REPUBLIC OF THE MARSHALL ISLANDS

STAFF REPORT FOR THE 2016 ARTICLE IV CONSULTATION—DEBT SUSTAINABILITY ANALYSIS

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Approved By
Ranil Salgado and Andrea Richter Hume (IMF), and Satu Kahkonen (IDA)

Prepared by staff of the International Monetary Fund and the International Development Association.

The 2016 Debt Sustainability Analysis (DSA) assesses that the Republic of the Marshall Islands (RMI) remains at high risk of debt distress. Currently, the ratios of the present value (PV) of external public and publicly-guaranteed (PPG) debt to GDP and exports are above their respective policy-dependent indicative thresholds. Moreover, the PV of the external debt-to-GDP ratio is expected to remain above its indicative threshold throughout the entire projection period and, for most indicators of external debt, indicative thresholds would be breached under stress test scenarios. Although the RMI does not currently face any debt servicing risk due to concessionality of debt obligations and access to a stable flow of funds from Compact grants until FY2023, risks from contingent liabilities and lack of fiscal buffers call for a fiscal reform strategy. Thus, the government needs to adhere to its existing consolidation plans to generate sufficient fiscal surpluses by FY2023 to shore up the Compact Trust Fund, while safeguarding social spending and economic growth.

BACKGROUND

1. **The RMI's PPG debt is almost entirely external.** According to the limited data available, the domestic component—held by domestic banks—is only 6 percent of the total. Private sector external debt is also estimated to be small, representing less than 2 percent of GDP.

2. **PPG external debt has been on a downward trajectory since the early 2000s.** It declined from 73.7 percent of GDP in FY2002 to 49.1 percent of GDP at end FY2015. About two-thirds is central government debt contracted with the Asian Development Bank (AsDB) on concessional terms, while the remainder is state-owned enterprise (SOE) debt guaranteed by the government.

3. **The analysis is based on the standard DSA framework for low-income countries (LICs).** The framework assesses the evolution of debt against the respective policy-dependent indicative thresholds to ascertain debt sustainability.[1] RMI's policies and institutions, as measured by the CPIA, averaged 2.7 over the past 3 years. Hence the country is classified as a "weak" performer and is assessed against relatively lower debt thresholds.

UNDERLYING ASSUMPTIONS

4. **The economy is estimated to have returned to a positive growth in FY2015, led by the fishery sector, and is expected to expand further in FY2016.** Following a contraction in FY2014, real GDP growth was estimated at 0.4 percent in FY2015 and is expected to rise to 1.4 percent in FY2016, as the effects of the drought earlier this year are offset by the resumption of Compact-funded infrastructure spending. The fiscal balance is estimated to have recorded a surplus of 3 percent of GDP in FY2014–15, due to record-high fishing license fees. It is projected to decline to a smaller surplus in FY2016 and, without reforms, to a deficit of 2 percent of GDP over the medium term due to the steady decline in Compact grants until FY2023. Potential GDP growth is projected to be 1-1.5 percent over the medium term, absent structural reforms. Box 1 summarizes the medium-term macroeconomic framework underlying this DSA update, which is also consistent with the outlook for the Compact Trust Fund (CTF) summarized in Box 2.

EXTERNAL DSA

5. **Under the baseline scenario, RMI's external PPG debt trajectory remains above the indicative threshold for a protracted period of time.** The present value (PV) of external PPG debt is estimated at 40.0 percent of GDP in FY2015, 10 percentage points above the indicative threshold of 30 percent and is not anticipated to fall below that limit over the projection period. Debt accumulation is expected to remain positive at least until FY2036, reflecting government deficit

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[1] The low-income country debt sustainability framework recognizes that better policies and institutions allow countries to manage higher levels of debt, and thus the threshold levels for debt indicators are policy-dependent. In particular, the quality of a country's policies and institutions is measured by the World Bank's Country Policy and Institutional Assessment (CPIA) index and classified into three categories: strong, medium, and weak. For the analysis, a 5 percent discount rate is assumed for present value calculations.

financing. The grant element of new borrowing is expected to increase after FY2018, as the share of concessional loans from multilateral partners in the financing mix is projected to rise. The PV of external PPG debt-to-export ratio is currently above the indicative threshold of 100 percent, but is projected to fall below it in FY2017, thanks to the projected export expansion. The PV of external PPG debt-to-revenue ratio is currently below the indicative threshold of 200 percent, and expected to remain below it during the projection period. As most of external PPG debt is on concessional terms, the debt service to export and revenue ratios are expected to remain below the indicative thresholds over the long-term horizon.

6. Stress tests confirm the vulnerability of the debt position relative to GDP, exports, and revenues. In the most extreme shock scenario—with export value growth in FY2017–18 one standard deviation below the historical average—the PV of the debt-to-export ratio would remain above its relevant threshold at the end of the projection period. The debt service-to-exports ratio would also remain above its indicative threshold at least until FY2036. These highlight the sensitivity of the external debt position to exports, including in fishing, which historically had high volatility. Under a more benign scenario whereby key macroeconomic variables are assumed at their historical averages—characterized by positive primary balances—the PV of the debt-to-GDP, and debt-to-exports would fall below their indicative thresholds in FY2016.[2]

PUBLIC DSA

7. Total PPG debt follows very closely the dynamics of PPG external debt. The PV of PPG debt-to-GDP and to revenue ratios is projected to decline very slowly over the projection period. The debt dynamics is particularly sensitive to growth shocks. Under the most extreme shock, the PV of debt-to-GDP and debt-to-revenue would remain on an upward trend at least until FY2036. Under a shock to the primary balance, the debt service-to-revenue ratio would also keep growing throughout the projection period.

THE AUTHORITIES VIEWS

8. The authorities agreed with the DSA findings, noting that the current risk of debt distress is high. They saw the need for fiscal adjustment and improvements in public financial management. They emphasized that a Decrement Management Plan (DMP) was developed to implement a fiscal adjustment in the face of declining Compact grants. They also noted that the Public Financial Management Reform Roadmap (PFMRR) was adopted in August 2014. The Ministry of Finance is leading the effort in implementing its recommendations and targeted activities, including financial accountability, transparency and budget oversight, and aid coordination.

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[2] Holding the set of key variables related to debt dynamics at ten-year averages does not appear to provide a relevant comparator to the baseline. In particular, the scenario in which variables are at their historical levels is regarded as too benign due to historically smaller current account deficits that were financed in the past by large one-off FDI.

However, these efforts continue to require consistent attention and action to realize the full benefit of the Reform Roadmap.

CONCLUSIONS

9. The standard DSA framework for LICs suggests that the RMI is at high risk of debt distress. The baseline scenario indicates that the PV of the external debt-to-GDP ratio would breach the indicative threshold throughout the entire projection period. Furthermore, stress tests suggest that RMI's external PPG debt trajectory could remain above relevant thresholds for an even more protracted period of time. RMI's vulnerability to debt distress is mitigated by a number of factors: most debt is on concessional terms and from development partners; the decline in external support from the Compact will be gradual, sheltering the country from the risk of a sudden stop in foreign financing; and the government is building up the CTF that will provide a stable source of funding after FY2023. On the other hand, vulnerabilities are exacerbated by the lack of fiscal buffers, uncertainty about prospective SOE losses, contingent liabilities from climatic events, the social security system, and uncertainty on prospective income returns from the CTF. Thus, the government needs to adhere to its existing consolidation plans to generate sufficient fiscal surpluses by FY2023 to shore up the Compact Trust Fund, while safeguarding social spending and economic growth.

Box 1. Marshall Islands: Macroeconomic Assumptions

The key assumptions of the 2016 DSA are consistent with the macroeconomic framework outlined in the 2016 Article IV Report. Relative to the previous DSA, short-term indicators have improved somewhat mainly due to the upward revision of fiscal revenues, notably from fishing license fees, but the long-term dynamics remain broadly unchanged.

GDP growth is projected to rise from 0.4 percent in FY2015 to 1.3 percent over the medium term. The medium-term projections reflect the decline in Compact grants and limited private sector expansion.

The **GDP deflator** is expected to remain about 1 percentage point below CPI inflation growth, at around 1 percent.

A **fiscal deficit** of around 1–3 percent of GDP is projected in FY2020–36. The wage bill is assumed to remain constant as a percent of GDP beyond FY2020, while subsidies to SOEs are assumed to decline very moderately in real terms. On the revenue side, Compact grants in nominal terms are projected to decrease according to schedule, while grants from other donors are expected to remain stable at an annual average of about 12 percent of GDP. The tax revenues-to-GDP ratio is assumed to remain broadly unchanged at around 15 percent of GDP, as the baseline scenario does not incorporate any tax reforms. Fishing license fees are assumed to increase moderately. Beyond FY2023, expenditures are expected to follow trends in revenues and grants.

External financing: In the absence of access to the international capital market and a very limited domestic market, the financing gap is assumed to be financed by a combination of bilateral loans from development partners and multilateral concessional lending. The annual interest rate on bilateral loans is assumed at 3 percent, consistent with the rate currently charged to public entities by bilateral development partners. In the medium term, it is assumed that the RMI will also be eligible for IDA-like concessional lending.

The **Compact Trust Fund** (CTF) outlook is summarized in Box 2.

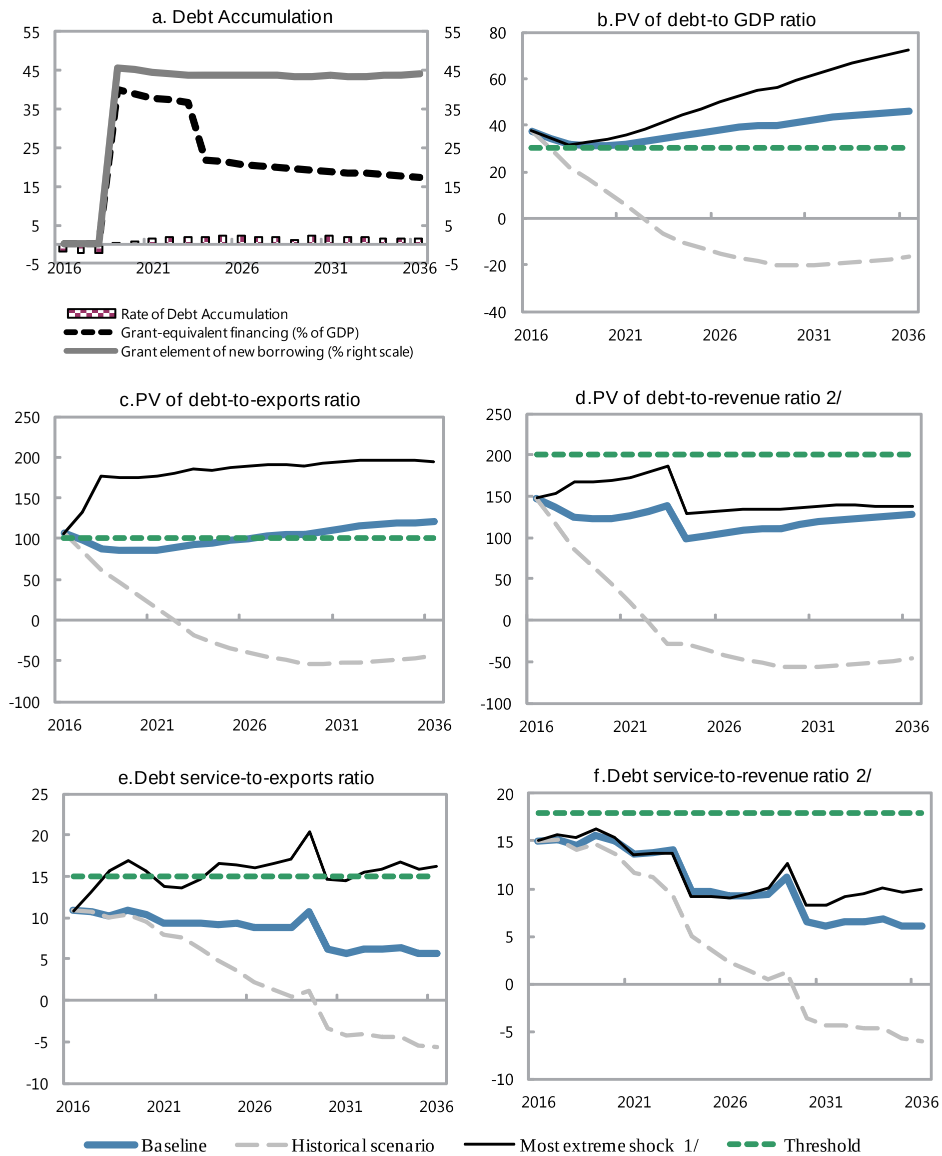
The **current account deficit** (including official transfers) is expected to gradually deteriorate from 1.6 percent of GDP in FY2015 to around 5 percent of GDP by FY2023 and remain at that level thereafter. The deficit is assumed to be financed by a combination of bilateral loans from development partners and multilateral concessional lending.

Box 2. Brief Overview of the Compact Trust Fund Under the Baseline Scenario

The Compact Trust Fund (CTF) was established in FY2004 to contribute to the long-term budgetary self-reliance of the RMI after most of the recurrent Compact sector grants expire in FY2023. The CTF is administered by an independent committee formed by representatives from the RMI, United States, and Taiwan Province of China, and is managed by a professional investment advisor. The RMI's contributions to the CTF have not been steady over the years and depend on the country's fiscal position. Contributions have been mainly provided by the United States, followed by Taiwan Province of China. From FY2024 onwards, income returns from the CTF can be withdrawn to finance budget needs, under some limitations.

Under the baseline scenario, the CTF is assumed to yield an average annual nominal return of 5 percent, in line with the historical track record. Under this assumption, long-term self-sufficiency will not be secured because the real value of the CTF will decline over time, even though income flows in the years immediately after FY2023 are expected to be sufficient to cover the anticipated reduction in grants. Compact-related grants are expected to be reduced by US$27 million in FY2024, while CTF's investment earnings are projected at US$36 million. As the gap between investment returns and grant reduction is expected to be too small to compensate for inflation, the real value of the fund is projected to start declining in FY2024. These projections are sensitive to the assumption on CTF annual investment returns, which have been quite volatile in the past.

Figure 1. Marshall Islands: Indicators of Public Guaranteed External Debt Under Alternative Scenarios FY2016–36 1/

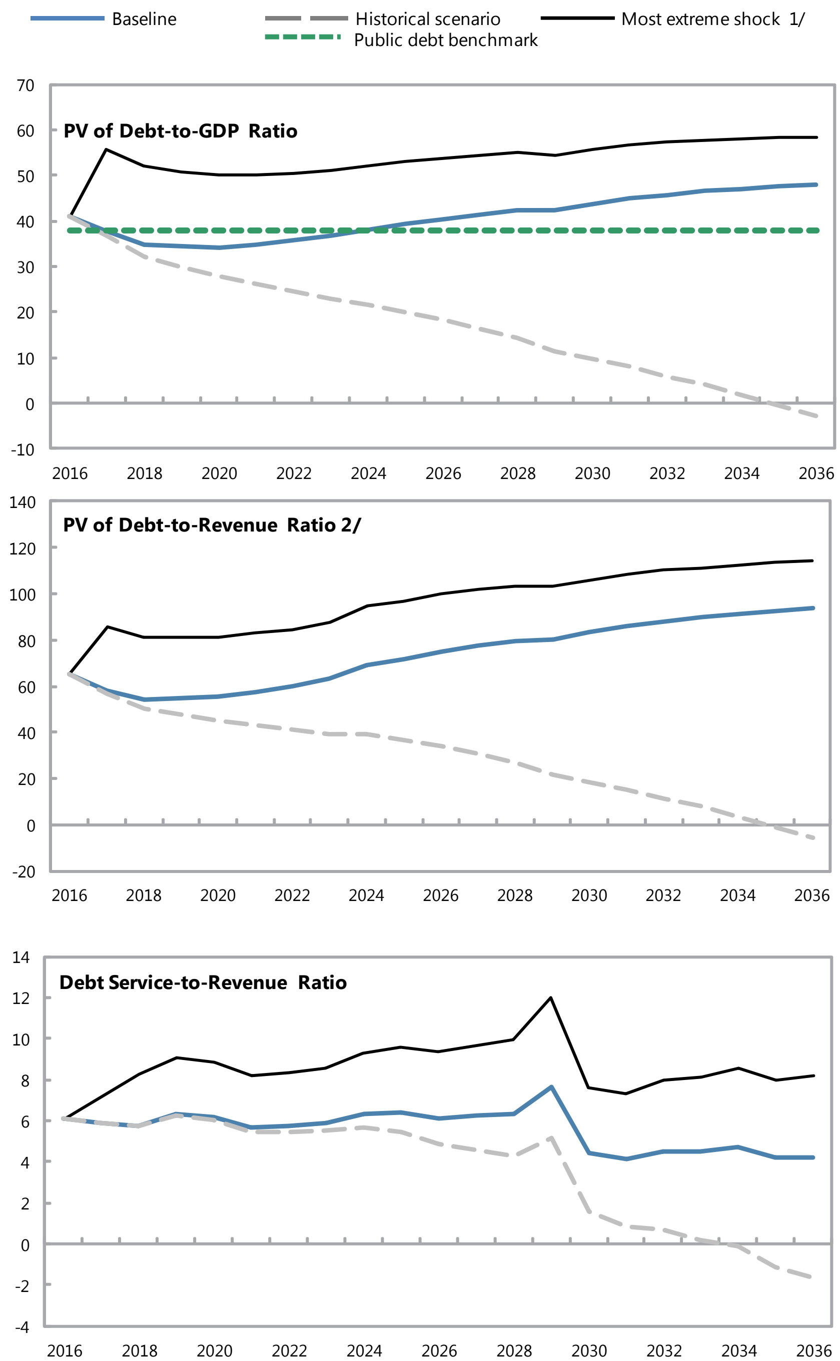


Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio on or before 2026. In figure b. it corresponds to a Terms shock; in c. to a Exports shock; in d. to a Exports shock; in e. to a Exports shock and in figure f. to a Growth shock

2/ Revenues are defined exclusive of grants. Revenues increase in FY2024 due to annual distributions from the Compact Trust Fund (CTF) starting that year.

Figure 2. Marshall Islands: Indicators of Public Debt Under Alternative Scenarios, FY2016–36



Sources: Country authorities; and staff estimates and projections.
1/ The most extreme stress test is the test that yields the highest ratio on or before 2026.
2/ Revenues are defined inclusive of grants.

Table 1. Marshall Islands: External Debt Sustainability Framework, Baseline Scenario, FY2013–36 1/
(In percent of GDP, unless otherwise indicated)

	Actual			Historical 6/	Standard 6/	Projections									
				Average	Deviation							2016-2021			2022-2036
	2013	2014	2015			2016	2017	2018	2019	2020	2021	Average	2026	2036	Average
External debt (nominal) 1/	**53.7**	**53.1**	**51.1**			**47.6**	**43.6**	**39.7**	**39.3**	**39.3**	**40.0**		**47.2**	**63.6**	
of which: public and publicly guaranteed (PPG)	51.8	51.1	49.1			45.6	41.7	37.8	37.5	37.5	38.3		45.6	62.4	
Change in external debt	-0.6	-0.6	-2.0			-3.6	-3.9	-3.9	-0.4	-0.1	0.7		1.4	1.5	
Identified net debt-creating flows	5.8	3.4	2.3			5.5	7.2	7.4	7.7	8.6	9.5		6.6	4.9	
Non-interest current account deficit	**8.5**	**3.1**	**1.9**	**4.6**	**8.4**	**6.5**	**8.4**	**8.5**	**8.7**	**9.5**	**10.3**		**7.2**	**5.2**	7.2
Deficit in balance of goods and services	60.2	58.0	66.4			68.5	70.4	69.7	69.2	68.8	68.5		64.1	59.4	
Exports	43.6	39.6	35.7			35.2	35.5	35.9	36.3	36.5	36.8		37.8	37.9	
Imports	103.8	97.7	102.2			103.6	105.9	105.5	105.5	105.3	105.2		101.9	97.3	
Net current transfers (negative = inflow)	-31.3	-29.4	-31.5	-35.5	4.9	-32.0	-32.4	-30.9	-30.5	-29.5	-28.6		-17.4	-15.4	-18.0
of which: official	-30.1	-28.0	-30.4			-30.2	-30.7	-29.3	-28.9	-28.1	-27.3		-14.9	-12.9	
Other current account flows (negative = net inflow)	-20.3	-25.6	-33.0			-30.0	-29.6	-30.2	-30.1	-29.8	-29.6		-39.5	-38.8	
Net FDI (negative = inflow)	**-2.4**	**-2.0**	**-1.5**	**-5.3**	**6.9**	**-1.5**	**-1.4**	**-1.4**	**-1.4**	**-1.3**	**-1.3**		**-1.3**	**-1.3**	-1.3
Endogenous debt dynamics 2/	**-0.3**	**2.3**	**1.9**			**0.5**	**0.2**	**0.3**	**0.4**	**0.4**	**0.5**		**0.7**	**0.9**	
Contribution from nominal interest rate	1.4	1.3	1.3			1.2	1.1	1.0	1.0	1.0	1.0		1.2	1.7	
Contribution from real GDP growth	-1.1	0.5	-0.2			-0.7	-0.8	-0.7	-0.6	-0.6	-0.5		-0.6	-0.8	
Contribution from price and exchange rate changes	-0.5	0.5	0.8			...	...	...	...	...	...		...	...	
Residual (3-4) 3/	**-6.4**	**-4.0**	**-4.3**			**-9.0**	**-11.1**	**-11.3**	**-8.1**	**-8.7**	**-8.8**		**-5.2**	**-3.4**	
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	
PV of external debt 4/	...	...	42.0			39.4	36.4	33.3	33.0	32.8	33.4		39.3	47.0	
In percent of exports	...	...	117.4			112.0	102.7	92.9	90.9	89.9	91.0		104.2	123.9	
PV of PPG external debt	**...**	**...**	**40.0**			**37.4**	**34.5**	**31.5**	**31.1**	**31.1**	**31.7**		**37.8**	**45.8**	
In percent of exports	**...**	**...**	**111.8**			**106.4**	**97.2**	**87.7**	**85.9**	**85.1**	**86.3**		**100.2**	**120.8**	
In percent of government revenues (excluding grants)	**...**	**...**	**151.6**			**147.9**	**137.2**	**123.8**	**122.3**	**123.2**	**126.8**		**105.2**	**127.9**	
Debt service-to-exports ratio (in percent)	**7.6**	**9.1**	**10.9**			**10.8**	**10.7**	**10.3**	**11.0**	**10.4**	**9.3**		**8.8**	**5.7**	
PPG debt service-to-exports ratio (in percent)	**7.6**	**9.1**	**10.9**			**10.8**	**10.7**	**10.3**	**11.0**	**10.4**	**9.3**		**8.8**	**5.7**	
PPG debt service-to-revenue ratio (in percent)	**15.5**	**15.5**	**14.8**			**15.1**	**15.2**	**14.5**	**15.6**	**15.0**	**13.6**		**9.2**	**6.0**	
Total gross financing need (Millions of U.S. dollars)	17.9	8.8	8.0			16.5	20.7	21.5	23.1	25.2	26.9		22.5	19.0	
Non-interest current account deficit that stabilizes debt ratio	9.1	3.7	4.0			10.0	12.3	12.5	9.0	9.5	9.5		5.8	3.8	
Key macroeconomic assumptions															
Real GDP growth (in percent)	2.1	-0.9	0.4	1.5	2.6	1.4	1.7	1.8	1.6	1.6	1.3	1.6	1.3	1.3	1.3
GDP deflator in US dollar terms (change in percent)	1.0	-0.9	-1.5	1.5	1.8	0.5	0.8	1.3	1.3	1.5	1.5	1.1	1.1	1.1	1.1
Effective interest rate (percent) 5/	2.6	2.4	2.4	2.9	0.4	2.3	2.3	2.4	2.7	2.7	2.7	2.5	2.8	2.8	2.8
Growth of exports of G&S (US dollar terms, in percent)	-0.6	-10.8	-10.8	8.2	23.4	0.2	3.4	4.3	4.0	3.8	3.5	3.2	2.7	2.5	2.6
Growth of imports of G&S (US dollar terms, in percent)	11.6	-7.7	3.4	4.1	9.0	3.3	4.7	2.7	2.9	2.9	2.8	3.2	1.6	2.0	1.9
Grant element of new public sector borrowing (in percent)	...	...	...	...	...	...	...	...	45.5	45.1	44.6	45.1	43.8	44.0	43.7
Government revenues (excluding grants, in percent of GDP)	21.4	23.4	26.4			25.3	25.1	25.4	25.5	25.2	25.0		36.0	35.8	34.4
Aid flows (in Millions of US dollars) 7/	66.2	53.9	56.5			70.0	76.6	76.6	84.2	84.6	85.5		54.8	57.9	
of which: Grants	61.3	53.9	56.5			70.0	76.6	76.6	76.5	76.5	76.4		43.7	47.4	
of which: Concessional loans	4.9	0.0	0.0			0.0	0.0	0.0	7.6	8.2	9.1		11.1	10.4	
Grant-equivalent financing (in percent of GDP) 8/	...	...	...			...	...	...	39.9	38.8	37.8		20.5	17.2	21.7
Grant-equivalent financing (in percent of external financing) 8/	...	...	...			...	...	...	93.1	92.7	92.2		85.9	87.3	86.8
Memorandum items:															
Nominal GDP (Millions of US dollars)	190.2	186.7	184.6			188.0	192.8	198.6	204.5	210.8	216.7		244.3	310.5	
Nominal dollar GDP growth	3.2	-1.8	-1.1			1.8	2.5	3.0	3.0	3.1	2.8	2.7	2.4	2.4	2.4
PV of PPG external debt (in Millions of US dollars)			73.8			70.3	66.5	62.5	63.7	65.5	68.8		92.4	142.2	
(PVt-PVt-1)/GDPt-1 (in percent)						-1.9	-2.0	-2.1	0.6	0.9	1.5	-0.5	2.1	1.4	1.9
Gross workers' remittances (Millions of US dollars)	7.4	7.7	8.3			8.4	8.7	8.9	9.2	9.5	9.7		11.0	14.0	
PV of PPG external debt (in percent of GDP + remittances)	...	...	38.3			35.8	33.0	30.1	29.8	29.8	30.4		36.2	43.8	
PV of PPG external debt (in percent of exports + remittances)	...	...	99.3			94.3	86.3	77.9	76.4	75.8	76.9		89.5	108.0	
Debt service of PPG external debt (in percent of exports + remittance	...	...	9.7			9.6	9.5	9.1	9.8	9.2	8.3		7.8	5.1	

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)]/(1+g+ρ+gρ) times previous period debt ratio, with r = nominal interest rate; g = real GDP growth rate, and ρ = growth rate of GDP deflator in U.S. dollar terms.

3/ Includes exceptional financing (i.e., changes in arrears and debt relief); changes in gross foreign assets; and valuation adjustments. For projections also includes contribution from price and exchange rate changes. This line item also reflects projected capital transfers for investment projects.

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

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

6/ Historical averages and standard deviations are generally derived over the past 10 years, subject to data availability.

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

8/ 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).

Table 2. Marshall Islands: Sensitivity Analysis for Key Indicators of PPG External Debt, FY2016–36 (In percent)

	Projections							
	2016	2017	2018	2019	2020	2021	**2026**	2036
PV of debt-to GDP ratio								
Baseline	37	34	31	31	31	32	**38**	46
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	37	30	22	17	11	6	**-15**	-17
A2. New public sector loans on less favorable terms in 2016-2036 2	37	34	31	32	34	36	**50**	72
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	37	35	33	33	33	34	**40**	49
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	37	38	43	42	42	43	**48**	49
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	37	35	32	32	32	33	**39**	47
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	37	37	36	36	36	37	**42**	47
B5. Combination of B1-B4 using one-half standard deviation shocks	37	36	36	36	36	37	**42**	49
PV of debt-to-exports ratio								
Baseline	106	97	88	86	85	86	**100**	121
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	106	84	61	46	30	15	**-40**	-44
A2. New public sector loans on less favorable terms in 2016-2036 2	106	97	88	90	93	98	**132**	190
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	106	97	88	86	85	86	**100**	121
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	106	132	177	175	174	176	**189**	195
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	106	97	88	86	85	86	**100**	121
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	106	106	102	100	99	101	**112**	125
B5. Combination of B1-B4 using one-half standard deviation shocks	106	108	112	110	109	111	**125**	143
PV of debt-to-revenue ratio								
Baseline	148	137	124	122	123	127	**105**	128
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	148	118	86	65	44	22	**-42**	-47
A2. New public sector loans on less favorable terms in 2016-2036 2	148	137	124	128	134	143	**139**	202
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	148	141	131	130	131	134	**111**	135
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	148	153	167	166	168	173	**133**	138
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	148	139	127	126	127	130	**108**	131
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	148	149	143	142	144	148	**117**	132
B5. Combination of B1-B4 using one-half standard deviation shocks	148	144	143	141	143	147	**118**	136

Table 2. Marshall Islands: Sensitivity Analysis for Key Indicators of PPG External Debt, FY2016–36 (In percent) (concluded)

	Projections							
	2016	2017	2018	2019	2020	2021	**2026**	2036
Debt service-to-exports ratio								
Baseline	11	11	10	11	10	9	**9**	6
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	11	11	10	10	9	8	**2**	-6
A2. New public sector loans on less favorable terms in 2016-2036 2/	11	11	10	11	10	9	**10**	15
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	11	11	10	11	10	9	**8**	9
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	11	13	16	17	16	14	**16**	16
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	11	11	10	11	10	9	**8**	9
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	11	11	10	11	10	9	**9**	10
B5. Combination of B1-B4 using one-half standard deviation shocks	11	12	12	13	12	10	**10**	11
Debt service-to-revenue ratio								
Baseline	15	15	14	16	15	14	**9**	6
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	15	15	14	15	14	12	**2**	-6
A2. New public sector loans on less favorable terms in 2016-2036 2/	15	15	14	15	15	14	**11**	16
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	15	16	15	16	15	14	**9**	10
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	15	15	15	16	15	14	**11**	11
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	15	15	15	16	15	13	**9**	10
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	15	15	15	16	15	13	**10**	10
B5. Combination of B1-B4 using one-half standard deviation shocks	15	15	15	16	15	14	**10**	10
Memorandum item:								
Grant element assumed on residual financing (i.e., financing required above baseline) 5/	40	40	40	40	40	40	**40**	40

Sources: Country authorities; and staff estimates and projections.

1/ Variables include real GDP growth, growth of GDP deflator (in U.S. dollar terms), non-interest current account in percent of GDP, and non-debt creating flows.
2/ Assumes that the interest rate on new borrowing is by 2 percentage points higher than in the baseline., while grace and maturity periods are the same as in the baseline.
3/ Exports values are assumed to remain permanently at the lower level, but the current account as a share of GDP is assumed to return to its baseline level after the shock (implicitly assuming an offsetting adjustment in import levels).
4/ Includes official and private transfers and FDI.
5/ Applies to all stress scenarios except for A2 (less favorable financing) in which the terms on all new financing are as specified in footnote 2.

Table 3. Marshall Islands: Public Sector Debt Sustainability Framework, Baseline Scenario, FY2013–36
(In percent of GDP, unless otherwise indicated)

	Actual			Average 5/	Standard Deviation 5/	Estimate	Projections								
	2013	2014	2015			2016	2017	2018	2019	2020	2021	2016-21 Average	2026	2036	2022-36 Average
Public sector debt 1/	55.2	54.6	52.6			49.0	45.1	41.1	40.7	40.6	41.3		48.3	64.5	
of which: foreign-currency denominated	55.2	54.6	52.6			49.0	45.1	41.1	40.7	40.6	41.3		48.3	64.5	
Change in public sector debt	0.8	-0.6	-2.0			-3.6	-4.0	-4.0	-0.4	-0.1	0.7		1.4	1.4	
Identified debt-creating flows	-1.4	-2.2	-2.1			-2.3	-1.5	-1.0	-0.6	-0.3	0.1		1.2	1.5	
Primary deficit	-1.1	-4.5	-4.0	-3.4	1.7	-2.5	-1.3	-0.7	-0.5	-0.1	0.2	-0.8	1.1	1.3	1.1
Revenue and grants	53.7	52.2	57.0			62.5	64.9	64.0	62.9	61.5	60.3		53.8	51.1	
of which: grants	32.2	28.8	30.6			37.2	39.8	38.6	37.4	36.3	35.3		17.9	15.3	
Primary (noninterest) expenditure	52.6	47.7	52.9			60.0	63.6	63.3	62.4	61.4	60.5		54.9	52.4	
Automatic debt dynamics	-0.3	2.3	1.9			0.2	-0.2	-0.3	-0.2	-0.2	-0.1		0.1	0.2	
Contribution from interest rate/growth differential	-0.3	2.3	1.9			0.2	-0.2	-0.3	-0.2	-0.2	-0.1		0.1	0.2	
of which: contribution from average real interest rate	0.8	1.8	2.1			0.9	0.7	0.5	0.5	0.4	0.5		0.7	1.0	
of which: contribution from real GDP growth	-1.1	0.5	-0.2			-0.7	-0.8	-0.8	-0.6	-0.6	-0.5		-0.6	-0.8	
Contribution from real exchange rate depreciation	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		...	...	
Other identified debt-creating flows	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Privatization receipts (negative)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Recognition of implicit or contingent liabilities	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Debt relief (HIPC and other)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Other (specify, e.g. bank recapitalization)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Residual, including asset changes	2.2	1.6	0.1			-1.3	-2.5	-3.0	0.2	0.2	0.6		0.1	-0.1	
Other Sustainability Indicators															
PV of public sector debt	...	...	43.5			40.9	37.9	34.7	34.3	34.2	34.7		40.5	47.9	
of which: foreign-currency denominated	...	...	43.5			40.9	37.9	34.7	34.3	34.2	34.7		40.5	47.9	
of which: external	...	...	40.0			37.4	34.5	31.5	31.1	31.1	31.7		37.8	45.8	
PV of contingent liabilities (not included in public sector debt)	...	...	...			...	...	...	...	...	...		...	...	
Gross financing need 2/	4.0	2.6	3.4			4.7	5.9	6.3	6.7	6.7	6.6		7.1	5.5	
PV of public sector debt-to-revenue and grants ratio (in percent)	...	...	76.4			65.4	58.4	54.3	54.6	55.6	57.6		75.2	93.8	
PV of public sector debt-to-revenue ratio (in percent)	...	...	165.0			161.6	150.7	136.6	134.8	135.4	138.7		112.6	133.8	
of which: external 3/	...	...	151.6			147.9	137.2	123.8	122.3	123.2	126.8		105.2	127.9	
Debt service-to-revenue and grants ratio (in percent) 4/	6.2	6.9	6.8			6.1	5.9	5.8	6.3	6.2	5.7		6.1	4.2	
Debt service-to-revenue ratio (in percent) 4/	15.5	15.5	14.8			15.1	15.2	14.5	15.6	15.0	13.6		9.2	6.0	
Primary deficit that stabilizes the debt-to-GDP ratio	-1.9	-3.9	-2.0			1.1	2.7	3.3	-0.1	0.0	-0.5		-0.3	-0.1	
Key macroeconomic and fiscal assumptions															
Real GDP growth (in percent)	2.1	-0.9	0.4	1.5	2.6	1.4	1.7	1.8	1.6	1.6	1.3	1.6	1.3	1.3	1.3
Average nominal interest rate on forex debt (in percent)	2.6	2.4	2.3	2.9	0.5	2.3	2.2	2.4	2.6	2.6	2.6	2.4	2.7	2.8	2.7
Average real interest rate on domestic debt (in percent)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Real exchange rate depreciation (in percent, + indicates depreciation)	0.0	0.0	0.0	0.0	0.0	0.0	...	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	1.0	-0.9	-1.5	1.5	1.8	0.5	0.8	1.3	1.3	1.5	1.5	1.1	1.1	1.1	1.1
Growth of real primary spending (deflated by GDP deflator, in percent)	5.8	-10.0	11.4	0.7	5.4	14.9	7.8	1.3	0.1	-0.1	-0.1	4.0	0.2	0.9	0.3
Grant element of new external borrowing (in percent)	...	...	...	...	...	...	...	...	45.5	45.1	44.6	45.1	43.8	44.0	...

Sources: Country authorities; and staff estimates and projections.

1/ [Indicate coverage of public sector, e.g., general government or nonfinancial public sector. Also whether net or gross debt is used.]

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

3/ Revenues excluding grants.

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

5/ Historical averages and standard deviations are generally derived over the past 10 years, subject to data availability.

Table 4. Marshall Islands: Sensitivity Analysis for Key Indicators of Public Debt FY2016–36

	Projections							
	2016	2017	2018	2019	2020	2021	2026	2036
PV of Debt-to-GDP Ratio								
Baseline	41	38	35	34	34	35	40	48
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	41	37	32	30	28	26	18	-3
A2. Primary balance is unchanged from 2016	41	37	33	31	30	29	24	8
A3. Permanently lower GDP growth 1/	41	38	35	35	36	37	49	81
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2017-2018	41	39	38	39	39	41	53	74
B2. Primary balance is at historical average minus one standard deviations in 2017-2018	41	38	34	33	33	34	40	47
B3. Combination of B1-B2 using one half standard deviation shocks	41	38	34	34	34	35	44	59
B4. One-time 30 percent real depreciation in 2017	41	56	52	51	50	50	54	58
B5. 10 percent of GDP increase in other debt-creating flows in 2017	41	44	41	40	40	41	47	53
PV of Debt-to-Revenue Ratio 2/								
Baseline	65	58	54	55	56	58	75	94
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	65	57	50	47	45	43	34	-6
A2. Primary balance is unchanged from 2016	65	57	51	50	48	47	44	16
A3. Permanently lower GDP growth 1/	65	59	55	56	57	60	89	153
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2017-2018	65	60	58	59	62	65	96	142
B2. Primary balance is at historical average minus one standard deviations in 2017-2018	65	58	53	53	54	56	74	92
B3. Combination of B1-B2 using one half standard deviation shocks	65	58	52	53	55	58	81	115
B4. One-time 30 percent real depreciation in 2017	65	86	81	81	81	83	100	114
B5. 10 percent of GDP increase in other debt-creating flows in 2017	65	67	64	64	65	68	87	105
Debt Service-to-Revenue Ratio 2/								
Baseline	6	6	6	6	6	6	6	4
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	6	6	6	6	6	5	5	-2
A2. Primary balance is unchanged from 2016	6	6	6	6	6	6	5	0
A3. Permanently lower GDP growth 1/	6	6	6	6	6	6	7	7
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2017-2018	6	6	6	7	6	6	7	7
B2. Primary balance is at historical average minus one standard deviations in 2017-2018	6	6	6	6	6	6	6	4
B3. Combination of B1-B2 using one half standard deviation shocks	6	6	6	6	6	6	6	5
B4. One-time 30 percent real depreciation in 2017	6	7	8	9	9	8	9	8
B5. 10 percent of GDP increase in other debt-creating flows in 2017	6	6	6	7	6	6	7	5

Sources: Country authorities; and staff estimates and projections.

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

2/ Revenues are defined inclusive of grants.