INTERNATIONAL MONETARY FUND

HAITI

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STAFF REPORT FOR THE 2019 ARTICLE IV CONSULTATION—DEBT SUSTAINABILITY ANALYSIS

Approved By
Patricia Alonso-Gamo, Jeromin Zettelmeyer (IMF), and Marcello Estevão (IDA)

Prepared by staffs of the International Monetary Fund and the World Bank.

Haiti: Joint Bank-Fund Debt Sustainability Analysis	
Risk of external debt distress	High
Overall risk of debt distress	High
Granularity in the risk rating	Debt is sustainable.
Application of judgment	Yes: High probability of protracted and substantial threshold breaches from FY2034.

The Debt Sustainability Analysis (DSA) was prepared in accordance with the revised joint Bank-Fund debt sustainability framework (DSF) for low-income countries (LICs).[1] Haiti's risk of debt distress is assessed to be high, despite a model-based risk rating for both external and overall public debt of "moderate." The application of judgement to change the rating from "moderate" to "high" is justified by the high probability of threshold breaches under the baseline scenario from FY2034, and by Haiti's institutional fragilities and exceptional vulnerability to natural disasters. Haiti is an FCV country (that is, a country affected by fragility, conflict, and violence as defined by the World Bank) and tailored stress tests suggest that its debt risk rating over FY2019-2029 is very vulnerable to large natural disaster shocks which are statistically very frequent. Nevertheless, the moderate level of public debt and broadly stable debt trajectory over the next ten years point to a sustainable public debt.

[1] Guidance Note on the Bank-Fund Debt Sustainability Framework for Low-Income Countries (LIC-DSF), February 2018.

PUBLIC DEBT COVERAGE

1. Coverage. Gross public debt used for the DSA covers the central government, local governments, extrabudgetary autonomous organisms, the state-owned electricity company, *Electricité d'Haiti* (EDH), and advances by the central bank to the government. No data is available on guaranteed debt, including to other state-owned enterprises (SOE), and non-guaranteed SOE debt.

2. Gross domestic public debt is calculated as the sum of claims of the overall banking sector (including the central bank) to the non-financial public sector (NFPS) plus suppliers' credits and domestic arrears reported by the authorities. The banking claims data come from the 10R and 20R tables reported by the *Banque de la République d'Haiti (*BRH). The education fund *Programme de Scolarisation Universelle, Gratuite, et Obligatoire* (PSUGO) and social security funds (*Pension civile* and *Office Nationale d'Assurance-Vieillesse*—ONA) are consolidated with the rest of the NFPS. In the absence of data, the calculation for domestic public debt does not include T-bills and bonds held outside of the banking sector.

3. External debt data come from the BRH and include debt to multilateral and bilateral creditors and payment arrears to a foreign oil company. External debt is defined on a residency basis.

Haiti: Public Debt Coverage

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

1	The country's coverage of public debt	The general government			
		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	2.0	
4	PPP	35	percent of PPP stock	0.0	
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)			7.0	

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%.

BACKGROUND ON DEBT

4. At the end of the 2019 fiscal year, Haiti's stock of public sector debt totaled US$3.7 billion (47 percent of GDP).[2] External public debt accounts for 58.2 percent of total outstanding public debt (27.4 percent of GDP) of which 86 percent is debt arising from oil imports financed by Venezuela's Petrocaribe. The remainder is largely concessional debt from multilateral creditors, including the International Fund for Agricultural Development (IFAD) and the IMF. There is

[2] Annual data refer to the fiscal year ending September 30.

no publicly available information on private external debt. Domestic public debt amounts to US$1.5 billion, mostly in the form of central bank advances to the government. External technical arrears to Venezuela of about US$260 million (as of September 30, 2019) are in the process of being resolved.[3]

Haiti: Structure of Public Debt at end-2019 (Fiscal-year basis)			
		in percent of	
	US$ millions	total debt	GDP
Total External Debt	**2147.9**	**58.2**	**27.4**
Multilateral creditors	**177.4**	**4.8**	**2.3**
o/w IMF	79.8	2.2	1.0
o/w OPEC	49.3	1.3	0.6
o/w IFAD	48.3	1.3	0.6
o/w IDA	0.0	0.0	0.0
Bilateral creditors	**1923.4**	**52.1**	**24.5**
Venezuela	1853.0	50.2	23.6
o/w PetroCaribe	1826.2	49.5	23.3
o/w BANDES	26.8	0.7	0.3
Taiwan, Province of China	70.4	1.9	0.9
Other borrowing	**47.0**	**1.3**	**0.6**
Total Domestic Debt	**1541.4**	**41.8**	**19.6**
BRH	**960.2**	**26.0**	**12.2**
Other creditors	**581.2**	**15.8**	**7.4**
Total Debt	**3689.3**	**100.0**	**47.0**

Sources: Haitian authorities, and Fund staff estimates.

5. **Debt has increased since the debt relief that followed the 2010 earthquake.** Haiti benefited from about US$1 billion in debt relief from international creditors after the earthquake, including US$268 million from the IMF (under the Post-Catastrophe Debt Relief Trust Fund) and US$36 million from the World Bank.[4] As a result, external public debt fell from 19 percent at end-FY2009 to less than 9.0 percent of GDP in FY2011. Since then, debt has increased steadily, mostly driven by disbursements related to the *PetroCaribe* agreement with Venezuela on the external side, and by unremunerated advances from the central bank on the domestic side. More recently, the government obtained funding from domestic suppliers (US$123 million) in FY2018 and signed a loan from Taiwan Province of China (US$150 million) in January 2019, although the latter has not been disbursed.[5]

6. **Fiscal policy and public borrowing have been more conservative than was projected in the last DSA of November 2016.** Fiscal policy proved more conservative than expected in FY2017, with the NFPS posting a primary deficit of only 0.7 percent of GDP compared to the 4.1 percent of GDP projected in the 2016 DSA. As a result, the present value of public debt stood at 30.4 percent of GDP in September 2018.[6]

BACKGROUND ON MACROECONOMIC FORECASTS

7. **The baseline scenario** assumes conservatively a low growth, sub-optimal equilibrium with enough resolution of the political crisis in the short-term to permit a degree of stability but not enough to implement ambitious reforms. This would allow for some resumption in activity and external financing.

[3] Haiti has attempted to pay some of these arrears but the authorities have encountered processing difficulties with financial institutions in making regular payments to Venezuela under the *Petrocaribe* agreement. Debt service payments to Venezuela are made into an escrow account in U.S. dollars at the central bank.

[4] In addition, following the earthquake, the World Bank provided US$508 million in grant financing from the IDA Crisis Response Window (CRW) to support reconstruction and long-term restoration of capacity in the country.

[5] The loan package, which includes grants from the government of Taiwan Province of China to compensate for the difference between a low fixed rate and the currently-higher variable rate applicable to the loan, is assessed to be concessional.

[6] This number cannot be compared to the present value of public debt reported in the 2016 DSA since the coverage of debt has changed to include the central bank's advances to the government.

- Real GDP is estimated to have dropped in FY2019 amidst a protracted political crisis. Growth for FY2020 is projected to stay negative at around -0.4 percent. Absent comprehensive reforms, medium-term growth prospects remain grim with potential growth reaching only 1.5 percent, taking the high probability of natural disasters and their effect on growth into account.[7] Revisions in the macroframework vis-à-vis the 2016 DSA reflect economic developments since then and staff's current baseline projections.
- After peaking above 20 percent y/y in 2019, inflation is expected to stabilize and gradually converge to a single digit over the medium term. A stable real exchange rate vis-à-vis the U.S. dollar is assumed over the longer term, so the nominal bilateral exchange rate is driven by the inflation differential vis-à-vis the United States.
- The deficit of the NFPS is estimated at 3.8 percent of GDP in FY2019, as domestic revenues dropped and currency depreciation pushed up the cost of fuel subsidies. The deficit is projected to contract to 3.1 percent of GDP by FY2025, constrained by the lack of financing and limited additional credit from the BRH. Beyond 2025, the deficit is projected to widen to 4.1 percent of GDP on average to account for the likely impact of natural disasters. Those would increase both current spending for emergency assistance to victims and capital spending for reconstruction purposes. The resulting deficit increase is expected to be mostly externally financed through concessional multilateral or bilateral financing.
- The current account deficit is estimated to have shrunk to 2 percent of GDP in FY2019 owing to weak import growth and higher remittances. The deficit is expected to widen in the longer term as remittance inflows normalize and the impact of natural disasters ensues.

Haiti: Macroeconomic Assumptions Compared to the Previous DSA

	2020		2021-24 Avg		2025-35 Avg	
	Previous DSA	Current DSA	Previous DSA	Current DSA	Previous DSA	Current DSA
(annual percentage change, unless otherwise indicated)						
Real GDP	3.0	-0.4	2.4	1.0	2.0	1.5
Consumer prices (period average)	5.0	19.0	5.0	12.7	5.0	9.4
(in percent of GDP, unless otherwise indicated)						
Total revenue and grants	19.7	13.4	19.5	15.2	19.0	17.5
Of which: Revenue	15.1	10.0	16.0	12.2	18.0	14.5
Total expenditure	22.5	15.6	22.6	17.1	21.9	20.4
Of which: Capital expenditure	11.0	4.1	10.8	5.3	12.2	8.3
Overall balance	-3.2	-3.4	-3.1	-3.0	-2.9	-3.1
Current account balance	-1.8	-0.9	-1.7	-1.8	-2.0	-3.5
Exports of goods and services	23.7	18.0	24.5	17.7	27.3	17.8
Imports of goods and services	-55.6	-61.3	-53.9	-60.7	-51.4	-61.6

Sources: Haitian authorities; and Fund staff estimates and projections.

[7] The 1.5 percent long-term growth projection is based on a growth accounting exercise, using a neoclassical production function with a labor share of 54 percent (Cicowiez and Filippo, 2018), assuming the same growth rate of labor and capital as during 1996-2018 and zero TFP growth, and subtracting about 1 percent to account for the average impact of natural disasters (Cantelmo, Melina, and Papageorgiou, 2019). Growth of 1.5 percent also corresponds to the average observed real rate over 1996-2018, a period during which 77 natural disasters were recorded in Haiti.

8. Future gross financing needs are assumed to be met both internally—by the rollover of central bank advances to the government—and externally. Central bank advances are not remunerated. Remaining internal financing takes the form of short-term treasury bills held by commercial banks. The share of internal financing coming from T-bills is assumed to increase in the long-term as the domestic financial market deepens.[8] External debt financing, contracted or guaranteed, is assumed to be mostly concessional. It is assumed that the IDA18 allocation to Haiti will be replenished to similar levels every IDA cycle.

9. The baseline assumptions are credible. The realism tool shows some differences between past and projected debt dynamics coming in part from the impact on external debt of a lower current account deficit and FDI balance and for total public debt from a lower primary deficit, suggesting that previous vintages were pessimistic (Figure 3). The current baseline scenario projects debt-creating flows above those actually observed in the past 5 years, but the latter may also reflect improvements in the coverage and measure of debt.

10. The projected fiscal adjustment is realistic. The planned adjustment falls outside the top quartile of the distribution of past adjustments of the primary fiscal deficit, suggesting a reasonable and credible pace of adjustment (Figure 4).

11. The growth forecast for 2020 and 2021 is driven by the assumed stabilization of the political situation unrelated to the projected fiscal adjustment. The baseline growth projection assumes near-zero growth in FY2020 as the political stabilization and ensuing reduction in uncertainty allow for a modest recovery in the second half of the year. Growth would further recover in 2021. This growth path is largely independent of the expected fiscal adjustment which would result from a resumption of activity supporting higher revenue collection (Figure 4).

COUNTRY CLASSIFICATION AND STRESS TESTS

12. The value of the composite indicator to assess debt carrying capacity is 2.86, resulting in a "medium" classification.[9] Haiti's debt carrying capacity would be classified as weak if remittances as a share of GDP were not so high. Remittances-to-GDP above the 15.5 percent cut-off (on average over 2013-22) brings the index above the 2.69 cutoff value (see Table Debt Carrying Capacity). Previous DSA vintages, using the average CPIA score instead of the composite indicator, had a weak debt carrying capacity.

13. This classification sets higher external and public debt thresholds to assess the risk of debt distress. The present value of external debt can go as high as 40 percent of GDP or 180 percent of exports of goods and services, and the present-value of public debt can reach 55 percent of GDP, before the model-based risk of distress increases. The benchmarks for external debt service are 15 percent of exports of goods and services and 18 percent of fiscal revenues.

14. In addition to the standard stress tests, the analysis considers the effects on debt of a one-off major natural disaster shock of a similar magnitude to Hurricane Matthew that hit Haiti in 2016. This

[8] Projected internal financing is assumed to be exclusively in domestic currency.

[9] The calculation of the composite index uses October 2019 WEO and 2018 CPIA data.

type of shock is particularly relevant since, during the past decade, Haiti has been struck by several major natural disasters. This shock assumes damages of 25 percent of GDP, similar to those caused by Hurricane Matthew. The damages and estimated losses following the 2010 earthquake were estimated at 120 percent of FY2009 GDP. However, this type of disaster is not as statistically frequent as hurricanes, thus considered a tail risk event.[10]

[10] See IMF Policy Paper, "Small States' Resilience to Natural Disasters and Climate Change – Role for the IMF," December 2016.

Haiti: Debt Carrying Capacity and Thresholds

Debt Carrying Capacity and Thresholds

Country	Haiti
Country Code	263

Debt Carrying Capacity	Medium

Final	Classification based on current vintage	Classification based on the previous vintage	Classification based on the two previous vintages
Medium	Medium	Medium	Medium
	2.86	2.92	2.97

Applicable thresholds

APPLICABLE	
EXTERNAL debt burden thresholds	
PV of debt in % of	
Exports	180
GDP	40
Debt service in % of	
Exports	15
Revenue	18

APPLICABLE	
TOTAL public debt benchmark	
PV of total public debt in percent of GDP	55

Calculation of the CI Index

Components	Coefficients (A)	10-year average values (B)	CI Score components (A*B) = (C)	Contribution of components
CPIA	0.385	2.816	1.08	38%
Real growth rate (in percent)	2.719	1.391	0.04	1%
Import coverage of reserves (in percent)	4.052	37.187	1.51	53%
Import coverage of reserves^2 (in percent)	-3.990	13.829	-0.55	-19%
Remittances (in percent)	2.022	15.494	0.31	11%
World economic growth (in percent)	13.520	3.499	0.47	17%
CI Score			2.863	100%
CI rating			Medium	

New framework				
	Cut-off values			
Weak		CI <	2.69	
Medium	2.69	≤ CI ≤		3.05
Strong		CI >	3.05	

Reference: Thresholds by Classiciation

EXTERNAL debt burden thresholds	Weak	Medium	Strong
PV of debt in % of			
Exports	140	180	240
GDP	30	40	55
Debt service in % of			
Exports	10	15	21
Revenue	14	18	23

TOTAL public debt benchmark	Weak	Medium	Strong
PV of total public debt in percent of GDP	35	55	70

DEBT SUSTAINABILITY

A. External Debt Sustainability Analysis

15. Under the baseline scenario, Haiti's external debt path is projected to breach the indicative threshold from FY2034 onward (Figure1). No threshold breaches are projected to take place under the standard 10-year projection period. However, Haiti's institutional fragility and its exceptional vulnerability to large natural disasters and the impact of climate change warrant consideration of the debt dynamics over a longer (20-year) horizon.[11] Within that period, two debt indicators show large and sustained breaches of the relevant threshold. The present value of external debt-to-GDP is projected to gradually increase from 15.8 percent in FY2020 to 21.8 percent in FY2030, and up to 44.2 percent in FY2040 on account of external borrowing to finance the (re)construction of infrastructure. Similarly, the present value of debt-to-exports gradually increases from 87.8 percent in FY2020 to up to 237.3 percent in 2040, breaching the 180 percent threshold in FY2034. The external debt service-to-revenue ratio remains one percentage point below the threshold of 18 percent in 2040 thanks to the large share of external debt on concessional terms.

16. The historical scenario highlights the realism of the baseline scenario. The path of debt that would result from key macroeconomic variables in the baseline projection being permanently replaced by their 10-year historical average would imply earlier and more prolonged threshold breaches for all the indicators of public and publicly guaranteed external debt considered.

17. Stress tests confirm the vulnerability of debt dynamics to a drop in remittances and natural disasters. A shock to non-debt flows (decline in both current transfers and FDI inflows by one standard deviation) would bring the present value of external debt persistently above the 180-percent-of-exports threshold, and the debt service-to-revenue ratio above the 18 percent threshold for more than 10 years. A natural disaster shock has the largest negative impact on the external debt trajectory, bringing the present value of debt-to-GDP to 54 percent by 2040 (Table 3).

B. Public Sector Debt Sustainability Analysis

18. Public debt is sustainable under the baseline scenario. Total public debt is projected to remain below 47 percent of GDP until 2025. In present value terms, public debt would reach 35.6 percent of GDP in FY2025, around 20 percentage points below the corresponding benchmark (Tables 2 and 4).

19. Stress test scenarios show debt crossing the public debt benchmark. Under the most extreme natural disaster scenario, the present value of the public-debt-to-GDP ratio would exceed 55 percent the year of the shock and after 2035 (Figure 2, Table 4).

[11] DSF guidance note, paragraph 87.

RISK RATING AND VULNERABILITIES

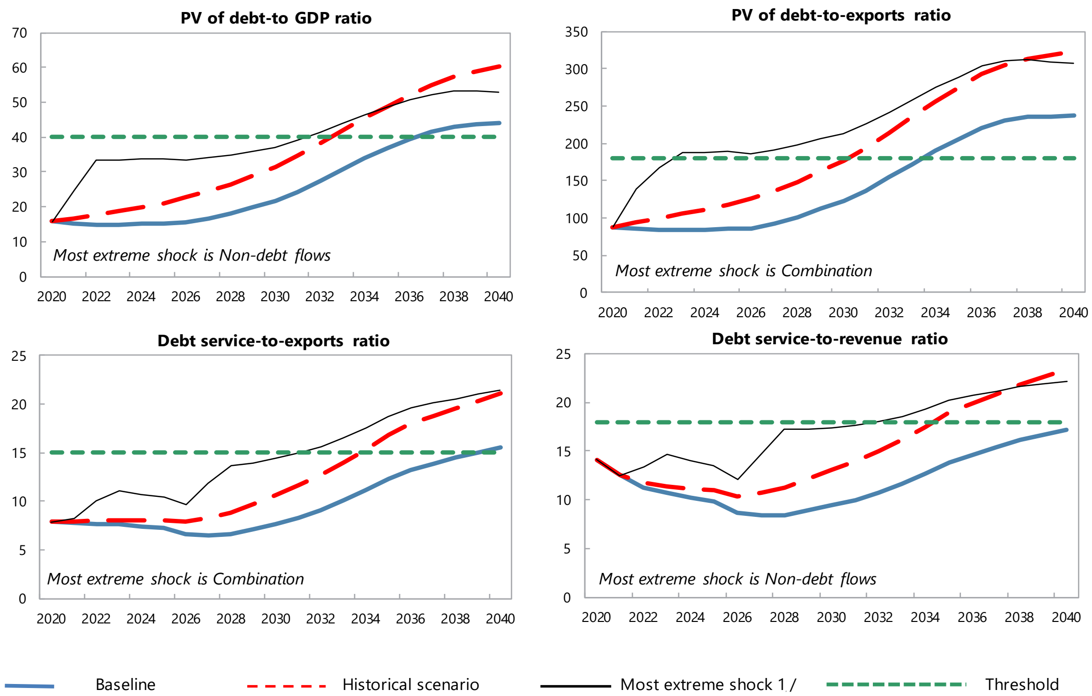
20. The debt outlook for Haiti is subject to several risks. Public debt is expected to grow as a share of GDP over the medium to long term, as potential growth, accounting for the average annual impact of natural disasters, remains weak and Haiti's financing needs decline marginally. The present values of the external public debt-to-GDP and debt-to-exports ratios are projected to breach their indicative benchmarks respectively in FY2036 and FY2034 under the baseline. A drop in remittances or a natural disaster shock similar in magnitude to Hurricane Matthew would imply earlier breaches of the thresholds, as would the historical scenario.

21. Haiti remains at high-risk of debt distress. Haiti is a country affected by fragility, conflict, and violence, and one of the countries in the world most exposed to natural hazards and climate change. Looking beyond the first 10 years of the projection horizon, the baseline, most likely scenario accounting for the high probability of natural disasters forecasts protracted and substantial breaches of the external debt burden indicator thresholds, while an additional major natural disaster or a decline in remittances would substantially aggravate these debt dynamics, even under a 10-year horizon. On this basis, judgment has been applied to the model-based rating of moderate risk for both external and overall public debt distress to an assessment of high risk for both measures.

AUTHORITIES' VIEWS

22. The authorities agreed with the debt sustainability analysis and the assessment. The BRH highlighted the implications of the transition to IFRS-9 for the accounting of the central bank's advances to the government as well as interest payments, and its efforts to develop the market for government debt securities which would help it progressively reduce its financing of the government. They indicated that IFRS-9 compliance would require a higher remuneration of BRH's claims on the government and the establishment of a timetable for domestic debt payments. They emphasized that achieving growth would require higher levels of investment, particularly in infrastructure. While high public investment can increase the stock of debt, if the associated investments are productive, they would have a positive impact on debt sustainability through higher growth, income and exports. While the authorities agreed that Haiti needs concessional funding, they were skeptical that sufficient concessional resources would be made available to finance productive investments that could generate a strong and inclusive growth.

Figure 1. Haiti: Indicators of Public and Publicly Guaranteed External Debt under Alternatives Scenarios, 2020–40



Customization of Default Settings	Size	Interactions
Tailored Tests		
Combined CLs	No	
Natural Disasters	Yes	No
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.

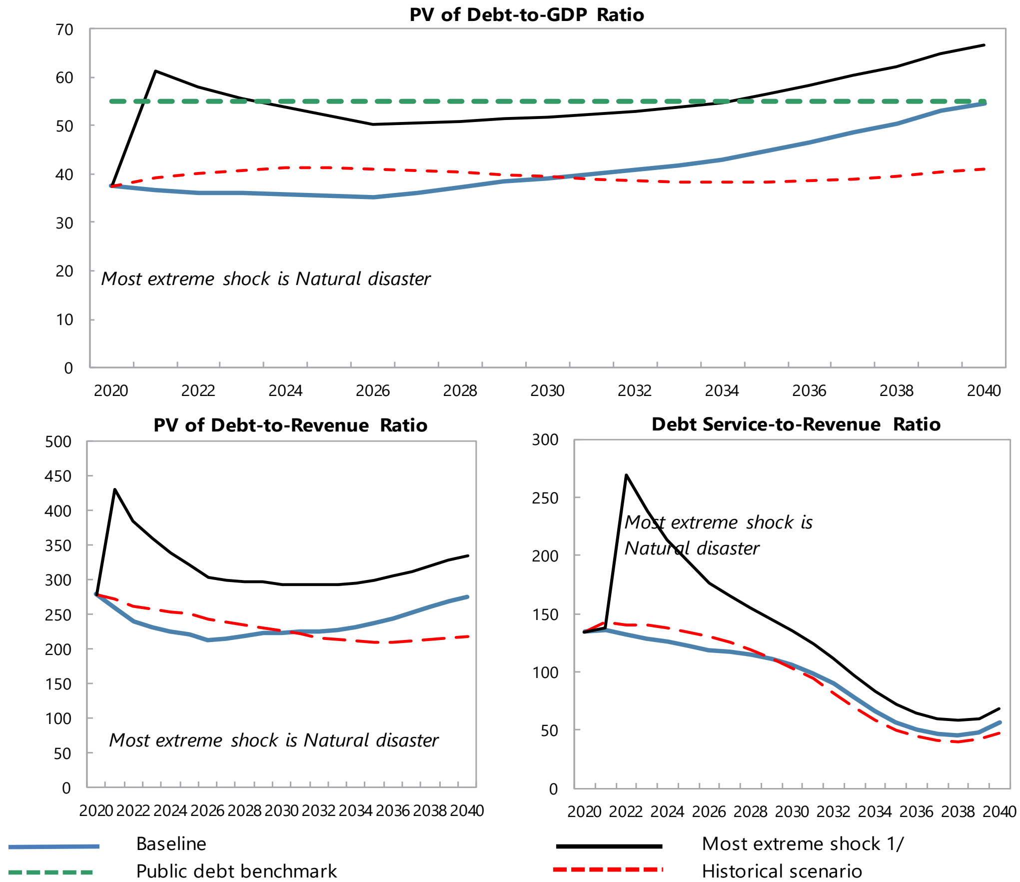
Borrowing Assumptions for Stress Tests*	Default	User defined
Shares of marginal debt		
External PPG MLT debt	100%	
Terms of marginal debt		
Avg. nominal interest rate on new borrowing in USD	1.7%	1.7%
USD Discount rate	5.0%	5.0%
Avg. maturity (incl. grace period)	33	33
Avg. grace period	5	5

* 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 2030. 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-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. Haiti: Indicators of Public Debt Under Alternatives Scenarios, 2020–40



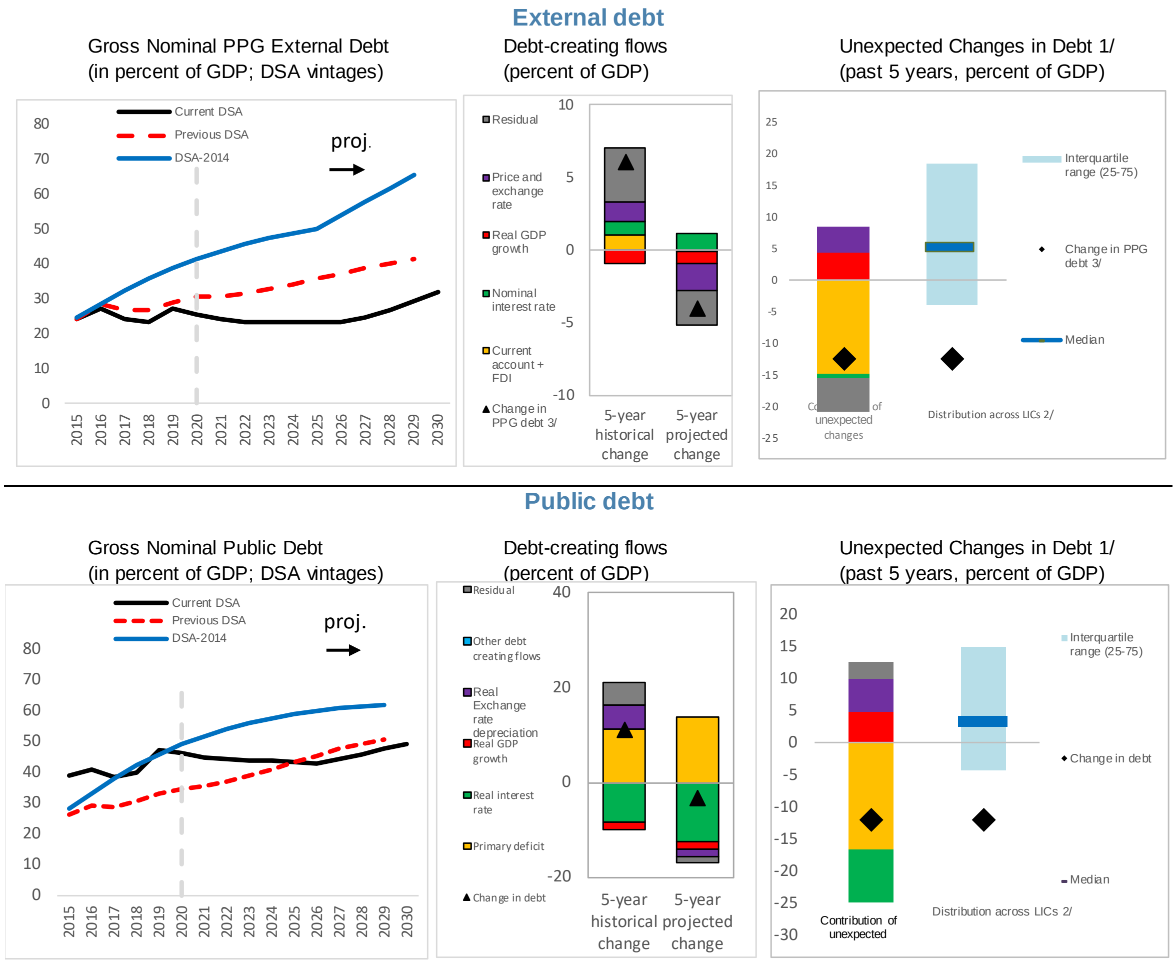
Borrowing Assumptions for Stress Tests*	Default	User defined
Shares of marginal debt		
External PPG medium and long-term	11%	11%
Domestic medium and long-term	0%	0%
Domestic short-term	89%	89%
Terms of marginal debt		
External MLT debt		
Avg. nominal interest rate on new borrowing in USD	1.7%	1.7%
Avg. maturity (incl. grace period)	33	33
Avg. grace period	5	5
Domestic MLT debt		
Avg. real interest rate on new borrowing	0.0%	0.0%
Avg. maturity (incl. grace period)	1	1
Avg. grace period	0	0
Domestic short-term debt		
Avg. real interest rate	-9.1%	-9.1%

* 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 2030. 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. Haiti: Drivers of Debt Dynamics-Baseline Scenario External Debt



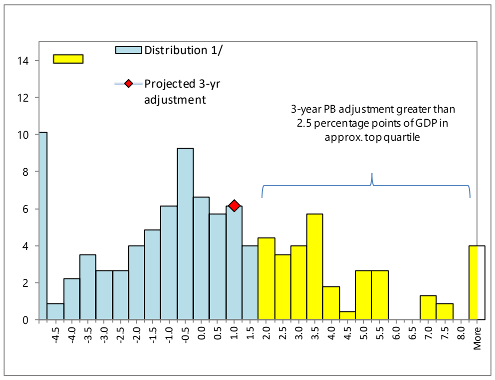
1/ Difference between anticipated and actual contributions on debt ratios.

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.

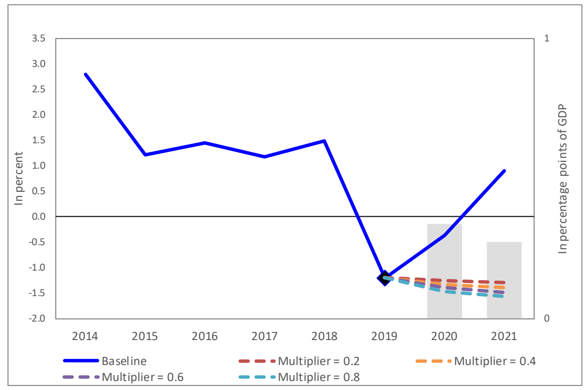
Figure 4. Haiti: Realism Tools

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



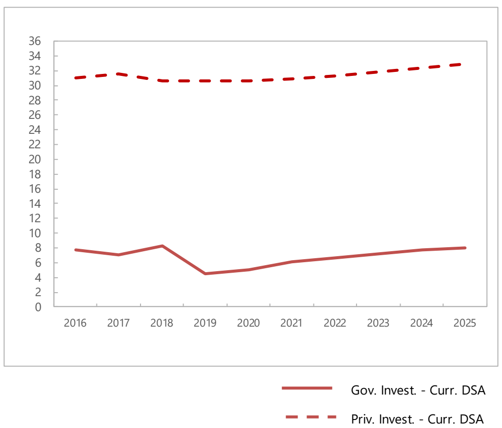
1/ Data cover Fund-supported programs for LICs (excluding emergency financing) approved since 1990. The size of 3-year adjustment from program inception is found on the horizontal axis; the percent of sample is found on the vertical axis.

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)

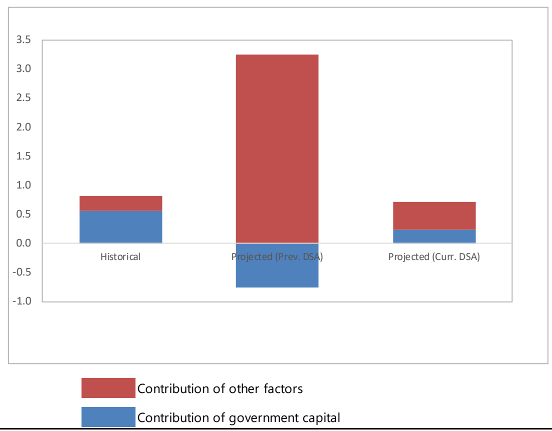
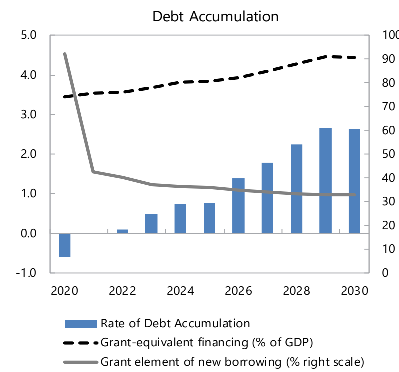


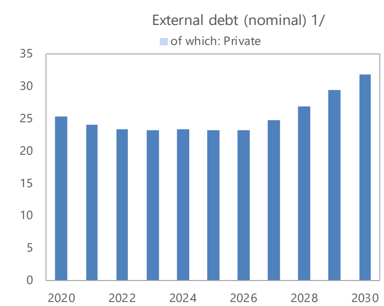
Table 1. Haiti: External Debt Sustainability Framework, Baseline Scenario, 2017–40

(in percent of GDP, unless otherwise indicated)

	Actual			Projections								Average 8/	
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2030	2040	Historical	Projections
External debt (nominal) 1/	**24.2**	**23.5**	**27.4**	**25.3**	**24.1**	**23.3**	**23.2**	**23.3**	**23.2**	**31.8**	**60.3**	**20.1**	**25.3**
of which: public and publicly guaranteed (PPG)	**24.2**	**23.5**	**27.4**	**25.3**	**24.1**	**23.3**	**23.2**	**23.3**	**23.2**	**31.8**	**60.3**	**20.1**	**25.3**
Change in external debt	-3.2	-0.7	3.9	-2.0	-1.2	-0.8	-0.1	0.2	-0.2	2.4	0.1		
Identified net debt-creating flows	**-4.9**	**-0.4**	**3.7**	**0.1**	**-0.5**	**-0.2**	**0.3**	**0.5**	**0.4**	**0.8**	**0.5**	**1.6**	**0.4**
Non-interest current account deficit	**0.8**	**3.7**	**1.8**	**0.6**	**0.8**	**1.3**	**1.9**	**2.2**	**2.2**	**2.7**	**2.2**	**3.6**	**2.0**
Deficit in balance of goods and services	36.0	40.3	42.9	43.3	42.6	42.7	43.0	43.4	43.5	43.9	43.5	**38.0**	**43.4**
Exports	19.8	18.4	18.9	18.0	17.8	17.7	17.7	17.8	17.7	17.8	18.6		
Imports	55.8	58.7	61.8	61.3	60.4	60.4	60.7	61.2	61.2	61.7	62.1		
Net current transfers (negative = inflow)	-34.3	-35.9	-40.3	-41.9	-40.9	-40.6	-40.4	-40.4	-40.5	-40.2	-39.6	**-33.7**	**-40.5**
of which: official	-4.6	-4.0	-2.8	-2.3	-3.0	-3.0	-3.0	-3.0	-3.1	-3.0	-3.0		
Other current account flows (negative = net inflow)	-0.9	-0.7	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-1.0	-1.6	**-0.6**	**-0.8**
Net FDI (negative = inflow)	**-4.5**	**-1.1**	**-0.9**	**-0.9**	**-1.3**	**-1.5**	**-1.6**	**-1.7**	**-1.7**	**-1.8**	**-1.9**	**-1.8**	**-1.6**
Endogenous debt dynamics 2/	**-1.2**	**-2.9**	**2.8**	**0.3**	**0.0**	**0.0**	**0.0**	**0.0**	**-0.1**	**0.0**	**0.2**		
Contribution from nominal interest rate	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	1.1		
Contribution from real GDP growth	-0.3	-0.3	0.3	0.1	-0.2	-0.2	-0.2	-0.3	-0.3	-0.4	-0.9		
Contribution from price and exchange rate changes	-1.1	-2.8	2.3	...	...	...	...	...	...	...	...		
Residual 3/	**1.7**	**-0.3**	**0.2**	**-2.2**	**-0.8**	**-0.6**	**-0.4**	**-0.3**	**-0.6**	**1.6**	**-0.4**	**-0.7**	**0.0**
of which: exceptional financing	-1.7	-0.9	-1.1	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	**...**	**...**	**16.1**	**15.8**	**15.2**	**14.8**	**14.8**	**15.0**	**15.2**	**21.8**	**44.2**		
PV of PPG external debt-to-exports ratio	**...**	**...**	**85.0**	**87.8**	**85.6**	**83.9**	**83.8**	**84.5**	**85.6**	**122.4**	**237.3**		
PPG debt service-to-exports ratio	**5.7**	**6.1**	**6.9**	**7.9**	**7.8**	**7.7**	**7.6**	**7.4**	**7.2**	**7.7**	**15.5**		
PPG debt service-to-revenue ratio	**8.0**	**8.7**	**12.1**	**14.1**	**12.5**	**11.3**	**10.7**	**10.2**	**9.8**	**9.4**	**17.2**		
Gross external financing need (Million of U.S. dollars)	-210.9	356.5	192.7	101.3	82.6	104.5	154.5	179.7	178.8	280.3	593.4		
Key macroeconomic assumptions													
Real GDP growth (in percent)	1.2	1.5	-1.2	-0.4	0.9	0.7	1.1	1.2	1.4	1.5	1.5	**1.4**	**1.1**
GDP deflator in US dollar terms (change in percent)	4.2	13.2	-8.7	-1.6	2.7	2.5	2.4	2.4	2.7	2.2	2.2	**1.7**	**2.4**
Effective interest rate (percent) 4/	0.7	1.0	0.9	0.8	0.9	0.9	1.0	1.0	1.1	1.5	1.8	**0.5**	**1.1**
Growth of exports of G&S (US dollar terms, in percent)	3.6	6.9	-7.3	-6.9	2.4	2.8	3.4	4.3	3.6	3.8	4.3	**5.3**	**3.0**
Growth of imports of G&S (US dollar terms, in percent)	11.7	20.9	-5.1	-2.8	2.0	3.3	4.1	4.4	4.1	3.8	3.9	**7.9**	**3.6**
Grant element of new public sector borrowing (in percent)	...	...	...		42.4	40.0	37.3	36.2	36.2	32.8	32.3	**...**	**36.0**
Government revenues (excluding grants, in percent of GDP)	14.0	13.0	10.8	10.0	11.1	12.1	12.5	12.9	13.0	14.6	16.8	**12.9**	**12.9**
Aid flows (in Million of US dollars) 5/	1186.1	-2965.9	-6550.8	305.1	321.5	326.6	332.7	346.7	364.8	435.2	606.2		
Grant-equivalent financing (in percent of GDP) 6/	...	...	...	3.5	3.5	3.6	3.7	3.8	3.8	4.4	4.3	**...**	**3.9**
Grant-equivalent financing (in percent of external financing) 6/	...	...	...	99.9	84.2	80.9	75.3	73.0	73.7	60.0	61.0	**...**	**73.1**
Nominal GDP (Million of US dollars)	8,409	9,658	8,708	8,533	8,842	9,135	9,454	9,798	10,199	12,773	18,473		
Nominal dollar GDP growth	5.4	14.9	-9.8	-2.0	3.6	3.3	3.5	3.6	4.1	3.8	3.8	**3.1**	**3.6**
Memorandum items:													
PV of external debt 7/	...	...	16.1	15.8	15.2	14.8	14.8	15.0	15.2	21.8	44.2		
In percent of exports	...	...	85.0	87.8	85.6	83.9	83.8	84.5	85.6	122.4	237.3		
Total external debt service-to-exports ratio	5.7	6.1	6.9	7.9	7.8	7.7	7.6	7.4	7.2	7.7	15.5		
PV of PPG external debt (in Million of US dollars)			1401.4	1348.5	1347.5	1356.3	1401.2	1471.6	1545.8	2783.9	8156.3		
(PVt-PVt-1)/GDPt-1 (in percent)				-0.6	0.0	0.1	0.5	0.7	0.8	2.6	2.1		
Non-interest current account deficit that stabilizes debt ratio	4.0	4.4	-2.1	2.7	2.1	2.1	2.0	2.0	2.4	0.2	2.1		

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





Sources: Country authorities; and staff estimates and projections.

1/ Includes both public and private sector external debt.

2/ Derived as $[r - g - \rho(1+g) + \varepsilon\alpha(1+r)]/(1+g+\rho+g\rho)$ 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.

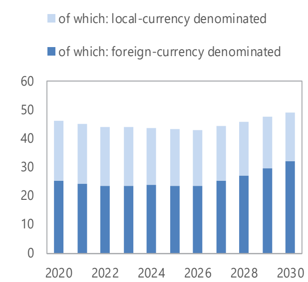
Table 2. Haiti: Public Sector Debt Sustainability Framework, Baseline Scenario, 2017–40

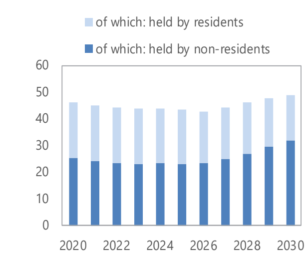
(in percent of GDP, unless otherwise indicated)

	Actual			Projections								Average 6/	
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2030	2040	Historical	Projections
Public sector debt 1/	38.3	39.9	47.0	46.1	44.9	44.1	43.9	43.7	43.4	49.0	70.3	**35.5**	**45.1**
of which: external debt	24.2	23.5	27.4	25.3	24.1	23.3	23.2	23.3	23.2	31.8	60.3	**20.1**	**25.3**
Change in public sector debt	-2.5	1.6	7.0	-0.9	-1.2	-0.8	-0.2	-0.2	-0.3	1.3	1.4		
Identified debt-creating flows	-5.4	0.5	5.1	-0.6	-0.9	-0.6	0.0	0.0	-0.2	1.3	1.4	**2.2**	**0.3**
Primary deficit	0.7	2.6	3.4	3.0	2.7	2.5	2.8	2.7	2.7	2.9	2.9	**3.4**	**2.9**
Revenue and grants	17.7	17.3	13.6	13.4	14.2	15.1	15.5	15.9	16.1	17.6	19.8	**19.2**	**15.9**
of which: grants	3.7	4.3	2.8	3.4	3.0	3.0	3.0	3.0	3.1	3.0	3.0		
Primary (noninterest) expenditure	18.4	19.9	17.0	16.4	16.9	17.5	18.3	18.6	18.8	20.5	22.7	**22.6**	**18.9**
Automatic debt dynamics	-6.0	-2.1	1.8	-3.6	-3.7	-3.1	-2.8	-2.7	-2.8	-1.7	-1.5		
Contribution from interest rate/growth differential	-2.1	-2.3	-2.1	-3.2	-3.3	-2.7	-2.6	-2.5	-2.4	-1.6	-1.3		
of which: contribution from average real interest rate	-1.6	-1.7	-2.5	-3.3	-2.9	-2.4	-2.1	-2.0	-1.8	-0.9	-0.3		
of which: contribution from real GDP growth	-0.5	-0.6	0.5	0.2	-0.4	-0.3	-0.5	-0.5	-0.6	-0.7	-1.0		
Contribution from real exchange rate depreciation	-4.0	0.2	3.8	...	...	...	...	...	...	...	...		
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	2.9	1.1	1.9	-0.7	-0.7	-0.6	-0.4	-0.4	-0.7	-0.1	-0.2	**-0.8**	**-0.4**
Sustainability indicators													
PV of public debt-to-GDP ratio 2/	...	...	37.5	37.4	36.8	36.2	36.0	35.8	35.6	39.2	54.6		
PV of public debt-to-revenue and grants ratio	...	...	274.8	278.8	258.9	240.0	232.4	225.6	220.8	223.2	275.4		
Debt service-to-revenue and grants ratio 3/	72.6	73.1	108.2	134.8	136.7	132.0	129.1	126.0	122.8	106.3	56.8		
Gross financing need 4/	13.5	15.2	18.1	21.1	22.1	22.4	22.8	22.7	22.5	21.6	14.1		
Key macroeconomic and fiscal assumptions													
Real GDP growth (in percent)	1.2	1.5	-1.2	-0.4	0.9	0.7	1.1	1.2	1.4	1.5	1.5	**1.4**	**1.1**
Average nominal interest rate on external debt (in percent)	0.7	0.9	1.0	0.9	0.9	1.0	1.0	1.1	1.1	1.5	1.9	**0.5**	**1.2**
Average real interest rate on domestic debt (in percent)	-11.2	-10.6	-13.4	-15.3	-12.7	-10.5	-9.5	-8.7	-7.9	-4.1	-2.9	**-6.7**	**-8.1**
Real exchange rate depreciation (in percent, + indicates depreciation)	-14.7	0.8	16.3	...	...	...	...	...	...	...	...	**1.3**	**...**
Inflation rate (GDP deflator, in percent)	13.4	12.8	17.3	19.0	15.9	13.1	11.4	10.4	9.4	5.0	5.0	**9.2**	**9.9**
Growth of real primary spending (deflated by GDP deflator, in percent)	-4.8	9.5	-15.4	-3.6	3.9	4.3	5.3	3.0	2.6	0.4	-0.8	**0.5**	**2.9**
Primary deficit that stabilizes the debt-to-GDP ratio 5/	3.1	0.9	-3.7	3.9	3.9	3.3	3.0	2.9	3.0	1.6	1.5	**0.1**	**2.7**
PV of contingent liabilities (not included in public sector debt)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		

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

Public sector debt 1/





Sources: Country authorities; and staff estimates and projections.

1/ Coverage of debt: The general government. 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. Haiti: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2020–40

	Projections 1/																				
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
PV of debt-to GDP ratio																					
Baseline	16	15	15	15	15	15	15	17	18	20	22	24	27	31	34	37	39	**42**	**43**	**44**	**44**
A. Alternative Scenarios																					
A1. Key variables at their historical averages in 2020-2030 2/	16	17	18	19	20	21	23	24	27	29	31	35	38	**42**	**45**	**49**	**52**	**55**	**57**	**59**	**60**
B. Bound Tests																					
B1. Real GDP growth	16	16	16	16	17	17	17	18	20	22	24	27	30	34	37	**40**	**43**	**46**	**48**	**48**	**49**
B2. Primary balance	16	15	15	16	16	17	17	18	20	22	23	26	29	32	35	38	**41**	**43**	**45**	**45**	**46**
B3. Exports	16	17	19	19	19	19	19	20	22	24	25	28	31	34	37	40	**43**	**45**	**46**	**47**	**47**
B4. Other flows 3/	16	25	33	33	34	34	33	34	35	36	37	39	**41**	**44**	**46**	**49**	**51**	**52**	**53**	**53**	**53**
B5. Depreciation	16	19	11	11	11	12	12	14	16	19	21	25	29	33	37	**41**	**45**	**48**	**50**	**51**	**52**
B6. Combination of B1-B5	16	24	31	31	32	32	31	32	33	35	36	38	**41**	**44**	**46**	**49**	**51**	**53**	**54**	**54**	**54**
C. Tailored Tests																					
C1. Combined contingent liabilities	16	16	16	16	16	17	17	18	20	22	24	26	30	33	36	39	**42**	**44**	**45**	**46**	**46**
C2. Natural disaster	16	17	18	19	20	21	22	23	25	28	30	33	36	39	**43**	**46**	**49**	**51**	**53**	**53**	**54**
C3. Commodity price	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.
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	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
PV of debt-to-exports ratio																					
Baseline	88	86	84	84	84	86	86	93	101	112	122	137	154	172	**190**	**206**	**221**	**231**	**235**	**236**	**237**
A. Alternative Scenarios																					
A1. Key variables at their historical averages in 2020-2030 2/	88	94	100	105	111	118	127	137	149	163	176	**194**	**214**	**235**	**255**	**274**	**293**	**305**	**313**	**318**	**323**
B. Bound Tests																					
B1. Real GDP growth	88	86	84	84	84	86	86	93	101	112	122	137	154	172	**190**	**206**	**221**	**231**	**235**	**236**	**237**
B2. Primary balance	88	87	87	89	91	93	94	102	111	122	132	146	164	**182**	**199**	**215**	**230**	**240**	**243**	**244**	**245**
B3. Exports	88	104	131	131	132	133	133	141	151	163	175	**192**	**214**	**236**	**256**	**276**	**294**	**306**	**311**	**311**	**311**
B4. Other flows 3/	88	138	**189**	**189**	**190**	**191**	**187**	**192**	**196**	**203**	**209**	**219**	**233**	**247**	**260**	**272**	**284**	**290**	**290**	**287**	**284**
B5. Depreciation	88	86	51	51	51	52	54	61	71	83	94	110	129	148	167	**184**	**201**	**212**	**218**	**220**	**222**
B6. Combination of B1-B5	88	139	167	**188**	**188**	**190**	**186**	**192**	**198**	**206**	**214**	**226**	**242**	**259**	**275**	**290**	**304**	**311**	**312**	**310**	**307**
C. Tailored Tests																					
C1. Combined contingent liabilities	88	88	89	91	92	95	96	103	112	123	134	148	166	**184**	**202**	**218**	**233**	**244**	**248**	**248**	**249**
C2. Natural disaster	88	99	105	112	117	123	125	135	146	159	171	**187**	**206**	**226**	**244**	**262**	**278**	**289**	**293**	**294**	**295**
C3. Commodity price	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.
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	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180
Debt service-to-exports ratio																					
Baseline	8	8	8	8	7	7	7	7	7	7	8	8	9	10	11	12	13	14	14	15	16
A. Alternative Scenarios																					
A1. Key variables at their historical averages in 2020-2030 2/	8	8	8	8	8	8	8	8	9	10	11	12	13	14	15	17	18	19	20	20	21
B. Bound Tests																					
B1. Real GDP growth	8	8	8	8	7	7	7	7	7	7	8	8	9	10	11	12	13	14	14	15	16
B2. Primary balance	8	8	8	8	8	7	7	7	7	8	8	9	10	11	12	13	14	14	15	16	16
B3. Exports	8	9	10	10	10	10	9	9	10	11	11	12	13	14	15	17	18	19	19	20	21
B4. Other flows 3/	8	8	9	10	10	10	9	11	14	14	14	15	15	16	17	18	19	19	19	20	20
B5. Depreciation	8	8	8	7	7	6	6	6	4	5	6	6	7	8	9	11	11	12	13	13	14
B6. Combination of B1-B5	8	8	10	11	11	10	10	12	14	14	14	15	16	17	18	19	20	20	21	21	21
C. Tailored Tests																					
C1. Combined contingent liabilities	8	8	8	8	8	7	7	7	7	7	8	9	9	10	11	13	13	14	15	15	16
C2. Natural disaster	8	8	8	8	8	8	8	8	8	8	9	10	10	11	13	14	15	15	16	17	17
C3. Commodity price	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.
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	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Debt service-to-revenue ratio																					
Baseline	14	12	11	11	10	10	9	8	8	9	9	10	11	12	13	14	15	15	16	17	17
A. Alternative Scenarios																					
A1. Key variables at their historical averages in 2020-2030 2/	14	13	12	11	11	11	10	11	11	12	13	14	15	16	17	**19**	**20**	**21**	**22**	**23**	**23**
B. Bound Tests																					
B1. Real GDP growth	14	13	12	12	11	11	10	9	9	10	10	11	12	13	14	15	16	17	18	**18**	**19**
B2. Primary balance	14	12	11	11	10	10	9	9	9	9	10	11	11	12	13	15	15	16	17	17	18
B3. Exports	14	13	12	12	11	11	10	10	10	11	11	12	12	13	14	15	16	17	18	**18**	**19**
B4. Other flows 3/	14	12	13	15	14	13	12	15	17	17	17	18	**18**	**19**	**19**	**20**	**21**	**21**	**22**	**22**	**22**
B5. Depreciation	14	16	14	12	11	11	10	9	7	8	9	9	11	12	13	15	16	17	**18**	**19**	**20**
B6. Combination of B1-B5	14	13	14	15	14	13	12	14	16	16	17	17	18	**18**	**19**	**20**	**21**	**21**	**22**	**22**	**22**
C. Tailored Tests																					
C1. Combined contingent liabilities	14	12	11	11	10	10	9	9	9	9	10	10	11	12	13	14	15	16	16	17	17
C2. Natural disaster	14	12	12	11	11	11	10	10	10	10	11	11	12	13	14	15	16	16	17	18	**18**
C3. Commodity price	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.
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	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18

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. Haiti: Sensitivity Analysis for Key Indicators of Public Debt, 2020–40

	Projections 1/																				
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
PV of Debt-to-GDP Ratio																					
Baseline	37	37	36	36	36	36	35	36	37	39	39	40	41	42	43	45	47	49	51	53	55
A. Alternative Scenarios																					
A1. Key variables at their historical averages in 2020-2030 2/	37	39	40	41	41	41	41	41	40	40	40	39	39	38	38	38	39	39	40	40	41
B. Bound Tests																					
B1. Real GDP growth	37	39	41	42	43	43	44	46	48	49	51	52	54	**56**	**58**	**60**	**63**	**66**	**68**	**72**	**74**
B2. Primary balance	37	40	42	41	40	40	39	40	40	41	42	43	43	44	45	47	49	51	52	55	**56**
B3. Exports	37	38	40	40	39	39	39	40	41	42	42	43	44	44	45	47	49	51	52	55	**56**
B4. Other flows 3/	37	47	**55**	**55**	**55**	54	53	54	54	55	55	55	**55**	**55**	**56**	**57**	**58**	**59**	**61**	**62**	**63**
B5. Depreciation	37	38	36	35	35	33	33	32	33	33	33	33	33	33	33	34	35	37	38	40	41
B6. Combination of B1-B5	37	38	38	35	35	35	35	36	37	38	39	39	40	41	42	44	46	48	50	52	54
C. Tailored Tests																					
C1. Combined contingent liabilities	37	43	42	41	41	40	39	40	41	42	42	43	44	45	46	47	49	51	53	**55**	**57**
C2. Natural disaster	37	**61**	**58**	**56**	54	52	50	50	51	51	52	52	53	54	55	**56**	**58**	**60**	**62**	**65**	**67**
C3. Commodity price	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.
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.
Public debt benchmark	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
PV of Debt-to-Revenue Ratio																					
Baseline	279	259	240	232	226	221	213	216	219	222	223	225	226	228	232	237	244	252	260	270	275
A. Alternative Scenarios																					
A1. Key variables at their historical averages in 2020-2030 2/	279	272	262	258	254	251	243	239	235	231	226	221	217	214	212	211	210	211	213	216	218
B. Bound Tests																					
B1. Real GDP growth	279	272	269	267	265	264	260	267	274	281	285	289	294	299	306	314	324	336	346	359	368
B2. Primary balance	279	279	278	265	254	246	235	236	237	239	239	239	240	241	244	249	255	263	270	279	284
B3. Exports	279	268	264	256	249	243	234	236	238	240	240	240	241	242	245	250	256	263	270	279	284
B4. Other flows 3/	279	328	367	356	347	338	323	322	319	316	312	307	304	301	300	301	304	308	312	318	320
B5. Depreciation	279	271	244	230	222	211	200	196	196	192	191	185	185	182	182	184	187	192	197	205	209
B6. Combination of B1-B5	279	268	252	229	223	218	210	213	216	220	220	222	223	225	229	234	241	249	257	267	272
C. Tailored Tests																					
C1. Combined contingent liabilities	279	306	279	266	255	247	236	237	238	240	240	240	241	243	246	251	257	265	272	282	287
C2. Natural disaster	279	431	384	359	338	322	304	300	298	297	294	293	292	292	294	299	305	313	320	329	335
C3. Commodity price	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.
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	135	137	132	129	126	123	118	117	115	112	106	99	90	78	66	57	51	46	45	48	57
A. Alternative Scenarios																					
A1. Key variables at their historical averages in 2020-2030 2/	135	143	141	140	138	135	130	125	120	112	104	94	83	70	58	50	44	41	40	42	47
B. Bound Tests																					
B1. Real GDP growth	135	142	145	148	149	149	147	148	148	146	141	135	126	114	103	93	87	84	84	87	97
B2. Primary balance	135	137	148	159	150	142	133	130	125	120	113	106	95	83	71	61	54	50	49	51	60
B3. Exports	135	137	132	130	127	123	119	118	117	113	108	101	91	79	67	58	51	47	46	49	58
B4. Other flows 3/	135	137	134	132	129	126	121	122	122	119	113	106	96	84	72	62	56	51	50	52	61
B5. Depreciation	135	130	126	121	115	117	109	111	106	106	97	94	82	74	63	55	48	45	44	46	54
B6. Combination of B1-B5	135	134	131	128	125	122	118	117	114	111	106	99	90	78	66	57	50	46	45	48	56
C. Tailored Tests																					
C1. Combined contingent liabilities	135	137	170	159	150	142	133	129	125	120	113	105	95	82	70	60	53	49	47	50	58
C2. Natural disaster	135	138	269	238	214	194	177	165	155	145	135	124	112	97	84	73	65	60	58	60	68
C3. Commodity price	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.
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.