Honduras: Debt Sustainability Analysis 2006

This Debt Sustainability Analysis paper for Honduras was prepared jointly by a staff team of the World Bank and International Monetary Fund as background documentation for the periodic consultation with the member country. It is based on the information available at the time it was completed on October 26, 2006. The views expressed in this document are those of the staff team and do not necessarily reflect the views of the government of Honduras or the Executive Board of the IMF.

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INTERNATIONAL DEVELOPMENT ASSOCIATION AND
INTERNATIONAL MONETARY FUND

HONDURAS

Joint World Bank/IMF Debt Sustainability Analysis 2006

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Using the joint Bank-Fund Low-Income Country Debt Sustainability Framework (LIC-DSF), this document assesses the sustainability of Honduras' total public debt following debt relief received under the enhanced HIPC Initiative and the Multilateral Debt Relief Initiative (MDRI). The results suggest that all debt ratios remain below their indicative thresholds provided sound fiscal policy is maintained. Moreover, the debt outlook remains fairly robust under various bounds tests, although it is subject to moderate risk of debt distress in the presence of selected external shocks. Furthermore, the risk of debt distress increases significantly if fiscal management is allowed to deteriorate. Reducing the risk of debt distress will therefore depend critically on maintaining sound policies consistent with a prudent borrowing strategy for the medium and long term.

A. Introduction

1. **This is the first debt sustainability analysis (DSA) for Honduras based on the LIC-DSF since the country reached the HIPC Completion Point**.[1] The framework follows a methodology for assessing the risk of debt distress in LICs, guided by indicative, country-specific external debt burden thresholds derived from the empirical finding that sustainable debt levels for LICs increase with the quality of policies and institutions.[2] The quality of policies and institutions is measured by the World Bank 2005 Country Policy and

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[1] External debt includes public and publicly guaranteed debt, while domestic debt includes public and publicly guaranteed debt of the general government. The data were updated from information provided by the authorities, creditors, and the loan-by-loan external database used at the HIPC Completion Point.

[2] See Kraay, Aart and Vikram Nehru, 2004, When is Debt Sustainable?, World Bank Policy Research Working Paper No. 3200, Washington, D.C.

Institutional Assessment (CPIA), which ranks Honduras as a strong performer.[3] This DSA assesses the likely path of Honduras' debt indicators under a baseline scenario for macroeconomic indicators and borrowing. It also tests the robustness of the analysis under both standardized and customized stress tests.

2.   **The DSA is based on various assumptions**. First, the macroeconomic framework underlying the baseline scenario assumes sustained growth and prudent macroeconomic policies. Second, the evolution of external debt reflects the full delivery of HIPC debt relief by all creditors, as well as additional bilateral debt relief (up to 100 percent debt reduction) provided by Paris Club creditors and delivery of relief by non-Paris Club creditor on comparable terms.[4] Finally, new external financing in the medium term is provided mostly by the International Development Association (IDA), the Inter-American Development Bank (IDB), and the Central American Bank for Economic Integration (CABEI), with average concessionality of external borrowing declining in the long run.[5]

B.   Background—Evolution of Debt under HIPC/MDRI

3.   **Honduras reached the HIPC Completion Point in April 2005 and subsequently received debt relief beyond HIPC from some bilateral creditors**. At the Completion Point, multilateral creditors pledged US$297 million in debt-service relief, of which US$135 million has already been delivered. The remaining US$163 million will be delivered through a reduction in future debt service payments as they fall due.[6] On the bilateral side, Honduras has signed agreements with all Paris Club creditors except France, the Netherlands, and Switzerland, for a stock-of-debt relief of about US$846 million, out of an expected debt relief of US$940 million.[7, 8]

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[3] In 2005, Honduras was upgraded from a medium to a strong performer with a CPIA index of 3.9 out of 6. The indicative thresholds for countries in this category are: NPV of debt-to-GDP ratio of 50 percent; NPV of debt-to-exports ratio of 200 percent, NPV of debt-to-revenue ratio (excluding grants) of 300 percent; and debt-service-to-exports and revenue (excluding grants) ratios of 25 and 35 percent, respectively.

[4] So far, non-Paris Club creditors have not committed to participate in the HIPC Initiative. Excluding this relief, the end-2005 NPV of debt-to-revenue ratio would have risen by less than 5 percent.

[5] The results of this analysis do not affect IDA's lending to Honduras. Although the risk of debt distress is primarily used to guide IDA's grant allocation, Honduras is currently subject to IDA lending on hardened terms and, thus is not eligible to receive IDA grants. As such, the annual IDA allocation to Honduras is unaffected by the risk of debt distress classification resulting from this exercise.
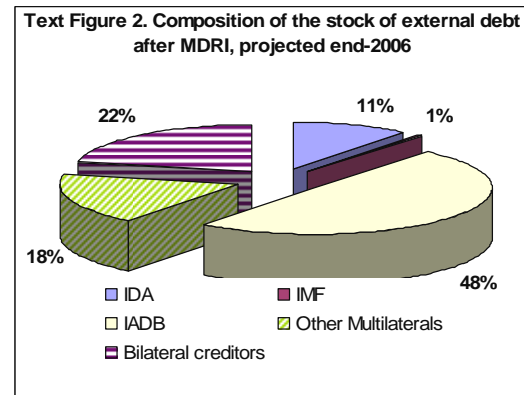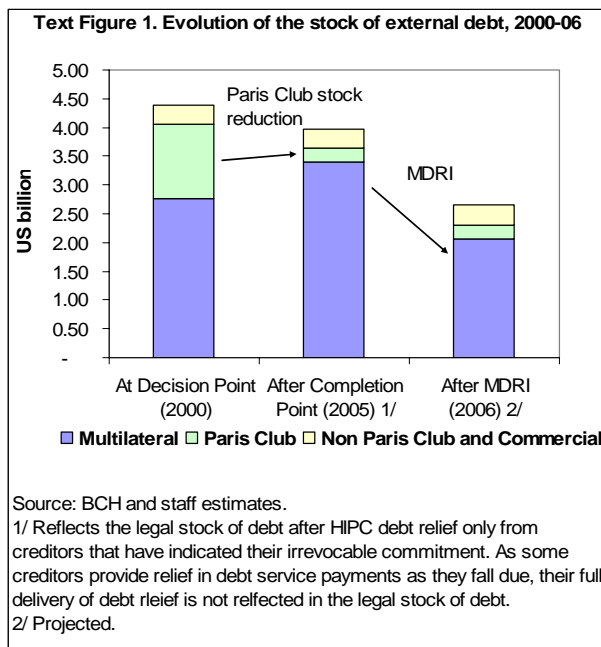
[6] Includes HIPC debt relief from CABEI, IDB, OPEC, and the International Fund for Agricultural Development (IFAD).

[7] The expected debt relief derives from bilateral agreements with Canada, Denmark, Germany, Japan, Spain, and the U.S. (at average 2006 exchange rates), and assumes debt relief beyond HIPC from remaining Paris Club

4.   **Progress in debt relief negotiations with non-Paris Club creditors has been slow**. The total share of debt relief from these creditors amounts to only 8 percent of the total NPV of debt relief approved at the completion point. So far, non-Paris Club creditors have not committed to participate in the HIPC Initiative. The Honduras authorities need to strengthen efforts to reach agreement with these creditors and ensure full delivery of debt relief on comparable terms.

5.   **Debt relief provided under the MDRI has further reduced Honduras' external debt burden**. In January 2006, the IMF granted debt-stock relief of US$155 million on debt incurred before end-2004. In July 2006, IDA provided debt relief for US$1.1 billion on debt disbursed prior to end-2003. After MDRI relief, multilateral creditors will still account for 78 percent of the projected stock of outstanding debt at end-2006 (Text Figures 1 and 2).

Text Figure 1. Evolution of the stock of external debt, 2000-06

Source: BCH and staff estimates.
1/ Reflects the legal stock of debt after HIPC debt relief only from creditors that have indicated their irrevocable commitment. As some creditors provide relief in debt service payments as they fall due, their full delivery of debt rleief is not relfected in the legal stock of debt.
2/ Projected.

Text Figure 2. Composition of the stock of external debt after MDRI, projected end-2006

6.   **Honduras' debt burden has improved compared to the projection in the HIPC Completion Point document**. At the HIPC Completion Point, the NPV of debt-to-revenue ratio was projected to decline to 174 percent by end-2005, reflecting prudent fiscal policies

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creditors, as envisaged in the HIPC Completion Point Document. It excludes US$83 million in debt-service from Spain (*Fondo de Ayuda al Desarrollo*).

[8] The Commonwealth Development Corporation (CDC) and Lloyds Bank, which accounted for 85 percent of the debt from commercial creditors, had provided their share of HIPC relief (around US$15 million). The CDC had canceled debt service falling due since October 2000 and forgave the remaining stock of debt after the HIPC Completion Point. Lloyds Bank participated in a buyback operation in 2002 through the IDA Debt Reduction Facility. Commercial debt currently amounts to less than US$3 million.

and HIPC debt relief. Using the DSF methodology [9], this ratio fell sharply to117 percent.[10] The factors underlying this decrease are the following (Box 1):

- **Changes in methodology**. A large portion of the decline in the NPV of debt-to-revenue ratio (37 percentage points) is explained by the use of a fixed discount rate of 5 percent to calculate the NPV of debt under the DSF methodology. As noted, the HIPC methodology uses currency-specific discount rates.

- **Unanticipated changes in the variables used for the projection**. The remaining decrease in the NPV of debt-to-revenue ratio is largely explained by debt-stock relief provided under MDRI, among other factors:

  a. **MDRI debt relief** reduced the debt ratio by almost 17 percentage points.

  b. **Central government revenue** rose due to improvements in tax administration and smaller-than-expected revenue losses derived from CAFTA.

  c. **New borrowing terms**. Although new disbursements were slightly higher than anticipated, their concessionality was also higher.

7.   **The evolution of the domestic debt has also improved**. The domestic debt of the general government amounted to 10 percent of GDP (L9 billion) at the HIPC Decision Point (June 2000)—over 90 percent of this debt comprised medium-and long-term debt of the central government. This stock rose slightly to 10.5 percent of GDP at the time of HIPC Completion Point, but has since declined to 8 percent of GDP.

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[9] The HIPC and LIC-DSF frameworks serve different purposes and use different methodologies. The HIPC framework computes the debt reduction needed to reach a specific debt threshold, while the LIC-DSF framework is designed to proved a forward-looking analysis of debt sustainability, and to guide levels of future borrowing. The LIC-DSF methodology calculates the NPV of debt by using a fixed 5 percent discount rate, WEO exchange rate and export projections. See www.imf.org and IDA/R2004-0253 (Operational Framework for Debt Sustainability Assessments in Low-Income Countries—Further Considerations).

[10] The end-2005 ratio incorporates debt relief from HIPC and MDRI.

Box 1. Factors Underlying Changes in NPV of Debt-to-Revenue Ratio After the Completion Point

	Percentage Points	Percent of Total
Projected NPV of debt-to-revenues ratio (HIPC methodology) [1/]	**174.0**	
Actual NPV of debt-to-revenues ratio (LIC DS Framework) [2/]	**116.5**	
Total Change	**-57.5**	**100**
Due to change in methodology	**-37.4**	
From CIRR to 5 percent discount rate	-37.3	65
From fixed exchange rate to WEO projections	-0.1	0.2
Due to unanticipated changes	**-23.6**	
New Borrowing	-1.9	3
Of which: Higher than anticipated disbursements	*0.9*	
Of which: Higher than anticipated grant element	*-2.8*	
Change in revenues [3/]	*-5.0*	9
MDRI implementation	*-16.7*	29
Other factors [4/]	**3.5**	**-6**

Source: Staff estimates.

1/ Projected NPV of debt-to-revenue ratio at end-2005 under assumption of full delivery of HIPC assistance, as shown in the HIPC Completion Point document. By assuming full delivery of debt relief, the NPV at end-2005 is capturing the effect of debt relief provided both as stock and debt service reduction from 2005 onwards.

2/ Estimated NPV of debt-to-revenue ratio at end-2005 assuming full delivery of HIPC assistance and MDRI debt relief. By assuming full delivery of debt relief, the NPV at end-2005 is capturing the effect of debt relief provided both as stock and debt service reduction, as well as the effect of debt relief under MDRI.

3/ Defined as central government revenues excluding grants.

4/ Other factors capture changes in the time and profile of assistance and minor data inconsistencies.

C. Assumptions for the Baseline Scenario

8.   **Two major exogenous factors and one policy assumption underlie the macroeconomic framework of the baseline scenario**. First, the implementation of CAFTA is expected to promote greater trade openness and export diversification. Second, we expect a gradual reduction of remittances as a percentage of GDP. Finally, it is assumed that prudent policies will keep budget deficits under control resulting in only modest domestic financing needs, and yielding an improved investment climate. The baseline scenario assumes that the authorities will successfully address current pressures on the budget for higher public sector wages and energy subsidies (electricity and fuel).

9.   **Real GDP growth is projected to average 4 percent in the medium term and 3.8 percent in the long run**. During 1990–2004 real GDP growth averaged 3 percent per annum. In 2005, real GDP growth increased to 4.1 percent, and is projected to exceed 5 percent in 2006, owing to a good coffee harvest, robust growth in *maquila* production, and a boost in construction and tourism. In the medium term, owing to the implementation of CAFTA and notwithstanding high oil prices, growth is projected to remain strong by recent

historical standards, at about 4 percent per year. In the long term, as the second and third phases of tariff reduction are be completed and the benefits of CAFTA stabilize, real growth is estimated to converge to 3.8 percent (Box 2 and Table 1).

10.   **A prudent fiscal policy will support private sector development and ensure long-term fiscal sustainability**. The fiscal deficit will be largely financed externally by loans from multilateral institutions and bilateral donors. After picking up in 2007, external financing is assumed to remain at about 1.4 percent of GDP over the medium term, followed by a progressive decline to 1 percent of GDP in the long run. Central government revenues are expected to grow moderately due to improved tax administration, to 19.1 percent of GDP over the medium term and 19.3 percent in the long run. Central government expenditures would not exceed 22.5 percent of GDP, with priorities given to poverty reduction spending and key infrastructure investment. External borrowing would gradually become less concessional and grants stabilize at 0.7 percent of GDP in the long run.

11.   **Annual export growth is projected to average 8 percent in the next 20 years**. Export of goods and services rose by 15 percent in 2004 and 10 percent in 2005 led by robust external demand and increased export prices. In the medium term, an expected decrease in export prices is offset by temporarily higher growth in export volumes, supported by the first phase of CAFTA implementation and by expanded activity in tourism and maquila. In the long run, as integration with the U.S. economy deepens and the economy diversifies, exports are assumed to grow at an average annual rate of 8 percent, raising export receipts from 41 percent of GDP in 2006 to 49 percent of GDP two decades later.

12.   **Annual import growth is projected to average 7 percent in the next 20 years**. Non-fuel imports are projected to increase in the medium term, induced by domestic growth and remittances. Fuel imports would remain high on account of both high international oil prices and sustained domestic demand for bunker fuel and gasoline. By the next decade, two countervailing forces will begin to impact import growth: remittances would decrease as a share of GDP, putting downward pressure on imports, while lower tariffs on U.S. imported goods will raise demand for imports. In the long-run, imports of goods and services are projected to grow at an annual average rate of 6.7 percent.

13.   **The current account deficit is projected to increase gradually, remaining under 2 percent of GDP in the medium term and reaching 3 percent of GDP in the long run**. In addition to the dynamics of trade in goods and services, the decline in the rate of growth of remittances explains the moderate increase in the current account deficit. In the medium term, remittances are assumed to remain at 25 percent of GDP. As migratory flows stabilize, however, remittances would decline relative to GDP over the long run.

Box 2. Macroeconomic Assumptions Underlying the DSA

Growth. Real GDP growth is projected to reach 4 percent in the medium term, boosted by CAFTA, and vigorous activity in the maquila, construction, and financial sectors. In the long run, growth converges to 3.8 percent; above the 3.0 percent average experienced in 1990–2004.

Inflation. Fiscal consolidation will stabilize inflation at a long term rate of 3 percent.

Central government deficit. The primary deficit of the central government is expected stabilize at 2.3 percent per year. Primary revenue and expenditure will be close to their 2005 levels: revenue remains at 19 percent of GDP and expenditure declines to a prudent 22 percent of GDP over the long run.

Grants and loans. Official grants to the public sector decrease from about 1 percent of GDP in the medium term to 0.7 percent of GDP in the long run, and external financing from about 1.4 percent of GDP in the medium term to 1.1 percent of GDP in the long run.

Export and imports. CAFTA should support further trade openness. Exports of goods and services grow at about 8 percent to reach 49 percent of GDP in 2026. Imports of goods and services grow at 6.7 percent in the long run, to reach about 68 percent of GDP.

Remittances. After a period of accelerating growth, the reduction of migratory flows results in lower growth of remittances and a declining remittance-to-GDP ratio, from 25 percent in the medium term to 18 percent in the long term.

Current account deficit. Assisted by continued, albeit slower, growth in remittances and an improved trade balance, the current account deficit will remain below 2 percent of GDP in the medium term, and rise to 3 percent of GDP in the long run.

D. External Debt Sustainability

Baseline scenario

14.   **Under the baseline scenario, Honduras' external debt should be sustainable**. A projected low level of outstanding debt at end-2006 (21 percent of GDP in NPV terms), coupled with declining recourse to external financing, although at less concessional terms, allows the NPV of debt-to-GDP ratio to remain stable over the medium and long term, well below the 50 percent policy-dependent indicative threshold (Table 2 and Figure 1). Robust growth in exports of goods and services compensates for the increase in the cost of financing, allowing for a slight reduction in the NPV of debt-to-export ratio, from 52 percent in 2006 to 49 percent by 2016. At the same time, the rise in fiscal revenue in 2007 will cause a reduction of the NPV of debt-to-revenue ratio from 125 percent in 2006 to 111 percent in 2016, with a subsequent reduction to close to 100 percent by 2026. The impact of lower

concessionality in the future is stronger on the debt service-to-revenue ratio, which shows a gradual increase from 8 percent of central government revenues in 2006 to a peak of about 15 percent in the long run, but still well below the 35 percent debt burden threshold.[11]

Standardized sensitivity analysis

15.   **Honduras' debt outlook remains fairly robust under various bound tests**. With the exception of the NPV of debt-to-GDP ratio and the NPV of debt-to-revenue ratio, all debt burden indicators would remain well below the policy-dependent indicative thresholds under the standardized bound tests. The NPV of debt-to-exports is projected to be comfortably below the thresholds both under the baseline and under all the bound tests. Debt service indicators are also projected to remain below the indicative thresholds, suggesting that debt service payments would remain at manageable levels (Table 2 and Figure 1). These results are robust to more pessimistic assumptions on GDP and export growth. If during 2007–26 real GDP growth averaged an annual 1.8 percent (compared to 3.8 as in the baseline) and export growth averaged an annual 5.2 percent (compared to 6.7 in the baseline), both debt and debt service ratios would remain below the thresholds. [12]

16.   **The most extreme stress test, however, indicates that Honduras could be vulnerable to debt distress**. Assuming a two-year shock to real GDP growth, export value growth, U.S. dollar GDP deflator, and the net non-debt creating flows, Honduras' external debt burden would be negatively affected as the financing requirements needed to absorb the shocks will substantially increase.[13] Under this assumption, the NPV of debt-to-GDP ratio rapidly increases from 21 percent in 2006 to 63 percent in 2008, followed by a slow reduction to 45 percent by 2016. Similarly, the NPV of debt-to-revenues ratio jumps to 371 percent by 2008, slowly decreasing over time but never going back to the baseline levels. Moreover, these shocks would have lasting effects in all debt burden indicators, particularly on the debt service ratio, which would pick up slowly (due to reduced concessionality during

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[11] The outlier observed in 2025 is due to a bullet payment to CABEI (US$230 million) from a debt agreement signed in 2000. The agreement rescheduled debts amounting to US$252 million and provided for HIPC debt relief in NPV terms.

[12] Results under the historical scenario were excluded from Figure 1 as they are less informative about possible sources of debt distress. The historical scenario assumes that relevant macro variables (such as GDP growth, FDI in percent of GDP, and the non-interest current account as a percentage of GDP) remain at their ten-year historical average. In the last ten years, the flow of FDI and the non-interest current account were particularly high, due to large investments for electricity projects and the construction of maquila plants, and due to large interest payments. Therefore, the historical scenario offers a profile of FDI and non-interest current account that is more favorable than the baseline scenario, resulting in debt ratios that are lower than in the baseline.

[13] All bound tests in the DSF have been chosen to approximate a probability of 25 percent of debt distress over a 10-year period. The extreme stress test discussed here assumes that in each of the first two years all these variables are simultaneously one-half standard deviation below their historical average.

part of the medium-term)[14] and then remain more than double the level in the baseline scenario until 2020 (Table 2 and Figure 1).

E. Total Public Debt Sustainability

Baseline scenario

17.   **Under the baseline scenario, the total public sector debt appears to be on a sustainable path**. Due in large part to HIPC and MDRI debt relief, the assumed prudent macroeconomic policies limit the need for recourse to domestic financing at higher interest rates. The NPV of debt-to-GDP remains below 40 percent and the NPV of debt-to-revenue remains below 200 percent throughout the entire period of analysis (Table 3 and Figure 2). This favorable debt outlook under the baseline scenario, however, results from several critical policy assumptions, namely that improvements in tax administration will lead to a rebound of the revenue-to-GDP ratio over the medium term; that expenditure will not be derailed by demands for rapid public wage increases, but instead will continue to focus on poverty reduction and key infrastructure improvements; and other current expenditure are tightly controlled. Moreover, the baseline analysis only takes into account the general government sector. Thus, it does not include the impact of potential significantly increased borrowing by state-owned enterprises, guaranteed by the central government, including borrowing by the public electricity enterprise ENEE.

Standardized sensitivity analysis

18.   **Honduras' total debt profile is robust under a series of standardized bound stress tests**. The most extreme stress test—real GDP at the historical average minus one standard deviation in 2007–08—would lead to an NPV of debt-to-GDP ratio of just over 30 percent and an NPV of debt-to-revenue over 160 percent by 2011 (Table 4).

19.   **A no-reform scenario produces a better outcome than the baseline, although it is less informative about the risk of debt distress.** In line with DSF methodology, this scenario assumes that the projected primary deficit remains unchanged from the 2005 level of 1.3 percent of GDP (compared to 2.2 percent of GDP in the baseline), the last available observation. As this primary deficit resulted from underexecution of priority spending, including investment and social projects, it is inconsistent with the poverty-reduction strategy embodied in the baseline.

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[14] Reduced concessionality is explained mainly by the projected graduation from IDA's and IDB's concessional lending over the medium term.

Customized sensitivity analysis

20.   **An alternative scenario, which assumes a deterioration of fiscal policy driven by high wage increases, shows a significant increase in the risk of debt distress**. This scenario differs from the standardized stress tests of the DSF as it is based on policy-driven, rather than exogenous, shocks. In particular, it assumes that current pressures faced by the authorities for higher public wages and energy subsidies result in a deterioration of fiscal policy. Wage concessions and lower revenue result in a larger fiscal deficit in the medium term (by about 3 percentage points of GDP); a deterioration in the investment climate with the resulting slow-down in economic and export growth; and lower donor assistance.

21.   **Under this customized scenario, Honduras' debt burden worsens significantly**. The NPV of debt-to-revenue increases beginning in end-2006 and exceeds 200 percent by 2011. The debt service-to-revenue ratio would reach 28 percent by 2011, and remain above that level thereafter. Although the external debt and debt service ratios do not change much with respect to the baseline scenario, due to lower external financing than in the baseline, the risk of distress with respect to the total debt increases substantially. (Table 4 and Figure 2)

F. Conclusion

22.   **In staff's view, Honduras' debt is subject to a moderate risk of distress**. While all debt ratios remain below their debt burden indicative thresholds in the baseline scenario, both severe exogenous and endogenous shocks have the potential to create distress and a long-lasting increase in debt service. While full delivery of debt relief from remaining bilateral donors would help lower the debt stock and make the debt less vulnerable, reducing the country's risk of experiencing debt distress in the medium and long term will continue to require sound macroeconomic policies, most notably fiscal discipline.

23.   **One area of further study and assessment should be the domestic debt profile of the consolidated public sector**. As in many other low-income countries, reliable data on the debt stock of the consolidated public sector, including public enterprises, is not currently available in Honduras. Consequently, the data projections on domestic debt used in the DSA are limited to the general government only. The results of this analysis should therefore be considered with caution.

Table 1. Honduras: External Debt Sustainability Framework, Baseline Scenario, 2006–2026 1/
(In percent of GDP, unless otherwise indicated)

	2000	2001	2002	2003	2004	2005	Historical Average 6/	Standard Deviation 6/	2006	2007	2008	2009	2010	2011	2006-11 Average	2016	2026	2012-26 Average
External debt (nominal) 1/	**73.1**	**70.7**	**71.6**	**70.6**	**68.2**	**50.1**			**27.9**	**27.1**	**26.0**	**25.6**	**25.3**	**25.1**		**24.4**	**21.3**	**21.3**
o/w public and publicly guaranteed (PPG)	73.1	70.7	71.6	70.6	68.2	50.1			27.9	27.1	26.0	25.6	25.3	25.1		24.4	21.3	21.3
Change in external debt	-7.7	-2.4	0.9	-1.0	-2.5	-18.1			-22.2	-0.8	-1.0	-0.4	-0.3	-0.2		-0.2	-0.3	
Identified net debt-creating flows	-8.8	-3.2	-0.7	-3.6	-4.6	-9.6			-5.0	-3.4	-2.7	-2.4	-2.2	-2.2		-1.9	-0.5	
Non-interest current account deficit	**1.4**	**2.0**	**1.2**	**2.0**	**3.9**	**-0.8**	**1.1**	**1.5**	**-0.1**	**0.2**	**0.5**	**0.7**	**0.9**	**0.8**		**1.1**	**2.3**	**1.6**
Deficit in balance of goods and services	14.1	16.5	15.5	16.0	19.1	20.9			25.9	26.9	26.7	26.4	25.8	25.3		23.4	18.4	
Exports	41.4	38.0	38.7	39.3	41.8	41.4			41.3	39.8	39.1	39.2	39.4	39.8		42.5	49.2	
Imports	55.6	54.4	54.1	55.3	61.0	62.3			67.2	66.7	65.8	65.6	65.3	65.1		65.9	67.5	
Net current transfers (negative = inflow)	-12.5	-15.2	-15.4	-16.2	-18.7	-24.6	-13.9	5.5	-28.8	-29.3	-28.7	-28.2	-27.5	-27.1		-25.1	-19.1	-23.2
Other current account flows (negative = net inflow)	-0.2	0.7	1.2	2.1	3.5	2.9			2.7	2.5	2.4	2.5	2.5	2.6		2.7	3.1	
Net FDI (negative = inflow)	**-4.7**	**-3.0**	**-2.7**	**-3.6**	**-4.4**	**-3.0**	**-3.3**	**1.0**	**-3.3**	**-3.0**	**-2.8**	**-2.7**	**-2.7**	**-2.7**		**-2.7**	**-2.7**	**-2.7**
Endogenous debt dynamics 2/	**-5.6**	**-2.3**	**0.8**	**-2.0**	**-4.2**	**-5.7**			**-1.7**	**-0.6**	**-0.4**	**-0.4**	**-0.4**	**-0.3**		**-0.3**	**-0.1**	
Contribution from nominal interest rate	2.5	2.0	1.9	1.7	1.4	1.2			0.7	0.5	0.5	0.5	0.5	0.6		0.6	0.7	
Contribution from real GDP growth	-4.2	-1.8	-1.9	-2.4	-3.1	-2.5			-2.3	-1.1	-1.0	-0.9	-0.9	-0.9		-0.9	-0.8	
Contribution from price and exchange rate changes	-3.9	-2.5	0.8	-1.4	-2.6	-4.4			...	...	...	...	...	...		...	...	
Residual (3–4) 3/	**1.1**	**0.9**	**1.6**	**2.6**	**2.2**	**-8.5**			**-17.2**	**2.6**	**1.7**	**2.0**	**1.9**	**2.0**		**1.7**	**0.2**	
o/w exceptional financing	-1.9	-1.4	-1.6	-1.9	-1.6	-7.2			-13.8	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
NPV of external debt 4/	...	...	...	...	...	31.9			21.3	21.2	20.5	20.2	20.1	20.1		20.9	19.8	
In percent of exports	...	...	...	...	...	76.9			51.7	53.4	52.5	51.5	51.0	50.4		49.2	40.3	
NPV of PPG external debt	...	...	...	...	...	**31.9**			**21.3**	**21.2**	**20.5**	**20.2**	**20.1**	**20.1**		**20.9**	**19.8**	
In percent of exports	...	...	...	...	...	76.9			51.7	53.4	52.5	51.5	51.0	50.4		49.2	40.3	
Debt service-to-exports ratio (in percent)	13.5	12.5	14.1	13.9	10.6	11.0			3.3	2.8	2.8	2.8	3.0	3.8		4.1	5.7	
PPG debt service-to-exports ratio (in percent)	13.5	12.5	14.1	13.9	10.6	11.0			3.3	2.8	2.8	2.8	3.0	3.8		4.1	5.7	
Total gross financing need (billions of U.S. dollars)	0.1	0.2	0.3	0.3	0.3	0.1			-0.2	-0.2	-0.1	-0.1	-0.1	-0.1		0.0	0.8	
Non-interest current account deficit that stabilizes debt ratio	9.1	4.4	0.3	3.0	6.4	17.3			22.1	1.0	1.5	1.1	1.2	1.0		1.3	2.6	
Key macroeconomic assumptions																		
Real GDP growth (in percent)	5.7	2.6	2.7	3.5	4.7	4.1	3.3	2.2	5.1	4.5	4.0	3.8	3.8	3.8	4.2	3.8	3.8	3.8
GDP deflator in U.S. dollar terms (change in percent)	5.0	3.5	-1.1	1.9	3.8	6.9	5.4	4.5	5.3	6.8	5.3	3.7	3.1	2.8	4.5	2.5	2.5	2.5
Effective interest rate (percent) 5/	3.4	2.9	2.7	2.5	2.2	2.0	3.3	1.1	1.5	2.2	2.2	2.2	2.2	2.4	2.1	2.6	3.4	2.8
Growth of exports of G&S (U.S. dollar terms, in percent)	11.5	-2.7	3.5	7.2	15.7	10.1	7.0	8.1	10.4	7.5	7.6	8.1	7.6	7.6	8.1	8.0	7.9	7.9
Growth of imports of G&S (U.S. dollar terms, in percent)	9.6	4.1	1.0	7.9	19.8	13.6	10.5	6.2	19.5	10.7	8.1	7.3	6.4	6.5	9.7	6.7	6.5	6.7
Grant element of new public sector borrowing (in percent)	...	...	...	...	...	...		...	25.0	26.2	30.9	34.9	27.9	25.1	28.3	11.1	8.5	10.9
Memorandum item:																		
Nominal GDP (billions of U.S. dollars)	6.0	6.4	6.5	6.9	7.5	8.3			9.2	10.2	11.2	12.1	12.9	13.8		18.8	35.0	

Source: Fund staff simulations.

1/ Includes both public and private sector external debt.
2/ Derived as [r - g - r(1+g)]/(1+g+r+gr) times previous period debt ratio, with r = nominal interest rate; g = real GDP growth rate, and r = growth rate of GDP deflator in U.S. dollar terms.
3/ Includes exceptional financing (i.e., changes in arrears and debt relief); changes in gross foreign assets; and valuation adjustments.
For projections also includes contribution from price and exchange rate changes.
4/ Assumes that NPV of private sector debt is equivalent to its face value.
5/ Current-year interest payments divided by previous period debt stock.
6/ Historical averages and standard deviations are generally derived over the past 10 years, subject to data availability.

Table 2. Honduras: Sensitivity Analyses for Key Indicators of Public and Publicly Guaranteed External Debt, 2006–26
(In percent)

	2006	2007	2008	2009	2010	2011	**2016**	2026
				Pro	jections			
NPV of debt-to-GDP ratio								
Baseline	21	21	21	20	20	20	**21**	20
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2007–26 1/	21	22	22	21	20	19	**16**	4
A2. New public sector loans on less favorable terms in 2007–26 2/	21	22	22	22	22	23	**25**	28
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2007–08	21	22	22	22	21	21	**22**	21
B2. Export value growth at historical average minus one standard deviation in 2007–08 3/	21	24	29	28	28	28	**25**	20
B3. U.S. dollar GDP deflator at historical average minus one standard deviation in 2007–08	21	22	23	22	22	22	**23**	22
B4. Net non-debt creating flows at historical average minus one standard deviation in 2007–08 4/	21	40	57	56	55	54	**41**	22
B5. Combination of B1-B4 using one-half standard deviation shocks	21	42	63	61	60	59	**45**	24
B6. One-time 30 percent nominal depreciation relative to the baseline in 2007 5/	21	29	29	28	28	28	**29**	28
NPV of debt-to-exports ratio								
Baseline	52	53	53	52	51	50	**49**	40
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2007–26 1/	52	56	55	53	51	48	**38**	8
A2. New public sector loans on less favorable terms in 2007–26 2/	52	55	55	55	56	57	**59**	58
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2007–08	52	53	53	52	51	50	**49**	40
B2. Export value growth at historical average minus one standard deviation in 2007–08 3/	52	66	87	85	83	82	**71**	49
B3. U.S. dollar GDP deflator at historical average minus one standard deviation in 2007–08	52	53	53	52	51	50	**49**	40
B4. Net non-debt creating flows at historical average minus one standard deviation in 2007–08 4/	52	101	146	142	139	136	**96**	45
B5. Combination of B1-B4 using one-half standard deviation shocks	52	103	159	155	152	148	**105**	49
B6. One-time 30 percent nominal depreciation relative to the baseline in 2007 5/	52	53	53	52	51	50	**49**	40
Debt service-to-export ratio								
Baseline	3	3	3	3	3	4	**4**	6
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2007–26 1/	3	3	3	3	3	4	**3**	3
A2. New public sector loans on less favorable terms in 2007–26 2/	3	3	3	3	3	4	**4**	8
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2007–08	3	3	3	3	3	4	**4**	6
B2. Export value growth at historical average minus one standard deviation in 2007–08 3/	3	3	4	4	4	5	**7**	7
B3. US dollar GDP deflator at historical average minus one standard deviation in 2007–08	3	3	3	3	3	4	**4**	6
B4. Net non-debt creating flows at historical average minus one standard deviation in 2007–08 4/	3	3	5	6	6	7	**12**	7
B5. Combination of B1-B4 using one-half standard deviation shocks	3	3	5	7	7	8	**13**	7
B6. One-time 30 percent nominal depreciation relative to the baseline in 2007 5/	3	3	3	3	3	4	**4**	6
NPV of debt-to-revenue ratio								
Baseline	125	126	121	118	118	114	**111**	103
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2007–26 1/	125	132	128	122	118	109	85	20
A2. New public sector loans on less favorable terms in 2007–26 2/	125	130	128	127	130	128	133	148
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2007–08	125	130	129	126	126	121	118	110
B2. Export value growth at historical average minus one standard deviation in 2007–08 3/	125	143	169	164	163	156	134	106
B3. U.S. dollar GDP deflator at historical average minus one standard deviation in 2007–08	125	133	134	131	131	126	122	114
B4. Net non-debt creating flows at historical average minus one standard deviation in 2007–08 4/	125	239	337	326	322	306	215	115
B5. Combination of B1-B4 using one-half standard deviation shocks	125	247	371	359	355	337	237	127
B6. One-time 30 percent nominal depreciation relative to the baseline in 2007 5/	125	175	169	164	165	158	154	144
Debt service-to-revenue ratio								
Baseline	8	7	6	7	7	9	9	15
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2007–26 1/	8	7	7	7	7	8	8	7
A2. New public sector loans on less favorable terms in 2007–26 2/	8	7	7	7	7	8	9	20
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2007–08	8	7	6	7	7	9	9	15
B2. Export value growth at historical average minus one standard deviation in 2007–08 3/	8	7	8	10	10	12	16	18
B3. U.S. dollar GDP deflator at historical average minus one standard deviation in 2007–08	8	7	6	7	7	9	9	15
B4. Net non-debt creating flows at historical average minus one standard deviation in 2007–08 4/	8	7	11	14	15	16	26	17
B5. Combination of B1-B4 using one-half standard deviation shocks	8	7	11	16	16	17	29	19
B6. One-time 30 percent nominal depreciation relative to the baseline in 2007 5/	8	7	6	7	7	9	9	15
Memorandum item:								
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	12	12	12	12	12	12	**12**	12

Source: Fund staff projections and simulations.

1/ Variables include real GDP growth, growth of GDP deflator (in U.S. dollar terms), non-interest current account in percent of GDP, and non-debt creating flows.
2/ Assumes that the interest rate on new borrowing is by 2 percentage points higher than in the baseline, while grace and maturity periods are as in the baseline.
3/ Exports values are assumed to remain permanently at the lower level, but the current account as a share of GDP is assumed to return to its baseline level after the shock (implicitly assuming an offsetting adjustment in import levels).
4/ Includes official and private transfers and FDI.
5/ Depreciation is defined as percentage decline in dollar/local currency rate, such that it never exceeds 100 percent.
6/ Applies to all stress scenarios except for A2 (less favorable financing) in which the terms on all new financing are as specified in footnote 2.

Table 3. Honduras: Public Sector Debt Sustainability Framework, Baseline Scenario, 2003–2026
(In percent of GDP, unless otherwise indicated)

			Estimate				Historical Average 5/	Standard Deviation 5/				Projections			2006-11 Average			2012-26 Average
	2000	2001	2002	2003	2004	2005			2006	2007	2008	2009	2010	2011		2016	2026	
Public sector debt 1/	84.2	81.3	81.5	81.9	78.5	60.6			35.9	33.1	31.4	30.4	29.7	29.1		27.1	22.7	
o/w foreign-currency denominated	74.0	71.6	71.6	70.6	68.2	50.1			27.9	27.1	26.0	25.6	25.3	25.1		24.4	21.3	
Change in public sector debt	-8.8	-3.0	0.2	0.4	-3.4	-18.0			-24.6	-2.8	-1.8	-1.0	-0.7	-0.6		-0.4	-0.4	
Identified debt-creating flows	-5.1	-1.4	2.6	1.5	-2.6	-7.4			-17.9	0.0	0.8	1.5	1.4	1.4		1.7	1.8	
Primary deficit	3.1	4.0	3.4	4.1	2.0	1.1	1.4	2.3	-0.2	2.6	2.5	2.7	2.5	2.4	2.1	2.5	2.4	2.5
Revenue and grants	18.7	20.0	19.4	19.6	20.3	20.5			19.3	18.6	18.6	18.8	18.7	18.7		18.6	18.8	
of which: grants	1.0	1.8	1.1	1.1	0.9	1.3			1.4	1.2	1.1	1.1	0.8	0.7		0.7	0.7	
Primary (noninterest) expenditure	21.9	24.0	22.8	23.8	22.3	21.7			19.1	21.2	21.2	21.5	21.2	21.1		21.1	21.2	
Automatic debt dynamics	-7.9	-4.9	-0.6	-2.6	-4.3	-7.7			-4.2	-2.5	-1.8	-1.2	-1.1	-0.9		-0.8	-0.6	
Contribution from interest rate/growth differential	-4.1	-4.6	-2.3	-2.0	-3.1	-4.5			-3.0	-1.4	-0.9	-0.8	-0.8	-0.8		-0.4	-0.2	
of which: contribution from average real interest rate	0.7	0.0	-0.2	0.1	-0.4	-0.9			-0.1	0.2	0.3	0.3	0.3	0.3		0.6	0.6	
of which: contribution from real GDP growth	1.8	-4.6	-2.1	-2.2	-2.8	-3.5			-2.9	-1.5	-1.3	-1.1	-1.1	-1.1		-1.0	-0.8	
Contribution from real exchange rate depreciation	-3.8	-0.3	1.7	-0.6	-1.1	-3.2			-1.2	-1.1	-0.8	-0.4	-0.3	-0.2		...	...	
Other identified debt-creating flows	-0.3	-0.5	-0.1	0.0	-0.4	-0.9			-13.5	-0.1	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	0.0		0.0	0.0	
Recognition of implicit or contingent liabilities	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Debt relief (HIPC and other)	-0.3	-0.5	-0.1	0.0	-0.4	-0.9			-13.5	-0.1	0.0	0.0	0.0	0.0		0.0	0.0	
Other (specify, e.g. bank recapitalization)	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Residual, including asset changes	-3.8	-1.5	-2.4	-1.0	-0.8	-10.5			-6.7	-2.8	-2.5	-2.5	-2.2	-2.0		-2.0	-2.2	
NPV of public sector debt	...	...	...	...	...	42.3			29.4	27.3	25.9	25.0	24.5	24.0		23.6	21.1	
o/w foreign-currency denominated	...	...	...	...	...	31.9			21.3	21.2	20.5	20.2	20.1	20.1		20.9	19.8	
o/w external	...	...	...	...	...	31.9			21.3	21.2	20.5	20.2	20.1	20.1		20.9	19.8	
NPV 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	
Gross financing need 2/	8.8	8.9	8.8	9.8	6.8	6.1			0.8	3.2	3.1	3.2	3.3	3.5		3.7	4.6	
NPV of public sector debt-to-revenue ratio (in percent) 3/	...	...	...	...	...	206.2			152.3	146.7	138.7	133.2	131.0	128.4		126.7	112.2	
o/w external	...	...	...	...	...	155.2			110.6	114.0	110.1	107.6	107.6	107.1		112.1	105.2	
Debt service-to-revenue ratio (in percent) 3/ 4/	30.5	24.4	28.1	28.7	23.5	23.9			12.5	9.9	8.9	8.3	8.5	10.0		10.8	15.5	
Primary deficit that stabilizes the debt-to-GDP ratio			28.1	3.7	5.4	19.1			24.4	5.4	4.3	3.7	3.2	3.0		2.9	2.8	
Key macroeconomic and fiscal assumptions																		
Real GDP growth (in percent)	-1.9	5.7	2.6	2.7	3.5	4.7	3.2	2.3	5.1	4.5	4.0	3.8	3.8	3.8	4.2	3.8	3.8	3.8
Average nominal interest rate on forex debt (in percent)	2.9	2.9	2.9	2.7	2.3	2.0	2.6	0.4	1.5	2.2	2.2	2.2	2.2	2.4	2.1	2.6	3.4	2.8
Average real interest rate on domestic currency debt (in percent)	-4.1	-5.2	-5.9	-5.1	-5.2	-5.6	-5.2	0.6	5.3	3.2	4.8	5.5	5.7	5.6	5.0	5.7	5.8	5.8
Real exchange rate depreciation (in percent, + indicates depreciation)	-4.5	-0.5	2.4	-0.9	-1.6	-5.0	-2.6		-2.6	...	...	...	...	...		...	...	
Inflation rate (GDP deflator, in percent)	9.7	8.0	6.3	7.7	8.9	10.3	10.7	4.7	5.5	6.6	5.0	3.4	2.9	3.0	4.4	3.0	3.0	3.0
Growth of real primary spending (deflated by GDP deflator, in percent)	5.4	10.9	-4.0	9.4	-0.6	2.4			-11.4	17.4	2.2	3.8	1.9	3.4	2.9	3.8	3.8	3.8
Grant element of new external borrowing (in percent)	...	...	...	...	...	25.0	25.0		25.0	26.2	30.9	34.9	27.9	25.1	28.3	11.1	8.7	...

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

1/ [Indicate coverage of public sector, e.g., general government or nonfinancial public sector. Also whether net or gross debt is used.]
2/ Gross financing need is defined as the primary deficit plus debt service plus the stock of short-term debt at the end of the last period.
3/ Revenues including grants.
4/ Debt service is defined as the sum of interest and amortization of medium and long-term debt.
5/ Historical averages and standard deviations are generally derived over the past 10 years, subject to data availability.

Table 4. Honduras: Sensitivity Analysis for Key Indicators of Public Debt 2006-2026

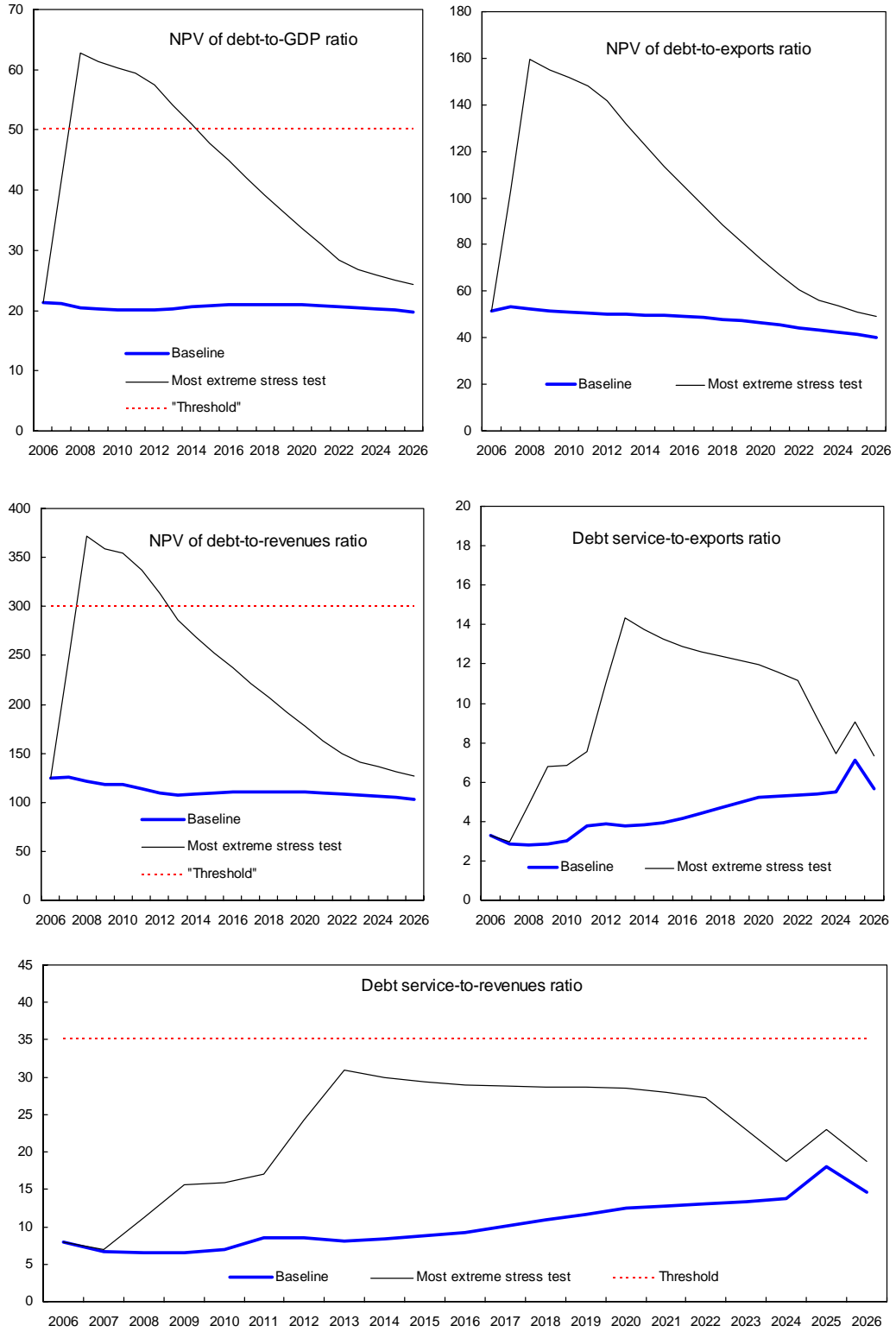|	Projections							
	2006	2007	2008	2009	2010	2011	2016	2026
NPV of Debt-to-GDP Ratio								
Baseline	29	27	26	25	25	24	24	21
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	30	27	24	23	21	20	17	8
A2. Primary balance is unchanged from 2006	30	26	24	22	20	19	15	6
A3. Permanently lower GDP growth 1/	29	27	26	25	25	24	24	20
A4. High wages	29	32	33	35	37	38	36	29
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2007-2	29	29	29	30	30	31	37	46
B2. Primary balance is at historical average minus one standard deviations in 2007-20	29	28	28	27	26	26	26	25
B3. Combination of B1-B2 using one half standard deviation shocks	29	28	27	26	25	25	24	22
B4. One-time 30 percent real depreciation in 2007	29	36	34	33	32	31	31	30
B5. 6 percent of GDP increase in other debt-creating flows in 2007	30	33	31	30	30	29	30	29
NPV of Debt-to-Revenue Ratio 2/								
Baseline	152	147	139	133	131	128	127	112
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	154	143	131	120	114	108	90	44
A2. Primary balance is unchanged from 2006	154	128	116	106	99	92	72	31
A3. Permanently lower GDP growth 1/	152	147	139	133	131	129	127	105
A4. High wages	152	191	197	204	218	217	188	153
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2007-2	152	154	156	157	161	165	196	242
B2. Primary balance is at historical average minus one standard deviations in 2007-20	152	152	150	144	141	139	139	131
B3. Combination of B1-B2 using one half standard deviation shocks	152	149	144	137	134	131	129	118
B4. One-time 30 percent real depreciation in 2007	152	193	182	173	169	166	165	160
B5. 6 percent of GDP increase in other debt-creating flows in 2007	153	177	168	162	159	157	159	153
Debt Service-to-Revenue Ratio 2/								
Baseline	12	10	9	8	8	10	11	15
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	12	13	10	9	9	10	11	14
A2. Primary balance is unchanged from 2006	12	11	9	8	7	8	9	11
A3. Permanently lower GDP growth 1/	12	12	12	12	12	13	14	21
A4. High wages	12	20	21	23	26	28	28	38
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2007-2	12	13	14	15	16	18	21	38
B2. Primary balance is at historical average minus one standard deviations in 2007-20	12	12	14	15	13	14	15	24
B3. Combination of B1-B2 using one half standard deviation shocks	12	12	12	12	12	13	14	23
B4. One-time 30 percent real depreciation in 2007	12	13	13	13	14	15	17	27
B5. 6 percent of GDP increase in other debt-creating flows in 2007	12	12	23	16	15	15	16	27
Debt Service-to-GDP Ratio								
Baseline	2	2	2	2	2	2	2	3
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	2	2	2	2	2	2	2	3
A2. Primary balance is unchanged from 2005	2	2	2	2	1	2	2	2
A3. Permanently lower GDP growth 1/	2	2	2	2	2	2	3	4
A4. High wages	2	3	4	4	4	5	5	7
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2007-2	2	2	3	3	3	3	4	7
B2. Primary balance is at historical average minus one standard deviations in 2007-20	2	2	3	3	2	3	3	5
B3. Combination of B1-B2 using one half standard deviation shocks	2	2	2	2	2	2	3	4
B4. One-time 30 percent real depreciation in 2007	2	2	2	2	3	3	3	5
B5. 6 percent of GDP increase in other debt-creating flows in 2007	2	2	4	3	3	3	3	5

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

1/ Assumes that real GDP growth is at baseline minus one standard deviation divided by the square root of 20 (length of projection period).

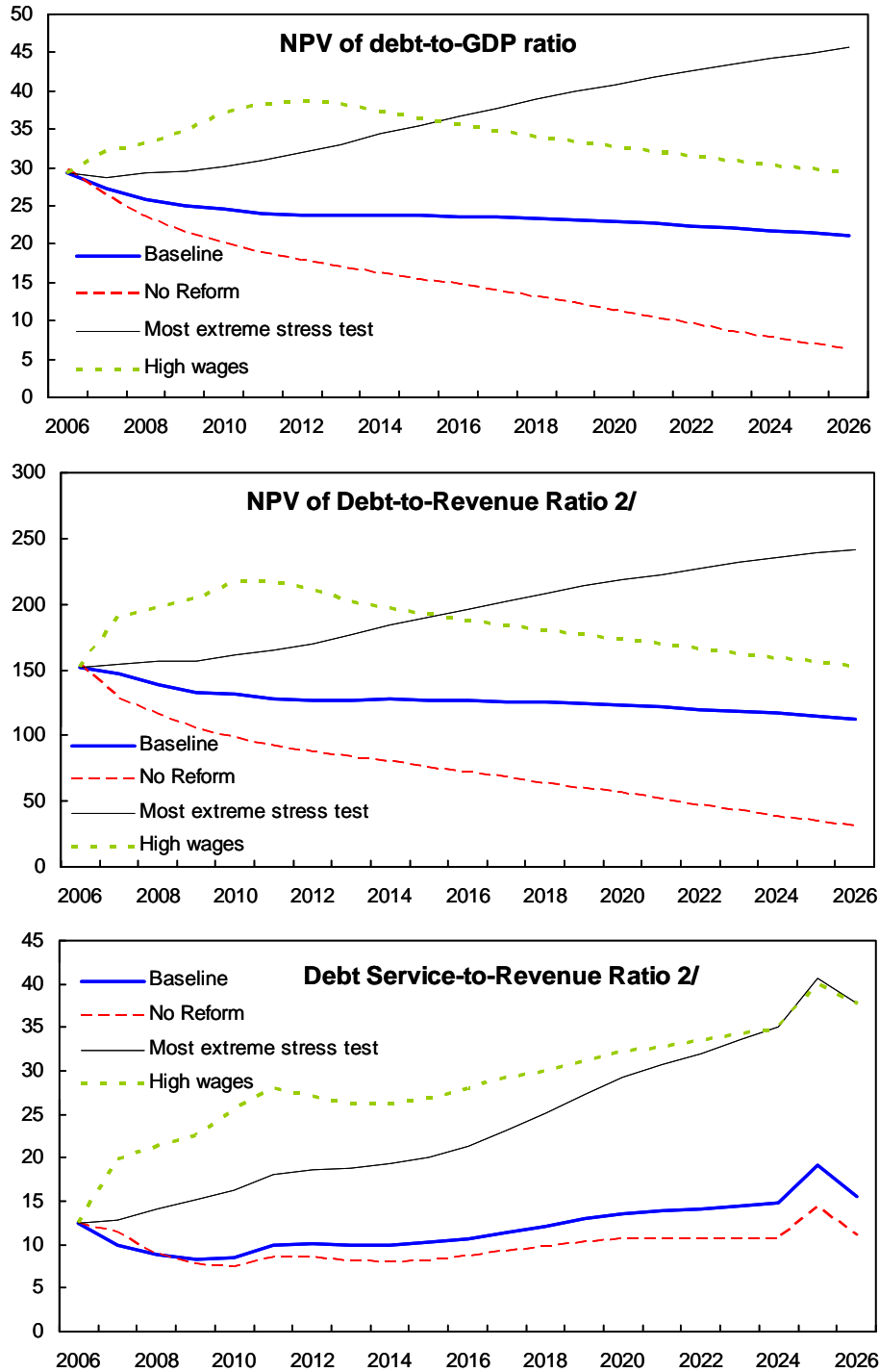2/ Revenues are defined inclusive of grants.

**Figure 1. Honduras: Indicators of Public and Publicly Guaranteed External Debt
Under Alternative Scenarios, 2006–2026 (In percent)**

Source: Fund staff projections and simulations.

Figure 2. Honduras: Indicators of Public Debt Under Alternative Scenarios, 2006-26 1/

NPV of debt-to-GDP ratio

- Baseline
- No Reform
- Most extreme stress test
- High wages

NPV of Debt-to-Revenue Ratio 2/

- Baseline
- No Reform
- Most extreme stress test
- High wages

Debt Service-to-Revenue Ratio 2/

- Baseline
- No Reform
- Most extreme stress test
- High wages

Source: Fund staff projections and simulations.
1/ Most extreme stress test is test that yields highest ratio in 2016.
2/ General government revenue including grants. The most extreme stress is one
where real GDP grwoth declines by one standard deviation in 2007-08.