

INTERNATIONAL MONETARY FUND AND  
INTERNATIONAL DEVELOPMENT ASSOCIATION

CAMBODIA

**Joint IMF/World Bank Debt Sustainability Analysis 2008<sup>1</sup>**

Prepared by the staffs of the International Monetary Fund and  
the International Development Association

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*This document presents the joint IMF-World Bank debt sustainability analysis (DSA) for Cambodia using the Debt Sustainability Framework for Low-Income Countries (LIC).<sup>2</sup> It shows that external debt burden indicators do not breach the relevant policy-dependent indicative thresholds under the baseline scenario. However, given recent global developments and Cambodia's vulnerability to external shocks, there are considerable downside risks to the baseline scenario. An assessment of the impact of various exogenous shocks on the sustainability of external and public sector debt shows Cambodia would face a moderate risk of debt distress.<sup>3</sup>*

**I. INTRODUCTION**

**1. Cambodia's DSA indicates that the risk of debt distress remains moderate.** At end-September 2008, the total value of its external public debt was US\$2.8 billion

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<sup>1</sup> This DSA was prepared jointly by the IMF and World Bank. The staffs also consulted with the Asian Development Bank. The debt data underlying this exercise were provided by the Cambodian authorities and donor partners.

<sup>2</sup> See "Debt Sustainability in Low-Income Countries: Proposal for an Operational Framework and Policy Implications" (<http://www.imf.org/external/np/pdr/sustain/2004/020304.htm> and IDA/SECM2004/0035, 2/3/04) and "Debt Sustainability in Low-Income Countries: Further Considerations on an Operational Framework, Policy Implications" (<http://www.imf.org/external/np/pdr/sustain/2004/091004.htm> and IDA/SECM2004/0629, 9/10/04) and "Applying the Debt Sustainability Framework for Low-Income Countries Post Debt Relief," ([www.imf.org/external/np/pp/eng/2006/110606.pdf](http://www.imf.org/external/np/pp/eng/2006/110606.pdf) and IDA/SecM2006-0564, 8/11/06).

<sup>3</sup> The low income country debt sustainability framework (LIC DSF) recognizes that better policies and institutions allow countries to manage higher levels of debt, and thus the threshold levels are policy dependent. Cambodia's policies and institutions, as measured by the World Bank's Country Policy and Institutional Assessment (CPIA), averaged 3.17 percent over the past three years, placing it as a "weak performer." The relevant indicative thresholds for this category are: 30 percent for the NPV of debt-to-GDP ratio, 100 percent for the NPV of debt-to-exports ratio, 200 percent for the NPV of debt-to-revenue ratio, 15 percent for the debt service-to-exports ratio, and 25 percent for the debt service-to-revenue ratio. These thresholds are applicable to public and publicly guaranteed external debt.

(27 percent of GDP) and domestic debt was US\$0.1 billion ( $\frac{3}{4}$  percent of GDP), one-third of which was denominated in foreign currency.<sup>4</sup> Under the baseline scenario and standard alternative scenarios and stress tests, all debt burden indicators are well below the relevant policy-dependent indicative thresholds with one exception—the net present value (NPV) of debt-to-revenue ratio, which exceeds the threshold over brief periods in the standard tests. This finding represents a modest improvement from the last DSA conducted during the IMF’s 2007 Article IV consultation, in which thresholds were breached for two indicators.<sup>5</sup> However, in view of recent developments and Cambodia’s vulnerability to external shocks, staffs have analyzed a few additional scenarios. They show that in the event of a prolonged economic downturn, debt burden indicators would breach the indicative thresholds over extended periods.

## II. BACKGROUND AND ASSUMPTIONS

2. **The main underlying macroeconomic assumptions are presented in Box 1.** They reflect Cambodia’s continued pursuit of sound macroeconomic and financial policies and structural reforms in support of growth and poverty reduction and low external vulnerability. Growth prospects are predicated on implementation of necessary banking, fiscal, and regulatory reforms and improvements to public infrastructure and services, helping to raise productivity and strengthen competitiveness. However, the development of extractive industries is not factored into the baseline, given uncertainties about the timing and impact of new oil and mineral production. Resources development could create considerable fiscal space, but also pose challenges for macroeconomic management.

3. **Cambodia remains in arrears to the Russian Federation and the United States.** Following a Paris Club agreement in 1995, Cambodia concluded agreements with France, Germany, Italy, and Japan. Negotiations of outstanding debt obligations with the Russian Federation and the United States are still ongoing, with their status unchanged since the last DSA. Currently, Cambodia is not servicing its debt with either of these creditors, but is making efforts to conclude agreements with each under the framework of the Paris Club. Since prospects for resolution are unclear, the current DSA assumes no restructuring in its baseline, with arrears continuing to build up throughout the projection period. In measuring debt levels, the DSA incorporates the negotiated debt stock for the Russian Federation (US\$457 million) and the agreed amount of total principal due for the United States (US\$162 million).<sup>6</sup>

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<sup>4</sup> Cambodia received debt relief from the IMF under the Multilateral Debt Relief Initiative (MDRI) of SDR57 million (US\$82 million) in January 2006, as outlined in the decision of the Executive Board.

<sup>5</sup> See Cambodia—Staff Report for the 2007 Article IV Consultation, Joint IMF/World Bank Debt Sustainability Analysis 2007, IMF Country Report No. 07/290 (August 2007).

<sup>6</sup> For this DSA, staffs continue to apply the standard 70 percent discount to the nominal value of debt owed to the Russian Federation.

### Box 1: Main Assumptions for the Baseline Scenario (2008–28)

- **Real GDP growth** is projected to average slightly under 6 percent a year in 2008–10 compared with an average of 11 percent over the previous five years. The slowdown is due to some catch-up effects earlier on and less benign global conditions more recently, including spillover effects from the global financial crisis and weak external demand. Growth is expected to rise thereafter to around 7½ percent by 2014 as global and domestic conditions improve. Important drivers of future growth will be new export opportunities in light manufactures and agribusiness, as well as more expansive tourism activity. The construction and infrastructure sectors are also expected to be major contributors. These activities would depend on an improved investment climate as well as a recovery in foreign direct investment (FDI) starting in 2010, following an expected reduction in 2009 by around one-third from the previous year's level owing to global conditions. Over the longer term, growth is projected to be sustained in the range of 6–7 percent a year, supported by export growth and assuming maintenance of macroeconomic stability.
- **The external current account deficit** (including official transfers) is projected to decline in 2009 to 8 percent of GDP, compared to 12 percent in 2008, mainly due to lower oil prices and non-oil import growth, which more than offset low expected growth in garment exports and tourism services. Over the medium term, garment exports will continue to underpin export performance. Tourism growth should also strengthen as global conditions improve and given promotion efforts. Over the longer term, the current account deficit is expected to settle in the range of 5–6 percent of GDP a year. Official assistance (grants and loans) would decline gradually as a share of GDP, while FDI and other private inflows would rise. The baseline scenario also assumes an increasing but moderate level of external borrowing would be on less concessional terms, including from some bilateral creditors. With FDI and other private inflows expected to decline, the **overall external position** would weaken somewhat in 2009. Thereafter, gross official reserves would begin to build up slowly again in U.S. dollar terms, with the import coverage in the range of 2½–3 months from 2014 onward.
- **Macroeconomic stability** is underpinned by a moderate fiscal stance. Given weak global conditions, modest countercyclical easing is likely in 2009, with the **overall fiscal deficit** (excluding grants) expected to rise to around 3¼ percent of GDP in 2009 compared to a projected 1¼ percent in 2008. Thereafter, the deficit would be expected to decline gradually to under 2 percent by 2012, mostly financed externally. Revenue would rise over the medium term by about ¾ percentage point to around 13¼ percent of GDP by 2012 on increased tax buoyancy and a broadening of the tax base, with more moderate increases thereafter. **Grants** are projected to decline as a share of GDP from around 2¼ percent in recent years to 1½ percent in the outer years. **Expenditure** would stay around 15¼ percent of GDP over the medium term, but then rise gradually owing mainly to higher locally-financed capital spending.

4. **Cambodia received several speculative-grade sovereign credit ratings in 2007, which could provide an opportunity for commercial borrowing.** No plans have been announced and prospects appear remote at this time. However, bonds could be issued to finance infrastructure development, possibly for the oil sector. Several build-operate-transfer (BOT) projects have been signed with firms from China, but possible contingent liabilities arising from these types of contracts are not incorporated in this DSA. Greater transparency is needed in this area to facilitate the monitoring of these liabilities and mitigation of any associated fiscal risks.

### III. EXTERNAL DEBT SUSTAINABILITY

5. **All external debt indicators remain below the policy-dependent debt burden thresholds under the baseline scenario, but one threshold is breached under the most extreme standard stress test.** The main results of the external DSA are as follows:

- The NPV of external debt as a share of GDP is expected to remain below the 30 percent indicative threshold over period covered (Table 1a). Under the most extreme stress test—a one-time 30 percent nominal depreciation of the Cambodian riel vis-à-vis the U.S. dollar relative to the 2008 baseline—the NPV of debt-to-GDP ratio would increase by about 7 percentage points to 27 percent by end-2009, but still remain well below the indicative threshold over the projection period (Figure 1 and Table 1b).
- The NPV of external debt-to-revenue ratio remains below the threshold for all years in the baseline scenario, declining from 162 percent in 2008 to 128 percent by 2013, and further decreasing over the long term. Debt service stays under 2 percent of exports throughout the entire projection period, as existing debts are highly concessional.
- However, under the one-time 30 percent riel depreciation, the NPV of debt-to-revenue ratio does exceed the 200 percent threshold during the period 2009–11, and then falls below the indicative threshold for the rest of the projection period.

|  | DSA<br>Thresholds | Cambodia |                       |
|--|-------------------|----------|-----------------------|
|  |                   | 2007     | 2008–28 <sup>1/</sup> |
| NPV of debt in percent of:   |                   |          |                       |
| GDP  | 30                | 23       | 16                    |
| Exports  | 100               | 35       | 33                    |
| Government revenue   | 200               | 191      | 111                   |
| Debt service in percent of:  |                   |          |                       |
| Exports  | 15                | 1        | 1                     |
| Government revenue   | 25                | 4        | 4                     |
| Sources: Cambodian authorities; and staffs' estimates and projections. |                   |          |                       |
| <sup>1/</sup> Period average under the baseline scenario.              |                   |          |                       |

6. **In staffs' view, Cambodia faces a moderate risk of debt distress.** This assessment is based on the standard alternative scenarios and bound tests of the DSA, which are predicated on strong past performance.<sup>7</sup> However, it also takes into account current global conditions and the possibility of a prolonged economic downturn. As an illustrative exercise, a few additional alternative scenarios are examined, based on different assumptions from the baseline. They are (i) lower annual real GDP growth (4½ percent over the medium term) and smaller FDI inflows (the average of 2000–04 level as a share of GDP); and (ii) smaller FDI flows and higher borrowing costs (an average nominal interest rate of 6 percent on new loans) (Figure 2 and 3). The latter scenario presumes low FDI would be indicative of a persistence of a weak business and investment climate, with a lack of reforms and the resulting financing gap necessitating that Cambodia resort to more costly borrowing. The results indicate that the NPV of external debt as a share of GDP breaches the indicative thresholds under both scenarios, and with (ii) remains well above the threshold at the end of the projection period.

<sup>7</sup> Because of double-digit growth in recent years, the standard alternative scenarios and stress tests based on average past performance show a continued decline in debt and debt service levels. However, in view of the sharp downturn in global economic activity in the second half of 2008 and uncertain prospects about the degree and timing of a recovery, past performance may not be instructive of future trends.

#### IV. PUBLIC DEBT SUSTAINABILITY

7. **Given that most public debt is external, the overall public and external debt dynamics are very similar.** The nominal stock of public debt, equivalent to 30½ percent of GDP at end-2007, is expected to decline to 27½ percent by end-2008 (Figure 4 and Table 2a). The NPV of public sector debt-to-GDP ratio would fall steadily from 21 percent in 2008 to 12 percent by 2028. The NPV of public debt-to-revenue ratio, which is projected to be 142 percent in 2008, would decline to 70 percent by 2028. The debt-service-to-revenue ratio remains low in most scenarios for the entire projection period because of the concessionality of the existing debts. However under the standard alternative scenarios and bound tests, public debt ratios are particularly sensitive to a real exchange rate depreciation. A one-time 30 percent riel depreciation relative to the 2008 baseline would raise the NPV of public debt-to-GDP and the public debt-to-revenue ratios by around 8 and 51 percentage points, respectively, by end-2009, but eventually decline over the projection period.

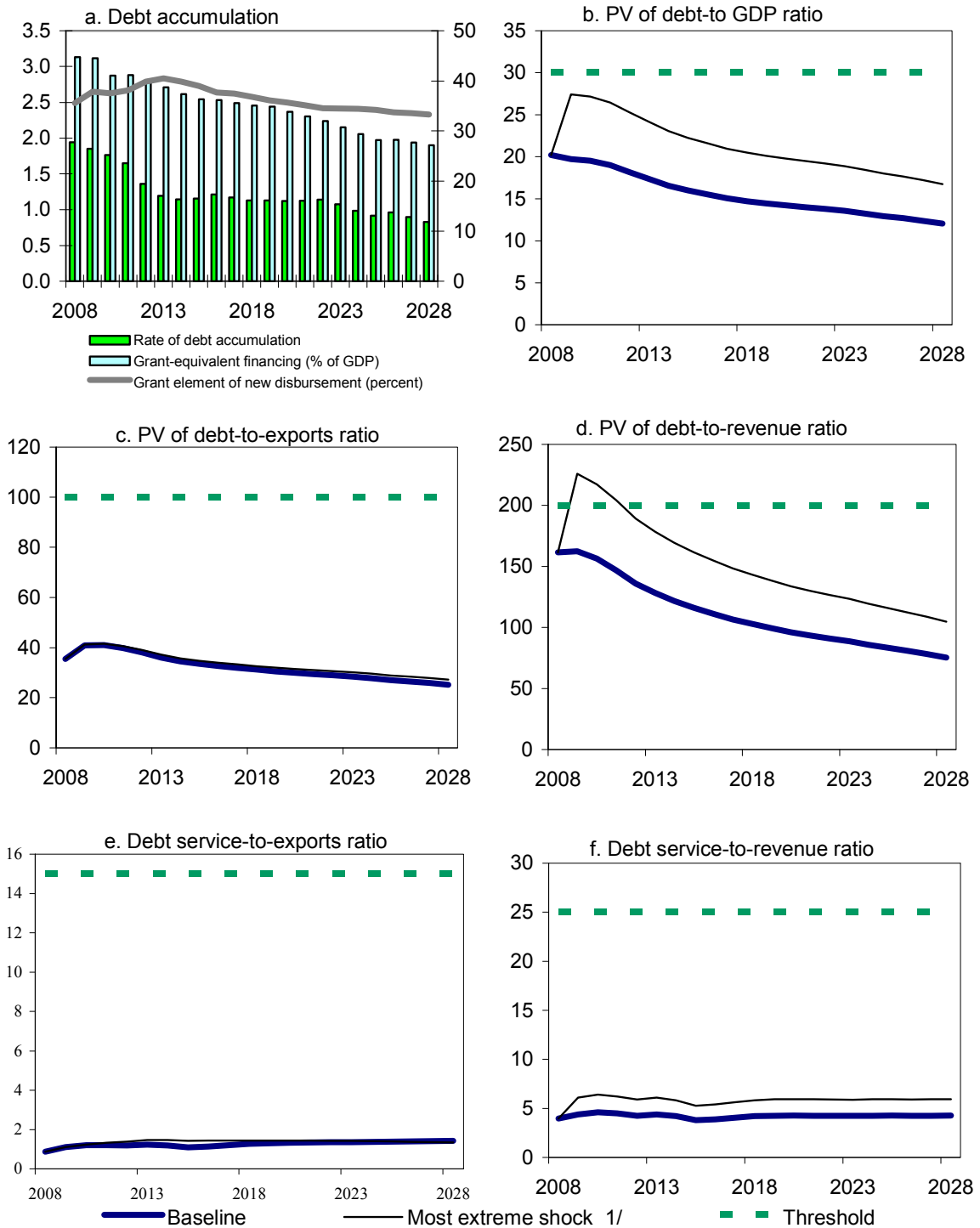
8. **The DSA does not account for possible contingent liabilities, notably those arising from large infrastructure investment.** More careful assessment is needed of plans in this area, including examination of BOT contracts for possible guarantees offered. The authorities will need to monitor commitments closely and transparently, including developing and maintaining an inventory of all concessions granted, in particular for infrastructure, and building and improving capacity to analyze the impact of contingent liabilities on debt sustainability, should they arise.

#### V. CONCLUSION

9. **Staffs conclude that Cambodia faces a moderate risk of debt distress.** No thresholds are breached under the baseline scenario and standard stress tests and alternative scenarios, except one bound test. However, this benign outlook is subject to substantial downside risks, as it rests on a pick up in the pace of economic activity from 2010 onward, notably economic growth and external inflows. Additional scenarios reflecting a prolonged downturn in global economic activity indicate that external debt could exceed indicative thresholds for extended periods. This outlook could be further weakened in the event actual liabilities arise from contingent obligations, mainly those entered for infrastructure development, which further underscores the rationale for the designation of risk.

10. **Given uncertainty about near-to medium-term prospects, staffs urge the Royal Government of Cambodia continue pursuing a sound strategy for public debt management.** Careful consideration is needed in possibly contracting less concessional loans, as they could impair sustainability, in particular if the revenue base remains low and institutions weak. Stronger capacity in debt management is an essential pre-requisite for this type of borrowing. To this end, a full accounting of all commitments, including from newly emerging creditors, and better monitoring of contingent liabilities will be necessary to ensure debt sustainability. Staffs also encourage the authorities to continue seeking agreements to resolve outstanding arrears.

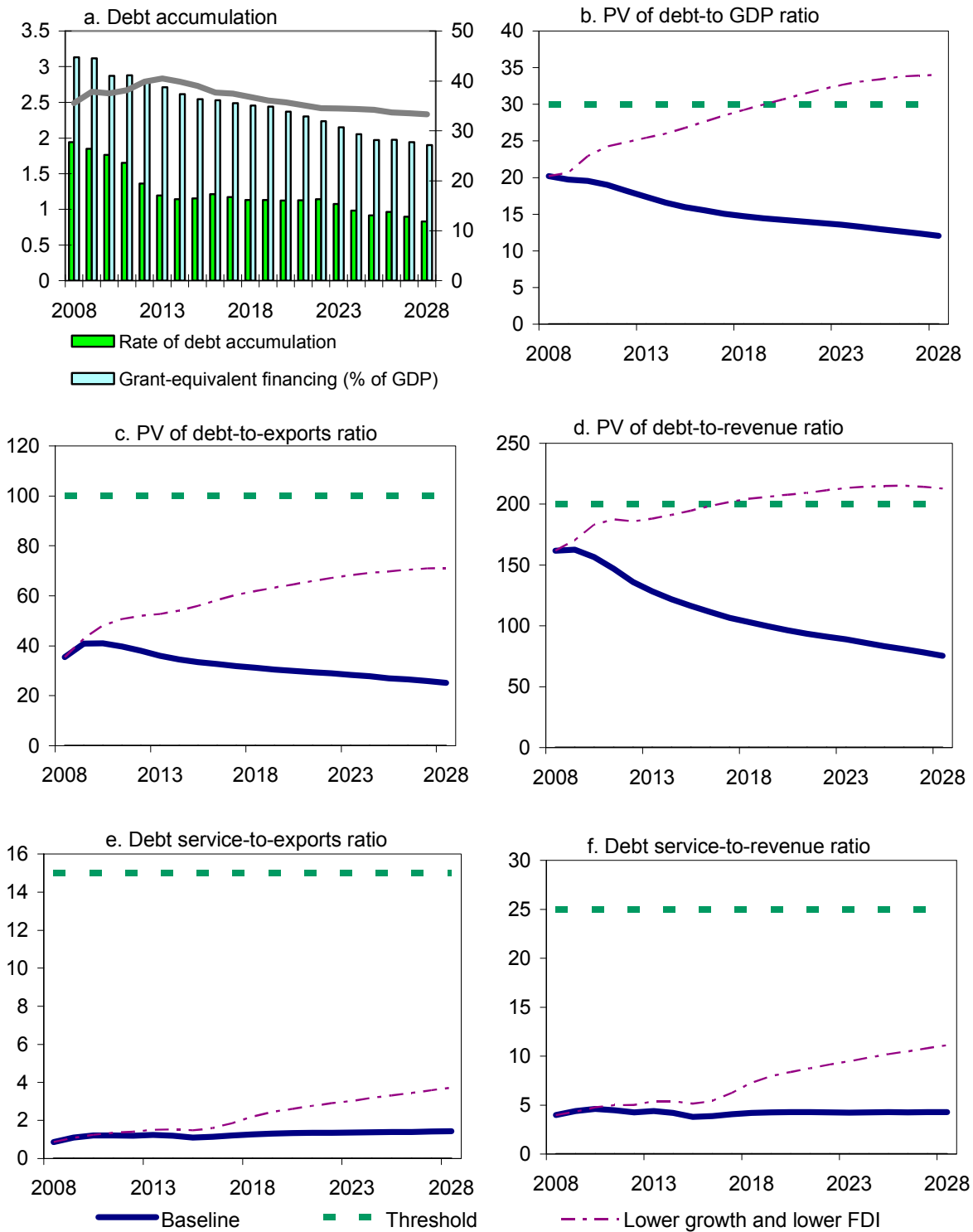
**Figure 1. Cambodia: Indicators of Public and Publicly Guaranteed External Debt under Baseline and Alternative Scenarios, 2008–28 1/**



Source: Staffs' projections and simulations.

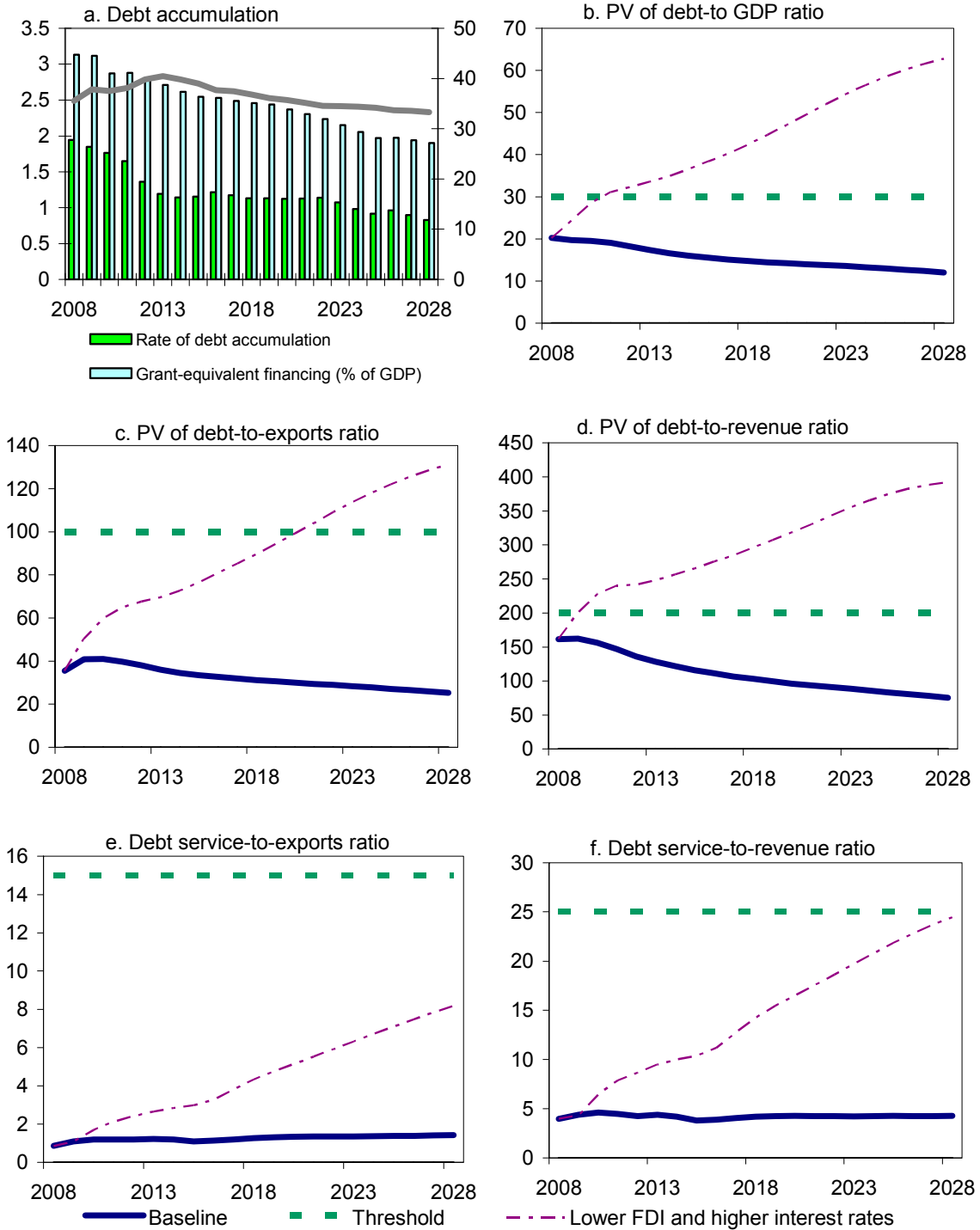
1/ The most extreme stress test is the test that yields the highest ratio in 2018. In figure b. it corresponds to a one-time depreciation shock; in c. to a terms shock; in d. to a one-time depreciation shock; in e. to a terms shock; and in f. to a one-time depreciation shock.

**Figure 2. Cambodia: Indicators of Public and Publicly-Guaranteed External Debt under the Alternative Scenario of Lower GDP Growth and Lower FDI, 2008–28**



Source: Staffs' projections and simulations.

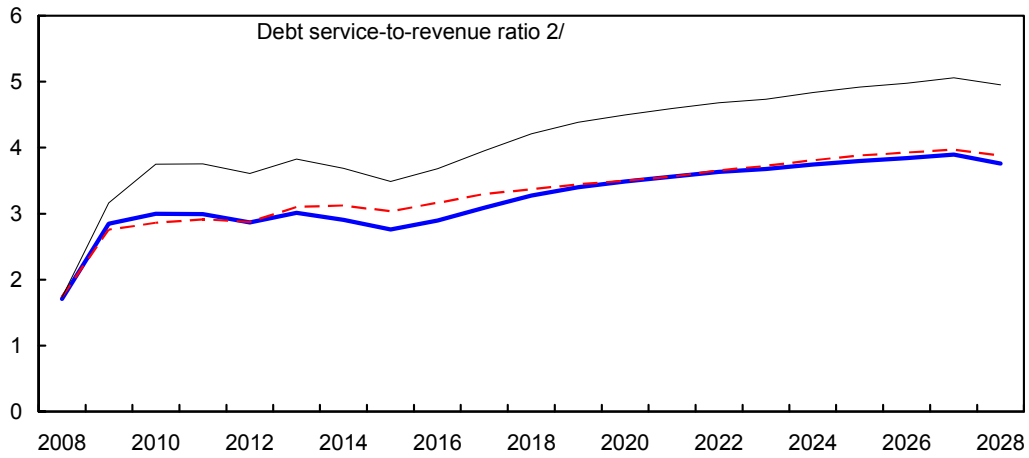
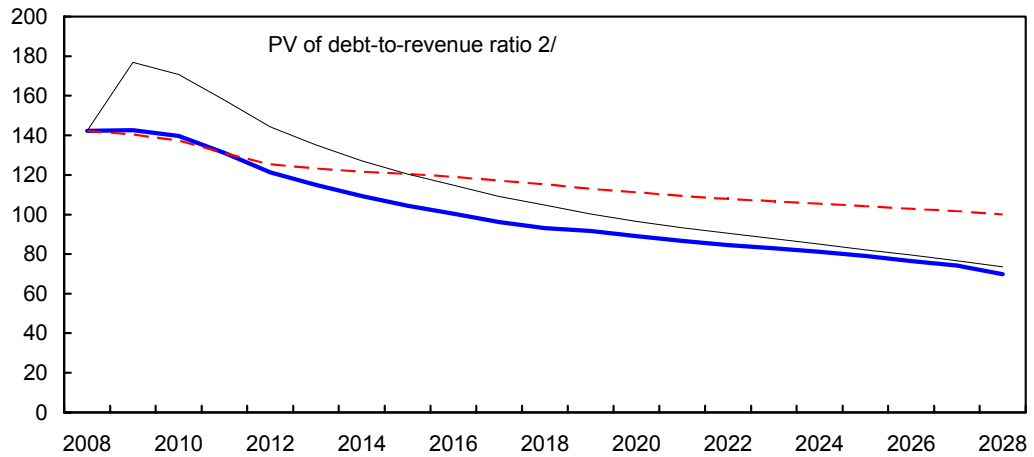
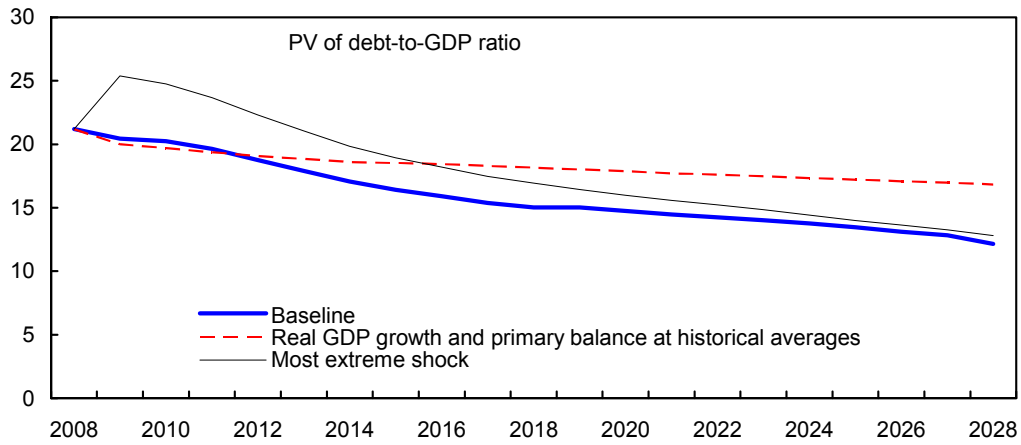
**Figure 3. Cambodia: Indicators of Public and Publicly-Guaranteed External Debt under the Combined Scenario of Lower FDI and Higher Interest Rates, 2008–28**



Source: Staffs' projections and simulations.



**Figure 4. Cambodia: Indicators of Public Debt under Baseline and Alternative Scenarios, 2008–28 1/**



Source: Staffs' projections and simulations.

1/ The most extreme stress test is the test that yields the highest ratio in 2018. For the first two charts, it is the 10 percent of GDP increase in other debt creating flows. For the third chart, it is the one-time 30 percent real depreciation in 2009.

2/ Revenue is defined as inclusive of grants.

**Table 1a. Cambodia: External Debt Sustainability Framework, Baseline Scenario, 2005–28 1/**  
(In percent of GDP, unless otherwise indicated)

|  | Actual       |              |              | Historical<br>Average | Standard<br>Deviation | Projections  |              |              |              |              |              | 2008-13 |              | 2014-28     |             |  |
|--|--------------|--------------|--------------|-----------------------|-----------------------|--------------|--------------|--------------|--------------|--------------|--------------|---------|--------------|-------------|-------------|--|
|  | 2005         | 2006         | 2007         |                       |                       | 2008         | 2009         | 2010         | 2011         | 2012         | 2013         | Average | 2018         | 2028        | Average     |  |
| <b>External debt (nominal) 1/</b>                                | <b>35.0</b>  | <b>31.1</b>  | <b>29.7</b>  |                       |                       | <b>26.8</b>  | <b>26.0</b>  | <b>25.9</b>  | <b>25.3</b>  | <b>24.2</b>  | <b>23.2</b>  |         | <b>20.0</b>  | <b>16.0</b> |             |  |
| Of which: Public and publicly guaranteed (PPG)                   | 35.0         | 31.1         | 29.7         |                       |                       | 26.8         | 26.0         | 25.9         | 25.3         | 24.2         | 23.2         |         | 19.5         | 15.8        |             |  |
| Change in external debt  | -4.5         | -4.0         | -1.4         |                       |                       | -2.9         | -0.8         | -0.1         | -0.6         | -1.1         | -1.0         |         | -0.5         | -0.5        |             |  |
| Identified net debt-creating flows                               | -8.1         | -10.7        | -11.7        |                       |                       | 3.0          | 1.8          | 1.3          | 0.3          | -0.3         | -0.8         |         | -1.2         | -1.8        |             |  |
| <b>Non-interest current account deficit</b>                      | <b>3.5</b>   | <b>0.3</b>   | <b>3.1</b>   | <b>2.2</b>            | <b>1.2</b>            | <b>11.6</b>  | <b>6.8</b>   | <b>6.6</b>   | <b>5.8</b>   | <b>5.4</b>   | <b>5.0</b>   |         | <b>5.1</b>   | <b>4.7</b>  | <b>5.2</b>  |  |
| Deficit in balance of goods and services                         | 8.1          | 7.1          | 7.9          |                       |                       | 15.8         | 10.6         | 10.5         | 9.5          | 8.8          | 8.3          |         | 7.4          | 5.9         |             |  |
| Exports  | 64.1         | 68.7         | 64.8         |                       |                       | 56.9         | 48.3         | 47.7         | 47.8         | 47.8         | 48.2         |         | 47.2         | 47.8        |             |  |
| Imports  | 72.2         | 75.8         | 72.7         |                       |                       | 72.7         | 58.8         | 58.2         | 57.3         | 56.6         | 56.5         |         | 54.6         | 53.7        |             |  |
| Net current transfers (negative = inflow)                        | -9.1         | -10.9        | -8.9         | -10.3                 | 1.2                   | -7.6         | -6.7         | -6.5         | -6.2         | -6.0         | -5.8         |         | -4.6         | -2.5        | -3.8        |  |
| Of which: Official   | -5.8         | -6.5         | -4.6         |                       |                       | -4.3         | -3.9         | -3.6         | -3.3         | -2.9         | -2.6         |         | -1.5         | -0.4        |             |  |
| Other current account flows (negative = net inflow)              | 4.5          | 4.0          | 4.1          |                       |                       | 3.4          | 2.9          | 2.6          | 2.6          | 2.5          | 2.5          |         | 2.3          | 1.2         |             |  |
| <b>Net FDI (negative = inflow)</b>                               | <b>-6.0</b>  | <b>-6.7</b>  | <b>-10.0</b> | <b>-4.6</b>           | <b>2.7</b>            | <b>-7.4</b>  | <b>-4.1</b>  | <b>-4.2</b>  | <b>-4.3</b>  | <b>-4.4</b>  | <b>-4.5</b>  |         | <b>-5.3</b>  | <b>-5.8</b> | <b>-5.5</b> |  |
| <b>Endogenous debt dynamics 2/</b>                               | <b>-5.7</b>  | <b>-4.3</b>  | <b>-4.8</b>  |                       |                       | <b>-1.2</b>  | <b>-0.8</b>  | <b>-1.1</b>  | <b>-1.2</b>  | <b>-1.3</b>  | <b>-1.3</b>  |         | <b>-1.0</b>  | <b>-0.7</b> |             |  |
| Contribution from nominal interest rate                          | 0.3          | 0.4          | 0.3          |                       |                       | 0.4          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          |         | 0.3          | 0.3         |             |  |
| Contribution from real GDP growth                                | -4.4         | -3.3         | -2.6         |                       |                       | -1.6         | -1.2         | -1.4         | -1.5         | -1.6         | -1.6         |         | -1.3         | -1.0        |             |  |
| Contribution from price and exchange rate changes                | -1.6         | -1.4         | -2.4         |                       |                       | ...          | ...          | ...          | ...          | ...          | ...          |         | ...          | ...         |             |  |
| <b>Residual (3-4) 3/</b>   | <b>3.6</b>   | <b>6.7</b>   | <b>10.3</b>  |                       |                       | <b>-5.9</b>  | <b>-2.6</b>  | <b>-1.4</b>  | <b>-0.9</b>  | <b>-0.8</b>  | <b>-0.2</b>  |         | <b>0.7</b>   | <b>1.3</b>  |             |  |
| Of which: Exceptional financing                                  | -0.3         | 1.1          | -0.2         |                       |                       | 0.0          | -0.2         | -0.1         | -0.1         | -0.1         | -0.1         |         | 0.0          | 0.0         |             |  |
| PV of external debt 4/   | 30.1         | 27.5         | 22.7         |                       |                       | 20.2         | 19.7         | 19.5         | 19.0         | 18.2         | 17.4         |         | 15.2         | 12.2        |             |  |
| In percent of exports  | 47.0         | 40.0         | 35.0         |                       |                       | 35.5         | 40.8         | 41.0         | 39.7         | 38.1         | 36.0         |         | 32.1         | 25.6        |             |  |
| <b>PV of PPG external debt</b>                                   | <b>30.1</b>  | <b>27.5</b>  | <b>22.7</b>  |                       |                       | <b>20.2</b>  | <b>19.7</b>  | <b>19.5</b>  | <b>19.0</b>  | <b>18.2</b>  | <b>17.4</b>  |         | <b>14.7</b>  | <b>12.0</b> |             |  |
| In percent of exports  | 47.0         | 40.0         | 35.0         |                       |                       | 35.5         | 40.8         | 41.0         | 39.7         | 38.1         | 36.0         |         | 31.2         | 25.2        |             |  |
| <b>In percent of government revenues</b>                         | <b>292.4</b> | <b>239.0</b> | <b>191.2</b> |                       |                       | <b>161.6</b> | <b>162.5</b> | <b>156.3</b> | <b>146.9</b> | <b>135.9</b> | <b>128.3</b> |         | <b>103.0</b> | <b>75.3</b> |             |  |
| <b>Debt service-to-exports ratio (in percent)</b>                | <b>0.9</b>   | <b>0.9</b>   | <b>0.9</b>   |                       |                       | <b>0.9</b>   | <b>1.1</b>   | <b>1.2</b>   | <b>1.2</b>   | <b>1.2</b>   | <b>1.2</b>   |         | <b>1.3</b>   | <b>1.4</b>  |             |  |
| <b>PPG debt service-to-exports ratio (in percent)</b>            | <b>0.9</b>   | <b>0.9</b>   | <b>0.9</b>   |                       |                       | <b>0.9</b>   | <b>1.1</b>   | <b>1.2</b>   | <b>1.2</b>   | <b>1.2</b>   | <b>1.2</b>   |         | <b>1.3</b>   | <b>1.4</b>  |             |  |
| <b>PPG debt service-to-revenue ratio (in percent)</b>            | <b>5.3</b>   | <b>5.3</b>   | <b>4.9</b>   |                       |                       | <b>4.0</b>   | <b>4.4</b>   | <b>4.6</b>   | <b>4.5</b>   | <b>4.2</b>   | <b>4.4</b>   |         | <b>4.2</b>   | <b>4.3</b>  |             |  |
| Total gross financing need (Billions of U.S. dollars)            | -0.1         | -0.4         | -0.5         |                       |                       | 0.5          | 0.4          | 0.4          | 0.3          | 0.3          | 0.2          |         | 0.1          | -0.3        |             |  |
| Non-interest current account deficit that stabilizes debt ratio  | 8.0          | 4.3          | 4.5          |                       |                       | 14.5         | 7.6          | 6.7          | 6.4          | 6.4          | 6.0          |         | 5.6          | 5.2         |             |  |
| <b>Key macroeconomic assumptions</b>                             |              |              |              |                       |                       |              |              |              |              |              |              |         |              |             |             |  |
| Real GDP growth (in percent)                                     | 13.3         | 10.8         | 10.2         | 9.6                   | 2.0                   | 6.5          | 4.8          | 6.0          | 6.6          | 7.1          | 7.4          | 6.4     | 6.7          | 6.5         | 6.7         |  |
| GDP deflator in US dollar terms (change in percent)              | 4.1          | 4.3          | 8.6          | 3.2                   | 2.9                   | 14.7         | 6.7          | 3.7          | 4.5          | 4.6          | 4.0          | 6.4     | 3.0          | 3.1         | 3.1         |  |
| Effective interest rate (percent) 5/                             | 1.0          | 1.2          | 1.1          | 1.1                   | 0.1                   | 1.5          | 1.4          | 1.4          | 1.4          | 1.4          | 1.4          | 1.4     | 1.4          | 1.4         | 1.5         |  |
| Growth of exports of G&S (US dollar terms, in percent)           | 18.7         | 23.9         | 12.9         | 17.6                  | 6.5                   | 7.2          | -5.2         | 8.6          | 11.8         | 11.9         | 12.6         | 7.8     | 10.0         | 9.6         | 10.0        |  |
| Growth of imports of G&S (US dollar terms, in percent)           | 20.0         | 21.3         | 14.8         | 15.9                  | 5.3                   | 22.0         | -9.4         | 8.8          | 9.7          | 10.6         | 11.4         | 8.8     | 9.7          | 9.4         | 9.7         |  |
| Grant element of new public sector borrowing (in percent)        | ...          | ...          | ...          | ...                   | ...                   | 35.6         | 37.9         | 37.5         | 38.1         | 39.8         | 40.5         | 38.2    | 36.8         | 33.3        | 35.7        |  |
| Government revenues (excluding grants, in percent of GDP)        | 10.3         | 11.5         | 11.9         | ...                   | ...                   | 12.5         | 12.1         | 12.5         | 12.9         | 13.4         | 13.5         | ...     | 14.3         | 16.0        | 14.9        |  |
| Aid flows (in billions of U.S. dollars) 7/                       | 0.3          | 0.3          | 0.4          |                       |                       | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.4          |         | 0.6          | 1.1         |             |  |
| Of which: Grants   | 0.1          | 0.2          | 0.2          |                       |                       | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.4          |         | 0.6          | 1.1         |             |  |
| Of which: Concessional loans                                     | 0.2          | 0.1          | 0.3          |                       |                       | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |         | 0.0          | 0.0         |             |  |
| Grant-equivalent financing (in percent of GDP) 8/                | ...          | ...          | ...          |                       |                       | 3.1          | 3.1          | 2.9          | 2.9          | 2.8          | 2.7          |         | 2.5          | 1.9         | 2.3         |  |
| Grant-equivalent financing (in percent of external financing) 8/ | ...          | ...          | ...          |                       |                       | 70.1         | 67.8         | 66.1         | 68.0         | 72.0         | 73.3         |         | 70.4         | 67.4        | 69.0        |  |
| <b>Memorandum items:</b>   |              |              |              |                       |                       |              |              |              |              |              |              |         |              |             |             |  |
| Nominal GDP (billions of U.S. dollars)                           | 6.3          | 7.3          | 8.7          |                       |                       | 10.6         | 11.9         | 13.1         | 14.5         | 16.3         | 18.2         |         | 30.4         | 76.5        |             |  |
| Nominal dollar GDP growth  | 17.9         | 15.6         | 19.6         |                       |                       | 22.1         | 11.9         | 9.9          | 11.5         | 12.0         | 11.6         | 13.2    | 9.9          | 9.7         | 10.0        |  |
| PV of PPG external debt (in billions of U.S. dollars)            | ...          | ...          | 2.0          |                       |                       | 2.1          | 2.3          | 2.5          | 2.8          | 3.0          | 3.2          |         | 4.5          | 9.2         |             |  |
| (PVt-PVt-1)/GDPT-1 (in percent)                                  | ...          | ...          | ...          |                       |                       | 1.9          | 1.8          | 1.8          | 1.7          | 1.4          | 1.2          | 1.6     | 1.1          | 0.8         | 1.1         |  |

Sources: Cambodian authorities; and staffs' estimates and projections.

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 PV of private sector debt is equivalent to its face value.

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

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

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

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

**Table 1b. Cambodia: Sensitivity Analysis for Key Indicators of Public and Publicly-Guaranteed External Debt, 2008–28**  
(In percent)

|  | Projections |      |      |      |      |      |            | 2018 | 2028 |
|--|-------------|------|------|------|------|------|------------|------|------|
|  | 2008        | 2009 | 2010 | 2011 | 2012 | 2013 |            |      |      |
| <b>PV of debt-to GDP ratio</b>   |             |      |      |      |      |      |            |      |      |
| <b>Baseline</b>  | 20          | 20   | 20   | 19   | 18   | 17   | <b>15</b>  | 12   |      |
| <b>A. Alternative Scenarios</b>  |             |      |      |      |      |      |            |      |      |
| A1. Key variables at their historical averages in 2008–28 1/                                     | 20          | 16   | 13   | 10   | 7    | 5    | ..         | ..   |      |
| A2. New Public Sector loans on less favorable terms in 2008–28 2/                                | 20          | 20   | 20   | 19   | 19   | 18   | <b>15</b>  | 13   |      |
| <b>B. Bound Tests</b>  |             |      |      |      |      |      |            |      |      |
| B1. Real GDP growth at historical average minus one standard deviation in 2009–10                | 20          | 19   | 19   | 18   | 17   | 17   | <b>14</b>  | 12   |      |
| B2. Export value growth at historical average minus one standard deviation in 2009–10 3/         | 20          | 14   | 8    | 9    | 8    | 8    | <b>9</b>   | 10   |      |
| B3. US dollar GDP deflator at historical average minus one standard deviation in 2009–10         | 20          | 21   | 21   | 21   | 20   | 19   | <b>16</b>  | 13   |      |
| B4. Net non-debt creating flows at historical average minus one standard deviation in 2009–10 4/ | 20          | 20   | 19   | 19   | 18   | 17   | <b>15</b>  | 12   |      |
| B5. Combination of B1-B4 using one-half standard deviation shocks                                | 20          | 12   | 3    | 3    | 3    | 4    | <b>6</b>   | 10   |      |
| B6. One-time 30 percent nominal depreciation relative to the baseline in 2009 5/                 | 20          | 27   | 27   | 26   | 25   | 24   | <b>20</b>  | 17   |      |
| <b>PV of debt-to-exports ratio</b>   |             |      |      |      |      |      |            |      |      |
| <b>Baseline</b>  | 35          | 41   | 41   | 40   | 38   | 36   | <b>31</b>  | 25   |      |
| <b>A. Alternative Scenarios</b>  |             |      |      |      |      |      |            |      |      |
| A1. Key variables at their historical averages in 2008–28 1/                                     | 35          | 33   | 26   | 20   | 15   | 11   | ..         | ..   |      |
| A2. New Public Sector loans on less favorable terms in 2008–28 2/                                | 35          | 41   | 42   | 41   | 39   | 37   | <b>33</b>  | 27   |      |
| <b>B. Bound Tests</b>  |             |      |      |      |      |      |            |      |      |
| B1. Real GDP growth at historical average minus one standard deviation in 2009–10                | 35          | 41   | 41   | 40   | 38   | 36   | <b>31</b>  | 25   |      |
| B2. Export value growth at historical average minus one standard deviation in 2009–10 3/         | 35          | 25   | 15   | 15   | 15   | 14   | <b>15</b>  | 18   |      |
| B3. US dollar GDP deflator at historical average minus one standard deviation in 2009–10         | 35          | 41   | 41   | 40   | 38   | 36   | <b>31</b>  | 25   |      |
| B4. Net non-debt creating flows at historical average minus one standard deviation in 2009–10 4/ | 35          | 41   | 40   | 39   | 37   | 35   | <b>31</b>  | 25   |      |
| B5. Combination of B1-B4 using one-half standard deviation shocks                                | 35          | 21   | 4    | 5    | 6    | 6    | <b>9</b>   | 16   |      |
| B6. One-time 30 percent nominal depreciation relative to the baseline in 2009 5/                 | 35          | 41   | 41   | 40   | 38   | 36   | <b>31</b>  | 25   |      |
| <b>PV of debt-to-revenue ratio</b>   |             |      |      |      |      |      |            |      |      |
| <b>Baseline</b>  | 162         | 162  | 156  | 147  | 136  | 128  | <b>103</b> | 75   |      |
| <b>A. Alternative Scenarios</b>  |             |      |      |      |      |      |            |      |      |
| A1. Key variables at their historical averages in 2008–28 1/                                     | 162         | 133  | 101  | 75   | 54   | 38   | ..         | ..   |      |
| A2. New Public Sector loans on less favorable terms in 2008–28 2/                                | 162         | 164  | 159  | 150  | 140  | 132  | <b>108</b> | 81   |      |
| <b>B. Bound Tests</b>  |             |      |      |      |      |      |            |      |      |
| B1. Real GDP growth at historical average minus one standard deviation in 2009–10                | 162         | 158  | 150  | 141  | 131  | 123  | <b>99</b>  | 72   |      |
| B2. Export value growth at historical average minus one standard deviation in 2009–10 3/         | 162         | 118  | 67   | 66   | 63   | 62   | <b>61</b>  | 65   |      |
| B3. US dollar GDP deflator at historical average minus one standard deviation in 2009–10         | 162         | 173  | 172  | 161  | 149  | 141  | <b>113</b> | 83   |      |
| B4. Net non-debt creating flows at historical average minus one standard deviation in 2009–10 4/ | 162         | 161  | 154  | 145  | 134  | 126  | <b>102</b> | 75   |      |
| B5. Combination of B1-B4 using one-half standard deviation shocks                                | 162         | 100  | 20   | 24   | 26   | 27   | <b>39</b>  | 61   |      |
| B6. One-time 30 percent nominal depreciation relative to the baseline in 2009 5/                 | 162         | 226  | 217  | 204  | 189  | 178  | <b>143</b> | 105  |      |

**Table 1b. Cambodia: Sensitivity Analysis for Key Indicators of Public and Publicly-Guaranteed External Debt, 2008–28 (Concluded)**  
(In percent)

|  | Projections |      |      |      |      |      |      |      |
|--|-------------|------|------|------|------|------|------|------|
|  | 2008        | 2009 | 2010 | 2011 | 2012 | 2013 | 2018 | 2028 |
| <b>Debt service-to-exports ratio</b>   |             |      |      |      |      |      |      |      |
| <b>A. Alternative Scenarios</b>  |             |      |      |      |      |      |      |      |
| A1. Key variables at their historical averages in 2008–28 1/                                     | 1           | 1    | 1    | 1    | 1    | 1    | 0    | ...  |
| A2. New Public Sector loans on less favorable terms in 2008–28 2/                                | 1           | 1    | 1    | 1    | 1    | 1    | 1    | 1    |
| <b>B. Bound Tests</b>  |             |      |      |      |      |      |      |      |
| B1. Real GDP growth at historical average minus one standard deviation in 2009–10                | 1           | 1    | 1    | 1    | 1    | 1    | 1    | 1    |
| B2. Export value growth at historical average minus one standard deviation in 2009–10 3/         | 1           | 1    | 1    | 1    | 1    | 1    | 0    | 1    |
| B3. US dollar GDP deflator at historical average minus one standard deviation in 2009–10         | 1           | 1    | 1    | 1    | 1    | 1    | 1    | 1    |
| B4. Net non-debt creating flows at historical average minus one standard deviation in 2009–10 4/ | 1           | 1    | 1    | 1    | 1    | 1    | 1    | 1    |
| B5. Combination of B1–B4 using one-half standard deviation shocks                                | 1           | 1    | 1    | 0    | 0    | 0    | 0    | 1    |
| B6. One-time 30 percent nominal depreciation relative to the baseline in 2009 5/                 | 1           | 1    | 1    | 1    | 1    | 1    | 1    | 1    |
| <b>Debt service-to-revenue ratio</b>   |             |      |      |      |      |      |      |      |
| <b>A. Alternative Scenarios</b>  |             |      |      |      |      |      |      |      |
| A1. Key variables at their historical averages in 2008–28 1/                                     | 4           | 4    | 4    | 3    | 3    | 2    | ...  | ...  |
| A2. New Public Sector loans on less favorable terms in 2008–28 2/                                | 4           | 4    | 5    | 5    | 5    | 5    | 5    | 4    |
| <b>B. Bound Tests</b>  |             |      |      |      |      |      |      |      |
| B1. Real GDP growth at historical average minus one standard deviation in 2009–10                | 4           | 4    | 4    | 4    | 4    | 4    | 4    | 4    |
| B2. Export value growth at historical average minus one standard deviation in 2009–10 3/         | 4           | 4    | 4    | 2    | 2    | 3    | 0    | 3    |
| B3. US dollar GDP deflator at historical average minus one standard deviation in 2009–10         | 4           | 5    | 5    | 5    | 5    | 5    | 5    | 5    |
| B4. Net non-debt creating flows at historical average minus one standard deviation in 2009–10 4/ | 4           | 4    | 5    | 4    | 4    | 4    | 4    | 4    |
| B5. Combination of B1–B4 using one-half standard deviation shocks                                | 4           | 4    | 3    | 1    | 1    | 2    | ...  | ...  |
| B6. One-time 30 percent nominal depreciation relative to the baseline in 2009 5/                 | 4           | 6    | 6    | 6    | 6    | 6    | 6    | 6    |
| Memorandum item:   |             |      |      |      |      |      |      |      |
| Grant element assumed on residual financing (i.e., financing required above baseline) 6/         | 35          | 35   | 35   | 35   | 35   | 35   | 35   | 35   |

Source: Staffs' projections and simulations.

1/ Variables include real GDP growth, growth of GDP deflator (in US dollar terms), non-interest current account in percent of GDP and non-debt creating flows.

Due to large swings in GDP, deflator and current account in 2008, compared to historical average, debt falls sharply under this scenario.

2/ Assumes that the interest rate on new borrowing is by 2 percentage points higher than in the baseline., while grace and maturity periods are the same as in the baseline.

3/ Exports values are assumed to remain permanently at the lower level, but the current account as a share of GDP is assumed to return to its baseline level after the shock (implicitly assuming an offsetting adjustment in import levels).

4/ Includes official and private transfers and FDI.

5/ 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 2a. Cambodia: Public Sector Debt Sustainability Framework, Baseline Scenario, 2005–28**  
(In percent of GDP, unless otherwise indicated)

|   | Actual |       |       | Average | Standard<br>Deviation | Estimate |       |       |       |       | Projections |                    |       |      |                    |
|---|--------|-------|-------|---------|-----------------------|----------|-------|-------|-------|-------|-------------|--------------------|-------|------|--------------------|
|   | 2005   | 2006  | 2007  |         |                       | 2008     | 2009  | 2010  | 2011  | 2012  | 2013        | 2008-13<br>Average | 2018  | 2028 | 2014–28<br>Average |
| <b>Public sector debt 1/</b>                                      | 37.2   | 32.8  | 30.6  |         |                       | 27.5     | 26.7  | 26.6  | 25.9  | 24.8  | 23.7        |                    | 19.8  | 15.9 |                    |
| <i>Of which: Foreign-currency denominated</i>                     | 35.0   | 31.1  | 29.7  |         |                       | 26.8     | 26.0  | 25.9  | 25.3  | 24.2  | 23.2        |                    | 19.5  | 15.8 |                    |
| Change in public sector debt                                      | -5.5   | -4.4  | -2.2  |         |                       | -3.1     | -0.8  | -0.1  | -0.7  | -1.1  | -1.1        |                    | -0.5  | -0.5 |                    |
| Identified debt-creating flows                                    | -6.0   | -6.3  | -4.5  |         |                       | -5.5     | -2.1  | -1.6  | -2.4  | -3.0  | -2.8        |                    | -1.8  | -2.0 |                    |
| Primary deficit   | 0.2    | 0.0   | 0.5   | 1.9     | 1.5                   | -0.8     | 0.8   | 0.5   | 0.1   | -0.5  | -0.6        | -0.1               | -0.3  | -0.8 | -0.4               |
| Revenue and grants  | 12.4   | 14.0  | 14.1  |         |                       | 14.9     | 14.3  | 14.5  | 15.0  | 15.5  | 15.6        |                    | 16.2  | 17.4 |                    |
| <i>Of which: Grants</i>   | 2.1    | 2.5   | 2.2   |         |                       | 2.4      | 2.2   | 2.0   | 2.0   | 2.1   | 2.0         |                    | 1.9   | 1.4  |                    |
| Primary (noninterest) expenditure                                 | 12.6   | 14.0  | 14.5  |         |                       | 14.1     | 15.2  | 15.0  | 15.0  | 15.0  | 15.0        |                    | 15.9  | 16.6 |                    |
| Automatic debt dynamics   | -6.1   | -5.2  | -4.9  |         |                       | -4.7     | -2.9  | -2.1  | -2.4  | -2.5  | -2.2        |                    | -1.6  | -1.2 |                    |
| Contribution from interest rate/growth differential               | -6.8   | -4.7  | -4.6  |         |                       | -5.3     | -2.9  | -2.1  | -2.4  | -2.5  | -2.3        |                    | -1.6  | -1.2 |                    |
| <i>Of which: Contribution from average real interest rate</i>     | -1.8   | -1.1  | -1.5  |         |                       | -3.4     | -1.6  | -0.6  | -0.8  | -0.7  | -0.6        |                    | -0.3  | -0.3 |                    |
| <i>Of which: Contribution from real GDP growth</i>                | -5.0   | -3.6  | -3.0  |         |                       | -1.9     | -1.3  | -1.5  | -1.7  | -1.7  | -1.7        |                    | -1.3  | -1.0 |                    |
| Contribution from real exchange rate depreciation                 | 0.7    | -0.4  | -0.4  |         |                       | 0.6      | 0.0   | 0.0   | 0.0   | 0.0   | 0.1         |                    | ...   | ...  |                    |
| Other identified debt-creating flows                              | 0.0    | -1.1  | 0.0   |         |                       | 0.0      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0         |                    | 0.0   | 0.0  |                    |
| Privatization receipts (negative)                                 | 0.0    | 0.0   | 0.0   |         |                       | 0.0      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0         |                    | 0.0   | 0.0  |                    |
| Recognition of implicit or contingent liabilities                 | 0.0    | 0.0   | 0.0   |         |                       | 0.0      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0         |                    | 0.0   | 0.0  |                    |
| Debt relief (HIPC and other)                                      | 0.0    | -1.1  | 0.0   |         |                       | 0.0      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0         |                    | 0.0   | 0.0  |                    |
| Other (specify, e.g. bank recapitalization)                       | 0.0    | 0.0   | 0.0   |         |                       | 0.0      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0         |                    | 0.0   | 0.0  |                    |
| Residual, including asset changes                                 | 0.5    | 1.9   | 2.3   |         |                       | 2.4      | 1.3   | 1.4   | 1.7   | 1.8   | 1.7         |                    | 1.3   | 1.6  |                    |
| <b>Other Sustainability Indicators</b>                            |        |       |       |         |                       |          |       |       |       |       |             |                    |       |      |                    |
| <b>PV of public sector debt</b>                                   | 27.0   | 24.8  | 23.7  |         |                       | 21.2     | 20.5  | 20.3  | 19.6  | 18.8  | 17.9        |                    | 15.0  | 12.2 |                    |
| <i>Of which: Foreign-currency denominated</i>                     | 23.8   | 22.6  | 22.7  |         |                       | 20.4     | 19.7  | 19.5  | 19.0  | 18.2  | 17.4        |                    | 14.7  | 12.1 |                    |
| <i>Of which: External</i>   | 23.8   | 22.6  | 22.6  |         |                       | 20.4     | 19.7  | 19.5  | 19.0  | 18.2  | 17.4        |                    | 14.7  | 12.1 |                    |
| PV of contingent liabilities (not included in public sector debt) | ...    | ...   | ...   |         |                       | ...      | ...   | ...   | ...   | ...   | ...         |                    | ...   | ...  |                    |
| Gross financing need 2/   | 2.7    | 0.6   | 0.4   |         |                       | 1.0      | -0.6  | 1.2   | 1.0   | 0.5   | 0.0         |                    | 0.2   | -0.1 |                    |
| PV of public sector debt-to-revenue and grants ratio (in percent) | 217.0  | 176.6 | 168.5 |         |                       | 142.2    | 142.6 | 139.7 | 131.1 | 121.3 | 115.0       |                    | 93.1  | 69.8 |                    |
| PV of public sector debt-to-revenue ratio (in percent)            | 262.1  | 215.7 | 199.4 |         |                       | 169.5    | 168.6 | 162.0 | 151.8 | 140.2 | 132.3       |                    | 105.1 | 76.1 |                    |
| <i>Of which: External 3/</i>                                      | 231.1  | 196.6 | 189.8 |         |                       | 163.5    | 162.5 | 156.3 | 146.9 | 135.9 | 128.5       |                    | 103.1 | 75.5 |                    |
| Debt service-to-revenue and grants ratio (in percent) 4/          | 3.5    | 3.0   | 3.5   |         |                       | 1.7      | 2.8   | 3.0   | 3.0   | 2.9   | 3.0         |                    | 3.3   | 3.8  |                    |
| Debt service-to-revenue ratio (in percent) 4/                     | 4.2    | 3.7   | 4.1   |         |                       | 2.0      | 3.4   | 3.5   | 3.5   | 3.3   | 3.5         |                    | 3.7   | 4.1  |                    |
| Primary deficit that stabilizes the debt-to-GDP ratio             | 5.7    | 4.4   | 2.7   |         |                       | 2.3      | 1.6   | 0.6   | 0.7   | 0.6   | 0.5         |                    | 0.2   | -0.4 |                    |
| <b>Key macroeconomic and fiscal assumptions</b>                   |        |       |       |         |                       |          |       |       |       |       |             |                    |       |      |                    |
| Real GDP growth (in percent)                                      | 13.3   | 10.8  | 10.2  | 9.6     | 2.0                   | 6.5      | 4.8   | 6.0   | 6.6   | 7.1   | 7.4         | 6.4                | 6.7   | 6.5  | 6.7                |
| Average nominal interest rate on forex debt (in percent)          | 1.0    | 1.2   | 1.1   | 1.1     | 0.1                   | 1.5      | 1.4   | 1.4   | 1.4   | 1.4   | 1.4         | 1.4                | 1.4   | 1.7  | 1.5                |
| Real exchange rate depreciation (in percent, + indicates depreci) | 4.0    | -1.0  | -3.3  | 1.0     | 2.5                   | 2.9      | ...   | ...   | ...   | ...   | ...         | ...                | ...   | ...  | ...                |
| Inflation rate (GDP deflator, in percent)                         | 4.1    | 4.3   | 8.6   | 3.2     | 2.9                   | 14.7     | 6.7   | 3.7   | 4.5   | 4.6   | 4.0         | 6.4                | 3.0   | 3.1  | 3.1                |
| Growth of real primary spending (deflated by GDP deflator, in pe  | 0.0    | 0.2   | 0.1   | 0.1     | 0.1                   | 0.0      | 0.1   | 0.0   | 0.1   | 0.1   | 0.1         | 0.1                | 0.1   | 0.1  | 0.1                |
| Grant element of new external borrowing (in percent)              | ...    | ...   | ...   | ...     | ...                   | 35.6     | 37.9  | 37.5  | 38.1  | 39.8  | 40.5        | 38.2               | 36.8  | 33.3 | ...                |

Sources: Cambodian authorities; and staffs' estimates and projections.

1/ General government debt (in gross terms).

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

3/ Revenues excluding grants.

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

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

Table 2b. Cambodia: Sensitivity Analysis for Key Indicators of Public Debt 2008–28

|   | Projections |      |      |      |      |      |      |      |
|---|-------------|------|------|------|------|------|------|------|
|   | 2008        | 2009 | 2010 | 2011 | 2012 | 2013 | 2018 | 2028 |
| <b>PV of debt-to-GDP ratio</b>  |             |      |      |      |      |      |      |      |
| <b>Baseline</b>   | 21          | 20   | 20   | 20   | 19   | 18   | 15   | 12   |
| <b>A. Alternative scenarios</b>   |             |      |      |      |      |      |      |      |
| A1. Real GDP growth and primary balance are at historical averages                    | 21          | 20   | 20   | 19   | 19   | 19   | 18   | 17   |
| A2. Primary balance is unchanged from 2008  | 21          | 19   | 19   | 18   | 17   | 16   | 12   | 10   |
| A3. Permanently lower GDP growth 1/   | 21          | 20   | 20   | 20   | 19   | 18   | 16   | 18   |
| <b>B. Bound tests</b>   |             |      |      |      |      |      |      |      |
| B1. Real GDP growth is at historical average minus one standard deviations in 2009–10 | 21          | 20   | 19   | 18   | 17   | 16   | 12   | 8    |
| B2. Primary balance is at historical average minus one standard deviations in 2009–10 | 21          | 22   | 23   | 22   | 21   | 19   | 16   | 12   |
| B3. Combination of B1-B2 using one half standard deviation shocks                     | 21          | 21   | 21   | 20   | 18   | 17   | 12   | 7    |
| B4. One-time 30 percent real depreciation in 2009                                     | 21          | 28   | 27   | 25   | 23   | 21   | 16   | 11   |
| B5. 10 percent of GDP increase in other debt-creating flows in 2009                   | 21          | 25   | 25   | 24   | 22   | 21   | 17   | 13   |
| <b>PV of debt-to-revenue ratio 2/</b>   |             |      |      |      |      |      |      |      |
| <b>Baseline</b>   | 142         | 143  | 140  | 131  | 121  | 115  | 93   | 70   |
| <b>A. Alternative scenarios</b>   |             |      |      |      |      |      |      |      |
| A1. Real GDP growth and primary balance are at historical averages                    | 142         | 140  | 137  | 131  | 125  | 123  | 115  | 100  |
| A2. Primary balance is unchanged from 2008  | 142         | 136  | 128  | 117  | 107  | 100  | 76   | 55   |
| A3. Permanently lower GDP growth 1/   | 142         | 142  | 140  | 131  | 122  | 116  | 100  | 100  |
| <b>B. Bound tests</b>   |             |      |      |      |      |      |      |      |
| B1. Real GDP growth is at historical average minus one standard deviations in 2009–10 | 142         | 138  | 131  | 120  | 109  | 101  | 74   | 46   |
| B2. Primary balance is at historical average minus one standard deviations in 2009–10 | 142         | 151  | 157  | 145  | 133  | 125  | 98   | 71   |
| B3. Combination of B1-B2 using one half standard deviation shocks                     | 142         | 144  | 145  | 132  | 118  | 109  | 76   | 40   |
| B4. One-time 30 percent real depreciation in 2009                                     | 142         | 194  | 183  | 166  | 149  | 137  | 99   | 65   |
| B5. 10 percent of GDP increase in other debt-creating flows in 2009                   | 142         | 177  | 171  | 158  | 144  | 135  | 105  | 74   |
| <b>Debt service-to-revenue ratio 2/</b>   |             |      |      |      |      |      |      |      |
| <b>Baseline</b>   | 2           | 3    | 3    | 3    | 3    | 3    | 3    | 4    |
| <b>A. Alternative scenarios</b>   |             |      |      |      |      |      |      |      |
| A1. Real GDP growth and primary balance are at historical averages                    | 2           | 3    | 3    | 3    | 3    | 3    | 3    | 4    |
| A2. Primary balance is unchanged from 2008  | 2           | 3    | 3    | 3    | 3    | 3    | 3    | 3    |
| A3. Permanently lower GDP growth 1/   | 2           | 3    | 3    | 3    | 3    | 3    | 4    | 5    |
| <b>B. Bound tests</b>   |             |      |      |      |      |      |      |      |
| B1. Real GDP growth is at historical average minus one standard deviations in 2009–10 | 2           | 3    | 3    | 3    | 3    | 3    | 3    | 3    |
| B2. Primary balance is at historical average minus one standard deviations in 2009–10 | 2           | 3    | 3    | 3    | 3    | 3    | 3    | 4    |
| B3. Combination of B1-B2 using one half standard deviation shocks                     | 2           | 3    | 3    | 3    | 3    | 3    | 3    | 3    |
| B4. One-time 30 percent real depreciation in 2009                                     | 2           | 3    | 4    | 4    | 4    | 4    | 4    | 5    |
| B5. 10 percent of GDP increase in other debt-creating flows in 2009                   | 2           | 3    | 3    | 4    | 4    | 4    | 3    | 4    |

Source: Staffs' projections and simulations.

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

2/ Revenue is defined as inclusive of grants.