AMRO Country Report
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AMRO Annual Consultation Report

Lao PDR - 2022

ASEAN+3 Macroeconomic Research Office (AMRO)

September 2022

Acknowledgments

1. This Annual Consultation Report on Lao PDR has been prepared in accordance with the functions of AMRO to monitor, assess and report its members' macroeconomic status and financial soundness, to identify relevant risks and vulnerabilities, and to assist them in the timely formulation of policy to mitigate such risks (Article 3 (a) and (b) of the AMRO Agreement).
2. This Report is drafted on the basis of the Annual Consultation Visit of AMRO to Lao PDR from January 17 to January 31 (Article 5 (b) of the AMRO Agreement). The AMRO Mission team was headed by Dr Seung Hyun (Luke) Hong. Members included Dr Yoki Okawa, Desk Economist; Mr Paolo Hernando, Senior Economist; Dr Tanyasorn Ekapirak, Associate Economist; Dr Byunghoon Nam, Senior Economist; Mr Sota Nejime, Associate Researcher; Ms Lathtanaphone Thykeo, Associate; Ms Thipphaphone Chanthalath, Associate; Mr Sok Sotheareach, Associate. AMRO Director Mr Toshinori Doi and Chief Economist Dr Hoe Ee Khor also participated in key policy meetings with the authorities. This AMRO Annual Consultation Report on Lao PDR for 2021 was peer reviewed by Dr Sanjay Kalra, Group Head and Lead Economist, and Dr Sungtaek Kwon, Senior Economist; and approved by Dr Khor.
3. The analysis in this Report is based on information available up to 15 March.
4. By making any designation of or reference to a particular territory or geographical area, or by using the term "member" or "country" in this Report, AMRO does not intend to make any judgments as to the legal or other status of any territory or area.
5. On behalf of AMRO, the Mission team wishes to thank the Lao PDR authorities for their comments on this Report, as well as their excellent meeting arrangements and hospitality during our visit.

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Executive Summary

1. The pandemic continued to weigh on Lao PDR's growth in 2021. After growing at an average of 7.2 percent per annum over the past 10 years, GDP growth declined to 3.3 percent in 2020, and edged up to 3.5 percent in 2021. However, the growth slowdown due to the pandemic was not as severe as in many other countries, because Lao PDR's economy is less dependent on close contact services and is driven mainly by electricity generation, infrastructure construction, and agriculture. Aided by the ramp-up in vaccination and more targeted containment measures, the Laotian economy has adapted to surges in COVID-19 infections, and gradual recovery in economic activities continued even during the worst wave in late 2021. Higher agricultural exports to China, continued expansion of power generation capacities, and a gradual resumption of service sector activities, including tourism, are expected to support economic recovery in 2022-2023.

2. Inflation accelerated towards end-2021 due to high import prices. High food price inflation, triggered by natural disasters, pushed headline inflation to 5.1 percent in 2020 before moderating to 3.8 percent in 2021. Amid elevated import prices and a weak economic recovery in 2022, inflation is projected to rise to 5.4 percent in 2022 before moderating to 4.0 percent in 2023.

3. While trade balance surplus continued in 2021, the overall balance of payments recorded a slight deficit. In 2020, the trade balance recorded a surplus of 3.9 percent of GDP, a 6.4 percentage point increase from a deficit of 2.5 percent in 2019. The trade balance remained in surplus in 2021, as imports were constrained by the pandemic and the large depreciation of the domestic currency. Net capital inflow remained positve, supported by robust FDI inflows into the infrastructure and mining sectors. However, international reserves declined slightly in 2021 due to large debt repayments and unrecorded outflows. Lao PDR's gross international reserves have been relatively low, sufficient to cover less than two months of imports of goods and services.

4. New credit to the private sector remained subdued in 2021. Excluding the surge in Q4 2021, which is more due to the valuation effect, credit to the private sector remained subdued reflecting weak economic acitivity, the banks's cautious lending policy, and tight liqudity conditions. The Bank of Lao PDR's pandemic support measures continued to provide essential support to help affected businesses and households, but with varying degrees of effectiveness. Financial soundness indicators of the overall banking system seemed less affected by the pandemic, with NPL ratio stable at around 3 percent and CAR well above the minimum requirement level.

5. The fiscal deficit narrowed, but government debt surged in 2021. With the rebound in revenue collection and the reduction in fiscal spending, the fiscal deficit declined significantly in 2021. However, the government debt-to-GDP ratio jumped to 73.7 percent of GDP in 2021 from 61.9 percent in 2020 mainly because of the arrears resolution related to past public infrastructure projects, and the valuation effect of to the sharp depreciation of LAK on foreign debt. With the government's continued commitment to fiscal consolidation, the 2022 budget aims to reduce the fiscal deficit further. Revenue is budgeted to grow significantly offsetting the spending increase, and reducing the fiscal deficit to 2.1 percent of GDP.

6. Risk is tilted to the downside. Given its relatively weak public health system, repeated waves of COVID-19 infection and subsequent containment measures may delay economic recovery and worsen the disparities in economic performance across different sectors.

7. Making the large external debt service payments will remain challenging in the medium term. Notwithstanding revenue-enhancing measures, it will be challenging to refinance external debt in the medium term amid unfavorable market conditions and sovereign credit rating downgrades. The high and rapidly rising government debt, driven by chronic fiscal deficits, currency depreciation, and arrears resolution related to past public infrastructure projects has raised concerns on debt sustainability. The debt-to-GDP ratio is projected to remain elevated in the medium tterm without strong fiscal consolidation, and the debt profile is vulnerable to external shocks. Contingent liabilities from SOEs and PPP projects could become an additional financial burden on the government.

8. Structural external imbalances continue to put pressure on Lao's low foreign reserves and the Lao kip exchange rate. A high external debt service burden and a high reliance on imports of consumption and investment goods have created structural challenges for the economy's external account position. A large depreciation of LAK could erode public trust in the LAK, increase consumer price inflation, and weaken the financial position of the public sector.

9. Risks to financial stability stem from deteriorating asset quality and weak economic recovery. Restructured loans by banks are about 15 percent of total bank loans. The heterogeneity among banks also implies heightened risks for some banks with thin capital buffers and high NPL ratios. Withdrawal of regulatory forbearance could lead to a sudden increase in NPLs and should be supported by enhanced supervision.

11. Monetary policy should remain accommodative and continue to enhance flexible exchange rate management to support economic recovery. The authorities should communicate clearly their policy actions in a timely manner. Reverting the reserve requirement ratios to pre-pandemic level should be planned carefully, and clearly communicated. More flexible exchange rate management will help further narrow the exchange rate gap and ease the mismatch in liquidity demand and supply in different currencies, while policy efforts to rebuild public confidence in Lao kip and improve structural imbalances, are also essential. More targeted policy lending programs—such as SME lending—should be strengthened. Enhancing supervision and a well-phased withdrawal of pandemic measures are essential to maintain financial sector stability.

12. Given the limited fiscal space, fiscal consolidation efforts through revenue enhancement should be strengthened, while improving the efficiency of fiscal measures. The government's commitment to maintaining a fiscal deficit of below 2 percent of GDP in the medium term is commendable. However, the plan should be accompanied by concrete action plans and effective measures to achieve the targets and gain credibility. The authorities should continue to improve the government's medium-term debt management. Upgrading the public finance management framework will strengthen the role of fiscal policy. Risks from contingent liabilities should be properly addressed by improving SOE and PPP management.

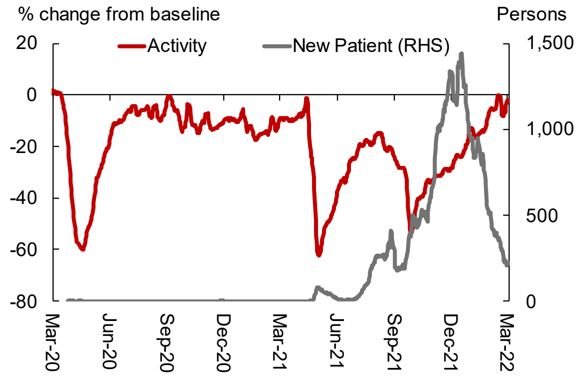
25. Accelerating structural reforms is essential to achieve a more inclusive, sustainable, and diversified economic recovery with less reliance on external debt. Enhancing the business environment is critical towards attracting more FDI into diverse sectors as well as further promoting domestic investment and production. Strengthening vocational training and job-matching programs will help supply skilled workers to growing industries, which will contribute to post-pandemic recovery and long-term growth potential. Close cooperation with development partners and strong coordination among government agencies are essential to facilitate the development of appropriate and effective mitigation and adaptation policies for the climate change.

A. Recent Developments and Outlook

Real Sector Developments and Outlook

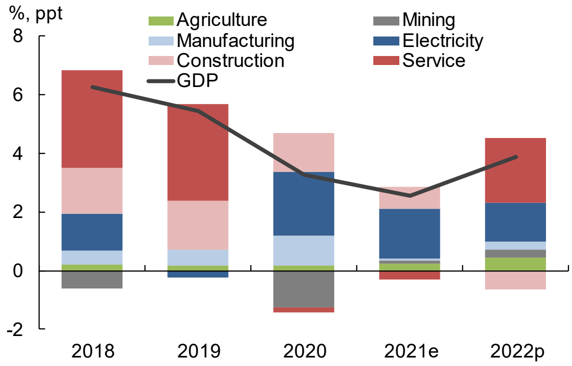
1. The pandemic continued to weigh on Lao PDR's growth in 2021. After growing at an average of 7.2 percent per annum over the past 10 years, GDP growth declined to 3.3 percent in 2020, reflecting COVID-19's impact. However, the slowdown in 2020 was not as severe as in many other countries,[1] because Lao PDR's economic growth is driven mainly by electricity generation, infrastructure construction, and agriculture, sectors which are not so dependent on close contact. In 2021, growth edged up to 3.5 percent[2], as repeated tightening of containment measures to contain the surge in the infection rate severely constrained economic activities, especially in the hospitality and transport sectors, keeping the unemployment rate elevated.[3] Meanwhile, the capital-intensive electricity and mining sectors, as well as construction, agriculture and manufacturing in several special economic zones (SEZs,), grew robustly despite rising infection rates. Aided by the ramp-up in vaccination and more targeted containment measures, the Laotian economy gradually adapted to surges in COVID-19 infections, and activities continued to recover during the worst wave in late 2021. (Figure 1).

Figure 1. Covid-19



Source: Google; WHO
Note: Activity data is 7-days average Google mobility data (Retail and recreation)

Figure 2. Contribution to Growth



Source: Lao Statistical Bureau; AMRO staff estimates

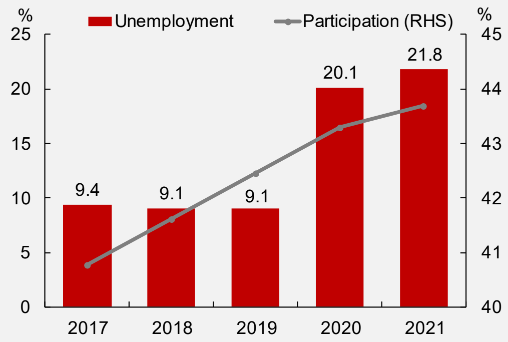
2. The economy is projected to recover moderately by 3.7 percent in 2022. The Lao-China railway that began freight operations in December 2021 and trade agreement with China that granted an agricultural import quota to Lao PDR, will contribute to agricultural exports to China and revive tourism. Continued expansion of power generation capacities, and a gradual resumption of service sector activities, including tourism, are expected to support economic recovery in 2022-2023.

[1] According to the IMF, the global economy contracted by 3.1 percent in 2020. Growth in ASEAN+3 economies as a whole in 2020 was 0 percent, according to AMRO (2021).
[2] In 2021, agriculture, industry and service sector is estimated to grew by 3.5 percent, 2.5 percent, and 1.4 percent respectively.
[3] The unemployment rate in the formal sector increased by 11 percentage points to 20.1 percent in 2020 and increased further in 2021 (See Box A).

Box A. Impact of COVID-19 on the Laotian Labor Market[4]

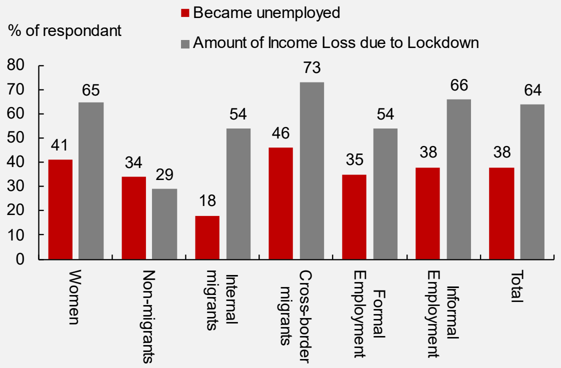
The unemployment rate surged by 12.7 percentage points during the pandemic. From a modest level of 9.1 percent before the pandemic, Lao PDR's unemployment rate is estimated to have increased to 20.1 percent in 2020 and further to 21.8 percent in 2021, while the participation rate increased slightly by 0.8 percentage point to 43.3 percent in 2020, and to 43.7 percent in 2021(Figure A1). Despite the high unemployment rate, domestic labor shortage, especially in the manufacturing sector in the SEZs, continued during the pandemic. Oxfam, an international non-profit organization, conducted a survey in Q4 2020 on the pandemic's impact on the labor market. The survey focused on vulnerable groups, particularly on informal, rural, female, and migrant workers. Its results suggest a large impact of COVID-19 – 38 percent of respondents became unemployed; and average income losses due to lockdowns amounted to 64 percent of normal income (Figure A2).

Figure A1. Unemployment and Labor Force Participation Rates



Source: Labor Force survey; AMRO staff estimates

Figure A2. Impact on Vulnerable Population

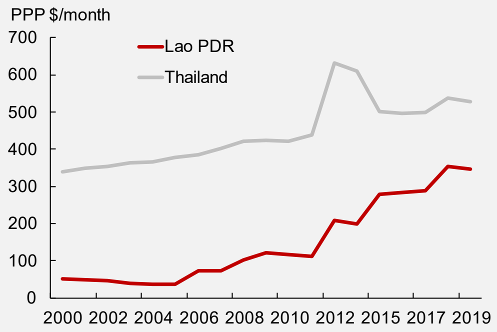


Source: Oxfam

A large number of migrant workers returned from Thailand in 2020, but about half of them went back to Thailand by end-2021. Thailand immigration data shows that 229,000 workers, representing over 10 percent of Lao PDR's domestic labor force, returned home, mainly due to job losses during the pandemic.[5] Despite this large influx of workers, the domestic labor force growth slowed from 4.5 percent in 2019 to 3.9 percent in 2020, and 3.7 percent in 2021, suggesting that these migrant workers were temporarily involved in informal activities such as agriculture in their hometowns, rather than seeking more permanent domestic jobs. With the much higher wages in the Thai labor market, half of the migrant workers who had returned during the pandemic, already resumed work in Thailand by end-2021. The average income of migrants is almost twice that of domestic labor in market exchange rate,[6] while the average years of education among migrant workers is lower than among the domestic labor force (Figures A3 and A4).

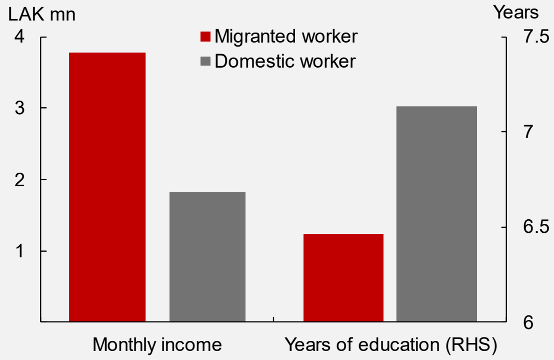
[4] Prepared by Chanthalath Thipphaphone and Yoki Okawa.
[5] Three major sectors for migrant workers are: food and hospitality (31.3 percent), wholesale, retail and repairs (14.1 percent), and manufacturing (12.5 percent).
[6] Thailand's minimum wage is 50 percent higher than that of Lao PDR in purchasing power parity terms, and it is 114 percent higher in terms of the market exchange rate.

Figure A3. Minimum Wage



Source: ILO

Figure A4. Income and Education

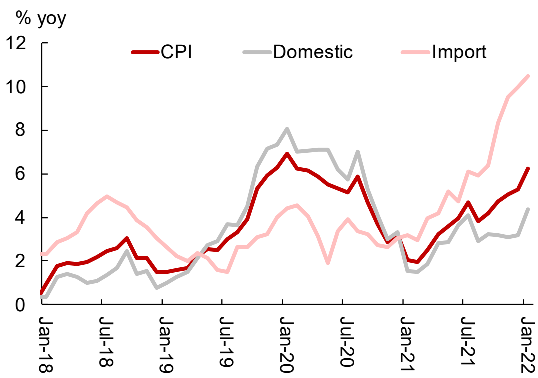


Source: Ministry of Labor and Social Welfare; AMRO staff estimates

Limited fiscal space and social security coverage constrained financial support to affected workers. While the government has expanded skill development programs to find new jobs, direct fiscal support for the unemployed were limited. Total unemployment benefits paid in 2020 and 2021 was 0.04 percent of GDP or USD59.5 per newly unemployed person. While the National Social Security Fund is expected to cover 50 percent of lost wages for three months, only 27.9 percent of the total labor force is enrolled in the unemployment insurance. The unemployed without unemployment insurance, might have engaged in buffer activities, such as agriculture.

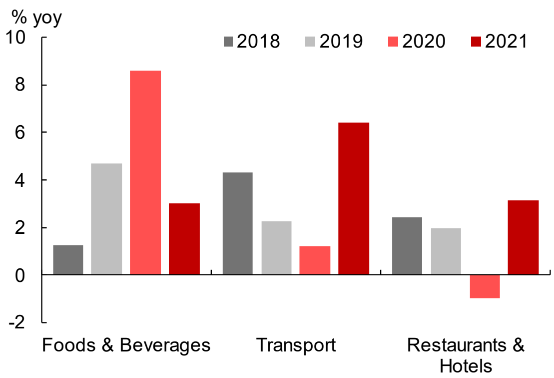
3. Inflation accelerated towards end-2021 due to high import prices, including energy. High food price inflation, triggered by natural disasters, pushed headline inflation to 5.1 percent in 2020 before moderating to 3.8 percent in 2021.[7] However, inflation picked up in late 2021, driven by higher import prices, and to a lesser extent, by increasing domestic prices.[8] High energy prices and currency depreciation led to a spike in transport price, while rebounding economic activities also contributed to a price increase in the restaurant and hotel sector. Amid elevated import prices and a gradual economic recovery in 2022, inflation is projected to rise to 5.4 percent in 2022 before moderating to 4.0 percent in 2023.

Figure 3. Inflation



Source: Lao Statistical Bureau

Figure 4. Annual Inflation (Selected Sectors)



Source: Lao Statistical Bureau

[7] Food price inflation spiked to 8.6 percent in 2020 from 1.2 percent in 2018 and 4.7 percent in 2019, before declining to 3 percent in 2021.
[8] Average energy prices increased by 18 percent in 2H 2021 compared to 1H 2021. The average reference exchange rate weakened by 7 percent during the same period.

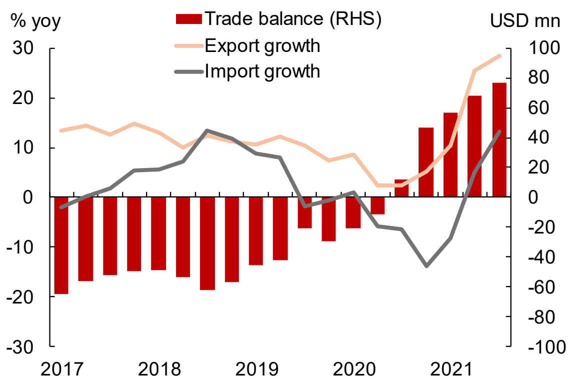
Authorities' View

Lao authorities project the economy to grow by 4.4 percent in 2022. In 2022, agricultural sector is expected to grow by 2.9 percent driven by exports to China; industry sector is projected to grow by 4.4 percent led by electricity, infrastructure, and manufacturing; service sector is forecast to rebound by 4.9 percent supported by transportation, retail and wholesale, and hospitality industry.

External Sector and the Balance of Payments

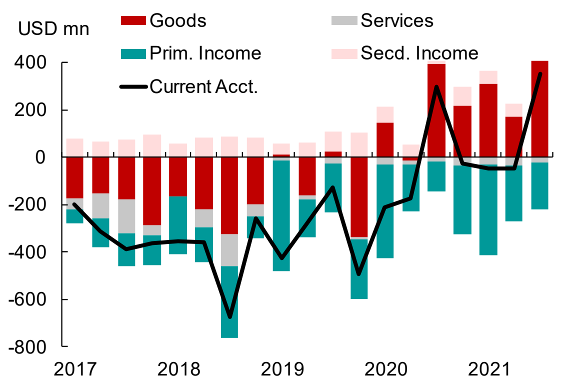
4. Trade balance continued its remarkable improvement in 2021, supported by robust export growth amid a slow recovery in import demand.[9] In 2020, the trade balance recorded a surplus of 3.9 percent of GDP, a 6.4 percentage point increase from a deficit of 2.5 percent in 2019. The lockdown suppressed the demand for imported consumer goods, leading to a 14 percent decline in imports, while exports registered positive growth as electricity generation and mining were less impacted by the pandemic. The trade balance remained positive in 2021, as the import rebound was constrained by the pandemic and the large depreciation of the domestic currency. Electricity, mineral, and agricultural imports continued to be robust. Meanwhile, the opening of the Lao-China railway in December 2021 is expected to gradually increase agricultural goods exports and international tourism to Laos from 2022 onward. A substantial trade surplus led to a moderate current account surplus in 2021, despite an increase in interest and dividend payments.

Figure 5. Trade Balance



Source: Bank of Laos PDR (BOL)
Note: 4-quarter moving averages

Figure 6. Current Account

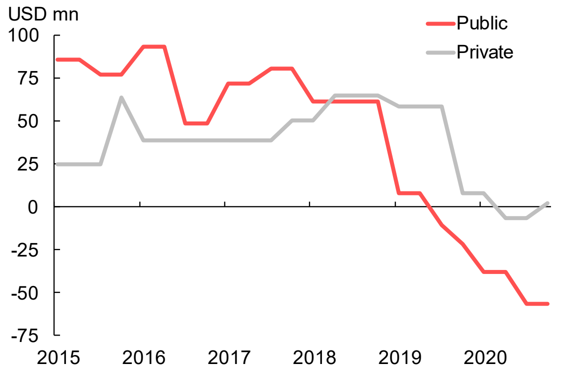


Source: BOL

5. Despite robust FDI inflows, the overall balance of payments recorded a slight deficit. Despite the pandemic, FDI inflows increased in 2020 and is estimated to have increased in 2021, drawn into the infrastructure and mining sector. International bond-related capital flow turned negative in 2020 for the public sector, reflecting suspension of international bond issuance after 2018.[10] Despite surpluses in the current and financial accounts, international reserves declined slightly in 2021 due to large unrecorded outflows in errors and omissions. Lao PDR's gross international reserves have been at below two months of imports of all goods and services since 2015.[11] With the recovery in imports, the reserve coverage of imports is projected to decline further in 2022 and 2023.

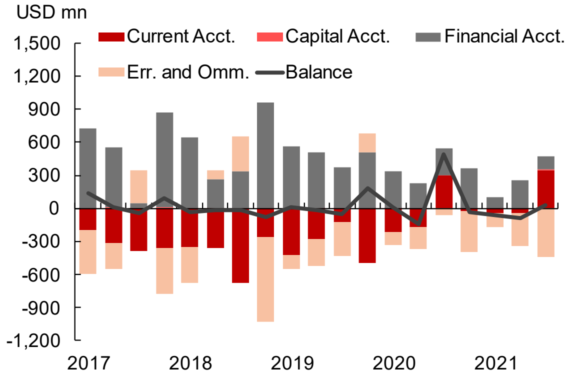
[9] Q4 2021 balance of payment (BOP) numbers are AMRO estimates.
[10] In the private sector, EDL-Gen issue international corporate bonds, mainly in the Thai market. Last issuance was about USD170 million in Q3 2021. The government is reported to have issued the first international bond in more than three years, in March 2022.
[11] Annex 4 discusses implications of large errors and omission on custom revenue.

Figure 7. Net Bond Issuance



Source: IMF; AMRO staff estimates
Note: Two-years moving average international bond principal recipient/repayment per quarter. Positive numbers are the net issuance of new bonds. Data ends in Q3 2021.

Figure 8. Overall Balance

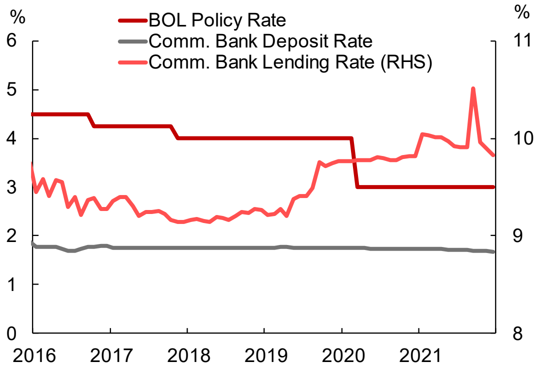


Source: BOL

Monetary Condition and Financial Sector

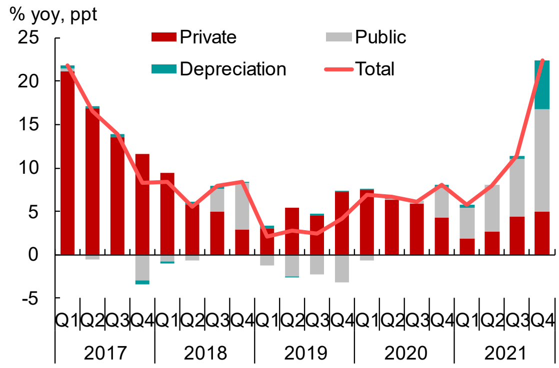
6. The Bank of Lao PDR's pandemic support measures continued to provide essential support, but with varying degrees of effectiveness. The BOL reduced the reserve requirement rates twice—in March 2020 and July 2021—to maintain ample liquidity in the banking system. Under the better liquidity condition, regulatory forbearance on the loan classification enabled banks to provide payment deferral to their customers. Meanwhile, the Lao kip policy rate cut to 3.0 percent in March 2020—the lowest rate since 1992—seems to have has little impact on the commercial bank's lending and deposit rates (See Figure 9).[12]

Figure 9. LAK Interest Rates



Source: BOL
Note: Policy rate is BOL's short-term (less than a week) lending rate to commercial banks; deposit rate is the average savings rate; lending rate is the short-term lending rate (less than a year).

Figure 10. Commercial Bank Credit



Source: BOL; AMRO staff estimates
Note: Measured in LAK. Changes in credit due to exchange rate fluctuations are estimated.

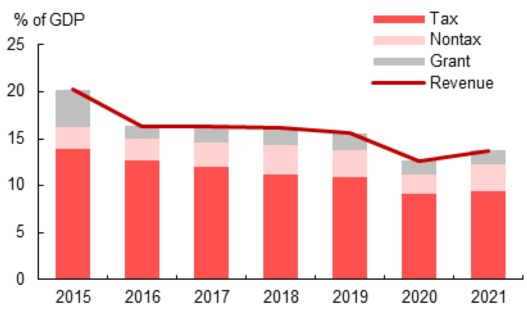
[12] The policy rate is applied to Lao kip only, but the movements of foreign currency deposit and lending rates have been similar to those of Lao kip (See Appendix 1). The reference rates on Lao kip are more than 100 bps above banks' deposit rates, and the BOL's lending at the reference rate is intended mostly for the temporary liquidity support of banks. The lending rate spiked temporarily in September 2021 when COVID-19 cases surged, but it fell to earlier levels within a month.

7. New credit to the private sector remained subdued in 2021. Commercial bank credit growth increased in Q4 2021 mainly due to the increase in credit to the public sector, while credit to the private sector remained below the pre-pandemic level, reflecting weak economic activity, and the cautious lending behavior of banks (Figure 10).[13] Meanwhile, as deposit growth remained relatively robust, commercial banks increased their investment in securities including government bonds, and their reserves at the BOL.[14] Financial soundness indicators of the overall banking system were less affected by the pandemic, as the non-performing loan (NPL) ratio remained relatively stable at around 3 percent and the capital adequacy ratio (CAR) continued to stay well above the minimum requirement level of 8 percent.

Fiscal Sector

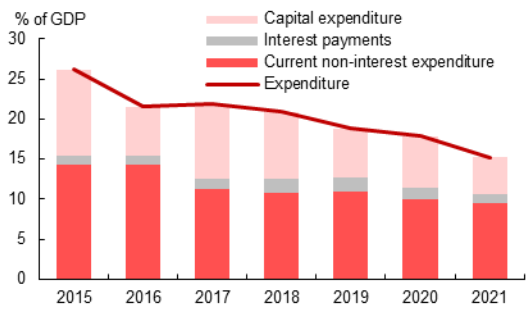
8. Revenues rebounded, while expenditures fell in 2021. After a sharp contraction in 2020, tax revenues rebounded to 9.5 percent of GDP in 2021 from 9.1 percent of GDP in 2020, driven by the increase in resource and excise taxes. Despite 11.2 percent increase in 2021, tax revenue remained below the pre-pandemic level in absolute value. Non-tax revenues, in particular dividends and administration fees, picked up substantially, while grants increased slightly (Figure 11). Total revenue rose from 12.7 percent of GDP in 2020 to 13.8 percent of GDP in 2021. Driven by the government's fiscal consolidation efforts and constrained by the financing difficulties, expenditures declined in 2021, recording a historical low of 15.2 percent of GDP. Current expenditure excluding interest payments increased slightly, while capital expenditure fell sharply by 24.8 percent. Interest payments declined by 12.9 percent despite an increase in the government debt (Figure 12).[15]

Figure 11. Revenue



Source: Ministry of Finance; AMRO staff estimates

Figure 12. Expenditure



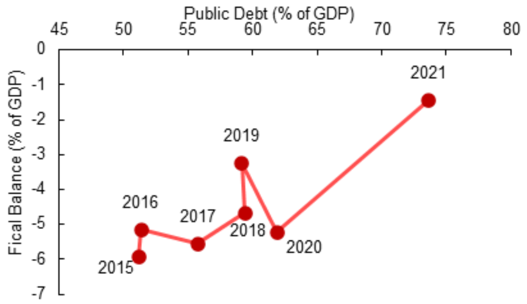
Source: Ministry of Finance; AMRO staff estimates

9. The fiscal deficit narrowed, but government debt increased in 2021 (Figure 13). With the rebound in revenue collection and the reduction in fiscal spending, the fiscal deficit declined significantly to 1.5 percent of GDP in 2021 from 5.2 percent of GDP in 2020. However, the government debt-to-GDP ratio jumped to 73.7 percent of GDP in 2021 from 61.9 percent in 2020 mainly because of the arrears resolution related to past public infrastructure projects [16] and an increase in the nominal value of external debt due to a 19 percent depreciation of LAK against USD[17] (Figure 14). Amid tight financing conditions with weak investor appetite,

[13] Credit to the private sector grew faster in Lao kip terms as the nominal values of foreign currency loans increased due to the Lao kip depreciation
[14] For domestic currency assets, government bond holdings increased most, which reflects the issuance of additional triangulation bonds in 2021. Meanwhile, commercial banks' foreign currency assets increased mostly in their reserves at the BOL and foreign asset holdings (See Appendix 1).
[15] Interest payments were disbursed only 59.2 percent of the budget, which could be due to the debt rescheduling negotiation.
[16] The government is estimated to have issued LAK10 trillion of the triangulation bonds in 2021 to resolve the arrears related to the public infrastructure projects completed in the past.
[17] The LAK value of external debt stock in the foreign currencies is evaluated using the BOL reference exchange rate at the end of the year. The share of external debt in total public debt was 86.8 percent at the end of 2021.

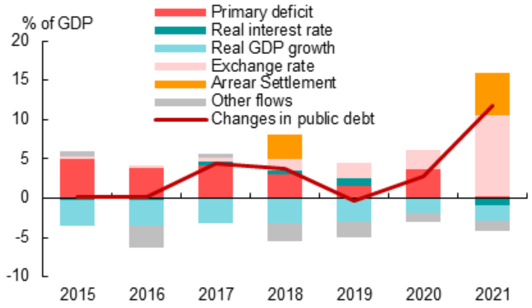
the authorities postponed the international bond issuance and repaid USD760 million out of USD1,275 million of debt service coming due in 2021.[18]

Figure 13. Fiscal Balance and Government Debt



Source: Ministry of Finance; AMRO staff estimates

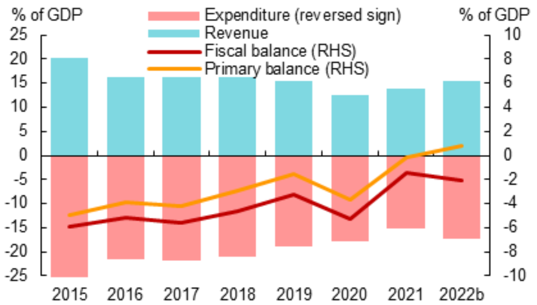
Figure 14. Government Debt Dynamics



Source: Ministry of Finance; AMRO staff estimates

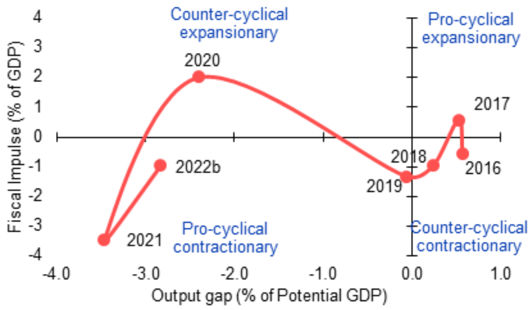
10. With the government's continued commitment to fiscal consolidation, the 2022 budget aims to maintain the low fiscal deficit. Revenue is budgeted to grow significantly offsetting most of the spending increase, and the fiscal deficit is set at 2.1 percent of GDP (Figure 15).[19] A substantial increase in the budgeted revenue reflects the government's plan to implement revenue-enhancing measures, including expanding the VAT tax base, utilizing the fast-track mining approval scheme, raising excise tax rates, and modernizing tax administration (Table 1). Given limited fiscal space and ongoing fiscal consolidation program, the fiscal stance remains pro-cyclically contractionary notwithstanding a still sizable negative output gap (Figure 16).

Figure 15. Revenue, Expenditure, Fiscal Balance



Source: Ministry of Finance; AMRO staff estimates

Figure 16. Fiscal Policy Stance



Source: Ministry of Finance; AMRO staff estimates

[18] For the remaining amount, the Lao government has been negotiating with bilateral creditors, including China, about postponing debt repayments. The government managed to finance the commercial debt repayments from the commercial bank syndicated loans, the receipts of on-lending debt repayment, foreign currency revenue, and USD denominated government bond issuance in the domestic market (USD18.3 million in 2020 and USD40.5 million in 2021 through the Lao Securities Exchange).

[19] The 2022 budget targets 17.2 percent increase in revenue and 9.8 percent increase in expenditure compared with the 2021 budget, or 20.4 percent and 23.7 percent compared with the 2021 revenue and expenditure outturns respectively.

Table 1. Revenue-enhancing Measures of the Lao Government in 2022

Measures	Progress and Challenges
Expanding existing tax bases	• Encouraging VAT registration by reducing the VAT rate from 10 to 7 percent until 2023[20] • Reducing revenue leakages, especially at the borders, by strengthening the control and monitoring of imports
Introducing new revenue bases	• Fees for using the Lao-China Railway and dry port: USD100-200 per container • Taxes and fees from the fast-track approval of mining projects - Advance payments per land area for exploration - Upfront lump-sum tax at the beginning of mining projects for the following three years (for example, USD30 per ton for iron ore) • Tax from cryptocurrency mining: USD1 million per 10MW of electricity usage
Raising tax rates	• Raising excise tax rates of luxury goods and alcohol products
Improving tax administration	• Modernizing tax collection by adopting IT systems and linking to banking services • Expanding mobile and online tax payments, which are currently applied to land and road taxes
Discussing new taxes	• Discussing the coverage of property and land taxes, which are currently determined annually • Discussing the introduction of a carbon tax by 2023

Source: Ministry of Finance; AMRO staff compilation

[20] The VAT rate has been reduced temporarily to incentivize businesses to register to the VAT system. Despite the VAT rate cut, the authorities expect that additional tax revenues of VAT, CIT, and PIT from newly registered firms would be more than the reduction from rate cut, as they had paid only small lump-sum amounts previously.

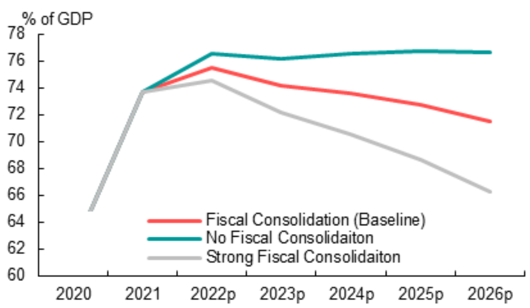
B. Risks, Vulnerabilities, and Challenges

Near-term Risks to the Macro Outlook

11. Risk is tilted to the downside. Although Lao PDR has achieved its 50 percent vaccination rate target for 2021, its vaccination rate and coverage are still lower than in neighboring countries. Given its relatively weak public health system, repeated COVID-19 infection waves and subsequent containment measures may weaken the economic recovery and worsen the disparities in economic performance across different sectors. In particular, the strength of recovery in the contact-intensive service sector and some labor-intensive manufacturing industries will depend on the effective containment of subsequent COVID-19 outbreaks, and the recovery of international travel.

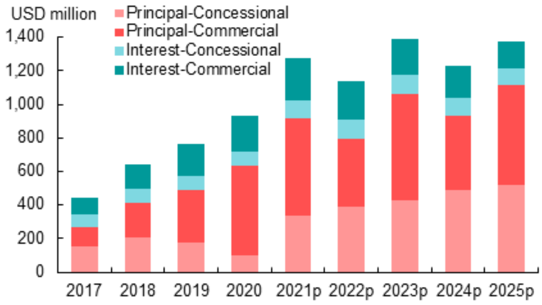
12. The high and rapidly rising government debt has raised concerns on debt sustainability.[21] In the past decade, the government debt increased substantially, reaching 73.7 percent of GDP in 2021, mainly driven by the financing for the large infrastructure projects and chronic fiscal deficits, and more recently, by currency depreciation and arrears resolution related to past public infrastructure projects.[22] The debt-to-GDP ratio is projected to rise further to 75.5 percent in 2022 due to the continued LAK depreciation and the VAT rate cut. Despite the revenue-enhancing measures of the authorities, the VAT rate cut of 3 percentage points will constrain the overall tax revenue collection in 2022 and 2023, given its share of 30 percent in total tax revenue. Without strong fiscal consolidation, the debt-to-GDP ratio is projected to remain high, above 75 percent of GDP in the medium term (Figure 17). Furthermore, the debt profile is vulnerable to external shocks, given the high reliance on external debt and a large share of commercial borrowings.[23]

Figure 17. Government Debt Projection



Source: Ministry of Finance; AMRO staff estimates
Note: The primary balance on average during the projected period is assumed to be -0.5, -1.5, 0.5 percent of GDP for fiscal consolidation (baseline), no consolidation, and strong consolidation, respectively.

Figure 18. External Debt Service Projection



Source: Ministry of Finance; AMRO staff estimates
Note: External debt service in the projected period is based on the government debt outstanding as of end-2020.

13. Financing the large external debt service payments will remain challenging in the medium term. Rapidly rising external debt has raised the external debt service burden of the government to USD1.1 – 1.4 billion (6.4 – 7.5 percent of GDP) in 2022 – 2025, of which 55 – 61 percent are on commercial terms (Figure 18). In particular, the principal repayments of USD403 million for commercial debt, due in 2022, are scheduled in January, July, and October to December. The government plans to mobilize funding from various sources, including the one-time power transmission line leasing fees from Electricite du Laos Transmission Company

[21] See Annex 1 on Debt Sustainability Analysis.
[22] The government issued the triangulation bond of LAK4,791 billion (3.1 percent of GDP) in 2018, and is estimated to have issued another tranche of triangulation bonds of LAK10 trillion (5.5 percent of GDP) in 2021.
[23] The shares of external debt and commercial debt in total government debt were 92.1 percent and 43.6 percent, respectively, as of end-2020.

Ltd. (EDL-T),[24] foreign currency revenue from the fast-track approval of mining projects, earnings from the Lao-China railway and dry ports, and cryptocurrency mining (Table 1). Notwithstanding the additional revenue sources, it will continue to be challenging to raise sufficient funds to service the external debt in the medium term amid unfavorable market conditions and sovereign credit rating downgrades.[25]

14. Structural external imbalances continue to put pressure on Lao's thin external buffer and the Lao kip exchange rate. The high external debt service burden and reliance on imports of consumption and investment goods have created structural challenges for the economy's external position.[26] With a tightly managed official exchange rate, increasing market pressure on Lao kip had widened the gap between the official and parallel market rates, which tended to reinforce the Lao kip depreciation by inducing strong demand for foreign currency assets and savings. With the low level of foreign reserves and the sustained large exchange rate gap between the official and parallel market rates—although narrowed recently—depreciation expectations could have exacerbated the currency mismatch of liquidity demand and supply in the banking sector. After a 19 percent depreciation of the LAK against USD in 2021,[27] a further large depreciation could exacerbate lack of confidence in the LAK, increase consumer price inflation, and weaken the financial position of the public sector that has liabilities mostly in foreign currency and revenues mostly in domestic currency.

15. Risks to financial stability stem from deteriorating asset quality and prolonged economic weakness. Seemingly stable financial soundness indicators may underestimate the risk of asset quality deterioration of restructured loans. Restructured loans by banks amounted to LAK15.7 trillion as of November 2021, accounting for about 15 percent of total bank loans. The heterogeneity among banks also implies heightened risks for some banks with thin capital buffers and high NPL ratios (See Box B).[28] Withdrawal of regulatory forbearance could lead to a sudden increase in NPLs and a credit crunch since restructured loans that become impaired would be classified as NPLs and the lack of sufficient provisions could reduce the CAR ratio below the regulatory minimum which would cause the banks to stop lending. Limited prudential toolkits and weak monitoring and supervision capacity may constrain the effective supervision of emerging risks in the financial sector.[29] Going forward, a weak economic recovery will put more companies and households in financial distress, which could become an additional burden on banks' balance sheets.

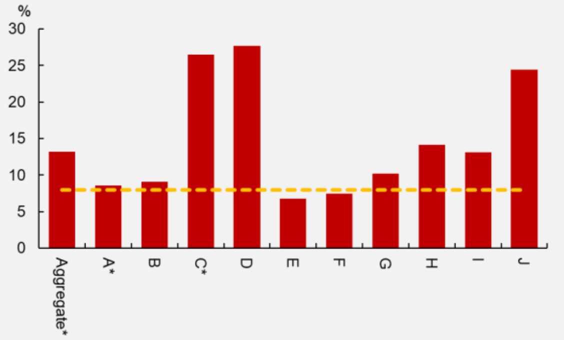
[24] According to the concessional agreement, EDL-T will pay USD625 million to EDL for leasing the electricity transmission lines for 40 years. EDL will use the leasing fees to repay the EDL's own debt and the on-lending debt to the government. The amount to be transferred to the government is under discussion.
[25] The sovereign credit rating for Lao PDR has been downgraded to Caa2 by Moody's in August 2020, to CCC by Fitch in September 2020, and to BBB- by TRIS in May 2021.
[26] Although trade account balance improved recently, part of export revenue remained abroad, and did not lead to a proportional improvement in the international reserve position.
[27] This calculation is based on the BOL reference rates of LAK against USD from end-2020 to end-2021.
[28] In case of one large state-owned commercial bank with 40 percent share of total banking sector deposits and with a CAR slightly below 8 percent, about 30 percent of total outstanding loans was restructured.
[29] In terms of macroprudential measures, Lao PDR is reported to have a simple nonstandard liquidity rule and cap on net FX position only. See AMRO Capital Flow Management and Macroprudential Policy Measure in the ASEAN+3: A Database (2022) for more details.

Box B. Assessment of Credit Quality in the Lao PDR Banking Sector[30]

At the start of the pandemic, the BOL quickly rolled out credit support measures and issued guidelines on regulatory forbearance. On 26 March 2020, BOL issued guidelines for financial institutions to provide relief to debtors affected by the pandemic.[31] The guidelines included support measures such as interest rate adjustment, deferment of interest and/or principal payments and fee reduction. These measures aimed to assist borrowers who could not meet the originally agreed loan terms due to the COVID-19 crisis. To facilitate the implementation, financial institutions are allowed to classify these restructured loans as special mention loans rather than NPLs. Guidelines on loan restructuring with regulatory forbearance have increased concerns over the risk of asset quality deterioration and the adequacy of individual banks' capital buffer levels.[32]

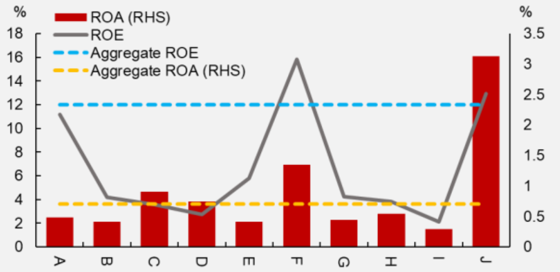
Banks in Lao PDR show large divergence in their performance.[33] While some banks maintain very high capital buffer levels, the capital adequacy levels of some other banks are even below the minimum regulatory level. Two joint state commercial banks and one subsidiary bank showed very high capital levels, contributing to a higher CAR at the aggregate level (Figure B1). Similarly, bank profitability indicators—such as return on assets (ROA) and return on equity (ROE)—show that only a few banks were able to earn decent profits in 2020. Among all banks, Bank F and J showed ROA and ROE above the aggregate level (Figure B2). In terms of liquidity, BOL cut the required reserve ratio (RRR) twice for both LAK and foreign currency deposits, which should have helped the liquidity situation during the pandemic. However, prior to the pandemic, the bank deposit ratio was above 1 for several banks, implying that their liquidity position could be tight (Figure B3).[34]

Figure B1. Capital Adequacy Ratio



Source: BankFocus
Note: Total Equity/Total assets were used for banks which do not publish CAR.

Figure B2. ROA and ROE



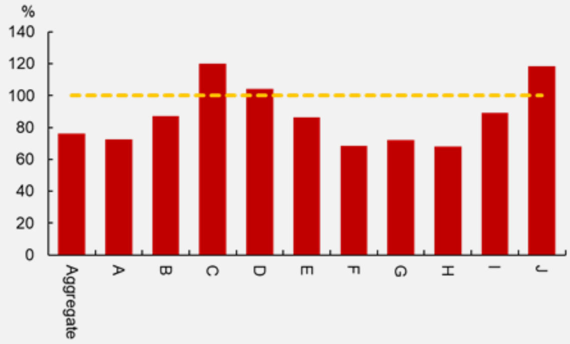
Source: BOL; AMRO staff calculations
Note: The aggregate ROE and ROA include other banks of Lao PDR.

A stress test on the capital position highlights the need to enhance the capital buffer of some financial institutions before the withdrawal of forbearance measures. Without regulatory forbearance, restructured loans will be reclassified as NPLs and require extra provisions. To check the sufficiency of the capital buffer to cover the potential increase in NPLs from restructured loans when the forbearance measures are withdrawn, individual banks' capital positions were tested under different scenarios.[35] Due to limited data availability, CARs are approximated using total equity and

[30] This box was prepared by Tanyasorn Ekapirak.
[31] The Decision on Policy in respect of Loans to Provide Remedial Measures Due to the Impact of the COVID-19 Pandemic no.238/BOL.
[32] With the withdrawal of loan restructuring programs, NPLs could rise sharply, requiring a proportional increase in loan loss provision.
[33] 10 banks are included in this analysis, which are (in alphabetical order) Aceleda Bank Lao. Ltd, Banque pour le Commerce Exterieur Lao Public, Banque Franco-Lao Ltd, BIC Bank Lao Co. Ltd, Indochina Bank Ltd, Joint Development Bank, Lao China Bank Co. Ltd, Lao-Viet Bank Co. Ltd, Phongsavanh Bank Ltd, and ST Bank Ltd.
[34] Other liquidity indicators such as liquidity coverage ratio (LCR) is not publicly available for comparison.
[35] Depending on the extent of loan quality deterioration, two scenarios are considered. Scenario I: 25 percent of restructured loans will turn into NPLs; and Scenario II: 50 percent of restructured loans will turn into NPLs.

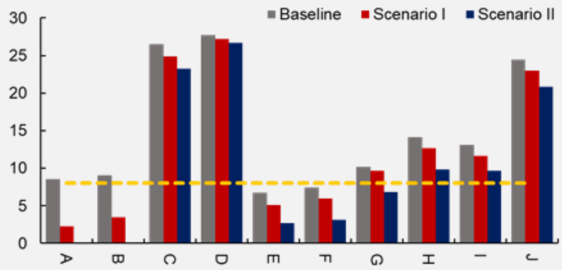
total assets.[36] This stress test exercise examined 10 out of 23 banks in Lao PDR's banking system, covering about 86 percent of total loans outstanding. To estimate the impact of NPL increase on the capital buffer level, available data on specific provisions is used for Bank A, B and C, while an average provisioning rate is applied for other banks without specific data. Loan restructuring of individual banks are available for a few banks only and the rest is approximated based on the share of total restructured loans to total outstanding loans.[37] With intensive loan restructuring and thin capital buffers of some banks, stress test results show that capital ratios of four banks fall below the minimum requirement level under scenario I, and five banks under scenario II (Figure B4).[38] Under scenario II, rising NPLs will completely wipe out the capital buffers of two banks, posing a risk to the whole banking sector.

Figure B3. Loan to Deposit Ratio



Source: BankFocus
Note: The aggregate level includes other banks.

Figure B4. Stress Test Exercise



Source: AMRO staff calculations

Longer-term Challenges and Vulnerabilities

16. Contingent liabilities could become an additional financial burden on the government.

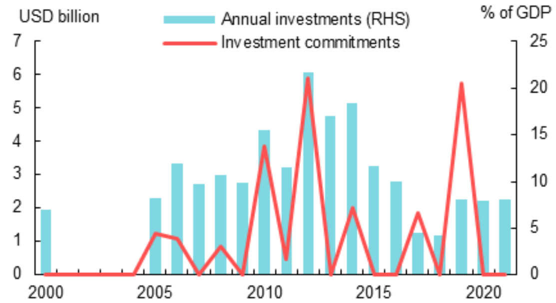
- **Electricite Du Laos' (EDL's) debt stood at 40.3 percent of GDP as of end-2018, and its financial position has continued to deteriorate.**[39] Relatively low domestic electricity tariffs compared to the EDL's purchasing prices continued to put pressure on the EDL's financial account, while temporary electricity tariff reduction during the pandemic and the sharp depreciation of the LAK against USD have further weakened its financial position during the pandemic.[40] One-time receipts of transmission line leasing fees from EDL-T will reduce the outstanding debt stock in the short term, but EDL is required to pay around USD50 million annually to EDL-T for using the transmission lines over the long term.[41] Meanwhile, the situation at some state-owned

[36] In case of Bank A and C, the CAR is calculated from available data on the regulatory capital and risk-weighted assets.
[37] Restructured loans accounted for 30 percent of BCEL's total credit and 28 percent of Lao-Viet's total credit.
[38] Loans of those four and five banks account for 71 percent and 72 percent of total outstanding loans, respectively.
[39] The main sources of EDL's losses are identified as follows: (i) operational losses due to average domestic electricity tariffs being lower than the break-even price with relatively high purchasing prices from independent power producers (IPPs); (ii) exchange rate losses from LAK depreciation due to currency mismatch (debt is serviced in foreign currency and 80 percent of income is in local currency); (iii) seasonal mismatch due to high reliance on hydropower generation which is susceptible to weather conditions. Electricity is oversupplied during the rainy season and undersupplied during the dry season, when electricity imports are required from neighboring countries are required; (iv) domestic oversupply and underdeveloped transmission lines have constrained the improvement in electrification and energy losses.
[40] The average electricity tariff has been reduced from 724 kip/kWh in 2019 to 616 kip/kWh in 2020. In 2021, EDL reduced electricity prices by 3 percent from May to July. As a result, the loss is estimated to be LAK7 trillion in 2020 and LAK2 trillion in 2021, compared with LAK1.7 trillion in 2017 and LAK1.6 trillion in 2018.
[41] The upfront leasing fee of USD625 million that EDL-T has to pay to EDL is supposed to be offset by the service fee of 0.5 cents/kWh that EDL has to pay to EDL-T during the concession period of 40 years. Given the domestic electricity supply and demand, EDL is expected to pay USD50 million annually.

enterprises (SOEs) with impaired capital and losses, such as Lao Development Bank (LDB), Agriculture Promotion Bank (APB), and Lao Airlines, has worsened during the pandemic.[42]

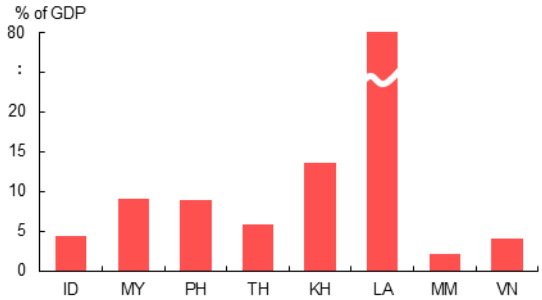
- **In addition, large-scale public-private partnership (PPP) projects, which the government has increasingly relied on for infrastructure development, may incur contingent liabilities if not carefully designed and managed**. With total PPP investment commitments of USD26.7 billion, the PPP capital stock is estimated to reach 81.3 percent of GDP at the end of 2021, which is the highest in the region (Figures 19 and 20).[43] Although PPP is an attractive option for infrastructure development in countries with insufficient fiscal resources, contingent government liabilities may build up unless the projects are financially viable and managed efficiently.

Figure 19. PPP Investment Commitment and Annual Investment



Source: World Bank Private Participation in Infrastructure (PPI); AMRO staff estimates
Note: Since the World Bank PPI database provides the total value of PPP investment commitments at contract signature or financial closure, annual PPP investments are estimated by spreading the value of PPP project commitments over five years.

Figure 20. PPP Capital Stock



Source: IMF Investment and Capital Stock Database (ICSD); AMRO staff estimates
Note: (1) The figure shows the PPP capital stock as of end-2019; (2) The capital stocks are constructed following the perpetual inventory method with initial capital stock and time-varying depreciation rates.

17. Strong growth in the past was driven by a few capital-intensive sectors while other sectors play a limited role. Strong FDI inflows into the natural resource and hydropower sectors have enabled the Lao economy to grow robustly for decades relying on a narrow economic base. Relying mostly on foreign capital, these capital-intensive sectors tend to create limited job opportunities and demand for the domestic products, reinforcing outward labor migration and slow progress in diversifying growth drivers. The contribution of these projects towards government revenues is also limited due to generous concession terms. This, in turn, constrains the government's capacity to pursue sustainable development goals, including poverty reduction, the provision of quality education, and climate change adaptation and mitigation. Lao PDR appears particularly at risk from climate change due to the high frequency of natural disasters and economic vulnerability to poor weather conditions, given the country's high reliance on subsistence agriculture and the hydropower sector. A weak business environment[44] could further slow investment in non-resource sectors, impeding the full realization of the country's economic potential.

[42] LDB was privatized and over 70 percent of shares were sold to Chalern Xekong company joint venture in September 2021.
[43] Electricity projects comprise 75 percent, while the remaining 25 percent of commitments are for railway, airport, and other infrastructure projects.
[44] In particular, the World Bank (2020) suggests that regulatory complexity to register as formal firms and competition with informal sector firms are some of the biggest obstacles to doing business in Lao PDR.

C. Policy Discussions and Recommendations

Supporting Recovery from the Pandemic

18. The careful resumption of economic activities and the ramping up of vaccination efforts should continue, while job support programs for unemployed workers need to be strengthened. Containment measures, including lockdowns, should be carefully managed to curb health risks effectively while promoting adaption efforts to minimize economic damages to affected regions and related sectors. The relaxation of containment measures should be in phases, based on the careful assessment of public health risks and economic impact. Given the high numbers of workers displaced by the pandemic, the authorities need to improve job matching through the improved job market information scheme, and strengthen training programs.

19. Monetary policy should remain accommodative and exchange rate should be managed flexibly to support economic recovery. The authorities' early pandemic responses helped provide vital support to affected businesses and households as well as financial institutions. The authorities should communicate clearly their policy actions associated with their objectives, in a timely manner to build a track record of implementation and market confidence, including the timely publication of periodic reports, while enhancing the monetary policy framework. In this regard, reversing the reserve requirement ratios to pre-pandemic level should be planned carefully, and clearly communicated in advance to the banks. In particular, the demand for liquidity remains elevated amid uncertain economic recovery prospects, and it is critical to ensure that sufficient financial resources are available during the economic recovery. More flexible exchange rate management will help further narrow the exchange rate gap and ease the mismatch in liquidity demand and supply in different currencies, while policy efforts to rebuild public confidence in Lao kip and improve structural imbalances, are also essential. Given the limited effectiveness of traditional monetary policy instruments in a partially dollarized economy with under-developed financial markets, more targeted policy lending programs—such as SME lending—should be strengthened to supplement the accommodative policy stance and support economic recovery.

20. Given the limited fiscal space, fiscal consolidation efforts through revenue enhancement should be strengthened, while improving the efficiency of fiscal expenditures. The government's commitment to maintaining a fiscal deficit of under 2 percent of GDP in the medium term is encouraging. However, the plan should be accompanied by concrete action plans and effective measures to achieve the targets and gain credibility.

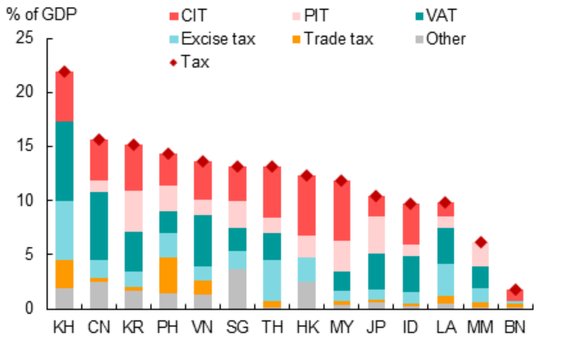
- **Efforts to enhance revenue collection should be expedited**.[45] With the tax reform programs already set in the Tax Strategic Development Plan 2021-2025, the authorities should carefully assess their implications on economic recovery and prioritize areas with great potential. Given low tax efficiency, efforts to broaden the tax base should be strengthened (Figures 21 and 22). Accelerating the registration of tax identification numbers (TIN) will facilitate formalizing the economic activities of MSMEs while encouraging VAT registrations will increase tax collection for income taxes as well as VAT through better accounting and tax filing practices. Also, with the prevalent under-reporting and illegal trading, enhancing the IT system, strengthening tax audits and improving customs procedures could generate additional revenue.[46] Generous tax incentives for investments should be revisited to ensure proper tax collection from

[45] See Annex 3 on tax reform measures in Lao PDR.
[46] See Annex 4 on forgone revenues from mirror trade data.

growth-leading industries. In addition, given the fast-changing economic environment, the authorities should also consider revising the excise and property tax rates and systems, and introduce new taxes such as an environmental tax and a capital gains tax. Furthermore, tax administration should be upgraded by expanding the digitalization of tax collection.

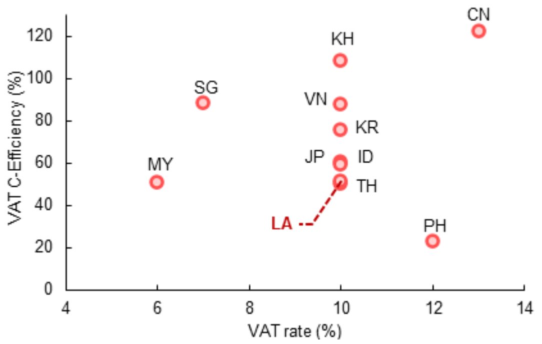
- **Concurrently, the efficiency of expenditure programs should be enhanced to ensure the continued provision of key public services amid a tightening of government spending**. Rigorous feasibility studies of public investment projects should be conducted by independent agencies, and the projects' finances should be closely monitored by the Ministry of Finance. In addition, the government should strengthen the review of administrative expenses while considering the efficient reallocation of public sector human resources by expanding the digitalization of government operations. The government's plan to introduce top-down budgeting, and performance-linked budgeting in the medium term, needs to be carefully implemented to improve the efficiency of resource allocation and the effectiveness of government programs.[47]

Figure 21. Tax Revenue Structure



Source: National authorities; AMRO staff estimates
Note: 1) CIT (corporate income tax), PIT (personal income tax), VAT (value-added tax); 2) Tax revenue structures in 2019 are compared to rule out COVID-19's impact.

Figure 22. VAT C-efficiency



Source: National authorities; AMRO staff estimates
Note: 1) VAT C-efficiency = actual VAT revenue / (statuary VAT rate x Consumption) x 100; 2) VAT C-efficiency in 2019 is compared to rule out the impact of the COVID-19 pandemic; 3) Without available consumption data for Lao PDR, the World Bank's estimate of the consumption share of GDP in 2016 is used to estimate consumption in 2019.

Ensuring Macro Stability

21. The authorities should continue to improve the government's medium-term debt management. Given rising concerns on debt sustainability and the high debt service burden, it is critical to secure sufficient and affordable funding from reliable sources to cover external debt services in the medium term. In this regard, the government should continue its efforts to enhance the transparency and reliability of its financing and debt management plan by strengthening both planning and implementing capacities, which will improve market confidence. The recent publication of the first debt bulletin is a welcome step. A higher transparency standard satisfying the requirements of multilateral creditors will help the Lao government's gain access to concessional loans. Furthermore, the domestic government bond

[47] Top-down budgeting refers to the baseline budgeting that MOF is considering as a pilot project granting the expenditure ceilings to line ministries and local governments. Performance-linked budgeting is also a pilot project that relates the budget allocation to achieving specific performance targets. Top-down budgeting and performance-linked budgeting should be implemented with well-designed institutions, close coordination among government agencies and capacity building of MOF and line ministries to ensure the efficient resource allocation and effective fiscal programs.

market should be further developed in collaboration with the central bank to gradually reduce the reliance on external borrowing and help debt management in the long run.

Table 2. Assessment of Financing Sources to Service External Debt

Sources	Availability	Assessment
Foreign currency revenue	Likely	• Stable financing source from overflight fees, royalties, concession fees, dividends, etc. • New revenue from the fast-track mining approval, the Lao-China railway and dry port, and cryptocurrency mining
Concessional loans from multilateral/ bilateral creditors	Conditional	• Concessional loans from IDA and ADB require (i) transparent disclosure of debt profile; and (ii) ceiling on non-concessional borrowing
Asset sales	Uncertain	• The privatization of SOEs/projects is uncertain due to (i) unattractive loss-making SOEs; (ii) an unfavorable business environment; and (iii) uncertain market sentiment
Borrowing from domestic, commercial banks	Likely, but with side effects	• Steadily growing financing source (7.4 percent of total external debt as of end 2020) • May exacerbate the FCY liquidity shortage in the market, crowding out credit to the private sector
Bond issuance in the domestic market	Limited	• Still nascent (USD40.5 million in 2021)
Bond issuance in the Thai and international markets	Uncertain	• Bond issuance in the Thai market may be possible with BBB- credit rating, but at high costs • Bond issuance in the international markets will be challenging and very costly with a near default credit rating

Source: AMRO staff assessment

22. Enhancing the public finance management framework will strengthen the role of fiscal policy. Enhancing linkages between the long-term socioeconomic goal, medium term fiscal plan, and annual budget operation will enhance strategic resource allocation for stabilizing the economy, and support sustainable and inclusive development. Moreover, the government may consider separating the resource sector fiscal account and the non-resource sector fiscal account. Given that resource revenues tend to be volatile and less predictable[48], separate management of resource and non-resource fiscal accounts will improve the setting of fiscal targets and help enhance the fiscal management credibility.[49]

23. Risks from contingent liabilities should be properly addressed by improving SOE and PPP management. Although the government has articulated a comprehensive reform plan for EDL, implementation has been slow and has faced many challenges (Table 3). Implementation of the financial reforms of EDL should be accelerated, focusing on restructuring the business to make an operational profit, reducing the debt stock through asset sales, and promoting electricity exports to neighboring countries. The authorities should also roll out reforms for other loss-making SOEs, while strengthening overall SOE management by enhancing transparency and accountability, especially reporting practices.[50] In this regard, the government's efforts to manage SOEs based on their performance is a welcome move.[51] For

[48] Here, the resource sector in Lao PDR refers to the mining and electricity sectors. The fiscal revenue from the mining sector tends to fluctuate with commodity price movements and revenues from the electricity sector are affected by weather conditions and river levels. For example, the commodity price collapse in 2012-2016 contributed to the subsequent large fiscal deficits as the increased fiscal spending commitment during the commodity boom was maintained even after the price collapse.

[49] For example, setting the fiscal targets for non-resources account will help the authorities focus on what they can better manage, by excluding the influence of uncontrollable commodity prices and natural disasters. This will improve the monitoring and evaluation of fiscal consolidation. See Annex 2 on the resource sector fiscal management.

[50] Although SOEs are supposed to report their business performance and financial situation to relevant ministries and the Ministry of Finance, no information is available to the public.

[51] The Ministry of Finance has categorized SOEs into three groups—well-performing, medium-level, and unprofitable—to approach them differently in strengthening their management. The government will urgently implement reform measures in all aspects of organization structure, staff, administration, management systems, and business structure for unprofitable SOEs. The

PPP projects, the Decree on PPP that came into effect in January 2021 should be implemented with well-designed institutions and regulations. In particular, the approval of projects based on objective feasibility studies, and the monitoring and review of the implementation on a regular basis, should be strengthened to enhance their effectiveness and efficiency.

Table 3. The Government's Financial Reform Plan of EDL

Measures	Progress and Challenges
Renegotiating the power purchase agreements (PPAs) with independent power producer (IPPs)	• Negotiating to cut purchasing prices by 20 percent from the current 6.3 cents/kWh to 4-5 cents/kWh in the next 5-6 years, while raising the prices to 7-8 cents/kWh after 5-6 years • Discussing to change the "take-or-pay" to the "take-and-pay" scheme • Only small IPPs are participating in PPAs renegotiation, while large IPPs held by foreign SOEs need to receive approval from their governments
Raising electricity tariffs	• EDL requested the government to raise the average domestic electricity tariff to at least LAK800/kWh from LAK616/kWh in 2020. • Politically challenging to raise tariffs rapidly
Privatizing projects	• Negotiating with Electricity Generating Authority of Thailand (EGAT) on the privatization of Nam Ngum 3 project and with Vietnam Electricity (EVN) on the privatization of Nam Ngum 4 project
Postponing new projects	• EDL requested the IPPs to postpone the development of new power plants
Reforming spending and governance	• Reducing administrative costs by cutting the number of staff and improving efficiency
Restructuring debt	• Negotiating with creditors on the postponement of debt repayment

Source: Ministry of Finance; EDL; AMRO staff

24. A well-phased withdrawal of pandemic measures supported by enhanced supervision is essential to maintain financial sector stability. While regulatory forbearance has helped financial institutions provide loan restructuring to affected borrowers, it has also increased credit risk, as the quality of outstanding loans has become harder to assess properly. Going forward, the withdrawal of forbearance measures should be well phased and communicated to avoid sudden shocks to borrowers and the financial system. With heightened credit risk, monitoring and supervision should be further strengthened, particularly of those banks with thin capital buffers, so that authorities can respond proactively to safeguard financial sector stability. Meanwhile, banks should be encouraged to gradually increase their provision for restructured loans based on an in-depth assessment of their asset quality, and to increase their capital as needed. Also, the authorities need to strengthen efforts to upgrade banking sector regulatory frameworks, in particular adoption of Basel II principles and IFRS 9 for all commercial banks. Corresponding improvements in regulatory capacity to fully implement the upgraded framework are also essential.[52] To enhance the resilience of the financial system, additional prudential measures such as liquidity coverage ratio should be considered, and the risk management at commercial banks should be improved.

Structural Reforms to Strengthen Growth Potential

25. Accelerating structural reforms is essential to achieve a more inclusive, sustainable, and diversified economic recovery with less reliance on external debt. Long-term policy efforts should aim to expedite the change in the economic structure to a more diversified and inclusive economy. The establishment of trade agreements and new infrastructure projects for connectivity will help. However, enhancing the business

medium-level SOEs with less profit or small losses are required to restructure the business structure and governance by hiring private experts, implementing M&A, or selling some shares to the private sector.

[52] Implementations of regulations related to the new Commercial Bank Law are in progress.

environment[53] is critical towards attracting more FDI into diverse sectors as well as further promoting domestic investment and production to replace imports, especially of agricultural produce, and increase exports. Strengthening vocational training and job-matching programs will help supply skilled workers to growing industries, which will contribute to post-pandemic recovery and long-term growth potential. Separately, since the adoption of the National Strategy on Climate Change in 2010, the authorities have been making slow progress in incorporating climate change issues in key national policy agenda.[54] Constrained by financial and technical capacities, as well as relevant data for analysis, close cooperation with development partners and strong coordination among government agencies are essential to facilitate the development of appropriate and effective mitigation and adaptation policies.

[53] In particular, additional organized efforts are needed towards enhancing administrative procedures and institutional and legal frameworks, modernizing business management practices such as accounting system and digitalization, and improving the public sector's efficiency.

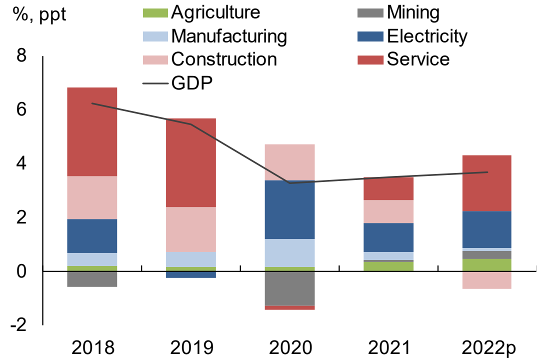
[54] In addition to the ratification of the UNFCCC in 1995 and the Kyoto Protocol in 2003, the Climate Change Action Plan (2013) and the Climate Change Technology Action Plan (2017) were developed. The Decree on Climate Change was also announced in 2019. With increased awareness, climate change issues are included in the 8th and 9th National Socio-Economic Development Plans.

Appendices

Appendix 1. Selected Figures for Major Economic Indicators

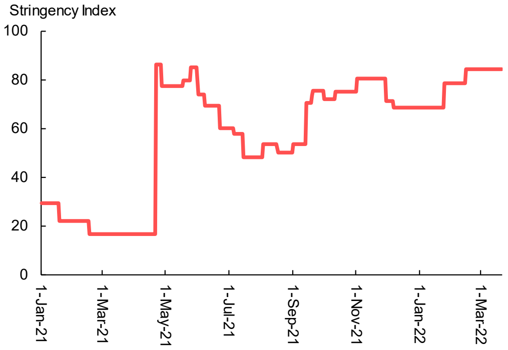
Figure 1.1 Real Sector

After the first shock of COVID-19 in 2020, the Lao economy faltered again in 2021.



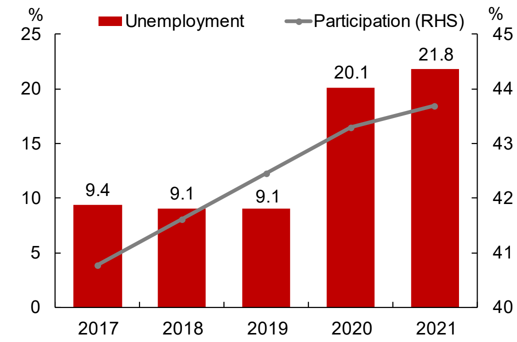
Source: Lao Statistics Bureau, AMRO staff estimates

Repeated tightening of lockdown measures since April 2021 severely constrained economic activities.



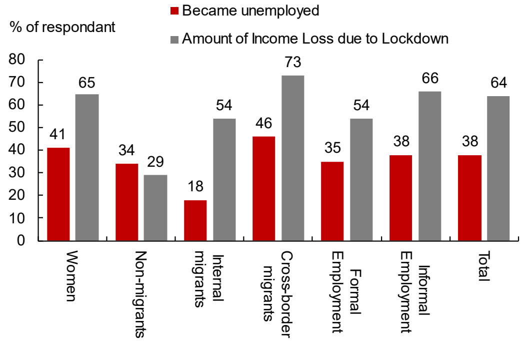
Source: University of Oxford

Unemployment surged as service sector activity moderated amid repeated lockdowns and continued global travel restrictions.



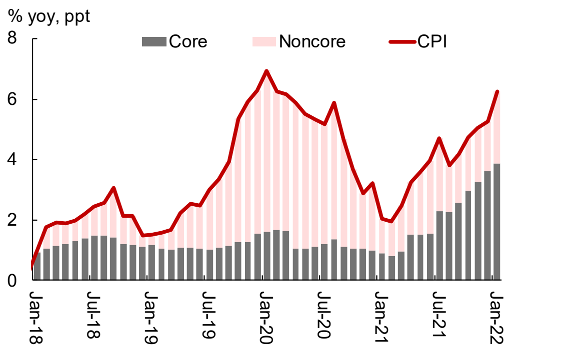
Source: Ministry of Labor

The vulnerable population was hit harder, with more than 50 percent income loss for women and informal sector workers.



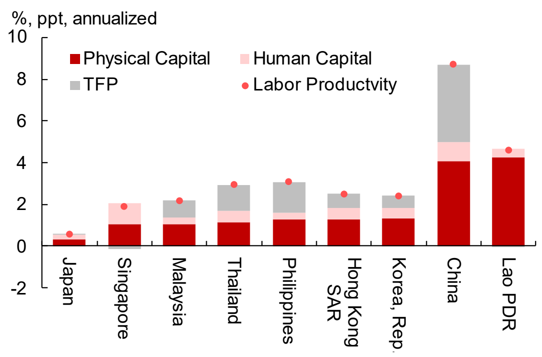
Sources: Oxfam
Note: Samples are not representative and disproportionally include women, informal workers, the population outside of the capital region, and returning migrants.

Headline inflation started to climb again, with both core and noncore inflation on the rise amid rising import prices.



Source: Lao Statistics Bureau

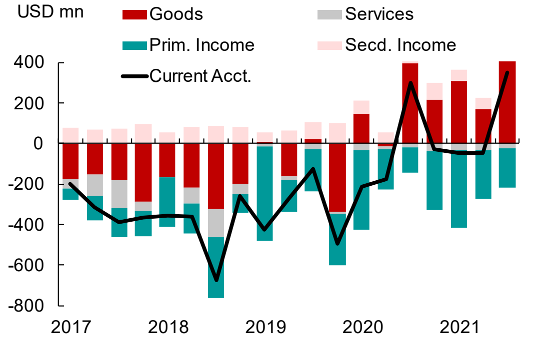
Lao PDR's productivity growth in the last two decades is almost exclusively driven by capital deepening.



Source: World Bank, AMRO Staff estimates
Note: Contribution to labor productivity growth using production function approach. Data covers 2000-2019.

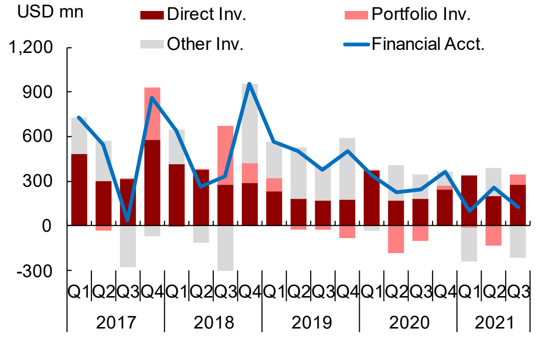
Figure 1.2 External Sector

The current account balance returned to a surplus in Q3 2021 due to robust exports, despite a recovery in imports and large interest payments.



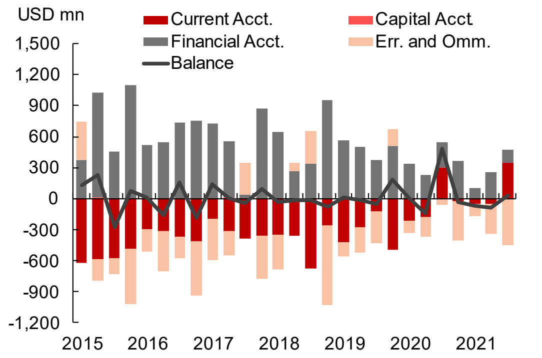
Source: BOL

The financial account recorded a smaller surplus in Q3 2021, as the outflow in other investments increased.



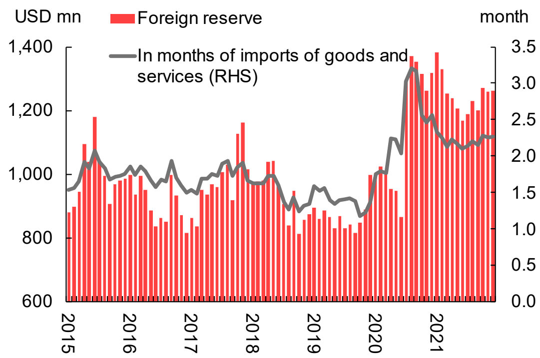
Source: BOL

The overall BOP recorded a small surplus of USD32 million in Q3 2021 as large outflows in net errors and omissions were offset by inflows from the current and financial accounts.



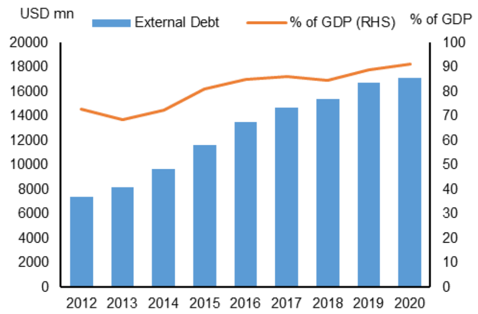
Source: BOL

FX reserves increased to USD1,229 million in August from USD1,189.6 million in July. FX reserves can cover around 2 months of imports of goods and services.



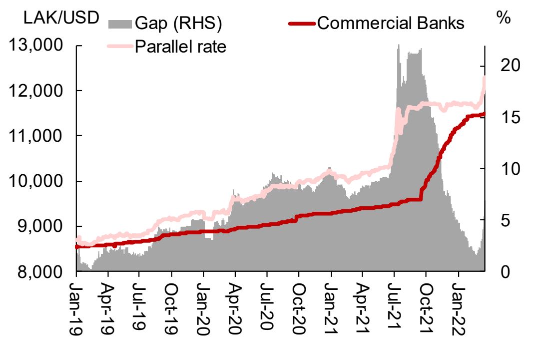
Source: BOL; AMRO staff estimates

External debt has risen steadily, reaching over 90 percent of GDP in 2020.



Source: World Bank

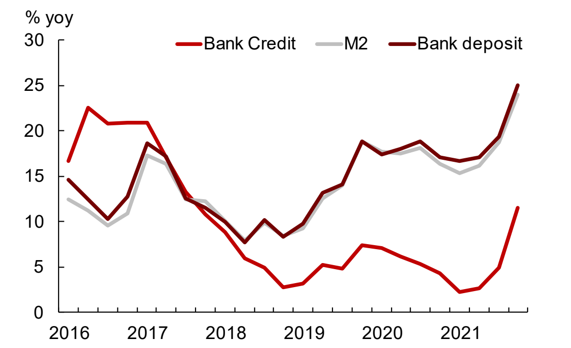
The FX gap between the commercial bank rate and parallel rate has narrowed significantly to within BOL's target range of 2 percent in February 2022.



Source: BOL; AMRO

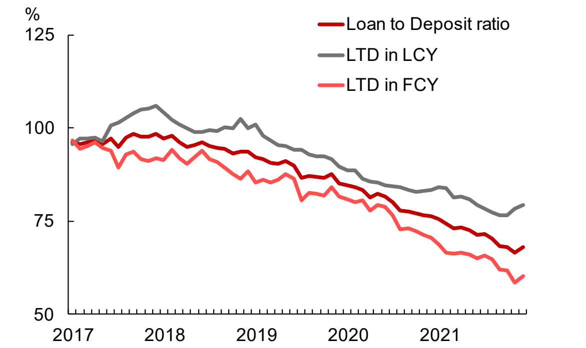
Figure 1.3 Monetary and Financial Sector

The subdued credit growth rate rebounded strongly in late 2021, mainly due to the increase in nominal value of foreign currency loans after the LAK's depreciation.



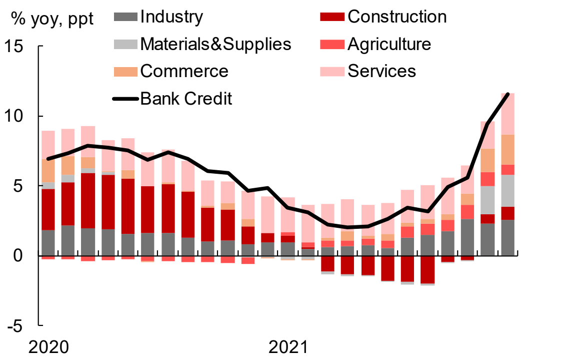
Source: BOL

However, nominal deposits increased as well and the loan-to-deposit ratio remained low.



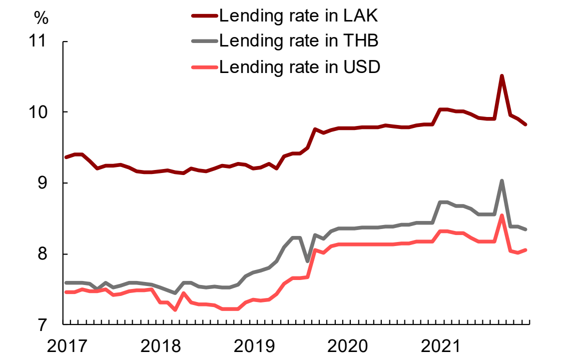
Source: BOL

Decelerating credit growth bottomed in early 2021 as lending to industry, construction, and commerce started to pick up.



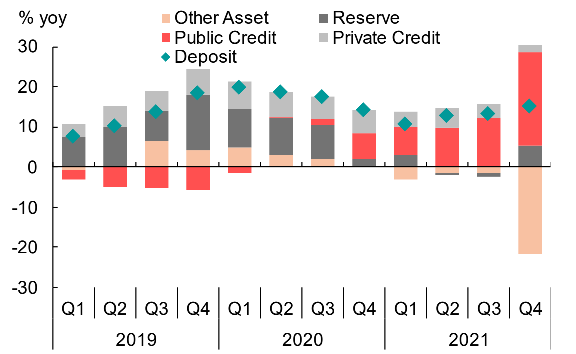
Source: BOL

Despite BOL's policy rate cut, lending rates increased in both FCY and LAK before starting to decline in late 2021.



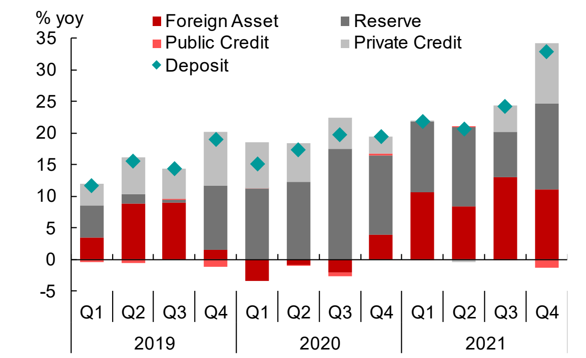
Source: BOL

Commercial banks have increased public debt holdings for their LAK assets through the purchase of triangular bonds, while private credit growth has remained weak.



Source: BOL

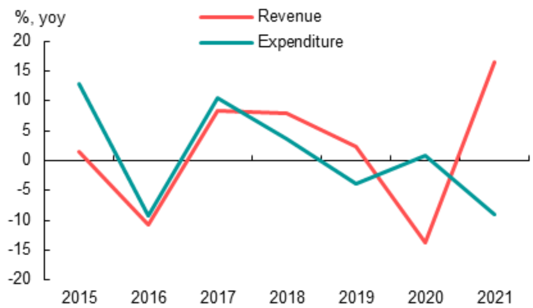
For foreign currency assets, commercial banks have increased their central bank reserves and foreign asset holdings while currency depreciation inflated the nominal value of outstanding credit in Q4 2021.



Source: BOL

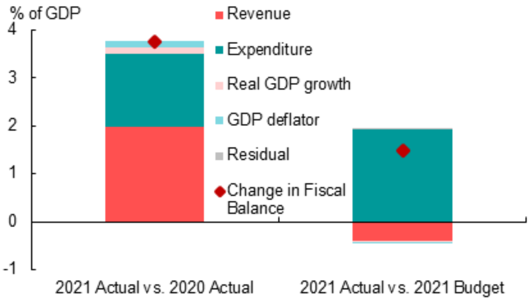
Figure 1.4. Fiscal Sector

Total revenue rebounded in 2021, while total expenditure fell sharply.



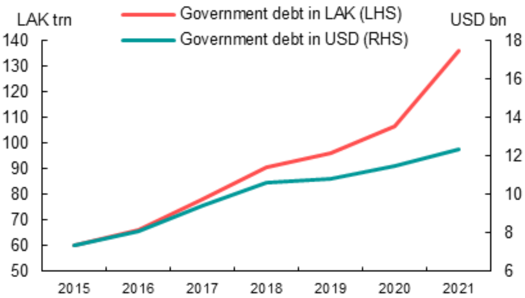
Source: Ministry of Finance; AMRO staff estimates

The fiscal deficit narrowed to 1.5 percent of GDP in 2021 from 5.2 percent of GDP in 2020, due to both revenue recovery and expenditure cut.



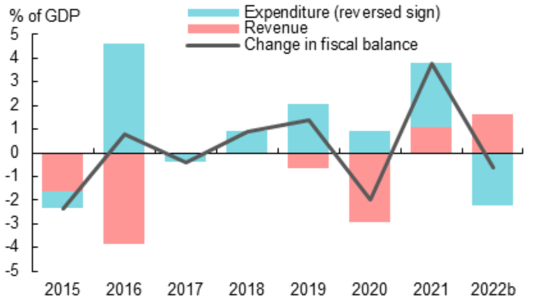
Source: Ministry of Finance; AMRO staff estimates
Note: The figure shows the contribution of each factor to the changes in fiscal balance in 2021, compared to the 2020 outturn and the 2021 budget.

Despite the slowdown in new borrowings, the government debt-to-GDP ratio surged due to arrear resolution and LAK depreciation.



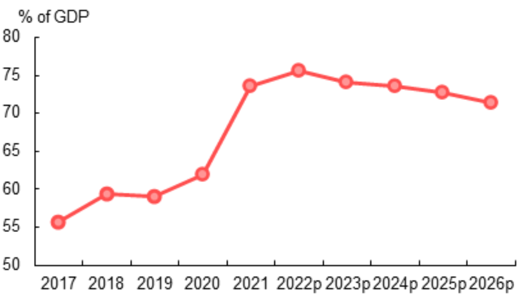
Source: Ministry of Finance; AMRO staff estimates
Note: Government debt is evaluated either in LAK or in USD by using the exchange rate at the end of the period.

The fiscal deficit in 2022 is budgeted at 2.1 percent of GDP, with continued strong revenue growth and a substantial increase in expenditure.



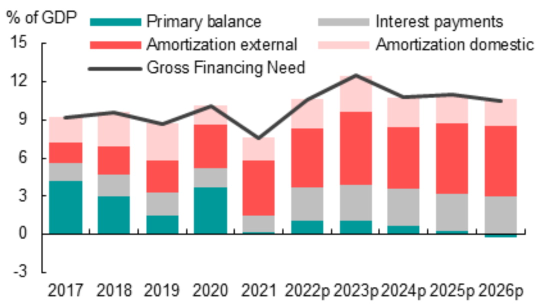
Source: Ministry of Finance; AMRO staff estimates
Note: The figure shows the contribution of each factor to the change in fiscal balance.

Government debt is projected to gradually decline but remain elevated in the medium term, even with strong fiscal consolidation efforts.



Source: Ministry of Finance; AMRO staff estimates

Gross financing needs are expected to remain high at above 10 percent of GDP in the medium term, due to a sizable debt repayment burden.



Source: Ministry of Finance; AMRO staff estimates

Appendix 2. Selected Economic Indicators for Lao PDR

	2018	2019	2020	2021e	Projections	
					2022	2023
Real Sector and Prices	(In percent change unless otherwise specified)					
Real GDP	6.2	5.5	3.3	3.5	3.7	5.1
Agriculture	1.3	1.2	1.1	1.5	2.4	3.4
Industry	7.8	5.6	9.2	6.1	2.9	3.0
Services	6.8	6.9	-1.2	1.4	4.7	8.0
GDP deflator	2.0	1.2	2.8	2.8	3.6	3.1
Consumer price inflation (average)	2.0	3.3	5.1	3.8	5.4	4.2
Consumer price inflation (end of period)	1.5	6.3	3.2	5.3	4.9	4.0
External Sector	(In millions of USD unless otherwise specified)					
Current account balance	-1,649	-1,320	-115	223	-53	93
(In percent of GDP)	-9.1	-7.0	-0.6	1.2	-0.3	0.5
Trade balance	-907	-466	745	1,237	949	1,061
(In percent of GDP)	-5.0	-2.5	3.9	6.5	5.5	5.8
Exports (In percent change)	11.0	7.4	5.3	26.0	2.9	6.4
Imports (In percent change)	11.4	-0.7	-14.4	20.4	7.9	5.6
Services, net	-264	-67	-99	-136	-140	21
Primary income, net	-786	-1,084	-1,012	-1,106	-1,148	-1,202
Secondary income, net	308	298	252	228	286	214
Financial account balance	-2,192	-1,943	-1,167	-636	-712	-732
Direct investment, net	-1,358	-756	-968	-938	-900	-930
Portfolio investment, net	-522	41	257	85	-41	10
Other investment, net	-312	-1,229	-456	217	229	187
Overall balance	-143	124	322	-57	-70	96
Gross international reserves	873	997	1,319	1,263	1,192	1,288
(In months of imports of goods and services)	1.4	1.6	2.7	2.3	1.9	1.8
External debt	15,138	15,650	15,956	15,993	16,308	16,623
(In percent of GDP)	84.7	85.3	85.7	96.2	96.7	93.7
Fiscal Sector (General Government)	(In percent of GDP)					
Revenue and grants	16.2	15.6	12.7	13.8	13.0	12.6
Tax Revenue	11.2	10.9	9.1	9.5	9.4	9.0
Expenditure	20.9	18.8	17.9	15.2	16.7	16.5
Current expenditure	10.8	10.9	9.9	10.7	8.9	8.5
Capital expenditure	8.4	6.2	6.4	4.5	5.2	5.2
Overall fiscal balance	-4.7	-3.3	-5.2	-1.5	-3.7	-3.9
Primary balance	-3.0	-1.5	-3.7	-0.2	-1.1	-1.1
Public debt	59.4	59.1	61.9	73.7	75.7	74.3
Monetary and Financial Sector	(In percent change, end-period unless specified)					
Domestic credit	2.8	7.4	4.3	11.5	7.5	9.3
In percent of GDP	49.5	49.8	48.9	51.3	51.7	51.8
Private Sector	4.4	8.5	5.5	10.6	9.2	11.0
Broad money	8.4	18.9	16.3	24.0	14.1	16.1
Memorandum Items						
Nominal GDP (LAK billion)	152,414	162,657	172,612	183,619	195,908	213,828
GDP per capita (USD)	2,586	2,630	2,637	2,574	2,330	2,469
Exchange rate (against USD, average)	8,403	8,681	9,048	9,707		
Exchange rate (against USD, EOP)	8,530	8,861	9,274	11,041		

Source: National authorities, AMRO staff estimates
Note: 2021, 2022 and 2023 fiscal indicators are based on AMRO estimations and projections. The budget for 2022 stipulates a fiscal deficit of 1.6 percent of GDP with revenue of 16 percent of GDP and expenditure of 17.7 percent of GDP.

Appendix 3. Balance of Payments

Indicators	2016	2017	2018	2019	2020
	(In millions of USD; unless specified otherwise)				
Current account	-1,385	-1,260	-1,649	-1,320	-115
Trade balance	-1,128	-794	-907	-466	745
Exports, f.o.b.	4,245	4,873	5,408	5,806	6,115
Imports, c.i.f.	5,372	5,667	6,315	6,272	5,370
Services, net	-188	-336	-264	-67	-99
Primary income, net	-325	-446	-786	-1,084	-1,012
Of which: Interest payments	158	360	664	1,052	522
Secondary income, net	255	317	308	298	252
Capital and financial account	-2,556	-2,194	-2,204	-1,958	-1,180
Financial account (net)	-2,534	-2,173	-2,192	-1,943	-1,167
Direct investment (net)	-920	-1,677	-1,358	-756	-968
Portfolio investment (net)	-514	-326	-522	41	257
Other investment (net)	-1,100	-170	-312	-1,229	-456
Errors and omissions	-1,343	-734	-698	-515	-743
Overall balance	-172	201	-143	124	322
Memorandum items:					
Current account (% of GDP)	-8.7	-7.4	-9.1	-7.0	-0.6
Gross official reserves (in millions of US$)	815	1,016	873	997	1,319
(In months of imports of goods and services)	1.5	1.8	1.4	1.6	2.7
Nominal GDP (USD million)	15,913	17,062	18,138	18,737	19,076
Exchange rate (against USD, EOP)	8,530	8,861	9,274	11,041	11,593

Source: BOL

Appendix 4. Statement of Central/General Government Operations

Indicators	2017	2018	2019	2020	2021
	(In billions of LAK; unless specified otherwise)				
Revenue	22,925	24,758	25,329	21,846	25,436
Tax	16,918	17,032	17,736	15,765	17,524
Income-based tax	3,582	3,692	3,856	3,179	3,031
Consumption-based tax	9,168	9,944	10,385	8,322	9,681
Trade tax	1,000	1,097	1,012	1,085	1,256
Other tax	3,168	2,299	2,483	3,179	3,556
Non-tax	3,661	4,797	4,763	3,451	5,130
Grant	2,346	2,929	2,829	2,630	2,782
Expenditure	30,736	31,866	30,624	30,858	28,075
Current non-interest expenditure	15,751	16,466	17,679	17,126	17,435
Interest payments	1,911	2,597	2,868	2,609	2,273
External	1,491	2,084	2,428	2,100	1,729
Domestic	420	512	440	509	543
Capital expenditure	13,074	12,803	10,076	11,123	8,368
Fiscal Balance	-7,811	-7,107	-5,295	-9,012	-2.639
Primary Balance	-5,900	-4,511	-2,427	-6,403	-366
	(In percent of GDP)				
Revenue	16.3	16.2	15.6	12.7	13.8
Tax	12.0	11.2	10.9	9.1	9.5
Income-based tax	2.5	2.4	2.4	1.8	1.6
Consumption-based tax	6.5	6.5	6.4	4.8	5.2
Trade tax	0.7	0.7	0.6	0.6	0.7
Other tax	2.3	1.5	1.5	1.8	1.9
Non-tax	2.6	3.1	2.9	2.0	2.8
Grant	1.7	1.9	1.7	1.5	1.5
Expenditure	21.8	20.9	18.8	17.9	15.2
Current non-interest expenditure	11.2	10.8	10.9	9.9	9.4
Interest payments	1.4	1.7	1.8	1.5	1.2
External	1.1	1.4	1.5	1.2	0.9
Domestic	0.3	0.3	0.3	0.3	0.3
Capital expenditure	9.3	8.4	6.2	6.4	4.5
Fiscal Balance	-5.6	-4.7	-3.3	-5.2	-1.5
Primary Balance	-4.2	-3.0	-1.5	-3.7	-0.2
Memorandum items:					
Nominal GDP (LAK billion)	140,698	152,414	162,657	172,612	184,982

Source: LMOF; AMRO staff estimates

Appendix 5. Monetary Survey

Indicators	2017	2018	2019	2020	2021
	(In billions of LAK; unless specified otherwise)				
Net Foreign Assets	-7,769.3	-9,248	-7,260	-2,051	4,441
Assets	18,437.8	17,159	20,769	26,404	37,755
Liabilities	-26,207.1	-26,408	-28,029	-28,456	-33,314
Net Domestic Assets	82,447.5	90,179	103,447	113,946	134,283
Net Domestic Credit	75,087.6	81,984	85,594	92,110	113,712
Government	1,723	6,588	4,587	7,630	19,506
Private sector	73,365	75,396	81,007	84,481	94,206
Other items net	7,360	8,194	17,852	21,836	20,571
Reserve Money	22,812.4	23,873	27,325	32,469	40,011
Broad Money	74,678	80,930	96,186	111,895	138,724
Currency in circulation	8,823	9,200	10,990	12,195	13,386
Currency outside banks	6,638	7,149	8,581	9,312	10,490
Deposits	68,032	73,673	87,560	102,521	128,150
Of which: Foreign currency	31,479	33,779	40,090	45,803	52,755
Of which: Local currency	36,554	39,894	47,470	56,718	75,395

Source: BOL

Appendix 6. Data Adequacy for Surveillance Purposes: a Preliminary Assessment

Criteria/ Key Indicators for Surveillance	Availability (i)	Reporting Frequency/ Timeliness (ii)	Data Quality (iii)	Consistency (iv)	Others, if Any (v)
National Accounts	- GDP on the production side is the main approach and available in LSB website, while the expenditure approach has yet to be made available. - Quarterly GDP data is not available.	Dissemination of GDP data is on an annual basis with a time lag of six to nine months.	- GDP rebased to 2012 from 2002 using data from the 5th Lao Expenditure and Consumption Survey 2012/13. GDP compilation is transitioning to 2008 SNA, with most data reported on an accrual basis. - Data collection techniques remain weak due to resource constraints.		Ongoing activities in GDP compilation include methodological and data upgrades to enable release of GDP by expenditure and a new quarterly GDP series.
Balance of Payments (BOP) and External Position	-BOP data has been published by the BOL and is publicly available on the BOL website on a quarterly basis. - Time-series data on international reserves are publicly available, disseminated on a quarterly basis, with monthly breakdowns (3-5 months lag). - Ministry of Industry and Commerce (MOIC) reports exports and imports. - Information on external positions are not published from the authority.	- BOP data has been released on a quarterly basis with a time lag of one to two quarters. - External trade data is released in the BOL's quarterly reports, but is currently delayed by more than 2 years. - MOIC data is released every month.	- BOP is compiled on a quarterly basis by BOL in accordance with BPM6. Further improvements in the compilation of merchandise trade, external debt data and the FDI survey is still work-in-progress. - External trade data is incomplete, especially on the import side, as it covers only major items where their values are based on average prices of goods specified by the authorities in the past. - Breakdown of external trade data report from MOIC changes every month, and historical data are not available.	- Consistency of trade data among government agencies could be improved. - There is a large discrepancy between trade data from national sources and the international financial institutions, as well as the major trading partners, in particular for import data. - Large errors and omissions in several periods make the analysis and interpretation of BOP data challenging.	There are ongoing activities to enhance the coverage of exports and imports to narrow data discrepancies between customs, BOL and the Ministry of Industry and Commerce, and address understated trade deficits.
State Budget and Government Debt	- Budget implementation data is released by the Ministry of Finance (MOF) - Debt bulletin is published on the MOF website.	- Budget and its implementation report in Laotian language is published bi-annually with a time lag from six months to one year. - Publication of debt bulletin is on annual basis with a time lag of six month	The use of Government Finance Statistics (GFS) standards and procedures is weak. The data coverage is limited to the operations of the budget. Off-budget activities are not included in the fiscal data.	- Persistent off-budget expenditure	- Implementation of PFM is still ongoing. - Continued capacity building is needed to improve the timeliness, coverage and accuracy of fiscal data.
Inflation, Money Supply and Credit Growth	- Data on inflation is published on the LSB website. - Monetary statistics, released by the BOL, are publicly available on its website. - Official and effective exchange rate (parallel rate) data is available on BOL website. - Data on credit, the breakdown into claims on government, credit to SOEs and credit to the private sector, are available.	- Headline CPI data is released monthly with a time lag of one to three months. - Monthly breakdown of CPI components were reported in PDF report in Laotian language with delay up to a year. - While official exchange rates are reported daily, effective exchange rate data is available only at monthly frequency with up-to four-month delay. - Monetary and credit data is publicly released on a monthly basis with a time lag of three to six months. - BOL's quarterly and annual economic reports are currently delayed for more than 2 years.	- CPI includes all 18 provinces (extending the previous coverage of 12 provinces). The number of items was also expanded to 485 from 245 with weights generated from the 2012 Lao Social Indicator Survey. - The actual U.S. dollar amount, and other foreign currency-denominated bills circulating in the economy, have not been captured in the official monetary statistics. The money supply data includes only deposits in banks (denominated in both local and foreign currencies) and bills in circulation (in local currency only).	Some items in monetary survey, such as central banks' claim to the commercial banks and commercial banks' liability from the central bank are not internally consistent.	Policy efforts to improves consistency in monetary survey is ongoing.
Financial Sector Soundness Indicators	- Selected indicators for the financial soundness indicators (FSIs) are published on the BOL website.	Quarterly and annual data is available on BOL's website, usually with a time lag of three to six months.	FSI indicators are generally compiled based on the IMF FSI Guide. FSI indicators are available except those related to liquidity and market risks. However, underlying data and metadata are not available.	Some financial indicators, such as interest rate margin, are not consistent with level implied from the individual bank balance sheets.	-

Notes:

(i) Data availability refers to whether the official data is available for public access by any means.

(ii) Reporting frequency refers to the periodicity that the available data is published for. Timeliness refers to how up-to-date the published data is, relative to the publication date.

(iii) Data quality refers to the accuracy and reliability of the available data given the data methodologies are taken into account.

(iv) Consistency refers to both internal consistency within the data series itself and its horizontal consistency with other data series of either same or different categories.

(v) Other criteria might also apply, if relevant. Examples include but are not limited to potential areas of improvement for data adequacy.

Source: AMRO staff compilations. This preliminary assessment will form the "Supplementary Data Adequacy Assessment" in the EPRD Matrix.

Annexes: Selected Issues

Annex 1. Debt Sustainability Analysis [55]

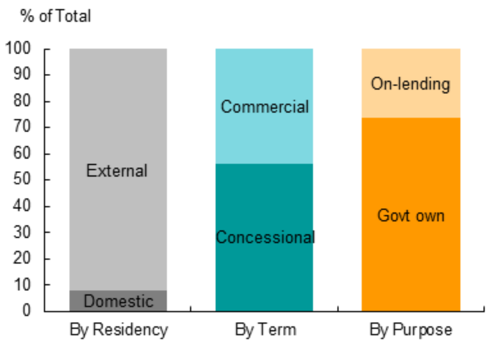
Background

1. Lao PDR's public debt-to-GDP ratio increased to 73.7 percent in 2021 from 61.9 percent in 2020. [56] In the past five years, the public debt-to-GDP ratio has increased significantly by around 20 percent, mainly from the financing for the large infrastructure projects and chronic fiscal deficits, and more recently from currency depreciation, and the recognition of arrears related to public infrastructure projects.[57] In 2021, despite the narrowed fiscal deficit of 1.5 percent of GDP, the triangulation bond issuance to resolve the arrears increased the domestic debt outstanding by 5.5 percent of GDP and a 19 percent depreciation of Lao kip inflated the nominal value of external debt.

2. Gross financing needs (GFN) declined to 7.6 percent of GDP in 2021 from 8-10 percent of GDP in the past five years. In 2021, high public debt with a large share of commercial borrowing continued to increase the debt repayment burden, while the improvement in primary balance eased the deficit financing needs.

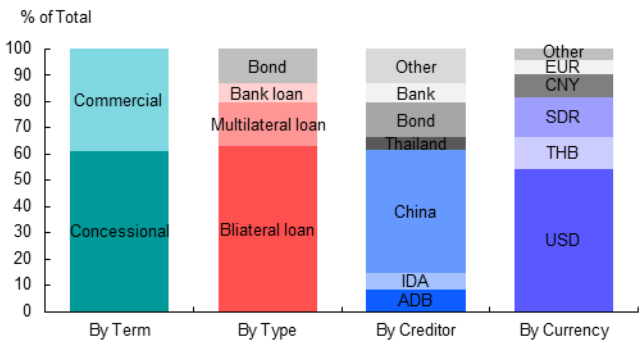
3. Public debt relies heavily on external debt with a sizable share in commercial terms.[58] As of end-2020, external and commercial debt accounted for 92 percent and 44 percent of total public debt, respectively. On-lending debt to SOEs, including EDL and Lao Holding State Enterprise (LHSE), was 26 percent. Of public external debt, 63 percent was in the form of bilateral loans, 47 percent was held by Chinese creditors, and 54 percent was denominated in USD.

Figure A1.1. Public Debt Structure



Source: Ministry of Finance; AMRO staff estimates

FigureA1.2. Public External Debt Structure



Source: Ministry of Finance; AMRO staff estimates

Macroeconomic and Fiscal Projections

4. Baseline growth projection assumes continued expansion of power generation capacity, robust growth of the agricultural sector, and gradual resumption of tourism (Table A1.1). The average annual economic growth rate for 2022-2026 is projected at 4.6 percent, slightly lower than the 4.9 percent for 2017-2021, reflecting the sustained contribution from the electricity and construction sectors and the gradual recovery of tourism. Given the

[55] Prepared by Byunghoon Nam.
[56] The public debt sustainability analysis (DSA) for Lao PDR covers the central government debt.
[57] The government issued the triangulation bond of LAK4,791 billion (3.1 percent of GDP) in 2018 to resolve the arrears accumulated due to the public infrastructure projects in the past and is estimated to have issued another tranche of triangulation bonds of LAK10 trillion (5.5 percent of GDP) in 2021.
[58] The Ministry of Finance published the Debt Bulletin 2019 and 2020, in May 2021.

narrower exchange rate gap between commercial and parallel rates, and the improved trade balance, the speed of LAK depreciation is assumed to slow down to within the BOL's limit of 5 percent per annum. The effective interest rate is expected to rise marginally.

5. Fiscal consolidation is assumed to continue in the medium term (Table A1.1). Lao authorities are committed to fiscal consolidation in the medium term by reducing the fiscal deficit to less than 2 percent of GDP. However, considering the low tax elasticity of the economy, VAT rate reduction in 2022-2023, and substantial cut in expenditure during the pandemic, this analysis assumes a slower pace of consolidation.[59]

Table A1.1. Macroeconomic and Fiscal Indicators

	2017	2018	2019	2020	2021	2022p	2023p	2024p	2025p	2026p
Macroeconomic indicators (Percent)										
Real GDP growth	6.9	6.2	5.5	3.3	3.5	3.7	5.1	4.5	4.5	4.5
GDP deflator	1.8	2.0	1.2	2.8	3.6	3.6	3.1	3.0	3.0	3.0
Effective interest rate	2.9	3.3	3.2	2.7	2.1	3.8	4.0	4.2	4.3	4.4
Fiscal indicators (Percent of GDP)										
Revenue	16.3	16.2	15.6	12.7	13.8	13.0	12.6	12.7	12.9	13.0
Expenditure	21.8	20.9	18.8	17.9	15.2	16.7	16.5	16.3	16.1	15.8
Fiscal balance	-5.6	-4.7	-3.3	-5.2	-1.5	-3.7	-3.9	-3.6	-3.2	-2.8
Primary balance	-4.2	-3.0	-1.5	-3.7	-0.2	-1.1	-1.1	-0.7	-0.2	0.2

Source: Lao Statistics Bureau; Ministry of Finance; AMRO staff estimates
Note: The macroeconomic and fiscal indicators for 2021-2026 are based on AMRO staff estimates and projections.

Debt-Carrying Capacity and Thresholds for Public Debt

6. Lao PDR's debt-carrying capacity is assessed to be weak according to the Composite Indicator (CI) developed by the IMF and the World Bank.[60] Despite the slight improvement in the World Bank's Country Policy and Institutional Assessment (CPIA) score to 3.01 in 2020 from 2.97 in 2019, and the increase in gross international reserves in recent years, the CI score for debt-carrying capacity remained broadly unchanged at 2.39, which falls into the weak category (CI < 2.69).[61]

Table A1.2. Composite Indicator (CI) Score

Component	Coefficient	Average Values	CI Score component	Contribution
CPIA	0.385	3.04	1.17	49.0%
Real growth rate	2.719	4.8%	0.13	5.4%
Remittances	2.022	1.4%	0.03	1.2%
Import/reserves	4.052	19.9%	0.80	33.7%
Import/reserver^2	-3.990	4.1%	-0.16	-6.9%
World growth rate	13.520	3.1%	0.42	17.6%
CI score			2.39	

Source: Lao Statistics Bureau; Ministry of Finance; BOL; IMF WEO, World Bank WDI; AMRO staff estimates
Note: Average values are computed for 10 years from 2017 to 2026.

[59] As in the government plan, a strong fiscal consolidation based on revenue enhancing measures is assumed, although the extent of revenue enhancement is smaller than the government's target.

[60] The Composite Indicator (CI) is computed as: $CI = \beta_1 CPIA + \beta_2 g + \beta_3 \frac{Remittances}{GDP} + \beta_4 \frac{Reserves}{Imports} + \beta_5 \left(\frac{Reserves}{Imports}\right)^2 + \beta_6 g_w$, where g and g_w are growth and world growth respectively, and where all variables are in percent except the CPIA score. The weights are $\beta_1 = 0.385$, $\beta_2 = 2.719$, $\beta_3 = 2.022$, $\beta_4 = 4.052$, $\beta_5 = -3.990$, $\beta_6 = 13.520$. See IMF (2018) for details.

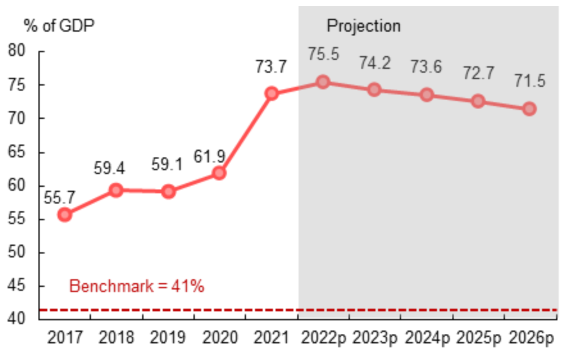
[61] Based on the CI, countries are classified into three groups – weak (CI < 2.69), medium (2.69 ≤ CI ≤ 3.05), and strong (CI > 3.05). The country classification of debt-carrying capacity is linked to the indicative thresholds for PV of PPG external debt, PPG external debt service, and PV of public debt.

Baseline Debt and GFN Projections

7. The public debt-to-GDP ratio is projected to gradually decline from its peak of 75.5 percent in 2023, but still remain higher than the threshold (Figure A1.3).[62] The debt dynamics are driven mainly by the exchange rate movement, given the large share of external debt, and real GDP growth. The primary balance deficit and real interest rate contribute positively to the ratio, while on-lending debt repayments from SOEs, reflected in the other flows, are expected to reduce the ratio (Figure A1.5).[63]

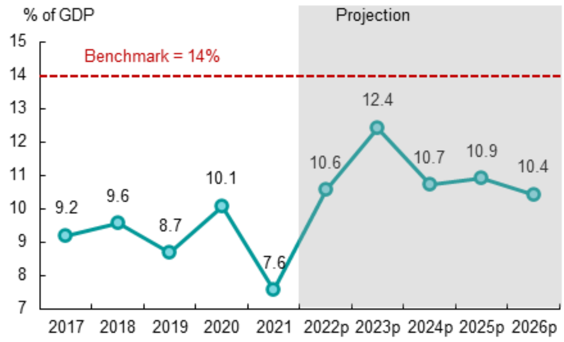
8. GFNs are expected to remain at above 10 percent of GDP, but lower than the benchmark (Figure A1.4).[64] The debt repayment schedule determines the GFNs' movement as the primary deficit is assumed to decline gradually (Figure A1.6). Given the long-term maturity of the outstanding debt, the GFN-to-GDP ratio is projected not to be as high as implied by the high debt-to-GDP ratio.[65] However, securing financing sources to service the external debt—amounting to over USD1 billion a year in the medium term—will be challenging amid unfavorable market conditions and worsening sovereign credit ratings.

Figure A1.3. Public Debt



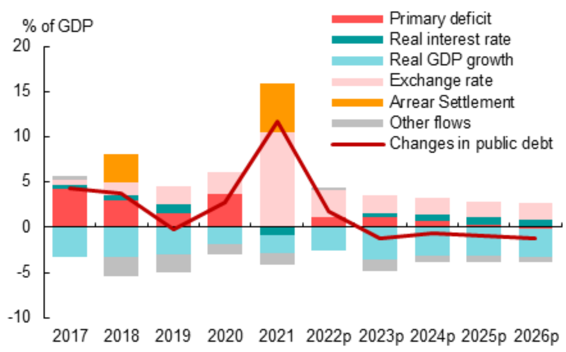
Sources: Ministry of Finance; AMRO staff estimates

Figure A1.4. Gross Financing Needs



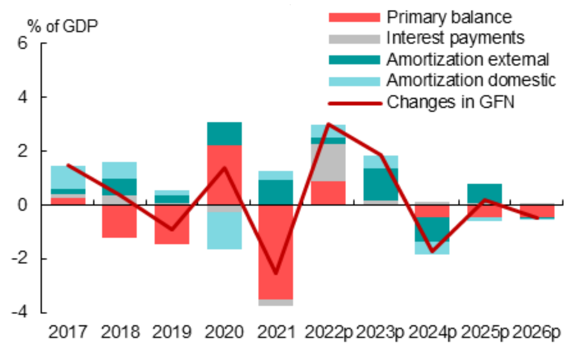
Sources: Ministry of Finance; AMRO staff estimates

Figure A1.5. Public Debt Dynamics



Sources: Ministry of Finance; AMRO staff estimates

Figure A1.6. Changes in Gross Financing Needs



Sources: Ministry of Finance; AMRO staff estimates

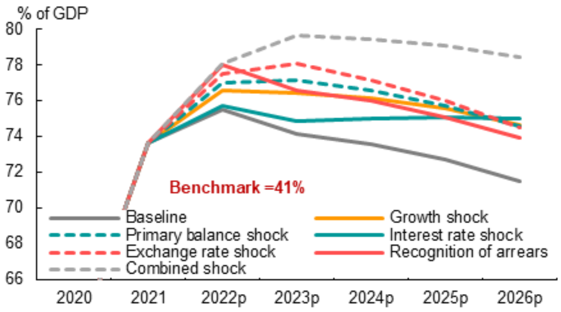
[62] The indicative threshold of 35 percent for the present value (PV) of debt-to-GDP ratio, suggested by the IMF and the World Bank, has been adjusted to 41 percent for the nominal value of debt-to-GDP ratio for more intuitive comparison with the projected nominal ratios. See Box A1.2 for more details.
[63] EDL is supposed to receive one time transmission line leasing fees from EDL-T, and use a part of the receipts in repaying the on-lending debt to the government. However, this is not included in the other flows given that the actual receipts are still pending and the share of the on-lending debt repayment is not decided yet. Currently, usual on-lending debt repayments from SOEs are included, based on average past performance.
[64] Given a large portion of commercial borrowing, the threshold of GFN for low-income countries with market access is applied at 14 percent GDP to assess the market-financing pressure, as suggested by the IMF and the World Bank.
[65] The average remaining maturity as of end-2021 is estimated to be 20 years.

Macro-Fiscal Risks – Stress Tests

9. Stress test results suggest that Lao PDR's debt dynamics are sensitive to exchange rate and primary deficit shocks, while recognizing additional arrears could shift the trajectory (Figure A1.7).[66] Notwithstanding the significant improvement in the trade balance, the external position is likely to remain under pressure due to sizable external debt service, and low foreign reserves, hence, the LAK is likely to depreciate further. The primary deficit may increase from lower-than-expected revenue collection. The economic recovery could be delayed depending on the COVID-19 situation and containment measures. The effective interest rates may rise due to weak investors' sentiment or limited access to concessional loans. Meanwhile, the additional recognition of existing arrears related to public infrastructure projects in the past will shift the debt trajectory at the year of recognition.[67] Under a strong fiscal consolidation case, however, the debt-to-GDP ratio declines toward the pre-pandemic level in the medium term.[68] In all scenarios, the debt-to-GDP ratio stays above the threshold of 41 percent until 2026.

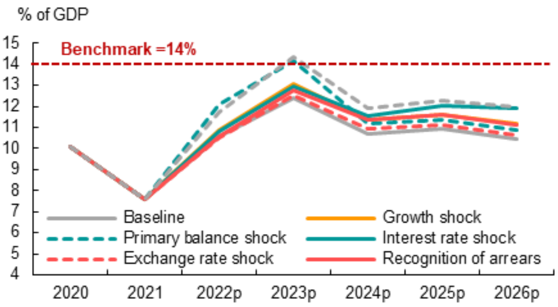
10. GFNs are sensitive to primary balance shocks (Figure A1.8). The primary balance shock directly affects financing needs, while other shocks indirectly affect financing needs through the primary balance, interest payments, and amortization over time. Nevertheless, the GFN-to-GDP ratio remains below the benchmark of 14 percent despite shocks.

Figure A1.7. Public Debt Stress Test



Source: Ministry of Finance; AMRO staff estimates

Figure A1.8. GFN Stress Test



Source: Ministry of Finance; AMRO staff estimates

Table A1.3. Assumptions for Public Debt Stress Test

(Percent)	2021	2022p	2023p	2024p	2025p	2026p
Baseline						
Real GDP growth	3.5	3.7	5.1	4.5	4.5	4.5
GDP deflator	3.6	3.6	3.1	3.0	3.0	3.0
Primary balance	-0.2	-1.1	-1.1	-0.7	-0.2	0.2
Effective interest rate	2.1	3.8	4.0	4.2	4.3	4.4
Growth shock						
Real GDP growth	3.5	2.7	4.1	4.5	4.5	4.5
GDP deflator	3.6	3.4	2.9	3.0	3.0	3.0
Primary balance	-0.2	-1.2	-1.4	-1.0	-0.6	-0.1
Effective interest rate	2.1	3.8	4.0	4.2	4.3	4.4
Primary balance shock						
Real GDP growth	3.5	3.7	5.1	4.5	4.5	4.5
GDP deflator	3.6	3.6	3.1	3.0	3.0	3.0
Primary balance	-0.2	-2.6	-2.6	-0.7	-0.2	0.2
Effective interest rate	2.1	3.8	4.1	4.3	4.4	4.5

(Percent)	2021	2022p	2023p	2024p	2025p	2026p
Interest rate shock						
Real GDP growth	3.5	3.7	5.1	4.5	4.5	4.5
GDP deflator	3.6	3.6	3.1	3.0	3.0	3.0
Primary balance	-0.2	-1.1	-1.1	-0.7	-0.2	0.2
Effective interest rate	2.1	4.1	4.7	5.3	5.7	6.0
Exchange rate shock						
Real GDP growth	3.5	3.7	5.1	4.5	4.5	4.5
GDP deflator	3.6	4.9	4.4	3.0	3.0	3.0
Primary balance	-0.2	-0.9	-0.8	-0.4	0.1	0.5
Effective interest rate	2.1	3.8	4.0	4.1	4.3	4.4
Combined shock						
Real GDP growth	3.5	3.2	4.6	4.5	4.5	4.5
GDP deflator	3.6	4.1	3.6	3.0	3.0	3.0
Primary balance	-0.2	-2.0	-2.2	-0.7	-0.2	0.2
Effective interest rate	2.1	4.0	4.4	4.8	5.0	5.2

[66] The scenarios for the stress test are as follows: 1) Real GDP growth shock: –1 percentage point shock in 2022 and 2023; 2) Primary balance shock: –1.5 percent of GDP shock in 2022 and 2023; 3) Interest rate shock: +3 percentage points shock from 2022; 4) Exchange rate shock: +5 percentage points shock in 2022 and 2023; 5) Recognition of arrears: +2.5 percent of GDP shock in 2022, by recognizing additional arrears; 6) Combined shock: combination of growth, primary balance, interest rate, exchange rate shocks with half size of individual shocks articulated in 1) – 4).

[67] Stress tests for contingent liabilities from PPP, SOE debt, and financial markets have not been conducted due to the lack of data availability. However, given the PPP capital stock of 81.3 percent of GDP as of 2021, 28.5 percent of GDP (35 percent of PPP stock) could be considered as contingent liabilities according to the IMF (2018). SOEs, especially EDL, also have sizable debt that may put additional financial burden on the government. Furthermore, amid the prolonged COVID-19 pandemic, the state-owned commercial banks face the deterioration of profitability and asset quality, and may require recapitalization.

[68] A strong fiscal consolidation case assumes maintaining the primary balance surplus at 0.5 percent of GDP on average. See Figure 17 for the debt-to-GDP ratio trajectories in the medium-term under different consolidation scenarios.

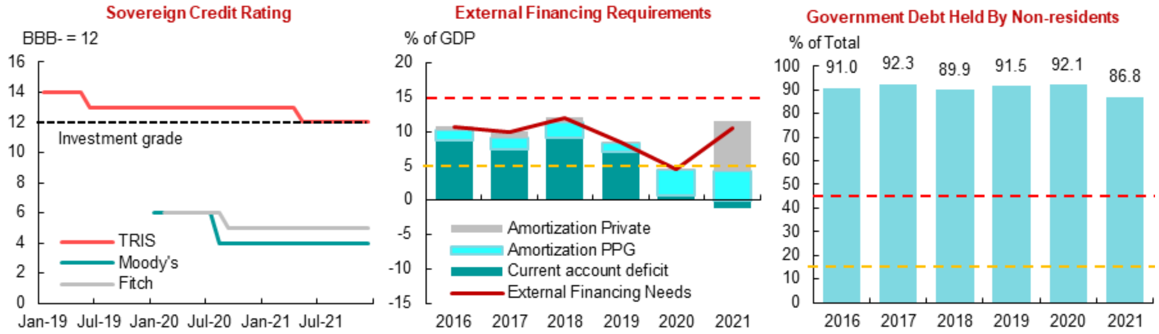
Source: AMRO staff estimates

Market Perception of Risk and Debt Profile Vulnerabilities – Early Warnings

11. Market perception of sovereign risk has risen. Credit ratings for Lao government bonds were downgraded in 2020 and 2021, reflecting the pressure on external buffer, constrained financing options, and deterioration in its fiscal position amid the pandemic. The government attempted to issue international bonds three times between December 2020 and March 2021, but postponed the deal due to unfavorable market conditions. [69]

12. The debt structure is vulnerable to external shocks. External financing requirements remained high at 10.4 percent of GDP in 2021 due to the sizable amortization of both public and private sectors despite the improved current account balance. External financing requirements are expected to remain high in the coming years as the current account balance deteriorates with the recovery in imports while high amortization needs persist. In 2021, the share of debt held by non-residents was 93.1 percent, of which 39 percent are in commercial terms, some with higher rollover and interest rate risks.

Figure A1.9. Public Debt Profile Vulnerabilities



Source: TRIS; Moody's; Fitch; World Bank, Bank of Lao PDR; Ministry of Finance; AMRO staff estimates
Note: 1) Lower and upper early warning thresholds for the market-access countries (emerging markets) have been added to external financing requirements and debt held by non-residents for reference purposes. – – – Lower early warning (25 percent of the benchmark), – – – Upper early warning (75 percent of the benchmark); 2) External financing requirements = current account deficit + amortization of public external debt + amortization of private external debt.

Overall Assessment

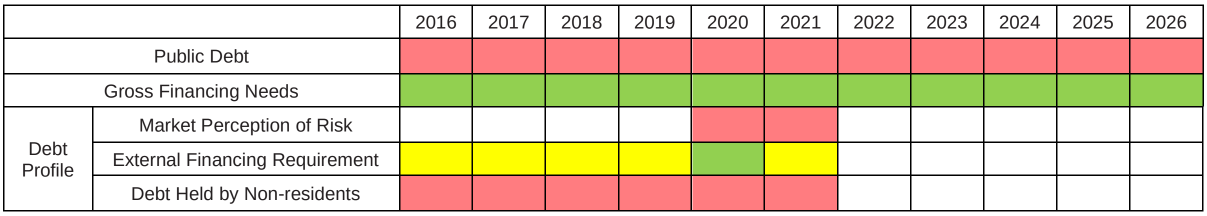
13. Public debt sustainability analysis (DSA) results show the overall risk of public debt sustainability is high. The public debt-to-GDP ratio has breached the threshold in the past five years and is projected to breach the threshold in the baseline and all stress test scenarios over the projection period. Although the GFN-to-GDP ratio has remained and is expected to remain below the benchmark, the authorities face financing pressures due to heightened perception of sovereign risk and a debt structure that is vulnerable to external shocks.

14. The electricity sector and PPP projects could exacerbate public debt stress. About 26 percent of public debt has been on-lent mostly to energy SOEs, which are expected to create sufficient income to repay the on-lending debt over the long-term. However, if EDL's operational loss continues without successful reforms, on-lending debt could become the government's direct liability. Similarly, PPP projects in infrastructure, especially the recently completed Lao-China railway, are expected to support economic growth and increase fiscal

[69] The Lao government held investor calls to issue USD300-350 million five-year international bonds at 10-11 percent coupon rate through the Singapore Stock Exchange, but withdrew the deal as investors raised questions about the breach of negative pledge provisions of loans provided by ADB and other bilateral creditors. Ministry of Finance has been discussing with creditors to resolve related issues.

revenue from related businesses. However, they may also form contingent liabilities if not carefully designed and managed.

Figure A1.10. Heatmap of Public Debt Sustainability



Source: AMRO staff estimates
Note: 1) For the Public Debt and Gross Financing Needs, the cell is highlighted in green if the benchmark is not exceeded under all shocks or baseline, yellow if exceeded under any specific shock but not baseline, and red if the benchmark is exceeded under baseline; 2) For Debt Profile, the cell is highlighted in green if the country value is less than the lower early warning benchmark, red if the country value exceeds the upper early warning benchmark, and yellow if the country value is between the lower and upper early warning benchmarks.

Box A1.1. External Debt Sustainability Analysis

Background

The external debt-to-GDP ratio surged in 2021, driven mainly by the increase in public and publicly guaranteed (PPG) debt.[70] External debt rose to 99.2 percent of GDP in 2021 from 87.7 percent of GDP in 2020, while the PPG external debt-to-GDP ratio increased to 75.5 percent in 2021 from 66.8 percent in 2020. Despite robust FDI inflows and a current account surplus in 2021, backed by high mineral and electricity exports and lagging import recovery, the currency depreciation pushed up the nominal value of external debt.

External debt service also rose sharply to 13.7 percent of GDP in 2021 from 5.1 percent of GDP in 2020. The public external debt service increased to USD1.1 billion, and at the same time, the private external debt service reached the highest level of USD1.5 billion.

Macroeconomic Projections

The current account balance is projected to return to a deficit in the medium term, but to a lesser extent compared to the pre-pandemic level. Notwithstanding the continued export growth in the electricity, mining, and agricultural sectors, the trade balance surplus is expected to narrow due to the rebound in imports as the economy recovers. Interest payments will increase in line with the rising outstanding debt. Meanwhile, remittances will increase as Lao migrant workers, who returned home during the pandemic, start to go back to work in neighboring countries. The service balance deficit will change minimally as both inbound and outbound tourism resume gradually.

FDI inflows and external financing are expected to remain stable. Despite the completion of the Lao-China railway, other infrastructure projects, including the Vientiane-Boten expressway and several power plant projects, will continue to contribute to FDI growth. The authorities plan to issue bonds in the Thai and international markets if the market situation improves, while securing financing sources from multilateral and bilateral creditors.

Other macroeconomic and fiscal indicators follow the projections for the public DSA.

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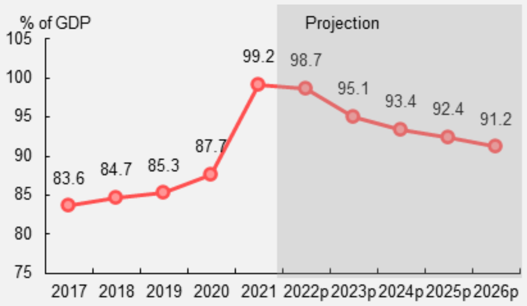
[70] As of 2021, the share of PPG debt in total external debt was 76 percent, while the share of the private non-guaranteed debt was 24 percent. External debt is computed as the sum of PPG external debt, based on the Debt Bulletin published by the MOF, and private non-guaranteed external debt, based on the World Bank's International Debt Statistics.

Baseline Projections

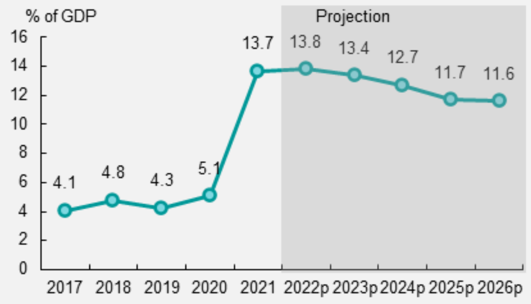
The external debt-to-GDP ratio is projected to remain above 90 percent of GDP in the medium term (Figure A1.1.1)**.** Economic growth, non-interest current account surplus (excluding interest payments) and robust FDI inflows will help reduce the debt-to-GDP ratio, while real interest rate increase and currency depreciation push up the ratio. Other flows, capturing the net errors and omissions, contribute positively to debt movements (Figure A1.1.3). The external debt service is expected to decline gradually, based on the public and private amortization schedule (Figure A1.1.2. and Figure A1.1.4).

Figure A1.1.1. External Debt



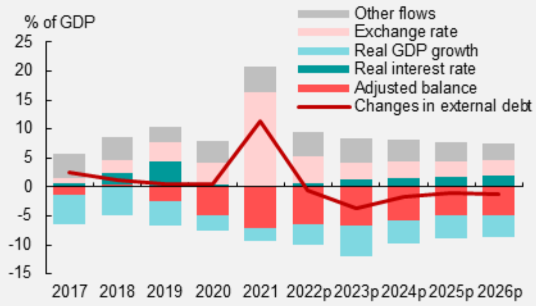
Source: Ministry of Finance; World Bank; AMRO staff estimates

Figure A1.1.2. External Debt Service



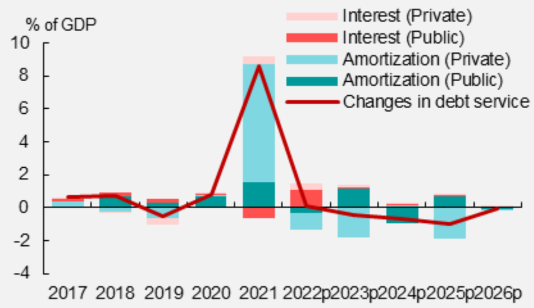
Source: Ministry of Finance; World Bank; AMRO staff estimates

Figure A1.1.3. External Debt Dynamics



Source: Ministry of Finance; World Bank; AMRO staff estimates

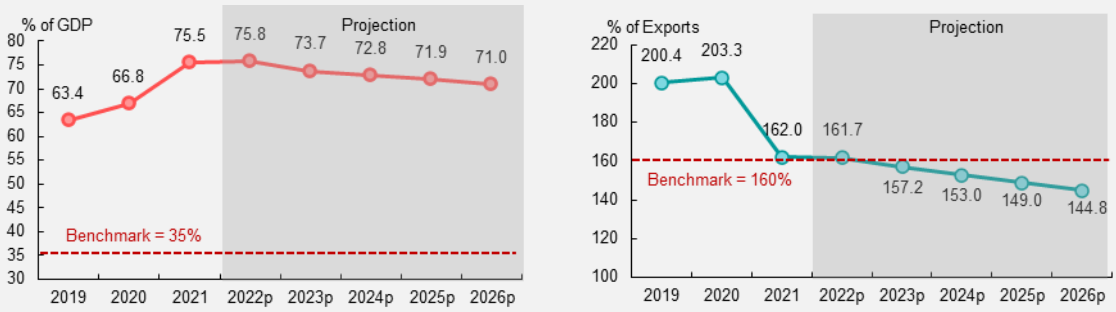
Figure A1.1.4. External Debt Service Components



Source: Ministry of Finance; World Bank; AMRO staff estimates

PPG external debt is expected to breach the threshold of 35 percent of GDP during the projected period, but fall below the threshold of 160 percent of exports after 2023 (Figure A1.1.5).[71] This is mainly attributable to the robust increase in exports, especially in the electricity, mining, and agricultural sectors. Meanwhile, the PPG external debt service will remain higher than the thresholds of 10 percent of exports and 14 percent of revenue (Figure A1.1.6).

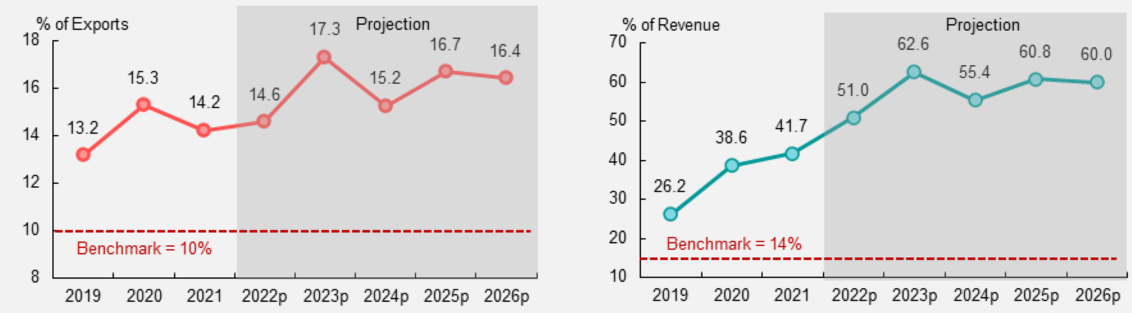
Figure A1.1.5. PPG External Debt



Source: Ministry of Finance; AMRO staff estimates

[71] See Box A1.2 for more details.

Figure A1.1.6. PPG External Debt Service

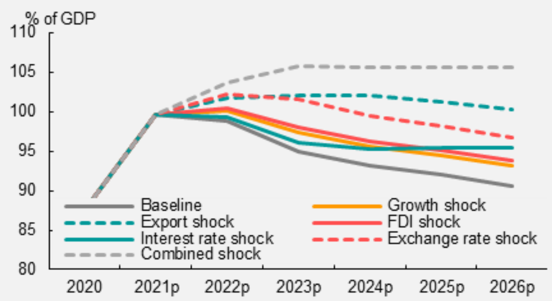


Source: Ministry of Finance; AMRO staff estimates
Note: Only external debt services from public debt are included due to the lack of data on the publicly guaranteed debt services.

Stress Test

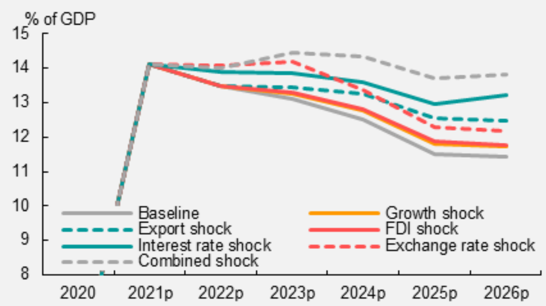
According to the stress test results, external debt is affected largely by exports and exchange rate shocks, while the external debt service is also sensitive to interest rate movements (Figure A1.1.7 and Figure A1.1.8).[72] Export growth in value may be lower than expected if commodity prices fall and agricultural products' access to the Chinese market are faced with obstacles in terms of trade and quality restrictions. The interest rate of new borrowings and rollover debt may rise depending on the market situation and accessibility to concessional loans.

Figure A1.1.7. External Debt Stress Test



Source: Ministry of Finance; World Bank; AMRO staff estimates

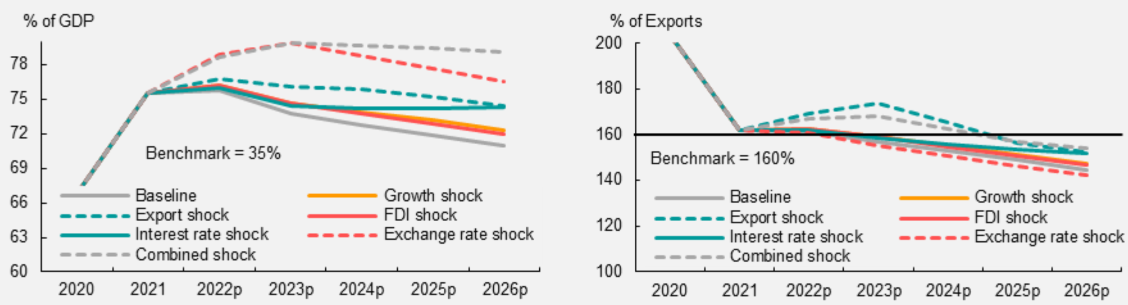
Figure A1.1.8. External Debt Service Stress Test



Source: Ministry of Finance; World Bank; AMRO staff estimates

PPG external debt will breach the threshold in percent of GDP in all scenarios, including the baseline, while falling below the threshold in percent of exports by the end of the projected period despite all shocks (Figure A1.1.9). On the other hand, the PPG external debt service, which breaches the threshold under the baseline, will remain above the threshold in the medium term (Figure A1.1.10).

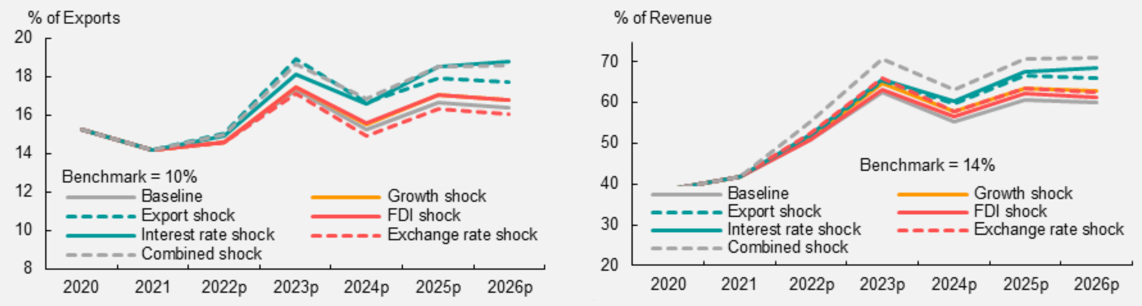
Figure A1.1.9. PPG External Debt Stress Test



Source: Ministry of Finance; AMRO staff estimates

[72] The scenarios for the stress test are as follows: 1) Real GDP growth shock: –1 ppts shock in 2022 and 2023; 2) Export growth shock: –3.5 ppts in 2022 and 2023; 3) FDI shock: –1.5 percent of GDP in 2022 and 2023; 4) Interest rate shock: +3 percentage points shock from 2022; 5) Exchange rate shock: +5 percentage points shock in 2022 and 2023; 6) Combined shock: combination of growth, export, FDI, interest rate, exchange rate shocks with half size of individual shocks articulated in 1) – 5).

Figure A1.1.10. PPG External Debt Service Stress Test



Source: Ministry of Finance; AMRO staff estimates

Overall Assessment

The external DSA suggests the overall downside risk of PPG external debt sustainability is high. PPG external debt in percent of GDP is at least two times higher than the benchmark in the projected period under all stress test scenarios and the baseline, although the debt in percent of exports gradually falls below the threshold, backed by expectations of robust exports. Furthermore, the PPG external debt service breached the threshold by a large extent in all scenarios, implying Lao PDR's challenging financing situation.

Box A1.2. Converting the Thresholds for the Present Value to Nominal Value

Denote the public debt as the sum of concessional debt and non-concessional debt:

$$D_t = CD_t + ND_t\ ,$$
$$PVD_t = PVCD_t + PVND_t$$

where D_t: total debt, CD_t: concessional debt, ND_t: non-concessional debt, PV: Present value

Assuming no grant element in non-concessional loan,

$$PVND_t = ND_t$$

$$PVCD_t = \sum_{k=1}^{m} \frac{DS_{t+k}}{(1+\beta)^k} = \sum_{k=1}^{m} \frac{PP_{t+k} + IP_{t+k}}{(1+\beta)^k}$$

where DS_{t+k}: debt service, PP_{t+k}: principal payment, IP_{t+k}: interest payment, m: maturity, β: discount rate

Assuming even principal payments, constant effective interest rate in the remaining maturity,

$$PVCD_t = \sum_{k=1}^{m} \frac{CD_t}{m} \frac{1}{(1+\beta)^k} + \sum_{k=1}^{m} \left[CD_t - (k-1)\frac{CD_t}{m}\right] \frac{i}{(1+\beta)^k}$$

Then, $PVCD_t$ can be obtained by CD_t, m, β, and i.

Next, define the grant element (GE) of public debt as the difference in its nominal and present value:

$$GE_t = \frac{D_t - PVD_t}{D_t}$$

$$PVD_t = (1 - GE_t)\, D_t$$

Now, denote the indicative threshold for the present value of debt-to-GDP as $\bar{c}_{PV}$, and the adjusted threshold for the nominal value of debt-to-GDP as $\bar{c}_{NV}$. By definition,

$$pvd_{t+k} < \bar{c}_{PV}, \text{ for all } k$$

$$\textit{where } pvd_{t+k} = \frac{PVD_{t+k}}{P_{t+k}Y_{t+k}}, P_t\textit{: GDP deflator, } Y_t\textit{: real GDP}$$

Combining with the definition of the grant element,

$$d_{t+k} < \frac{\bar{c}_{PV}}{(1-GE_{t+k})}, \text{ for all } k$$

$$\textit{where } d_{t+k} = \frac{D_{t+k}}{P_{t+k}Y_{t+k}}$$

Further assuming m, β, and i are constant over the projected period, and the share of concessional debt, $s = \frac{CD_t}{D_t}$, is also maintained constant over time, $\mathrm{GE} = \mathrm{GE_t} = \mathrm{GE_{t+k}}$ for all k. Then, we get

$$d_{t+k} < \frac{\bar{c}_{PV}}{(1-GE)} = \bar{c}_{NV}, \text{ for all } k$$

Considering the 14 percent grant element (GE) of public debt from concessional loans, the threshold for the nominal value of the debt-to-GDP ratio is adjusted to 41 percent. Meanwhile, the threshold of GFN for low-income countries with market access is applied at 14 percent GDP to assess market-financing pressure.

In the same manner, the thresholds for nominal PPG external debt are adjusted to 35 percent of GDP and 160 percent of exports, from 30 percent of GDP and 140 percent of exports, for weak debt-carrying capacity countries, with the grant element of 13 percent. Meanwhile, the PPG external debt service thresholds are set at 10 percent of exports and 14 percent of revenue, as suggested by the IMF and the World Bank.

Table A1.2.1. Thresholds for Public Debt and PPG External Debt

	Public debt in percent of	**Public GFN** in percent of	**PPG external debt** in percent of		**PPG external debt service** in percent of	
	GDP	GDP	GDP	Exports	Exports	Revenue
Present Value	35	14	30	140	10	14
Nominal Value	41		35	160		

Source: IMF (2018); AMRO staff estimates
Note: 1) Thresholds for the nominal value of public debt are adjusted by applying a grant element of 14 percent;
2) Thresholds for the nominal value of PPG external debt are adjusted by applying a grant element of 13 percent.

References

International Monetary Fund. (2013) "Staff Guidance Note on the Application of the Joint Bank-Fund Debt Sustainability Framework for Low-Income Countries."

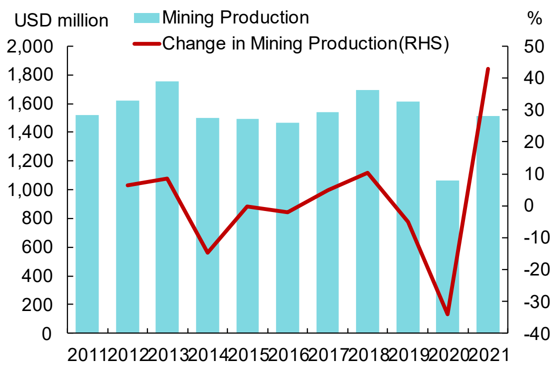
______________________. (2018) “Guidance Note on the Bank-Fund Debt Sustainability Framework for Low Income Countries.”

Annex 2. Resource Sector Fiscal Management in Lao PDR [73]

Lao PDR's Resource Sector and its Fiscal Implications

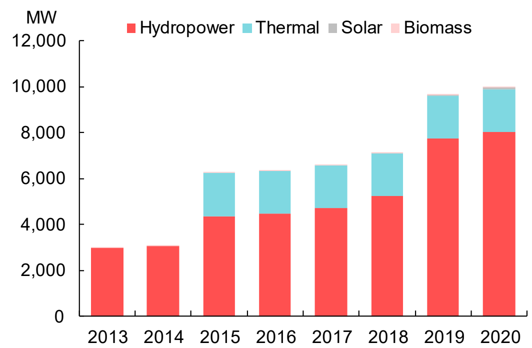
1. **Lao PDR has high potential as a resource-rich country with abundant reserves of industrial metals and rich hydropower resources.** Since mining production began in 2002, copper and gold mining have made significant contributions to Lao PDR's economic development. Despite the moratorium on new concessions since 2012 and the closure of major copper mines since 2020, the resumption in gold mining in the middle of 2020, backed by the rise in global gold prices, supported the continued strong contribution of the sector to economic growth in 2021 (Figure A2.1). Apart from metals, hydropower plants, making using Lao's ample water resources, have also been increasing their contribution to Lao's economy. With its strong ambition to become 'the battery of Asia', the Lao government has rapidly expanded installed power capacity to 10,021 MW in 2020, of which 8,029 MW is derived from hydropower (Figure A2.2). Despite a declining mining sector, the growing electricity sector has driven the overall combined growth of the two industries, accounting for about 16 percent of GDP in 2020 (Figure A2.3). Resource sector exports have also increased steadily, accounting for more than half of total exports as of 2020 (Figure A2.4).

Figure A2.1. Mining Production



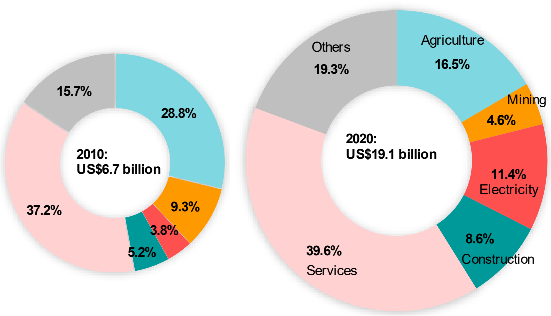
Source: Ministry of Energy and Mine

Figure A2.2. Installed Power Capacity



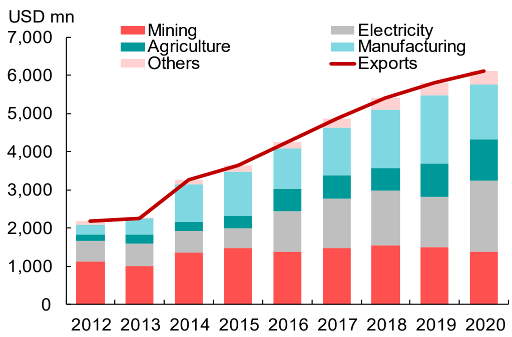
Source: Ministry of Energy and Mine

Figure A2.3. GDP Share by Sector



Source: Lao Statistics Bureau; AMRO staff estimates

Figure A2.4. Exports by Sector



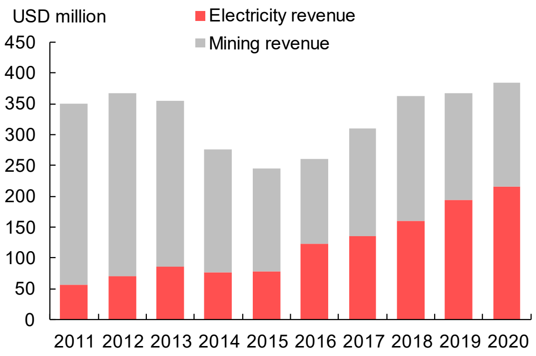
Source: Bank of Lao PDR; AMRO staff estimates

2. **The share of resource sector fiscal revenue has increased thanks to the electricity sector's robust expansion**. The commodity market collapse in 2012 brought a substantial decline in resource sector revenue, which started to gradually increase again

[73] Prepared by Paolo Hernando, Byunghoon Nam, and Sota Nejime.

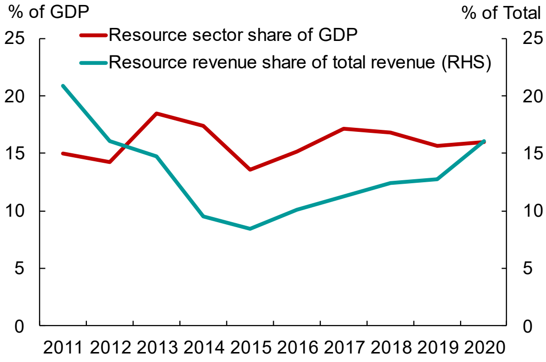
since 2016 as mining production improved and the electricity sector revenue picked up (Figure A2.5). However, the increase in electricity revenue has not been as dramatic as the expansion of power capacity due to generous tax concessions.[74] As a result, the revenue contribution of the resource sector, particularly the electricity sector, tends to lag behind its contribution to the economy (Figure A2.6).

Figure A2.5. Resource Sector Revenue



Source: Ministry of Energy and Mine; AMRO staff estimates
Note: 1) Mining revenues are provided by the MEM; 2) The electricity revenues are estimated by AMRO, based on the fiscal revenue per installed capacity and over operation periods.

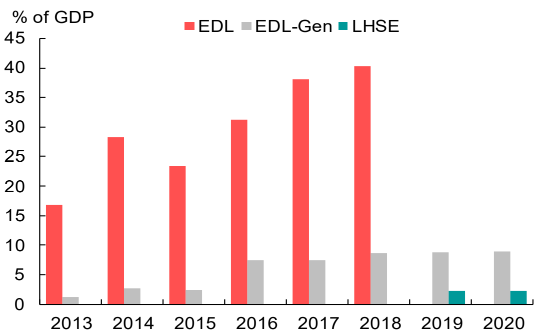
Figure A2.6. Resource Sector Share



Source: Lao Statistics Bureau; LMOF; AMRO staff estimates

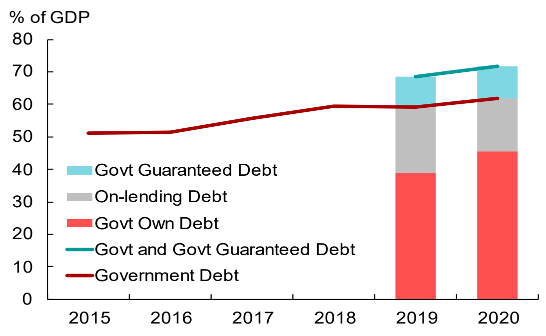
3. **Large upfront investments required for power plant projects have led to substantial debt accumulation.** As of end-2020, the total capacity of power plants in operation is 10,021 MW, of which EDL owns projects with a total capacity of 184 MW. EDL Generation Public Company (EDL-Gen) owns projects with a capacity of 1,683 MW in total, including wholly-owned projects and shareholding IPP projects. LHSE is a shareholder in four projects with a capacity of over 3,650 MW.[75] With the sizable upfront investments for power plants, these three major energy SOEs have accumulated large amounts of debt (Figure A2.7). At the same time, the government's support for energy SOEs via on-lending and guarantees increased the government's liabilities as well. As of end-2020, on-lending debt was 16.3 percent of GDP, and government guaranteed debt was 9.8 percent of GDP. (Figure A2.8).

Figure A2.7. Energy SOE Debt



Source: EDL, EDL-Gen, LHSE
Note: EDL consolidated EDL-Gen debt by offsetting their inter-company transactions. EDL and LHSE debt data are available only up to 2018 and after 2019, respectively.

Figure A2.8. Government Debt



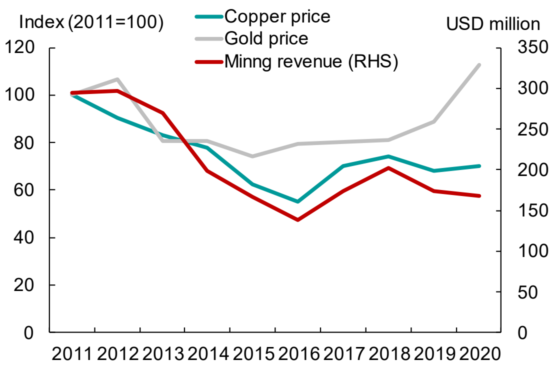
Source: Ministry of Finance; AMRO staff estimates
Note: On-lending debt and government-guaranteed debt data are available only after 2019.

[74] The concession agreement is signed between a hydropower project company and the Lao government, and it generally lasts for 25 or 30 years from the commercial operation date. To attract investment in the electricity sector, the Lao government permits project companies to include a tax holiday clause—which offers tax reduction or elimination for the first several years from the beginning of the contract—in the concession agreement on a negotiation basis.
[75] EDL is a state-owned electricity utility company overseen by the Ministry of Energy and Mine. Its shares are 100 percent-owned by Lao PDR's MOF. EDL-Gen's shares are 51 percent owned by EDL and 49 percent owned by private investors. LHSE is 100 percent owned by the MOF. EDL has been transferring its power plants to EDL-Gen to separate generation activities.

Challenges Facing the Resource Sector Fiscal Management

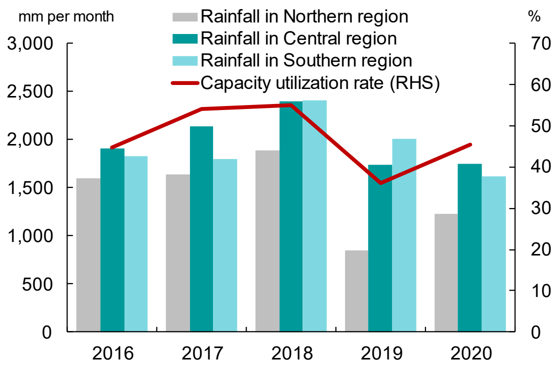
4. **Fiscal revenue from the resource sector tends to be volatile and is hard to predict.** Finite mineral reserves have intrinsically cast a shadow on revenue stability, requiring the government to consider how to better manage mining exploration and production. More importantly, the frequent global commodity price fluctuations resulted in volatile fiscal revenue, making it challenging to maintain fiscal policy based on plans (Figure A2.9). Likewise, hydropower generation has been susceptible to changing water levels in the rivers and weather conditions, leading to volatile revenue contributions (Figure A2.10). This is expected to worsen if the impact of climate change intensifies going forward.

Figure A2.9. Commodity Prices and Mining Revenue



Source: Ministry of Energy and Mine; CEIC; AMRO staff estimates

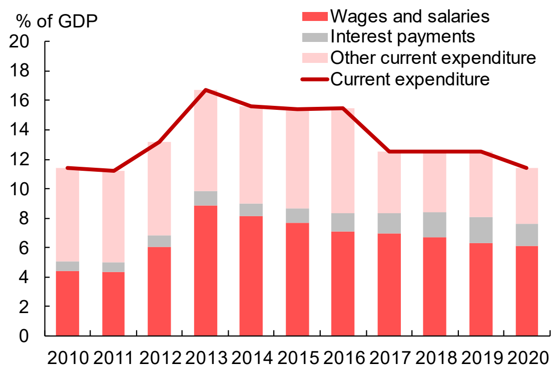
Figure A2.10. Electricity Generation and Rainfall



Source: Ministry of Energy and Mine; Ministry of Natural Resources and Environment; AMRO staff estimates
Note: Capacity utilization rate is computed by dividing the actual electricity generation per unit capacity by the assumed electricity generation per unit capacity (365 days and 24 hours per day).

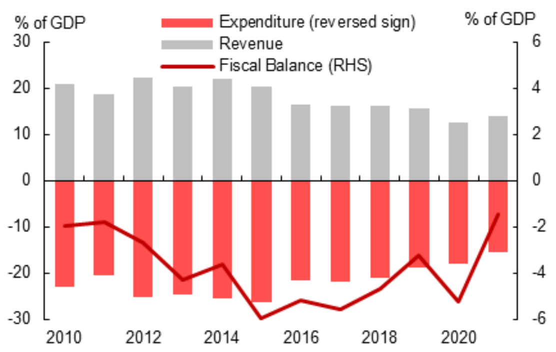
5. **Lao PDR has experienced procyclical fiscal spending and a lingering large fiscal deficit due to unexpected volatility in commodity prices.** The strong revenue increase from the commodity price boom in 2010-2011 led the government to substantially increase its fiscal spending (Figure A2.11).[76] However, metal prices plunged in 2012, but the higher level of expenditure was not cut, resulting in large fiscal deficits for many years (Figure A2.12).

Figure A2.11. Current Expenditure



Source: Ministry of Finance; AMRO staff estimates

Figure A2.12. Fiscal Balance



Source: Ministry of Finance; AMRO staff estimates

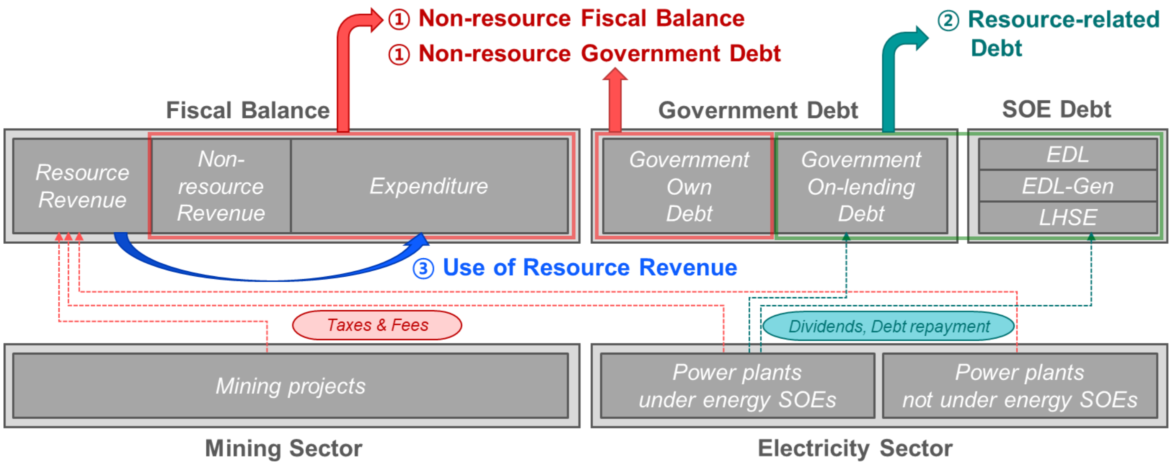
[76] For instance, the government increased the wages and salaries of officials by 168 percent between 2011 and 2013, expecting sufficient mining revenue collection as a result of favorable metal prices.

6. **Major uncertainties hang over the financial viability of hydropower projects.** A typical power project has high upfront investment costs and the resulting debt stock is paid off by the income stream stretched over a long period. As discussed above, the energy SOEs, as well as the government, have accumulated debts from massive investments in power projects. For these projects to be profitable, income from electricity sales over the concession period should be large enough to repay debt and leave sufficient profit after all taxes and fees have been paid during their operations. Taxes and fees from the projects are often minimal or zero due to generous tax incentives and tax holidays in the early stages of operation, and are subject to many uncertainties over the long concession period. In addition, the low profitability or operational losses pose great risks to financial sustainability of debt repayments and the energy sector's contribution to fiscal revenue.[77]

Policy Discussion on Better Resource Sector Fiscal Management

7. **Given the unique challenges of the resource sector, the authorities may consider managing the resource fiscal accounts separately from non-resource accounts.[78]** As shown in Figure A2.13, the first step is setting fiscal targets for non-resources accounts, excluding the resource account revenue affected by the unpredictable and uncontrollable factors such as global commodity prices and weather conditions. Setting fiscal targets will improve the accountability and credibility of fiscal policy by allowing the government to concentrate on the targets that are better controlled by their policy efforts. Second, the authorities should ensure that resource account debts are repaid by expected resource income streams, by clearly presenting the debt repayment plan for both energy SOEs and on-lending debts. Third, the projection of resource revenue and debt repayment plan should carefully incorporate related uncertainties, while the use of resource revenue should be strategically determined based on evolving policy priorities under the national agenda.

Figure A2.13. Resource Sector Fiscal Management



Source: AMRO staff illustration

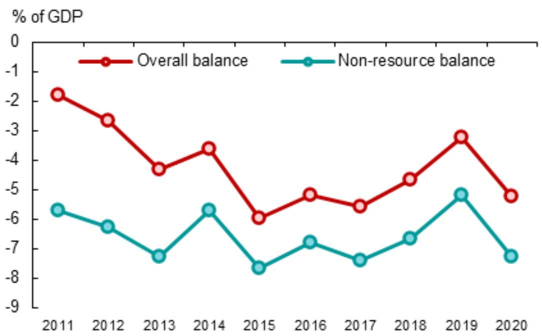
[77] EDL has been registering operational losses and is under financial reforms that aim to make it profitable by 2030. However, EDL's chronic operational losses due to below cost-recovery tariffs, compounded by rising financial costs from exchange rate volatility and unfavorable take-and-pay arrangement with domestic IPPs, have deteriorated its financial position. Moreover, its financial position could exert pressure on the government's fiscal management as the government may need to bear some of its on-lending debt service burden.

[78] IMF (2012) also suggests that resource-rich developing countries (RRDCs) separate spending from resource revenue volatility, and use non-resource fiscal targets such as non-resource primary balance to be able to better deal with boom-bust cycles. Unlike non-resource rich countries, RRDCs need to take into account price volatility and the exhaustibility of natural resources in their fiscal frameworks. Price volatility is the main issue resulting in revenue volatility and procyclical fiscal expenditure. On the other hand, the exhaustibility of resources results in issues related to sustainability and intergenerational equity.

8. **The first step to improve resource sector fiscal management is to enhance the reporting of resource sector fiscal revenue and debt**. Although the fiscal revenue from the mining and electricity sectors is recorded internally by the MOF, more comprehensive data related to resource fiscal accounts should become available for further analyses and scrutiny. Ongoing efforts to improve the tax information system supported by the World Bank and E.U. will help track resource revenues more systematically. For the resource sector debt, details of both energy SOEs' debt and government on-lending debt should be disclosed for a timely analysis of the risk to debt management.[79]

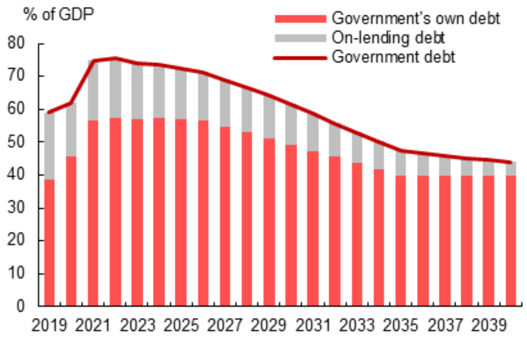
9. **With clearly identified resource accounts, the government may set specific fiscal targets for non-resource accounts.** The fiscal balance excluding resource sector revenue should be set as the main target indicator, while separately presenting the resources sector revenue. Looking back at the fiscal balance in the past 10 years, the fiscal balance excluding resource revenue has been much less volatile than the fiscal balance, including resource revenue (Figure A2.14).[80] Excluding the expected resource revenue of 3.1 percent of GDP in 2022, the non-resource primary balance target for 2022 is estimated to be -2.3 percent of GDP, compared to the budgeted primary balance of 0.8 percent of GDP. Similar to the fiscal balance, the non-resource government debt should be the other main fiscal target, while ensuring resource-related debt will be self-paid in the long-term, as will be discussed below. As of 2021, government debt is estimated at 74.9 percent of GDP, of which the on-lending debt is 18.4 percent of GDP and the government's own debt is 56.5 percent of GDP. Assuming the government's own debt can be considered as non-resource debt, continued fiscal consolidation is expected to lower the non-resource debt-to-GDP ratio to 40 percent of GDP by 2035 (Figure A2.15).[81] Setting fiscal targets that can be better controlled by the government will help it develop more tangible policy measures to improve the fiscal position and enhance the credibility and accountability of its fiscal management.

Figure A2.14. Fiscal Balance with and Without Resource Sector Revenue



Source: CEIC; AMRO staff estimates

Figure A2.15. Government Debt Projection



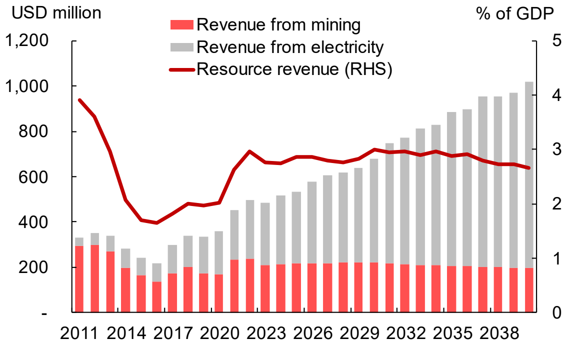
Source: Ministry of Finance; AMRO staff projection

[79] Energy SOEs' debt information is scarce and not all energy SOEs make their recent financial statements available to the public. The on-lending debt to SOEs is assumed to be the resource-related government debt, as EDL and LHSE have received most of the on-lending debt, but no details are available.
[80] During 2011-2020, the standard deviation of fiscal balance—including and excluding resource revenues—was 1.4 percent and 0.8 percent, respectively.
[81] Macroeconomic and fiscal projections are as follows: 1) Projections until 2026 are the same as the DSA conducted by AMRO (See Annex 1 on DSA); 2) Real GDP growth and GDP deflator are assumed to remain at 4.5 percent and 3 percent, respectively, while the exchange rate moves within the central bank's range (±5 percent); 3) Continued fiscal consolidation that achieves the fiscal balance close to zero, by 2035, is assumed; 4) On-lending debt is assumed to remain unchanged in the absolute level until 2030 and gradually decline after 2030 if EDL starts to break even.

10. **It is critical to ensure the solvency of resource-related debt**. Confidence in the debt repayment of resource-related debt is a necessary condition for the effective fiscal management of non-resource accounts. While strengthening the SOE governance framework, the government needs to ensure energy SOEs' efficient debt management. This includes both the government's on-lending debt and energy SOEs' own debt. Income streams and debt repayment schedules should be carefully projected based on existing and planned power plant projects and reasonable assumptions, and various risks should be properly assessed through stress tests. The energy SOEs' debt management plan should also be reviewed and updated regularly to better capture the evolution of power sector developments and policy changes. Meanwhile, EDL's financial reform should be expedited to ensure both profitability and debt repayment capability.

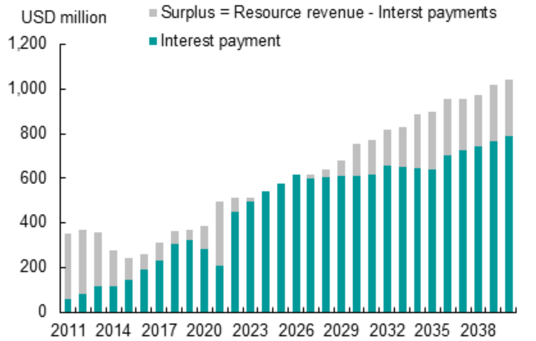
11. **The use of resource sector revenue should be strategically aligned to policy priorities.** The authorities may consider managing fiscal revenues from the electricity and mining sectors separately, including corporate income tax, VAT, royalty, licensing fees, concession fees, and dividends.[82] Based on careful revenue projections, the use of resource fiscal revenue should be determined strategically for policy priorities under the national agenda (Figure A2.16).[83] Given growing concerns about the high debt service burden and debt sustainability, the highest priority in the medium term should be given to the interest and principal payments of government debt. However, as government debt levels fall to a comfortable level, the government may consider increasing the resource revenue allocation to other development priorities, such as infrastructure, healthcare, and education (Figure A2.17). To avoid the arbitrary spending of resource windfalls, the priorities of resource revenue spending should be explicitly stipulated in public documents such as the national medium term plan.

Figure A2.16. Fiscal Revenue from Resource Sector



Source: Ministry of Energy and Mine; IMF; World Bank; AMRO staff estimates
Note: 1) The fiscal revenue projection is based on existing power plants and mining projects; 2) Mining revenue is projected based on the gradual decline of metal exports and prices; 3) Newly introduced fast-track advance payments and revenue from cryptocurrency mining have not been considered in the projection; 4) Electricity revenue is projected based on the fiscal revenue per installed capacity and over operation periods.

Figure A2.17. Fiscal Revenue from Resource Sector and Interest Payments



Source: Ministry of Energy and Mine; AMRO staff estimates
Note: The interest payment projections are based on AMRO's debt and effective interest rate projection. The surplus indicates the difference between total fiscal revenue from the resource sector and interest payments, which suggests the revenue that can be used for other purposes, such as principal repayments and development needs.

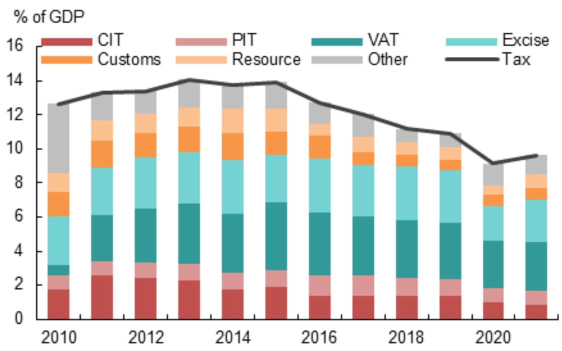
[82] Newly introduced fast-track advance payments for mining concessions and lump-sum tax should also be taken into account. Also, revenues from companies that are engaged in cryptocurrency mining, which is supposed to pay a lump-sum tax of USD1 million per 10MW of electricity and a license fee of USD0.5 million, could be included as this revenue is created by electricity investment.
[83] The baseline projection should be based on the existing and planned power plants and mining projects, together with policy changes. Considering the volatility and uncertainty of resource sector fiscal revenues, a few scenarios should be considered for commodity prices and natural disaster shocks, as well as macroeconomic shocks.

Annex 3. Tax Revenue Reforms in Lao PDR [84]

Background

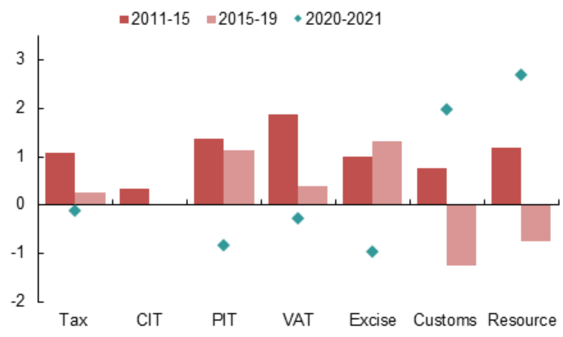
1. **Tax revenue growth in Lao PDR has slowed down substantially, resulting in low tax buoyancy**. Tax revenues in percent of GDP have trended down to reach 10.9 percent of GDP in 2019, after peaking at 14.1 percent in 2013. During the pandemic, tax revenues dropped further to 9.1 percent of GDP in 2020, but recovered to 9.6 percent of GDP in 2021 (Figure A3.1).[85] Reflecting the slow tax revenue growth, the tax elasticity with respect to nominal GDP declined to 0.2 in 2015-2019 from 1.1 in 2011-2014.[86] Tax buoyancy has declined in all tax categories, except for excise tax, with negative growth registered in customs duties and resource taxes (Figure A3.2).[87]

Figure A3.1. Tax Revenue



Source: Ministry of Finance; AMRO staff estimates

Figure A3.2. Tax Elasticity



Source: Ministry of Finance; AMRO staff estimates

2. **Recognizing the importance of tax revenues, the authorities have implemented tax reform measures**. Given the need for strong fiscal consolidation and continuous fiscal support for sustainable development, the government has rolled out several revenue reform initiatives.[88] Among these, the noteworthy developments include the introduction of the tax revenue information system (TaxRIS), a one-stop customs services (namely, Lao National Single Window), and Smart Tax and e-payments in collecting taxes and duties through the banking system. Also, the tax administration law, VAT law, income tax law, and excise tax law were revised to improve the legal framework. The government has committed to further tax revenue reforms by establishing the Tax Strategic Development Plan 2021-2025, and highlighting revenue-enhancing measures in the 9th National Socio-Economic Development Plan 2021-2025.

3. **Against this backdrop, this annex aims to identify issues related to tax collection in Lao PDR, to review the government's tax reform measures in addressing those issues, and suggest some policy recommendations**.

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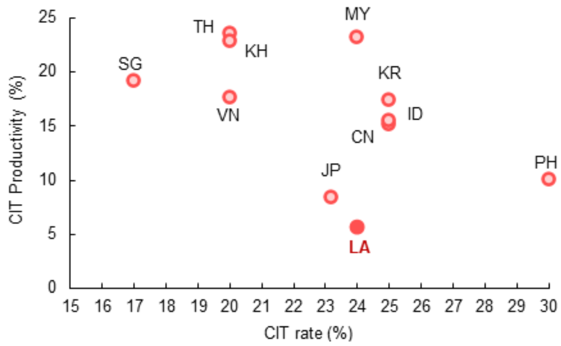
[84] Prepared by Byunghoon Nam, Thykeo Lathanaphone, and Sok Sotheareach.
[85] From 2013 to 2021, CIT dropped from 2.3 to 0.8, PIT dropped from 1.0 to 0.8, VAT dropped from 3.6 to 2.9, excise tax dropped from 3.0 to 2.4, customs duties dropped from 1.5 to 0.7, resource tax dropped from 1.1 to 0.9 percent of GDP.
[86] Although tax elasticity rebounded to 2.1 in 2021 from -1.8 in 2020, this could be a result of extraordinary circumstances during the pandemic rather than a structural improvement.
[87] Customs duties have declined due to tariff reduction and exemption for FTA, export promotion, and import support. Resource revenue has declined due to a slowdown in the global commodity market and the restriction of log and timber exports.
[88] For example, the Tax Strategic Development Plan 2018-2020, Public Finance Development Strategy 2018-2025 and Vision 2030 (PFM Strategy) have been implemented. See Box C. Major Fiscal Reform Measures for Fiscal Consolidation in Lao PDR in the AMRO Annual Consultation Report on Lao PDR 2020.

Assessment of Tax System and Performance in Lao PDR

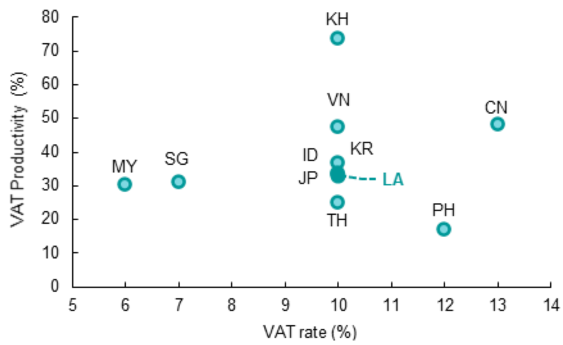
4. **Low productivity of major taxes (CIT, VAT, PIT) implies narrow tax bases and weak tax administration.**[89] Compared to ASEAN+3 member countries, CIT productivity is lowest, and VAT productivity belongs to the low group (Figure A3.3 and A3.4). Low tax productivity may arise from both weaknesses in design (low registration, multiple rates, high levels of exemptions or significant incentives) and weaknesses in tax administration (complex compliance requirements, poor risk management, and ineffective service and enforcement) (ADB, 2021).

Figure A3.3. CIT Productivity



Source: National authorities; AMRO staff estimates
Note: CIT rate and CIT productivity are computed as of 2019. CIT productivity = CIT revenue / (statutory CIT rate x nominal GDP).

Figure A3.4. VAT Productivity



Source: National authorities; AMRO staff estimates
Note: VAT rate and VAT productivity are computed as of 2019. VAT productivity = VAT revenue / (statutory VAT rate x nominal GDP).

5. **A low registration rate has led to narrow tax bases.** According to the Economic Census 2019-2020,[90] 94.2 percent of total business units are micro-enterprises that pay only a small amount of lump-sum tax.[91] The census also revealed that 30.4 percent of business units are registered, 22.0 percent have a license, and only 12.9 percent have a tax identification number (TIN) (Figure A3.5). A low business registration rate implies a large informal sector, and an even lower TIN registration rate suggests that many registered businesses have not acquired a TIN. The share of registered business units without licenses and TIN is also sizable for small and medium enterprises. In addition, the majority of micro and small enterprises lack a proper accounting system, making it challenging to collect not only CIT but also PIT and VAT (Figure A3.6).[92] Meanwhile, without the TIN being linked to the national identification and social security system, individuals are required to apply separately for TIN. This impedes the expansion of TIN registration.

[89] Productivity is measured as the ratio of the particular tax revenue (i.e., CIT revenue, VAT revenue) to the statutory tax rate (i.e., CIT rate, VAT rate) multiplied by nominal GDP. Comparing productivity over time, or across countries, can help gauge relative revenue performance of a particular tax. However, the economic structure, GDP composition, and consumer behavior may affect these ratios. For VAT, C-efficiency, measured by VAT revenue / (VAT rate x private consumption), can also be used.

[90] The definition of enterprises in Lao PDR is as follows:

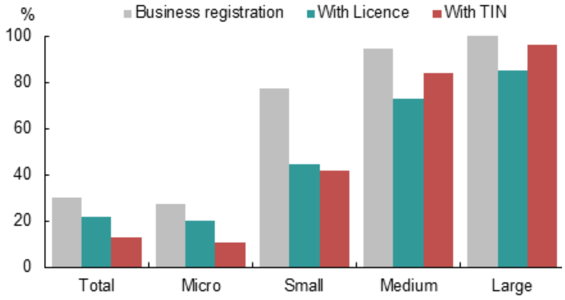
	Micro	Small	Medium	Large
Annual average employees	1-5	6-50	51-99	Over 100
Annual turnover	Less than LAK400 mn	LAK400 mn – LAK3 bn	LAK3 bn – LAK6 bn	Over LAK6 bn
Share of total (2019-2020)	94.2%	4.9%	0.7%	0.2%

Note: The definition is for trade sector. The manufacturing and service sector have different annual turnover thresholds.

[91] Micro enterprises with an annual turnover of less than LAK50 million are exempted from taxes, and micro enterprises with annual turnover between LAK50 million and LAK 400 million pay a lump-sum tax of 1-3 percent. The average value of tax in 2019-2020 was LAK2 million, LAK23 million, LAK618 million, and LAK7,640 million for micro, small, medium, and large enterprises, respectively.

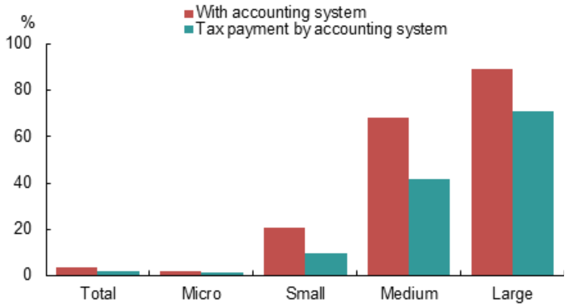
[92] Only 3.8 percent of business units (2.2 percent of micro, 20.7 percent of small, 68.1 percent of medium, 89.1 percent of large enterprises) have accounting systems, and 2.1 percent (1.3 percent of micro, 9.7 percent of small, 41.8 percent of medium, 71 percent of large) pay taxes based on the accounting system.

Figure A3.5. Business Registration, Licensing, and TIN Registration



Source: Lao Statistics Bureau, Economic Census 2019-2020; AMRO staff estimates

Figure A3.6. Businesses with Accounting System



Source: Lao Statistics Bureau, Economic Census 2019-2020; AMRO staff estimates

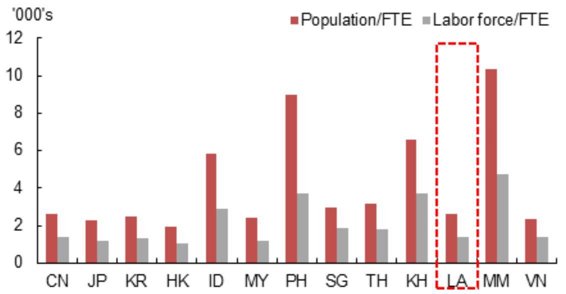
6. **Broad tax exemptions and generous tax incentives have stunted sufficient tax collection from growing industries**. To attract foreign investment for national development, CIT exemption of up to 10 years and reduced tax rates of up to an additional five years are applied to companies with promoted investment activities.[93] These investors are also entitled to customs duty and VAT exemptions for certain materials and equipment.[94] Given that incentivized industries, including the electricity and mining sectors, have contributed largely to economic growth, tax exemption and incentives for these industries have widened the gap between economic and tax performances. In general, VAT is waived for a wide range of goods and services for imports and exports.[95]

7. **Weak tax administration and taxpayers' compliance have constrained proper tax collection, leading to revenue leakage and tax gaps**. According to the Ease of Doing Business indices, Lao PDR ranked 157th in the Paying Taxes indicator, the lowest rank in the ASEAN region (Figure A3.7). Sub-indicators indicate that tax payments require a long time and effort to comply, while the post-filing process for tax correction is long. Despite the introduction of TaxRIS, Smart Tax, and the e-payment system, tax administration and compliance have not shown significant improvement, unlike some successful cases in other countries.[96] Considering the slow expansion of the e-tax system and low staffing levels, tax administration resources are deemed insufficient (Figure A3.8).

Figure A3.7. Ease of Doing Business

Source: World Bank, Ease of Doing Business 2020

Figure A3.8. Revenue Body Staffing Level



Source: International Survey on Revenue Administration (ISORA)
Note: LA and VN as of 2017; all other countries as of 2019.

[93] According to the IMF (2019), the foregone revenue due to CIT incentives is estimated to be 4.5 percent of GDP on average. According to Wiedermann and Finke (2015), the wedge between the effective tax rate with incentive and statutory tax rate in Lao PDR is estimated to be 13.4 percentage points, which is among the largest in the region.
[94] See **http://investlaos.gov.la/why-laos/incentive/** for details about investment incentives.
[95] The supply and imports of certain goods and services are exempt from VAT, including unprocessed agricultural products, seeds, fertilizers, equipment for agricultural purposes, international transportation services, educational goods and services, certain medical goods and services, certain bank services, and financial institution services. Exports of goods are zero-rated, except the export of natural resources that are not finished goods.
[96] Brunei Darussalam jumped 20 ranks in the Paying Taxes ranking after introducing the System for Tax Administration and Revenue Services or STARS e-Services system in 2017. Indonesia's ranking, following the introduction of an e-filing and payment system in 2018, improved by over 30 places (ADB, 2021).

8. **The inefficiency of property and land taxes should be addressed, while the introduction of new taxes should be considered.** Currently, property and land tax are levied at annually determined rates depending on the location, type and size, while the land data and valuation are not updated properly. Annually determined tax rates may lead to unpredictable tax liabilities to the private sector and lower taxpayers' compliance. Meanwhile, the introduction of environmental and digital tax has become increasingly important to properly tax fast-growing e-commerce and online/mobile businesses and to pre-emptively address climate change.

Tax Revenue Reform Plans of the Lao Government

9. **Tax Strategic Development Plan (TSDP) 2021-2025 aims to increase revenue by 5 percent of GDP over the next five years** (Table A3.1). The plan aims to address aforementioned weak tax administration and compliance issues by enhancing taxpayer services and management, modernizing tax collection, and developing the capacities of both staff and organizations. Reforming the property and land tax, and developing an environmental tax, are also planned under the goal of "revising the legislative and regulatory frameworks". The 9th National Socio-Economic Development Plan (NSEDP) 2021-2025 also highlighted the exploration of new revenue sources, such as an urban property tax and an environmental tax. Furthermore, the National Agenda to Address Economic and Financial Difficulties 2021-2023 emphasized the public awareness of tax payment, the enforcement and revision of tax policy measures, and measures to address revenue leakages.

Table A3.1. Tax Strategic Development Plan 2021-2025

Goal	Work Plan
1. Revise legislative and regulatory frameworks	1.1. Improve existing legislation and develop new tax laws • Develop a land and property tax law, and an environment tax law • Revise/improve VAT, income tax, excise tax laws
	1.2. Revise and develop subordinate legislations • Develop/revise guidelines for new/revised tax laws • Establish rules for identifying audit risk and revise internal audit regulations
2. Improve taxpayer services	2.1. Enhance taxpayers' services • Establish standard operating processes and tax service procedures • Provide training for tax officers and taxpayers
	2.2. Increase awareness of taxpayers in tax payments
	2.3. Provide an incentive to promote tax payments
3. Manage taxpayer effectively	3.1. Manage large taxpayers effectively
	3.2. Improve tax administration and regulations of taxpayers to prevent tax evasion • Establish a risk management committee to address non-compliance • Develop risk factors and research risk-based regulations
	3.3. Develop regulations for medium-sized taxpayers
	3.4. Improve the implementation of tax laws and regulations
4. Modernize tax management	4.1. Expand the TaxRIS system across the country
	4.2. Enhance digital tax services • Increase the digital tax payments for CIT of MSMEs • Provide digital tax payments for PIT
	4.3. Strengthen macro-level works • Develop standard operating procedures for registration, notification, payment and inspection for each tax type
	4.4. Promote international cooperation
	4.5. Improve the internal audit and integrity
5. Develop staff capacity and organization	5.1. Implement new organizational structures
	5.2. Improve the management of tax officials
	5.3. Increase the abilities and skills of tax officials • Establish training institution and curriculum for central and local tax officers

Source: Ministry of Finance

10. **The authorities plan to encourage VAT and TIN registration.** The VAT rate has been reduced from 10 percent to 7 percent temporarily from 2022 to 2023 to incentivize businesses to register in the VAT system.[97] To address the hesitance of businesses due to the accounting burden, the CIT rate for small enterprises registering in the VAT system will be reduced to 0.1 percent for the first three years.[98] For TIN registration, the MOF has been trying to link TIN to business licenses under the Ministry of Industry and Commerce (MOIC). Additionally, a mobile application will be developed to allow individuals to apply easily for a personal TIN. The authorities plan to further expand individual TIN registrations by linking it with the National Identity Card and Social Security Card.

11. **In addition to the government's comprehensive tax reform plan, other measures should be considered too**. Broad tax exemptions and generous tax incentives remain intact despite a large amount of foregone revenue. Supportive measures for small businesses to equip themselves with proper accounting systems should be strengthened to facilitate their registration in the VAT system. In addition, benchmarking the successful reform experience of peer countries will help discover additional areas of improvement (Table A3.2). On tax administration, extra measures to address tax abuse and evasion could be introduced, such as anti-tax evasion, anti-corruption, and anti-smuggling programs and activities, with a focus on strengthening transparent audit functions. Compliance risk management is another area to improve the systematic tax administrative capacity. In terms of tax policy, frequent and regular updates of taxpayers' profiles and property values will help tax authorities maintain an up-to-date database, while a simplified tax regime for MSMEs will reduce tax compliance costs.

Table A3.2. Key Tax Reform Measures in Selected Economies

	Philippines	Vietnam	Cambodia
Tax Administration	• Improve taxpayers' registration database • Enhance audit functions • Intensify anti-tax evasion programs • Strengthen anti-smuggling activities • Improve data-sharing with authorities	• Strengthen anti-corruption efforts • Enhance voluntary compliance by improving tax services • Modernize tax system operation through ICT development • Strengthen the capacity of revenue administration	• Implement a self-assessed tax regime • Modernize tax management through ICT development • Enhance audit functions • Elevate taxpayer services • Improve risk assessment methods • Establish automated risk information exchange channel
Tax Policy	• Lower and simplify PIT • Expand VAT base • Adjust excise tax rate • Review tax incentives • Review property value	• Reform PIT and VAT • Review the property and land use tax • Impose an environment protection tax	• Frequently/regularly update taxpayer's profile and property value • Simplify tax regime for SMEs • Review tax and customs incentives for SMEs • Review of VAT and excise

Source: Department of Finance, Philippines; Ministry of Finance, Vietnam; Ministry of Economy and Finance, Cambodia; AMRO staff compilation

[97] According to new VAT law, enterprises with an annual turnover of more than LAK400 million must register to the VAT system.
[98] A tax revenue collection survey conducted in 2021 found that around 14,000 enterprises with annual turnover of more than LAK400 million still wanted to pay the lump-sum tax rather than VAT, as they would otherwise be required to have a proper accounting system and pay PIT and CIT as well. Most of these are service sector enterprises in Vientiane.

Policy Considerations for Successful Tax Revenue Reforms

12. **The government should sequence and prioritize the planned policy measures after carefully assessing their implications on economic recovery and tax revenues**. Given the still weak economic recovery and high uncertainty, tax reforms should be carefully calibrated to avoid weakening the economic recovery and other looming priorities. For example, measures involving only the public sector, such as improving taxpayer services and modernizing tax management, can be expedited, while measures raising the tax burden on the private sector can be gradually rolled out in line with the progress of the economic recovery. At the same time, the authorities should prioritize areas of great potential among many planned tasks to produce tangible results.

13. **The most urgent task is to broaden the tax base**. Close coordination and cooperation with relevant government agencies are essential to efficiently link VAT and TIN registration to the national registration and identification systems.[99] Temporary fiscal incentives for registration and policy assistance for bookkeeping practices could be considered to ease the concerns of newly registered enterprises on becoming formalized, while non-compliance penalties should be strictly implemented. A simplified accounting system for small enterprises will also help enhance their tax compliance. Meanwhile, the design, management, and governance of tax incentives should be rigorously examined to ensure effectiveness and efficiency. Measuring the revenue foregone due to tax incentives will be the first step.[100]

14. **Revising the tax structure and introducing new taxes should be carefully determined with a balanced view on various policy objectives and revenue implications.** Although the reduction of the VAT rate in 2022 may lead to a larger tax base in the medium- to long-term, its effectiveness in encouraging VAT registration, and the corresponding revenue implications, should be closely monitored and rigorously assessed before deciding on its reversion or extension in 2023. The type of excise tax, whether ad-valorem or unit-based, should be examined to better achieve various policy objectives,[101] while the coverage of excise tax could be reviewed to apply to other goods and services, including luxury products. The government's plans to improve the property and land tax, based on updated land valuations and to introduce an environmental tax, is a welcome move and should be implemented as scheduled. Overall, a strong communication strategy will be essential to gain public support for the revision and introduction of taxes and to enhance tax compliance.

15. **Strengthening tax administration will facilitate the implementation of other reform initiatives and improvement in taxpayers' compliance**. In this regard, the TSDP 2021-2025, which is focused on enhancing tax administration, should be expedited. In particular, the continued expansion of e-filing and e-payment will improve taxpayer services and reduce compliance costs. In addition, risk management and risk-based audit functions should be developed and strengthened to better manage revenue uncertainties and enhance taxpayer compliance. Tax evasion, smuggling, and corruption should also be addressed to avoid revenue leakages and obtain the public support for tax reforms.

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[99] Relevant government agencies include the Ministry of Industry and Commerce for business registration and license, the Ministry of Home Affairs for the national identification card, and the Ministry of Labor and Social Welfare for the social security card.
[100] See Andriansyah et. al. (2021).
[101] For example, the World Health Organization (WHO) developed a resource tool for alcohol taxation and pricing policies, including the type of excise tax, to serve as guideline for the design of taxes on alcohol products.

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Annex 4. Estimating Foregone Revenues from Mirror Trade Data[102]

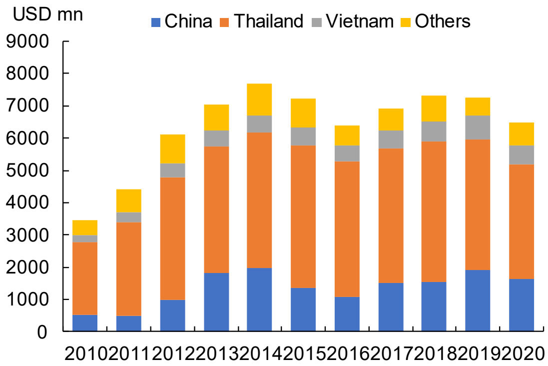
1. **Lao PDR's imports from major trading partners appear to be significantly underreported.** Hamanaka (2011) and Bannister et. al. (2017) raised the issue of large discrepancies in Lao PDR's trade statistics with its major trading partners (i.e., mirror data). Although the discrepancy of import data has narrowed compared to that reported by studies in the past,[103] it remains substantial at 28 percent, 15 percent and 41 percent for Thailand, China and Vietnam in 2019, respectively. The discrepancies in mirror statistics can provide an estimate of probable revenue losses, which can be recovered and added to government revenues, thereby improving the fiscal position.

2. **Differences with mirror trade data could provide guidance on the extent of unrecorded trade.** Trade flows recorded by one country have corresponding records in another. This means a particular country's exports are recorded as imports by the receiving country, and vice versa. There are various reasons why there could be discrepancies between a country's recorded trade flows and corresponding mirror data trade flows. Discrepancies may arise from differences in cost reporting,[104] differences in timing, currency conversion, or a misclassification of goods.[105] However, large discrepancies over a sustained period of time may be due to certain structural problems such as tax and tariff evasion (particularly if misclassified as products with large exemptions or taxed at a lower rate), and unrecorded or illegal trade.

3. **Detailed analysis on a product level reveals significant discrepancies for a wide range of products imported by Lao PDR from its major trading partners.** The analysis compares mirror trade with Thailand, China, and Vietnam, which account for around 90 percent of Lao PDR's imports in aggregate (Figure A4.1), focusing on imports of consumer and durable goods with large discrepancies between the Lao data and the mirror data.[106] To ensure data consistency across Lao PDR and its major trading partners, all data are sourced from the World Integrated Trade Solutions (WITS).[107] Assuming the origin of goods is correctly specified, and the classification of goods is consistent between trading partners, the discrepancies in import goods by harmonized system (HS) codes are calculated by taking the difference between home country data and mirror data. Underreporting, particularly in relation to imports from Thailand, involves a wide range of goods and is in an order of magnitude that is over five times higher than the underreporting in imports from Lao PDR's other major trading partners (Figure A4.2). In the case of imports from China, underreporting is mostly related to office/data machines and road vehicles (Figure A4.3), while for Vietnam, the largest underreported imports are petroleum, beverages and miscellaneous food items (Figure A4.4). This granular analysis can help identify products that are susceptible to misclassification or fraud, and thus may need closer attention from the authorities.[108]

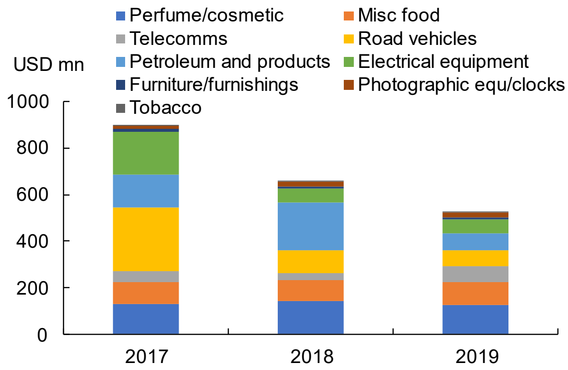
[102] Prepared by Paolo Hernando.
[103] Hamanaka (2011) reported that Lao PDR's total imports from major trading partners stood at less than half the total exports from partner countries to Lao PDR, while Bannister et. al. (2017) reported that imports were underreported by 30-70 percent, with the underreporting concentrated among major trading partners such as Thailand, China, and Vietnam.
[104] Traders' reported data has different cost definitions. In particular, imports are reported including the cost of insurance and freight (CIF basis), while exports are reported on a free on board (FOB basis), which excludes the costs of transportation and insurance.
[105] Misclassifications may arise from various sources and can be reduced by adopting common harmonized system (HS) codes. The Harmonised Commodity Description and Coding System, or simply the HS, is an international nomenclature (at 6-digit levels) developed by the World Customs Organisation (WCO) for the classification of goods.
[106] Considering the size of trade, the analysis includes discrepancies of above USD10 million for Thailand and above USD5 million for China and Vietnam. With the goal of estimating foregone revenue, this focuses on imports only, and imports of consumer and durable goods, because the majority of capital and intermediate imports are tax exempt.
[107] This database contains merchandise trade exports and imports by detailed commodity and partner country data using the HS coding system developed by the WCO.
[108] HS Code 2-digit level of aggregation is used in this analysis. However, for a more detailed analysis, the Lao Customs Office may extract import data from its Automated System for Customs Data or ASYCUDA system to calculate the difference in customs values versus mirror values at more detailed levels of product classification (i.e., the HS 6-digit level) to precisely detect which products have large differences in values and investigate them accordingly (Cariolle et. al., 2018).

Figure A4.1. Lao PDR Imports (by Country)



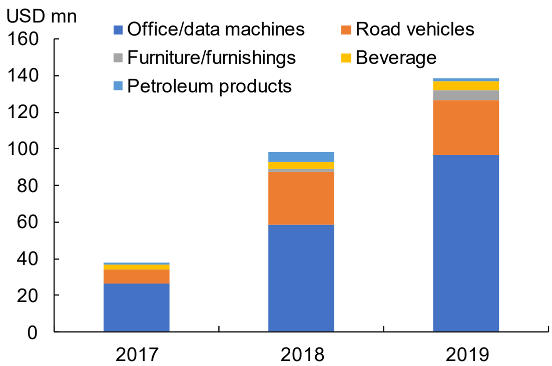
Source: Direction of Trade Statistics (DOTS); AMRO staff calculations

Figure A4.2. Difference Between Thai Export and Lao Import Data



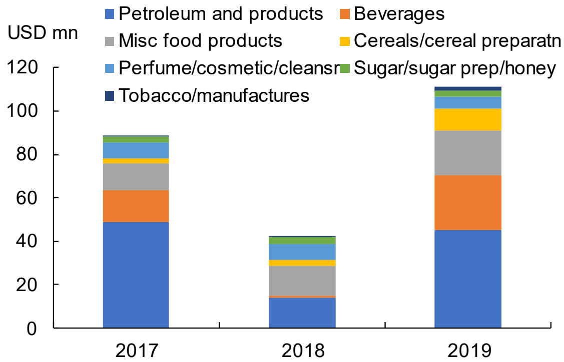
Source: WITS; AMRO staff calculations

Figure A4.3. Difference Between Chinese Export and Lao Import Data



Source: WITS; AMRO staff calculations

Figure A4.4. Difference between Vietnamese Export and Lao Import Data

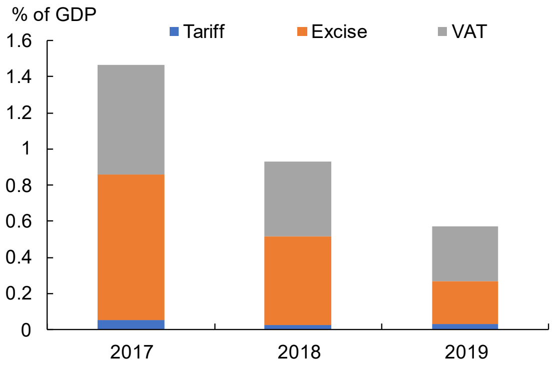


Source: WITS; AMRO staff calculations

4. **The potential revenue loss estimated by using mirror trade data is almost 1 percent of GDP.** The analysis considers three revenue sources–tariff, excise, and value added taxes (VAT)–in estimating potential revenue losses by multiplying the estimates for underreported imports with the corresponding tariff or tax rates for different goods categories. Tariff rates are taken from the tariff schedule,[109] and excise tax rates for specific products are taken from the Excise Tax Law. VAT estimates, using the 10 percent VAT rate,[110] assume that goods not recorded at the border are unlikely to pay any VAT as well. Taken together, revenue foregone in 2019 due to possible underreporting of imports is estimated to be equivalent to 0.9 percent of GDP. Broken down, it amounts to foregone tariffs of 0.05 percent of GDP, foregone excise taxes equivalent to 0.39 percent of GDP and foregone VAT of 0.45 percent of GDP (Figure A4.8).

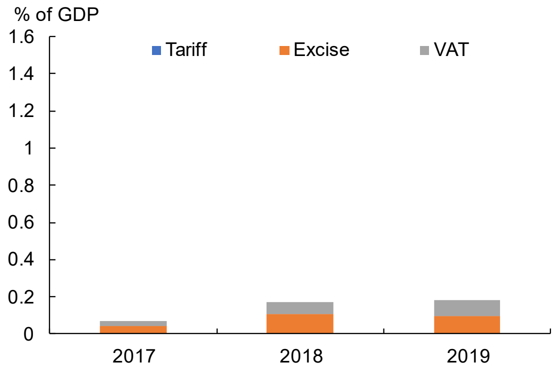
[109] Tariffs have fallen significantly for Laos since 2017 with the onset of various free trade agreements, and around 95 percent of products from Thailand, Vietnam, and China have zero tariffs.
[110] The prevailing VAT rate, in 2019, of 10 percent, is used to correspond with the particular data period, but estimates of foregone revenues will go down with the lower VAT rate of 7 percent, effective from January 2022 onwards.

Figure A4.5. Foregone Revenues (Imports from Thailand)



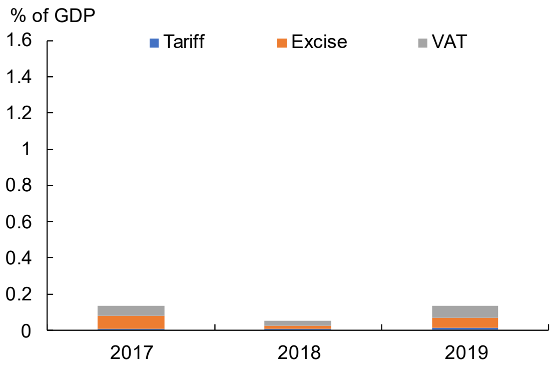
Source: AMRO staff calculations

Figure A4.6. Foregone Revenues (Imports from China)



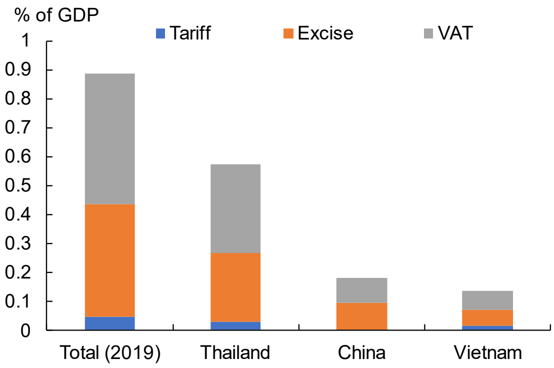
Source: AMRO staff calculations

Figure A4.7. Foregone Revenues (Imports from Vietnam)



Source: AMRO staff calculations

Figure A4.8. Estimated Foregone Revenue in 2019



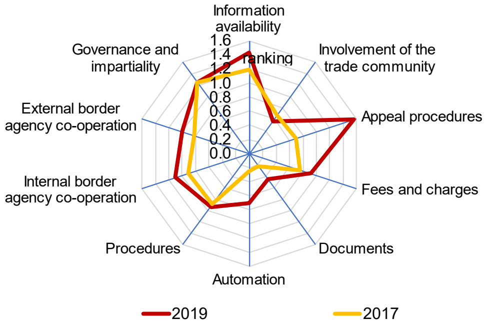
Source: AMRO staff calculations

5. **Border control and customs systems need to be strengthened to effectively reduce unrecorded trade and to support the growth of formal trade flows.** This effort should involve enhancing trade facilitation, which covers the full spectrum of border procedures – from the electronic exchange of data about a shipment, to the simplification and harmonization of trade documents. Although Lao PDR's Trade Facilitation Indicators (TFI)[111] have shown improvement in 10 of the 11 indicators in 2019 compared to 2017 (Figure A4.9), Lao's scores are still among the lowest in the ASEAN region. This suggests that greater effort is required across a wide range of indicators to improve trade facilitation (Figure A4.10).

[111] Trade Facilitation Indicators (TFIs) are 11 indicators for which the OECD compiles data to compare performances over time, and also against 163 other economies included in the database. The 11 indicators are (1) governance, (2) external cooperation, (3) internal cooperation, (4) procedures, (5) automation, (6) documents, (7) fees, (8) appeals, (9) advance rulings, (10) involvement with the trade community, and (11) information availability.

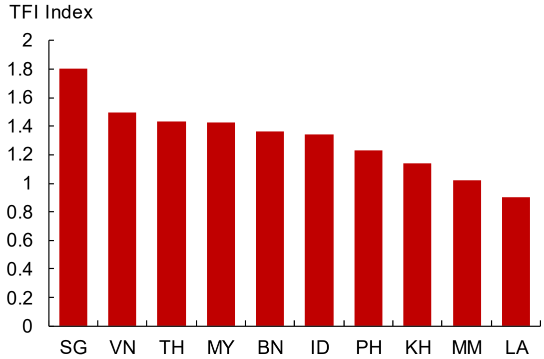
6.

Figure A4.9. TFIs for Laos 2017 vs 2019



Source: OECD TFI Indicators; AMRO staff calculations
Note: The TFIs take values from 0 to 2, where 2 represents the best performance that can be achieved.

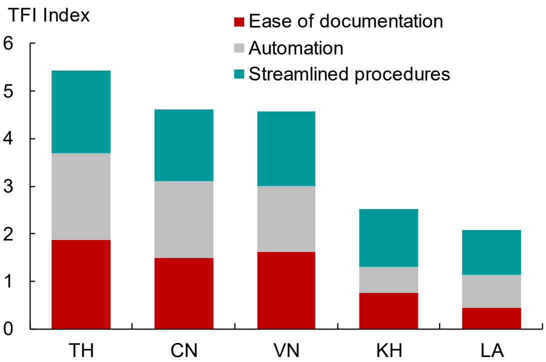
Figure A4.10. TFI Index in ASEAN Economies (2019)



Source: OECD TFI Indicators; AMRO staff calculations
Note: TFI index is a composite of the 11 TFIs.

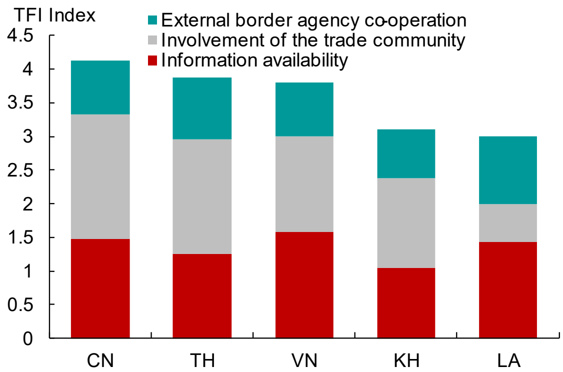
7. **Enhanced efficiency can be achieved through streamlining of procedures and enhancing automation by expanding ASYCUDA.** Compared to neighboring countries, Lao PDR has the lowest scores for procedures related to the processing of cargo from arrival to physical release by customs (Figure A4.11). Currently, ASYCUDA has been adopted at select border checkpoints and airports.[112] The full operationalization of ASYCUDA at all border checkpoints, and the complete transition to electronic processing, will greatly enhance the efficiency and accuracy of customs procedures.[113] In addition, the adoption of valuation control in the ASYCUDA platform will help flag declarations that are out of the expected range based on the commodity code, country of origin, and commercial description of declared goods.[114]

Figure A4.11. TFI on Procedures and Formalities



Source: OECD TFI Indicators; AMRO staff calculations

Figure A4.12. TFI on External Cooperation



Source: OECD TFI Indicators; AMRO staff calculations

[112] ASYCUDA is a computerized customs management system that covers most foreign trade procedures. In addition to handling customs declarations, accounting procedures and transit procedures, it also generates trade data that can be used for statistical economic analysis. ASYCUDA automated customs management system is installed and currently operated at 11 Lao border check points (out of a total of 24 border check points).
[113] The Lao PDR Time Release Study (2019) notes that despite the availability of electronic processing, a parallel paper-based process still requires traders to print out detailed customs declarations by using pre-printed forms, carry hard copies of supporting documents, and present all paper documents to customs at the face-vetting desk.
[114] The risk profiles in the ASYCUDA system need to be constantly updated to enable it to properly identify risky shipments. To operationalize this, customs staff need to regularly assess compliance and fraud, and calibrate this into the risk criteria set in the ASYCUDA system.

8. **Expand the Lao National Single Window to cover more government institutions to improve the flow of information and ease procedures.** Enhancing the integration of ASYCUDA with the Lao National Single Window (LNSW)[115] will enable better coordination between customs and other government agencies which will further enhance efficiency and reduce costs.[116] Furthermore, the LNSW can be linked to digital payment systems, such as Smart Tax, and the banking system. These will help fully shift tariff and tax payments towards digital payments instead of cash usage. The expansion of LNSW should also be accompanied by intensified training and capacity-building to effectively roll-out the LNSW to more users in the public and private sectors.

9. **Adopt regional and global initiatives to reduce discrepancy in exports and imports**. Although Lao PDR scores relatively well in external border agency cooperation (Figure A4.12), this can be further improved by integrating the LNSW with the ASEAN Single Window. Such a link would facilitate electronic exchange of data with other ASEAN member states, expediting the cargo clearance process and reducing cost and time towards enhanced trade efficiency and competitiveness. In this regard, strong efforts to implement the exchange of more e-documents using the ASEAN Single Window should be prioritized, with the adoption of the ASEAN Customs Declaration Document that supports risk management in importing countries, and reduces opportunities for fraud and abuse.[117] Such reforms will not only help increase revenue collection, but will also reduce clearance times at borders and airports, lower the cost of doing business, and improve transparency.

10. **Strengthen cooperation with customs agencies in neighboring countries.** Lao PDR can enter into a formal agreement with its major trading partners—particularly Thailand, China, and Vietnam—to enhance communication, facilitate information exchange, and strengthen cooperation in various border control and customs administration measures. The memorandums of agreement should help establish the working relationship and scope of collaboration between customs agencies, with a view to strengthen cooperation on trade facilitation (particularly in verifying the authenticity of trade documents) and support harmonization of customs procedures and data standards (through enhanced single window connectivity).

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[115] The LNSW is a portal where traders can submit all trade related documents and access all relevant information regarding trade via a single electronic gateway. The LNSW provides an effective interface for traders to connect with the government to ease the flow of goods.
[116] According to Lao PDR Time Release Study (2019), the lack of coordination among government agencies at the border resulted in multiple inspections, with government agencies other than customs accounting for almost half of the overall clearance time.
[117] In December 2020, Cambodia, Myanmar, and Singapore started the exchange of the ASEAN Customs Declaration Document through the ASW, followed by Malaysia and Thailand from 31 March 2021. The remaining ASEAN countries were expected to follow depending on internal timelines and in coordination with other ASEAN members.

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