

AMRO Annual Consultation Report

Lao PDR - 2023

ASEAN+3 Macroeconomic Research Office (AMRO)

November 2023

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 May 18 to June 2 (Article 5 (b) of the AMRO Agreement). The AMRO Mission team was led by Dr. Sumio Ishikawa (Mission Chief) and joined by Dr. Nguyen Thi Kim Cuc (Deputy Mission Chief), Dr. Yoki Okawa (Desk Economist), Ms. Ravisara Hataiseree (Fiscal Specialist), Ms. Chanthevivanh Keobounphanh (Advisor¹), Ms. Benyaporn Chantana (Associate Economist), Mr. Sota Nejime (Associate Researcher²), Ms. Phiengphathai Maniphone (Associate¹), Mr. Somphone Changdabout (Associate), and Mr. Naoaki Inayoshi (Consultant). AMRO Director Dr. Kouqing Li, Chief Economist Dr. Hoe Ee Khor, and Deputy Director Mr. Tetsuya Utamura also participated in key policy meetings with the authorities. The AMRO Annual Consultation Report on Lao PDR for 2023 was peer-reviewed by a group of economists from AMRO's Country Surveillance, Financial Surveillance and Fiscal Surveillance teams; endorsed by the Policy and Review Group; and approved by Chief Economist Dr. Hoe Ee Khor.
3. The analysis in this Report is based on information available up to July 3, 2023.
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.

Disclaimer: The findings, interpretations and conclusion expressed in this Report represent the views of the staff of ASEAN+3 Macroeconomic Research Office (AMRO) and are not necessarily those of its members. Neither AMRO nor its members shall be held responsible for any consequence from the use of the information contained herein.

¹ Until August 2023

² Until September 2023

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Executive Summary

1. The Laotian economy is expected to maintain its recovery from the pandemic. Economic growth increased to 4.4 percent in 2022, bolstered by the service sector following full economic reopening. GDP is expected to grow by 4.8 percent in 2023 as tourism and logistics benefit from enhanced connectivity with neighboring countries, including China.

2. Inflation is projected to remain elevated in 2023 after a multi-year high in 2022. Inflation surged to 23 percent in 2022, driven by rising food and fuel prices and exacerbated by a sharp kip depreciation. Month-on-month inflation stays elevated reflecting a gradual kip depreciation and higher inflation expectations. Inflation is expected to average 30 percent in 2023.

3. External balances are expected to improve after a deterioration in 2022. The improvement will be supported by a recovery in tourism receipts and FDI along with increased connectivity and business opportunities in renewable energy. The exchange rate depreciated sharply in H1 2022, triggered by an increase in fuel imports and amplified by accelerated currency substitution. Following the Bank of Lao PDR's (BOL) issuance of 4 trillion Kip bills in mid-2022 to mop up liquidity, the parallel rate stabilized. However, the depreciation has resumed since February 2023.

4. Growth in monetary base slowed in H2 2022 following the BOL monetary tightening but has picked up in 2023. BOL purchases of a large issuance of government bonds for bank recapitalization and arrears clearance in 2021 expanded the monetary base in H1 2022. The BOL bill issuance in June 2022 curbed monetary base growth substantially. However, the monetary base has expanded again along with the redemption of BOL bills and increased BOL credit to banks. It could expand further if BOL were to purchase the LAK8 trillion arrears-clearance bonds in 2023.

5. Bank-level data continues to exhibit financial fragility. While the aggregate Capital Adequacy Ratio (CAR) has improved following bank recapitalization, it is still low among local banks, with the largest bank falling below the minimum requirement. Moreover, the currently low Non-Performing Loans ratios could be masked by uncleared debt arrears related to government projects.

6. The budget deficit narrowed in 2022 while debt negotiation with some creditors continued. The fiscal deficit narrowed to 0.2 percent of GDP, thanks to increased tax revenue reflecting higher commodity prices, and one-time registration and licensing fees from the cryptocurrency industry and several pilot mining projects. The government cut non-interest expenditure and suspended interest payments to some creditors, equivalent to about 1.1 percent of GDP.

7. Slower than expected recovery in China would weigh on Laotian growth and external position via lower exports and FDI. A possible spike in global energy prices could put pressure on the exchange rate, inflation, and trade balance.

8. The government debt-to-GDP ratio is estimated to increase to 99 percent in 2022, reflecting the effects of depreciation. The government bonds issued to repay past expenditure arrears increased the debt stock in 2021. Ongoing arrears clearance could further push up government debt. Financial weakness in the state-owned electricity company (EDL) could inflict a fiscal burden.

9. It remains challenging to meet the government's increased foreign exchange needs. Given the thin gross international reserves, the government has secured forex through tax and non-tax revenue in foreign currencies, bond issuances in the Thai market, and suspension of repayment on some external debt pending negotiation.

10. Pockets of financial vulnerability remain as banks have potentially higher impaired loans. NPLs could increase upon the withdrawal of regulatory forbearance and/or the deterioration of restructured electricity-sector loans into bad debt. Recent kip depreciation would likely affect the debt service capacity of borrowers with FCY loans but earnings in kip.

11. BOL should tighten further its monetary policy by reducing the monetary base. BOL may need to reduce its credit provision to banks and other sectors. Issuing BOL bills with high interest rates to mop up liquidity outside the banking sector should be minimized, as the impact is temporary unless the BOL bill is continuously renewed at maturity, which is too costly for BOL. The BOL should sterilize the liquidity injection arising from its purchase of future debt-clearance bonds by raising the reserve requirement ratio (RRR) or issuing bills to the banks, to avoid an excessive increase in bank liquidity and the monetary base.

12. Moving forward, BOL should manage liquidity in the banking system more actively through its monetary operations. Ample liquidity, limited monetary operations, and inactive standing facilities have led to excessive expansion of the monetary base. It is recommended that BOL strengthens its capacity to regulate liquidity conditions among banks via monetary operations.

13. The authorities are encouraged to adopt market-friendly policies to increase the supply of foreign exchange. The BOL should continue to make timely adjustments to the reference exchange rate. FX management measures, which are administrative in nature, should be temporary and time-bound, and policy details should be clearly communicated to relevant stakeholders in a timely manner.

14. Policy measures to strengthen the banking sector's soundness should be stepped up. Banks should review the quality of their loan books regularly and appropriately increase provisioning as regulatory forbearance is phased out. Efforts to resolve NPLs should be sped up and clearly communicated to banks. Specific measures should be taken against banks with a CAR below the minimum requirement. Timely and clear guidance is needed to ensure a smooth transition to the implementation of Basel II standards and IFRS9 among banks.

15. Ensuring fiscal discipline is crucial to prevent arrears from recurring. To avoid future arrears, capital expenditure ceilings have been applied on ministries and local governments. These ceilings must be accompanied with rigorous monitoring and enforcement of spending commitments. Furthermore, greater efforts should be made to enhance public finance management.

16. The government should enhance its fiscal consolidation plan. The VAT rate should be restored to 10 percent. Revenue mobilizing efforts including reviewing tax incentives should continue. The government should also negotiate with its major creditors to reschedule its external debt repayments in order to ease pressure on foreign exchange. As a temporary measure, raising fiscal revenues in foreign currency from new sources may be considered. In the long run, the government should study how to maximize the benefits from the transfer of assets of the hydropower plants to the government under the BOT agreement.

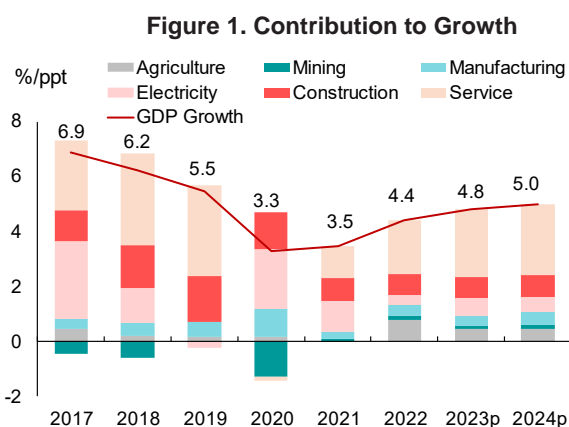
17. SOE reform should be accelerated to contain the government's contingent liabilities. To improve EDL's financial position, the government should consider raising electricity tariffs to a cost recovery level for all sectors, while providing subsidies to offset the impact on vulnerable groups. The government may eventually consider injecting capital into EDL. EDL's efforts on transparency, notably by publishing audited financial statements, should be expedited.

18. Structural reforms should be expedited to bolster momentum towards inclusive and sustainable growth. Vocational programs should be reinforced to increase the supply of skilled workers. Business processes should be streamlined, for instance, by utilizing digital platforms. The authorities should take advantage of their ample renewable energy resources, while adaptation issues should be timely and comprehensively addressed.

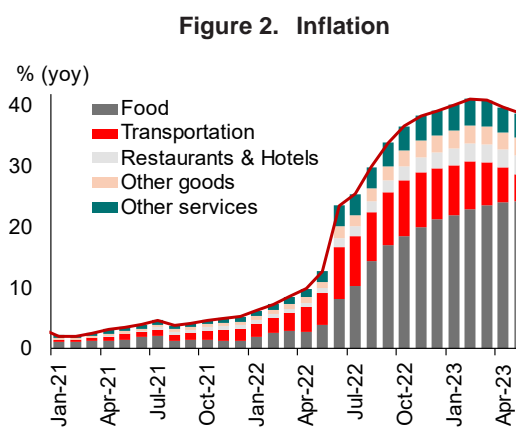
A. Recent Developments and Outlook

A.1 Real Sector Developments and Outlook

1. The Laotian economy is expected to maintain its recovery from the pandemic. Economic growth increased from 3.5 percent in 2021 to 4.4 percent in 2022. The growth was bolstered by the ongoing recovery of the service sector following the full reopening of the economy and robust expansion in the construction and agriculture sectors. While the National Assembly has set a growth target of 4.5 percent for 2023, growth is expected to reach 4.8 percent, as tourism and logistics benefit from the reopening of China and enhanced connectivity with neighboring countries³. In addition, mining sector activity is likely to be stronger than anticipated due to the expansion of the Phu Bia mine⁴. Growth in 2023 will also be supported by increased electricity generation capacity from the opening of new hydro power plants.



Source: Lao Statistical Bureau; AMRO staff estimates



Source: Lao Statistical Bureau; AMRO staff estimates

2. Inflation is projected to remain elevated in 2023 after reaching a multi-year high in 2022. Headline inflation averaged 23 percent in 2022, primarily driven by rising domestic food and fuel prices, against the backdrop of spikes in global commodity prices, especially oil, and a sharp depreciation of the Kip. Moreover, persistently high inflation may have pushed up inflation expectations. Month-on-month inflation came off the peak toward the end 2022, as the currency somewhat stabilized after June 2022, and global oil prices eased. However, inflation has picked up in recent months to reach 2.4 percent (mom) in May 2023, higher than the historical average of 0.2 percent, on the back of resumed depreciation and higher inflation expectation.⁵ Continued depreciation and base-effects are expected to push up the annual inflation to 30 percent in 2023.

3. Improvement in connectivity is unlocking Laos’s economic potential for inclusive and sustainable growth. The transportation landscape of Lao PDR has improved significantly since the Laos-China Railway⁶ began commercial operation in December 2021.

³ Lao China Railway and Thanaleng Dry Port started operation in December 2021.

⁴ Phu Bia mine produces copper, gold, and silver.

⁵ Inflation is broad based: Annual price increased more than 20 percent for 11 categories out of a total of 13 categories under the consumer price index.

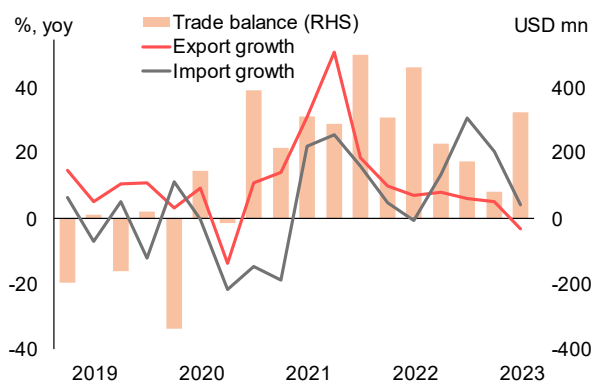
⁶ The Laos-China Railway connects the Laotian capital of Vientiane and Kunming in southwest China’s Yunnan province with a total length of 1,035km. The Laotian section of the railway runs about 400km between Vientiane and Boten, a city in northern

The railway has reduced traveling time and logistics costs, reinforcing Lao PDR's attractiveness as a tourist and investment destination. By the end of February 2023, it was reported that the railway's Laos' section had carried 1.6 million passengers and 3.5 million tons of goods, while China's section handled 8.7 million passenger trips and 12.5 million tons of goods. Also, there were 3 million tons of cross-border shipments. With the reopening of China and the resumption of international travel across the world, improved connectivity will support the recovery of Lao's tourism sector and its related industrial activities, diversifying the economy from the resource sector in the long run.

A.2 External Sector and the Balance of Payments

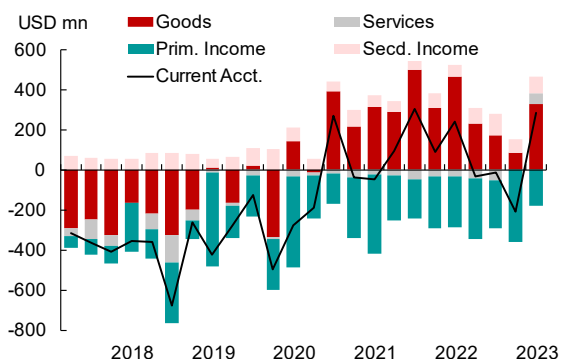
4. External balances are expected to improve after a deterioration in 2022. The current account balance deteriorated due to lower export growth, while economic recovery and surging energy prices increased the value of imports. The financial account continued to weaken on the back of a slowdown in foreign direct investment (FDI). The overall BOP recorded a larger deficit of USD 142 million in 2022 and gross international reserves declined to USD 1.1 billion, equivalent to 1.7 months of gross imports at end-2022. External debt remained almost unchanged in U.S. dollar terms, standing at USD 15.9 billion at end-2022, equivalent to 127 percent of GDP. Moving forward, the external accounts are expected to be supported by increased tourism receipt and higher FDI inflows, amid the reopening of China, greater connectivity, and new renewable energy projects⁷.

Figure 3. Trade Balance



Source: BOL
Note: 4-quarter moving averages

Figure 4. Current Account



Source: BOL

5. Kip has continued to depreciate in 2023 following a sharp depreciation in 2022. The commercial bank exchange rate depreciated by 22 percent against the U.S. dollar between February and June 2022⁸. The parallel market rate depreciated even more, by 32 percent during the same period. As a result, the gap between the bank rate and the parallel rate

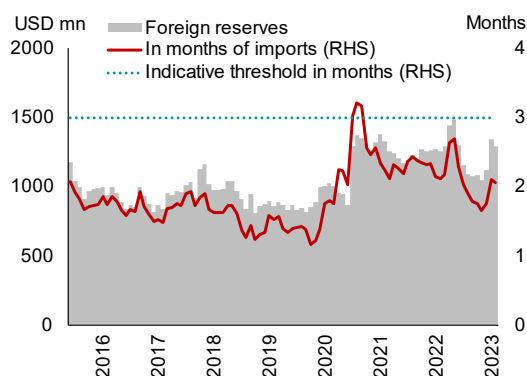
Lao PDR bordering China. The Chinese section runs 600km between Kunming and Mohan, a city bordering Laos. Both sections started commercial operation in December 2021. The Laotian section costed USD 5.9 billion and was built in cooperation with China as part of the Belt and Road Initiative.

⁷ There is a 600-megawatt Monsoon Wind Power Project, which spans across both Xekong province and Attapeu province. The electricity generated will be supplied to Vietnam. The construction period is end-2022 to 2025. The total cost of the project is USD 930 million, which is partially financed by the Asian Development Bank.

⁸ The BOL reference rate, set by BOL every morning, is used as a reference point for commercial banks to set their exchange rates (bank rate). A parallel market rate is applied to FX transaction outside of the banking system based on demand and supply.

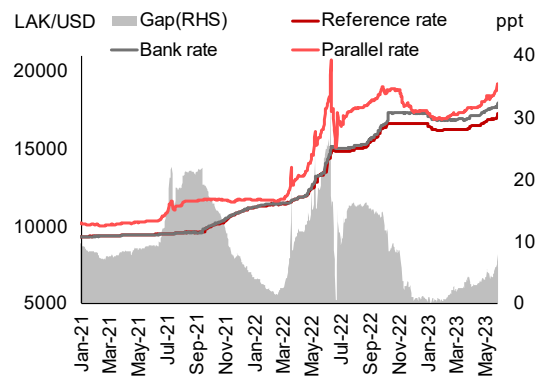
widened to 18 percent in June 2022. The depreciation was triggered by an increase in fuel imports on the back of a sharp rise in global oil prices and accelerated by increased currency substitution due to ample kip liquidity fueled by higher monetary base growth after end-2021⁹. Reflecting BOL’s issuance of bills to mop up liquidity, the Kip parallel rate was stabilized in H2 2022 and into early 2023, and the gap between the bank rate and parallel rate narrowed. That said, the currency started to depreciate again after February 2023. Some gap between the two rates is expected to persist, because the banking system cannot satisfy foreign currency (FCY) needs.

Figure 5. International Reserves



Source: BOL
Note: 4-quarter moving averages

Figure 6. Exchange Rates



Source: BOL
Note: Bank rates are set by commercial banks, and they could fluctuate within a certain band from the reference rate, which was set by BOL every day. Gap is defined as the percentage difference between commercial bank rate and parallel rate.

Authorities’ View

6. The authorities have reported that as of December 2022, the gross international reserve was equivalent to 3.14 months of imports. In their view, the coverage ratio of 1.7 months of gross imports used by AMRO understates the import coverage ratio because gross imports include imports of investment goods which are part of foreign direct investment. Hence, the authorities argued that the import coverage ratio should be 3.14 months of import, rather than AMRO’s estimate of the 1.7 month of import.

A.3 Monetary Condition and Financial Sector

7. The BOL tightened monetary and foreign exchange (FX) management policy to stabilize the exchange rate and control inflation in mid-2022.

- a. Policy rate.** The policy interest rate was raised twice in 2022 and once in February 2023, from 3.0 percent to 7.5 percent¹⁰.
- b. Reserve requirement ratio.** During 2022 and 2023, the reserve requirement rates for Kip and foreign currencies were increased to 5.5 percent (from 3 percent) and 8 percent (from 5 percent), respectively.

⁹ The depreciation from July to October 2022 and appreciation from October 2022 to January 2023 could be associated with the movement of the U.S. dollar value index.

¹⁰ Policy rate is a rate applied to the standing facility for commercial banks’ reserve management and has little correlation with rates offered by the commercial banks to the customer.

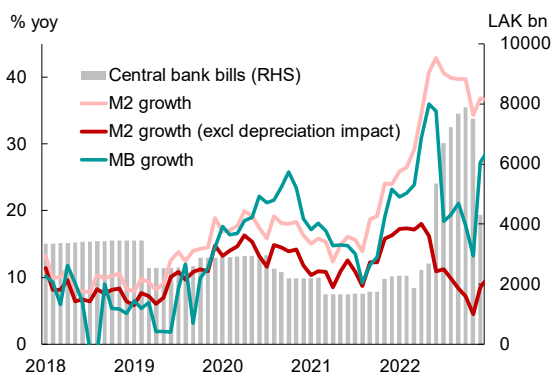
- c. BOL bill issuance.** The BOL issued Kip bills totalling an estimated LAK4.6 trillion between June and November 2022, with a tenure of six months and an annual interest rate of 20 percent.¹¹ The bills were sold to the non-banking sector to absorb the ample liquidity (outside banks) amid by BOL's purchase of a large issuance of bonds by the government to clear its arrears with the private sector - and ease imbalances in the FX market (Box A). The BOL issued additional bills worth 1 trillion kip twice, in January and February 2023 to partially re-absorb the liquidity released from the redemption of the bills issued in 2022. The BOL issued yet more bills, worth 2 trillion in May 2023 with a 15 percent interest rate.
- d. FX market regulations.** The BOL has tightened FX regulations by restricting access to FX bureaus by individuals, who are now subject to a daily cap, while businesses are required to conduct FX transactions with only commercial banks. The FX management law was also amended and is pending implementation upon the issuance of sub-laws and regulations. According to the amended law, the effectiveness of the export earnings repatriation regulations has been enhanced by requiring exporters to designate a single account for all external transactions. Part of the export earnings might also be required to be converted into the Kip, with specific details to be determined by the BOL. To strengthen its control of exchange rates offered to non-bank customers, the BOL has ordered FX bureaus to be merged into commercial banks' FX business, and to use bank rates in their transactions starting January 2023.
- e. Exchange rate management.** The BOL also adjusted its reference rate against the U.S. dollar to close the gap with the parallel rate by January 2023. In addition, it further widened the trading band for the bank rates to ± 4.5 percent of the BOL reference rate in October 2022 from ± 1.5 percent, which had, in turn, been widened from ± 0.25 percent in September 2021. In June 2023, BOL further widened the trading band to ± 7.5 percent.

8. Broad money growth slowed following BOL monetary tightening in mid-year but picked up at the end of 2022. A large issuance of government bonds related to arrear clearance, called triangulation bonds, and bank recapitalization, led to a rapid expansion in loan growth and monetary base in the first half of 2022. The BOL bill issuance temporarily curbed monetary base growth and halted the acceleration of broad money (M2) growth in mid-2022. M2 growth peaked at 43 percent in June 2022, but moderated and stood at 37 percent as of end-2022 (Box A).¹² That said, monetary base expanded again recently following the maturity of the BOL bills and an increase in BOL's credit to banks, SOEs and the government.

¹¹ BOL announced to issue LAK5 trillion worth of BOL bills, and the actual issuance is estimated at LAK4 trillion

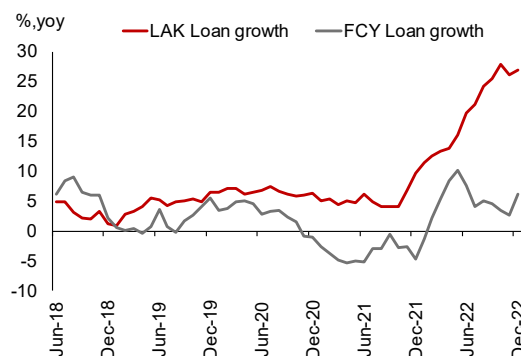
¹² According to AMRO staff estimates, the growth of broad money after removing the impact of LAK depreciation moderated from the peak of 25 percent to about 18 percent as at end-2022.

Figure 7. BOL and Bank Liabilities



Source: BOL; AMRO staff calculations

Figure 8. Loan Growth



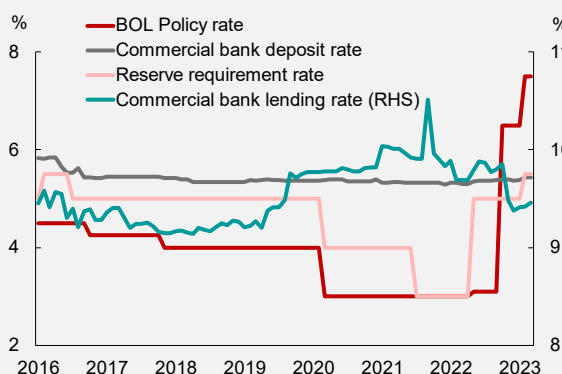
Source: BOL

Note: FCY Loan growth is in foreign currency

Box A. Impact of Large-Scale Issuance of BOL Bills on Monetary Conditions¹³

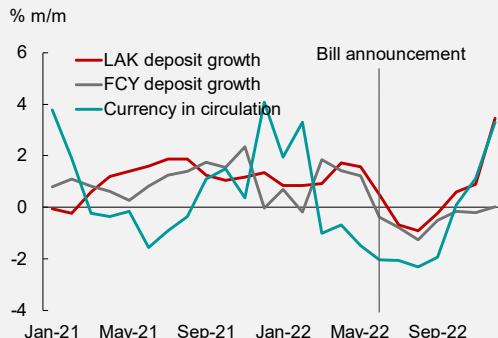
Conventional monetary policy instruments have limited effectiveness in Lao PDR. To contain a sharp currency depreciation and inflation, BOL has since mid-2022 increased policy rates and reserve requirement ratios, which were lowered during the pandemic. Despite these efforts, commercial bank deposit rates remained flat while lending rate declined in 2023 (Figure A1). Monetary policy transmission was undermined by the unsterilized injection of liquidity into the banking system from the BOL's purchase of government bonds. As a result, there was excess liquidity in the banking system which led to a disconnect between BOL's policy rates and interbank interest rates. In addition to ample liquidity conditions, a large share of term deposits and fixed-rate loans in total bank loans might have also contributed to relatively sticky deposit and lending rates in Lao PDR.

Figure A1. Interest rates



Source: BOL
Note: BOL policy rate is a standing facility rate for less than one week. Commercial bank lending rates and deposit rates are in one year term. Reserve requirement rate and interest rates are applied to Kip.

Figure A2. Deposit and Currency



Source: AMRO staff estimates
Note: month-on-month percent change, 3-month moving averages. Data ends in December 2022.

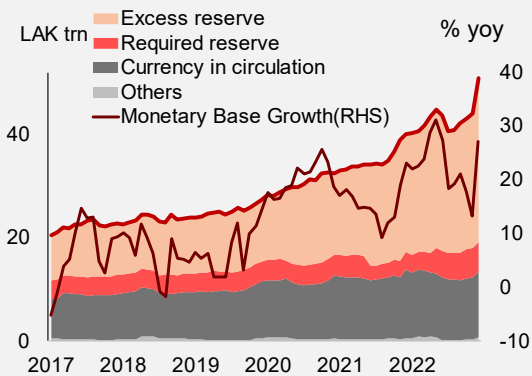
The announcement of a large BOL bill issuance in mid-2022 was effective in stabilizing the exchange rate. Together with the hikes in the policy rate and reserve requirement ratio, the BOL announced the issuance of a large amount of BOL bills, totaling 5 trillion Kip, in June 2022 to mop

¹³ This box is prepared by Chanthevivanh Keobounphanh, Advisor, Phiangphathai Maniphone, Associate, and Yoki Okawa, Economist.

up excess liquidity to support Lao kip which had depreciated sharply¹⁴. The bills were sold from June to September in phases to non-banks and households with a six-month tenure and an annual interest rate of 20 percent¹⁵. During that period, about Kip 1.0 trillion and USD 296 million of deposits were withdrawn from May to September by customers to purchase the bills (Figure A2)¹⁶. The reduction in Kip liquidity and the conversion of foreign currency deposits into kip to purchase the BOL bills reduced pressures on the FX market and stabilized the exchange rate (Figure 6). While the parallel exchange rate peaked at 20,715 LAK/USD on June 14, 2022, it appreciated by 28 percent from June 14 to 24 and was relatively stable afterward (Figure A4).

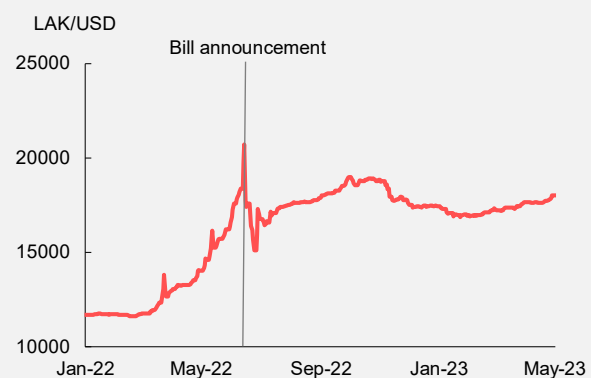
The BOL bill issuance also contained the growth of the monetary base, contributing to the slowdown of inflation. During the same period, the currency in circulation dropped by 987 billion Kip, which, together with a drop in excess reserves, reduced the monetary base growth. The decline in excess reserves was due to the withdrawal of the deposits amid the increase in the reserve requirement ratio (Figure A3). The growth of the monetary base dropped sharply to 18 percent in July after peaking at 36 percent in May. Month-on-month inflation, which peaked at 10 percent in June 2022, gradually slowed to 0.8 percent in December 2022.

Figure A3. Monetary Base



Source: BOL

Figure A4. Exchange rate



Source: BOL

Note: Parallel exchange rate for kip and USD.

High interest rate bills could be effective only in the short run. The excess liquidity in Kip was successfully absorbed from the market due to the high interest rate of the BOL bills. However, high interest rates will eventually increase the monetary base at the time of redemption, creating additional pressure on the exchange rate and inflation. Monetary base growth rebounded to 27 percent in December 2022 from 13 percent in November as the bills issued in June 2022 were being redeemed (Figure A3, Figure 7)¹⁷. Total interest payments for the bills issued in 2022 and 2023 are estimated at LAK 825 billion, or 1.6 percent of the monetary base.

9. The interbank market is in the early stage of development in Lao PDR. While initial regulations were issued as early as the 1990s, the legal framework and infrastructure of the interbank market were improved in 2016 with the launch of an electronic interbank trading platform, Interbank2018. Current regulations allow Lao banks to conduct short-term lending

¹⁴ During the Asian financial crisis, the BOL issued bills with interest rates ranging from 24 percent to 60 percent between 1998 and 2001. Short-term bills, with tenures of three months, six months, and one year, were also issued in the past when a sharp exchange rate depreciation occurred. The annual interest rates were ranged from 20 percent to 60 percent.

¹⁵ Commercial banks were not allowed to buy the bills.

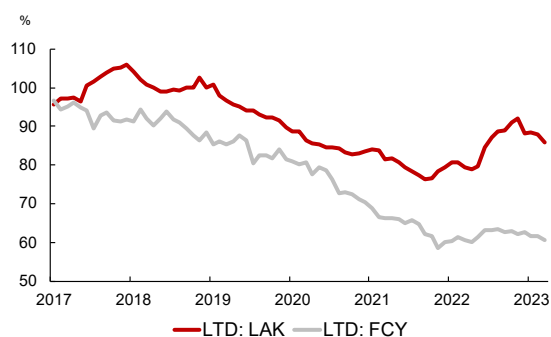
¹⁶ USD 296 million is equivalent to about 25 percent of gross international reserve.

¹⁷ To partially re-absorb the liquidity released from the redemption of the bills issued in 2022, the central bank issued additional bills worth 1 trillion Kip in both January and February 2023, and 2 trillion Kip in May 2023.

and borrowing in both kip and FCY, and to carry out FX trading.¹⁸ That said, transactions in the interbank market have been mostly on FX trading, primarily in the form of spot transactions.¹⁹ FX transaction volumes have declined in recent years, especially for the U.S. dollar, underpinned by weakening FX supply relative to demand. In addition, a widening gap between the interbank and parallel market rates further constrained FX supply to the interbank market. Meanwhile, there have been few interbank transactions of short-term borrowing and lending using Interbank2018 trading platform as banks are cautious about the repayment capacity of borrowing banks. Most banks prefer to borrow and lend on a bilateral basis instead.

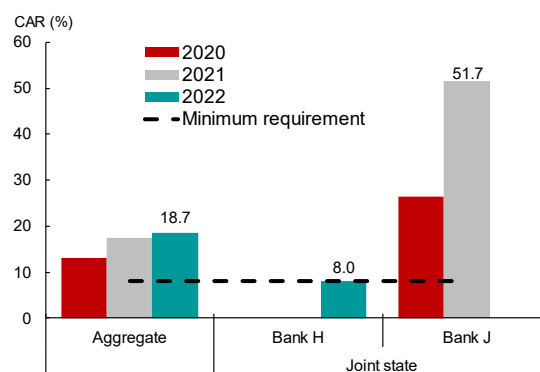
10. Kip liquidity among banks has been ample, although it tightened in H2 2022. As loan demand recovered in line with the reopening of the economy in 2022, credit growth accelerated, especially for kip loans.²⁰ In addition, the recent recapitalization of two joint state commercial banks,²¹ namely Lao Development Bank and Agricultural Promotion Bank, has raised their capital adequacy ratios (CARs) and allowed these two banks to resume normal lending activity.²² The strong loan growth might have also been associated with the improved financial position of several banks and construction companies due to the government’s arrears resolution in 2021. Meanwhile, deposit growth slowed markedly from mid-2022 as many depositors likely switched from bank deposits to BOL bills with higher interest rates. As a result, liquidity conditions became tighter, as reflected in a pickup in the loan-to-deposit (LTD) ratio, especially for the kip, to about 90 percent in Q3 2022 (Figure 9). That said, liquidity conditions have eased significantly in recent months, driven by a rebound in deposit growth following the redemption of central bank bills at end-2022.

Figure 9. Loan-to-Deposit Ratio by Currency



Source: BOL; CEIC; AMRO staff calculations
Note: Monthly data is up to March 2023.

Figure 10. CAR by Bank



Source: BOL
Note: Dashed line denotes 8 percent threshold.

¹⁸ In addition to interbank lending and borrowing and FX trading transactions, Interbank2018 also processes transactions between the BOL and banks, or open market operations.

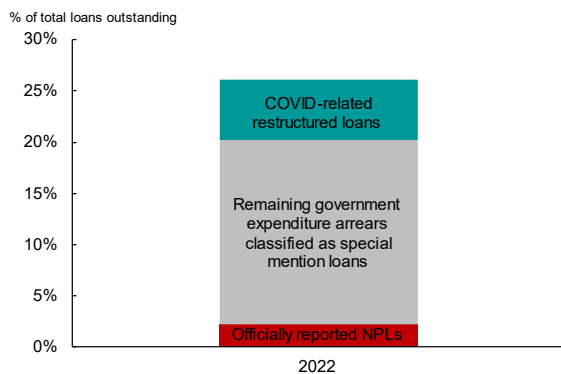
¹⁹ FX spot transactions are frequently conducted in LAK/USD and LAK/THB. In addition to FX spot transactions in LAK/USD and LAK/THB, Interbank2018 supports LAK/RMB and other currencies, depending on market demand.

²⁰ Kip loans grew by 25 percent year on year in September 2022, up from 9.6 percent as at end-2021. FCY loans in U.S. dollar terms also picked up but to a lesser extent, standing at 2.9 percent yoy as of September 2022, compared to a contraction of 5.3 percent as at end-2021.

²¹ The banking system in Lao PDR comprise a state-owned commercial bank (where the state’s share is more than 50 percent), joint state banks (with the state’s share below 50 percent), private banks, foreign bank branches, and foreign bank subsidiaries. Lao Development Bank and Agriculture Promotion Bank used to be state-owned commercial banks prior to the recapitalization in 2021 when 70 percent of their shares were sold to domestic investors.

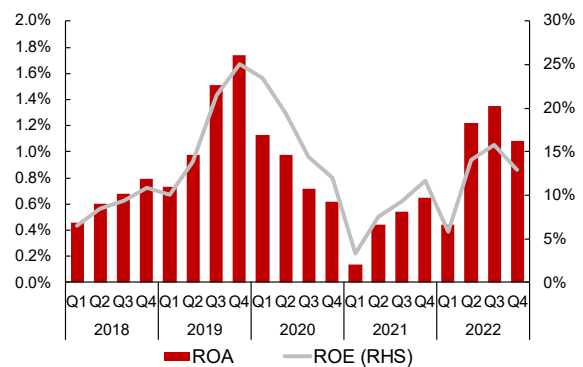
²² For example, Lao Development Bank reported that its net loans and advances to customers more than doubled from LAK8,131 billion as at end-2021 to LAK17,460 billion as at end-2022.

Figure 11. Loans at Risk



Source: BOL; LMOF
Note: Data is as of end-2022.

Figure 12. Bank Profitability



Source: BOL

11. Bank-level data continued to exhibit divergence across banks as financial soundness indicators showed fragility in several banks. Capital injections, including to the two joint state commercial banks in 2021, had lifted the aggregate CAR to 18.7 percent as of Q4 2022, which was well above the minimum regulatory requirement of 8 percent (Figure 10). That said, the CAR remained low among local banks. Similarly, the aggregate non-performing loan (NPL) ratio moderated to 2.2 percent in Q4 2022, but asset quality and coverage of loan-loss reserves vary across banks. The true loan quality may be masked by the pandemic-induced regulatory forbearance policy, with restructured loans comprising 6-7 percent of total outstanding loans as of end-2022.²³ Furthermore, uncleared expenditure arrears related to government projects may remain on banks' books in the form of performing loans under the "special mention" category.²⁴ While a rebound in loan growth supported the improved overall profitability of the banking system (Figure 12), several banks reported weaker profits or even larger losses in 2022.

12. Ongoing efforts to strengthen banking supervision and regulation include a review of loan restructuring related to COVID-19, and Basel II and International Financial Reporting Standards (IFRS) 9 implementation. Given the recent recovery in borrowers' repayment capacity, the BOL has instructed banks to gradually phase out the use of such forbearance measures by the end of the year. Basel II adoption has progressed into the second phase, with banks expected to at least implement minimum Basel II criteria on capital adequacy (Pillar 1),²⁵ as well as to start the internal capital adequacy assessment process and achieve information disclosure by 2023 (Pillars 2 and 3). Implementation progress varies across banks (Box B). The BOL is also planning to switch to a risk-based supervisory approach and is conducting regular workshops with banks in this phase. In terms of IFRS 9 adoption, it has set up a committee to work with commercial banks to conduct gap analysis and prepare for full implementation by 2026. Some banks have begun their own internal adoption of IFRS9, ahead of the launch of the BOL's formal regulatory requirements.

²³ According to BOL Decision No. 238 on Regulatory Forbearance for COVID-19, dated March 26, 2020, banks are allowed to classify restructured loans in the same loan group as they were before restructuring, and to classify loans affected by the pandemic and turned into NPLs ("substandard" and/or "doubtful") since January 1, 2020, into performing loans ("special mention" loans). Banks could also restructure loans more than twice. As well, they are permitted to extend new loans to customers affected by the COVID-19 pandemic and classified as "substandard" since January 1, 2020.

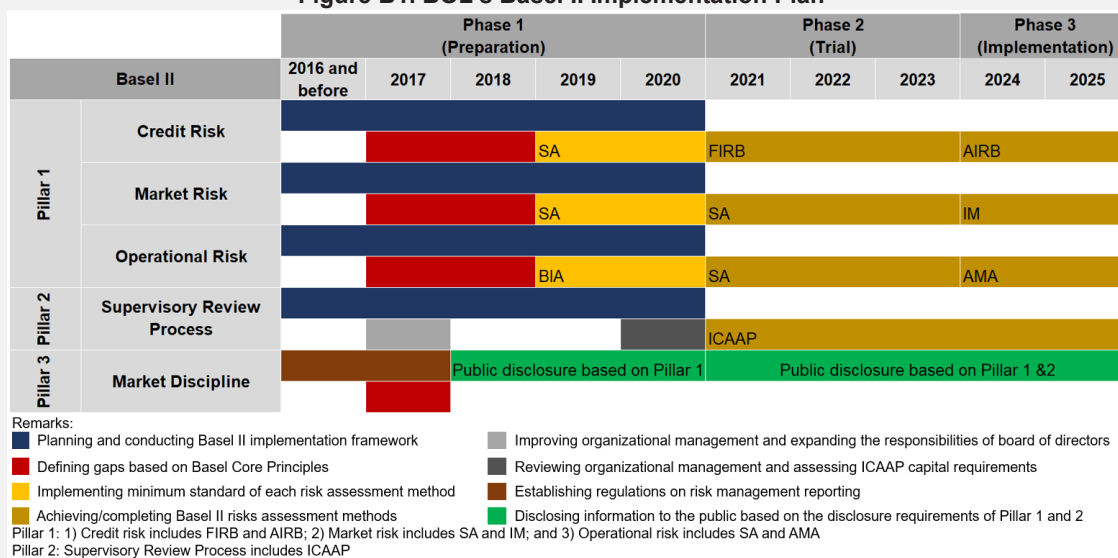
²⁴ Government expenditure arrears that remained uncleared were estimated at about LAK23 trillion as of 2022, comprising around 18 percent of total outstanding loans, or 10.7 percent of 2022 GDP. The government plans to clear part of these arrears by issuing bonds worth LAK8 trillion in 2023. See paragraph 15 for details.

²⁵ Basel II standards for calculating capital adequacy require banks to consider market and operation risks in addition to credit risks, which fall under Basel I standards.

Box B. Progress of Basel II and IFRS 9 Implementation²⁶

The BOL aims to strengthen its banking sector soundness, including by aligning its supervisory practices with international standards. In the Strategic Plan for Financial Sector Development of the Lao PDR (2016-2025), BOL plans to adopt Basel II standards in three phases²⁷, with the goal of enhancing banks' risk management by aligning capital adequacy requirements with banks' risk profiles (i.e., credit, market and operational risks), improving supervisory capacity (by moving toward a risk-based supervisory approach, and strengthening disclosure and market discipline (Figure A1). There is also a plan to achieve full adoption of IFRS 9 by 2026, which allows banks more discretion to incorporate forward-looking information into loan-loss provisions via the expected credit loss (ECL) framework, hence requiring earlier and larger impairment allowances and thereby enhancing financial stability.

Figure B1. BOL's Basel II Implementation Plan



Source: BOL, AMRO Lao PDR Annual Consultation Report 2019

Note: The abbreviated names are as follows: Standardized Approach (SA); IRB (Internal-Ratings Based Approach); FIRB (Foundation IRB); AIRB (Advanced IRB); IM (Internal Model); BIA (Basic Indicator Approach); AMA (Advanced Measurement Approach); ICAAP (Internal Capital Adequacy Assessment Process)

Banks have been at various stages of Basel II implementation. Most local banks are calculating their credit risk under Basel II using BOL's methodology guidelines for the standardized approach issued in May 2023, which was initially planned to be implemented in 2019. Meanwhile, some foreign banks are frontrunning official regulatory requirements by the BOL by internally adopting elements of Basel II, such as their own internal credit, market, and operational risk assessments, provisioning models, and calculation of CAR, supported by the technical expertise from their parent banks.

Likewise, the progress of IFRS 9 adoption varies across banks. Although the BOL has already set up a committee with banks to conduct gap analyses for IFRS 9 implementation, the issuance of relevant regulations seems to be delayed, which will limit the amount of historical data needed to calculate ECL at the time of actual implementation. While most local banks are still waiting for BOL's

²⁶ This box is prepared by Benyaporn Chantana, Associate Economist, with contribution from Nguyen Thi Kim Cuc, Deputy Group Head and Senior Economist

²⁷ In the first phase between 2017 and 2020, BOL and banks were in the preparation to move toward Basel II implementation by conducting gap analysis of banks, determining supervision methods of BOL and legal framework on risk management, including issuing regulations on implementation of minimum Basel II standards on capital requirements. This phase also selected several pilot banks to trial the implementation of the above-mentioned minimum standards on capital requirements. In the second phase, BOL is expected to issue relevant regulations on banks' internal capital adequacy assessment process (ICAAP) and disclosure. In addition, BOL shall switch to the risk-based supervision approach and conduct workshops with banks consistently. Pilot banks may implement foundation internal rating-based approach for capital measurement for credit risk, standardized approach for market risk and operational risk, and implement corporate governance requirements to be ready for implementing ICAAP. Phase 2 is expected to end in 2023. In the third phase that ends in 2025, BOL shall issue regulation for banks to be able to implement capital measurement based on more advanced approaches, as well as improve legal framework and reassessment of Basel standards compliance. Pilot banks may implement capital measurement based on the advanced internal ratings-based approach for all risks, shall conduct ICAAP and disclose all required information.

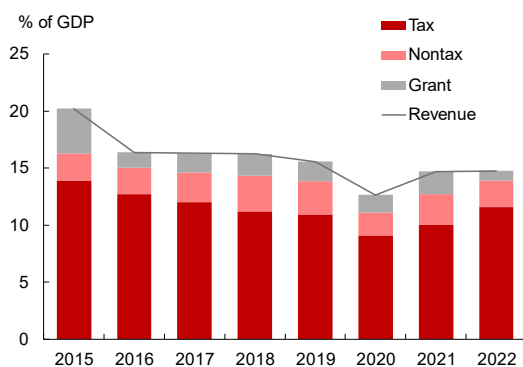
guidelines, several foreign banks have already implemented IFRS 9 internally on a pilot basis, in order to minimize large swings in provisioning requirements in 2026.

A few challenges lie ahead for a smooth adoption of Basel II and IFRS 9. With limited capacity and resources, BOL has found it challenging to effectively evaluate banks' compliance and provide them with timely guidelines and feedbacks, considering banks' varying implementation schedules. On a positive note, BOL has been actively seeking technical assistance from diverse sources, including from AMRO,²⁸ to enhance their supervisory capacity. Several local banks that underwent recapitalization in 2021 and restructuring which disrupted their Basel II and IFRS 9 implementation may face difficulty in starting the process anew. Another challenge is the impact on banks' balance sheets. As IFRS 9 introduces the forward-looking ECL framework for the recognition of loan impairment, banks will be required to set aside earlier and larger loan-loss provisions,²⁹ which may adversely affect their profitability and capital adequacy ratio. Local banks' capital buffers are already thin, so this shift towards more risk-based capital requirements under Basel II and expected loss provisioning under IFRS 9 may potentially lead to even larger shortfalls in profits and capital adequacy.

A.4 Fiscal Sector

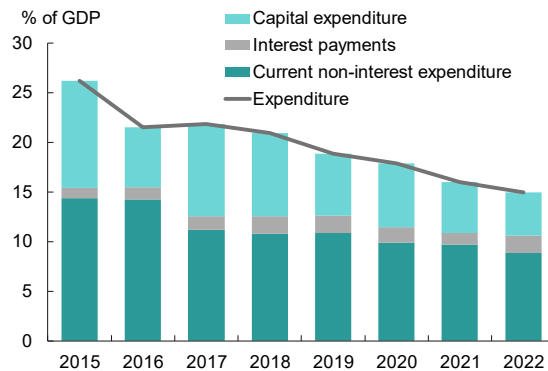
13. The government incurred a small fiscal deficit in 2022, and debt negotiations with creditors are still ongoing. Firming economic growth and higher commodity prices increased tax revenue from 10.0 percent of GDP in 2021 to 11.6 percent in 2022, despite a VAT rate cut from 10 percent to 7 percent effective from January 2022³⁰. (Figure 13) Furthermore, the collection of one-time registration and licensing fees for the cryptocurrency and mining sectors also supported revenue in 2022. Meanwhile, expenditure declined from 16.0 percent of GDP in 2021 to 15.0 percent in 2022, mainly driven by lower current non-interest expenditure and lower public investments. (Figure 14) In addition, the government has continued to suspend interest payment to a major creditor, equivalent to around 1.1 percent of GDP, amid on-going debt negotiation.³¹ On a cash basis, the budget deficit therefore declined to 0.2 percent of GDP in 2022 from 1.3 percent of GDP in the previous year. (Figure 15)

Figure 13. Government Revenue



Source: Lao PDR Ministry of Finance (LMOF)

Figure 14. Government Expenditure



Source: LMOF

Note: Interest payments reflect actual payments and do not include unpaid interest payments to some creditors.

²⁸ AMRO has provided BOL with technical assistance in conducting liquidity stress testing and bank scorecard exercise.

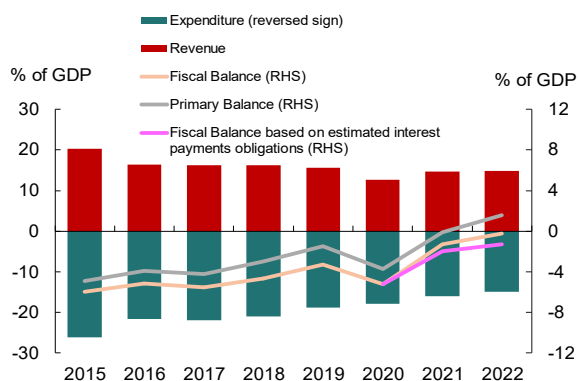
²⁹ Under IFRS 9, impairment of loans is recognized in three stages. In stage one, when a loan is originated, its ECLs for the next 12 months are recognized, and a loss allowance is established accordingly. Under stage 2 (credit risk increased significantly but not yet impaired) and stage 3 (credit-impaired), lifetime ECLs are recognized.

³⁰ Tax revenue to GDP peaked at 14.1 percent in 2013 and was on the downward trend before the pandemic.

³¹ The government also suspended the interest payment to some creditors in 2021 and 2022. This will be referred as "unpaid interest payments" in the remainder of the current report.

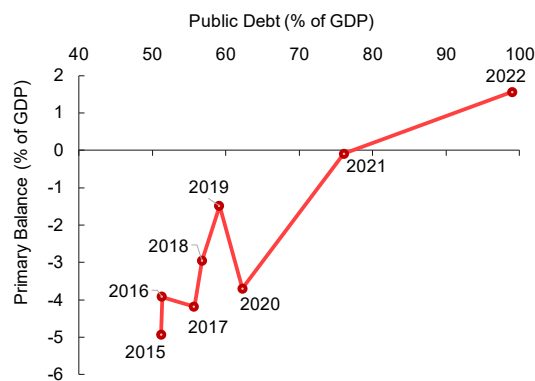
14. The fiscal deficit is expected to widen in 2023 reflecting lower revenue due to the absence of one-time fees and higher expenditure. While tax revenue remains strong due to an expansion of the tax base, revenue as a share of GDP is expected to decline, driven by the absence of the above-mentioned one-time registration and licensing fees. The realization of delayed investment and increased public sector benefits is expected to raise expenditure. Therefore, the fiscal deficit is projected to widen to 0.8 percent of GDP³²,

Figure 15. Fiscal Balance



Source: LMOF and AMRO's staff estimation
Note: The fiscal deficit, the yellow line, is based on actual interest payments and excludes unpaid interest payment obligations. Pink line shows the deficit level with full interest payment obligations estimated by AMRO.

Figure 16. Debt to GDP



Source: LMOF and AMRO's staff calculation

15. Sharp currency depreciation has pushed up the government debt-to-GDP ratio while the government's need for foreign exchange to repay its external debt has remained elevated. Notwithstanding a significant decline in the fiscal deficit, government debt is estimated to increase from 77 percent of GDP in 2021 to 99 percent in 2022³³, reflecting the sharp depreciation of Kip. (Figure 16) The FCY debt service repayment burden has risen to above USD1 billion annually since 2020. The government secured forex to service its debt payments mainly through FCY component of its tax and nontax revenues, and bond issuance in Thailand in 2022³⁴; in addition, the government has suspended debt repayment to some official creditors (in 2020-2022) pending the conclusion of negotiations on rescheduling of the debt which are still underway³⁵. The government's FCY needs in 2023 are estimated at USD1.5 billion, equivalent to about 10 percent of GDP. Meanwhile, the government's potentially available forex is estimated at USD700 million, equivalent to 5 percent of GDP. This excludes EDL's loan repayment to the government³⁶. However, even if the government is able meet its repayment obligations in 2023, it will still have a problem meeting its debt repayments in the medium term as they are projected at about USD 1.1-1.5 billion per year from 2024 to 2027.

16. Large scale arrears clearance through bond issuance continues. The authorities have identified potential public investment expenditure arrears amounting to 33 trillion Kip³⁷. Arrears

³² Should the suspension in debt repayment continue in 2023, the fiscal deficit would likely widen to 2.0 percent of GDP.

³³ The debt includes unpaid interest payments to creditors amount to USD304 million in 2021-2022.

³⁴ In 2022, Lao PDR issued baht-denominated bond amount to THB5 billion (USD150 million)

³⁵ Total unpaid interest payments are estimated to be USD304 billion in 2021-2022.

³⁶ EDL has paid government on-lending partially in recent years and full annual debt service amount is at least USD300 million, or 1.5 percent of GDP. The successful negotiation of transmission line fees with Electricite du Laos Transmission Company Ltd. (EDL-T), worth of USD625 million, would improve EDL's debt service capacity in the short term.

³⁷ According to the Debt Statistic Bulletin 2022, the arrears are currently undergoing an audit and inspection process by relevant agencies. The amounts verified and approved as arrears might be cleared through a combination of domestic bond issuances and cash.

of 10 trillion Kip were resolved through the issuance of domestic bonds in 2021³⁸. In 2023, the government is expected to clear arrear worth of 10 trillion kip, of which 8 trillion, equivalent to 3 percent of GDP, will be cleared through issuance of triangulation bonds³⁹ and 2 trillion arrears will be paid in cash.

17. The electricity sector continues to grow, yet state-owned EDL's financial position remains weak. The electricity sector's contribution to GDP nearly doubled in the last decade, reaching 13 percent in 2022. Electricity exports have increased steadily and become an important source of FX earnings. Independent power producers for export (IPP(e)s) generate more than 75 percent of total electricity output in Lao PDR and are estimated to account for about half of the electricity sector's total external debt. On the other hand, EDL provides electricity to domestic customers from supplies generated by EDL-Gen and independent power producers for domestic (IPP(d)s).⁴⁰ As EDL pays higher prices to its suppliers relative to the electricity tariffs, its financial position has deteriorated, with persistent operational losses and significant debt accumulation.⁴¹ To address EDL's financial problems, the authorities have formed a reform committee for EDL and increased electricity tariffs⁴² (Annex: Selected Issue 1).

³⁸ The government issued two types of bonds to settle its expenditure arrears relating to public investment projects: triangulation bonds and investment bonds. Triangulation bonds were issued to banks which had provided loans to contractors who have difficulties in repayment due to government expenditure arrears. For those contractors who undertook public investment projects without borrowing from banks, investment bonds would be issued to them. Investment bonds were issued to recapitalize state-owned banks as well.

³⁹ In February 2023, the government had proposed to the National Assembly, the issuance of triangulation bonds to clear arrears of LAK8 trillion.

⁴⁰ IPP(d)s generate 72 percent of electricity in the domestic market and sell it to EDL.

⁴¹ Although the detailed financial situation of EDL is unclear as its financial statement has not been published since 2019, the LMOF's debt statistic bulletin shows that the on-lending debt and publicly guaranteed debt of EDL increased significantly in 2022 from 2018 by more than 140%, partly due to a sharp kip depreciation.

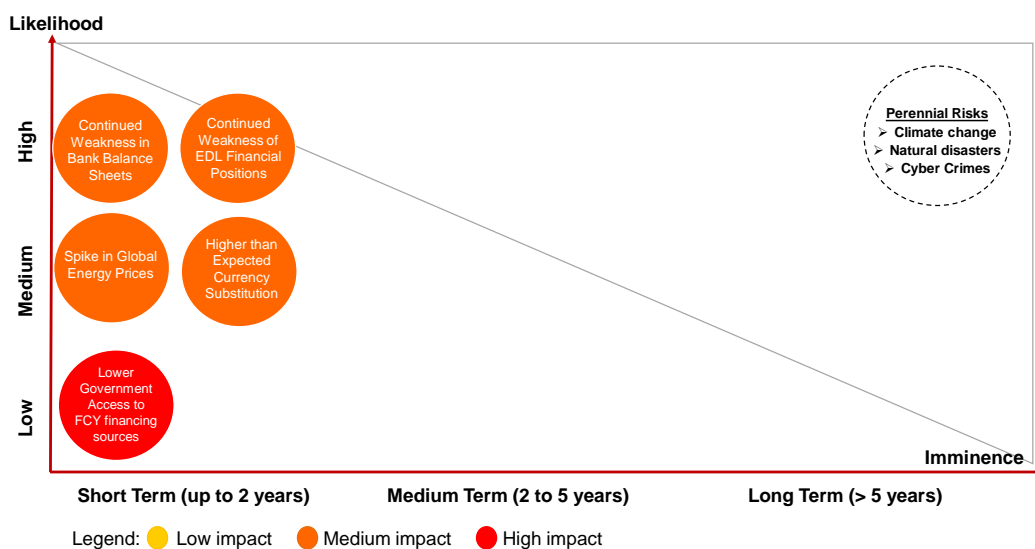
⁴² The authorities raised the electricity tariff for industrial and commercial uses in February 2023 in order to ease the impact of higher electricity purchasing costs due to a sharp kip depreciation.

B. Risks, Vulnerabilities, and Challenges

B.1 Near-term Risks to Macro Outlook

18. The external environment poses risks to the Laotian economic outlook. While the reopening of the Chinese border is providing a boost to tourism and trade, a slower-than-expected recovery of China could weigh on Lao PDR’s growth and FDI. Possible spikes in global energy prices could put pressure on the exchange rate, inflation, and trade balance. Another round of kip depreciation could accelerate inflation and weaken the balance sheets of firms, particularly those with currency mismatch in debt service versus revenue, such as EDL.

Figure 17. Country Risk Map



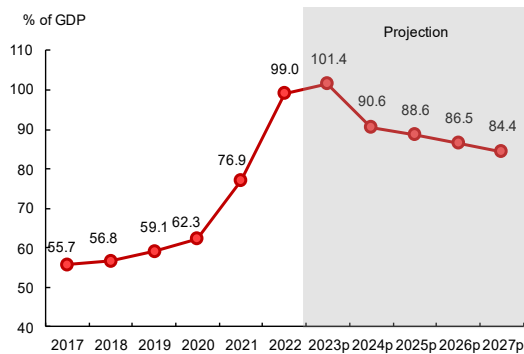
Source: AMRO staff

19. Persistent currency depreciation or deterioration of primary balance could undermine government debt sustainability. Notwithstanding an improvement in the primary balance, government debt increased sharply to 99 percent of GDP in 2022, from 77 percent of GDP in 2021, on account of LAK depreciation, as about 88 percent of the debt is denominated in foreign currencies. (Figure 18) Prior to this, the increase in government debt was driven by chronic primary deficits, in part due to large infrastructure spending, and more recently, bond issuance to clear the government’s arrears to domestic firms and to recapitalize state-owned banks. (Figure 19) While robust growth prospects, commitments to fiscal consolidation, and still low effective interest rates of existing debt, are expected to reduce the debt/GDP level in the medium term, risks to debt sustainability remain significant if negative shocks to the primary balance and/or exchange rate were to materialize (Appendices 1. Figure 1.6)⁴³. Moreover, additional debt may arise when the government identified new arrears beyond estimated remaining arrear of about LAK 23 trillion (9 percent of GDP in 2023). The risks associated with the government’s debt level and gross financing needs are contingent

⁴³ With real GDP growth projected at 4.8-5.0 percent and the primary surplus at 0.9-1.2 percent of GDP over the medium term, the government debt-to-GDP ratio is expected to decline from 99 percent of GDP in 2022 to 84 percent in 2027. In a standard stress test exercise using temporary shocks to growth, the interest rate, or primary balance, government debt is projected to still decline in the medium term.

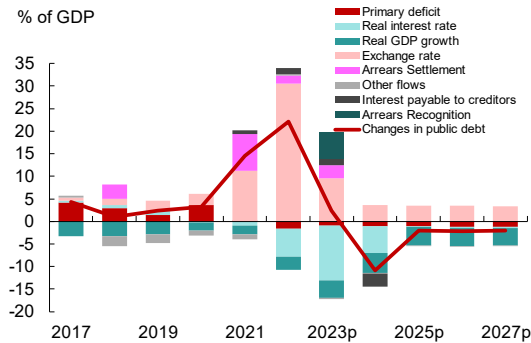
upon recognition and resolution of expenditure arrears. The outcome of ongoing debt negotiation with some external creditors could impact the external financing needs.

Figure 18. Government Debt



Source: LMOF and AMRO's staff projection
Note: Debt stock in 2021 and 2022 include unpaid interest payments. The uncleared arrears of LAK23 trillion have been incorporated in the debt stock in 2023.

Figure 19. Debt Dynamics



Source: LMOF and AMRO's staff projection

20. The rising government debt burden could further limit room to increase expenditure on priority areas. The interest payment burden, as a share of total fiscal revenue, doubled from 5 percent in 2015 to about 10 percent between 2017 and 2020, and would have reached above 15 percent in recent years if interest payments were paid in full. Rising interest payments would squeeze non-interest expenditure including capital spending, education, and other necessary expenses to support sustainable growth, considering the need to continue fiscal consolidation over the medium term in order to lower government debt to a more sustainable level.

21. Continued weakness in EDL's financial position could impose a fiscal burden on the government. Publicly guaranteed debt and on-lending to SOEs were equivalent to about 41 percent of GDP⁴⁴ in 2022. Moreover, loss-making SOEs, especially EDL, could create an additional debt burden on the government. EDL's interest expenses and exchange rate losses⁴⁵ have escalated due to recent debt accumulation and kip depreciation, respectively. The growing capacity of the suppliers is outpacing demand, especially in the rainy season, and EDL's financial position has worsened because it is required to make unconditional payments to domestic suppliers under a "take-or-pay" clause⁴⁶ in their power purchase agreements (PPAs). A lack of high-voltage transmission lines prevents EDL from distributing and exporting excess power supply efficiently.

22. Securing sufficient foreign exchange continues to be a challenge for the government. As discussed above, the government's forex needs, after netting out potential FCY financing sources, are projected at 5 percent of GDP, assuming there is no unpaid interest and principal payments. While the government was successful in issuing bonds in the Thai market in 2022 and is likely to continue doing so this year, obtaining new external loans, or issuing additional bonds has become increasingly difficult for Lao PDR as its sovereign

⁴⁴ The public-guaranteed debt in 2022 consisted of USD1,809 million owned by EDL and USD154 million owned by Lao Airlines. On-lending debt in 2022 consisted of USD3,852 million owned by EDL and USD315 million owned by Lao Holding State Enterprise.

⁴⁵ EDL services its debt in foreign currencies such as the U.S. dollar and Thai baht, while 80 percent of income is the Lao kip. This currency mismatch led to exchange rate losses during the recent kip depreciation.

⁴⁶ Take-or-pay is a provision in a contract stating that the buyer (in this case, EDL) is obliged to purchase a fixed amount of generation regardless of the actual purchase. On the other hand, take-and-pay is a provision where the buyer pays the seller (that is, the IPP(d)) the generation amount it consumed.

ratings have deteriorated⁴⁷ while global financial conditions have tightened. Additionally, limited foreign currency supply to the official FX market has constrained the government's ability to obtain foreign exchange in the domestic market.

23. Pockets of banking-sector vulnerability remain as several banks have thin capital buffers and potentially higher impaired loans. Besides pandemic-affected loans, which are masked by regulatory forbearance, there could also be loans related to the electricity sector and loss-making SOEs which have been restructured by banks. There is a risk that NPLs could increase upon the withdrawal of regulatory forbearance, and/or that restructured loans could turn into bad debt. In addition, the recent kip depreciation would likely affect the debt service capability of borrowers who have FCY loans but earnings in kip, and hence impact banks' asset quality. A deterioration in bank asset quality, coupled with potentially insufficient loan-loss provisioning, could worsen the CAR of banks with already low capital buffers. Weakening financial soundness would render banks more vulnerable to shocks. It also prevents them from effectively performing their core function of financial intermediation to support economic recovery.

B.2 Long-term Challenges to Sustainable Growth

24. Structural challenges may prevent Lao PDR from maximizing the benefits of improvement in connectivity. Lao PDR needs to upgrade its workforce and production facilities among small and medium-sized enterprises (SMEs) in order to produce higher-quality products. For instance, Laotian exporters continue to face difficulties in meeting China's sanitary and phytosanitary (SPS) measures when they export goods to China, despite an increasing number of categories exported to China through the Laos-China Railway from September 2022 to May 2023. A challenging business environment, including a time-consuming approval process and limited access to finance for SMEs, is another concern. These issues could prevent firms from expanding and diversifying even though the improvement in connectivity provides greater business opportunities. The labor shortage has worsened as inflation and Kip depreciation reduced real wages and fueled increased migration of Laotian workers to other countries, particularly to Thailand.

25. Natural disasters worsened by global warming pose a major risk to the economy. In 2020, Lao PDR's greenhouse gas (GHG) emissions were lower than the baseline scenario by 34 percent.⁴⁸ The authorities have submitted an updated Nationally Determined Contribution to the United Nations in 2021, lowering its target GHG emissions below the baseline scenario by 60 percent for 2030. Although the mitigation targets are achievable due mostly to land use changes, adaptation to climate change is a major challenge for the country. The economy is highly vulnerable to climate change, with floods and droughts which have worsened as a result of global warming. The country would need to invest more in adaptation measures to improve its resilience to natural disasters.⁴⁹

⁴⁷ Moody's downgraded Lao PDR's sovereign rates from "B3" to "Caa2" in August 2020, and further to "Caa3" in June 2022. Meanwhile, Thailand-based TRIS Ratings downgraded Lao PDR's sovereign ratings from "BBB+" to "BBB" in June 2019, and further to "BBB-" in May 2021, but affirmed its ratings at the investment grade level "BBB-" in May 2023.

⁴⁸ The baseline scenario is a hypothetical case that represents future GHG emission levels most likely to occur in the lack of GHG mitigation activities. Under the baseline scenario, total GHG emissions in 2020 and 2030 are estimated at around 82,000 kilotons of carbon dioxide equivalent (kt-CO₂e) and 104,000 kt-CO₂e, respectively, while actual GHG emissions in 2020 was around 53,000 kt-CO₂e.

⁴⁹ As of 2014, economic losses from floods each year were estimated to be between 2.8 and 3.6 percent of GDP.

C. Policy Discussions and Recommendations

C.1 Ensuring Macroeconomic Stability

26. AMRO recommends BOL avoids an excessive expansion of its monetary base to stop inflation and depreciation. The monetary base started to expand again in late 2022, amid the redemption of BOL bills and the BOL's increased credit provision to commercial banks, SOEs, and the government. The approved issuance of LAK 8 trillion of triangulation bonds would increase the monetary base further if the bonds are purchased by the central bank as that would inject liquidity into the banking system. Such liquidity if left unsterilized would lead to an expansion in the monetary base which would in turn lead to an expansion in broad money, thereby exerting pressures on the Kip exchange rate and inflation. The BOL should therefore sterilize the liquidity injections arising from its purchase of triangulation bonds. Such sterilization can be done through issuing BOL bills (at interest rates close to the market rate) to banks or by raising Reserve Requirement Ratio.

27. Moving forward, BOL should manage liquidity in the banking system more actively through its monetary operations in the interbank market.⁵⁰ Amid ample liquidity conditions, limited BOL monetary operations and relatively inactive standing facilities have led to a rapid expansion in monetary base and a disconnect between the policy and market interest rates. The BOL should conduct monetary operations in the interbank market to manage bank liquidity in order to align the interbank rates and its policy interest rates. BOL should strengthen its efforts to forecast the daily liquidity needs among banks and regulate bank liquidity via monetary operations. To incentivize banks to use Interbank2018, the platform's functions and flexibility could be improved. At the same time, enhanced transparency and information disclosure will promote trust in the system and facilitate interbank lending.

28. AMRO staff encourage the authorities to adopt market-friendly policy measures to increase FX supply in the onshore market. The recent widening of the trading band for commercial bank exchange rates is a welcome move. The BOL should continue to adjust the reference rate in a timely manner in line with market conditions and to minimize the gap with the parallel rate. Increased exchange rate flexibility could be combined with stricter enforcement of FX regulations to encourage transactions through the banks. As the market stabilizes, the BOL could take the opportunity to judiciously intervene in the market to build up its FX reserves. The experience of other countries suggests the use of FX management measures, such as repatriation and surrender requirements, could be justified when foreign reserves are low, there is a shortage of foreign exchange in the banking system, and exchange rate volatility has risen excessively (Annex: Selected Issue 2). The implementation of such measures should be preceded by a careful assessment of risks, such as loss of investor confidence, increased currency substitution, and the possible emergence of black-market activities. If implemented, the measures should be temporary and time-bound, and policy details should be clearly communicated to relevant stakeholders in a timely manner.

29. Policy measures to strengthen the banking sector's soundness should be stepped up.

- a. **NPL recognition and resolution.** Banks should be encouraged to constantly review the quality of their loan books, including restructured loans related to

⁵⁰ Bank of Lao PDR has received several technical assistances (TA) to develop the money market from central banks in the region (Bank of Thailand, Bank of Korea, State Bank of Vietnam), and also requested for a technical assistance from AMRO on the best practice for standing facilities and interbank market developments.

COVID-19, and appropriately increase loan-loss provisioning as regulatory forbearance is phased out. The authorities are considering a plan to spin off the debt collection center from the central bank and convert it into an asset management company (AMC) with operational and budgetary independence to handle NPL resolution. Efforts to address NPLs should be sped up and clearly communicated to banks.

- b. **Bank recapitalization.** At the same time, greater efforts should be made to strengthen banks' capital buffers. In this regard, the BOL's current plan of requiring banks to increase their paid-in capital in the next five years is in the right direction.⁵¹ In the meantime, regulatory measures should be taken against banks with a CAR below the minimum regulatory requirement. For example, banks should suspend dividend payments to stakeholders, including the government, until their CAR returns to the regulatory minimum. In addition, banks which are systemically important should be subject to higher capital adequacy requirements.
- c. **Risk management and regulatory standard enforcement.** Risk management, especially among local banks, should be enhanced. To that end, the BOL's timely and clear guidance is needed to ensure a smooth transition to Basel II standards and IFRS 9 among banks. The employment of new toolkits, such as bank scorecards, could enhance the BOL's supervisory capacity as it moves toward a risk-based approach.⁵² Introducing stress tests for banks would be useful to assess the impact of various shocks, such as the COVID-19 pandemic or currency depreciation, on banks' asset quality, profits and liquidity.⁵³ As bank soundness indicators exhibit great variation across banks, the BOL's capacity to enforce banks' compliance and impose penalties should be strengthened.

C.2 Steering Towards Prudent Fiscal Discipline

30. Ensuring fiscal discipline is crucial to prevent further arrears from recurring⁵⁴. The Ministry of Planning and Investment has set ceilings on capital expenditure of ministries and local governments since 2022 to avoid future arrears⁵⁵. The ceiling must be accompanied by rigorous monitoring and enforcement of spending commitments. Moreover, the authorities should accelerate their efforts to enhance public financial management, including the budget formulation, implementation, spending control, and monitoring, to prevent overspending on domestic expenditure and the incurrence of arrears.

31. The authorities should continue their fiscal consolidation efforts to improve government debt sustainability by strengthening revenue mobilization. Revenue

⁵¹ The BOL plans to increase the minimum paid-in capital investment of banks and foreign bank branches from LAK500 billion and LAK300 billion to LAK1 trillion over five years. Banks and foreign bank branches were previously asked to raise their minimum capital investment from LAK300 billion and LAK100 billion to LAK500 billion and LAK300 billion, respectively, between 2019 and 2021.

⁵² AMRO is providing technical assistance on the bank scorecard toolkit to the BOL.

⁵³ AMRO has provided technical assistance on liquidity stress testing to BOL staff. The authorities are encouraged to conduct the stress test on a regular basis.

⁵⁴ The government has established an effective Public Financial Management (PFM) infrastructure and State Budget Law to regulate spending. The authority is currently developing a financial management information system to replace its current Government Finance Information System (GFIS). However, the main challenges lie in the implementation and enforceability of these measures, indicating the need to strengthen the fiscal responsibility law.

⁵⁵ The government has implemented the State Budget Law to prevent local governments and government agencies from undertaking projects or activities without budgetary approval. However, the lack of enforceability of this law has resulted in expenditure arrears for the central government. To resolve this issue, the Ministry of Planning and Investment has applied expenditure ceilings, which would enhance the implementation of the State Budget Law and prevent the accumulation of future arrears.

measures can support fiscal consolidation while meeting the needs for sustainable and inclusive growth. There are several policy measures to increase revenues.

- a. **Budget reliance on indirect taxes and the regional trend on VAT rate might justify a restoration of the VAT rate to 10 percent.** VAT revenue accounts for about 30 percent of total tax revenue and the government had cut the VAT rate from 10 to 7 percent in 2022 to broaden the tax base. As an incentive to register, the government cut the Corporate Income Tax (CIT) rate for those micro, small and medium enterprises (MSMEs) which register for the VAT system. As a result, the government successfully increased the VAT registration in 2022⁵⁶ (see Box C.). However, the VAT cut should now be reviewed given the global trend towards higher rates, as the VAT is a primary revenue source, especially with the successful broadening of the VAT base. A 10-percent VAT rate will be also in line with the regional trend in which the median VAT rate is 10 percent and several countries have already announced VAT rate increases in the coming years (see Box C). The government might increase the VAT rate and offer financial assistance to vulnerable households which would be adversely affected by the higher VAT rate.
- b. **Efforts to mobilize revenue should be expedited.** The government is expected to launch several tax measures between 2023-2024, such as revising the land tax formula⁵⁷ and introducing an environmental tax. The government could also consider the possibility of imposing new taxes, such as a tax on sugar or property. Cryptocurrency lump sum tax collection should be strengthened, or the license of the non-compliant company should be revoked, to free up the capacity of the EDL⁵⁸. The authorities should follow up the expansion of ASYCUDA system to all border checkpoints to reduce customs evasion, while improving capacity of customs officers⁵⁹. In addition, tax administration should be strengthened by further digitalizing tax collection and training tax officers.
- c. **Tax incentives for the concession agreements should be reviewed to increase revenue.** Tax incentives should be granted only when it is necessary to secure FDIs to Lao PDR which will bring sufficient benefits such as employment and technology transfer to the country, considering the competition with neighboring countries. Favorable tax treatments for investment in sectors which utilize Laos' unique natural resources, including mining and energy, should be reconsidered. In so doing, Lao PDR could learn from neighboring countries' targeted tax incentives⁶⁰ and streamline the concession agreement approval process. Concession agreements should be reviewed regularly to minimize the fiscal cost of their tax incentives.
- d. **The authorities should impose VAT on some of the largest multinational enterprises and introduce top-up tax to reap full benefits from the OECD global tax reform initiative⁶¹.** Lao PDR government should enact the sub-law to

⁵⁶ Lao PDR's Ministry of Finance has requested AMRO's TA support to provide finance to their study on the effectiveness of VAT rate cut on the increase in the tax base.

⁵⁷ Land tax calculation is revised to collected tax based on the assessed land value instead of the land area in which the government will be able to catch up tax collection with the growing economy.

⁵⁸ Laos started pilot projects for cryptocurrency mining sector promotion. Miners must make power purchase agreements for 3 years to EDL, and they have to pay licensing fee according to its committed electricity usage to the government.

⁵⁹ The Automated System for Customs Data (ASYCUDA) can help in reinforcing the country's border control and customs system to increase formal trade flows. See AMRO 2022 Annual Consultation Report on Lao PDR

⁶⁰ AMRO Policy Perspective Paper: Policy Considerations in Using Tax Incentives for Foreign Investment. (Andriansyah, Hong, Nam, 2021).

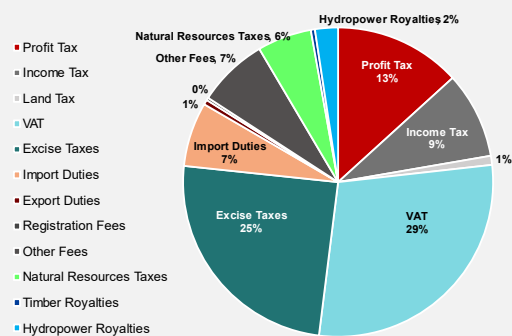
⁶¹ The OECD global tax reform has two pillars. Pillar One will ensure a fairer distribution of profits and taxing rights among countries with respect to the largest MNEs, including digital companies. It would re-allocate some taxing rights over MNEs from

collect VAT on digital services in 2024 as planned. The government needs to analyze the potential impact of a global minimum CIT rate of 15 percent on its revenue collection and introduce a ‘qualified domestic minimum top-up tax’ (QDMTT) to avoid tax leakage to other countries⁶². Meanwhile, the adoption of the global minimum tax has reduced the effectiveness of traditional tax incentives such as tax holiday, in attracting FDI to Laos. The government should redesign its incentives system to enhance competitiveness and promote investment without lowering the tax rate.

Box C. Enhancing Revenue from the VAT Reform⁶³

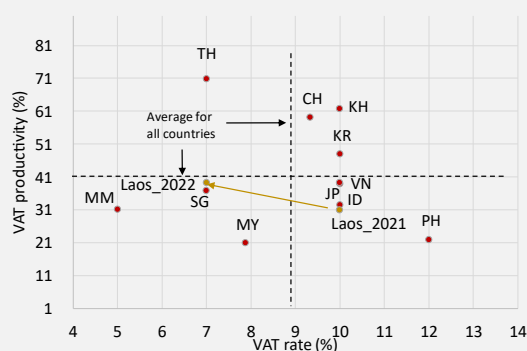
The Lao PDR government has been making efforts to reform its VAT system to enhance revenue collection. VAT is the most important source of revenue as it accounts for 30 percent of total tax revenue, equivalent to around 3 percent of GDP, and the expansion of VAT base would help mobilize the VAT revenue. As of 2020, the number of VAT-registered businesses is 11,729 units⁶⁴ and the National Agenda’s target is to increase additional VAT-registered business by 14,657 units in 2022-2023. As a result, the authorities have implemented significant tax incentives, especially corporate income tax rate cuts, to drive up VAT registration. For example, they have slashed the CIT rate from 20 percent to 0.1 percent for micro enterprises that register for the VAT system. Small and medium enterprises which have newly registered their business and are at the same time participating in the VAT system, get a CIT rate cut to 3 percent and to 5 percent, respectively, during the first three years. On top of the CIT incentives, the statutory VAT rate was cut from 10 percent to 7 percent in January 2022, and the government efforts to step up digitalization to reduce compliance costs have contributed greatly to a broader VAT base and improved VAT productivity (Figure C2). The registration campaign resulted in additional VAT-registered units of around 10,000 in 2022 and the authority is expecting an additional 4,000 VAT-registered units in 2023, which is on track to meet the National Agenda’s target.

Figure C1. Composition of Tax Revenue



Source: LMOF
Note: Percentage of total tax revenue, 2017-2022 average.

Figure C2. VAT Productivity and Rates



Source: Haver; CEIC; LMOF; AMRO staff estimates
Note: VAT productivity = VAT revenue / (statutory VAT rate x nominal GDP) in 2021.

Although cutting the VAT rate is a government attempt to support pandemic-hit households and to increase the VAT base, the statutory rate of 7 percent in Lao PDR is relatively low compared to regional peers. The median VAT rate in the region is around 10 percent. Several countries have announced VAT rate increases in the coming years to enhance tax revenue, while others have temporarily lowered it but will restore the higher rate later. Indonesia increased the VAT rate from 10 percent to 11 percent in 2022 and will raise it further to 12 percent by 2025. Singapore

their home countries to the markets where they have business activities and earn profits, regardless of whether firms have a physical presence there. Pillar Two seeks to put a floor on competition over corporate income tax, through the introduction of a global minimum corporate tax rate that countries can use to protect their tax bases.

⁶² The QDMTT is a domestic top-up tax to ensure that any top-up tax on Lao PDR’s economic activities remain in Lao PDR, rather than going to another country.

⁶³ Prepared by Ravisara Hataiseree and Somphone Changdabout.

⁶⁴ According to CIAT, IMF, IOTA, OECD (2022), International Survey on Revenue Administration: 2020 and 2021.

increased its goods and services tax (GST) rate from 7 percent to 8 percent in 2023 and will raise it to 9 percent in 2024. Vietnam introduced a temporary VAT rate cut to 8 percent in 2022 and restored the rate to 10 percent before reducing it to 8 percent in July 2023, a level that will last till the end of the year. Therefore, a restoration of the VAT rate to 10 percent in Lao PDR will be on a par with regional trends and could also help maintain the country's key revenue source, especially when the broadened VAT base is likely to provide the government with higher tax revenues.

Table C1. VAT, SST and GST Rate and Change in ASEAN+3 Countries

	Current VAT and other consumption tax rates	Rate changes
Lao PDR	7%	Temporary cut from 10% in 2022
Cambodia	10%	
Vietnam	8%	Temporary cut from 10% to 8% in 2022 and in July-December 2023
Myanmar	5% (Commercial tax)	
Philippines	12%	
Indonesia	11%	Increase to 12% in January 2025
Malaysia	6%, 10% (SST)	
Thailand	7%	Reduce from 10% to 7% until 30 September 2023
Singapore	8% (GST)	Increase to 9% in January 2024
Japan	10% (Consumption tax)	
Korea	10%	
China	13%, 9%, 6%	

Source: AMRO staff compilation

Another challenge in Lao PDR lies in low tax compliance relative to other countries, partially due to high compliance costs. The extensive time required to go through VAT compliance procedures, ranging from tax return preparation and filing, to payment and audit, has resulted in Lao PDR's low ranking in the Paying Taxes indicator in the World Bank's Ease of Doing Business Report compared to ASEAN+3 countries. In addition, the proportion of active VAT-registered businesses account for only 48 percent of total VAT-registered businesses, implying that less than half of VAT-registered businesses will file VAT returns during the fiscal year. These issues suggest that there is room to enhance tax compliance via tax administrative reforms and enhanced digitalization. Among ASEAN member economies, Singapore leads in Paying Taxes scores owing to its most extensively prepopulated e-filing system. Thailand ranks second in ASEAN with its promotion of e-tax invoices and e-withholding tax, which streamlines tax filing and auditing processes. Malaysia encouraged companies to adopt e-filing and e-payment from 2008, before making these processes mandatory in 2016. Vietnam has upgraded its tax department's IT infrastructure, eliminating the need to submit VAT returns in hard copy. Indonesia and the Philippines have introduced online filing and payment systems to enhance tax compliance and lower tax procedures cost for both existing and new taxpayers.

Table C2. Value Added Tax Systems in Lao PDR Compared to Other ASEAN+3 Countries

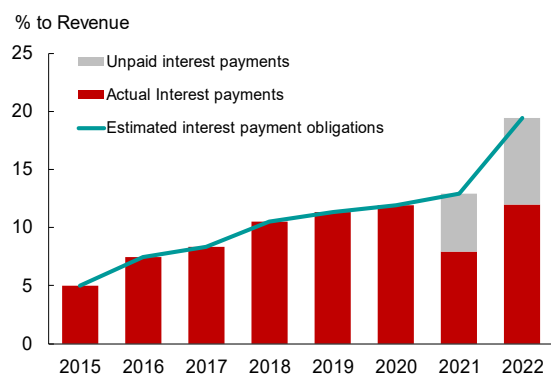
	Percentage of active VAT-registered businesses to total VAT-registered businesses	Time needed to comply with VAT preparation, filing and payment (hours)	Paying Taxes Score in Ease of Doing Business Report	Paying Taxes Ranking in Ease of Doing Business Report
Lao PDR	48%	182	54.2	157
Cambodia	95%	66	61.3	138
Vietnam	39%	125	69.0	109
Myanmar	n/a	107	63.9	129
Philippines	76%	108	72.6	95
Indonesia	59%	66	75.8	81
Malaysia	SST system	95	76.0	80
Thailand	49%	58	77.7	68
Singapore	Note (2)	30	91.6	7
Japan	Note (3)	20	81.6	51
Korea	96%	19	87.4	21
China	93%	46	70.1	105

Source: CIAT, IMF, IOTA, OECD (2022), International Survey on Revenue Administration (ISORA): 2020 and 2021; Ease of Doing Business Report 2019, World Bank; AMRO staff compilation

Note: (1) "Active taxpayer" refers to a taxpayer who has a tax liability during the fiscal year (the data is as of 2020, surveyed in 2021); (2) GST-registered businesses in Singapore in 2020 totaled 101,293 but the number of active GST businesses was not provided; (3) active VAT businesses in Japan in 2020 totaled 3,404,000 but the number of total VAT-registered businesses was not provided.

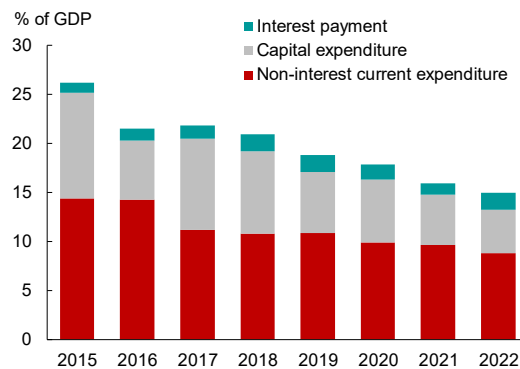
32. The revenue enhancement measures could support the expenditure to meet medium-term development targets while supporting fiscal consolidation. As Lao PDR aims to graduate from Least Developed Country status in 2026, it needs stronger human and physical capital investment.⁶⁵ However, non-interest current expenditure declined from about 14 percent of GDP in 2015 to less than 9 percent in 2022, while capital expenditure fell from 10 percent to 4 percent during the same period.⁶⁶ Ongoing efforts to reduce unnecessary spending are welcome. At the same time, the government should allocate sufficient expenditure for necessary social spending including higher access to quality education and health services.⁶⁷ A stronger institutional framework, such as performance-linked budgeting, could also improve spending efficiency, and ensure continued fiscal consolidation.

Figure 20. Interest Payment Burden



Source: LMOF

Figure 21. Expenditure Compositions



Source: LMOF

Note: Interest payments reflect actual payments and do not include unpaid interest payments to some creditors.

33. The government should explore external debt rescheduling and strengthen strategic management of overall debt. Given low gross international reserves, the government has relied mainly on its FCY revenues to service its external debt. Efforts to raise additional FCY revenues included a lump-sum tax and a one-time registration and licensing fee from fast-track mining projects and cryptocurrency companies, as well as the issuance of FCY bonds in both the domestic and Thai markets. Notwithstanding the additional revenue raised, the government was still unable to service its external debt fully in the past few years. In this regard, the government should explore debt restructuring with major creditors to lower the debt burden and make annual repayment more manageable over the medium term. As a temporary measure, the government may consider raising FCY revenues from new sources, including targeting a broader range of sectors that generate revenue in foreign currencies⁶⁸. Over the long term, developing domestic capital markets can help reduce reliance on external debt. Furthermore, the government should consider how to maximize the benefits from the options of transferring the hydropower assets to the government under the Build-Operate-Transfer (BOT) scheme to meet its financing needs⁶⁹. IPP(e)s have enjoyed sound financial positions due to the PPAs with foreign utility companies such as EGAT, thus these projects

⁶⁵ Lao PDR's the 9th Five-Year National Socio-Economic Development Plan (2021-2025) focuses on higher access to quality education and health services as well as building the infrastructure needed to facilitate private sector investment and poverty alleviation.

⁶⁶ These levels of expenditure were lower than neighboring countries such as Cambodia and Vietnam.

⁶⁷ The government reduced unnecessary spending and increase efficiency for public investment procurement by enforcing the Rational and Anti-Extravagance Decree issued in 2022.

⁶⁸ This could include companies with foreign workers employed in Lao PDR, the tourism sector providing services to visitors from abroad, companies that export goods, as well as vehicle dealers. However, the policy should also take into consideration the potential negative effects on public confidence on Kip and LCY bond financing capacity.

⁶⁹ Assets will be transferred to the government starting in 2029. Options include advance sales of concession of the assets to investors or transferring the assets to domestic SOEs.

are expected to provide similar benefits to the government once the hydropower assets are transferred to the government at the end of the concession periods (Annex: Selected Issue 1).⁷⁰

34. EDL reform should be accelerated so that the company can repay its debt to the government and reduce the risk of government contingent liability. To improve EDL's financial condition, the consensus agreement between Electricite du Laos Transmission Company Ltd. (EDL-T) and EDL-lenders should be finalized as scheduled so that EDL can receive an upfront leasing fee of USD625 million from EDL-T.⁷¹ AMRO staff welcome the authorities' decision to increase the electricity tariff for the commercial sector.⁷² The government should consider raising tariffs to a cost recovery level for all sectors while providing subsidies to offset the impact on vulnerable groups, so that EDL is able to generate sufficient revenue to cover its operational costs and financial expenses. The government should also consider adjusting the tariff according to the season to mitigate the economic impact of the seasonality of output at hydropower plants.⁷³ The excess capacity problem, arising from previous optimistic projections, could be solved by selling the surplus energy to new sources of demand, such as cryptocurrency mining, and by expanding the export of electricity to neighboring countries through the building of new high-voltage transmission lines. The government may eventually consider injecting capital into EDL to improve its financial position. These measures would require EDL to make organizational improvement including urgent efforts on transparency, such as the timely publication of financial statements.

C.3 Laying Foundations for Long-term Sustainable Growth

35. Structural reforms should be accelerated to bolster the momentum towards inclusive and sustainable growth. Ongoing efforts to improve product quality should be continued. The authorities' effort to upgrade the SME promotion department in the Ministry of Industry and Commerce to the SME Promotion Agency is a welcome move to strengthen the operation of existing SME Promotion Fund, which aims to enhance SME's production capacity. The fund's impact should be periodically reviewed, and the program could be adjusted flexibly when necessary to match the SME's needs. SME's access to finance can be strengthened with the establishment of the Credit Guarantee Company. The vocational program should also be expanded to increase the number of skilled workers. Furthermore, the business registration and approval process should be streamlined and improved, for instance, by utilizing digital platforms. The authorities should closely consult the business community in revising these procedures. They should continue improving connectivity across the country, especially through the infrastructure development projects identified under the 9th Five-Year National Socio-Economic Development Plan. Coordination with the development partners would be critical to fill the financial and knowledge gap for accelerating structural reforms.

36. The authorities should take advantage of the country's ample renewable energy resources, considering global trends from fossil towards renewable energy, while adaptation issues should be accorded high priority and addressed in a timely and comprehensive manner. Lao PDR should take advantage of the current worldwide trend to

⁷⁰ Although the PPAs will have to be renewed after the transfer of the hydropower assets to the government, utility companies generally continue the PPAs. In terms of the profitability, the new PPAs will provide similar or even higher profits to the government as it will not have to bear huge costs of building power plants.

⁷¹ According to the concessional agreement, EDL-T will pay USD625 million to EDL for leasing electricity transmission lines during the concessionary period. EDL will use the leasing fees to repay its own debt and the on-lending debt to the government. The amount to be transferred to the government is expected to be USD325 million.

⁷² In February 2023, the average electricity tariffs for non-household low voltage, medium voltage and high voltage usage increased by 43 percent, 52 percent and 69 percent, respectively, from 2021 levels. Tariff rates for the households remain unchanged.

⁷³ For instance, EDL may charge higher prices when supply is limited, and it needs to import electricity from neighboring countries.

shift from fossil fuel to renewable energy by leveraging the country's natural resources, such as its ample hydropower electricity generation capacity. For example, the country could export hydropower and other renewable energy to neighboring countries with an ambitious renewable energy mix target.⁷⁴ On the adaptation front, the authorities should continue to improve the country's resilience to floods and droughts, to mitigate the negative impacts on economic activities. To secure financing for adaptation measures, close cooperation with development partners and strong coordination among government agencies are essential to facilitate the development of appropriate and effective policies and infrastructure projects.

⁷⁴ In June 2022, the Lao-PDR-Thailand-Malaysia-Singapore Power Integration Project started as the first cross-border electricity trade among the four ASEAN countries. The initiative was a step toward realizing the broader ASEAN Power Grid vision of expanding regional multilateral electricity trading. Lao PDR is also building a 600MW Monsoon Wind Power Project in Xekong province and in Attapeu province, which will start operation in 2025.

Appendices

Appendix 1. Selected Figures for Major Economic Indicators

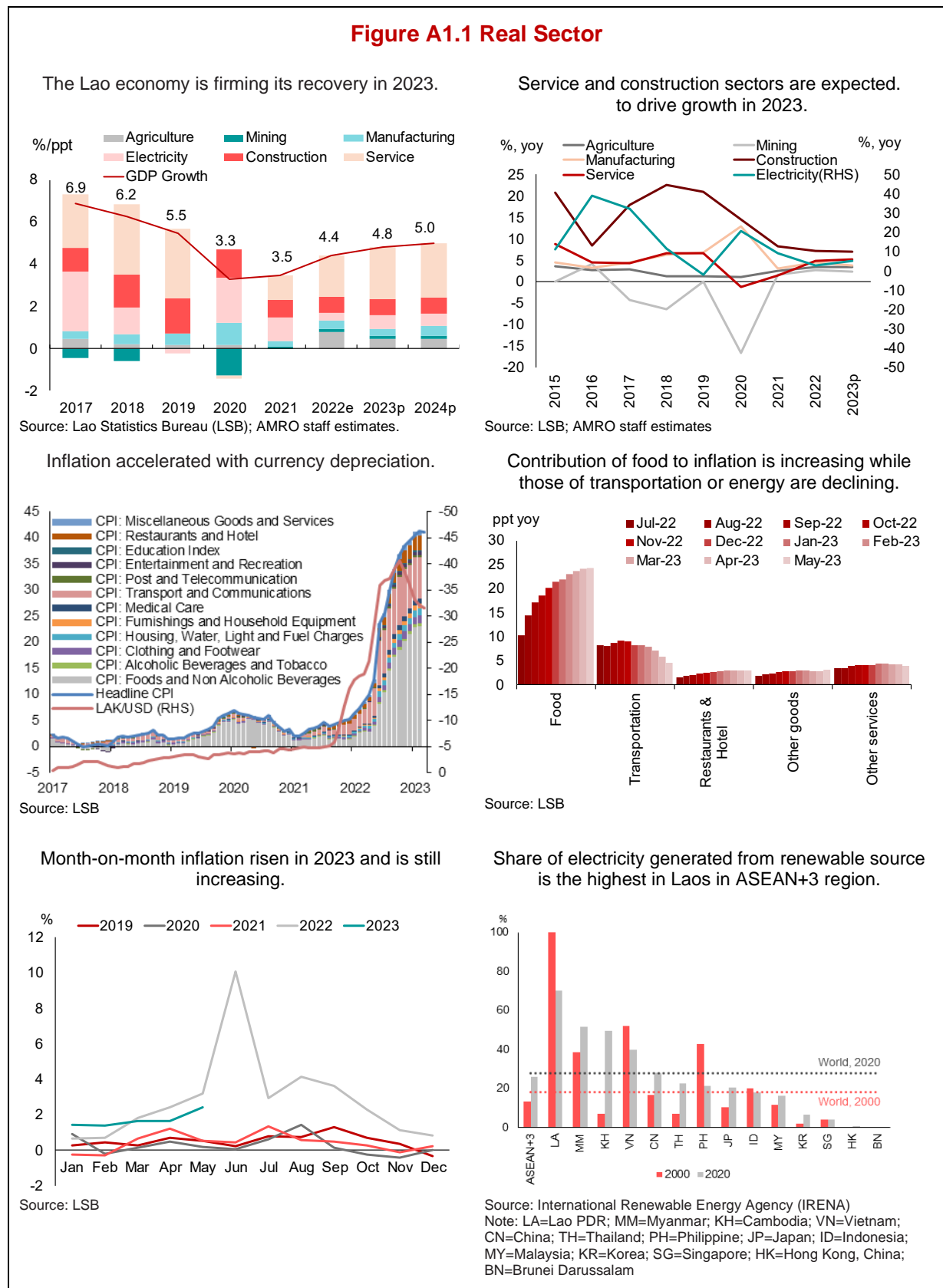
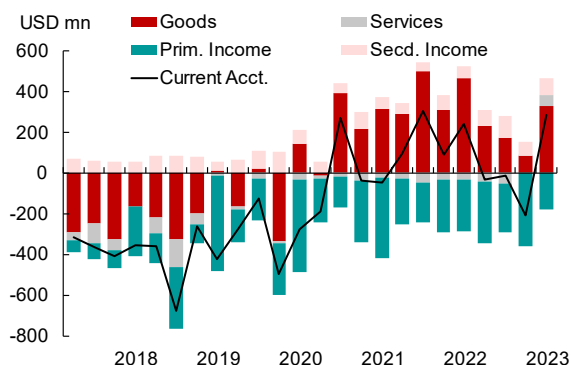


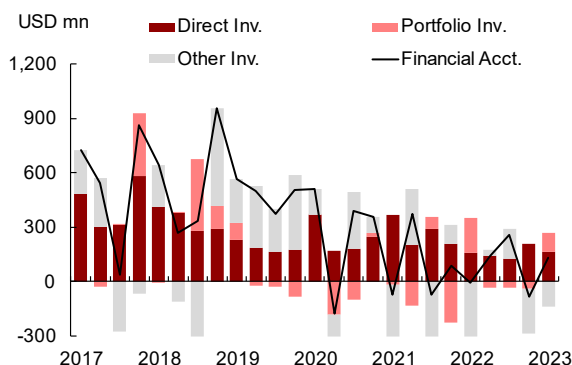
Figure A1.2 External Sector

The trade balance deteriorated in Q1-Q4 in 2022 but rebounded in Q1 2023.



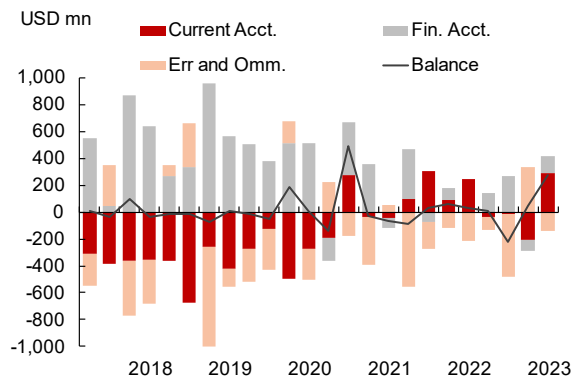
Source: BOL

Direct investment is on a declining trend.



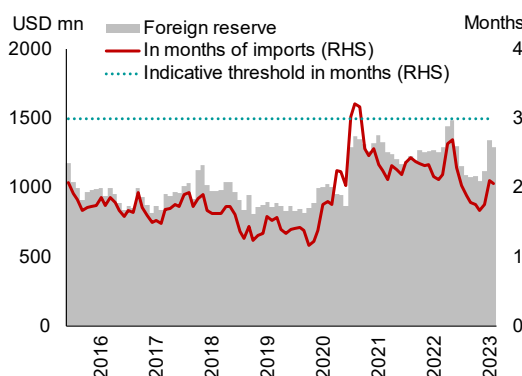
Source: BOL

The overall BOP improved towards end-2022 and Q1 2023.



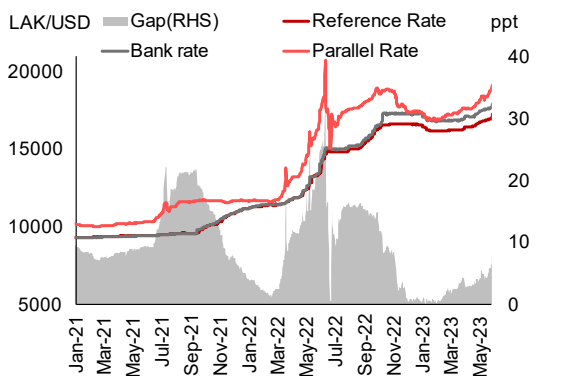
Source: BOL.

FX reserves declined to about 2 months of imports.



Source: BOL.

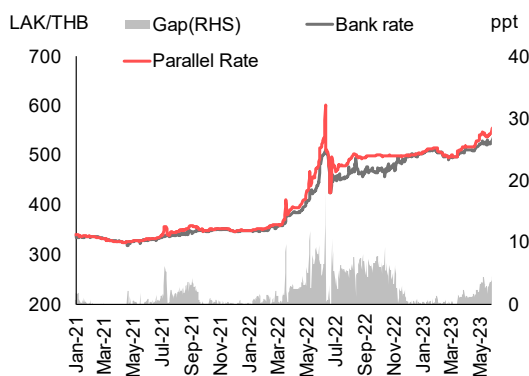
The gap between the USD parallel rate and commercial bank rate has re-emerged recently.



Source: BOL

Note: The bank rate is set by commercial banks, and could fluctuate within a certain band from the reference rate, which was set by BOL every day. The gap is defined as the percentage difference between the commercial bank rate and the parallel rate.

For the Thai baht, the gap between the parallel rate and BOL rate has also widened recently.

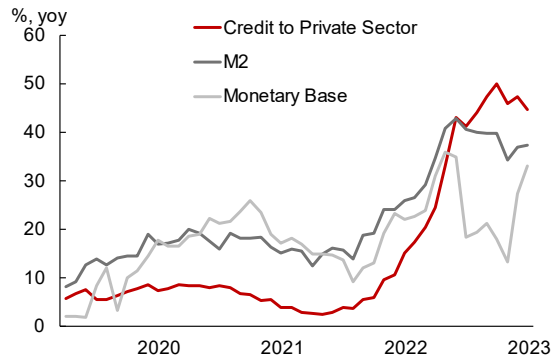


Source: BOL

Note: The BOL rate is the exchange rate offered by the BOL for its transaction with commercial banks. It is calculated based on the USD/LAK reference rate and USD/THB exchange rate in the international market. There is no reference rate for the baht.

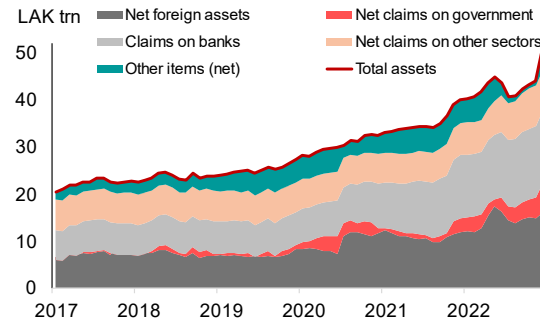
Figure A1.3 Monetary Sector

The monetary base declined in mid-2022 amid a BOL bill issuance but rebounded in late 2022.



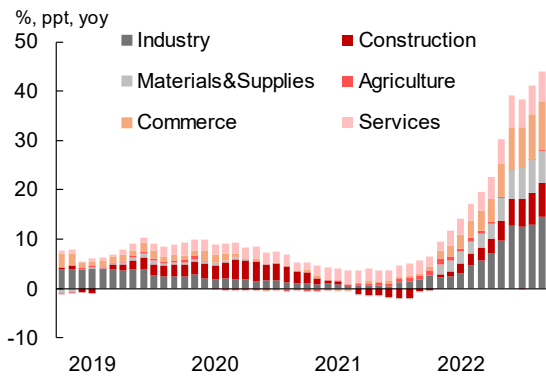
Source: BOL; CEIC

BOL assets also moderated following the issuance of BOL bills in mid-2022.



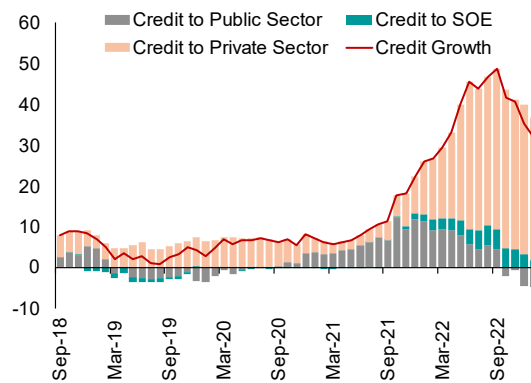
Source: BOL; CEIC

Recent loan growth was driven by industry and construction.



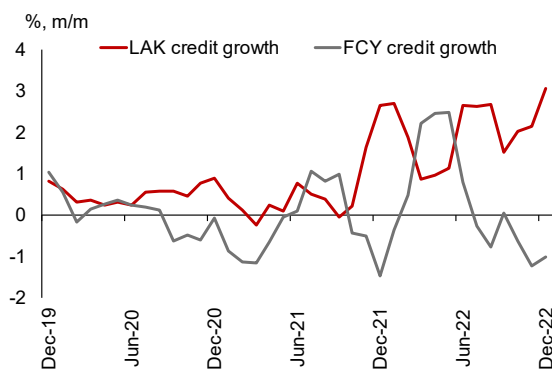
Source: BOL.
Note: The data includes FCY loans converted to local currency using the exchange rate of that date.

Kip credit growth remains elevated, driven by the private sector.



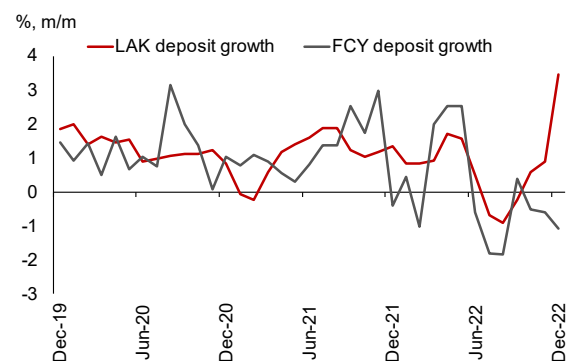
Source: BOL;
Note: Local currency credit growth and decomposition.

Monthly LAK credit growth has been elevated since late 2021.



Source: BOL; AMRO staff estimates.
Note: Monthly growth of 3-months average. FCY credit is converted to USD to remove effects of currency depreciation.

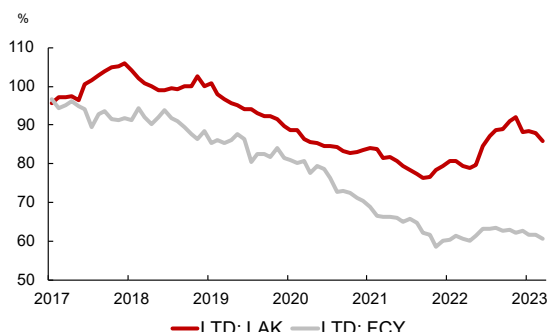
Deposits declined in mid-2022 amid BOL bill issuance.



Source: BOL; AMRO staff estimates.
Note: Monthly growth of 3 months average. FCY deposits were converted to USD to remove effects of currency depreciation.

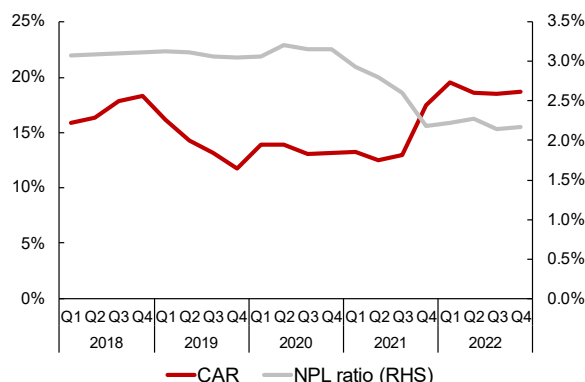
Figure A1.4 Banking Sector

Kip liquidity conditions have loosened after a pick-up in the loan to deposit (LTD) ratio in H2 2022.



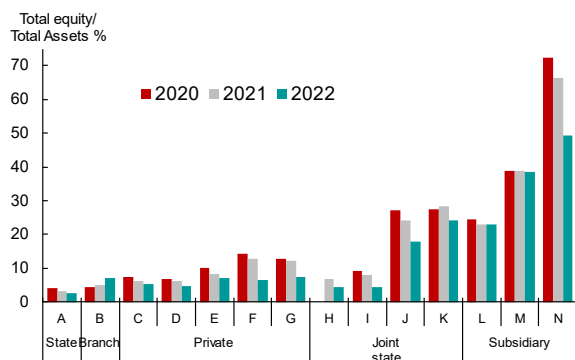
Source: BOL; CEIC; AMRO staff calculations

Recent capital injections have lifted the aggregate CAR, while the NPL ratio remained stably low.



Source: BOL

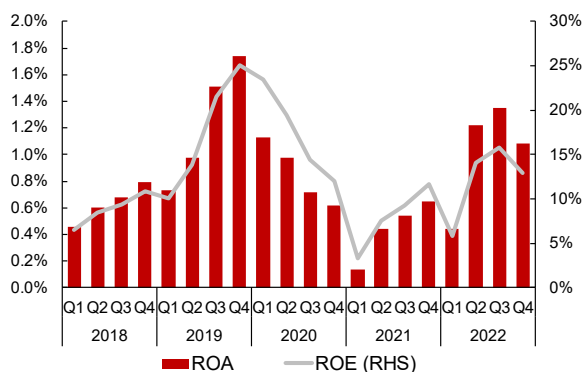
However, bank-level data shows most local banks and some joint venture banks have thin capital buffers relative to foreign bank subsidiaries.



Source: BankFocus; banks' financial statements; AMRO staff calculations

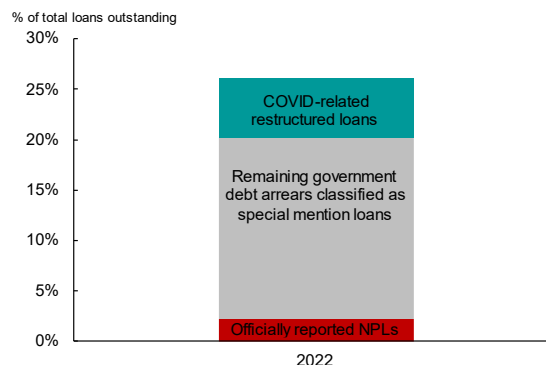
Note: Due to limited publicly available data on CAR, total equity to total assets is used as a proxy for banks' capital buffer level

A rebound in loan growth post-pandemic supported improved overall profitability of the banking system.



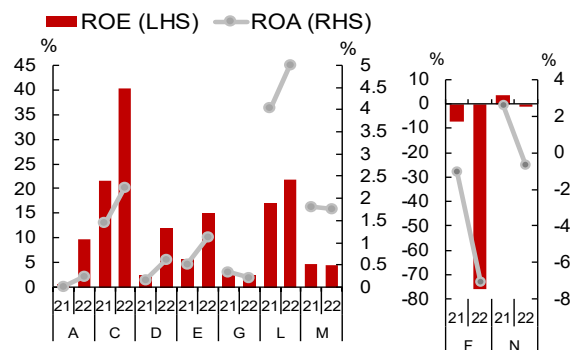
Source: BOL

NPLs could raise after COVID-related regulatory forbearance is withdrawn, and contractors' loans related to remaining government expenditure arrears turn into bad debt.



Source: BOL; LMOF

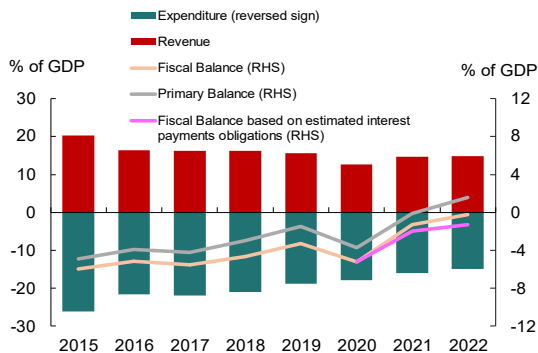
Nonetheless, some banks reported weaker profits or even larger losses in 2022.



Source: BankFocus; banks' financial statements

Figure A1.5 Fiscal Sector

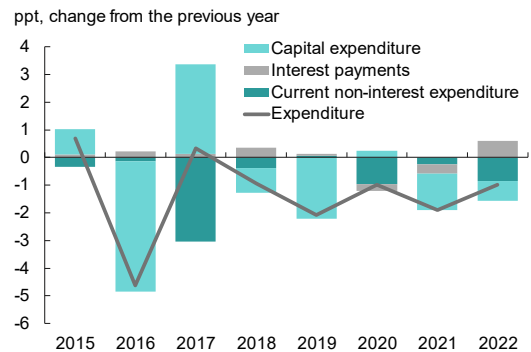
The budget deficit narrowed in 2022 due to expenditure cuts.



Source: LMOF; AMRO's staff estimation

Note: The fiscal deficit (yellow line) is based on actual interest payments and excludes unpaid interest payments. Pink line shows the deficit level with full interest payment obligations estimated by AMRO.

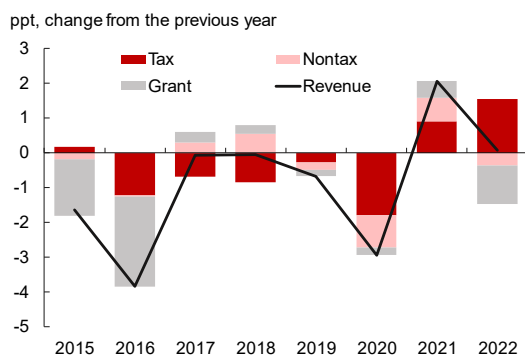
The expenditure cuts are driven by both lower current non-interest expenditure and capital expenditure.



Source: LMOF

Note: Interest payments reflect actual payments and exclude unpaid interest payments to some creditors.

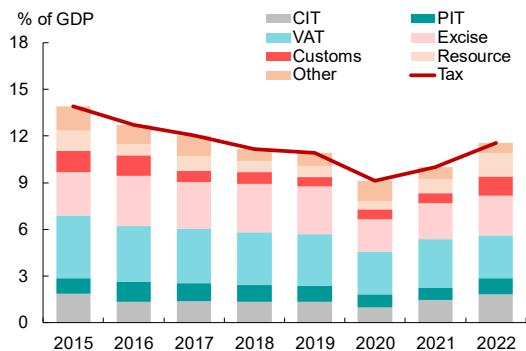
In 2022, total revenue slightly increased with higher tax revenue amid lower grants and non-tax revenues.



Source: LMOF

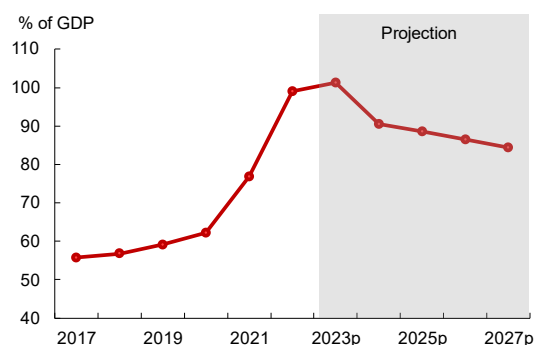
Note: Percentage point difference in revenue to GDP ratio and its decomposition.

Tax revenue rose due to higher customs and resource taxes resulting from increased commodity prices and kip depreciation.



Source: LMOF

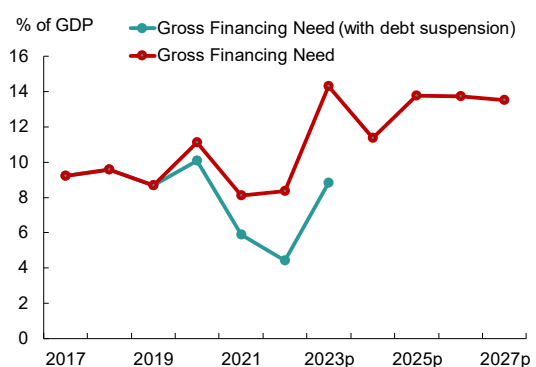
Government debt increased in 2023 due to remaining arrear clearance and decline afterwards.



Source: LMOF; AMRO staff projections

Note: Public investment arrears of LAK23 trillion are added to the 2023 debt stock, of which, the government is expected to issue LAK8 trillion of triangulation bond to clear part of the arrears in 2023. Unpaid interest payments are included in the debt stock. Transmission line leasing fees of USD625 million from EDL-T is assumed to be used to repay the payable to creditors in 2024.

Gross financing needs are expected to increase in 2023, mainly due to debt service to local commercial banks.

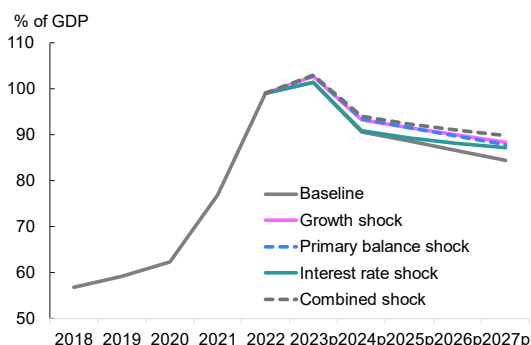


Source: LMOF; AMRO staff projections

Note: The debt suspension scenario assumes that both interest and principal payments to major creditors remain unpaid.

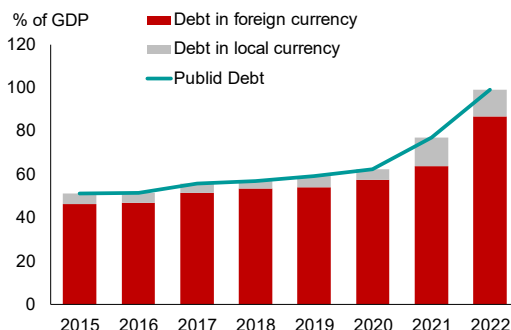
Figure A1.6 Debt Sustainability Analysis

In standard stress test scenarios, government debt will decline in the medium term.



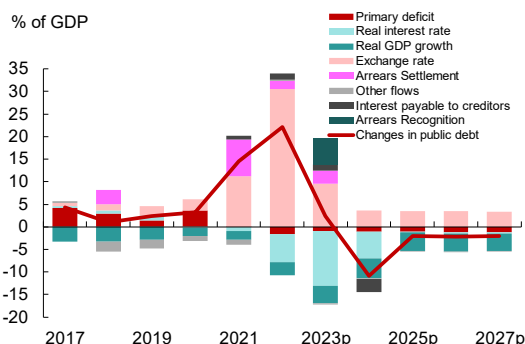
Source: LMOF; AMRO staff projections
Note: The scenarios for the stress test are: 1) real GDP growth shock: -1 percentage point shock in 2023-2024; 2) primary balance shock: -1.5 percent of GDP shock in 2023-2024; 3) interest rate shock: +3 percentage points shock from 2023; 4) combined shock: combination of growth, primary balance, interest rate, with half size of individual shocks articulated in 1) - 3).

However, debt sustainability depends on the exchange rate as 90 percent of government debt is denominated in foreign currencies.



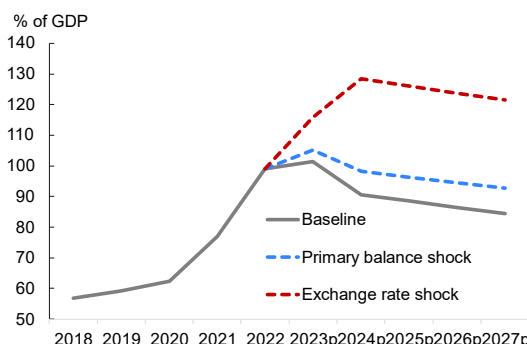
Source: LMOF; AMRO staff estimates

Expenditure arrears also increase the debt stock, whereas maintaining a positive primary balance reduces the overall debt level.



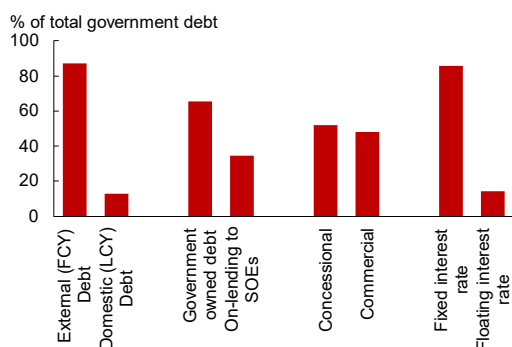
Source: LMOF and AMRO's staff projection
Note: AMRO includes public investment arrears of LAK23 trillion in 2023 debt stock. Unpaid interest payments to some creditors have been factored into the debt stock for the corresponding year. Some principal payments were suspended from 2020 to 2023. Transmission line leasing fees of USD625 million from EDL-T is assumed to be used to repay the payable to a creditor in 2024.

The debt ratio is expected to reach at almost 130 percent of GDP if the kip depreciates in the same manner as 2021-2022.



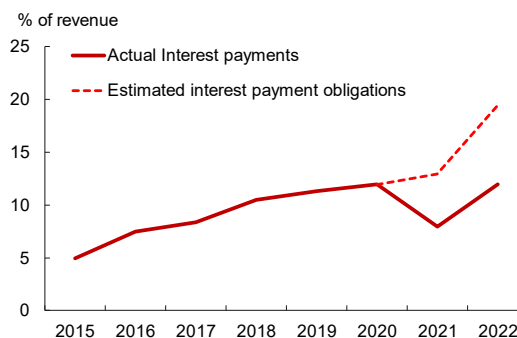
Source: LMOF and AMRO's staff projection
Note: 1) primary balance shock assumes a primary deficit of 3 percent of GDP during 2023-2024, the same level as 2017-2020 average; 2) exchange rate shock assumes 35 percent depreciation both in 2023 and 2024, the same level as 2021-2022 average.

While the share of concessional loans has exceeded 50 percent, and more than 80 percent of loan is fixed interest loan...



Source: LMOF
Note: Share of total government debt in 2022. Government debt in Lao PDR's definition includes government owned debt and on-lending to SOEs.

the estimated interest payment obligations are increasing amid increasing debt.



Source: LMOF; AMRO estimation
Note: The difference between actual and estimated comes from unpaid interest payments to some creditors.

Appendix 2. Selected Economic Indicators for Lao PDR

	2019	2020	2021	2022	Projections		
					2023	2024	
Real Sector and Prices	(In percent change unless otherwise specified)						
Real GDP	5.5	3.3	3.5	4.4	4.8	5.0	
Agriculture	1.2	1.1	1.5	2.4	3.4	4.4	
Industry	5.6	9.2	6.1	4.4	4.9	5.1	
Services	6.9	-1.2	1.4	4.9	5.2	5.4	
GDP deflator	1.2	2.9	3.4	11.6	17.8	10.1	
Consumer price inflation (average)	3.3	5.1	3.8	23.0	30.0	11.2	
External Sector	(In millions of USD unless otherwise specified)						
Current account balance	-1,320	-231	447	-11	-138	-251	
(In percent of GDP)	-7.0	-1.2	2.4	-0.1	-1.0	-1.6	
Trade balance	-466	745	1,419	954	637	427	
(In percent of GDP)	-2.5	3.9	7.5	6.3	4.4	2.8	
Exports	5,806	6,115	7,695	8,198	8,510	9,079	
(In percent change)	7.4	5.3	25.8	6.5	4.6	6.7	
Imports	6,272	5,370	6,275	7,244	7,872	8,652	
(In percent change)	-0.7	-14.4	16.8	15.4	8.7	9.9	
Services, net	-67	-99	-127	-122	-2	151	
Primary income, net	-1,084	-1,128	-1,072	-1,158	-1,063	-1,163	
Secondary income, net	298	252	226	315	252	275	
Financial account balance	1,944	1,079	315	299	979	953	
Direct investment, net	756	968	1,072	636	883	1,033	
Portfolio investment, net	-41	-257	-310	71	83	32	
Other investment, net	1,230	368	-447	-408	13	-112	
Net Errors and Omissions	-515	-539	-821	-438	-356	-287	
Overall balance	124	322	-57	-142	489	421	
Gross international reserves	997	1,319	1,263	1,121	1,341	1,603	
(In months of imports of goods and services)	1.6	2.7	2.3	1.7	1.9	2.0	
External debt	15,641	15,778	15,821	15,764	15,816	15,847	
(In percent of GDP)	85.3	84.8	95.7	126.6	116.3	105.9	
Fiscal Sector (General Government)	(In percent of GDP)						
Revenue and grants	15.6	12.6	14.7	14.8	14.2	14.0	
Tax Revenue	10.9	9.1	10.0	11.6	11.4	11.2	
Expenditure	18.8	17.8	16.0	15.0	15.0	14.8	
Current non-interest expenditure	10.9	9.9	9.7	8.8	8.2	7.8	
Interest expenditure	1.8	1.5	1.2	1.8	1.7	1.8	
Capital expenditure	6.2	6.4	5.1	4.4	5.2	5.2	
Overall fiscal balance	-3.3	-5.2	-1.3	-0.2	-0.8	-0.8	
Fiscal balance with unpaid interest payment obligations	-3.3	-5.2	-2.0	-1.3	-2.0	-2.1	
Primary balance	-1.5	-3.7	-0.1	1.6	0.9	1.0	
Government debt	59.1	62.3	76.9	99.0	101.4	90.6	
Monetary and Financial Sector	(In percent change, end-period unless specified)						
Domestic credit	4.4	7.6	23.5	36.5	10.9	13.9	
In percent of GDP	49.8	48.9	51.0	63.7	59.9	62.3	
Private Sector	8.5	5.5	10.6	46.7	11.6	15.4	
Broad money	18.9	16.3	24.0	36.9	17.9	11.6	
Memorandum Items							
Nominal GDP (LAK billion)	162,657	172,919	184,982	215,609	266,299	307,914	
Nominal GDP (USD million)	18,719	19,099	18,984	15,061	14,525	15,339	
GDP per capita (USD)	2,628	2,640	2,583	2,017	1,945	2,054	
Exchange rate(reference rate against USD, average)	8,689	9,054	9,744	14,316			
Exchange rate(reference rate against USD, EOP)	8,869	9,290	11,193	17,312			

Source: National authorities, AMRO staff estimates.

Note: Fiscal indicators and gross international reserve in months of imports are based on AMRO estimations and projections.

Appendix 3. Balance of Payments

Indicators	2018	2019	2020	2021	2022
	(In millions of USD unless specified otherwise)				
Current account	-1,649	-1,320	-231	447	-11
Trade balance	-907	-466	745	1,419	954
Exports, f.o.b.	5,408	5,806	6,115	7,695	8,198
Imports, c.i.f.	6,315	6,272	5,370	6,275	7,244
Services, net	-264	-67	-99	-127	-122
Primary income, net	-786	-1,084	-1,128	-1,072	-1,158
Secondary income, net	308	298	252	226	315
Capital and financial account	2,206	1,959	1,092	317	307
Financial account (net)	2,194	1,944	1,079	315	299
Direct investment (net)	1,358	756	968	1,072	636
Portfolio investment (net)	522	-41	-257	-310	71
Other investment (net)	314	1,230	368	-447	-408
Errors and omissions	-700	-515	-539	-821	-438
Overall balance	-143	124	322	-57	-142
Memorandum items:					
Current account (% of GDP)	-9.1	-7.0	-1.2	2.4	-0.1
Gross international reserves (USD million)	873	997	1,319	1,263	1,121
(In months of imports of goods and services)	1.4	1.6	2.7	2.3	1.7
Nominal GDP (USD million)	18,127	18,719	19,099	18,984	15,061
Exchange rate (against USD, EOP)	8,532	8,869	9,290	11,193	17,312

Source: BOL

Appendix 4. Statement of Central/General Government Operations

Indicators	2018	2019	2020	2021	2022
	(In billions of LAK unless specified otherwise)				
Revenue	24,758	25,329	21,846	27,177	31,835
Tax	17,032	17,736	15,765	18,534	24,938
Income-based tax	3,692	3,856	3,179	4,227	6,174
Consumption-based tax	9,944	10,385	8,322	9,997	11,478
Trade tax	1,097	1,012	1,085	1,205	2,621
Other tax	2,299	2,483	3,179	3,105	4,665
Non-tax	4,797	4,763	3,451	4,966	4,988
Grant	2,929	2,829	2,630	3,678	1,908
Expenditure	31,866	30,624	30,858	29,507	32,281
Current non-interest expenditure	16,466	17,679	17,126	17,880	19,013
Interest payments	2,597	2,868	2,609	2,163	3,806
External	2,084	2,428	2,100	1,762	2,492
Domestic	512	440	509	401	1,314
Capital expenditure	12,803	10,076	11,123	9,465	9,461
Fiscal Balance	-7,107	(5,295)	(9,012)	(2,330)	(446)
Primary Balance	-4,511	(2,427)	(6,403)	(168)	3,360
	(In percent of GDP)				
Revenue	16.2	15.6	12.6	14.7	14.8
Tax	11.2	10.9	9.1	10.0	11.6
Income-based tax	2.4	2.4	1.8	2.3	2.9
Consumption-based tax	6.5	6.4	4.8	5.4	5.3
Trade tax	0.7	0.6	0.6	0.7	1.2
Other tax	1.5	1.5	1.8	1.7	2.2
Non-tax	3.1	2.9	2.0	2.7	2.3
Grant	1.9	1.7	1.5	2.0	0.9
Expenditure	20.9	18.8	17.8	16.0	15.0
Current non-interest expenditure	10.8	10.9	9.9	9.7	8.8
Interest payments	1.7	1.8	1.5	1.2	1.8
External	1.4	1.5	1.2	1.0	1.2
Domestic	0.3	0.3	0.3	0.2	0.6
Capital expenditure	8.4	6.2	6.4	5.1	4.4
Fiscal Balance	-4.7	-3.3	-5.2	-1.3	-0.2
Primary Balance	-3.0	-1.5	-3.7	-0.1	1.6
Memorandum items:					
Nominal GDP (LAK billion)	152,414	162,657	172,919	184,982	215,609

Source: LMOF; AMRO staff estimates

Appendix 5. Monetary Survey

Indicators	2018	2019	2020	2021	2022
	(In billions of LAK unless specified otherwise)				
Net Foreign Assets	-9,248	-7,260	-2,051	4,441	7,037
Assets	17,159	20,769	26,404	37,755	52,752
Liabilities	-26,408	-28,029	-28,456	-33,314	-45,715
Net Domestic Assets	90,179	103,447	113,946	134,283	182,811
Net Domestic Credit	81,984	85,594	92,110	113,712	155,239
Government	6,588	4,587	7,630	19,506	18,050
Private sector	63,197	68,544	72,301	79,963	117,316
Other items net	8,194	17,852	21,836	20,571	27,572
Reserve Money	23,873	27,325	32,469	40,011	50,902
Broad Money	80,930	96,186	111,895	138,724	189,849
Currency in circulation	9,200	10,990	12,195	13,386	12,662
Currency outside banks	7,149	8,581	9,312	10,490	9,500
Deposits	69,603	82,401	96,585	120,984	171,406
Of which: Foreign currency	39,894	47,470	56,718	75,395	119,993
Of which: Local currency	29,709	34,931	39,867	45,588	51,413

Source: BOL

Appendix 6. Climate Change Policy Fact Sheet ⁷⁵

Item	Sub-item	Note				
Nationally Determined Contribution (NDC)	Submission	<ul style="list-style-type: none"> Updated NDC (March 2021) 				
	Emission reduction targets	<ul style="list-style-type: none"> Total emissions of greenhouse gases (GHG) in 2000 amounted to 50,742 ktCO₂e. The government provides three scenarios to analyze the projection of GHG emissions: baseline, unconditional mitigation, and conditional mitigation. Baseline refers to the case most likely to occur in the absence of GHG mitigation activities. Unconditional mitigation reflects GHG emission reduction efforts that take into account the nation's own resources and existing support from other countries. Conditional mitigation represents GHG emission reduction efforts with increased support from other countries. 				
		(Unit: ktCO ₂ e)	2020	2030	2050	
		Baseline	82,000	104,000	125,000	
		Unconditional	53,000	42,000	20,000	
		Conditional	53,000	No target	0	
	Main mitigation targets	Sector	Unconditional target	Conditional target	Unconditional average abatement per year (ktCO ₂ e)	Conditional average abatement per year (ktCO ₂ e)
		Land use change and forestry	Reduced emissions from sustainable management of forests, etc.	Increased forest to 70% of land area	1,100	45,000
		Hydropower	13GW total hydropower in the country	-	2,500	-
		Other renewables	-	- Solar and wind energy: total 1GW installed - Biomass: total 300MW installed	-	184
		Energy-efficient	Introduction of 50,000 energy-efficient cooking stoves	10% reduction in final energy consumption	50	280
		Transport	- New bus rapid transit system in Vientiane - Lao-China Railway	- 30% electrical vehicles penetration - Biofuels to make up 10% of transport fuels	325	59
		Agriculture	-	Adjusted water management practices for 50,000 hectares	-	128
		Waste	-	Implementation of 500t/day solid waste management project	-	40
	Adaptation	Floods and droughts Key targeted sectors	Total damage and losses from 2018 flooding that affected more than 600,000 people across the country were estimated at USD371 million, 2 percent of GDP. Agriculture, forestry and land use change, water resources, transport and urban development, public health, and energy			
Climate Finance	Financing needs	2030 conditional mitigation measure			Financing needs (USD million)	
		Increased forest to 70% of land area			1,700	
		Solar and wind energy: total 1GW installed			1,500	
		Biomass: total 300MW installed			720	
		30% EV penetration			500	
		Biofuels to make up 10% of transport fuels			230	

⁷⁵ Prepared by Sota Nejime, Associate Researcher.

		10% reduction of final stationary energy consumption	30
		Adjusted water management practices for 50,000 hectares	65
		Implementation of 500t/day solid waste management project	17
		Total	4,762
	Multilateral climate finance	<u>United Nations Framework Convention on Climate Change (UNFCCC) funds</u>	
		<ul style="list-style-type: none"> • Adaptation fund: Financing of two adaptation projects amounts to USD10 million. • Global Environmental Facility (GEF): Financing of 22 mitigation projects amounts to USD48.7 million. • Least Developed Countries Fund (LDCF): Financing of eight adaptation projects amounts to USD33.1 million. • Green Climate Fund (GEF): Financing of one adaptation and mitigation project amounts to USD31.7 million. 	
	Bilateral climate finance	<u>Non-UNFCCC funds</u>	
		<ul style="list-style-type: none"> • UN: UN-REDD program focuses on reducing emissions from deforestation and forest degradation (REDD) in developing countries, supports one project with USD200,000. • World Bank: Climate Investment Funds (CIFs), Forest Investment Program, and Forest Carbon Partnership Facility (FCPF) support climate challenges in Lao PDR. • ADB: Climate Change Fund provides one project with grants amounting to USD1 million. • EU: EU Global Climate Change Alliance Plus (GCCA+) provides USD6.94 million to one project focusing on improving institutional capacity for forest management. • Germany: International Climate Initiative (IKI) provides EUR2.32 million as grants to mitigation and biodiversity conservation projects. 	

Source: Lao PDR NDC; UN; OECD; World Bank

Appendix 7. Data Adequacy for Surveillance Purposes

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 available on LSB website. - Quarterly GDP data became available in 2022. - GDP on the consumption side became available in 2023, but only for nominal data as of June 23, 2023.	GDP data is published annually with a time lag of six to nine months.	Data collection techniques are weak due to resource constraints.		
Balance of Payments (BOP) and External Position	- BOP data is published on the BOL website on a quarterly basis. - Time-series data on international reserves is published on a quarterly basis and provides a monthly breakdown with a 3-5 month lag. - Export and import data is reported by the Ministry of Industry and Commerce (MOIC). - Information on external positions is not published by the authorities.	- BOP data is released on a quarterly basis with a time lag of one to two quarters. - MOIC data is released every month.	- BOP is compiled on a quarterly basis by BOL in accordance with BPM6. Improvements in the compilation of data from merchandise trade, external debt and FDI surveys are a work-in-progress. - External trade data is incomplete, especially on imports, as it covers only major items whose values are based on average prices of goods specified by the authorities in the past. - A breakdown of external trade data is published by MOIC every month, and historical data is unavailable.	- Consistency of trade data among government agencies could be improved. - A large discrepancy can be seen between trade data from national sources, international financial institutions and Lao PDR's major trading partners, in particular for import data. - Large errors and omissions during several periods make the analysis and interpretation of BOP data challenging.	Ongoing efforts enhance the coverage of exports and imports, narrow data discrepancies between customs, BOL and MOIC, and address understated trade deficits.
State Budget and Government Debt	- Budget implementation data is released by the Ministry of Finance (MOF) - A debt statistic bulletin is published on the MOF website.	- The budget and its implementation report are published biannually in the Laotian language with a time lag of six months to one year. - A debt statistic bulletin is published annually with a time lag of six months	The use of Government Finance Statistics (GFS) standards and procedures is weak. Data coverage is limited to budget operations. Off-budget activities are excluded from the fiscal data.	Persistent off-budget expenditure	- Implementation of PFM is ongoing. - Continued capacity building is needed to improve the timeliness, coverage and accuracy of fiscal data.
Inflation, Money Supply and Credit Growth	- Inflation data is published on the LSB website. - Monetary statistics are published on the BOL website. - Data on official and effective exchange rates (parallel rate) is available on BOL website. - Data is available on credit, the breakdown into claims on government, credit to SOEs and credit to the private sector.	- Headline CPI data is released monthly with a time lag of one to three months. - Official exchange rates are reported daily, while effective exchange rate data is available only monthly with a delay of up to four months. - Monetary and credit data is released on a quarterly basis, with monthly breakdown with the time lag of three months to two quarters or six months.	- CPI now encompasses 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 amount of bills that are denominated in U.S. dollars or other foreign currencies and are circulating in the economy is not captured in official monetary statistics. Money supply data includes only deposits in banks (denominated in local and foreign currencies) and bills in circulation (in local currency only).	Some items in the monetary survey, such as the BOL's claim on commercial banks and commercial banks' liabilities with the central bank, are not internally consistent.	Policy efforts to improve consistency in the monetary survey are ongoing.
Financial Sector Soundness Indicators	Selected indicators on financial soundness (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's 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 the interest rate margin, are not consistent with levels implied in 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 on which the available data is published. 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, taking into account the data methodologies.
- (iv) Consistency refers to both internal consistency within the data series itself and its horizontal consistency with other data series of either the 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.

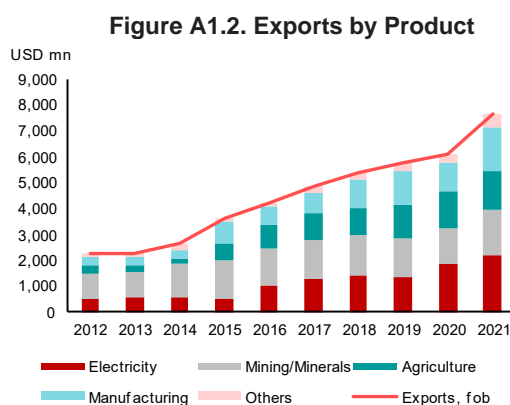
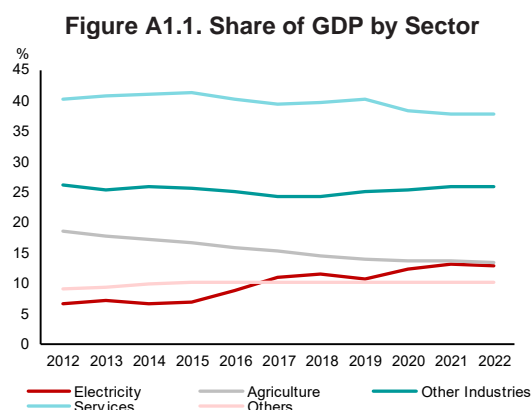
Annexes: Selected Issues

1. Assessing Sustainability of Electricity Sector Growth in Lao PDR⁷⁶

Under the 9th five-year National Socio-Economic Development Plan covering 2021 to 2025, the authorities identified the electricity sector as a potential area that Lao PDR could leverage for economic development. However, developing more power plants to grow the electricity sector could result in higher external debt, putting pressure on Lao PDR’s macro-financial stability. As such, whether the electricity sector could sustain its growth and help drive the Laotian economy requires a careful assessment. In this selected issue, we take stock of the performance and challenges of the electricity sector in Lao PDR, focusing on the debt repayment capacity of borrowers, to set the base for further policy consideration that could maximize the benefits of the sector.

I. Overview of Lao PDR’s Electricity Sector

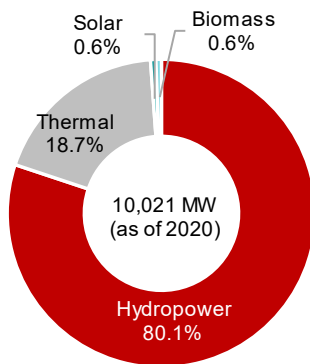
1. The electricity sector in Lao PDR has developed rapidly in the last decade, playing an important role as one of the growth drivers of the economy. The share of the electricity sector in the Laotian economy nearly doubled from 6.5 percent in 2012 to 12.8 percent in 2022 (Figure A1.1), the strongest growth among all the sectors. Electricity exports also increased during this period, becoming an important source of Lao PDR’s foreign currency revenue (Figure A1.2). Electricity exports had amounted to USD2,168.8 million by 2021, four times larger than the USD502.2 million recorded in 2012.



2. The main source of electricity generation is hydropower. As of 2020, hydropower formed 80 percent of total installed generation capacity, followed by thermal power with 19 percent (Figure A1.3). The country’s mountains and abundant water resources present a great opportunity to develop and expand hydropower generation. Power plants with a large installed capacity are concentrated in the north, which accounted for 43 percent of total installed capacity as of 2020 (Figure A1.4).

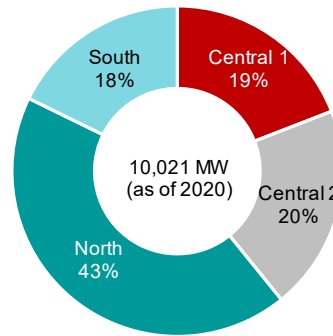
⁷⁶ Prepared by Naoaki Inayoshi and Sota Nejime

Figure A1.3. Installed Capacity by Source



Source: Electricity Statistics 2020; AMRO staff calculations

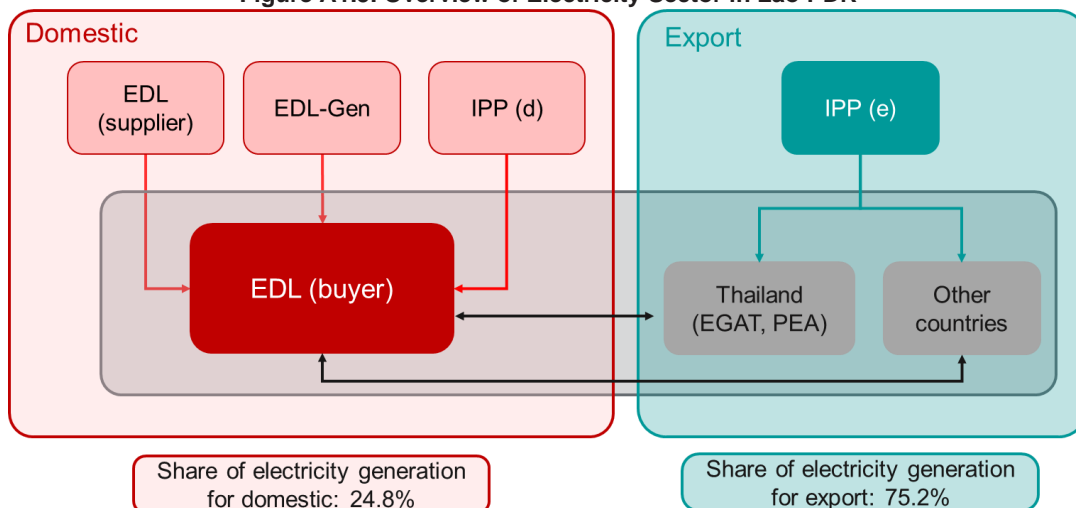
Figure A1.4. Installed Capacity by Region



Source: Electricity Statistics 2020; AMRO staff calculations
Note: Laotian authorities divide the country into four regions: North, Central 1, Central 2, and South.

3. The key players in the electricity sector fall into two groups: domestic and export. In the domestic power market, Electricite Du Lao (EDL) is the sole buyer of electricity from EDL Generation Public Company (EDL-Gen) and independent power producers for domestic use (IPP(d)s),⁷⁷ and at the same time, it also owns a few power plants (Figure A1.5).⁷⁸ EDL has signed individual power purchase agreements (PPAs) with EDL-Gen and IPP(d)s concerning each of the power plants. These domestic generators account for about 25 percent of total electricity generation in Lao PDR, while the remaining 75 percent is generated by independent power producers for export (IPP(e)s) and sold to neighboring countries under PPAs signed with their utility companies, mostly with the Electricity Generating Authority of Thailand (EGAT).⁷⁹ EDL also exports and imports electricity to and from neighboring countries depending on the season, as the supply of electricity from hydropower plants varies with the weather and does not meet domestic demand all the time.⁸⁰ As can be seen, the electricity sector in Lao PDR differs in nature between the export and domestic markets, therefore we assess these markets separately.

Figure A1.5. Overview of Electricity Sector in Lao PDR



Source: Electricity Statistics 2020; AMRO staff compilation
Note: PEA refers to Provincial Electricity Authority in Thailand.

⁷⁷ IPP(d) refers to an independent power producer selling electricity for domestic use, while IPP(e) refers to an independent power producer selling electricity for export to neighboring countries.

⁷⁸ EDL buys part of its electricity from IPP(e)s, but 98 percent of its total supply comes from its own power plants, EDL-Gen, IPP(d)s, and imports from foreign utility companies.

⁷⁹ Some IPP(e)s have contracts to supply electricity to EDL for domestic use, but almost all the electricity they produce is exported to neighboring countries.

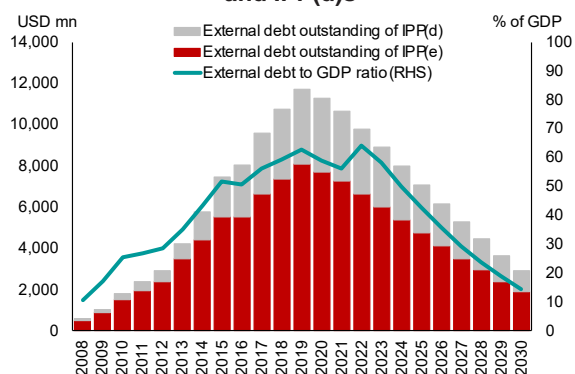
⁸⁰ EDL's exports account for 12 percent of total electricity exports from Lao PDR.

II. Export Market

4. On the export front, debt accumulated by IPP(e)s due to their continued electricity development would likely be manageable as their financial positions are generally sound. Although IPP(e)s are estimated to have accumulated significant external debt due to a boom in hydropower development after the 2010s, the debt is expected to be repaid steadily as the power plants become operational going forward. Each IPP(e) receives a stable revenue under its PPA with a “take-or-pay”⁸¹ clause, and the transaction currency is denominated in the U.S. dollar. Furthermore, the IPP(e)s sell almost all their electricity to EGAT, whose balance sheet is healthier and stronger than that of EDL, ensuring its IPP(e) suppliers have good debt repayment capacity. As such, we estimate that IPP(e)s started reducing their accumulated debt after 2020 due to the nature of power plant investments in Lao PDR (Figure A1.6).⁸²

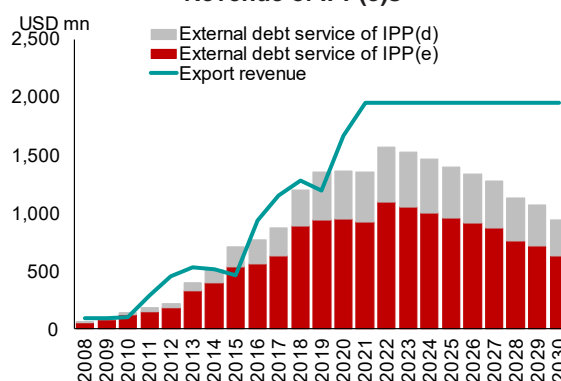
5. Electricity exports are growing as the number of IPP(e)s increases, generating sufficient export revenue to cover the annual power plants’ debt service. Annual export revenues of IPP(e)s are estimated to have surpassed the debt service burden of IPP(e)s and IPP(d)s in 2020 (Figure A1.7). In addition, EDL will likely increase electricity exports by taking advantage of its excess supply during the rainy season and its increasing generation capacity.

Figure A1.6. External Debt Outstanding of IPP(e)s and IPP(d)s



Source: World Bank; ADB; Japan Bank for International Cooperation (JBIC); several IPP companies’ websites; AMRO staff estimates
Note: The external debt of 44 power plants that each has capacity of more than 10MW in capacity, is owned by an IPP(d) or IPP(e) and started operation before 2021 is estimated. Actual external debt information is taken from seven power plants, while the rest is estimated based on installed capacity and some assumptions, such as the following: i) the project D/E ratio is 7/3, ii) the disbursement period is three years, iii) the grace period is two years, and iv) the repayment period is 15 years.

Figure A1.7. External Debt Service and Export Revenue of IPP(e)s



Source: World Bank; ADB; JBIC; several IPP companies’ websites; AMRO staff estimates
Note: The external debt of 44 power plants that each have capacity of more than 10MW, is owned by an IPP(d) or IPP(e) and started operation before 2021 is estimated. Actual external debt information is taken from seven power plants, while the rest is estimated based on the installed capacity and some assumptions, such as the following: i) the project D/E ratio is 7/3, ii) the disbursement period is three years, iii) the grace period is two years, iv) the repayment period is 15 years, and v) the interest rate is 7.0 percent.

6. IPPs pay royalties and taxes that contribute to fiscal revenue after their tax holiday is over; in particular, those that produce energy for export will significantly benefit the public coffers following the end of the concession period.⁸³ Royalties and taxes from power plants are often minimal or zero due to generous tax incentives in the early stages of their operations, but will contribute to increasing fiscal revenues for more than 20 years after the tax holiday ends. The fiscal revenue benefit is estimated at USD276.8 million, equivalent to 1.5 percent of GDP in 2020, rising to USD383.4 million in 2030, or 1.9 percent of GDP

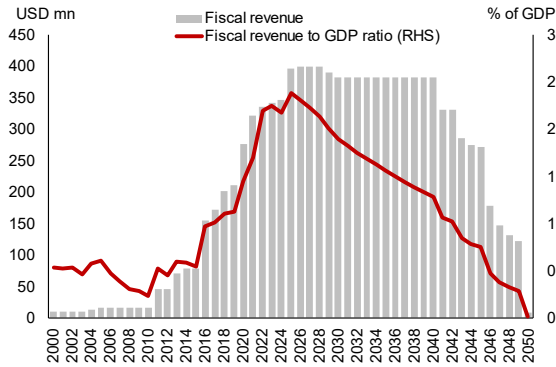
⁸¹ Take-or-pay is a provision that obliges the buyer to purchase a fixed amount of electricity generation regardless of actual demand.

⁸² A typical power plant project requires a large upfront investment in the initial phase and pays off the resulting debt stock using its income stream, stretched over a long period as it takes time to start operation. For instance, hydropower projects have a standard loan duration of 10-20 years, while their export revenues will benefit the country for at least 50 years.

⁸³ Every power plant project operates under a concession agreement signed between the government and the respective IPP.

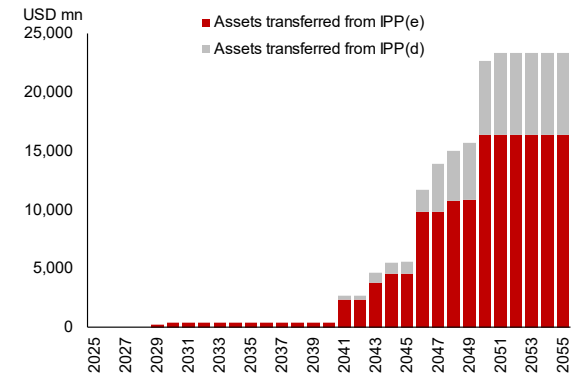
(Figure A1.8), as most electricity generators start paying these fees from around 2025. In addition, power plant assets now owned by IPPs, notably for export use, will be transferred to the government at the end of the concession period under a Build-Operate-Transfer scheme, allowing Lao PDR to reap the full benefits of electricity exports (Figure A1.9).

Figure A1.8. Estimated Fiscal Revenue from IPPs



Source: World Bank; ADB; JBIC; several IPP companies' websites; AMRO staff estimates
Note: Fiscal revenues from 44 power plants that have more than 10MW in capacity each and are owned by an IPP(d) or IPP(e) are estimated. Fiscal revenues consist of royalties and corporate income tax, excluding dividends from government-owned shares. Royalties become payable starting from the commercial operation date (COD), while corporate income tax is assumed to take effect five years after the COD. The fiscal revenues are estimated based on installed capacity and across the concession agreement period, which is assumed to last for 30 years. Therefore, fiscal revenues will decline slightly in 2029 when the first concession agreement expires and decline further after 2041 when more concession agreements end.

Figure A1.9. Cumulative Power Plant Assets to be Transferred to the Government

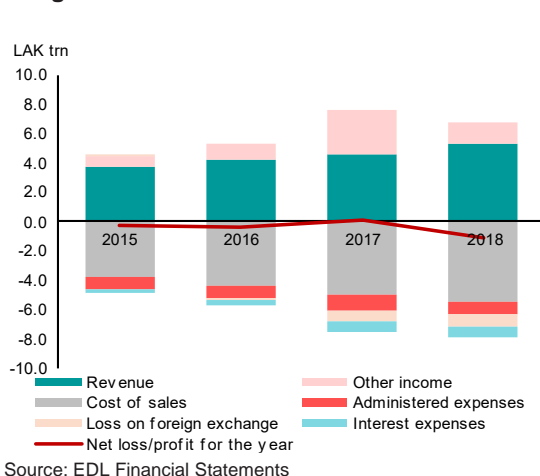


Source: World Bank; ADB; JBIC; several IPP companies' websites; AMRO staff estimates
Note: The assets of 44 power plants that have more than 10MW in capacity each and are owned by an IPP(d) or IPP(e) are estimated. The actual project assets information of seven power plants is found publicly, while the rest is estimated based on installed capacity.

III. Domestic Market

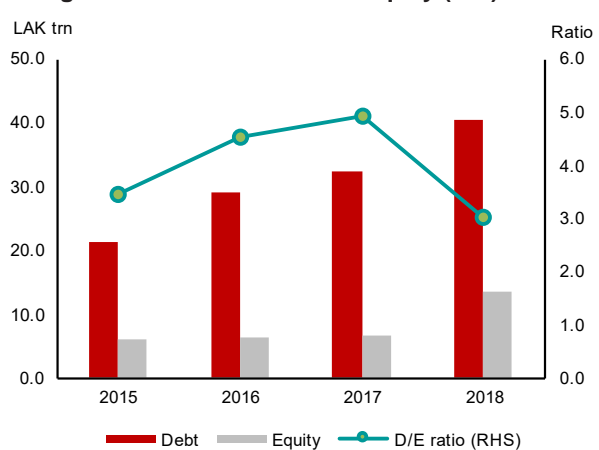
7. Looking at the domestic market, EDL has a weak financial position. Despite the growth in the electricity sector, EDL has mostly reported a financial deficit since its revenue is insufficient to cover expenses (Figure A1.10). In 2018, it recorded a net loss of LAK1.1 trillion and the debt-to-equity ratio was 3.0, which is higher than the common threshold of 1.5 to 2.0 required as the financial covenant of standard loan agreements (Figure A1.11).

Figure A1.10. EDL's Financial Performance



Source: EDL Financial Statements

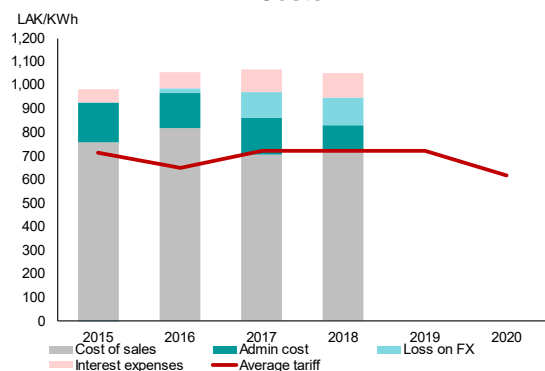
Figure A1.11. EDL's Debt-to-Equity (D/E) Ratio



Source: EDL Financial Statements; AMRO staff calculations
Note: The D/E ratio in 2018 decreased as equity increased under a LAK5,979,371 billion rises in the Ministry of Finance's contributed capital. The greater contribution was made up of LAK2,523,485 billion converted from retained earnings and LAK3,455,886 billion from land use rights. In addition, there was a surplus from property revaluation.

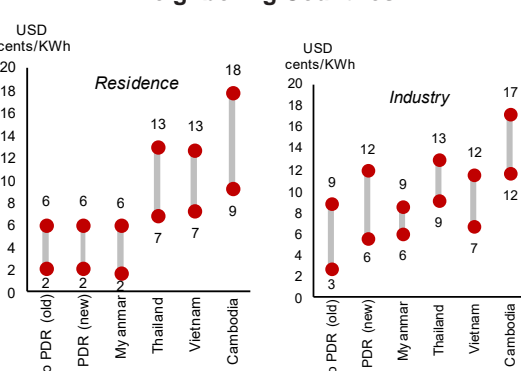
8. The domestic electricity market has been a structurally loss-making one for EDL as tariffs remain below the cost recovery level. In the past few years, the average tariff across different categories has been around LAK700 per kilowatt-hour. However, EDL’s total costs, including not only the purchase but also various administrative expenses, have exceeded the average tariff (Figure A1.12). Administrative expenses were reduced by LAK56 per kilowatt-hour from 2015 to 2018, but total costs remained above the average tariff due to an increase in interest payments and valuation losses due to Lao kip depreciation. In February 2023, the electricity tariff on industries increased to ease EDL’s financial burden from the rapid depreciation of the Lao kip. Nevertheless, electricity tariffs are estimated to remain lower than the cost recovery level and those of neighboring countries, especially for households (Figure A1.13).

Figure A1.12. Average Electricity Tariff and EDL’s Costs



Source: Electricity Statistics 2020; EDL Financial Statements; AMRO staff calculations

Figure A1.13. Electricity Tariff Range Across Neighboring Countries



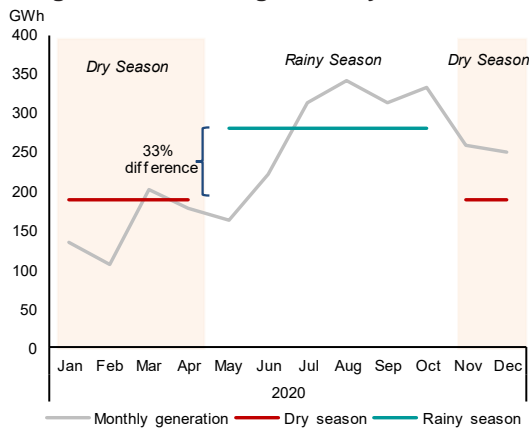
Source: EDL; Ministry of Electric Power, Myanmar; Metropolitan Electricity Authority, Thailand; Vietnam Electricity Corporation; Electricity Authority of Cambodia; BOL; Central Bank of Myanmar; Bank of Thailand; State Bank of Vietnam; National Bank of Cambodia; CEIC; AMRO staff calculations
Note: “Lao PDR (old)” refers to the electricity tariff before February 2023, whereas “Lao PDR (new)” refers to the tariff in effect since February 2023. For Thailand, the energy charge applied to the normal tariff is referenced and the industry refers to small, medium and large general services. For Vietnam, the retail electricity tariff for standard hours is used. The electricity tariff in each country was converted from the local currency (LCY) to USD using the May 2023 LCY/USD official exchange rate.

9. Purchase agreement under the PPA between EDL and the IPP(d) also put a stress on EDL’s financial position. As the sole electricity buyer in the domestic market, EDL purchases electricity from IPP(d)s under the take-or-pay clause of the PPA. This agreement guarantees the IPP(d) a fixed revenue and minimizes its loss from the large investment of constructing power plants. While the take-or-pay clause is commonly used in other countries, EDL bears the risk of paying for electricity that is not sold to consumers. Furthermore, EDL is subject to a foreign exchange risk as it buys electricity from the IPP(d) in U.S. dollar terms while selling to domestic consumers in the Lao kip. To ease the financial burden on EDL, small IPP(d)s have agreed to decrease their selling prices by 8 percent by amending their PPA in 1H 2023. Negotiations with large IPP(d)s are ongoing while the take-or-pay clause, as well as the foreign exchange risk, remain.

10. Other structural issues exist. One salient challenge is the hydropower-dependent electricity generation model. Electricity generation in Lao PDR is unstable during the year, changing significantly between the dry and rainy seasons. Average monthly generation during the dry season drops by 33 percent compared to the rainy season (Figure A1.14). As a result, EDL imports electricity during the dry season from neighboring countries such as Thailand to meet domestic demand (Figure A1.15). Fragmented transmission lines also prevent Lao PDR

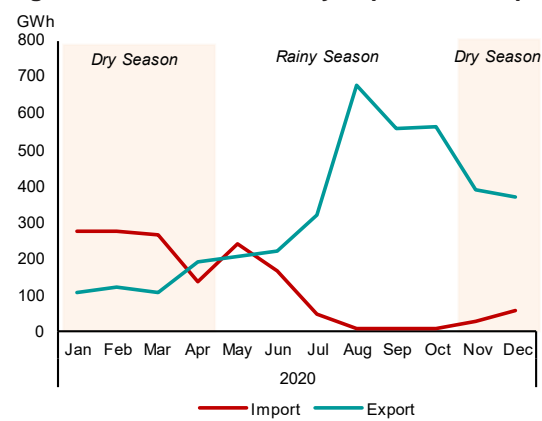
from optimizing domestic distribution. In Lao PDR, transmission lines dedicated to exports to neighboring countries are generally not linked to the domestic networks other than several 115 kilovolt lines that are connected to Thailand, limiting the flexibility to distribute electricity across the region based on demand. Furthermore, a lack of high-voltage transmission lines poses a challenge for Lao PDR to expand electricity exports to its neighbors.

Figure A1.14. Average Monthly Generation



Source: Electricity Statistics 2020; AMRO staff calculations

Figure A1.15. EDL Electricity Exports and Imports



Source: Electricity Statistics 2020

IV. Conclusion

11. Lao PDR’s electricity sector has delivered a mixed performance between the export and domestic markets. The electricity sector for export has seen stable performance and is expected to benefit the Laotian economy through export and fiscal revenues in the medium and long term. However, the simple conclusion that the future of the electricity sector is bright and able to sustain its growth is somewhat misleading. The domestic market contains several structural issues that adversely affect the Laotian economy. In particular, EDL’s weak financial position could pose a substantial risk to other parts of the economy, including the fiscal and financial sector. Furthermore, the dichotomy between the export and domestic markets may eventually disappear since IPP(e) assets will be transferred to the government after the concession agreement expires. By then, the situation may differ from current circumstances, warranting another assessment of the sustainability of Lao PDR’s electricity sector growth.

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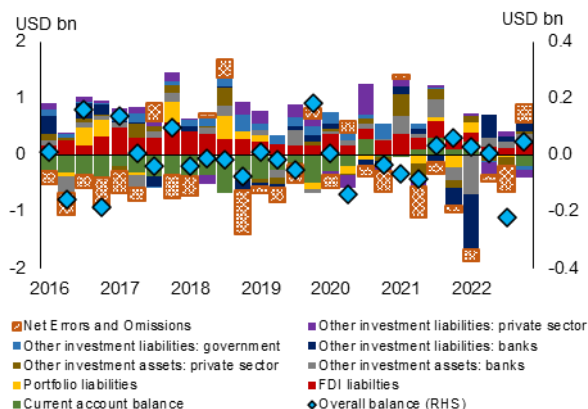
2. Foreign Exchange Management in Lao PDR and Neighboring Countries⁸⁴

Lao PDR has experienced a decline in foreign exchange (FX) supply in the last few years. At the same time, the demand for forex has increased due to higher imports, debt repayments, and residents' intensified currency substitution. A slow adjustment in the reference (official) exchange rate that led to a widening gap with the parallel market rate has added pressure on the FX market. In response, policy measures have been taken to boost domestic FX supply and lower FX demand and to channel transactions through the banks. Notably, the FX management law has been amended to better enforce repatriation regulations and introduce a conversion requirement. Outside of Lao PDR, other countries' FX management policies underscore the importance of market-friendly measures in sustaining investor confidence. Measures such as repatriation and conversion requirements are used only when official reserves are low and the onshore FX market is very short of foreign exchange. In addition, these measures are often temporary and are lifted when the onshore market is able to attract more inflows of foreign exchange and becomes more liquid.

Recent developments in the FX market in Lao PDR

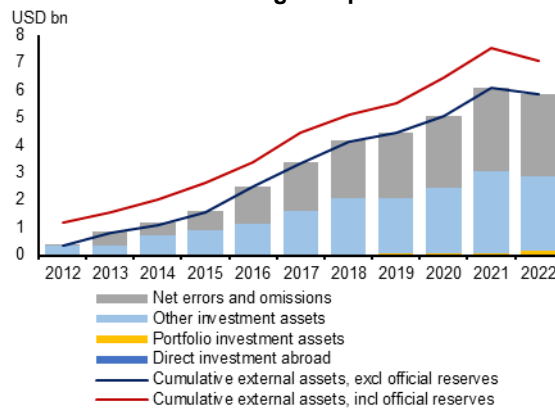
1. Lao PDR has experienced a decline in foreign exchange (FX) supply in recent years. The supply of foreign exchange was supported mostly by export earnings, remittances, and financial account flows, comprising foreign direct investment (FDI) and external borrowings by the public and private sectors. However, FDI inflows have declined since 2019 in the absence of large new projects in mining, hydropower, or infrastructure (Figure A2.1). The pandemic also caused delays in FDI realization among ongoing projects. Furthermore, the government stopped issuing bonds in the Thai market between 2019 and 2021, and the government also took out smaller external loans in 2022. Meanwhile, the improvement in the current account balance in the past few years has not translated into more domestic FX supply. Instead of repatriating FX earnings, exporters apparently kept a large share abroad, as reflected in their elevated external assets (Figure A2.2).

Figure A2.1. Overall Balance of Payments



Sources: BOL; CEIC; AMRO staff calculations
Note: Quarterly data up to Q4 2022.

Figure A2.2. Gross External Assets and Contributing Components

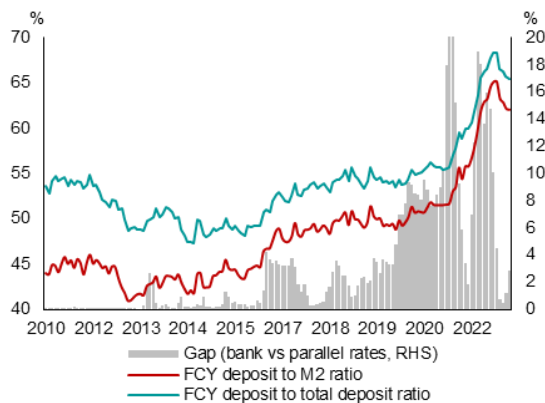


Sources: BOL; CEIC; AMRO staff calculations
Note: Data on Lao PDR's international investment position was unavailable. AMRO staff estimates the gross external assets based on BOP data. As direct and portfolio investment assets held by residents seem negligible, gross external assets consist mainly of "other investment" assets as well as other overseas assets that are reflected in large negative "net errors and omissions". Other investment assets held by residents are mainly in the form of foreign currency and overseas deposits belonging to banks, non-financial corporations, and households. In addition, AMRO staff assume that half of annual outflows classified under the "net errors and omissions" contributed to Laotian residents' acquisition of external assets.

⁸⁴ Prepared by Phiangphathai Maniphone, Chanthevivanh Keobounphanh, and Nguyen Thi Kim Cuc. Diana Del Rosario and Ming Han (Justin) Lim provided valuable comments and inputs.

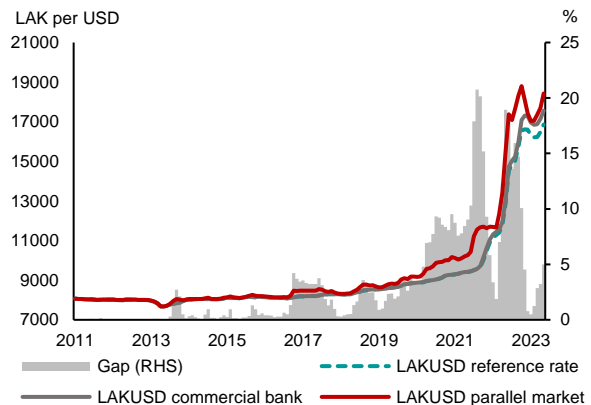
2. At the same time, FX demand has risen to meet higher imports, debt repayments, and residents' intensified currency substitution. Although the government suspended debt repayment to a major creditor between 2020 and 2022, FX demand rose to service the private sector's external debt obligations and to pay for more expensive fuel imports triggered by spiking global oil prices in 2022. On top of the heightened need for FX, confidence in the Kip weakened amid surging inflation and currency substitution in Lao PDR's highly dollarized economy accelerated as firms and households switched from kip to foreign currency (FCY) assets. The ratio of FCY deposits to total deposits, which had stabilized at around 55 percent until 2020, spiked to nearly 70 percent by end-2022 (Figure A2.3).

Figure A2.3. Ratio of FCY Deposits to Total Deposits and Broad Money (M2)



Sources: BOL; CEIC; AMRO staff calculations
Note: Monthly data up to December 2022.

Figure A2.4. USDLAK Exchange Rates



Sources: BOL; CEIC; AMRO staff calculations
Note: Monthly data up to May 2023.

3. A slow adjustment in the official exchange rate that had led to a widening gap with the parallel market rate, added pressure on the FX market. The parallel market, comprising FX bureaus, provides forex to households and small businesses, whereas commercial banks cater to the FX needs of large firms. In the past, the gap between the parallel and commercial bank rates was quite narrow, which helped maintain the separation between the formal (commercial bank) and parallel markets, each serving its own market segment. Due to a delay in adjusting the commercial bank rates which were tightly pegged to a rigid BOL reference rate⁸⁵, the gap widened significantly starting in 2020 and surged to 20 percent several times in 2021-2022 (Figure A2.4). This led to a squeeze in FX supply to commercial banks and constrained their ability to meet FX demand from clients. Bank clients had to secure part of their FX needs from the parallel market, which further pushed up the parallel rates and intensified the depreciation pressure on the Kip.

Policy Responses

4. FX management policies have been implemented to boost the supply of foreign exchange and reduce demand in the domestic market. To boost FX supply in the domestic market, the FX management law was amended in July 2022 to strengthen the enforcement of repatriation regulations on export earnings and introduce a conversion requirement (Table A2.1). Implementation of the conversion requirements has yet to take effect, pending BOL's issuance of sub-law regulations. To contain the FX demand, the amended law gives the BOL the authority to impose an upper limit on the FCY holdings of individuals and businesses. To better monitor FDI flows and increase the FCY supply, new FDI projects are required to open

⁸⁵ Commercial banks can set their exchange rate within a trading band of the USDLAK reference rate announced daily by the BOL. The trading band was narrow at ± 0.25 percent until 2021, when it was widened to ± 1.5 percent in September 2021, followed by ± 4.5 percent in October 2022, and ± 7.5 percent in June 2023.

a designated account with a local bank and convert their investment capital into Kip. FDI firms can then buy foreign currencies as needed from commercial banks in line with BOL regulations. Likewise, earnings from portfolio investment assets must be repatriated and converted into Kip in line with the central bank’s regulations on the FCY holding limits of individuals and businesses.

Table A2.1. FX Management Law in Lao PDR

Areas	Original FX Management Law (2014)	Amended FX Management Law (2022)	
		Regulations	Implementation Status
Export earnings repatriation; conversion regulations and exemptions	<p>[Repatriation] Require all FX earnings to be repatriated into domestic bank accounts within 120 days of export payment/receipt. Exempt offshore loan repayment and trade credit. The remaining earnings after loan repayment should be repatriated to Lao PDR.</p> <p>[Conversion] Do not require FX conversion.</p>	<p>[Repatriation] Require exporters to open a designated account with a local/onshore bank for external transactions. All FX earnings should be repatriated into domestic bank accounts.</p> <p>[Conversion] Require exporters to convert a certain portion of their export earnings into Lao kip based on a mandatory export conversion ratio stipulated by BOL.</p>	<p>Effective. Holding period of FX earnings offshore is to be determined in sub-law regulations that are under preparation.</p> <p>To be effective upon issuance of sub-law regulations.</p>
FX holdings by residents (individuals and businesses)	Allow residents and non-residents to hold FX in cash, bank deposits or both.	Impose an upper limit on FCY holdings of individuals and businesses. BOL will determine the limit, which could be on cash holdings, bank deposits or both.	To be effective upon issuance of sub-law regulations.
Inward FDI projects	Require new FDI projects to open account with local/onshore bank and transfer their investment capital through banking system.	Likewise, require new FDI projects to open designated account with local/onshore bank and convert their investment capital into Lao kip, after which FDI firms are allowed to buy foreign currencies from commercial banks in accordance with BOL regulations.	To be effective upon issuance of sub-law regulations.
Outward portfolio investments	Subject new portfolio investment abroad to BOL approval upon agreement with relevant line Ministries.	Subject new portfolio investment abroad to BOL approval and require investors to open designated account with local/onshore bank for investment earnings to be repatriated. Require earnings from outward portfolio investment to be repatriated and converted into kip in line with regulations on limits to FCY holdings of individuals and businesses.	To be effective upon issuance of sub-law regulations.

Source: AMRO staff compilation from the FX Management Law (December 2014); Decision on opening a deposit account, transferring cash in and out of Lao PDR (May 2019); Decision on capital transfer in and out of Lao PDR, loans and trade credit abroad (May 2019); Amended FX Management Law (July 2022), and other legal documents.

5. In addition, policy measures have been taken to contain parallel market activities.

First, the BOL restricted access to FX bureaus to individuals only, while businesses must conduct all FX transactions with commercial banks. FX bureaus were subsequently required to be merged with commercial banks’ FX operations. The BOL also aligned its reference rate against the U.S. dollar with the parallel market in a timelier manner, which helped to close the gap in early 2023. Banks were given greater flexibility in setting their exchange rate by widening the trading band of the commercial bank exchange rates.⁸⁶

FX management policy in neighboring countries

As the Lao PDR’s authorities have reviewed and revised their FX management policies, this section discusses relevant policies implemented by Indonesia, Malaysia, and Thailand, and highlight several key lessons for the Lao PDR.

6. In most regional countries, a reliance on foreign investment necessitates the adoption of a market-friendly approach to FX management to sustain investor confidence.

- a. **Indonesia** requires exporters of natural resources to repatriate their FX earnings onshore within 90 days of the date of export receipts. Prior to August 2023, no minimum holding

⁸⁶ Ibid footnote 78.

period was mandated, so exporters of natural resources can transfer their FX earnings elsewhere right after repatriation. Similar to Lao PDR, Indonesia recorded an improved current account balance during 2020-2022 but did not see an increase in FX supply as exporters prefer to place their FX earnings abroad due to higher overseas interest rates. To encourage them to retain their export proceeds onshore, Bank Indonesia (BI) offers financial instruments in the form of U.S. dollar term deposits carrying attractive interest rates in line with the market mechanism.⁸⁷ Early policies introduced prior to 2020 include a domestic non-deliverable forward (DNDF) instrument to complement the hedging options besides the offshore NDF market, and tax incentives for exporters who deposit FX earnings onshore and convert them into rupiah. Additionally, BI engages with investors in regular policy communications and dialogue (Table A2.2). A recently-issued regulation requires exporters of natural resources to retain a certain share of their FX proceeds onshore for a minimum period, effective August 2023, but repatriation does not require surrender or conversion. The exporters can deposit the FX with a local bank.⁸⁸

Table A2.2. Foreign Exchange Policies in Selected ASEAN Countries

	Indonesia	Lao PDR	Malaysia	Thailand
Export earnings repatriation and/or conversion regulations	Mandated repatriation of export earnings by exporters of natural resources, but no minimum holding period or conversion to rupiah; a 3-month minimum holding period for at least 30 percent of export earnings to be effective from August 2023.	Mandate export repatriation and conversion through amended FX management law, which requires exporters to transfer all income from exports to special deposit account opened at a resident bank and to sell the transferred foreign currency to that bank; enforcement is pending sub-law issuance.	Mandate repatriation of export proceeds. Imposed mandatory conversion of at least 75% of export proceeds into ringgit immediately upon repatriation between Dec 2016 and Apr 2021. Have banned onshore banks from participating in offshore NDF market since 2016.	Require any person receiving FX earnings from abroad of USD1 million or above to repatriate within 360 days from export or transaction date. Exporters can sell FX or keep it as FCY deposits at an authorized bank.
Market-based measures	Provide domestic NDF instrument as a hedging option complementing offshore NDFs. Offer tax incentives and market-competitive interest rates to encourage exporters to retain FX earnings onshore and convert them into rupiah.	Offer tax incentives for special economic zones to attract FDIs and FX earnings. Require outward investment to seek official approval.	Develop investor-friendly dynamic hedging program as an alternative hedging option to offshore NDFs. Allow/accommodate domestic long-term institutional investors to invest abroad, enabling two-way flows in FX market.	Banks in Thailand offer wide range of competitively priced FX hedging products, such as forwards, options, FX swaps, cross-currency swaps, and Thailand Futures Exchange (TFEX).
Other measures	Require non-bank corporates to hedge against short-term FCY liabilities. Conduct regular policy communication and dialogue with investors.	Start to conduct policy communications and dialogues with market participants. Conduct annual Investor Dialogue as part of an effort to enhance the investment environment.	Conduct regular policy communication and dialogue with investors to fine-tune policy measures.	Bank of Thailand collaborates with commercial banks to promote FX hedging products by arranging seminars and providing information to educate corporates and SMEs.
Underlying conditions	Negative net international investment position (IIP)	Negative net IIP. As with other dollarized economies, currency substitution may worsen the FX supply and exchange rate variability in volatile/turbulent periods.	Positive net IIP, domestic institutional investors hold sizeable external assets	Positive net IIP

Source: Respective central bank regulations; AMRO staff compilation

b. Malaysia has accelerated efforts to deepen the onshore FX market in recent years. Bank Negara Malaysia prohibited the trading and facilitation of offshore ringgit NDF in November 2016 as a move to stem the depreciation of the local currency. In place of the offshore NDF market, a dynamic hedging program was introduced in December 2016 for

⁸⁷ AMRO Annual Consultation Report on Indonesia 2022.

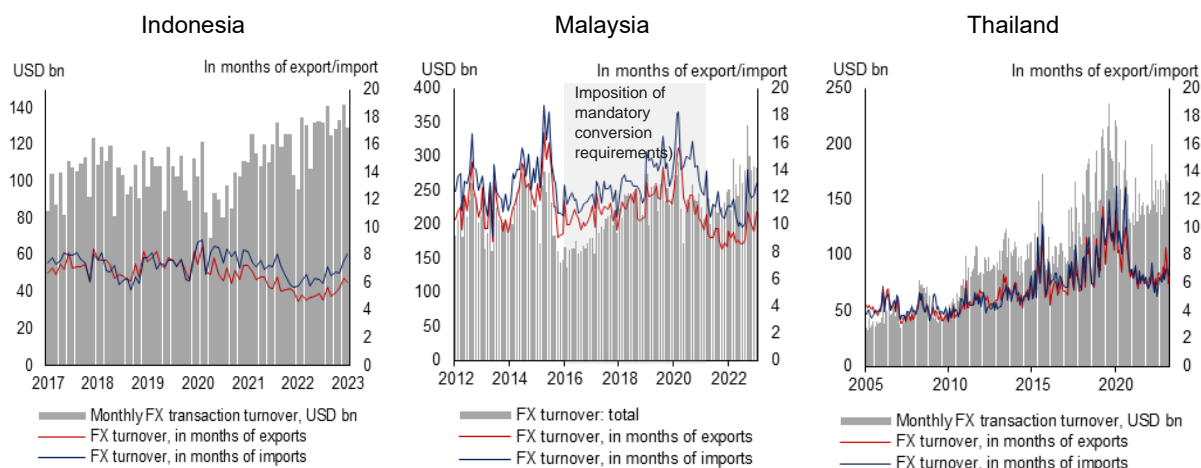
⁸⁸ Government Regulation Number 36 dated July 12, 2023, regarding FX proceeds from exploitation, management, and/or processing of natural resources.

institutional investors to actively manage their FX exposures on invested assets.⁸⁹ Policy communication and dialogue with investors are held regularly to fine-tune the program and enhance its flexibility and accessibility. The number of participants and the size of eligible assets under the program have increased steadily, boosting liquidity in the onshore FX market. Additionally, domestic long-term institutional investors have increased outward investment, enabling two-way flows in the onshore FX market.

7. Export repatriation and conversion regulations are enforced only when onshore FX liquidity declines to a significantly low level. In addition, these measures are often temporary and are lifted when the onshore market becomes sufficiently deep.

- a. **Malaysia** applied foreign exchange policies in 2016 when onshore FX transaction turnover declined to a very low level. Monthly FX turnover dropped from USD220 billion on average in 2012-2014 to USD165 billion in 2015-2016. In months of exports, the monthly FX turnover fell to less than 10 months at one point in 2016, from as high as 17 months a year ago (Figure A2.5). Exporters were subsequently required to convert at least 75 percent of their export proceeds into ringgit immediately upon repatriation. That said, the central bank of Malaysia has lifted the conversion requirement from early 2021 as the onshore FX transaction turnover rebounded and the domestic FX market became more resilient following deepening efforts.

Figure A2.5. Monthly FX Transaction Turnover in Selected ASEAN Countries



Sources: Bank Indonesia; Bank Negara Malaysia; Bank of Thailand; CEIC; AMRO staff calculations
Note: Monthly data up to April 2023 for Indonesia and Malaysia, and March 2023 for Thailand.

- b. **Thailand** imposed mandatory and conversion regulations after the 1997 Asian financial crisis, requiring exporters to repatriate FX earnings onshore and convert them into Thai baht immediately upon repatriation.⁹⁰ The regulations have been gradually relaxed along with increased FX supply and a strengthened Thai baht. To date, exporters are required to repatriate only export earnings that exceed USD1 million within 360 days from the date of export, up from USD5,000 and within 120 days of export about 25 years ago. Exporters can sell or deposit FX earnings with authorized banks upon repatriation, compared to immediate surrender requirements about 25 years ago.⁹¹ In the meantime, exporters who have to fulfill obligations in FX expenses are exempt from the above-mentioned repatriation and surrender requirements.

⁸⁹ More information on the dynamic hedging program can be found in Selected Issue 1 of AMRO Annual Consultation Report on Malaysia 2022, pp. 33-39.

⁹⁰ Exporters who have to fulfill obligations in FX expenses are allowed to deposit FX earnings into a designated FCY account held with a domestic bank.

⁹¹ Mahanakorn Partner Group (2021).

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