
1. 1. 1. 1. 1. 1. 1. 1.												
Tailored Tests 1. Combined coningent labilities 8.0 169 186 204 221 236 253 268 282 283 283 283 283 283 283 283 283 28												
	6. Combination of B1-B5	8.0	13.9	16.1	16.2	18.0	19.5	21.3	22.9	24.4	25.9	
2 Matural disaster 80 233 250 272 293 312 333 352 369 388 360	. Tailored Tests											
3. Commodify price na na na na na na na n	1. Combined contingent liabilities	8.0	16.9	18.6	20.4	22.1	23.6	25.3	26.8	28.2	29.7	
A. Market Financing Na.	2. Natural disaster	8.0	23.3	25.0	27.2	29.3	31.2	33.3	35.2	36.9	38.8	
PV of Debt-to-Revenue Ratio PV of Debt-to-Revenue Ratio Residing Service Incoming and Indicated Based Incoming Incoming Indicated Based Incoming Indicated Based Incoming	3. Commodity price	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
PV of Debt-to-Revenue Ratio 242 38.4 44.8 49.1 54.2 60.4 67.2 73.5 78.8 84.4	4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Second S	ublic debt benchmark	55	55	55	55	55	55	55	55	55	55	
Alternative Scenarios		PV o	of Debt-to-	Revenue R	atio							
New yariables at their historical averages in 2019-2029 2/	aseline	24.2	38.4	44.8	49.1	54.2	60.4	67.2	73.5	78.8	84.4	ç
Real GDP growth	. Alternative Scenarios											
1. Real GDP growth	1. Key variables at their historical averages in 2019-2029 2/	24.2	18.4	10.6	4.6	-1.4	-7.6	-9.4	-12.6	-15.3	-17.6	-
2. Primary balance	3. Bound Tests											
3. Exports 24,2 63,4 106,4 107,6 111,0 117,3 123,7 130,1 134,3 137,9 4. Other flows 3/	1. Real GDP growth	24.2	43.2	59.6	70.7	82.8	96.7	111.2	125.6	137.9	150.7	1
4. Other flows 3/ 6. One-time 30 percent nominal depreciation 24.2 59.3 85.5 87.8 91.8 91.8 104.6 110.9 115.5 119.6 6. One-time 30 percent nominal depreciation 24.2 38.7 39.3 39.1 39.9 41.5 43.8 45.8 47.4 49.4 6. Combination of B1-B5 24.2 43.3 49.9 48.6 53.7 59.9 66.6 72.9 78.2 83.7 2. Tailored Tests 2. Callored Tests 2. Callored Tests 2. Callored Tests 2. Callored Contingent liabilities 24.2 52.4 57.5 61.1 66.0 72.2 78.9 85.4 90.4 95.9 2. Natural disaster 24.2 71.7 77.0 81.1 87.0 95.0 103.3 111.4 117.7 124.5 3. Commodity price 2. Natural disaster 3. Callored Tests 3. Callored Tes	2. Primary balance	24.2	45.8	59.1	62.3	67.1	73.4	80.1	86.6	91.7	97.1	1
1	3. Exports	24.2	63.4	106.4	107.6	111.0	117.3	123.7	130.1	134.3	137.9	1
1	4. Other flows 3/	24.2	59.3	85.5	87.8	91.8	98.1	104.6	110.9	115.5	119.6	1
Califored Tests Califored Tests California Califo	6. One-time 30 percent nominal depreciation	24.2	38.7	39.3	39.1	39.9	41.5	43.8	45.8	47.4	49.4	
11. Combined contingent liabilities 24.2 52.4 57.5 61.1 66.0 72.2 78.9 85.4 90.4 95.9 12. Natural disaster 24.2 71.7 77.0 81.1 87.0 95.0 103.3 111.4 117.7 124.5 13. Commodity price na.	6. Combination of B1-B5	24.2	43.3	49.9	48.6	53.7	59.9	66.6	72.9	78.2	83.7	
2. Natural disaster 242 71,7 77,0 81,1 87,0 95,0 103,3 111,4 117,7 124,5 3. Commodity price n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a	. Tailored Tests											
Na.	1. Combined contingent liabilities	24.2	52.4	57.5	61.1	66.0	72.2	78.9	85.4	90.4	95.9	1
Debt Service-to-Revenue Ratio Saseline 1. Alternative Scenarios 1. Key variables at their historical averages in 2019-2029 2/ 1. Alternative Scenarios 1. Real GDP growth 1. Real GDP growth 1. Real GDP growth 1. Alternative Scenarios 1. Seports 1. Real GDP growth 1. Alternative Scenarios 1. Callernative Scenarios 1. Real GDP growth 1. Alternative Scenarios 1. Callernative Scenarios 1. The scenarios Scenarios 1. The scenarios Scenarios 1. Real GDP growth 1. Alternative Scenarios 1. Alternati	2. Natural disaster	24.2	71.7	77.0	81.1	87.0	95.0	103.3	111.4	117.7	124.5	1
Debt Service-to-Revenue Ratio 3.4 4.0 3.8 4.0 4.7 5.5 5.1 5.6 5.7 6.0	3. Commodity price	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Alternative Scenarios 1. Key variables at their historical averages in 2019-2029 2/ 3.4 3.6 0.2 -0.1 0.3 0.4 -0.4 2.3 2.3 2.1 3.8 Bound Tests 1.1. Real GDP growth 3.4 4.1 4.9 5.9 7.2 8.5 8.3 9.2 9.6 10.2 2.2. Primary balance 3.4 4.0 4.3 5.1 5.8 6.6 6.2 5.7 6.2 6.3 6.7 3. Exports 4. Other flows 3/ 6. One-time 30 percent nominal depreciation 3.4 4.0 4.0 4.1 5.0 6.0 5.3 5.8 5.9 6. Combination of B1-B5 3.4 3.9 3.8 3.9 4.7 5.5 5.1 5.6 6.1 6.2 6.4 3.4 4.0 6.6 4.7 5.2 6.1 5.6 6.1 6.2 6.4 3.4 4.0 10.4 6.0 6.5 7.4 7.0 7.5 7.6 7.9 3. Commodity price 1. Combined contingent liabilities 3.4 4.0 10.4 6.0 6.5 7.4 7.0 7.5 7.6 7.9 3. Commodity price	4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Alternative Scenarios 1. Key variables at their historical averages in 2019-2029 2/ 3.4 3.6 0.2 -0.1 0.3 0.4 -0.4 2.3 2.3 2.1 Bound Tests 1. Real GDP growth 3.4 4.0 5.3 5.8 5.5 6.2 5.7 6.2 6.3 6.7 3. Exports 3.4 4.0 4.0 4.3 5.1 5.8 6.6 6.2 6.6 6.6 8.1 4. Other flows 3/ 6. One-time 30 percent nominal depreciation 3.4 4.0 4.0 4.0 4.0 4.1 5.0 6. One-time 30 percent nominal depreciation 3.4 3.9 3.8 3.9 3.9 3.8 3.9 4.7 5.5 5.1 5.6 5.7 6.0 5.7 6.0 5.7 6.0 5.7 6.0 5.7 6.0 5.7 6.0 5.7 6.0 5.7 6.0 5.7 6.0 5.7 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0		Debt	Service-to	-Revenue	Ratio							
1. Key variables at their historical averages in 2019-2029 2/ 3.4 3.6 0.2 -0.1 0.3 0.4 -0.4 2.3 2.3 2.1 2.1 5.6 Bound Tests 1. Real GDP growth 3.4 4.1 4.9 5.9 7.2 8.5 8.3 9.2 9.6 10.2 2.2 Primary balance 3.4 4.0 5.3 5.8 5.5 6.2 5.7 6.2 6.3 6.7 3.2 Exports 3.4 4.0 4.3 5.1 5.8 6.6 6.2 6.6 6.6 8.1 4.0 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0		3.4	4.0	3.8	4.0	4.7	5.5	5.1	5.6	5.7	6.0	
1. Real GDP growth 3.4 4.1 4.9 5.9 7.2 8.5 8.3 9.2 9.6 10.2 2. Primary balance 3.4 4.0 5.3 5.8 5.5 6.2 5.7 6.2 6.3 6.7 3. Exports 3.4 4.0 4.3 5.1 5.8 6.6 6.2 6.6 6.6 8.1 4. Other flows 3/ 3.4 4.0 4.0 4.1 5.0 6.0 5.3 5.8 5.8 5.9 6.0 6.0 6.3 7.6 6.0 6.0 6.1 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0		3.4	3.6	0.2	-0.1	0.3	0.4	-0.4	2.3	2.3	2.1	
1. Real GDP growth 3.4 4.1 4.9 5.9 7.2 8.5 8.3 9.2 9.6 10.2 2. Primary balance 3.4 4.0 5.3 5.8 5.5 6.2 5.7 6.2 6.3 6.7 3. Exports 3.4 4.0 4.3 5.1 5.8 6.6 6.2 6.6 6.6 8.1 4. Other flows 3/ 6. One-time 30 percent nominal depreciation 3.4 4.0 4.0 4.1 5.0 6.0 5.3 5.8 5.8 5.9 6. Combination of B1-B5 3.4 3.9 3.8 3.9 4.7 5.5 5.1 5.6 5.7 6.0 5.7 6.0 5.1 5.6 5.7 6.0 5.7 6.0 5.1 5.6 5.7 6.0 5.1 5.6 5.7 6.0 5.1 5.6 5.7 6.0 5.1 5.6 5.7 6.0 5.1 5.6 5.7 6.0 5.1 5.0 5.0 5.1 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0												
2. Primary balance 3.4 4.0 5.3 5.8 5.5 6.2 5.7 6.2 6.3 6.7 3. Exports 3.4 4.0 4.3 5.1 5.8 6.6 6.2 6.6 6.6 8.1 4. Other flows 3/ 5.1 5.8 6.6 6.2 6.6 6.3 7.6 6.2 6.6 6.0 6.3 7.6 6.2 6.6 6.0 6.1 6.2 6.6 6.0 6.1 6.2 6.0 6.1 6.2 6.0 6.1 6.2 6.0 6.1 6.2 6.0 6.1 6.2 6.0 6.1 6.2 6.0 6.1 6.2 6.0 6.1 6.2 6.0 6.1 6.2 6.0 6.1 6.2 6.0 6.1 6.2 6.0 6.1 6.2 6.0 6.1 6.2 6.0 6.1 6.2 6.1 6.2 6.1 6.2 6.1 6.2 6.1 6.1 6.1 6.2 6.1 6.1 6.2 6.1 6.1 6.2 6.1 6.1 6.2 6.1 6.1 6.2 6.1 6.1 6.1 6.2 6.1 6.1 6.1 6.2 6.1 6.1 6.2 6.1 6.1 6.2 6.1 6.1 6.2 6.1 6.1 6.2 6.1 6.1 6.		2.4	4.1	4.0	FO	7.2	0 5	0.2	0.2	0.6	10.2	
3.4 4.0 4.3 5.1 5.8 6.6 6.2 6.6 6.6 8.1 4.0 ther flows 3/ 3.4 4.0 4.2 4.7 5.4 6.3 5.8 6.3 6.3 7.6 6.0 che-time 30 percent nominal depreciation 3.4 4.0 4.0 4.1 5.0 6.0 5.3 5.8 5.8 5.9 6.0 6.0 che-time 30 percent nominal depreciation 3.4 3.9 3.8 3.9 4.7 5.5 5.1 5.6 5.7 6.0 che-time 30 percent nominal depreciation 3.4 3.9 3.8 3.9 4.7 5.5 5.1 5.6 5.7 6.0 che-time 30 percent nominal depreciation 3.4 3.9 3.8 3.9 4.7 5.5 5.1 5.6 5.7 6.0 che-time 30 percent nominal depreciation 3.4 3.9 3.8 3.9 4.7 5.5 5.1 5.6 5.7 6.0 che-time 30 percent nominal depreciation 3.4 4.0 6.6 4.7 5.2 6.1 5.6 6.1 6.2 6.4 6.4 6.4 6.2 6.4 6.4 6.4 6.2 6.4 6.4 6.4 6.2 6.4 6.4 6.4 6.0 6.5 7.4 7.0 7.5 7.6 7.9 6.0 6.4 6.4 6.4 6.4 6.4 6.4 6.4 6.4 6.4 6.4	-											
4. Other flows 3/ 6. One-time 30 percent nominal depreciation 3.4 4.0 4.0 4.1 5.0 6.0 5.3 5.8 5.8 5.9 6. Combination of B1-B5 3.4 3.9 3.8 3.9 4.7 5.5 5.1 5.6 5.7 6.0 5.7 6.0 5.7 6.0 5.7 6.0 5.7 6.0 5.7 6.0 5.7 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	-											
6. One-time 30 percent nominal depreciation 3.4 4.0 4.0 4.1 5.0 6.0 5.3 5.8 5.8 5.9 6. Combination of B1-B5 3.4 3.9 3.8 3.9 4.7 5.5 5.1 5.6 5.7 6.0 5.7 6.0 5.1 5.6 5.7 6.0 5.1 5.6 5.7 6.0 5.1 5.0 5.0 5.1 5.0 5.0 5.7 6.0 5.1 5.0 5.0 5.1 5.0 5.0 5.1 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0												
6. Combination of B1-B5 3.4 3.9 3.8 3.9 4.7 5.5 5.1 5.6 5.7 6.0 2. Tailored Tests 1. Combined contingent liabilities 3.4 4.0 6.6 4.7 5.2 6.1 5.6 6.1 6.2 6.4 2. Natural disaster 3.4 4.0 10.4 6.0 6.5 7.4 7.0 7.5 7.6 7.9 3. Commodity price n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a												
Tailored Tests 1. Combined contingent liabilities 3.4 4.0 6.6 4.7 5.2 6.1 5.6 6.1 6.2 6.4 2. Natural disaster 3.4 4.0 10.4 6.0 6.5 7.4 7.0 7.5 7.6 7.9 3. Commodity price n.a.												
1. Combined contingent liabilities 3.4 4.0 6.6 4.7 5.2 6.1 5.6 6.1 6.2 6.4 2. Natural disaster 3.4 4.0 10.4 6.0 6.5 7.4 7.0 7.5 7.6 7.9 3. Commodity price n.a.						-						
2. Natural disaster 3.4 4.0 10.4 6.0 6.5 7.4 7.0 7.5 7.6 7.9 3. Commodity price n.a.		2 A	40	66	47	E 2	6.1	E 6	6.1	62	6.1	
3. Commodity price n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a												
••												