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HAITI

JOINT WORLD BANK-IMF DEBT SUSTAINABILITY ANALYSIS

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HAITI: JOINT BANK-FUND DEBT SUSTAINABILITY ANALYSIS[1]	
Risk of external debt distress	High[2]
Overall risk of debt distress	High
Granularity in the risk rating	Debt is sustainable
Application of judgment	Yes: High probability of protracted threshold breaches on external debt under a 20-year horizon from FY2035 and important risks and vulnerabilities to debt outlook.

This DSA updates the analysis conducted at the time of the SMP approval in June 2022, with the overall assessment largely unchanged. Haiti's risk of debt distress is assessed as "high" but overall public debt remains sustainable. Haiti is a Fragile and Conflict-Affected State (FCS) or affected by fragility, conflict, and violence, as defined by the World Bank and the IMF, and tailored stress tests suggest that its debt risk rating remains vulnerable to large natural disaster shocks, which are statistically frequent. Nevertheless, the level of public debt, a few characteristics of its profile such as its relatively long maturity of external debt and investment base, and the implementation of some structural reforms that boost growth potential under the SMP baseline scenario, point to a sustainable public debt. Although debt ratios have improved, this assessment remains subject to downside risks as Haiti continues to face important economic, policy, and institutional fragilities, and exceptional vulnerability to natural disasters and debt data limitations are also present. It will be essential for the government to follow through key reforms to mobilize additional revenues and

[1] Approved by Patricia Alonso-Gamo (WHD) and Andrea Schaechter (SPR); Manuela Francisco and Robert Taliercio (IDA World Bank).

[2] The current Composite Index (CI) is estimated at 2.767 and is based on the Bank's 2021 CPIA and the October 2022 WEO. Haiti's debt-carrying capacity remains medium.

improve efficiency of government expenditures, develop domestic markets, and growth enhancement policies to allow for a higher potential growth, about 1.5 percent currently assumed in this DSA.

PUBLIC DEBT COVERAGE

1. Coverage. Gross public debt used for this DSA covers the central government, local governments, extrabudgetary autonomous organisms, the state-owned electricity company *Electricité d'Haiti* (EDH), and financing from the *Banque de la République d'Haiti* (BRH) to the government (Text Table 1). External debt data come from the BRH and include debt to multilateral and bilateral creditors, including foreign oil companies, as well as an estimate of contingent liabilities. External debt is defined on a residency basis. No data are available on guaranteed debt, including to other state-owned enterprises (SOEs), and non-guaranteed SOE debt.

Text Table 1. Haiti: Public Debt Coverage

	Subsectors of the public sector	Check box
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. 1/	0 percent of GDP	0.3	
3	SoE's debt (guaranteed and not guaranteed by the government) 2/	2 percent of GDP	2	
4	Public Private Partnership (PPP)	35 percent of PPP stock	0	
5	Financial market (the default value of 5 percent of GDP is the minimum value)	5 percent of GDP	5	
	Total (2+3+4+5) (in percent of GDP)		7.3	

1/ Includes an estimate of external contingent liabilities.

2/ 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%.

2. The government is committed to expanding the debt coverage, including to SOEs. Ongoing efforts are aimed at improving debt data collection and the preparation and public disclosure of the debt portfolio review are supported by the World Bank. Under the Sustainable Development Finance Policy (SDFP), the Government of Haiti committed in FY2022 to implementing two performance and policy actions (PPAs) to strengthen fiscal resilience and debt sustainability. The PPAs are grounded in the DSA, the DeMPA (Debt Management Performance Assessment), and continuous policy dialogue. The first PPA dealt with debt management and limited new external public or publicly guaranteed (PPG) non-concessional debt to zero. With a focus on debt transparency (the second PPA), Ministry of Economy and Finance (MEF) staff received TA and training with the objective to develop a Debt Portfolio Review. Both PPAs were successfully implemented in FY2022. For FY2023, the PPAs target debt management and fiscal sustainability, respectively limiting new external public or publicly guaranteed (PPG) non-concessional debt to zero and implementing a rationalization plan of tax expenditures stemming from the government tax incentive regime.

3. Gross domestic public debt is calculated as the sum of claims of the overall banking sector (including the BRH) to the non-financial public sector (NFPS) plus suppliers' credits and domestic arrears as reported by the authorities. The banking claims data come from the Fund's Standardized Report Forms 1SR and 2SR Tables reported by the BRH to the Fund. The accounts of 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 of domestic public debt does not include T-bills and bonds held outside the banking sector, which are understood to be negligible. Overdue payments related to current spending on wages and salaries, or goods and services, are effectively recorded in the subsequent year's budget and typically processed (paid) in the current fiscal year. This is done so that the payments are not recorded as domestic arrears—instead of being added to debt, as per accounting norms, that is, after such criteria as 90-day delays are assessed.[3] In the recent past this has happened mostly with payments due to oil distribution companies which have been cleared, though, some delayed payments in salary and diplomatic representations were observed last September following the worsened security.

4. For now, central bank financing to the treasury does not trigger an "in debt distress" rating for Haiti. Government debt to BRH, equal to about 11.8 percent of GDP in FY2021, is not serviced but the July 2022 Memorandum of Understanding (MoU) between the BRH and MEF imputed accrued interest payment on non-negotiable government debt securities held by the BRH; this recognition resulted in an increase in the stock of the BRH's net claims on central government starting with the October 2021 balance sheet. The MoU recommends converting most of these liabilities into negotiable securities bearing interest rate of 7.57 percent per annum and payable over a fifty-year period with a grace period of 10 years. In addition, the MoU supports BRH's efforts to implement the 2019 safeguards recommendations on International Financial Reporting Standards (IFRS). Adopting the IFRS will provide BRH with greater transparency and communication of financial information, align it with the best international accounting practices, and a better understanding of how its financial position may impact the implementation of monetary policy and transmission channels, while harmonizing the accounting of operations carried out by treasury and the BRH on behalf of the Haitian state.

BACKGROUND ON DEBT

5. The revision to the national accounts in 2020 markedly reduced Haiti's public-debt-to-GDP ratio. After several years of technical assistance (TA), the Haitian Statistics Institute (IHSI) released in October 2020 re-based and re-benchmarked national accounts that led to a 65 percent upward revision in nominal GDP (FY2019), owing in part to the inclusion of the informal sector.[4] These revisions lowered debt ratios substantially. As a percent of GDP, public debt fell to 23.3 percent of GDP in FY2020 from 51.9 percent as previously projected in the 2020 DSA under the Rapid Credit Facility (RCF)—and to 28.5

[3] Payment arrears on expenditures are defined as all payment orders created by a public entity responsible for authorizing expenditure payments but not paid 90 days after the Treasury authorizes payment. Since the maturity of overdue payments does not extend beyond the 90-day deadline, they are not accounted as payment arrears.

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

percent in FY2021.[5] At the same time, domestic revenue ratios dropped sharply as a result of the rebasing but also because of a real decline in revenue administration and collection. As a percent of GDP, domestic revenue fell to 5.9 percent in FY2021 from 6.2 percent in FY2019—and compared with 10.7 percent under the old GDP series. Foreign exchange receipts from exports of goods and services also fell to an estimated 6 percent of GDP in FY2021 from 11.7 percent in FY2019—or from 18.2 percent under the old series. As evidenced by the ongoing deterioration in revenue trends (and the very low ratios), Haiti's debt service capacity has not improved (Figure 1).

6. **Public debt has increased since the debt relief received after the 2010 earthquake**. Haiti received debt relief of about $1.0 billion from international creditors after the 2010 earthquake, including $268 million from the Fund under the Post-Catastrophe Debt Relief Trust Fund (CCRT) and $36 million from the World Bank.[6] As a result, external public debt fell from 19 percent of GDP at end-FY2009 to less than 9 percent in FY2011 (both using old GDP series). After that, debt rose steadily until FY2020, mostly driven by disbursements related to the *PetroCaribe* agreement with Venezuela on the external side, and by unremunerated financing from the BRH on the domestic side. The government obtained some financing from domestic non-financial companies ($123 million) in FY2018 and signed a loan from Taiwan, China (for $150 million) in January 2019, although the latter was disbursed in tranches.[7] In April 2020, the IMF Board approved a disbursement of $111.6 million (SDR 81.9 million) under the RCF to help cover needs related to the COVID-19 pandemic. Haiti was also granted debt service relief worth $22.6 million (SDR 15.21 million) in April 2021 under the Fund's updated CCRT covering debt service to the IMF falling due from April 14, 2020, to April 13, 2022.[8] Haiti also benefited from an SDR allocation of $224 million (SDR157 million) in August 2021 with the central bank on-lending half to the government for emergency spending, including that related to the 2021 earthquake recovery.[9]

7. **At the end of FY2021, Haiti's stock of public sector debt totaled $5.0 billion (28.5 percent of GDP)**. External public debt accounted for 45.5 percent of total public debt (12.9 percent of GDP), of which 80.8 percent was debt arose from oil imports financed by Venezuela's *Petrocaribe* program (Text Table 2). The remainder was largely concessional debt from multilateral creditors, including from the International Fund for Agricultural Development (IFAD) and the IMF. Public information on private external debt is unavailable. Domestic public debt eased slightly to $2.7 billion from $2.8 billion in FY2020.[10] Nearly 80 percent was in the form of central bank financing to the government. This drop in domestic debt in U.S. dollars resulted largely from valuation effects as the gourde depreciated by over 32 percent against the

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[5] Additional minor revisions of national accounts by the IHSI in May 2021 raised nominal GDP slightly without affecting growth rates.

[6] The World Bank also provided $508 million in grant financing from the IDA Crisis Response Window (CRW) to support the country's reconstruction and long-term restoration of capacity.

[7] The loan package, which includes grants from the government of Taiwan, China to compensate for the difference between a low fixed rate and the current higher variable rate applicable to the loan, is assessed to be concessional. Of this loan, $82.5 million has been disbursed so far, plus $30 million in FY2022, with the remaining $37.5 million to be disbursed later.

[8] See Catastrophe Containment and Relief Trust, 2021.

[9] While not contributing to gross public debt directly, when SDRs are used (i.e., when holdings fall below allocations through on-lending, for instance) they enter the DSA as a long-term debt liability in the gross external debt statistics and the net interest payments in the debt service.

[10] All debt figures cited in this report are in US dollrs unless otherwise indicated.

dollar in FY2021. Haiti continues to have "technical arrears" to Venezuela of about $425.57 million, about 2 percent of GDP (September 30, 2021).[11]

Text Table 2. Haiti: Structure of Public Debt at end-2021 (Fiscal-year basis)

	US$ millions	in percent of total debt	in percent of GDP
Total External Debt	**2258.3**	**45.5**	**12.9**
Multilateral creditors	**262.8**	**5.3**	**1.5**
o/w IMF	175.1	3.5	1.0
o/w OPEC	42.9	0.9	0.2
o/w IFAD	44.8	0.9	0.3
o/w IDA	0.0	0.0	0.0
Bilateral creditors	**1993.1**	**40.1**	**11.4**
Venezuela	1853.0	37.3	10.6
o/w PetroCaribe	1826.2	36.8	10.5
o/w BANDES	26.8	0.5	0.2
Taiwan, China	140.1	2.8	0.8
Restructured debt	**2.4**	**0.0**	**0.0**
Total Domestic Debt	**2708.1**	**54.5**	**15.5**
BRH	**2063.6**	**41.6**	11.8
Other creditors	**644.6**	**13.0**	3.7
Total Debt	**4966.4**	**100.0**	**28.5**

Sources: Haitian authorities, and Fund staff estimates.

8. The fiscal year 2022 has been another challenging year. As noted above, tax revenue collection remained particularly low at 5.4 percent of GDP, partly the result of difficult security conditions, while higher international oil prices contributed to expanding the fiscal deficit, mainly through higher fuel subsidies. The NFPS primary deficit is estimated at 1.9 percent of GDP in FY2022 compared with 1.3 percent projected in the July 2022 DSA. Financing sources were limited mainly to the central bank as external budget support remained relatively low. Donor support in FY2022 has been lower after the $80 million provided in late-FY2021 in the aftermath of the August earthquake. Thus, the present value of public debt in September 2022 is estimated at 23.3 percent of GDP.[12]

BACKGROUND ON MACROECONOMIC FORECASTS

9. The baseline assumes a normative policy implementation under a 12-month Staff-Monitored Program (SMP) to restore macroeconomic stability and growth. Nonetheless, growth projections are very conservative over the medium and long term and the outlook is for a modest recovery, sufficient implementation of sound macro policies to restore stability, and implementation of select reforms to help attract some external financing and FDI and raise investment, growth, and real incomes. While the Staff-Monitored Program aims to lay the foundation for an eventual upper-credit-tranche arrangement,

[11] Haiti has had difficulties processing payments to Venezuela for debts incurred under the Petrocaribe agreement owing to issues related to international sanctions. For now, debt service payments to Venezuela are being placed in an escrow account in U.S. dollars held at the BRH.

[12] This number cannot be compared directly with the present value of public debt reported in the 2015 and 2020 DSAs since the coverage of debt has changed to include BRH financing to the government and GDP has been rebased.

reform implementation after the one-year SMP is assumed to be modest given the uncertainties predicting policy commitment beyond 2023. An upside risk would be a significant improvement of the current security situation and a reduction to its economic and social costs which would improve the business climate, permitting higher public investment and raising growth and employment outlooks further while reducing financing pressures.

- Real GDP is projected to turn positive in FY2023, to 0.3 percent, after contracting by 1.5 percent in FY2022, amid a protracted political crisis and the COVID pandemic (Text Table 3); by 1.8 percent in FY2021; 3.3 percent in FY2020; and 1.7 percent in FY2019. Growth for FY2023 is being fueled by a mild rebound in the service sector as social unrest abates. Nonetheless, and as noted above, risks to the growth outlook remain significant—the result of political uncertainty with possible presidential and parliamentary elections, security challenges, and prolonged fuel shortages. Moreover, without comprehensive structural reforms, medium-term growth prospects remain grim given the protracted political-security crisis and collapse in investment. Under the baseline scenario—which assumes some political stability and implementation of select reforms, including in vocational training to boost productivity—growth could reach 1.5 percent over the medium term, given the probability of natural disasters and their effect on growth.[13]

- After peaking at 25.2 percent, year on year, in FY2020, inflation declined gradually to 13.1 percent by September 2021, partly the result of a lagged reaction to the large gourde appreciation. But annual inflation is estimated at 38.7 percent at the end of September 2022. By the end of 2023, annual inflation is projected to drop to 21 percent, with a 12-month period-average rate of 33.4 percent markedly contributing to the GDP deflator which is projected at 33.4 percent in FY2023. As a result, public debt is expected to fall to 25.3 percent of GDP in FY2023—26.1 percent projected in the last DSA—from 29.4 percent in FY2022. Inflation could decline slowly over time under the moderate growth baseline, as monetary policy is expected to conduct short term liquidity operations to manage excess liquidity in the banking system and world market prices for food and fuel stabilize over the medium and long term. A stable real exchange rate vis-à-vis the U.S. dollar is assumed over the medium term following the gradual depreciation in FY2021, with the nominal bilateral rate being driven by inflation differential vis-à-vis the U.S.

- The deficit of the NFPS is projected to decline to 2 percent of GDP in FY2023 from 2.2 percent of GDP in FY2022, as fuel tax revenues would increase, and energy subsidies are reduced to provide the fiscal space to boost other recurrent and growth-enhancing expenditures. The deficit is expected to expand to about 2.7 percent of GDP in FY2025. Spending will revert to more realistic levels and the baseline scenario assumes no change in fuel price policy—given the high uncertainty surrounding the likelihood and timing of a fully-fledged fuel price reform. Declining global oil prices, however, may reduce foregone fuel taxes and somehow increase tax revenues. Over the long term, the deficit is expected

[13] 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 35 percent, based on staff projections for investment and UN projections for labor force growth, and assuming that TFP grows during the projection period 2020-25 at the same rate (1.2 percent) as the estimated average for 2013–19. Growth of 1.5 percent is 0.1 percent above the average observed real rate during 2013–19, when Haiti recorded about 77 natural disasters.

to widen gradually, to average of about 3.3 percent of GDP, taking into account baseline assumptions cited above and the likely impact of natural disasters. Fiscal revenues are expected to recover gradually in the medium supported by the authorities' efforts to boost revenue collection and meaningful progress on revenue mobilization from policy reform to simplify the tax and customs systems and enhance transparency, accountability, and audit capacity, while broadening the tax base. Disasters would raise both current spending for emergency assistance and capital spending for reconstruction. The deficit increase is expected to be financed with external financing, both concessional multilateral and bilateral; some domestic market financing; and financing from the BRH limited to about 2 percent of GDP.

Text Table 3. Haiti: Macroeconomic Assumptions Compared to the Previous DSA 1/

	2022		2023-27 Avg		2028-37 Avg	
	Previous DSA	Current DSA	Previous DSA	Current DSA	Previous DSA	Current DSA
(annual percentage change, unless otherwise indicated)						
Real GDP	0.3	-1.5	1.5	1.2	1.5	1.5
Consumer prices (period average)	26.1	27.6	13.8	16.3	9.7	9.7
(in percent of GDP, unless otherwise indicated)						
Total revenue and grants	8.6	8.1	8.9	9.5	9.7	10.3
Of which: Revenue	5.8	5.4	6.9	7.2	7.6	7.8
Total expenditure	10.1	10.3	11.6	12.1	13.0	13.8
Of which: Capital expenditure	3.5	3.4	3.5	4.1	4.5	5.3
Overall balance	-1.5	-2.2	-2.6	-2.6	-3.3	-3.5
Current account balance	0.8	-2.4	-0.5	-0.8	-2.0	-2.9
Exports of goods and services	6.6	6.9	6.9	6.4	7.1	6.4
Imports of goods and services	28.9	27.9	29.4	24.9	29.5	24.8

Sources: Haitian authorities; and Fund staff estimates and projections.
1/ The previous DSA forecasted data until FY2043, therefore, average presented are conditional to data availability.

- An external current account deficit of 0.8 percent of GDP is expected in FY2023, narrowing a deficit of 2.4 percent the year before. The reduction owes to some improvement in the trade balance despite a rebound in imports. Lower remittance flows, a key channel to smooth consumption, would reduce foreign exchange income making it even more difficult for households to pay higher food prices. The FY2022 deficit reflected lower-than-anticipated official transfers under the SMP, with subdued export and import growth. With no fuel price reform in the baseline scenario, higher fuel subsidies have been crowding out public capital spending, including on critical infrastructure (e.g., roads and ports), resulting in lower export growth. Over the medium and long term, the current account deficit is expected to stabilize at about 0.6 percent of GDP, with remittance inflows projected to follow historical trends.

10. **Future gross financing needs are assumed to be funded mostly by a moderate rise in external concessional financing and domestic debt instruments while annual growth of central bank lending to the government is expected to be contained at 2 percent of GDP or lower**. The SMP is expected to catalyze some external financing to fund more capital expenditures. Nonetheless, in percent of gross financing needs, the share of external financing could fall over the long term as government steps up borrowing through T-bills. Central bank financing, currently unremunerated, is expected to increase at about 2 percent of GDP every year slightly above a level consistent with low inflation (1.5 percent of GDP), with total stock projected at about 15 percent of GDP by 2033. The remaining domestic financing would

come from short-term debt instruments purchased by commercial banks.[14] The latter's share is assumed to increase gradually in the long term as the SMP curbs BRH fiscal financing, the authorities deepen the market for government securities, and given only modest opportunities for commercial banks to diversify their portfolios in a context of fiscal dominance.[15] External debt financing, contracted or guaranteed, is assumed to be mostly non-concessional and growing only moderately in relative terms in light of the implementation of structural reforms.

11. The baseline assumptions are credible. The realism tool shows some differences between past and projected external debt dynamics. These are derived partly from the impact on debt of the FY2020 current account surplus; output contraction during the last three years; exchange rate appreciation; and, for total public debt, from the improved real interest rate dynamics owing to unremunerated financing from the BRH and a larger primary deficit; the latter was due to the uncertainty about the likelihood and timing of fuel price reform (Figure 3). More broadly, the change in public debt to GDP over the past three years owes mainly to changes in the primary deficit, worsened by the real interest rate/growth differential, although exchange rate appreciation was a major contributor to the falling debt in FY2020. Under the baseline scenario, the variables affecting debt ratios remain broadly the same as in the past, except for real GDP growth. Growth is projected to be positive and financing sources are expected to resume gradually, spurred by modest reforms under a Fund-supported program. The past forecast error is either similar for the external debt ratio or lower for the public debt ratio than the median of other LICs and LMICs (Figure 3).

12. 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 modest yet credible pace of adjustment given the uncertainty of fuel price reform (Figure 4). The growth forecast for FY2023 assumes some stabilization of the political and security situation, as witnessed in recent months, unrelated to any projected fiscal adjustment. The baseline growth projection anticipates a modest resumption of economic activity in FY2023 following four years of contraction. Growth would rise modestly over the medium term.[16] This growth path is largely independent of the projected fiscal position, which reflects somewhat more stable tax revenues, a gradual increase in external financing, and limited additional credit from the BRH (Figure 4).

COUNTRY CLASSIFICATION AND STRESS TESTS

13. The value of the composite indicator to assess debt-carrying capacity is 2.77, classified as "medium."[17] 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 during 2013–21) push the index above the 2.69 cut-off value (see Debt Carrying Capacity Table). Relative to the last DSA, the

[14] Real interest rates on domestic debt shown in Table 3 reflect unremunerated central bank financing.
[15] Projected internal financing is assumed to be exclusively in domestic currency.
[16] The DSA forecast for FY23 and FY24 differ from earlier projections due to a more optimistic political and security outlook that would result in stronger economic activity.
[17] The current Composite Index (CI) is estimated at 2.77 and is based on the Bank's 2021 CPIA and the October 2022 WEO. Haiti's debt-carrying capacity remains "medium."

Composite Indicator (CI) has remained stable at around 2.77 from 2.81owing to a stronger contribution from import coverage of reserves and a weaker contribution from growth.

14. This classification sets higher external and public debt thresholds to assess the risk of debt distress. The present value of external debt can reach as high as 40 percent of GDP, or 180 percent of exports of goods and services, and the present value of public debt can hit 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 revenue (Table 1).

15. In addition to the standard stress tests, the analysis considers the effects on debt of a one-off major natural disaster, given Haiti's history of frequent major disasters. The shock assumes damage equivalent to 25 percent of GDP, similar to that caused by Hurricane Matthew in 2016. While the damage and losses following the 2010 earthquake were estimated at 120 percent of FY2009 GDP (old series), this type of disaster is not as statistically frequent as hurricanes and is thus considered a tail risk event.[18] The stress test on combined contingent liabilities on external and domestic debt was updated to reflect available data.

DEBT SUSTAINABILITY

EXTERNAL DEBT SUSTAINABILITY ANALYSIS

16. Under the baseline scenario, most indicators of Haiti's external debt path are under the baseline scenario, most indicators of Haiti's external debt path are projected to breach indicative thresholds except for the present value of debt to GDP and debt-service-to-revenue (Figure 1 and Table 3). Slightly larger primary deficits over the medium term, funded by a gradual increase in external concessional financing, amid subdued export growth, bring the present value of PPG external debt as a share of exports into the "high" range of debt distress thresholds. The present value of the debt-to-export ratio, which starts at about 93.6 percent in FY2022, reaches 189.3 percent in FY2035—breaching the 180 percent threshold and staying above that thereafter (rising to 264.2 percent by FY2043). The debt-service-to-exports ratio remains below the threshold of 15 percent under the baseline scenario until FY2040; it exceeds that threshold by FY2041, and it hits 16.8 percent by FY2043. Breaches in thresholds of these two key debt indicators over a longer (20-year) horizon partly reflect subdued export growth—attributable to Haiti's institutional fragility, reduced productive capacity and competitiveness during the protracted political crisis, prolonged subsidization of petroleum products, vulnerability to large natural disasters, and the impact of climate change. Meanwhile, contrary to previous DSA, the debt-service-to-revenue ratio is below the threshold until FY2043 as fiscal revenues would recover gradually in the medium due to the authorities' efforts to boost revenue collection and meaningful progress on revenue mobilization. The present value of external debt to GDP rises steadily but remains below the threshold indicating debt distress. It is projected to gradually increase to 10.4 percent by FY2033 from 6.5 percent in FY2022, reaching 18.3 percent in FY2043. This projection is based on a gradual resumption of external borrowing

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

to finance public investment projects, which in turn is associated with improved political stability and policy implementation[19].

17. The historical scenario highlights the realism of the baseline scenario. Debt arising from oil imports financed by Venezuela's *Petrocaribe* program rose rapidly during 2012–18. If the key macroeconomic variables in the baseline projection were replaced by their 10-year historical averages, the resulting path of external debt would yield a much larger and unrealistic debt accumulation, including earlier and more prolonged threshold breaches for many indicators of PPG external debt. Under the SMP baseline, which excludes another *Petrocaribe*-type program, external financing would resume gradually from a relatively low base, leading to breach of the debt-to-export threshold only over a longer (20-year) horizon.

18. Stress tests confirm the vulnerability of debt to lower remittances and to natural disasters. A shock to non-debt-creating flows (i.e., a decline in both current transfers and FDI inflows by one standard deviation) would raise the present value of external debt above the 180 percent-of-export threshold much earlier (2025) and the debt-service-to-export ratio above the 15 percent threshold after seven years (2029). A drop in remittances would pose a more severe shock. A natural disaster shock has a sizable impact on the external debt trajectory, bringing also the external-debt-to-export ratio above its threshold (Table 4).

Public Sector Debt Sustainability Analysis

19. Public debt is sustainable under the baseline scenario. Total public debt is projected at about 27 percent of GDP until 2027, rising to 48 percent by FY2043. In present value terms, public debt would peak at 42 percent of GDP in FY2043, some 13 percentage points below the corresponding benchmark (Figure 2, Table 3). A few characteristics of the debt profile help limit potential vulnerabilities, in particular:

- its relatively long maturity to multilateral creditors,
- a relatively high share denominated in gourdes (about 57 percent), and
- the investment base, consisting mostly of public agencies.

Thanks to these features, Haiti's government has funded its gross financing needs. Debt service appears somehow moderate over a 10-year horizon, as financing from the BRH, a significant portion of public debt (including principal and interest payments), are not serviced in the short term. But repayment of the BRH financing will raise debt service over the long run substantially, due to the conditions attached to its reimbursement (see paragraph 4). As a result, despite a moderate fiscal deficit, higher domestic debt reimbursement over the long run could lead to gross financing needs projected at about 15.4 percent of GDP by FY2033 compared to 2.4 percent of GDP in FY2023. With about 90 percent of these gross financing needs expected to be covered by domestic borrowing and project loans, rollover risk would likely be mitigated. Moreover, improved tax revenue collection, and financial deepening reflecting an increased

[19] Debt Sustainability Framework (DSF) guidance note, paragraph 87.

demand for government securities by domestic banks, would help fund Haiti's annual gross financing needs over the medium and long terms.

20. While the public debt ratio remains largely below its benchmark for all stress test scenarios, it is highly vulnerable to natural disasters. Under the most extreme natural disaster scenario, the present value of the public debt-to-GDP ratio barely approaches 55 percent over a longer horizon (20-year) after the year of the shock (Table 5). Nonetheless, it grows by 60 percent in the aftershock to 44 percent in 2025 (against the 23.3 percent baseline) before declining steadily. The ratio exhibits a tail effect over a longer horizon, slightly approaching the threshold by about FY2041, reflecting a higher probability of natural disasters over the longer term (Table 5). This proximity to the threshold over a longer horizon warrants consideration.

RISK RATING AND VULNERABILITIES

21. The debt outlook for Haiti remains subject to risks and vulnerabilities. Public debt is expected to stabilize as a share of GDP in the near term—owing to the modest economic recovery expected under the SMP despite the risk impact of natural disasters (Table 3). Potential growth and external financing would be stronger if reforms are sustained. The improvement in revenue collection is underpinned by the implementation of tax reforms such as the adoption of a new tax code in December 2022 and revisions of customs codes and tariffs also adopted in December 2022. Rollover risk is low, assuming continued BRH financing over the next four-five years. Over the long term, however, central bank financing of the fiscal deficit is expected to stabilize at 2.0 percent of GDP, gradually replaced by issuance of short-term T-bills. In this environment, although the present value of the external public debt-to-GDP ratio is projected to be below its indicative benchmark under the baseline, two indicators of external debt (e.g., the present value of the debt-to-export ratio and debt-service-to-exports) would breach their indicative benchmarks by 2035 and FY2041 respectively, owing to subdued export growth. A drop in remittances or a natural disaster shock similar in magnitude to Hurricane Matthew would also bring higher debt ratios and breaches in some thresholds of external debt indicators. External debt service capacity is also vulnerable to a drop in official and private transfers and FDI, as illustrated by the debt-service-to-revenue proximity to the threshold (Table 4). Haiti's debt-carrying capacity classification has remained "medium," unchanged from the last DSA. This calls for stepping up efforts to strengthen revenue mobilization and reforms to raise investment and growth, as recommended by the SMP. In the long run, it will be essential for the government to follow through recent tax reforms to mobilize additional revenues and improve efficiency of government expenditures through ongoing PFM reforms linked to the IMF Staff Monitored Program (SMP), ii) develop domestic markets, iii) growth enhancement policies, iv) avoid non-concessional external financing. These reforms will allow for a higher potential growth, about 1.5 percent currently assumed in this DSA.

22. Haiti's debt distress risk rating remains "high." Although the GDP rebasing nearly halved the debt-to-GDP ratio, the outlook assumes increased external concessional financing, in place of some monetary financing by the BRH, to fund slightly higher primary deficits over the medium term amid subdued export growth and weaker revenue mobilization. This combination results in threshold breaches, as observed under the baseline scenario in the previous DSA. Looking beyond the baseline, the most likely stress scenarios linked to the high probability of natural disasters show that external debt and external debt service would breach some thresholds. Another major natural disaster or fall in remittances would substantially worsen public debt dynamics, even over a 10-year horizon. Thus, consideration of these vulnerabilities in the DSA justifies maintaining the risk of debt distress as "high." The DSA underscores the need to implement the authorities' economic reform program supported by the SMP and to prepare for and manage the adverse effects of natural disasters.

AUTHORITIES' VIEWS

23. The authorities agreed with the thrust of the debt sustainability analysis and its conclusions. They viewed staff's baseline scenario as realistic but emphasized the potentially positive impact of increased tax revenue mobilization and exports if several important sectors of Haiti's economy rebound faster with further political stabilization. They cited Haiti's lower ratios of debt to GDP as a result of GDP rebasing and agreed that the country's risk of debt distress merits a classification of "high" while its debt-carrying capacity should remain at "medium." They noted that increased investment is critical for raising potential growth, which could widen the current account deficit over the medium term. The BRH highlighted some implications of reforms related to its governance and the ongoing transition to IFRS-9, which could alter the accounting of the central bank's advances to the government, as well as interest payments. Moreover, the BRH noted that efforts to deepen financial markets, and to develop the market for government debt securities in particular, could help gradually reduce monetary financing to the government.

Table 1. 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
	2.77	2.81	2.80

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	2.749	1.06	38%
Real growth rate (in percent)	2.719	0.405	0.01	0%
Import coverage of reserves (in percent)	4.052	43.991	1.78	64%
Import coverage of reserves^2 (in percent)	-3.990	19.352	-0.77	-28%
Remittances (in percent)	2.022	13.588	0.27	10%
World economic growth (in percent)	13.520	3.050	0.41	15%
CI Score			2.767	100%
CI rating			Medium	

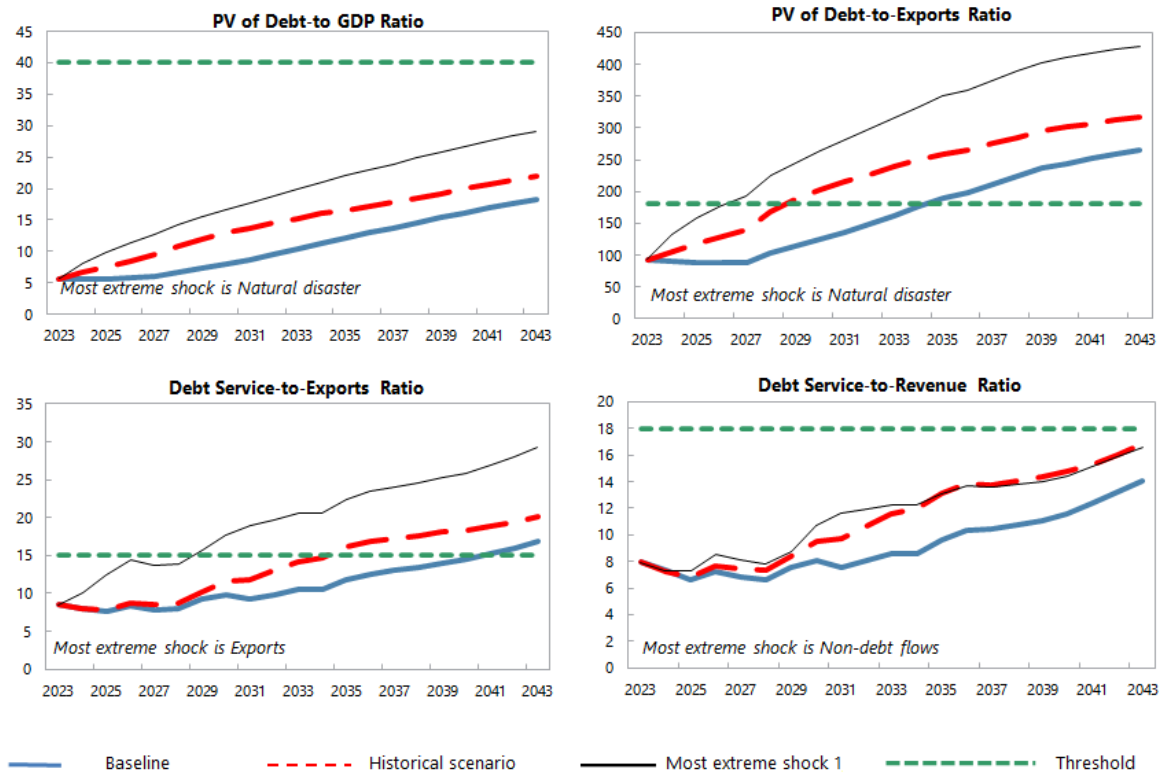
New framework	Cut-off values		
Weak	CI <	2.69	
Medium	2.69	≤ CI ≤	3.05
Strong	CI >	3.05	

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

Figure 1. Haiti: Indicators of Public and Publicly Guaranteed External Debt Under Alternatives Scenarios, 2023–43



Customization of Default Settings		
	Size	Interactions
Tailored Tests		
Combined CLs	Yes	
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	1.6%	1.6%
USD Discount rate	5.0%	5.0%
Avg. maturity (incl. grace period)	28	28
Avg. grace period	5	5

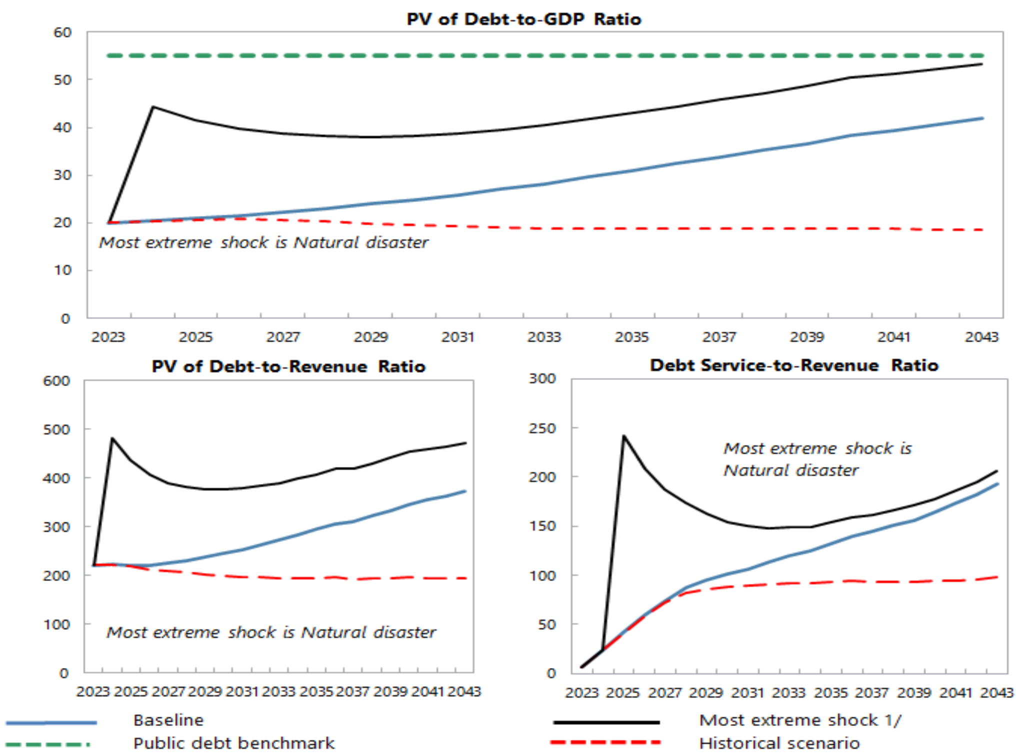
* Note: All the additional financing needs generated by the shocks under the stress tests are assumed to be covered by PPG external MLT debt in the external DSA. Default terms of marginal debt are based on baseline 10-year projections.

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 2033. 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 extreme 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, 2023–43



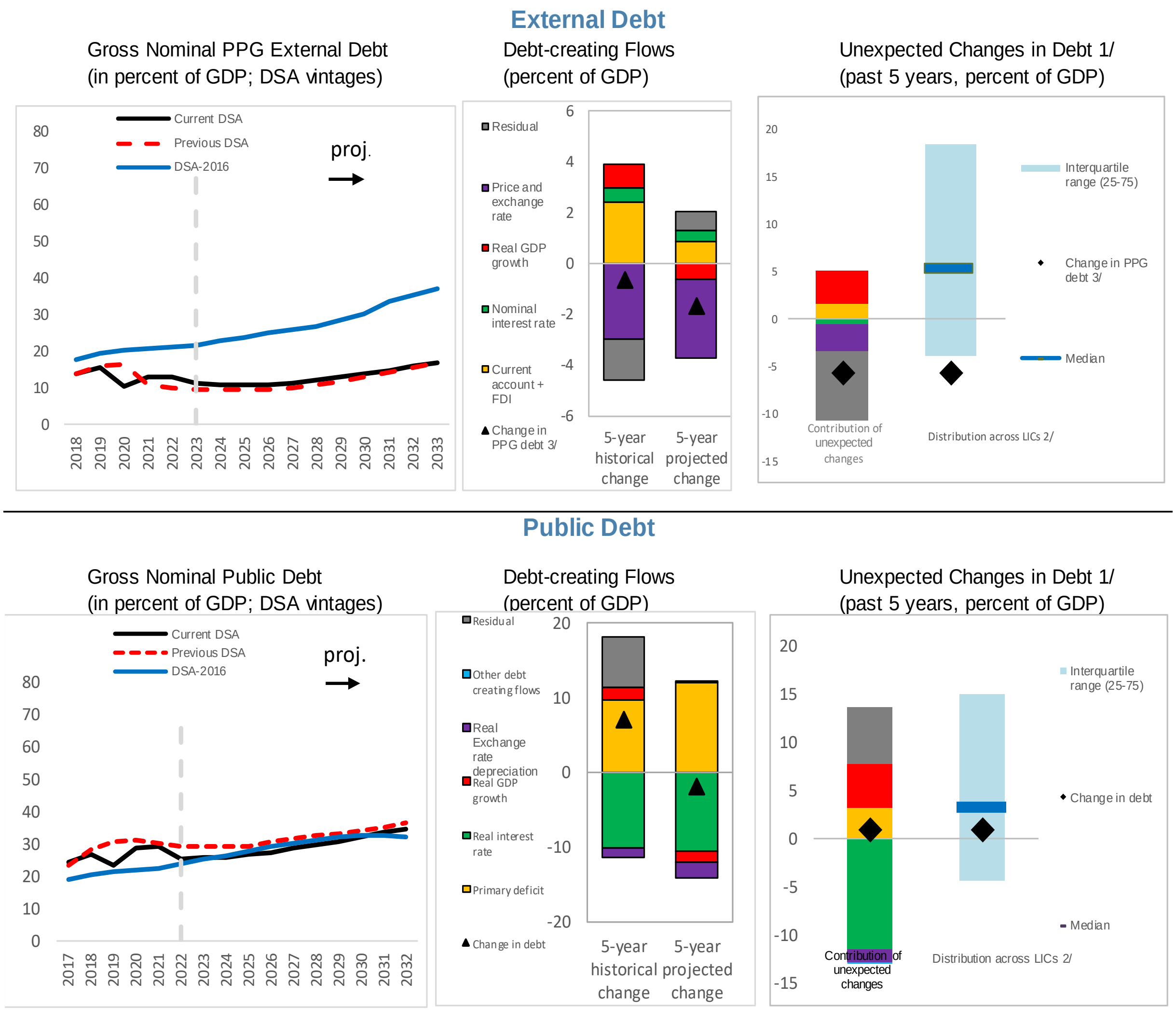
Borrowing Assumptions for Stress Tests*	Default	User defined
Shares of marginal debt		
External PPG medium and long-term	15%	15%
Domestic medium and long-term	0%	0%
Domestic short-term	85%	85%
Terms of marginal debt		
External MLT debt		
Avg. nominal interest rate on new borrowing in USD	1.6%	1.6%
Avg. maturity (incl. grace period)	28	28
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	-10.6%	-10.6%

* 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 2033. 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 extreme 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



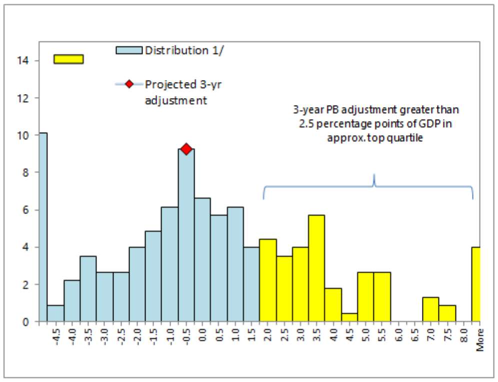
1/ Difference between anticipated and actual contributions on debt ratios.

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.

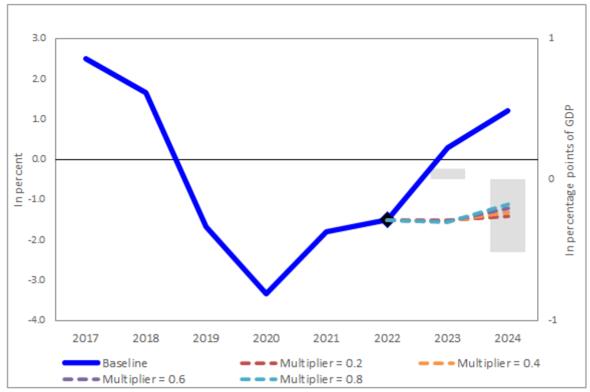
Figure 4. Haiti: Realism Tools

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



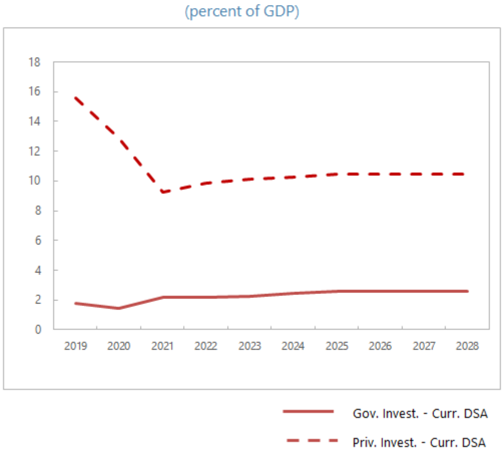
1/ Data cover Fund-supported programs for LICs (excluding emergency financing) approved since 1990. The size of 3-year adjustment from program inception is found on the horizontal axis; the percent of sample is found on the vertical axis.

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 2. Haiti: Structure of Public Debt and Debt Service
(Fiscal-year basis)

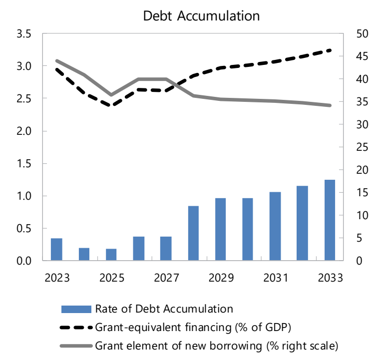
	Debt (at end-2021)			**Debt Service**					
		In percent of		2021	2022	2023	2021	2022	2023
	US$ millions	total debt	GDP	US$ millions			In percent of GDP		
Total	**4966.4**	**100.0**	**28.5**	**119.5**	**122.3**	**126.8**	**0.7**	**0.6**	**0.5**
External	**2258.3**	**45.5**	**12.9**	**119.5**	**122.3**	**126.8**	**0.7**	**0.6**	**0.5**
Multilateral creditors	**262.8**	**5.3**	**1.5**	**15.8**	**18.8**	**23.4**	**0.1**	**0.1**	**0.1**
IMF	175.1	3.5	1.0	7.5	10.6	15.3	0.0	0.1	0.1
OPEC	42.9	0.9	0.2	5.2	5.1	5.0	0.0	0.0	0.0
IFAD	44.8	0.9	0.3	3.1	3.1	3.1	0.0	0.0	0.0
IDA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bilateral creditors	**1993.1**	**40.1**	**11.4**	**103.7**	**103.5**	**103.3**	**0.6**	**0.5**	**0.4**
Paris Club	-	-	-	-	-	-	-	-	-
Non-Paris Club	1993.1	40.1	11.4	103.7	103.5	103.3	0.6	0.5	0.4
Venezuela	1853.0	37.3	10.6	96.6	96.5	96.5	0.6	0.5	0.4
PetroCaribe	1826.2	36.8	10.5	94.5	94.5	94.5	0.5	0.5	0.4
BANDES	26.8	0.5	0.2	2.1	2.0	2.0	0.0	0.0	0.0
Taiwan, China	140.1	2.8	0.8	7.1	7.0	6.8	0.0	0.0	0.0
Bonds	-	-	-	-	-	-	-	-	-
Commercial creditors	-	-	-	-	-	-	-	-	-
Other international creditors	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Restructured debt	2.4	0.0	0.0	-	-	-	-	-	-
Domestic	**2708.1**	**54.5**	**15.5**	-	-	-	-	-	-
Held by non-residents, total	-	-	-	-	-	-	-	-	-
Held by residents, total	2708.1	54.5	15.5 #	-	-	-	-	-	-
Loans, total	2708.1	54.5	15.5	-	-	-	-	-	-
BRH	2063.6	41.6	11.8	-	-	-	-	-	-
Other creditors (incl.T-Bills)	644.6	13.0	3.7	-	-	-	-	-	-
Memo items									
Collaterized debt	-	-	-	-	-	-	-	-	-
Contingent liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nominal GDP (US$ millions)	21016.8								

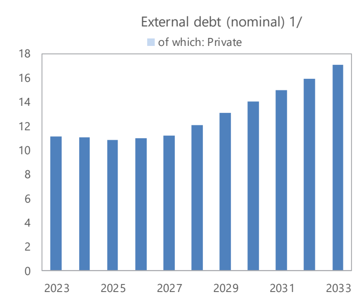
Sources: Haitian authorities, and Fund staff estimates.

Table 3. Haiti: External Debt Sustainability Framework, Baseline Scenario, 2020–2043
(In Percent of GDP, unless otherwise indicated)

	Actual			Projections								Average 8/	
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2033	2043	Historical	Projections
External debt (nominal) 1/	10.5	12.9	12.9	11.2	11.1	10.8	11.0	11.2	12.1	17.0	22.7	13.2	12.9
of which: public and publicly guaranteed (PPG)	10.5	12.9	12.9	11.2	11.1	10.8	11.0	11.2	12.1	17.0	22.7	13.2	12.9
Change in external debt	-5.3	2.4	-0.1	-1.7	-0.1	-0.2	0.1	0.2	0.8	1.1	-0.3		
Identified net debt-creating flows	-1.0	-4.0	2.6	0.4	0.0	0.0	0.2	0.2	0.3	1.2	0.4	1.5	0.5
Non-interest current account deficit	-1.2	-0.6	2.3	0.7	0.4	0.5	0.8	1.1	0.9	3.1	2.3	2.4	1.7
Deficit in balance of goods and services	22.0	18.7	21.0	18.7	18.4	18.4	18.4	18.5	18.4	18.4	17.9	21.4	18.4
Exports	7.0	6.0	6.9	6.1	6.3	6.4	6.5	6.7	6.4	6.4	6.9		
Imports	29.0	24.7	27.9	24.8	24.7	24.8	24.9	25.2	24.8	24.8	24.8		
Net current transfers (negative = inflow)	-22.9	-19.1	-18.5	-17.6	-17.6	-17.5	-17.2	-16.9	-17.0	-14.7	-15.0	-18.6	-16.2
of which: official	-0.9	-0.6	-1.1	-2.5	-2.3	-2.2	-0.2	-0.2	-0.2	-0.5	-1.0		
Other current account flows (negative = net inflow)	-0.3	-0.2	-0.2	-0.3	-0.4	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.4	-0.5
Net FDI (negative = inflow)	-0.2	-0.2	-0.3	-0.4	-0.4	-0.4	-0.6	-0.9	-0.5	-1.8	-1.8	-0.8	-1.1
Endogenous debt dynamics 2/	0.4	-3.2	0.6	0.1	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2		
Contribution from nominal interest rate	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2		
Contribution from real GDP growth	0.5	0.1	0.2	0.0	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3		
Contribution from price and exchange rate changes	-0.2	-3.4	0.3	...	...	...	...	...	...	...	...		
Residual 3/	-4.3	6.4	-2.7	-2.1	-0.1	-0.2	0.0	0.0	0.5	-0.1	-0.7	-0.9	-0.2
of which: exceptional financing	-0.7	-0.5	-0.4	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	...	...	6.5	5.7	5.7	5.6	5.8	5.9	6.6	10.4	18.3		
PV of PPG external debt-to-exports ratio	...	...	93.6	92.4	90.3	88.0	88.4	88.7	102.7	162.3	264.2		
PPG debt service-to-exports ratio	12.5	9.5	8.8	8.5	8.0	7.6	8.4	7.9	8.0	10.5	16.8		
PPG debt service-to-revenue ratio	14.1	9.6	11.2	8.0	7.3	6.7	7.3	6.9	6.6	8.5	14.1		
Gross external financing need (Million of U.S. dollars)	-76.5	-49.9	527.6	208.2	131.0	147.4	208.0	213.0	258.3	685.3	837.2		
Key macroeconomic assumptions													
Real GDP growth (in percent)	-3.3	-1.8	-1.5	0.3	1.2	1.5	1.5	1.5	1.5	1.5	1.5	0.6	1.4
GDP deflator in US dollar terms (change in percent)	1.5	47.5	-2.3	19.5	2.7	2.2	2.3	1.9	1.6	2.1	2.1	4.3	3.7
Effective interest rate (percent) 4/	0.9	1.3	0.7	0.8	0.8	0.8	0.8	0.9	1.0	1.0	0.8	0.7	0.9
Growth of exports of G&S (US dollar terms, in percent)	-41.5	23.8	11.3	6.7	5.9	6.0	6.1	6.1	-1.5	3.7	5.2	2.3	4.3
Growth of imports of G&S (US dollar terms, in percent)	-18.5	23.5	8.6	6.6	3.4	4.2	4.4	4.5	1.5	3.7	3.7	3.8	3.9
Grant element of new public sector borrowing (in percent)	...	...	...		40.9	36.4	40.0	40.0	36.3	34.3	32.9	...	36.8
Government revenues (excluding grants, in percent of GDP)	6.2	5.9	5.4	6.6	6.9	7.3	7.5	7.7	7.7	7.9	8.3	7.0	7.5
Aid flows (in Million of US dollars) 5/	-6542.7	-2155.3	-5265.6	740.5	657.4	603.8	714.6	734.4	767.6	976.8	1599.3		
Grant-equivalent financing (in percent of GDP) 6/	...	...	...	2.9	2.6	2.4	2.6	2.6	2.8	3.2	3.8	...	2.9
Grant-equivalent financing (in percent of external financing) 6/	...	...	...	84.5	86.0	86.0	80.7	81.1	73.3	69.5	70.3	...	76.9
Nominal GDP (Million of US dollars)	14,508	21,017	20,223	24,236	25,192	26,128	27,119	28,054	28,920	34,478	49,375		
Nominal dollar GDP growth	-1.9	44.9	-3.8	19.8	3.9	3.7	3.8	3.4	3.1	3.7	3.7	4.9	5.1
Memorandum items:													
PV of external debt 7/	...	...	6.5	5.7	5.7	5.6	5.8	5.9	6.6	10.4	18.3		
In percent of exports	...	...	93.6	92.4	90.3	88.0	88.4	88.7	102.7	162.3	264.2		
Total external debt service-to-exports ratio	12.5	9.5	8.8	8.5	8.0	7.6	8.4	7.9	8.0	10.5	16.8		
PV of PPG external debt (in Million of US dollars)			1306.4	1376.4	1425.1	1471.1	1567.4	1668.9	1903.8	3585.0	9024.4		
(PVt-PVt-1)/GDPt-1 (in percent)				0.3	0.2	0.2	0.4	0.4	0.8	1.3	1.3		
Non-interest current account deficit that stabilizes debt ratio	4.0	-3.0	2.4	2.4	0.5	0.7	0.6	0.9	0.1	2.0	2.6		

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

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

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

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

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

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

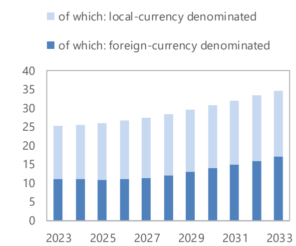
8/ Historical averages are generally derived over the past 10 years, subject to data availability, whereas projections averages are over the first year of projection and the next 10 years.

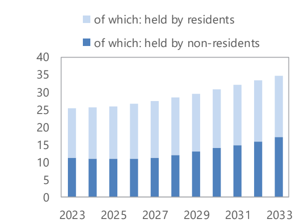
Table 4. Haiti: Public Sector Debt Sustainability Framework, Baseline Scenario, 2020–2043
(In Percent of GDP, unless otherwise indicated)

	Actual			Projections								Average 6/	
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2033	2043	Historical	Projections
Public sector debt 1/	23.3	28.5	29.4	25.3	25.5	25.9	26.6	27.4	28.4	34.7	48.0	24.9	29.0
of which: external debt	10.5	12.9	12.9	11.2	11.1	10.8	11.0	11.2	12.1	17.0	22.7	13.2	12.9
Change in public sector debt	-3.2	5.1	0.9	-4.1	0.2	0.4	0.7	0.8	1.0	1.4	1.0		
Identified debt-creating flows	-5.4	3.5	-2.2	-4.4	0.2	0.4	0.8	0.9	1.1	1.4	1.1	0.5	0.5
Primary deficit	2.1	2.3	1.9	1.8	2.3	2.5	2.8	2.6	2.6	3.0	4.0	2.1	2.6
Revenue and grants	7.5	8.2	8.1	9.1	9.2	9.5	9.8	9.9	10.0	10.4	11.3	9.7	9.9
of which: grants	1.3	2.3	2.8	2.5	2.3	2.2	2.2	2.2	2.3	2.5	3.0		
Primary (noninterest) expenditure	9.6	10.5	10.0	10.9	11.5	11.9	12.5	12.5	12.6	13.4	15.2	11.8	12.5
Automatic debt dynamics	-7.5	1.2	-4.1	-6.2	-2.1	-2.0	-2.0	-1.7	-1.6	-1.6	-2.9		
Contribution from interest rate/growth differential	-0.9	-1.8	-3.5	-4.4	-2.0	-2.0	-1.9	-1.7	-1.6	-1.6	-2.1		
of which: contribution from average real interest rate	-1.8	-2.2	-4.0	-4.4	-1.7	-1.6	-1.5	-1.3	-1.1	-1.1	-1.4		
of which: contribution from real GDP growth	0.9	0.4	0.4	-0.1	-0.3	-0.4	-0.4	-0.4	-0.4	-0.5	-0.7		
Contribution from real exchange rate depreciation	-6.6	3.0	-0.5	...	...	...	...	...	...	...	...		
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	2.2	1.6	3.1	-1.4	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.9	0.1	-0.2
Sustainability indicators													
PV of public debt-to-GDP ratio 2/	...	...	23.3	20.1	20.3	20.9	21.6	22.3	23.1	28.2	42.0		
PV of public debt-to-revenue and grants ratio	...	...	286.4	220.7	221.9	220.9	221.1	225.8	231.3	272.4	372.7		
Debt service-to-revenue and grants ratio 3/	13.5	10.1	10.2	6.9	24.2	41.4	59.1	73.8	87.2	119.8	193.1		
Gross financing need 4/	3.2	3.1	2.7	2.4	4.5	6.4	8.5	9.9	11.3	15.4	25.7		
Key macroeconomic and fiscal assumptions													
Real GDP growth (in percent)	-3.3	-1.8	-1.5	0.3	1.2	1.5	1.5	1.5	1.5	1.5	1.5	0.6	1.4
Average nominal interest rate on external debt (in percent)	1.0	0.9	0.8	0.8	0.8	0.8	0.9	0.9	1.0	1.0	0.8	0.7	0.9
Average real interest rate on domestic debt (in percent)	-15.9	-14.2	-20.2	-24.4	-11.3	-10.4	-9.3	-7.9	-6.5	-5.5	-4.7	-10.6	-8.9
Real exchange rate depreciation (in percent, + indicates depreciation)	-40.7	28.9	-4.4	...	...	...	...	...	...	...	...	1.3	...
Inflation rate (GDP deflator, in percent)	20.6	19.3	27.6	33.4	14.0	12.9	11.5	9.7	8.1	7.0	7.0	13.7	11.4
Growth of real primary spending (deflated by GDP deflator, in percent)	-5.5	6.9	-5.9	9.1	6.8	5.6	6.4	1.6	2.2	2.4	3.0	-3.7	4.1
Primary deficit that stabilizes the debt-to-GDP ratio 5/	5.3	-2.9	1.0	5.8	2.1	2.1	2.1	1.8	1.6	1.7	3.0	1.1	2.2
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 5. Haiti: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2023–2043 (In Percent)

	Projections 1/																				
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
PV of debt-to GDP ratio																					
Baseline	6	6	6	6	6	7	7	8	9	10	10	11	12	13	14	15	15	16	17	18	18
A. Alternative Scenarios																					
A1. Key variables at their historical averages in 2023-2033 2/	6	7	8	8	9	11	12	13	14	15	15	16	17	17	18	19	19	20	21	21	22
B. Bound Tests																					
B1. Real GDP growth	6	6	6	6	7	7	8	9	10	11	12	13	13	14	15	16	17	18	19	20	20
B2. Primary balance	6	6	6	6	7	7	8	9	10	10	11	12	13	14	15	15	16	17	18	18	19
B3. Exports	6	7	8	8	8	9	10	10	11	12	13	13	14	15	16	16	17	18	18	19	20
B4. Other flows 3/	6	8	10	10	10	11	11	12	13	13	14	15	15	16	16	17	18	18	19	19	20
B5. Depreciation	6	7	3	4	4	4	5	6	7	9	10	11	12	14	15	16	17	18	19	20	21
B6. Combination of B1-B5	6	8	9	9	10	10	11	12	12	13	14	15	15	16	17	18	18	19	20	20	21
C. Tailored Tests																					
C1. Combined contingent liabilities	6	6	7	7	8	9	10	10	11	12	13	14	15	16	17	17	18	19	20	20	21
C2. Natural disaster	6	8	10	11	13	14	15	17	18	19	20	21	22	23	24	25	26	27	28	28	29
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	92	90	88	88	89	103	114	125	136	149	162	176	**189**	**199**	**212**	**224**	**236**	**244**	**252**	**259**	**264**
A. Alternative Scenarios																					
A1. Key variables at their historical averages in 2023-2033 2/	92	106	117	130	141	167	**187**	**203**	**215**	**226**	**238**	**249**	**259**	**265**	**275**	**285**	**295**	**301**	**306**	**312**	**317**
B. Bound Tests																					
B1. Real GDP growth	92	90	88	88	89	103	114	125	136	149	162	176	**189**	**199**	**212**	**224**	**236**	**244**	**252**	**259**	**264**
B2. Primary balance	92	92	93	96	98	114	126	137	149	162	175	**189**	**202**	**211**	**223**	**235**	**247**	**255**	**262**	**268**	**273**
B3. Exports	92	129	**194**	**194**	**193**	**219**	**237**	**253**	**268**	**285**	**304**	**323**	**341**	**353**	**370**	**388**	**404**	**415**	**424**	**432**	**438**
B4. Other flows 3/	92	123	152	151	150	168	179	**188**	**197**	**206**	**217**	**228**	**238**	**244**	**253**	**263**	**273**	**278**	**282**	**286**	**289**
B5. Depreciation	92	90	42	43	44	56	67	77	91	106	122	138	153	165	**180**	**194**	**209**	**219**	**229**	**238**	**246**
B6. Combination of B1-B5	92	137	132	170	169	**191**	**205**	**217**	**230**	**243**	**258**	**273**	**287**	**296**	**310**	**323**	**337**	**345**	**351**	**357**	**362**
C. Tailored Tests																					
C1. Combined contingent liabilities	92	102	107	113	117	136	150	163	176	**189**	**204**	**218**	**232**	**241**	**254**	**267**	**279**	**287**	**294**	**300**	**305**
C2. Natural disaster	92	133	158	179	**193**	**225**	**246**	**264**	**282**	**299**	**317**	**334**	**350**	**360**	**374**	**389**	**403**	**411**	**418**	**423**	**428**
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	9	8	8	8	8	8	9	10	9	10	10	11	12	13	13	13	14	14	15	16	17
A. Alternative Scenarios																					
A1. Key variables at their historical averages in 2023-2033 2/	9	8	8	9	8	9	10	12	12	13	14	15	16	17	17	18	18	18	19	19	20
B. Bound Tests																					
B1. Real GDP growth	9	8	8	8	8	8	9	10	9	10	10	11	12	13	13	13	14	14	15	16	17
B2. Primary balance	9	8	8	8	8	8	9	10	10	11	11	11	13	13	14	14	15	15	16	17	18
B3. Exports	9	10	12	14	14	14	16	18	19	20	21	21	22	23	24	25	25	26	27	28	29
B4. Other flows 3/	9	8	8	10	9	9	11	13	14	15	15	15	16	17	17	17	18	18	19	19	20
B5. Depreciation	9	8	8	7	7	7	8	9	6	6	7	7	9	10	10	11	11	12	13	14	15
B6. Combination of B1-B5	9	9	11	12	11	12	13	16	16	17	18	18	19	20	20	21	21	22	23	23	24
C. Tailored Tests																					
C1. Combined contingent liabilities	9	8	8	9	8	9	10	11	10	11	11	11	13	13	14	14	15	15	16	17	17
C2. Natural disaster	9	8	9	10	10	11	12	13	12	13	14	14	15	16	16	17	17	18	18	19	20
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	8	7	7	7	7	7	8	8	8	8	9	9	10	10	10	11	11	12	12	13	14
A. Alternative Scenarios																					
A1. Key variables at their historical averages in 2023-2033 2/	8	7	7	8	7	7	8	10	10	11	12	12	13	14	14	14	14	15	15	16	17
B. Bound Tests																					
B1. Real GDP growth	8	8	7	8	8	7	8	9	8	9	9	10	11	11	12	12	12	13	14	15	16
B2. Primary balance	8	7	7	7	7	7	8	8	8	9	9	9	10	11	11	11	12	12	13	14	15
B3. Exports	8	7	7	8	8	7	8	9	10	10	11	11	12	12	12	13	13	13	14	15	16
B4. Other flows 3/	8	7	7	9	8	8	9	11	12	12	12	12	13	14	14	14	14	14	15	16	17
B5. Depreciation	8	9	8	8	7	7	8	9	6	7	7	7	9	10	10	11	11	12	13	14	15
B6. Combination of B1-B5	8	8	8	9	8	8	9	11	11	12	12	12	13	14	14	14	14	15	15	16	17
C. Tailored Tests																					
C1. Combined contingent liabilities	8	7	7	8	7	7	8	9	8	9	9	9	10	11	11	11	12	12	13	14	15
C2. Natural disaster	8	7	7	9	9	9	10	10	10	10	11	11	12	13	13	13	13	14	14	15	16
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 6. Haiti: Sensitivity Analysis for Key Indicators of Public Debt, 2023–2043

	Projections 1/																				
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
PV of Debt-to-GDP Ratio																					
Baseline	20	20	21	22	22	23	24	25	26	27	28	30	31	32	34	35	37	38	39	41	42
A. Alternative Scenarios																					
A1. Key variables at their historical averages in 2023-2033 2/	20	20	21	21	21	20	20	19	19	19	19	19	19	19	19	19	19	19	19	19	19
B. Bound Tests																					
B1. Real GDP growth	20	22	24	25	27	28	29	31	33	34	36	38	40	42	43	45	47	49	51	52	54
B2. Primary balance	20	22	23	23	24	25	25	26	27	28	29	31	32	33	35	36	38	39	40	42	43
B3. Exports	20	21	23	24	25	25	26	27	28	29	30	31	33	34	35	37	38	40	41	42	43
B4. Other flows 3/	20	22	25	26	27	27	28	29	30	31	32	33	34	35	37	38	39	41	41	43	44
B5. Depreciation	20	20	20	20	21	21	21	22	22	23	24	24	25	26	27	28	29	31	32	33	34
B6. Combination of B1-B5	20	21	22	22	22	23	24	25	26	27	28	30	31	32	34	35	37	38	40	41	42
C. Tailored Tests																					
C1. Combined contingent liabilities	20	27	27	27	27	27	28	28	29	30	31	33	34	36	37	38	40	41	42	44	45
C2. Natural disaster	20	44	42	40	39	38	38	38	39	40	41	42	43	44	46	47	49	50	51	52	53
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	221	222	221	221	226	231	238	245	254	263	272	283	295	307	311	322	333	346	355	363	373
A. Alternative Scenarios																					
A1. Key variables at their historical averages in 2023-2033 2/	221	222	218	213	210	206	202	199	197	196	195	194	195	196	192	193	194	196	195	194	193
B. Bound Tests																					
B1. Real GDP growth	221	233	249	255	265	275	286	298	311	324	337	352	367	382	389	403	418	434	444	454	465
B2. Primary balance	221	235	244	241	243	247	252	258	266	275	283	294	305	316	321	331	342	354	362	371	379
B3. Exports	221	231	246	245	250	255	261	268	275	284	292	301	312	322	326	335	345	358	365	372	380
B4. Other flows 3/	221	245	266	264	268	274	280	286	292	300	307	315	325	335	337	346	355	366	372	379	386
B5. Depreciation	221	223	215	213	213	213	214	217	221	226	231	238	246	254	257	264	273	283	290	297	305
B6. Combination of B1-B5	221	226	227	221	226	231	238	245	254	263	272	283	295	307	311	322	333	346	355	364	373
C. Tailored Tests																					
C1. Combined contingent liabilities	221	297	283	274	272	273	276	281	288	296	304	314	325	336	340	350	361	374	381	389	397
C2. Natural disaster	221	481	438	407	390	381	376	376	379	384	390	398	408	418	420	430	441	454	459	464	471
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	7	24	41	59	74	87	95	101	107	113	120	125	132	140	144	150	156	164	173	183	193
A. Alternative Scenarios																					
A1. Key variables at their historical averages in 2023-2033 2/	7	24	42	59	72	82	87	89	90	91	92	92	94	95	94	94	94	94	95	96	98
B. Bound Tests																					
B1. Real GDP growth	7	25	47	72	91	109	119	128	135	143	151	157	166	175	180	187	195	204	213	224	236
B2. Primary balance	7	24	52	77	87	97	102	107	112	117	123	128	135	143	147	153	159	167	175	185	195
B3. Exports	7	24	42	60	74	88	95	102	109	115	121	126	134	141	146	152	158	165	174	184	194
B4. Other flows 3/	7	24	42	60	75	88	96	103	110	116	123	127	135	142	147	153	159	166	175	185	195
B5. Depreciation	7	24	40	54	71	83	91	96	102	107	113	118	125	132	136	142	147	155	163	171	181
B6. Combination of B1-B5	7	24	41	59	74	87	95	101	107	114	120	125	132	140	144	150	157	164	173	183	193
C. Tailored Tests																					
C1. Combined contingent liabilities	7	24	100	102	106	112	114	116	118	122	127	131	137	144	148	154	159	167	175	185	195
C2. Natural disaster	7	24	242	208	187	174	163	155	150	149	149	150	154	159	161	166	171	178	186	195	206
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.