

## Lao People's Democratic Republic: Joint Bank-Fund Debt Sustainability Analysis

1. **This document presents an updated comprehensive debt sustainability analysis (DSA) for Lao P.D.R.**<sup>1</sup> The DSA, which was prepared jointly with the World Bank, is based on the common standard framework for low-income countries approved by the Executive Boards of the IMF and IDA.<sup>2</sup> The document also assesses the potential impact of the Multilateral Debt Relief Initiative (MDRI) on Lao P.D.R.

2. **The update confirms earlier findings that Lao P.D.R. remains in the category of low-income countries with a high risk of debt distress.** Provided that sufficient progress is made in economic reforms, the medium-term debt service outlook is manageable. However, there are significant risks, especially on the fiscal side, if the pace of reform remains slow. Debt relief under HIPC and MDRI would significantly reduce the external public debt burden, but its impact on net resource flows is more uncertain, as consequences for the country's access to new concessional financing from IDA and bilateral creditors is difficult to quantify. The authorities have not, to date, expressed interest in seeking debt relief under these initiatives.

### A. Debt Sustainability Analysis

#### Background

3. **Although external public debt has been declining as a percent of GDP, it remains high** (Figure 1). At end-2004, the latest date for which comprehensive data is available, the stock of external public debt amounted to \$2.1 billion in nominal terms, with a net present value of \$1.4 billion. At these levels, Lao P.D.R.'s debt stock indicators are significantly above the indicative thresholds for countries with similar CPIA rating (Text Table 1).

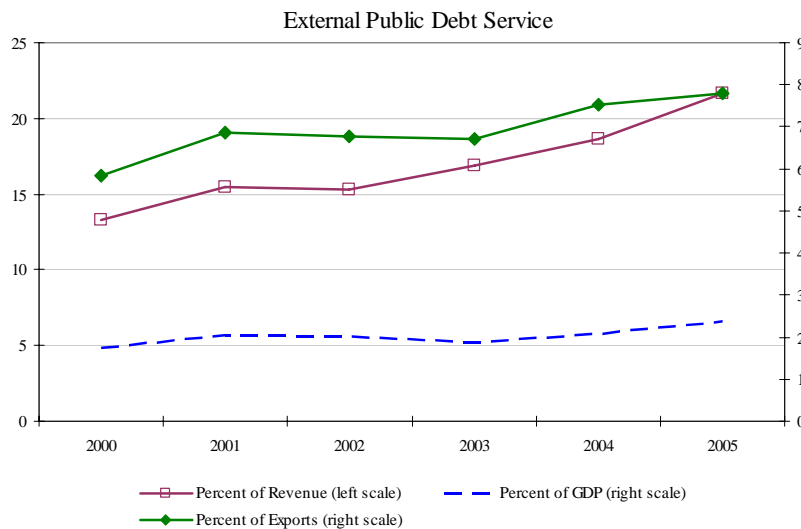
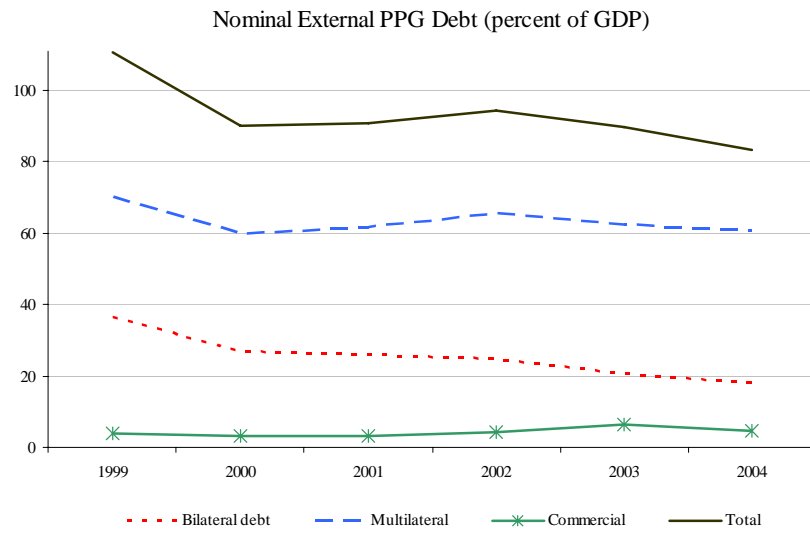
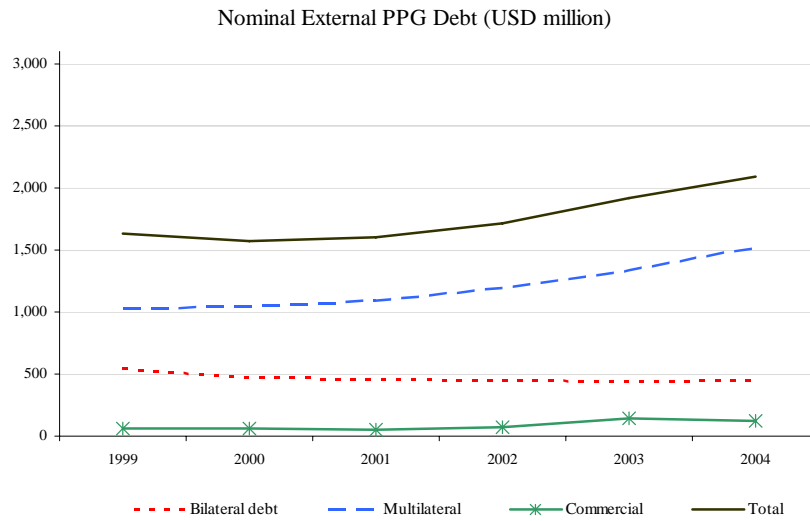
Text Table 1. Lao P.D.R.: External Public Debt Indicators

	Indicative Threshold	End-2004
NPV of debt in percent of		
<i>GDP</i>	30	55
<i>Exports</i>	100	199
<i>Revenues</i>	200	495

<sup>1</sup> The last comprehensive DSA for Lao P.D.R. was prepared in the context of the 2004 Article IV Consultation (IMF/Country Report No. 05/8).

<sup>2</sup> Due to the negligible size of domestic public debt in Lao P.D.R. (1.5 percent of GDP in 2004) and a lack of sufficient information on the level and terms of private external debt obligations, the debt sustainability analysis focuses exclusively on external public and publicly guaranteed debt. The analysis employs a modified LIC DSA external template, which incorporates both fiscal and balance of payments indicators.

Figure 1. Lao P.D.R.: External Public and Publicly Guaranteed Debt



4. **Almost 75 percent of Lao P.D.R.'s debt is in the form of concessional loans from multilateral creditors, primarily the World Bank and the AsDB** (Table 1). Concessional borrowing from these two institutions accounts for the bulk of the increase in public external debt since 1999.<sup>3</sup> The two largest bilateral creditors are Russia and Japan, who account for 19 and 2 percent of the stock of public debt respectively.<sup>4</sup> The bulk of the external debt is owed by the central government, with state-owned enterprises accounting for slightly over 5 percent of the total debt stock

5. **While the external debt service burden has remained at manageable levels due to a high degree of concessionality, it has been rising in recent years.** In the last 3 years, the debt service-to-revenue ratio has risen by 6.4 percentage points to 21.7 percent at end-2005, bringing it within reaching distance of the indicative threshold for low CPIA countries (25 percent). The debt service-to-export ratio has also risen, but much more modestly, and, at 7.8 percent, remains well within the indicative sustainability threshold (15 percent).

### Medium-Term Macroeconomic Framework

6. **Achieving the government's development objectives will require an acceleration of structural reforms.** In addition to maintaining sound macroeconomic policies, stepped up efforts to mobilize revenues and reform the state-owned commercial banks are needed to ensure macroeconomic stability over the medium term. Sustaining high levels of economic growth will also require a concerted effort to strengthen the investment climate, to enable Lao P.D.R. to take advantage of the opportunities for economic integration in the region.

7. **The staff have prepared a medium-term economic outlook based on such a scenario** (Table 2). Under this reform scenario, economic growth would remain at around 6-7 percent between 2005–2010 (Text Table 2). The two large mining projects (Oxiana and Pan Australian)<sup>5</sup> and the

**Text Table 2. Lao P.D.R.: Key Macroeconomic Assumptions**  
(In percent, unless stated otherwise)

Period average	2001–05	2006–10	2011–25
Real GDP growth	6.2	6.5	5.0
Export growth	7.0	10.4	7.0
Revenue (% of GDP)	11.8	12.4	13.6
Gross public borrowing (% of GDP)	6.1	5.5	4.0
Grant element of new borrowing	42.3	40.7	42.1

<sup>3</sup> Over 80 percent of the debt accumulated between 1999 and 2004 represents concessional loans from multilateral creditors, and about 15 percent represents SOE borrowing.

<sup>4</sup> To facilitate analysis, the stock of Russian debt prior to 2003 is valued at \$387 million, in line with the agreement reached between Lao P.D.R. and Russian Federation in December 2003.

<sup>5</sup> These two gold and copper mining projects began operations in 2004–05 and are expected to reach full capacity in 2007.

construction of the Nam Theun 2 (NT2) hydroelectric dam are projected to contribute around 1½ percentage per year to growth during this period. Underlying growth would be sustained at 5 percent—close to the average for the past five years—as growth in agriculture, tourism and small-scale manufacturing, stimulated by trade reforms and improvements in the investment climate, offset slower growth in garments following the expiration of the MFA quota system.<sup>6</sup>

8. **A gradual consolidation of fiscal policy will be needed to ensure debt sustainability over the medium term** (Table 3). Under the baseline scenario the overall fiscal deficit would decline from 4 percent of GDP to around 3 percent of GDP by 2010. The fiscal consolidation will need to be driven largely by an improved revenue effort—revenue is projected to rise from 11.6 percent to 12.8 percent of GDP, in part due to increased mining royalties and taxes. Non-resource revenues would rise from 10.1 percent to 10.6 percent of GDP.<sup>7</sup> Primary expenditure is expected to remain broadly unchanged under this scenario at around 16 percent of GDP, with the composition shifting gradually from capital to recurrent spending (partly reflecting a gradual decline in foreign-financed capital expenditure). The wage bill is assumed to stabilize at 5.0 percent of GDP, to ensure adequate resources for non-wage operating expenses in the budget.

9. **The medium-term fiscal outlook would be underpinned by efforts to enhance non-resource revenues and improve the efficiency of spending.** The scenario assumes that progress will be made in the authorities' efforts to improve tax and customs administration, based on greater collaboration with the provinces, and that it would be complemented by additional revenue-generating initiatives, culminating with the introduction of a VAT towards the end of the decade.<sup>8</sup> These reforms are expected to offset any revenue losses from tariff reductions under the ASEAN Free Trade Agreement.<sup>9</sup> Expenditure reforms would focus most immediately on improving budget monitoring at the center and in the provinces and in enhancing budget preparation, through improving the timeliness and transparency of

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<sup>6</sup> The impact of the expiration of the MFA quota system on GDP growth is expected to be relatively modest as the garments sector's contribution to GDP (less than 1 percent) is relatively small, and the loss of market share in the EU should be partly offset by improved access to the U.S. markets following the granting of normal trade relations in November 2004.

<sup>7</sup> Excludes royalties and taxes from timber, mining, and hydro-power projects.

<sup>8</sup> The authorities aim to introduce a VAT in 2008/09. In the shorter run, tax reforms such as the introduction of a single rate turnover tax and reforms of excises on petroleum and other products (especially tobacco) have some revenue generating potential.

<sup>9</sup> Staff estimate the loss in revenue from AFTA at 0.5 percent of GDP, in the absence of any reduction in leakages in customs collections.

basic budget documents. The longer-term goal would be to establish a strong national treasury, with full control over national public finances, and build up the systems of budget planning and execution to enable the allocation of public resources to be effectively aligned with the government's development goals.

10. **The external current account deficit, which will remain high (12–15 percent of GDP) in the next few years, is projected to decline sharply by the end of the decade.** Export volume growth is projected to rise sharply over the next 5 years—averaging 11 percent between 2005 and 2010—driven by increased gold and copper exports (and electricity once the NT2 dam comes on-stream in 2009/10). While the terms of trade are expected to deteriorate, reflecting mainly softer copper prices, export value growth is expected to average around 10 percent over the period. Initially, the increase in exports will be offset by higher imports associated with the construction of the NT2 dam. However, the current account deficit should start to decline sharply from 2007 onwards as these capital outlays wind down. Although the improvement in the current account deficit will be largely offset by higher capital outflows, associated with the repayment of NT2-related loans and the repatriation of mining profits, the net inflows from these projects should be sufficient to sustain external reserves at around 3-3½ months of imports.

### **Debt Outlook**

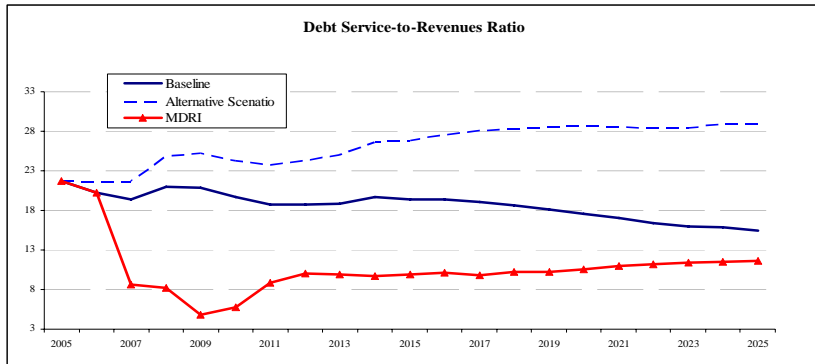
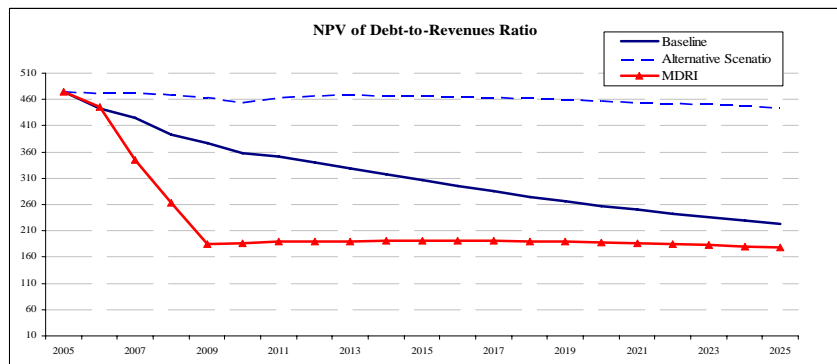
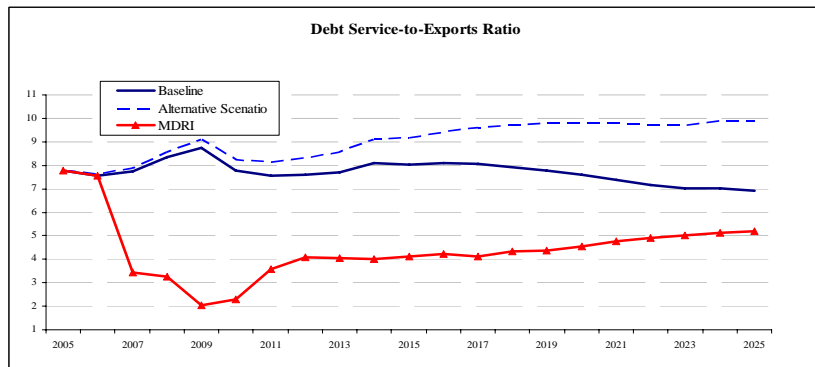
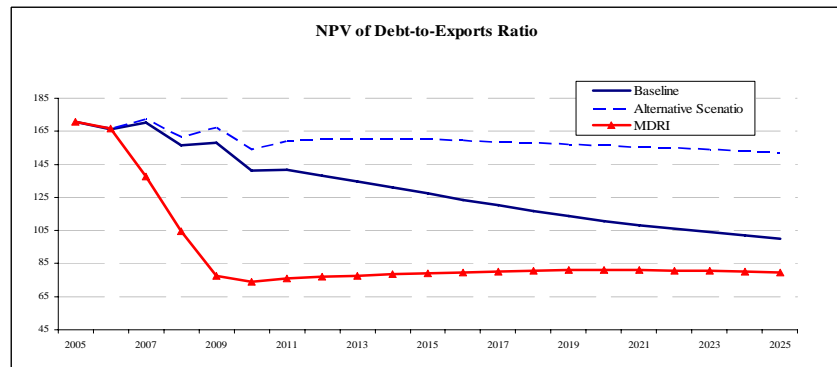
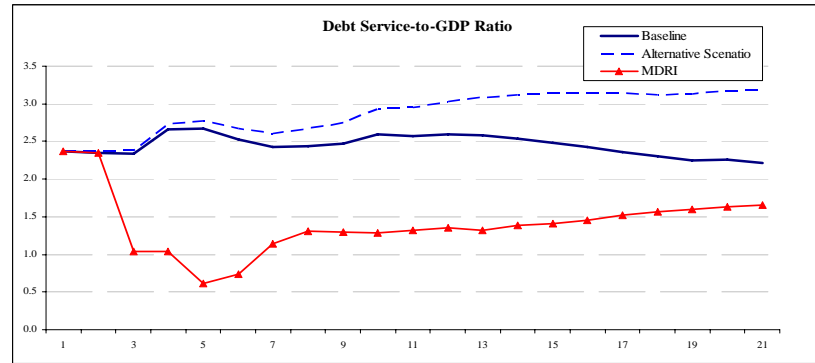
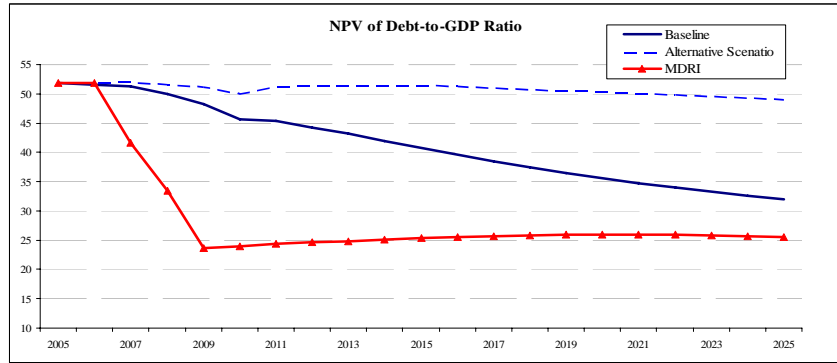
11. **The baseline scenario suggests that achieving long-term debt sustainability is feasible** (Figure 2 and Tables 4.a.-c.). While external public debt will remain at elevated levels throughout the projection period, the main debt-stock indicators are projected to decline steadily and approach the indicative thresholds by the end of the projection period (Text Table 3).<sup>10</sup> This relatively favorable debt profile hinges on the following key assumptions: (i) that robust GDP and export growth will be sustained, which in the longer-term will depend on improving Lao P.D.R.'s investment climate; (ii) progress is made in mobilizing revenues; (iii) public borrowing declines over the medium term;<sup>11</sup> and (iv) the authorities maintain a high level of concessionality on new borrowing.

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<sup>10</sup> Under the baseline scenario, Lao P.D.R.'s NPV of debt-to-export ratio would fall below the HIPC threshold of 150 percent in 2008/09.

<sup>11</sup> The scenario assumes that the Russian debt will be serviced according to the preliminary agreement reached in December 2003. Discussions on the agreement are currently ongoing, which, if successful, could alleviate some of the rise in debt service over the next few years.

Figure 2. Lao P.D.R.: Debt Sustainability Analysis of External Public and Publicly Guaranteed Debt, 2005-2025



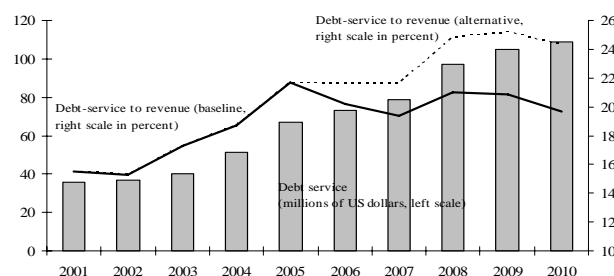
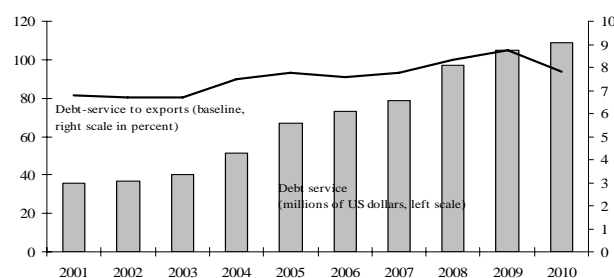
Text Table 3. Lao P.D.R.: Debt Sustainability Indicators Under Various Scenarios

	Indicative Threshold 1/	Baseline			Alternative Scenario		MDRI	
		2005	2025	Average, 2005–2025	2025	Average, 2005–2025	2025	Average, 2005–2025
NPV of debt in percent of								
<i>GDP</i>	30	52	32	41	49	51	25	29
<i>Exports</i>	100	171	100	130	152	160	80	92
<i>Revenues</i>	200	475	224	318	445	462	178	224
Debt service in percent of								
<i>Exports</i>	15	8	7	8	10	9	5	4
<i>Revenues</i>	25	22	15	19	29	26	12	11

1/ In 2004, Lao P.D.R. fell in the "poor performer" category in the World Bank's Country Policy and Institutional Assessment Index (CPIA).

12. **Despite a two-fold increase in debt service between 2004 and 2010, the debt service-to-exports ratio is expected to remain at manageable levels (Figure 3)<sup>12</sup>.** This reflects mainly the fact that the rise in debt service will coincide with a period of rapid export growth, as the gold and copper mining (and later NT2) projects come on stream. As a result, the debt service-to-export ratio is expected to remain at around 8-9 percent, well within the indicative thresholds. In the longer term, continued private sector development and growth in the energy sector, combined with prudent debt management, are expected to keep the debt service-to-exports ratio at modest levels.

Figure 3. Lao P.D.R. Projected External Public Debt Service



13. **The outlook on the fiscal side is more precarious.** Although the debt service-to-revenue ratio is projected to remain within the indicative thresholds, they remain elevated throughout the medium term, and significantly above levels in recent years. The margin for slippage on the fiscal side is therefore much narrower than on the external side.

<sup>12</sup> Of the total projected increase in debt service between 2005 and 2010, 47 percent represents higher repayments of concessional loans from multilateral creditors, about 23 percent are payments to Paris Club creditors and 30 percent is due to the repayment of commercial debt.

## Risks and Vulnerabilities

14. **The medium-term outlook is susceptible to several risks.** The main risk is that the pace of structural reform will remain slow and tentative, especially on the fiscal side. Although the economy will still receive a significant stimulus from the large natural resource sectors, a slow pace of reforms to improve the trade and investment environment would weaken the growth outlook for the underlying economy. On the fiscal side, the main risk is that higher resource revenues may be seen as a substitute for undertaking difficult reforms to mobilize non-resource revenues, limiting improvement in the overall revenue effort.<sup>13</sup> With the fiscal space constrained by a weak revenue effort, fiscal consolidation would be more difficult and there could be pressure to maintain high levels of borrowing to finance Lao P.D.R.'s development needs.

15. **Staff have factored these risks into an alternative scenario, characterized by limited progress in structural reforms.** The alternative scenario assumes lower GDP and export growth, weaker revenue performance and a higher level of borrowing. Specifically, the growth rate of exports and GDP is one percentage point lower than in the baseline scenario, revenues remain stagnant at their 2005 level of 11.3 percent of GDP, and borrowing is not reduced over time, remaining at its recent level of 6 percent of GDP.

16. **The debt outlook under such a “muddle-through” scenario is significantly less benign, especially on the fiscal side.** The decline in debt stock ratios is much less pronounced, and they remain well above the indicative sustainability thresholds throughout the projection period. The debt service burden is also considerably higher. While the debt service-to-export ratio is expected to remain at manageable levels even under the alternative scenario, the debt service-to-revenue ratio rises significantly above the indicative threshold, suggesting the possibility of debt distress.

17. **The standardized stress tests of the low-income DSA template broadly confirm these risks** (Table 4.c.). In particular, they highlight the importance of containing the volume and ensuring high concessionality of new borrowing. It would be critical to limit borrowing on less concessional terms to projects with firm financial viability. Assessing such viability in a transparent manner and through reputable sources will be important in maintaining donors' confidence in government policies. However, some stress tests are not that well suited to analyzing risks to Lao P.D.R.'s debt sustainability. For example, while setting export growth at historical average minus one standard deviation in 2006–07 (bound test B2) has a larger impact on debt ratios in 2006–2015 than the alternative scenario, such a shock is unlikely due to the planned expansion of mining operations, which are projected to

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<sup>13</sup> The projection for mining revenues is also subject to some uncertainty. While they are based on conservative commodity price assumptions, the parameters for profit taxes had to be estimated, as they are confidential. It is also assumed that the provinces will fully remit these revenues to the center.

considerably raise exports in 2007. A more plausible risk is that trend growth in exports over the longer-term will be slower than assumed in the baseline scenario.

## **B. Multilateral Debt Relief Initiative (MDRI)**

### **Background**

18. **Lao P.D.R. is eligible for debt relief under the HIPC Initiative and the MDRI.** It qualifies under the export window, as the NPV of its external public debt was 197 percent of exports at end-2004,<sup>14</sup> well above the HIPC Initiative threshold of 150 percent. If Lao P.D.R. were to participate in this process, it could receive debt relief through three channels: (i) traditional debt relief mechanisms, through which Lao P.D.R. would be eligible for rescheduling on its bilateral debt; (ii) debt relief under the HIPC Initiative, which would aim to reduce the NPV of Lao P.D.R.'s external public debt to 150 percent of exports; and (iii) debt relief from the IMF and IDA under the MDRI.

19. **The timing of any debt relief under the HIPC/MDRI initiatives would depend on how fast Lao P.D.R. could reach a completion point under the HIPC initiative.** There would be three basic steps in this process:

- The first step would be to negotiate a new PRGF program, a necessary condition for participating in the HIPC initiative.
- Once a new PRGF program is approved, Lao P.D.R. would need to build a track record to reach a decision point under the HIPC initiative. Provided Lao P.D.R. demonstrates strong performance and commitment to macroeconomic policies and structural reforms, it could build such a track record in 6-12 months.
- The timing of the completion point, when the MDRI relief would be received, would depend on meeting the completion point criteria. The average time between decision and completion points has been about 2-3 years.

20. **There is a risk that Lao P.D.R. might become ineligible for HIPC/MDRI debt relief, if the decision point is significantly delayed.** Exports are expected to rise considerably over the next three years, mainly because of higher mining exports, and this could push the debt-to-exports ratio below the 150 percent threshold. In such an event Lao P.D.R. would no longer be eligible for either HIPC or MDRI debt relief.

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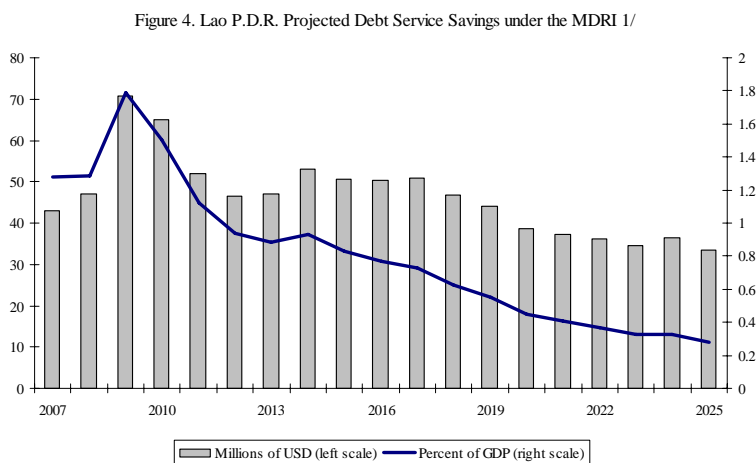
<sup>14</sup> After assumed application of traditional debt relief. The calculation is based on HIPC DSA methodology.

## Potential Impact on Debt Sustainability

21. **Staff have prepared an illustrative scenario based on the assumption of a HIPC decision point in 2007 and a completion point in 2009.** The basic assumptions are the same as for the baseline scenario discussed above, with the exception that the scenario has, for illustrative purposes, lowered public sector borrowing by 0.5 percent of GDP compared to the baseline, to reflect the possible impact of a lower IDA allocation and a lower access to concessional loans from some bilateral creditors (see paragraph 23).

22. **The main results of this illustrative MDRI scenario are as follows:**

- **Lao P.D.R.’s external public debt would be substantially reduced.** The NPV of debt-to-GDP ratio would fall to around 30 percent after Lao P.D.R received the full MDRI debt relief at the HIPC completion point. The bulk of the debt relief would come from the cancellation of the IDA debt borrowed before end-2003 and traditional debt relief from Lao P.D.R.’s bilateral creditors (Table 5).
- **Lao P.D.R.’s debt service burden would also be significantly lower** (Figure 4). Staff estimate that the debt service savings could be of the order of 1-2 percent of GDP in 2007-2015. These savings would start as soon as Lao P.D.R. started to receive HIPC interim debt relief once it reached the decision point.



1/ Based on end-2006 debt stock.

23. **Notwithstanding the potentially substantial reduction in the debt service burden, the impact on net resource flows to Lao P.D.R. remains uncertain.** In particular, the authorities are concerned that gross resource inflows could be reduced by more than the 0.5 percent of GDP assumed in the illustrative scenario. In addition to receiving a lower IDA allocation under the MDRI, participating in the HIPC Initiative may negatively affect Lao P.D.R.’s access to concessional loans from bilateral creditors. It might also disrupt disbursements for large hydro sector projects, whose creditors had previously received assurances that Lao P.D.R would not seek HIPC debt relief.

Table 1. Lao P.D.R.: External Debt and Debt Service 2003–2010 1/

	2003	2004	2005	2006	2007	2008	2009	2010
		Est.			Projections			
(In millions of U.S. dollars)								
<b>Total debt stock (public and private)</b>	2,171	2,530	2,910	3,179	3,428	3,652	3,788	3,802
Public debt	1,915	2,086	2,225	2,416	2,569	2,698	2,802	2,899
Bilateral official	437	453	476	506	525	549	565	581
<i>of which:</i> Russian Federation 2/	387	387	385	382	379	376	372	367
<i>Japan</i>	39	45	60	76	89	109	123	138
Multilateral	1,338	1,516	1,621	1,759	1,859	1,945	2,034	2,114
<i>of which:</i>								
AsDB	715	754	810	871	922	969	1,025	1,078
IDA	485	618	649	684	725	758	789	815
IMF	46	38	32	28	25	21	15	10
Commercial	140	117	127	151	185	203	203	204
Private debt	257	444	685	762	860	954	986	903
Amortization	56	70	83	147	149	131	140	178
Public debt	28	29	41	46	50	67	73	76
Bilateral official	2	2	3	6	6	6	8	9
<i>of which:</i> Russian Federation 2/	0	1	2	3	3	3	4	5
<i>Japan</i>	0	0	0	2	2	2	2	2
Multilateral	26	22	29	29	32	40	45	48
<i>of which:</i>								
AsDB	8	9	11	13	15	18	20	22
IDA	7	8	9	10	11	14	15	16
IMF	9	3	6	3	3	4	6	6
Commercial	0	4	9	11	11	20	20	19
Private debt	27	41	41	101	100	64	67	103
Interest payments	35	49	100	97	111	114	91	112
Public debt	12	22	26	27	29	30	32	34
Bilateral (official debt)	1	5	9	10	10	10	11	11
<i>of which:</i> Russian Federation 2/	0	4	9	9	9	9	9	9
<i>Japan</i>	0	0	1	1	1	1	1	1
Multilateral	11	16	14	15	15	16	17	18
<i>of which:</i>								
AsDB	6	9	8	8	9	9	10	11
IDA	4	6	5	5	5	6	6	6
IMF	0	0	0	0	0	0	0	0
Commercial	0	2	2	3	3	4	4	4
Private debt	23	27	75	70	82	84	59	78
(In percent of GDP)								
Total debt service	4	5	6	8	8	7	6	7
<i>of which:</i> public debt	2	2	2	2	2	3	3	3
Total debt stock	102	101	103	102	102	100	96	88
<i>of which:</i> public debt	90	83	79	78	77	74	71	67
(In percent of exports of goods and services)								
NPV of public external debt	205	199	171	166	170	157	158	141
Total debt service	15	17	21	25	26	21	19	21
<i>of which:</i> public debt	6.7	7.5	7.8	7.6	7.7	8.3	8.8	7.8
<b>Memorandum items:</b>								
NPV of public external debt	1,223	1,366	1,467	1,602	1,723	1,823	1,900	1,976
Debt service (percent of revenues)	17.3	18.7	21.7	20.2	19.4	21.0	20.9	19.1
Nominal GDP	2,138	2,501	2,828	3,104	3,358	3,651	3,941	4,323
Exports of goods and services	598	687	860	965	1,013	1,165	1,202	1,400

Sources: Data provided by the Lao P.D.R. authorities; and Fund staff estimates and projections.

1/ The numbers may not add up due to rounding.

2/ Based on the December 2003 agreement between Russian and Lao authorities.

Table 2. Lao P.D.R.: Summary Macroeconomic Framework, 2003–2010

	2003	2004	2005	2006	2007	2008	2009	2010
	Projections							
<b>Output and Prices (percent change)</b>								
Real GDP	6.1	6.4	7.0	7.1	6.0	6.5	5.7	7.4
(excluding NT2 and large mining projects)	4.2	6.1	4.2	4.8	4.9	5.1	5.0	5.0
Consumer prices (end period)	12.6	8.7	8.8	5.0	5.0	5.0	5.0	5.0
Consumer prices (period average)	15.5	10.5	7.2	6.8	5.0	5.0	5.0	5.0
<b>Savings and investment balance (in percent of GDP) 1/</b>								
Gross fixed investment	25.7	31.8	32.5	32.2	34.5	30.5	29.6	26.7
Gross national savings	17.5	17.3	16.1	19.5	19.7	20.8	21.7	22.3
Foreign savings (including official transfers)	8.1	14.4	16.4	12.7	14.7	9.7	7.9	4.4
<b>Public Finances (in percent of GDP) 2/</b>								
Revenue	10.9	11.0	10.9	11.6	12.0	12.7	12.8	12.8
Grants	2.1	1.1	1.4	1.5	1.4	1.4	1.8	1.5
Expenditure	18.6	15.5	15.9	17.1	17.3	17.4	17.5	17.2
Overall balance	-5.7	-3.4	-3.5	-4.0	-3.9	-3.3	-3.0	-3.0
Government debt	95.7	84.6	77.3	73.8	73.1	70.5	68.0	64.6
Debt service (in percent of revenue)	13.8	16.4	16.3	18.6	17.1	16.1	16.8	16.7
<b>Trade and Prices (percent change)</b>								
Export volume growth	-3.6	5.6	14.7	11.3	5.8	16.0	4.1	16.4
(excluding NT2 and large mining projects)	-10.8	7.6	7.6	4.8	2.1	9.2	4.1	-0.5
Import volume growth	17.0	28.2	9.6	4.3	8.1	-3.0	-0.5	0.2
(excluding NT2 and large mining projects)	9.6	4.1	5.7	3.4	4.2	4.7	4.7	4.9
Terms-of-trade (percent change)	6.8	0.8	2.8	-2.9	-2.4	-2.4	-2.7	-1.7
<b>Balance of Payments (in millions of US dollars)</b>								
Current Account Balance	-174	-361	-464	-394	-494	-354	-312	-188
Trade balance	-244	-478	-483	-490	-582	-421	-417	-264
Services and income (net)	-17	31	-74	-15	-29	-55	-20	-61
Transfers	87	85	93	111	116	121	125	137
Capital Account Balance	196	379	470	418	520	381	340	217
Official	118	118	150	192	152	120	104	97
Private	100	300	274	240	382	277	253	138
Overall Balance	22	18	7	24	25	26	28	29
<b>External Public Debt</b>								
in millions of US dollars (end period)	1,915	2,086	2,225	2,416	2,569	2,698	2,802	2,899
in percent of GDP (end period)	90	83	79	78	77	74	71	67
Net present value (in percent of exports)	205	199	171	166	170	157	158	141
<b>External Public Debt service</b>								
in millions of U.S. dollars	40	52	67	73	79	97	105	109
in percent of exports	6.7	7.5	7.8	7.6	7.7	8.3	8.8	7.8
<b>Gross Official Reserves</b>								
in millions of U.S. dollars	214	227	229	250	275	302	329	359
in months of imports 3/	3.7	3.4	3.0	3.0	3.2	3.3	3.4	3.4
<b>Memorandum items:</b>								
Nominal GDP (billions of Kip)	22,598	26,540	30,237	34,216	38,065	42,566	47,247	53,294
Nominal GDP (millions of U.S. dollars)	2,138	2,501	2,828	3,104	3,358	3,651	3,941	4,323

Sources: Data provided by the Lao P.D.R. authorities; and Fund staff estimates and projections.

1/ Estimates for private savings and investment are highly tentative as no expenditure based national accounts have yet been established.

In particular, private savings reflect unrecorded imports.

2/ Fiscal year basis (October to September); numbers are based on staff proposal for 2005 and 2006, and projections for 2007-2010.

3/ Excludes imports associated with NT2 and the large Oxiana and Pan Australian mining projects.

Table 3. Lao P.D.R.: Medium-Term Fiscal Projections  
(In percent of GDP, unless otherwise specified)

	Fiscal year 1/	2004	2005	2006	2007	2008	2009	2010
Nominal GDP	KN billion	25,555	29,313	33,222	37,103	41,441	46,077	51,782
Real GDP Growth	Annual rate	6.3	6.8	7.6	6.2	6.4	5.9	7.0
GDP deflator inflation	Annual rate	11.6	7.4	5.3	5.0	5.0	5.0	5.0
Real effective exchange rate	2000 = 100	101	103	103	103	103	103	103
Main results								
<b>FISCAL ACCOUNTS</b>								
Revenues and grants		12.1	12.4	13.1	13.4	14.1	14.5	14.2
Revenue		11.0	10.9	11.6	12.0	12.7	12.8	12.8
Tax		9.1	9.1	9.8	10.2	10.9	10.9	10.9
Resource 2/		1.1	1.2	1.5	1.7	2.4	2.3	2.2
Other		8.0	7.8	8.3	8.4	8.5	8.6	8.7
Non-tax		1.9	1.9	1.8	1.8	1.8	1.8	1.8
Grants		1.1	1.4	1.5	1.4	1.4	1.8	1.5
Primary expenditure		14.6	15.0	16.0	16.1	16.3	16.4	16.1
Current (excl. interest)		6.5	7.2	8.1	8.4	8.6	8.7	8.7
Wages		4.2	4.5	5.0	5.0	5.0	5.0	5.0
Non-wage recurrent		2.3	2.7	3.1	3.4	3.6	3.7	3.7
Capital		8.1	7.8	7.9	7.8	7.7	7.7	7.5
Domestic 3/		3.6	2.8	2.4	2.5	2.9	3.1	3.2
External		4.6	4.9	5.5	5.3	4.9	4.6	4.2
Primary Balance		-2.5	-2.6	-2.9	-2.8	-2.2	-1.9	-1.9
Interest		0.9	0.9	1.0	1.1	1.1	1.1	1.1
Domestic		0.2	0.1	0.2	0.4	0.4	0.4	0.4
External		0.8	0.8	0.8	0.8	0.7	0.7	0.7
<b>Overall balance</b>		<b>-3.4</b>	<b>-3.5</b>	<b>-4.0</b>	<b>-3.9</b>	<b>-3.3</b>	<b>-3.0</b>	<b>-3.0</b>
<b>Financing</b>								
Gross requirements		4.7	4.4	5.7	5.2	4.6	4.3	4.3
Deficit		3.4	3.5	4.0	3.9	3.3	3.0	3.0
Amortization		0.9	0.9	1.1	0.9	0.9	1.0	1.1
External		0.9	0.9	1.1	0.9	0.9	1.0	1.1
Bank restructuring		0.4	0.0	0.6	0.4	0.3	0.3	0.3
<b>Sources</b>								
External		4.5	4.2	5.1	4.8	4.4	4.0	3.6
Domestic		0.2	0.2	0.6	0.4	0.2	0.2	0.7
Bonds		0.4	0.0	0.6	0.4	0.2	0.2	0.5
Other		-0.3	0.2	0.0	0.0	0.0	0.0	0.2
<b>DEBT</b>								
<b>Total</b>		<b>84.6</b>	<b>77.3</b>	<b>73.8</b>	<b>73.1</b>	<b>70.5</b>	<b>68.0</b>	<b>64.6</b>
External		83.0	75.3	72.1	71.5	69.1	66.7	63.5
In billions of U.S. dollar		2.0	2.1	2.2	2.4	2.5	2.6	2.7
Domestic		1.5	1.9	1.7	1.5	1.4	1.2	1.1
<b>Memorandum items:</b>								
External financing (in millions of dollars)								
Grants		27	40	44	46	49	69	62
Loans		111	116	155	158	157	157	154
Domestic bonds (billions of Kip)		114	6	200	151	89	114	247
Interest payments/revenue (in percent)		8.3	8.4	8.9	9.5	8.7	8.7	8.4
Debt service / revenue (in percent)		16.4	16.3	18.6	17.1	16.1	16.8	16.7
Gold price (\$/oz)		409	434	453	475	495	515	535
Copper price (\$/tonne)		2,863	3,550	3,313	2,975	2,750	2,500	2,400

1/ Fiscal year ending in September.

2/ Royalties and taxes from timber, mining and hydro-power projects.

3/ Includes onlending, debt repayment and contingency.

Table 4.a. Lao P.D.R. Sustainability Analysis of External Public and Publicly Guaranteed Debt, 2005–2025

	2004	2005	2006	2007	2008	2009	2010	2006-10 Average	2015	2025	2011-25 Average
<b>a) External Public Debt Stock</b>											
<b>1. NPV of debt to GDP</b>											
	(In percent of GDP)										
Baseline	54.6	51.9	51.6	51.3	49.9	48.2	45.7		40.8	32.0	
Alternative Macroeconomic Scenario 1/	54.6	51.9	51.9	52.0	51.5	51.1	50.0		51.3	48.9	
MDRI 2/	54.6	51.9	51.8	41.6	33.4	23.6	23.9		25.3	25.5	
<b>2. NPV of debt to exports</b>											
Baseline	198.9	170.6	166.0	170.0	156.5	158.1	141.1		127.3	99.9	
Alternative Macroeconomic Scenario 1/	198.9	170.6	166.7	172.2	161.4	167.3	154.0		159.9	152.1	
MDRI 2/	198.9	170.6	166.7	137.7	104.8	77.5	73.9		79.1	79.6	
<b>3. NPV of debt to revenues</b>											
Baseline	495	475	443	426	394	377	357		306	224	
Alternative Macroeconomic Scenario 1/	495	475	471	473	469	464	454		467	445	
MDRI 2/	495	475	445	345	264	185	187		191	178	
<b>b) External Public Debt Service</b>											
<b>1. Debt service to exports</b>											
	(In percent of exports of goods and services)										
Baseline	7.5	7.8	7.6	7.7	8.3	8.8	7.8		8.0	6.9	
Alternative Macroeconomic Scenario 1/	7.5	7.8	7.6	7.9	8.5	9.1	8.2		9.2	9.9	
MDRI 2/	7.5	7.8	7.6	3.4	3.3	2.0	2.3		4.1	5.2	
<b>2. Debt service to revenues</b>											
	(In percent of fiscal revenues excluding grants)										
Baseline	18.7	21.7	20.2	19.4	21.0	20.9	19.7		19.4	15.5	
Alternative Macroeconomic Scenario 1/	18.7	21.7	21.6	21.6	24.8	25.2	24.3		26.8	28.9	
MDRI 2/	18.7	21.7	20.2	8.6	8.2	4.8	5.8		9.9	11.6	
<b>Memorandum Items</b>											
	(In millions of US\$, unless indicated otherwise)										
<b>Real GDP growth (percent)</b>											
Baseline	6.4	7.0	7.1	6.0	6.5	5.7	7.4	6.5	5.0	5.0	5.0
Alternative	6.4	7.0	6.1	5.0	5.5	4.7	6.4	5.5	4.0	4.0	4.0
<b>Growth of US dollar value of exports (percent)</b>											
Baseline	14.9	25.2	12.2	5.0	15.0	3.2	16.5	10.4	7.1	7.1	6.9
Alternative	14.9	25.2	11.2	4.0	14.0	2.2	15.5	9.4	6.1	6.1	5.9
<b>NPV of Public Debt</b>											
Baseline	1,366	1,467	1,602	1,723	1,823	1,900	1,976		2,483	3,871	
Alternative	1,366	1,467	1,595	1,713	1,829	1,938	2,060		2,844	4,891	
MDRI	1,366	1,467	1,609	1,396	1,221	931	1,034		1,544	3,082	
<b>Public Debt Service</b>											
Baseline	51.6	66.9	73.0	78.5	97.1	105.2	109.1	92.6	156.9	268.0	187.9
Alternative	51.6	66.9	73.0	78.3	96.9	105.3	110.0	92.7	163.2	318.3	208.4
MDRI	51.6	66.9	73.0	34.9	37.9	24.4	31.9	40.4	80.6	200.5	114.0
<b>Gross PPG borrowing (in percent of GDP)</b>											
Baseline	6.3	6.4	7.7	6.0	5.1	4.5	4.0	5.5	4.0	4.0	4.0
Alternative	6.3	6.4	7.4	6.0	6.0	6.0	6.0	6.3	6.0	6.0	6.0
MDRI	6.3	6.4	7.7	5.5	4.6	4.0	3.5	5.1	3.5	3.5	3.5
<b>Fiscal revenues (in percent of GDP)</b>											
Baseline	11.0	10.9	11.6	12.1	12.7	12.8	12.8	12.4	13.3	14.3	13.6
Alternative	11.0	10.9	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0

1/ From 2006 onwards growth rates of GDP and exports are lowered by one percent. Fiscal revenues are kept at 11 percent of GDP. Gross public borrowing stays at present level (6 percent of GDP).

2/ Assumes a decision point in 2007 and a completion point in 2009. Traditional debt relief was applied with a cut-off date in June 1999. Calculations are based on end-2004 discount and exchange rates. MDRI delivery was based on remaining end-2003 debt to IDA and end-2004 debt to IMF.

Table 4.b. Lao P.D.R. External Debt Sustainability Framework, Baseline Scenario, 2004-2025 1/  
(In percent of GDP, unless otherwise indicated)

	Estimate		Projections								
	2004	2005	2006	2007	2008	2009	2010	2006-10 Average	2015	2025	2011-25 Average
<b>External debt (nominal) 1/</b>	<b>83.4</b>	<b>78.7</b>	<b>77.8</b>	<b>76.5</b>	<b>73.9</b>	<b>71.1</b>	<b>67.1</b>		<b>57.9</b>	<b>46.6</b>	
Change in external debt	-8.6	-4.8	-0.8	-1.3	-2.6	-2.8	-4.0		-1.7	-0.7	
Identified net debt-creating flows	-11.4	-0.2	1.1	0.3	-1.0	-1.0	-2.3		-0.5	0.2	
<b>Non-interest current account deficit</b>	<b>13.6</b>	<b>14.5</b>	<b>10.9</b>	<b>13.0</b>	<b>8.0</b>	<b>6.2</b>	<b>2.7</b>		<b>2.1</b>	<b>2.4</b>	2.3
Deficit in balance of goods and services	13.8	11.2	10.0	11.5	5.8	4.9	0.5		2.2	2.2	
Exports	27.5	30.4	31.1	30.2	31.9	30.5	32.4		32.0	32.0	
Imports	41.3	41.6	41.0	41.7	37.7	35.4	32.9		34.3	34.3	
Net current transfers (negative = inflow)	-3.4	-3.3	-3.6	-3.5	-3.3	-3.2	-3.2		-3.3	-3.3	-3.3
Other current account flows (negative = net inflow)	3.2	6.6	4.5	4.9	5.5	4.5	5.3		3.2	3.4	
<b>Net FDI (negative = inflow)</b>	<b>-12.5</b>	<b>-10.5</b>	<b>-5.6</b>	<b>-9.2</b>	<b>-5.2</b>	<b>-4.1</b>	<b>-0.9</b>		<b>-0.7</b>	<b>-0.6</b>	-0.7
<b>Endogenous debt dynamics 2/</b>	<b>-12.5</b>	<b>-4.2</b>	<b>-4.2</b>	<b>-3.4</b>	<b>-3.7</b>	<b>-3.1</b>	<b>-4.0</b>		<b>-1.9</b>	<b>-1.6</b>	
Contribution from nominal interest rate	0.9	0.9	0.9	0.9	0.8	0.8	0.8		0.9	0.6	
Contribution from real GDP growth	-5.0	-5.1	-5.1	-4.3	-4.6	-3.9	-4.8		-2.8	-2.2	
Contribution from price and exchange rate changes	-8.4	-1.5	-1.3	-1.3	-1.2	-1.2	-1.2		...	...	
<b>Residual (2-3) 3/</b>	<b>2.7</b>	<b>-4.5</b>	<b>-1.9</b>	<b>-1.6</b>	<b>-1.6</b>	<b>-1.8</b>	<b>-1.7</b>		<b>-1.2</b>	<b>-0.9</b>	
o/w exceptional financing	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
<b>NPV of external debt 4/</b>	<b>54.6</b>	<b>51.9</b>	<b>51.6</b>	<b>51.3</b>	<b>49.9</b>	<b>48.2</b>	<b>45.7</b>		<b>40.8</b>	<b>32.0</b>	
In percent of exports	198.9	170.6	166.0	170.0	156.5	158.1	141.1		127.3	99.9	
<b>Debt service-to-exports ratio (in percent)</b>	<b>7.5</b>	<b>7.8</b>	<b>7.6</b>	<b>7.7</b>	<b>8.3</b>	<b>8.8</b>	<b>7.8</b>		<b>8.0</b>	<b>6.9</b>	
Total gross financing need (millions of U.S. dollars)	79.2	180.0	238.5	203.3	198.3	189.2	184.0		243.5	483.5	
Non-interest current account deficit that stabilizes debt ratio	22.3	19.3	11.8	14.3	10.6	9.0	6.7		3.8	3.1	
<b>Key macroeconomic assumptions</b>											
Real GDP growth (in percent)	6.4	7.0	7.1	6.0	6.5	5.7	7.4	6.5	5.0	5.0	5.0
GDP deflator in US dollar terms (change in percent)	10.0	5.7	2.5	2.1	2.1	2.1	2.1	2.2	2.0	2.0	2.0
Effective interest rate (percent) 5/	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.6	1.5	1.5
Growth of exports of G&S (US dollar terms, in percent)	14.9	25.2	12.2	5.0	15.0	3.2	16.5	10.4	7.1	7.1	7.0
Growth of imports of G&S (US dollar terms, in percent)	38.4	13.9	8.3	9.9	-1.7	1.2	2.0	4.0	7.1	7.1	7.4
Grant element of new public sector borrowing (in percent)	...	42.3	40.1	37.3	40.0	42.3	42.1	40.4	42.1	42.1	42.1
<i>Memorandum item:</i>											
Nominal GDP (millions of US dollars)	2,501	2,828	3,104	3,358	3,651	3,941	4,323		6,091	12,095	

Source: Staff simulations.

1/ Includes public and publicly guaranteed (PPG) external debt.

2/ Derived as  $[r - g - \rho(1+g)] / (1+g+\rho+g\rho)$  times previous period debt ratio, with  $r$  = nominal interest rate;  $g$  = real GDP growth rate, and  $\rho$  = 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/ Uses average financing terms and end-2004 exchange rates.

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

Table 4.c. Lao P.D.R.: Sensitivity Analyses for Key Indicators of Public and Publicly Guaranteed External Debt, 2004-25  
(In percent)

	Estimate			Projections									
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2025
<b>NPV of debt-to-GDP ratio</b>													
<b>Baseline</b>	55	52	52	51	50	48	46	45	44	43	42	<b>41</b>	32
New public sector loans on less favorable terms in 2006-25 1/	55	52	54	55	55	54	53	53	53	53	52	<b>52</b>	49
<b>Bound Tests</b>													
B1. Real GDP growth at historical average minus one standard deviation in 2006-07	55	52	53	53	51	49	47	47	46	44	43	<b>42</b>	33
B2. Export value growth at historical average minus one standard deviation in 2006-07 2/	55	52	54	57	56	54	51	51	49	48	47	<b>45</b>	34
B3. US dollar GDP deflator at historical average minus one standard deviation in 2006-07	55	52	54	55	54	52	49	49	48	47	45	<b>44</b>	34
B4. Net non-debt creating flows at historical average minus one standard deviation in 2006-07 3/	55	52	55	60	58	56	53	53	51	50	49	<b>47</b>	34
B5. Combination of B1-B4 using one-half standard deviation shocks	55	52	57	63	61	59	56	56	54	53	51	<b>50</b>	38
<b>NPV of debt-to-exports ratio</b>													
<b>Baseline</b>	199	171	166	170	157	158	141	142	138	135	131	<b>127</b>	100
New public sector loans on less favorable terms in 2006-25 1/	199	171	173	183	172	178	162	166	165	164	163	<b>162</b>	154
<b>Bound Tests</b>													
B1. Real GDP growth at historical average minus one standard deviation in 2006-07	199	171	166	170	157	158	142	142	139	136	132	<b>128</b>	100
B2. Export value growth at historical average minus one standard deviation in 2006-07 2/	199	171	201	236	217	219	196	196	191	187	181	<b>175</b>	130
B3. US dollar GDP deflator at historical average minus one standard deviation in 2006-07	199	171	166	170	157	158	142	142	139	136	132	<b>128</b>	100
B4. Net non-debt creating flows at historical average minus one standard deviation in 2006-07 3/	199	171	177	199	183	184	165	165	161	157	152	<b>147</b>	107
B5. Combination of B1-B4 using one-half standard deviation shocks	199	171	192	214	197	199	178	178	174	170	165	<b>160</b>	120
<b>Debt service-to-exports ratio</b>													
<b>Baseline</b>	7.5	7.8	7.6	7.7	8.3	8.8	7.8	7.6	7.6	7.7	8.1	<b>8.0</b>	6.9
New public sector loans on less favorable terms in 2006-25 1/	7.5	7.8	7.6	8.0	8.9	9.6	8.6	8.4	8.3	8.8	9.5	<b>9.3</b>	10.1
<b>Bound Tests</b>													
B1. Real GDP growth at historical average minus one standard deviation in 2006-07	7.5	7.8	7.6	7.8	8.3	8.8	7.8	7.6	7.6	7.7	8.1	<b>8.1</b>	7.0
B2. Export value growth at historical average minus one standard deviation in 2006-07 2/	7.5	7.8	8.7	9.9	10.9	11.4	10.1	9.8	9.9	10.0	10.8	<b>11.2</b>	9.3
B3. US dollar GDP deflator at historical average minus one standard deviation in 2006-07	7.5	7.8	7.6	7.8	8.3	8.8	7.8	7.6	7.6	7.7	8.1	<b>8.1</b>	7.0
B4. Net non-debt creating flows at historical average minus one standard deviation in 2006-07 3/	7.5	7.8	7.6	8.0	9.0	9.4	8.3	8.1	8.1	8.2	8.9	<b>9.4</b>	7.7
B5. Combination of B1-B4 using one-half standard deviation shocks	7.5	7.8	8.4	9.2	10.1	10.5	9.4	9.1	9.1	9.2	9.9	<b>10.2</b>	8.5
<b>Debt service-to-revenues ratio</b>													
<b>Baseline</b>	18.7	21.7	20.2	19.4	21.0	20.9	19.7	18.8	18.7	18.8	19.7	<b>19.4</b>	15.5
New public sector loans on less favorable terms in 2006-25 1/	18.7	21.7	20.2	19.9	22.3	22.9	21.9	20.7	20.5	21.6	23.1	<b>22.3</b>	22.6
<b>Bound Tests</b>													
B1. Real GDP growth at historical average minus one standard deviation in 2006-07	18.7	21.7	20.5	19.9	21.5	21.4	20.2	19.2	19.2	19.3	20.2	<b>19.9</b>	16.0
B2. Additional public borrowing of 6 percent of GDP in 2006-07	18.7	21.7	20.2	19.9	22.0	21.9	20.7	19.7	19.6	19.6	21.1	<b>21.7</b>	16.7
B3. US dollar GDP deflator at historical average minus one standard deviation in 2006-07	18.7	21.7	21.0	20.9	22.6	22.4	21.2	20.2	20.2	20.3	21.2	<b>20.9</b>	16.8
B4. Net non-debt creating flows at historical average minus one standard deviation in 2006-07 3/	18.7	21.7	20.2	20.0	22.5	22.3	21.1	20.0	19.9	20.0	21.6	<b>22.7</b>	17.2
B5. Combination of B1-B4 using one-half standard deviation shocks	18.7	21.7	21.7	22.4	24.7	24.5	23.1	22.0	22.0	22.0	23.5	<b>23.8</b>	18.6
<b>NPV of debt-to-revenues ratio</b>													
<b>Baseline</b>	495	475	443	426	394	377	357	352	340	329	318	<b>306</b>	224
New public sector loans on less favorable terms in 2006-25 1/	495	475	461	457	433	424	411	412	407	401	395	<b>389</b>	346
<b>Bound Tests</b>													
B1. Real GDP growth at historical average minus one standard deviation in 2006-07	495	475	451	436	403	387	367	362	350	340	328	<b>316</b>	228
B2. Additional public borrowing of 6 percent of GDP in 2006-07	495	475	465	476	439	421	399	392	380	368	354	<b>340</b>	235
B3. US dollar GDP deflator at historical average minus one standard deviation in 2006-07	495	475	461	458	424	406	386	380	368	357	344	<b>332</b>	240
B4. Net non-debt creating flows at historical average minus one standard deviation in 2006-07 3/	495	475	472	498	459	439	417	409	396	384	369	<b>354</b>	240
B5. Combination of B1-B4 using one-half standard deviation shocks	495	475	492	523	483	463	439	432	418	405	390	<b>375</b>	262

Source: Staff projections and simulations.

1/ 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.

2/ 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).

3/ Includes official and private transfers and FDI.

Table 5. Lao P.D.R. Projected Impact of the Multilateral Debt Relief Initiative (MDRI) 1/  
(In millions of U.S. dollars, unless indicated otherwise)

	NPV of Debt			
	End-2006	Post-Traditional Debt Relief	Post-HIPC Initiative	Post-MDRI
Multilateral Debt	1,064	1,064	931	641
<i>of which:</i>				
ADB	536	536	469	469
IDA	399	399	349	66
IFAD	27	27	23	23
OPEC	14	14	12	12
NDF	31	31	27	27
IMF	32	32	28	22
EIB	26	26	23	23
Bilateral Debt	417	204	179	179
<i>of which:</i>				
Japan	66	48	42	42
Russia	319	126	110	110
Germany	4	1	1	1
Sweden	10	10	9	9
China	0	0	0	0
Thailand	17	17	15	15
Norway	0	0	0	0
France	1	1	1	1
Commercial Debt	127	127	111	111
<b>Total external public debt</b>	<b>1,609</b>	<b>1,396</b>	<b>1,221</b>	<b>931</b>
(in percent of exports) 2/	198	171	150	114
(in percent of revenue) 2/	440	382	334	255
(in percent of GDP) 2/	52	45	39	30
<b>Memorandum Items:</b>				
Projected Exports (average, 2004–06)	814			
Projected Revenue (end-2006)	366			
Projected GDP (end-2006)	3104			

1/ The calculations are approximate and are provided for illustrative purposes only. Assumptions: (i) Paris Club rescheduling is implemented on Naples terms with a cut-off date in June 1999; (ii) Decision point is reached in 2007; (iii) Completion point is reached in 2009. Uses end-2004 exchange and interest rates. Future disbursements and amortization are based on Fund staff projections. MDRI relief is based on end-2003 debt to IDA and end-2004 debt to IMF.

2/ Ratios are based on staff's projections of end-2006 numbers. Debt-to-export ratios use a three-year average exports.