



Lao PDR Economic Monitor

Lowering risks and reviving growth

Thematic section:
Lao PDR power sector: Grow without sorrow

December 2017

Macroeconomic and Fiscal Management Global Practice
East Asia and Pacific Region



CURRENCY EQUIVALENTS

(Exchange Rate Effective as of December 6, 2017)

Currency Unit = LAK (Lao kip)

LAK 8,299 = US\$1.00

ACRONYMS AND ABBREVIATIONS

AEC	ASEAN Economic Community	MOIC	Ministry of Industry and Commerce
ASEAN	Association of Southeast Asian Nations	MW	megawatt
BOL	Bank of Lao PDR	NA	National Assembly
BOP	Balance of Payments	NEER	Nominal Effective Exchange Rate
CB	Commercial Banks	NFA	Net Foreign Assets
COD	Commercial Operation Date	NPL	Nonperforming Loan
CPI	Consumer Price Index	NSEDP	National Socio-Economic
EAP	East Asia and Pacific		Development Plan
EdL	Electricité du Lao	PIP	Public Investment Projects
EDL GEN	EDL Generation	PPG	Public and Public Guaranteed Debt
FAO	Food and Agriculture Organization	PPP	Purchasing Power Parity
FDI	Foreign Direct Investment	PV	Present Value
GDP	Gross Domestic Product	REER	Real Effective Exchange Rate
GNI	Gross National Income	SEZ	Special Economic Zones
GOL	Government of Lao PDR	SME	Small and Medium sized Enterprises
IMF	International Monetary Fund	SOCBs	State-owned Commercial Banks
LAK	Lao kip	SOE	State-owned Enterprise
LNCCI	Lao National Chamber of Commerce and	VAT	Value Added Tax
	Industry	WBG	World Bank Group
MFI	Microfinance Institution	WEO	World Economic Outlook
MOF	Ministry of Finance	YOY	year-on-year

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The findings and interpretations expressed here are those of the authors and do not necessarily reflect the views of the World Bank Group, its Executive Directors, or the countries they represent.

The Lao PDR Economic Monitor provides updates on macroeconomic developments and sectoral issues in the country. It is produced bi-annually and distributed widely to the Government agencies, development partners, the private sector, think tanks, civil society organizations, and academia.

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Contents

Executive summary	7
Recent economic developments and outlook	7
Thematic section: Lao PDR power sector: grow without sorrow	9
Recent economic developments in brief	11
Lao PDR Power Sector: Grow without Sorrow	12
Part I: Recent economic developments	13
The Lao PDR economy continues to gradually moderate	13
Domestic demand appears to be moderating	16
Exports from electricity, manufacturing, and agriculture are performing well	16
Inflation remains low as oil prices slowly recover and food prices fall	17
Improvement in manufacturing and agriculture as well as low prices may have benefited the poor	18
Macroeconomic management has improved slightly, but risks remain high	19
The fiscal space is thin. Government revenue shortfalls have been partially off-set by adjustments in spending	19
Still, public debt and risks have been increasing	22
Good export performance is expected to help narrow the current account deficit. Still, the foreign reserves buffer remains low	24
Greater flexibility in the exchange rate helped reverse some of the earlier appreciation.	26
Credit growth decelerated, despite unchanged monetary conditions	27
Expansion of the financial sector brings new challenges	29
Outlook	31
The medium-term outlook remains broadly favorable, but not without risks	31
Policy Considerations	34
Addressing risks to macroeconomic vulnerabilities is a key priority	34
Achieving more sustainable and stable growth will require a genuine and vibrant private sector	34
Part II: Lao PDR power sector: grow without sorrow	37
Summary	37
The power sector has fueled investment and growth	37
Reliable and affordable energy for people and businesses	39
Contribution to the budget has been growing, but remains modest	41
Who is who in the power sector	41
Power sector finances	44
Growing risks	45
Recommendations	47
References	49

FIGURES

Figure 1: Growth is expected to slightly moderate.....	13
Figure 2: Still, it remains strong.....	13
Figure 3: GDP growth continues to be driven by the power sector	14
Figure 4: Tourist arrivals continue to decline.....	14
Figure 5: Some recovery of agricultural commodity prices.....	17
Figure 6: Headline inflation remains low	18
Figure 7: Poverty is expected to continue falling.....	19
Figure 8: Addressing inequality remains a challenge	19
Figure 9: Revenues remain short of the ambitious target.....	20
Figure 10: Sound VAT and non-tax collection was offset by weaker performance on other taxes	20
Figure 11: Non-wage recurrent expenditures accounted for most of the expenditure adjustment	20
Figure 12: Fiscal deficit remains elevated	21
Figure 13: The fiscal deficit remains high compared to regional peers	21
Figure 14: Lao PDR's debt is on the high side compared to regional economies	22
Figure 15: Lao PDR increasingly resorts to bilateral and commercial loans.....	23
Figure 16: Lao PDR public external debt is mostly US\$-denominated debt	23
Figure 17: Financing needs are growing	23
Figure 18: Electricity export to Thailand	24
Figure 19: Parts and components exports mostly from SEZs continue	24
Figure 20: Lao PDR has low reserves adequacy by several metrics (data at end-2015).....	25
Figure 21: The kip recently depreciated against major currencies.....	26
Figure 22: The trend of appreciation started to reverse	26
Figure 23: The gap between official and parallel exchange rates narrows	26
Figure 24: Broad money growth was driven by growing foreign currency deposits	27
Figure 25: The kip deposit interest rate declined since introduction of an inflation linked cap in end 2015	27
Figure 26: Growing foreign currency deposits	27
Figure 27: Restriction on foreign currency lending contributes to lower credit growth while kip denominated lending picked up.	28
Figure 28: Lending to commerce and industry sectors drove credit growth in the first half of 2017	29
Figure 29: Outlook on key commodities generally look favorable	31
Figure 30: Lao PDR lags in several areas of Doing Business	35
Figure 31: Starting a business in Lao PDR is still behind the regional average.....	35
Figure 32: Power sector at a glance	38
Figure 33: Access to electricity has increased.....	39
Figure 34: Quality of electricity supply.....	40
Figure 35: The power sector and the business environment	40

Figure 36: Power sector royalties are growing slowly	41
Figure 37: Financial flows in the power sector	45
Figure 38: Debt levels have been increasing, especially so in the case of EdL.....	46

BOXES

Box 1: Tourism in Lao PDR.....	15
Box 2: Power sector potential	37

TABLES

Table 1: Energy consumption moderates	16
Table 2. Key Macroeconomic Indicators and Projections	36
Table 3: Electricity generation, consumption and trade.....	43

Executive summary

Recent economic developments and outlook

- 1. Growth is projected to further moderate to 6.7 percent in 2017, below historical averages, but towards a more sustainable level.** Continued expansion in power generation, manufacturing, and agriculture are weighed down by flat mining output, moderating construction, lower contribution from public services and weaker-than-expected tourism performance. On the expenditure side, the moderation has been driven by slowing domestic demand, which was only partially offset by good performance of exports of goods. Still, growth remains robust, close to the average for the developing East Asia and Pacific (EAP) region, one of the fastest growing regions globally. Headline inflation further declined in 2017, reflecting falling food prices and slowing aggregate demand, offsetting the effects of recovering oil prices.
- 2. Improved agriculture output and manufacturing activities are expected to have continued to support poverty reduction.** Poverty in Lao PDR, based on the international poverty rate of US\$1.90 a day in 2011 purchasing power parity (PPP), is projected to fall to 13 percent in 2017 from about 18 percent three years ago. Growth in agriculture exports, the sector that engages two-thirds of the labor force, has been due to increased participation of traditionally small-scale farming households in the production of export linked commodities, such as rice and non-rice crops. The growth in manufacturing, albeit from a low basis, is expected to have created job opportunities. However, disparity persists with the bottom 40 percent of the population benefiting less from the growth process.
- 3. Macroeconomic vulnerabilities remain significant despite some improvement in macroeconomic management.** In the first three quarters of 2017, despite good performance of VAT and non-tax revenues, revenues slightly declined compared to the previous year reflecting lower income and trade taxes, partly due to an extraordinary high comparison base from the third quarter of the previous year. Adjustments in non-wage recurrent spending and transfers partly offset the revenue underperformance, the increase in foreign-loan-financed public investment and the increase in the wage bill. Under these trends (stronger efforts to increase revenues and prudence on expenditures), the deficit is expected to be around 4.4 percent of GDP, close to last **year's level and below** the initial 2017 projection of 5.4 percent of GDP. Still, the deficit remains high, further adding to the already high public debt, which is projected to reach almost 60 percent in 2017, with external debt increasingly on less concessional term including bond issuance to finance the budget.
- 4. The current account deficit is expected to narrow slightly in 2017 on the back of strong exports of electricity, manufacturing and agriculture products while improved metal prices supported higher mining exports.** This will help offset the possibly negative impact of falling tourism this year. Imports increased at a slower pace reflecting moderating domestic demand and gradually recovering oil prices. The current account deficit continues to be financed by FDI and foreign borrowing. Still, reserves adequacy is low, with the ratio of reserves to foreign

currency deposits less than 25 percent in June 2017. In response to the large current account deficit and limited reserves, the kip depreciated against the US dollar and the Thai baht since the start of 2017, helping reverse some of the strong appreciation in recent years and narrowing the gap between the official and parallel market exchange rates.

5. **Credit to the economy moderated, while parts of the financial sector are still weak.** Though the monetary stance remains unchanged, credit growth decelerated to 17 percent in June due to weakening in the loan portfolio, tighter fiscal space and regulation on lending in foreign currency. Similar trends appear to have continued in the rest of 2017. Risks in the financial sector persist as some banks remain undercapitalized and overall profitability remains low.

6. **The overall medium-term outlook remains broadly favorable.** Growth is projected to further decelerate next year as current trends continue. This could be indicative of declining potential growth in Lao PDR (The World Bank Group, forthcoming) reflecting limitations of growth driven by natural resource and public spending. Still, additional capacity that is expected to be installed in power sector as well as greater focus on improving the business environment is expected to boost the **country's potential** in the medium term. The installed capacity is expected to reach up to 11,000MW by 2021 while the contribution from the mining sector is expected to gradually decline as current projects mature. Outside of the resource sectors, greater regional integration opens up opportunities, especially in agriculture, tourism, and trade as well as in manufacturing, as Lao PDR becomes part of regional value chains, if supported by an improved business environment. These sectors have significant potential to create jobs and lower poverty further. Still, bold steps are needed to address the fiscal and external imbalances. The medium-term fiscal plan envisages a reduction in deficit over the medium term supported by strengthened revenue administration, improved tax-payer services and modernization as well as continued control on spending. These measures are expected to contain the deficit and public debt, which is critical in order to lower the risk of debt distress. The external deficit is likely to widen in the short term reflecting larger imports due to the construction of the Lao PDR section of the Kunming-Singapore railway project and the recovery of oil prices. It is expected to decline in the medium term as major power projects start operation and export.

7. **The outlook, however, is subject to downside risks.** Steeper-than-expected adjustment in China or a reversal in recent trends in Thailand could depress demand for Lao exports and put pressure on reserves and macroeconomic stability. The rapidly expanding power sector could be affected in case of lower external demand which will result in a build-up of significant liabilities which could threaten its sustainability and the Government budget. Greater global financial and exchange rate disturbances could undermine capital inflows to Lao PDR with negative implications for growth and stability. Reversal of the commodity prices recovery could also affect prospects for growth and Government revenues. Domestically, fiscal slippage, continued low reserves buffers, and failure to deal with weaknesses in the financial sector could threaten macroeconomic stability, with a disproportionate impact on the poor and on future growth prospects. The recent announcement to increase the minimum wage could affect prospects in case it is not matched with productivity improvements.

8. **Addressing macroeconomic risks remains a pressing priority while improving environment for long-term growth is a continuous agenda.** To create a more stable macroeconomic environment for reforms, maintaining fiscal discipline and bolder steps towards fiscal consolidation is of utmost importance at this stage. In this regard, the proposed 2018 Budget envisages, at best, only a modest adjustment. More meaningful consolidation will require stronger efforts to strengthening revenue collection through improved tax administration, including up-to-date tax payer registries, modernizing revenue collection methods as well as expanding the tax base (lowering exemptions, closing loopholes to address international taxation issues and tax avoidance etc.). The upcoming revision to the tax laws in 2018 will be a good opportunity to address a number of these issues. Any slippages in revenue should be addressed through control on public spending and improvement in spending efficiency. Recent efforts to put public employment under control and improve productivity are welcomed. Importantly, public investment, especially of loan-financed, should be carefully examined and scaled-back. The ongoing efforts to strengthen the public debt management legal framework and institutional reorganizations can improve public debt management and reduce risks. The authorities are exploring options for addressing weaker banks, including state-owned commercial banks, and are also in the process of revising the key legal framework. This provides an opportunity to take into account good practices in important areas, such as objectives and instruments of the central bank, relations with market participants, including the Government, supervision authority, and so forth.

9. **However, achieving more sustainable and stable growth will require a genuine and vibrant private sector.** Decelerating GDP growth in recent years in Lao PDR is indicative of the limitations of a growth pattern that relies on use of natural resources and public spending. The low and deteriorating ranking of Lao PDR on the 2018 Doing Business indicators illustrates that the country still lags on several fronts including starting a business, paying taxes and protecting minority investors as well as resolving insolvency. The constraints to business environment is further exacerbated by informality, among other top constraints identified by firms in the recent Enterprise Survey. Providing more opportunities outside the resource sector and promoting more sustainable private sector led growth will require creation of a level playing field for firms, particularly outside of the SEZs, as well as improving efficiency in the formal processes. Investing in human capital and infrastructure services will help improve productivity and competitiveness of firms. Among the potential sectors, tourism is one of the priorities. With 2018 being the Lao tourism year, improving quality and options for service infrastructure, branding and marketing of Lao PDR as a unique tourist destination can help boost the sector.

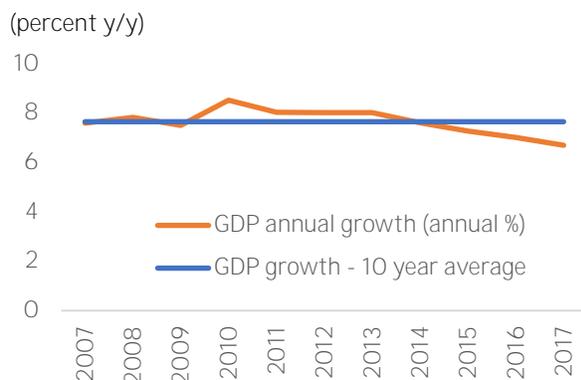
[Thematic section: Lao PDR power sector: grow without sorrow](#)

10. **Lao PDR's power sector played a major role in the country's development record over the last two decades.** The power sector expanded robustly as the country exploited its ample hydro potential, and more recently thermal and other sources of energy. The expansion boosted growth and poverty reduction through investments, provision of reliable, clean, and affordable energy and higher exports. Installed capacity in the power system (from all energy sources) is estimated at around 6,800MW in 2017 and could reach 11,000MW by 2021. Still, its contribution to the Government revenue is still low due to fiscal incentives and the debt servicing schedule.

11. **The power sector can have an equally dramatic influence over the future of Lao PDR.** The remaining potential in the sector is significant; however, so are the risks. The expansion has saddled the public sector with significant debt and contingent liabilities. Making the power sector more sustainable will require strengthening the power system planning and the project selection process to ensure that only economically viable, fiscally sustainable and environmentally justifiable projects are selected. This may mean fewer investments, but ones with higher returns and lower risks. In addition, the commercial orientation of the public entities in the power sector needs to, including through stronger financial and corporate management. Lowering risks will critically depend on the ability to secure and connect to well-paying markets for rapidly growing electricity. Additionally, EdL should explore options to lower liabilities under PPAs and economical and non-debt creating ways of completing the infrastructure gap.

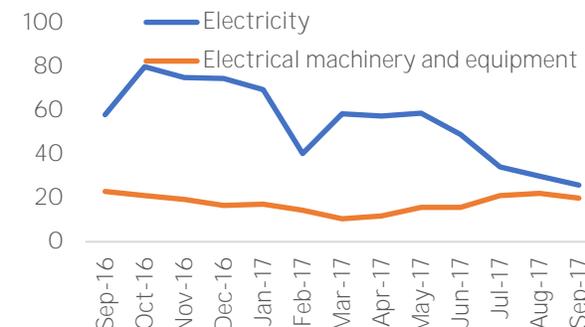
Recent economic developments in brief

Growth is expected to slightly moderate



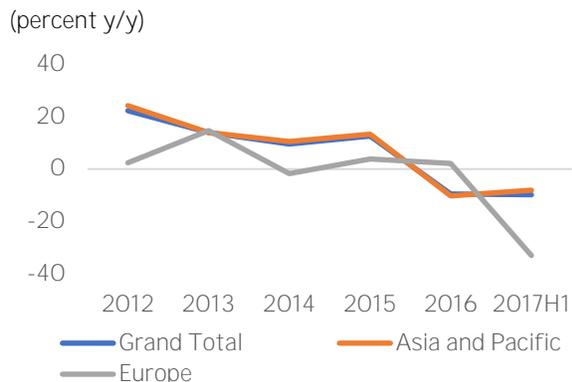
Source: Lao Statistics Bureau and WB staff estimate

Exports from electricity, manufacturing, and agriculture continue to grow (percent annual average)



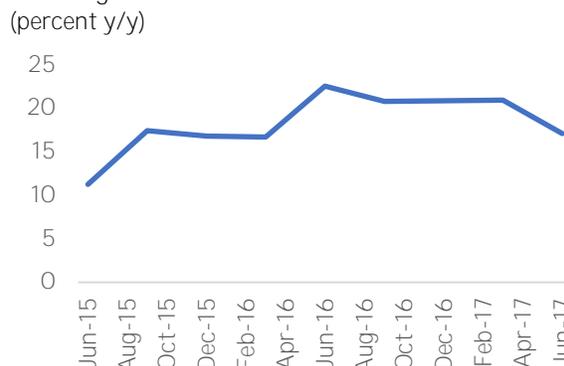
Source: Thailand Ministry of Commerce

But tourism has weakened



Source: Ministry of Information, Culture and Tourism

Credit growth has moderated



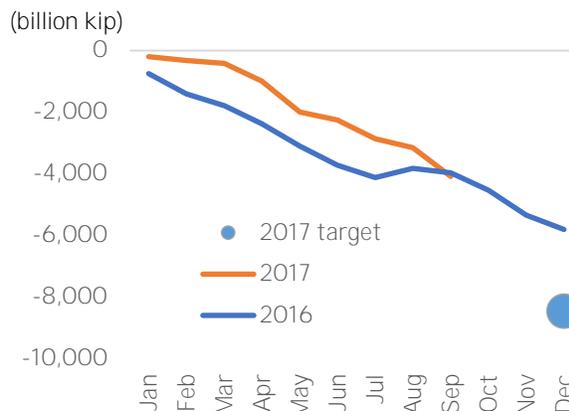
Source: Bank of Lao PDR

Greater flexibility in the exchange rate helped reverse some of the earlier appreciation (Index Dec 2007 = 100)



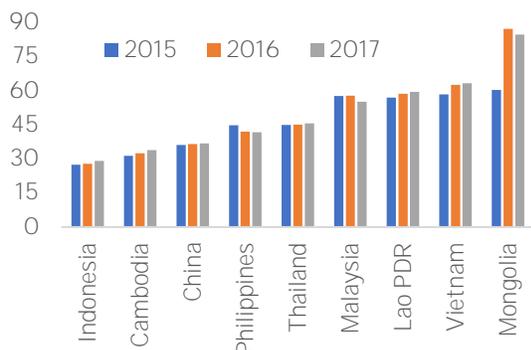
Source: <http://bruegel.org/> and WB staff estimates

Fiscal revenue shortfall was offset by expenditure adjustments, **keeping the fiscal deficit at last year's level**



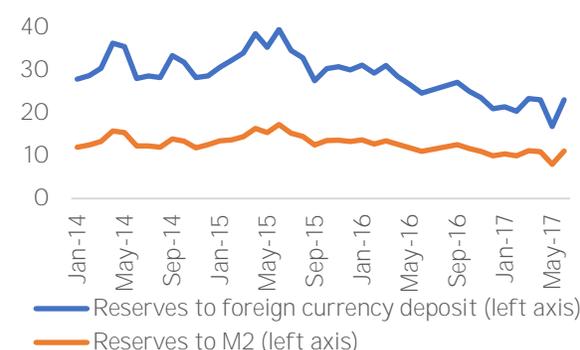
Source: Ministry of Finance

Still, public debt continues to increase (percent of GDP)



Source: EAP Economic Update October 2017

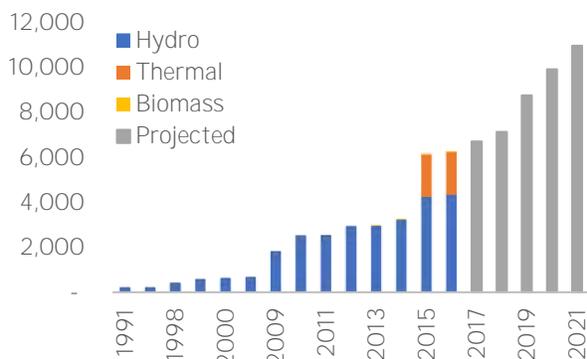
Reserves buffer remains thin (percent)



Source: WB staff calculation based on BOL data

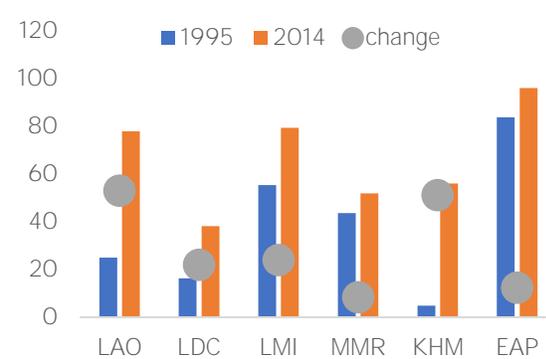
Lao PDR Power Sector: Grow without Sorrow

By mid-2000s, the power sector became a major source of growth* (Megawatt)



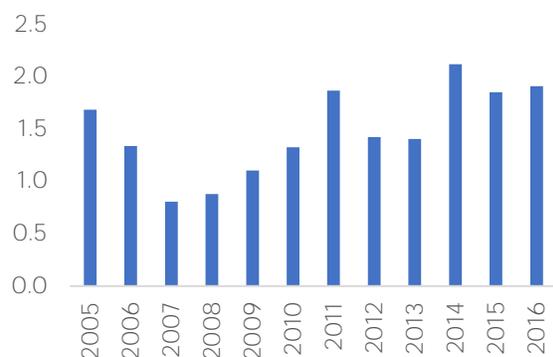
Source: EdL and Bank staff estimates
* projection includes all forms of power

Helping improve access to electricity (percent of population)



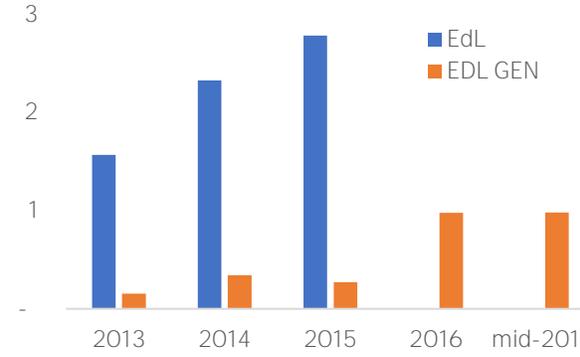
Source: World Development Indicators

The sector's contribution to fiscal revenues has been relatively modest (as percent of total fiscal revenues)



Source: Staff calculations based on data from Lao PDR Ministry of Finance

But also creating debt and significant contingent liabilities (Debt / equity ratio)



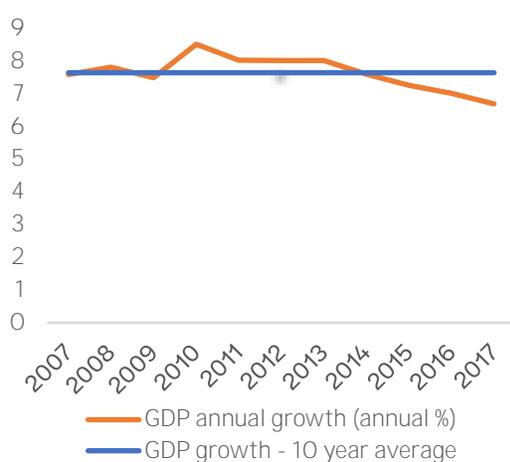
Staff calculations based on 2014 and 2015 unaudited EdL Annual Reports and EdL GEN Reports 2011-2017

Part I: Recent economic developments

The Lao PDR economy continues to gradually moderate

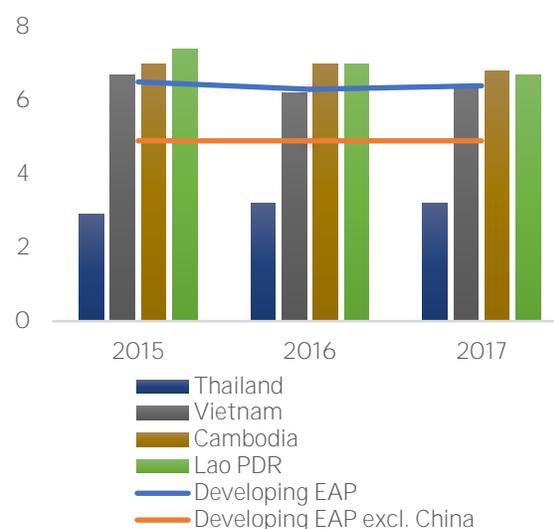
1. **Growth is projected to further moderate to 6.7 percent in 2017¹, below historical averages (Figure 1), but towards a more sustainable level.** Continued expansion in power generation, manufacturing, and agriculture are weighed down by flat mining output, moderating construction, lower contribution from public services and weaker-than-expected tourism performance. Still, growth remains robust, close to the average for the developing EAP region (Figure 2), one of the fastest growing regions globally.

Figure 1: Growth is expected to slightly moderate
(Percent, y/y)



Source: Lao Statistics Bureau and WB staff estimate

Figure 2: Still, it remains strong
(Percent, y/y)



Source: EAP Economic Update October 2017

2. **The power sector continues to expand.** Investments in the power sector remain healthy, though somewhat lower compared to previous years as few major projects were completed. Another 500-600 MW is expected to come on stream during 2017, increasing the total capacity to almost 6,800 MW by 2017 (see Thematic Section). Its contribution is expected to be more moderate. Output in the two large mines declined in the first three quarters of 2017 as the mines start to mature and reach lower grade ore. However, higher copper price this year helped offset the volume fall and resulted in higher export earnings.

3. **The performance in the non-resource sectors is mixed.** Manufacturing output continues to expand, albeit from a low base and with the expansion mostly concentrated in a few special economic zones, which have been able to attract about 5-10 new entrants per year. Agriculture output benefited from relatively favorable weather conditions and more crop commercialization.

¹ The Lao Statistics Bureau recently released rebased GDP to 2012. The rebased GDP series are higher than the previous series by about 15 percent. The numbers presented as ratio to GDP in this report are based on the rebased GDP.

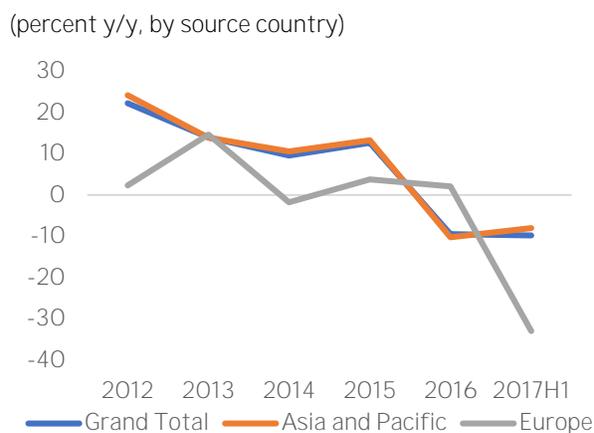
The Food and Agriculture Organization (FAO) estimates rice production in Lao PDR to grow by 2.6 percent in 2017, following a 5 percent growth last year. Some non-rice crops also increased markedly. According to Thai customs data, tubers (mostly cassava) export volume to Thailand increased by about 40 percent to about 0.6 million tons in the first ten months of 2017. Rubber output also increased in response to better prices early in the year. Commercial banana plantation has also expanded rapidly in the recent years, making bananas one of the top driver for agriculture output and export to date, mostly to China. However, concerns over misuse of chemical triggered the recent ban on new plantations and tighter control on the existing plantations. The construction sector moderated as completion of a few power projects, slowdown in credit growth and tight control on public spending offset the gradual start of the Lao section of the Kunming-Singapore railway line. On the other hand, retail trade as well as insurance continue to expand as the number of companies increased. The contribution from public services sectors remains subdued as the 7 percent increase in wages was offset by tight control on public recruitment as well as non-wage recurrent spending.

Figure 3: GDP growth continues to be driven by the power sector (percent y/y)



Source: LSB and WB staff estimates

Figure 4: Tourist arrivals continue to decline (percent y/y, by source country)



Source: Ministry of Information, Culture and Tourism

4. **Weaker tourism is expected to weigh down on services sector.** After declining by 10 percent in 2016, the total number of tourist arrivals continued to decline in 2017, falling by 10 percent in the first six months of 2017 compared to the same period in 2016 (Figure 3). The decline is driven by a drop in visitors from member countries of Association of South East Asian Nations (ASEAN). The drop in Thai and Vietnamese visitors accounts for about 56 percent of the decline. The number of Thai tourists could be affected by the promotion of domestic tourism in Thailand while the decline in number of Vietnamese arrivals could have been affected by the enforcement of measures to regulate foreign workers entering Lao PDR as tourists. Despite an increase in the number of arrivals from China, the number of arrivals from non-ASEAN countries declined, also due to a 30 percent decline in the number of arrivals from Europe. In addition, the average length of stay is slightly shorter, while the average spending increased from US\$70 per day per tourist in 2013 to US\$77 per day more recently. Coupled with the decline in the number of visitors, the tourism revenues and value added is likely to be affected. In response to boost the sector, the

Government recently announced 2018 as the Lao Tourism Year and plans to hold activities across 18 provinces.

Box 1: Tourism in Lao PDR

Tourism is an important sector for the Lao PDR economy, providing jobs and foreign exchange. Revenue from tourism almost doubled from US\$ 380 million in 2010 to more than US\$ 720 million in 2016 as tourist arrivals rose to 4.2 million in 2016 from 2.5 million seven years ago. With improved connectivity and affluence of Asian economies, visitors from Asia-Pacific region significantly increased. Visitors from ASEAN countries, particularly Thailand and Vietnam, rose by about 40 percent during 2010-2017, accounting for 72 percent of total arrivals. Non-ASEAN, particularly Chinese and Korean visitors, more than doubled during 2013-2016. Western visitors, who tends to spend more and stay longer (about 7 days compared to 1-3 days by regional tourists) accounted for about 7 percent in 2016.

Tourism facilities and sites have expanded. Lao PDR boasts spectacular landscape, caves, waterfalls, and **protected areas covering about 14 percent of the country’s land area, with ‘natural sites’ accounting for almost 60 percent of the nearly 2,000 government-designated tourism sites.** The number of accommodation facilities increased by 38 percent from almost 1,900 places in 2010 to 2,500 in 2016. However, the occupancy rate is about half with variation across provinces in the country. Connectivity has also improved. More airlines offer more direct flights to Lao PDR such as from Korea, Malaysia, Singapore, China etc. For instance, the Korean visitors increased markedly after direct flights became available.

Development and improvement of supporting infrastructure and industries can help tourism in Lao PDR realize its potential. Lao PDR currently ranks 94 globally on travel and tourism competitiveness index, better than Cambodia (rank 101), Nepal (103), but still below Vietnam (67), Malaysia (26) and Thailand (34). Investing in tourism services, including human resources, and infrastructure as well as branding Lao PDR effectively, can help distinguish Lao PDR as a unique tourist destination.

Performance Overview



Source: World Economic Forum, The Travel and Tourism Competitiveness Report 2017 and Ministry of Information, Culture and Tourism, 2016 Tourism Statistics Report.

Note: Higher score (on a scale from 1-7) reflects better performance.

Domestic demand appears to be moderating

5. On the expenditure side, the moderation has been driven by slowing domestic demand, which was only partially offset by good performance of exports of goods. In the absence of high-frequency data on domestic demand, data on electricity consumption, imports and tax collection suggest cooling domestic demand. The growth rate of electricity consumption slowed across all user groups. Residential power consumption increased by only 4 percent (y/y) in the first half of 2017 compared to 12 percent in the same period last year (Table 1). Import growth has been subdued during most of 2017, with imports of vehicles declining in the first half of this year. On the investment side, completion of fewer power projects, delays on some pipeline power projects, slowdown in credit growth and tighter control on public investment projects offset the gradual start of the construction of the Lao PDR section of the Kunming – Singapore railway line. Consumption also shows sign of moderation. The 7.5 percent increase in public sector wages in 2017 appears to have been offset by tight control over public sector employment and non-wage recurrent spending and temporary disruption to remittances as Lao migrants in Thailand went through the newly introduced formalization procedures.

Table 1: Energy consumption moderates
(Percent y/y)

Period	Consumer Categories								
	Residential	Commercial	Entertainment	Industry	Inter.Org	Government office	Irrigation	Education-Sport	Total
Jan-Jun 2015	10	12	11	14	16	9	(8)	39	12
July-Dec 2015	14	15	13	9	(19)	14	(9)	38	12
Jan-June 2016	12	18	21	11	(2)	13	16	32	12
July-Dec 2016	(2)	9	(5)	9	9	9	(34)	20	4
Jan-June 2017	3	4	(4)	5	(1)	3	(22)	9	4

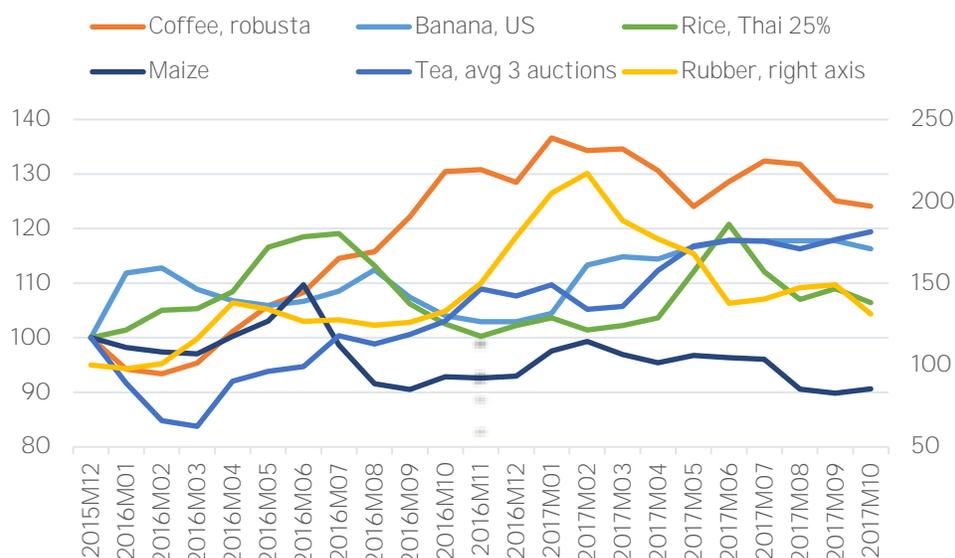
Source: EdL

Exports from electricity, manufacturing, and agriculture are performing well

6. Exports of electricity, manufacturing and agriculture continue to perform well in the first three quarters of 2017. Despite some increase in domestic consumption, most of the power generation is exported, mainly to Thailand, where electricity export increased by 15 percent (y/y) in the first nine months of 2017. Manufacturing exports, including electrical parts and components, glass lenses, garments, continued to expand but remain concentrated in the few Special Economic Zones. Encouragingly, these zones have been able to attract new companies helping generate around 500-1,000 jobs a year. The success of these companies demonstrates that, under improved conditions, Lao PDR could effectively participate in regional supply chains. A good harvest as well as recovery in key commodity prices (such as bananas, coffee) contributed

to stronger exports from the sector. Furthermore, rubber, dried cassava and coffee export increased by more than 30 percent in the first nine months of 2017 while cereal exports to China more than doubled in the same period, albeit from a low base.

Figure 5: Some recovery of agricultural commodity prices
(Dec 2015 = 100)*



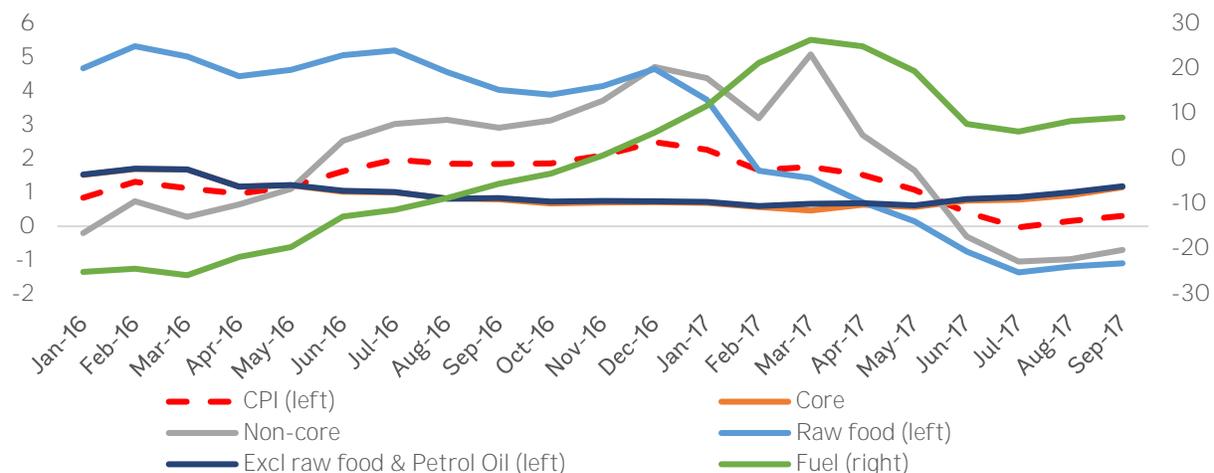
Source: World Bank October 2017

Note: *lines against the left axis, unless indicated otherwise

Inflation remains low as oil prices slowly recover and food prices fall

7. **Headline inflation further declined in 2017 reflecting falling food prices and slowing demand, amidst a very gradual recovery in oil prices.** The headline inflation was 0.5 percent (y/y) in October 2017 compared to 1.9 percent in the same month last year. The decline was partly due to moderating demand related to contained public spending and slower credit growth. Food prices fell by 1 percent (y/y) in September 2017, compared to an increase of almost 4 percent (y/y) last September. This is due to well-stocked food markets and administered prices of key staples, including rice and meat. On the other hand, oil prices have been slowly recovering since the end of last year following movements in international oil prices. Fuel prices rose by 9 percent in September compared to a decline of 5.6 percent in the same month last year. Consumer prices have been edging upward for three consecutive months suggesting that the impact of the oil price decline may have dissipated. Annual average inflation is expected to be around 1 percent in 2017. Core inflation slightly picked up to 1.5 percent in October partly due to higher house renting and maintenance costs as well as clothing and footwear.

Figure 6: Headline inflation remains low
(percent y/y)



Source: Lao Statistics Bureau

Improvement in manufacturing and agriculture as well as low prices may have benefited the poor

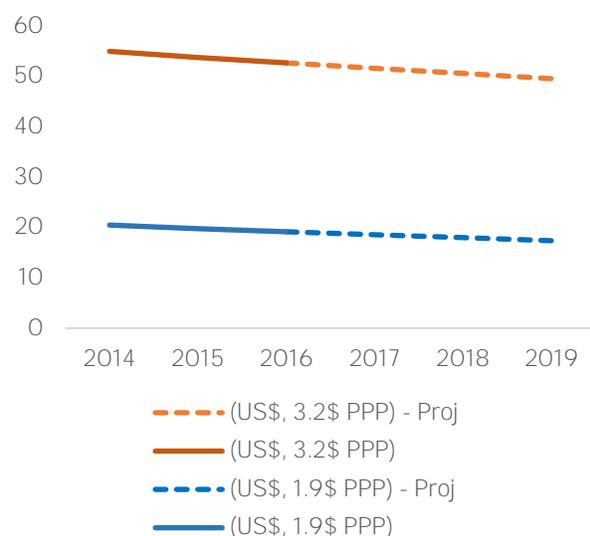
8. **Improved agriculture output and manufacturing activities are expected to have continued to support poverty reduction.** Poverty in Lao PDR, based on the international poverty rate of US\$1.9 in 2011 PPP, is projected to fall to 13 percent in 2017 from about 18 percent three years ago. Growth in agriculture exports, the sector that engages two thirds of labor force, reflects increased participation of traditionally small scale farming households in the production of export linked commodities, such as rice and non-rice crops. The growth in manufacturing, albeit from a low basis, is expected to have created job opportunities. In addition, the business confidence assessment in Lao PDR, jointly published by Lao National Chamber of Commerce and Industry (LNCCI) and the European Chamber of Commerce and Industry in 2016, reported that EU investors, mostly large firms employing more than 100 workers, indicated that they have increased their employment in late 2016². Taken together with continued expansion in the special economic zones, which currently employ about 7,600 Lao workers and create 500-1000 jobs per year, this points to better economic opportunities and some improvements in household welfare.

9. **However, household consumption growth is still low compared to regional peers, with some evidence that the better off are benefiting more than the poor.** Annual growth of consumption per capita for total population was around 2.2 percent in Lao PDR compared to 3.5 percent in Thailand, 3.4 percent in Indonesia, and 8.2 percent in China. Domestic disparity also persists with the population group at the bottom 40 percent face even slower growth in consumption at 1.5 percent, compared to almost 3 percent in the Philippines and almost 5 percent in Vietnam and Thailand. This is in part due to the nature of a resource based economy where few

² 2016 Business Confidence Assessment in Lao PDR jointly published by Lao National Chamber of Commerce and Industry (LNCCI) and the European Chamber of Commerce and Industry in 2016. <https://eccil.org/news/eccil-news/business-confidence-assessment-july-december-2016-2/>

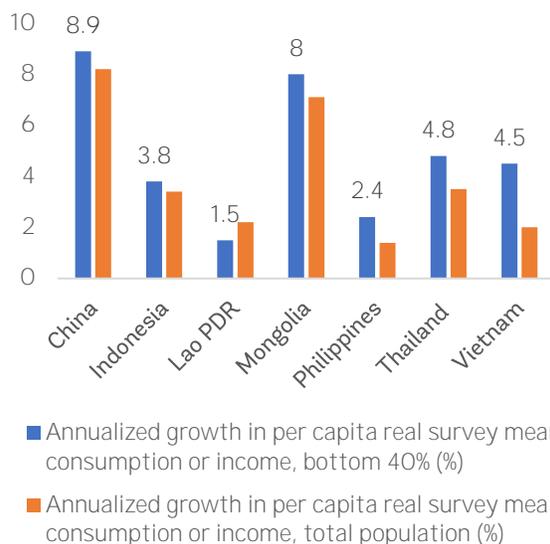
jobs are created, though recent developments in the labor market are more encouraging. Therefore, opportunities in labor intensive industries such as agriculture, manufacturing and services coupled with redistribution of benefits from resources will be key to improving consumption and making the growth process more inclusive.

Figure 7: Poverty is expected to continue falling
(percent of population)



Source: EAP Economic Update October 2017

Figure 8: Addressing inequality remains a challenge
(percent)



Source: World Bank,

<http://povertydata.worldbank.org/poverty/region/EAS>

Macroeconomic management has improved slightly, but risks remain high

The fiscal space is thin. Government revenue shortfalls have been partially off-set by adjustments in spending

10. Revenues declined in the first nine months of 2017 and are likely to remain considerably below the ambitious target.³ Total revenue reached LAK16.1 trillion (approximately US\$2 billion) in the first three quarters of the year, about 6 percent decline compared to the same period last year. Improving collection of value added tax (VAT), mining royalties and non-tax revenues, was offset by weak performance of income and trade taxes, including due to an exceptionally high comparison base from the third quarter of 2016. The improvement in VAT collection was due to strengthened administration, expanded tax base for VAT as well as some recovery in commodity prices. Royalties from natural resources also benefited from the higher commodity prices. Non-tax revenue collection increased due to higher dividends and over-flight revenues. Total revenues reached around 68 percent of the plan, reflecting the moderation of economic activity and falling profit tax but also weaknesses in the planning process resulting in

³ The fiscal aggregates presented in this section include the “asset sale” category from the MOF fiscal reports as capital revenues and the “capital return” (repayment of loans on-lent to state-owned enterprises) category as net lending in capital spending.

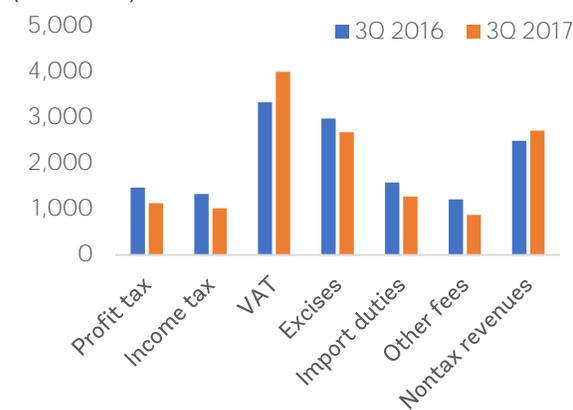
ambitious targets.⁴ Grants also declined reflecting slow implementation of the donor-supported projects compared to plan. In October 2017, road tax payment was rolled out following the enforcement of the new Presidential Decree on Road Tax. There has been stronger emphasis on revenue collection recently; still, revenues for the year are expected to decline to around 16 percent of GDP, and underperform by at least 5 percent compared to the initial 2017 Budget.

Figure 9: Revenues remain short of the ambitious target (billion LAK)



Source: Ministry of Finance

Figure 10: Sound VAT and non-tax collection was offset by weaker performance on other taxes (billion LAK)

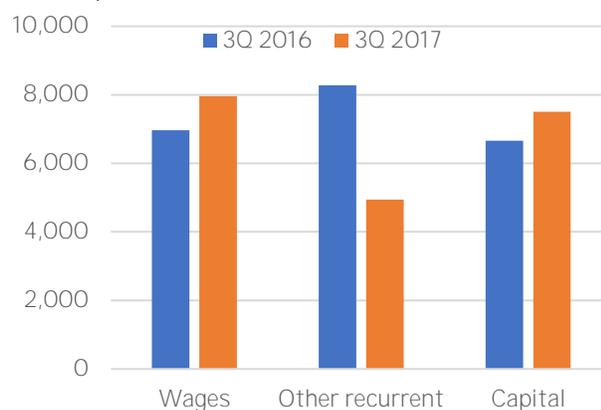


Source: Ministry of Finance

11. **Importantly, the underperformance on revenues was matched by adjustments in spending.**

The adjustments to the non-wage recurrent spending and domestically financed investment spending compensated for the higher capital spending supported by foreign finance. The wage bill increased reflecting a 7.5 percent hike in wage index at the start of the year. Civil servant intake was kept at 5,000 positions in 2017, most of which as replacement for retirees. Non-wage recurrent spending and transfers were cut. Capital spending increased as the fall in domestically financed public investment constrained by limited domestic revenues and control on construction of new buildings was more than offset by public projects financed by external loans. The spending is expected to accelerated slightly in the last quarter of the year reflecting also the improved liquidity following

Figure 11: Non-wage recurrent expenditures accounted for most of the expenditure adjustment (billion kip)



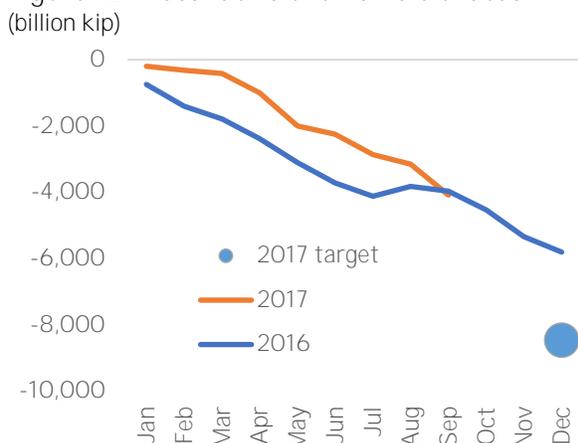
Source: Ministry of Finance and WB staff calculations

⁴ The formal planning process is underpinned by a 5-year fiscal plan approved by the National Assembly (NA). There is reluctance to revisit plans to take account of new developments, which locks MOF in preparing budgets in line with ambitious assumptions with the bias in estimates increasing over time.

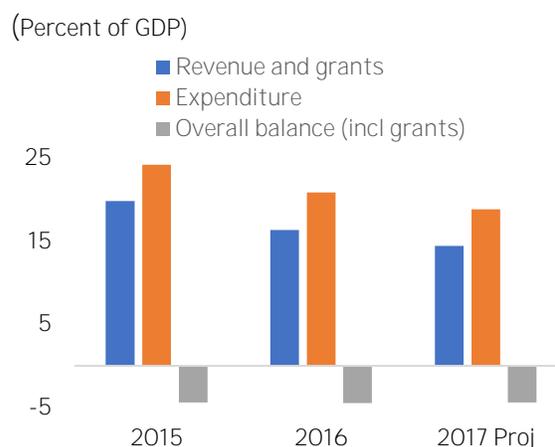
the issuance of government bonds in October 2017. Total spending is expected to decline to around 20 percent of GDP in 2017 compared to around 21 percent last year.

12. Under these trends, the deficit for the year is expected to slightly narrow to 4.4 percent of GDP from 4.5 percent of GDP in 2016 and compared to the initial 2017 projection of 5.4 percent of GDP. The deficit in the first nine months of 2017, was around LAK4 trillion, or around a half of the deficit planned for the year. Under current trends, the deficit could be slightly lower compared to the Budgeted. Despite the improvement, the fiscal deficit is still relative high compared to regional peers (Figure 12). The deficit in the first half was mostly financed by the foreign loans and borrowing from the banking sector. In the latter half of the year, the authorities resorted to bonds issuance in the Thai capital market issuing bonds worth around US\$420 million in October 2017.

Figure 12: Fiscal deficit remains elevated

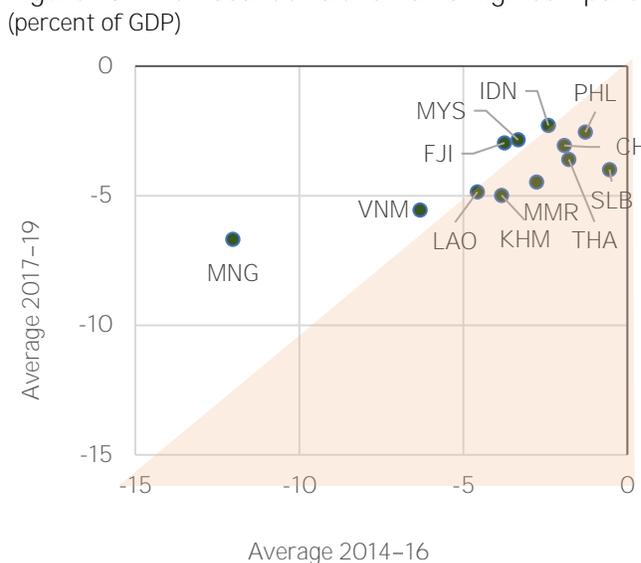


Source: Ministry of Finance



Source: Ministry of Finance

Figure 13: The fiscal deficit remains high compared to regional peers

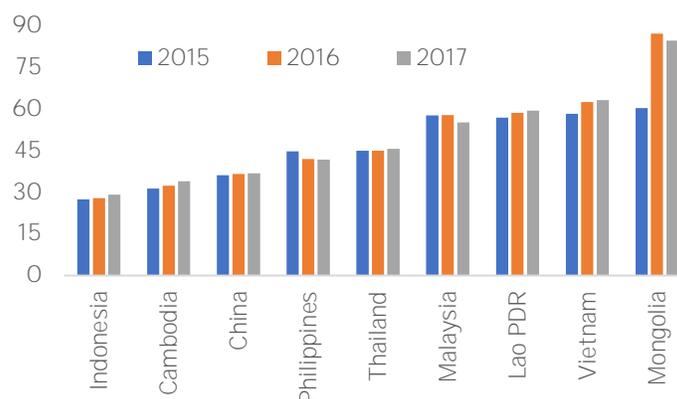


Source: EAP Economic Update October 2017
 Note: Cambodia (KHM) figures refer to deficit before grants.

Still, public debt and risks have been increasing

13. **The high fiscal deficit resulted in further increase in the already high public debt level, keeping the risk of debt distress elevated.** Total public and publicly guaranteed debt (PPG) was estimated to reach around US\$9 billion in 2016 or 59 percent of GDP and reached about 60 percent in 2017. The increase was driven by foreign-financed public investment, budget-financing bond issuance in the Thai capital market as well as growing domestic debt issuance. Overall, **Lao PDR's debt level is high** compared to less than 40 percent in Cambodia, less than 50 percent in Thailand and Philippines (Figure 14) with the 2016 joint IMF-World Bank Debt Sustainability Analysis (DSA) moving Lao PDR from moderate to high risk of debt distress due to breaches on 3 indicative debt thresholds.⁵ The increase in the debt level and increasing portion of less concessional loans are likely to put pressure on debt services going forward.

Figure 14: **Lao PDR's debt is on the high side compared to regional economies** (percent of GDP)

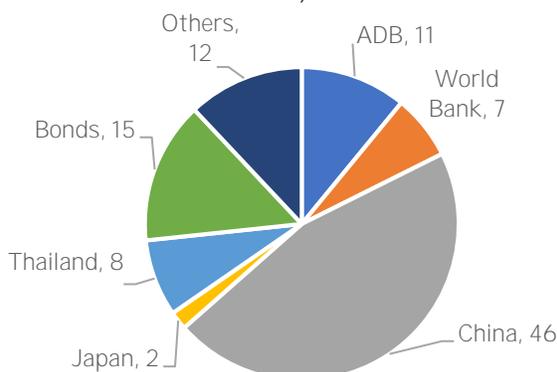


Source: EAP Economic Update October 2017

14. **External debt accounts for about 80 percent of the total public debt.** External debt is increasingly being contracted on market terms, mostly through the issuance of bond at the Thai capital market. More than a half of the borrowing is in US dollar, followed by special drawing rights (SDR), Chinese yuan and Thai baht respectively. This makes sudden kip depreciation one of the key risks to public debt sustainability. The domestic debt includes Treasury-bonds and Treasury-bills, capitalization bonds and direct loans from BOL to local authorities to finance infrastructure projects. An estimated one third of public external debt is financing public investment in the power sector, including for equity in selected self-financing power projects, which are expected to help lower risk on debt. However, this will depend on the ability to secure markets and set prices above cost-recovery level for the rapidly growing generation (see Thematic Section). Alternatively, the sector could create significant liabilities for the Budget.

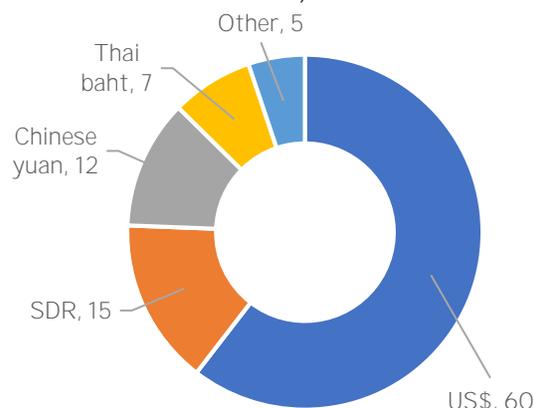
⁵ Lao PDR breached the thresholds for: i) the net present value (PV) of public and public guaranteed external debt (PPG) as a percent of GDP; ii) PV of debt to revenue ratio and iii) debt services to revenue ratio. Lao PDR was expected to breach the thresholds until around the mid-2020s under the baseline scenario.

Figure 15: Lao PDR increasingly resorts to bilateral and commercial loans (percent of total external debt)



Source: WB calculations based on MOF data

Figure 16: Lao PDR public external debt is mostly US\$-denominated debt (percent of total external debt)

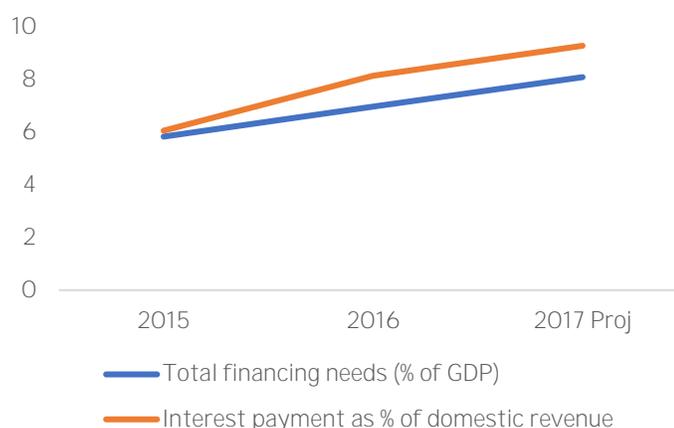


Source: WB calculations based on MOF data

15. **The Government has resorted to bond issuance in the Thai capital market to finance the budget.** Ministry of Finance placed the seventh issue of government bonds in October 2017 worth TBH14 billion or about US\$420 million, the largest tranche so far and also with longest maturity⁶. The issue comprises of 3, 5, 7, 10, 12 and, for the first time, 15 years maturity bonds with interest rates ranging from 3.65 percent to 6.05 percent receiving a BBB+ rating (reported as the first BBB+ rated bonds with 15 year maturity issued at the Thai capital market). With this the stock of outstanding bonds is expected to have reached around US\$1.3 billion.

16. **The increasing financing needs and debt service costs reduces the space for spending on national priorities.** The financing needs, defined as the fiscal deficit and the amortization on public borrowing, rose from almost 6 percent of GDP in 2015 to an estimated 8 percent in 2017. At the same time, interest payments as a share of domestic revenue increased from 6 percent in 2015 to 9.3 percent in 2017. This amount exceeds planned public spending on health and is equal to about 60 percent of planned education spending. This underscores the importance of lowering the debt burden and fiscal consolidation through improving revenue collection and improved efficiency in spending.

Figure 17: Financing needs are growing (percent)



Source: WB staff calculation based on MOF data.
 Note: Financing needs are the sum of the fiscal deficit and amortization of principals on public borrowing

⁶ <http://www.nationmultimedia.com/detail/Corporate/30328464>

Good export performance is expected to help narrow the current account deficit. Still, the foreign reserves buffer remains low.

17. The current account deficit is expected to slightly narrow on the back of strong exports of electricity, manufacturing and agriculture products as well as improved metal prices. This will help offset the possibly negative impact of falling tourism this year. The current account deficit continues to be financed by FDI and foreign borrowing.

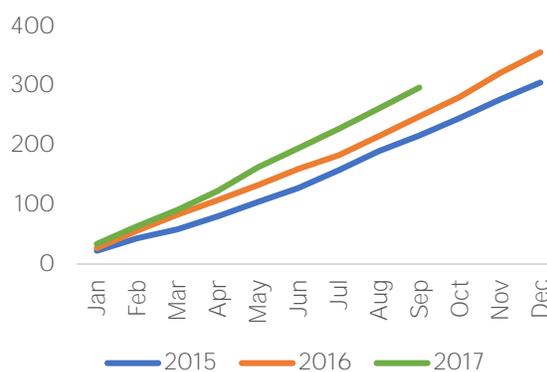
18. Exports to the three largest export markets (China, Vietnam and Thailand) increased by about 15 percent in the first nine months this year. Power exports to Thailand in the first three quarters reached US\$825 million compared to US\$ 715 million in the same period last year. Manufacturing of parts and components (electrical machinery, parts and components including digital camera parts and glass lenses, etc.) continued to grow by more than 20 percent in 3 quarters, reaching about US\$300 million. The expansion continues to mainly come from two special economic zones (Vita Park in Vientiane Capital and Savanh-Seno SEZs in Savannakhet province) which continued to attract new entrants recently.

Figure 18: Electricity export to Thailand (million US\$, cumulative)



Source: Thailand Ministry of Commerce (<http://www2.ops3.moc.go.th/>)

Figure 19: Parts and components exports mostly from SEZs continue (million US\$, cumulative)



Source: Thailand Ministry of Commerce (<http://www2.ops3.moc.go.th/>)

19. Recovery in commodity prices has given a boost to agriculture and mining export earnings. Rubber prices increased by about 30 percent (y/y) on average, almost doubling rubber export to China to US\$71 million in the first three quarters of 2017. In addition, other non-rice crops exports such as coffee, dried cassava, cereal also increased. The recovery of copper and ore prices boosted export earning of ores and copper, especially to China and Thailand, despite relatively flat output.

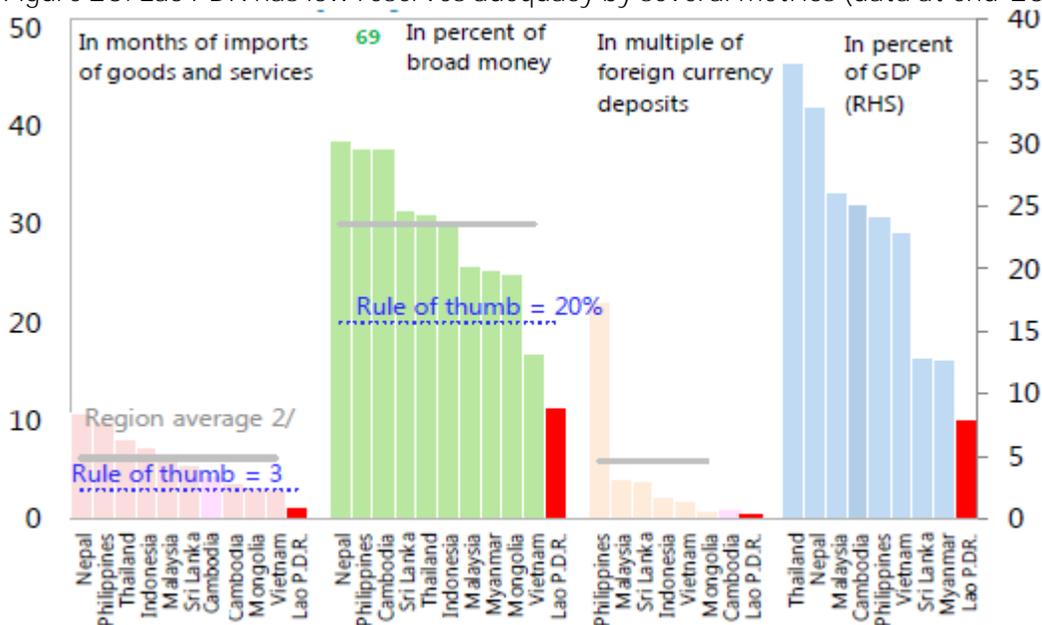
20. Imports increased at a slower pace. The fuel import bill increased gradually in line with slowly increasing oil prices. At the same time, imports related to the railway project construction picked-up in the second half of the year. The latter was off-set by completion of the construction

of some power projects, import substitution with domestic production (for example, cement) as well as the deceleration of domestic demand.

21. The improvement in merchandise exports is expected to compensate for the decline in net services balance as a result of slower tourism activities. Tourism revenues in 2016 remained stable at around US\$724 million despite the declining number of arrivals. With continued fall in tourist arrivals, revenue is expected to fall this year. Furthermore, western arrivals, who usually stay longer and spend more, fell by more than 30 percent in the first half. At the same time, more outbound tourism will contribute to higher service imports over the year. Remittances are expected to have remained stable, with stronger growth in Thailand offset by a temporary disruption due to the requirement to register informal migrants.

22. As a result, the current account deficit is expected to marginally fall, from 13.2 percent of GDP in 2016 to 13 percent in 2017. The deficit is financed by foreign direct investment and increased foreign borrowing, the latter on less concessional terms. Reserves increased to US\$ 960 million in June 2017 with the recent bond issuance likely to have pushed reserves to above US\$1.1 billion. Nevertheless, despite this temporary increase, reserves buffer is still considered thin by most indicators. Reserves cover less than 2 months of imports, less than 25 percent of foreign currency deposits and 11 percent of broad money, all significantly below regional peers (Figure 20).

Figure 20: Lao PDR has low reserves adequacy by several metrics (data at end-2015)



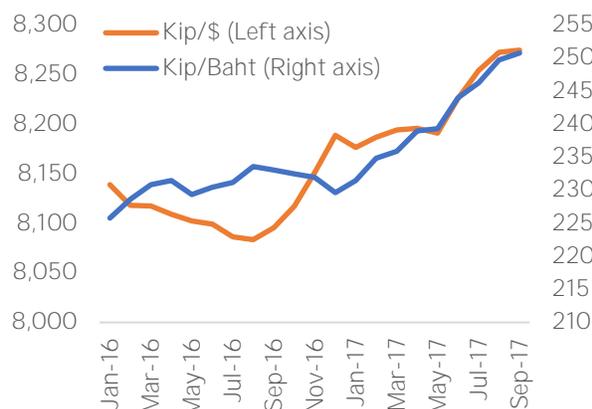
Source: IMF Article IV, 2017

Note: In percent of GDP is against the right axis

Greater flexibility in the exchange rate helped reverse some of the earlier appreciation.

23. On the back of large current account deficit and limited reserves, the kip depreciated against both the US dollar and Thai Baht. The authorities allowed greater flexibility in the exchange rate during 2017. As a result, by September 2017, the Kip depreciated by 2.1 and 7.6 percent y/y against the US dollar and the Thai baht, respectively. Such movements helped reverse part of the strong appreciation in recent years. The real effective exchange rate of the kip against trading partners' currencies depreciated by 4 percent in May 2017 compared to end 2016 and similar trends are expected to have continued in the rest of 2017. This helped to bridge the gap between the official and the parallel rate in the foreign exchange market, which narrowed below 1.5 percent in November 2017 from above 3 percent at the start of the year.

Figure 21: The kip recently depreciated against major currencies



Source: Bank of Lao PDR

Figure 22: The trend of appreciation started to reverse

(Index Dec 2007=100)



Source: <http://bruegel.org> and WB staff estimate
 Note: an increase in the index indicates appreciation of the home currency against the basket of currencies of trading partners

Figure 23: The gap between official and parallel exchange rates narrows

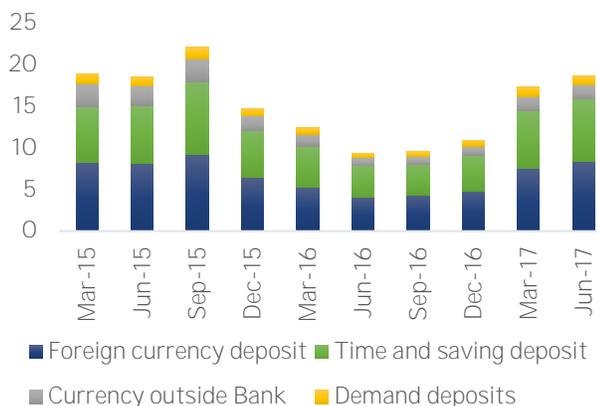


Source: Bank of Lao PDR

Credit growth decelerated, despite unchanged monetary conditions

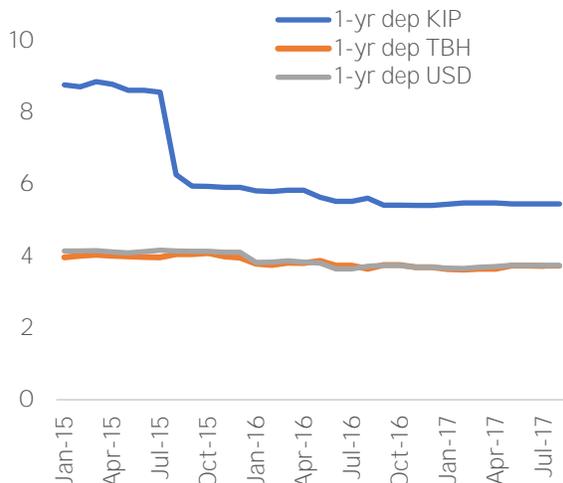
24. **Broad money growth accelerated on the back of growing foreign currency deposits.** Broad money expanded at 16.4 percent in the first half of 2017 compared to 11 percent last year due to a 25 percent (y/y) increase in foreign currency deposits (**Error! Reference source not found.**). On the other hand, kip deposits rose more slowly at 9.4 percent in June (y/y) compared to 11.3 percent last year. This could be related to the lowering of policy rate and introduction of inflation linked deposit rate for the kip since end 2015 as well as some currency substitution following the weakening of the kip against the US dollar and the Thai baht. As a result, foreign currency deposits account for 53 percent of total deposit in June compared to 49 percent last year. Deposit data from financial statement of commercial banks suggest that the growth rate may have moderated in the third quarter.

Figure 24: Broad money growth was driven by growing foreign currency deposits (percentage points)



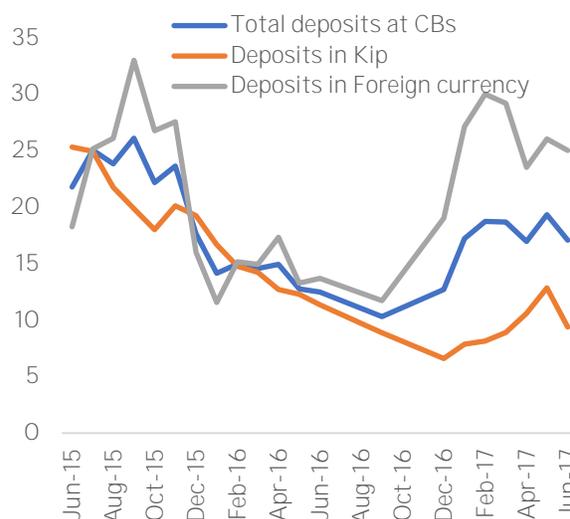
Source: Bank of Lao PDR

Figure 25: The kip deposit interest rate declined since introduction of an inflation linked cap in end 2015 (percent)



Source: Bank of Lao PDR

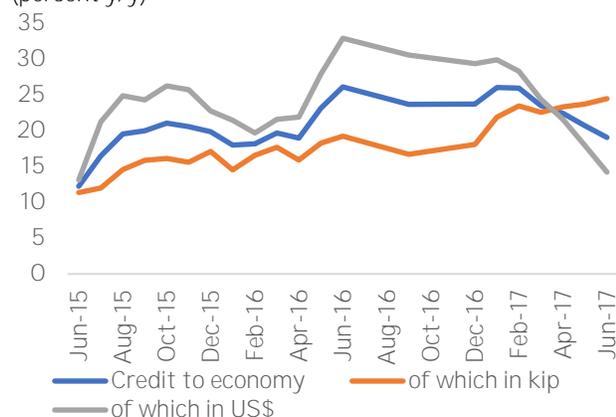
Figure 26: Growing foreign currency deposits (percent)



Source: Bank of Lao PDR
Note: CB refers to commercial banks

25. While monetary conditions remain unchanged in 2017, credit growth decelerated in the first half due to tighter fiscal space, stronger enforcement of regulation on lending in foreign currencies and weakening of the loan portfolios. There were no major changes in the monetary policy stance since 2015 when the BOL lowered its policy rate and introduced a cap on interest rates. However, the growth of credit to the economy moderated at 17 percent (y/y) in June compared to 23 percent (y/y) a year ago. In real terms, credit growth moderation was slower, from 21 percent (y/y) in mid-2016, to 17 percent (y/y) in mid-2017. Financial statement from reporting banks suggest continued moderation in the third quarter of 2017. The slowdown is partly due to slower economic activities, tighter fiscal conditions and pending arrears to the banking sector as well as more due diligence effort by banks to screen customers in an effort to improve loan quality. In addition, the BOL issued a decision in late 2016 allowing foreign currency lending only to borrowers who have foreign currency earnings or importers of certain products⁷, which is reported to have constrained lending by some banks. As a result, the pace of foreign currency lending reduced to 14 percent (y/y) in June 2017 from 33 percent a year ago while Kip denominated loans continued to grow from 19 percent last year to 24 percent (y/y) in June (Figure 27).

Figure 27: Restriction on foreign currency lending contributes to lower credit growth while kip denominated lending picked up. (percent y/y)



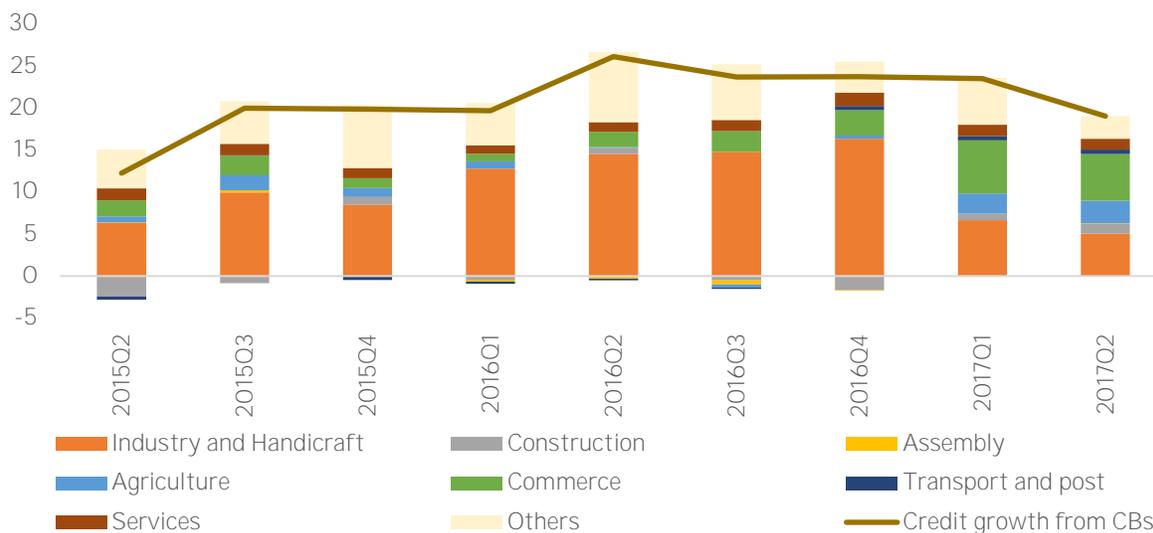
Source: Bank of Lao PDR

26. Credit growth was driven by lending to industry and commerce sectors, followed by agriculture. Lending to the commerce sector expanded by 33 percent in the year to June 2017 while agricultural credit increased by 34 percent (y/y), albeit from a low base. Despite some moderation, credit to the industry sector, including to some power projects, grew by 17 percent (y/y) in June 2017. Lending to the construction sector remains flat partly due to the pending issue on public sector arrears and control on new public investment projects.

⁷ The BOL issued a decision on foreign currency credit from commercial banks on November 17, 2016. The decision limits lending in foreign currency to borrowers who have sufficient foreign currency income and importers of products such as such as agriculture inputs, materials and equipment for industry sectors, medicine and medical equipment and fuel. Proper documentation on the needs to settle in foreign currency needs to be presented to the BOL. Commercial banks will settle directly with suppliers, discouraging cash disbursement. Commercial banks can issue letter of credits and bank guarantees in foreign currency importers, but they have to put in place risk management mechanism to ensure sufficient repayment.

Figure 28: Lending to commerce and industry sectors drove credit growth in the first half of 2017

(percent and percentage points)



Source: Bank of Lao PDR

Expansion of the financial sector brings new challenges

27. **The banking sector continued to expand.** Banking sector assets almost tripled in 2017 compared to five years ago, with the recent expansion driven by entry of foreign branches. Despite some moderation, the banking sector assets still grew at 17 percent in June 2017, reaching LAK118.2 trillion (approximately US\$14.3 billion) **almost as big as the country's GDP**. The aggregate capital to assets ratio in the banking sector (excluding state-owned banks) is above the mandated minimum of 8 percent and the aggregate loan-to-deposit ratio is around 1.

28. **Microfinance institutions (MFIs) continued to expand rapidly, albeit from a low base.** Total assets of MFIs reached about US\$450 million in July 2017, up by 11 percent y/y and reaching almost 3 percent of GDP. According to the UNCDF, the proportion of adults using at least one regulated financial service in Lao PDR was 47 percent in 2014, higher than Myanmar at 30 percent, but still lower than Nepal at 61 percent in the same year. Despite the expansion of the bank and non-bank financial institutions, informal financial services also exist, but often with higher interest rates with fewer procedural requirements. Reported proportion of adults using unregulated financial services was as high as 60 percent compared to 33 percent in Myanmar and 21 percent in Nepal in 2014.⁸

29. **However, the financial sector still faces challenges.** Part of the banking sector, including some state-owned commercial banks (SOCBs) and some private banks, have capital to asset ratio lower than the minimum regulatory level of 8 percent. In response, the authorities recently announced plans to restructure two SOCBs. Also, the largest commercial bank, BCEL was recently

⁸ UNCDF Making Access Possible Program. <http://map.uncdf.org/lao-peoples-democratic-republic>

recapitalized; though, additional resources may be required. Nonperforming loans (NPLs) have been edging upward, with some concerns that the official figure of around 3.3 percent understates the actual NPLs, including due to a recent regulation that loans related to public investment projects should not be treated as NPLs. While the extent of NPLs due to arrears on government projects is unclear, the authorities recently authorized issuance of LAK3,250 billion in 10-year bonds to settle these liabilities.⁹ In general, the profitability indicators for the sector are low. Data from commercial banks' financial reports show that half a dozen of banks made losses in the year up to the third quarter of 2017 with only 5 banks having return on assets of around 2 percent and above.

30. **In response, the BOL is in the process of improving the regulatory and supervisory framework.** There is a commitment to move to risk-based supervision. The Laws on the Bank of Lao PDR and Commercial Banks are being revised which is a good opportunity to take into account good international practices, including on management of BOL, relations with market participants including the Government, ability to regulate banks etc. There has been progress on the developing a payment system with the Automated Clearing House, a cost-efficient payment system, expected to be introduced during 2018. Reflecting anti-money laundering effort during 2017, Lao PDR was delisted from the grey list and in the process of preparing a national risks assessment.

⁹ To qualify, the projects should be on-budget, approved by the National Assembly; certified to be fully completed; and pre-financed by loans from commercial banks certified by the commercial banks and BOL.

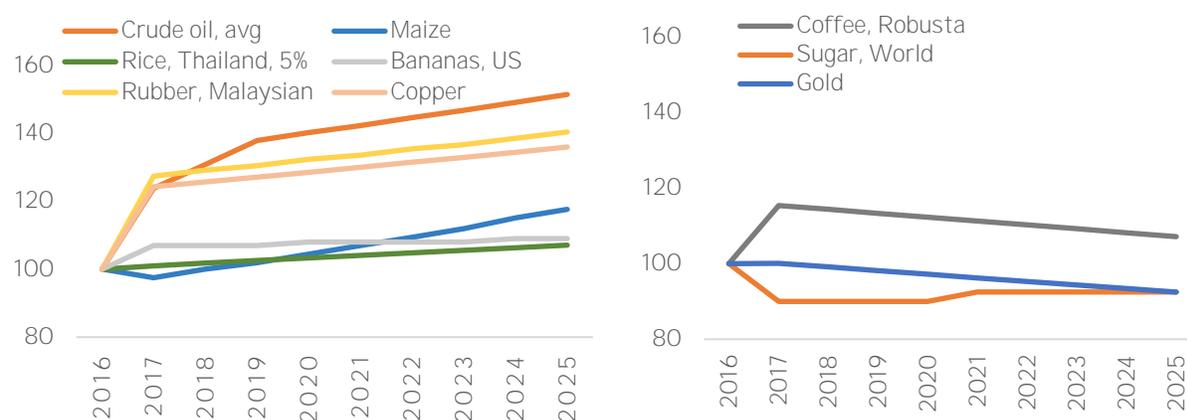
Outlook

The medium-term outlook remains broadly favorable, but not without risks

31. **Growth in 2018 is projected to further ease at 6.6 percent before picking slightly in 2019-2020.** Growth is projected to further decelerate next year as current trends continue. This could be indicative of declining potential growth in Lao PDR (The World Bank Group, forthcoming) reflecting limitations of growth driven by natural resource and public spending. Still, additional capacity that is expected to be installed in power sector as well as greater focus on improving the business environment is expected to boost the **country's potential** in the medium term. Growth will continue to be driven by the power sector, while greater ASEAN integration opens opportunities, especially in agriculture, tourism, retail trade as well as some manufacturing as part of regional value chain. These sectors have significant potential to create jobs and lower poverty further. The power sector will continue to expand with the installed capacity expected to reach about 11,000MW by 2021. A few large projects are expected to come on stream, including Xepian-Xenamnoi (410 MW, commissioning date (COD): 2019), Nam Ngiep 1 (270 MW, COD in 2019), Don Sahong (260MW, COD: 2019) and Xayabury power project (1,287MW, COD in 2019). The contribution from mining is expected to gradually decline as the current investments mature while the moratorium currently in place limits investments in new deposits. The slowdown also reflects potential impact of recent decisions to limit the land allocations for agriculture plantations, which appear to have had an important impact in commercializing production and increasing exports.

32. **In the near-term, commodity prices outlook provides mixed implications for Lao PDR.** Oil prices are projected to gradually recover to US\$60/barrel in 2019-2020 from around US\$43/barrel in 2016. While the increase can lift the import bills and domestic fuel inflation, it will also boost Government revenues. Prices for agriculture products including rice, maize, rubber are expected to grow slowly which can provide favorable prospect for the agriculture sector. However, reversal of this trend, natural disasters and weather shocks could be one of the key downside risks.

Figure 29: Outlook on key commodities generally look favorable
(Index 2016=100)



Source: World Bank Commodity Markets Outlook, <http://www.worldbank.org/en/research/commodity-markets>

33. **The medium term fiscal plan envisages a gradual reduction of the fiscal deficit helping to stabilize and eventually put public debt on a sustainable path by 2020.** The revenue improvement is expected to come from planned increase in excise tax rates, strengthened revenue administration, improved tax-payer services and the launch of modern revenue management information system. The authorities, with support from development partners, recently completed a tax policy review and are finalizing a plan for tax administration improvement. Building on these efforts, during 2018, the authorities plan to revise the Law on VAT and the Tax Law, and adopt new law on Income Taxation and on Excises. At the same time, spending growth will be controlled through continued strong control over the wage bill and public recruitment (intake of new staff is further reduced to 3,000 in 2018), cancelation of some public investment projects as well as cuts on non-essential spending.

34. **However, the fiscal plan for 2018 appears to propose, at best, a slower pace of deficit reduction.** The revenues, while revised downward compared to estimates from the October 2016 revision of the 5-year plan, remain optimistic. This was only partially offset through cuts in spending, resulting in a significantly slower reduction of the deficit than initially planned with the 5-year medium term fiscal plan. Downside risks to this outlook include weaker oil and metal prices that will also affect revenue collection. Public debt level is expected to remain high in coming years, continuing to pose a high risk to fiscal sustainability.

35. **The external deficit is expected to widen in 2018 reflecting the large import content of the infrastructure projects, including the railway, and higher oil prices.** The current account deficit is projected to enter a declining trend after 2018, as the power generation capacity comes on stream and increases exports, while manufacturing exports continue to grow. Gradual recovery of agriculture commodity and metal prices will support export earnings. The current account will continue to be financed by FDI and external borrowing, the latter increasingly on less concessional terms.

36. **Major changes in monetary and exchange rate policies are unlikely.** The authorities will continue to manage the exchange rate within the +/- 5 percent band; using the full band should provide the authorities with greater flexibility and lower pressures to intervene in the market to stabilize kip. The authorities project credit growth of up to 20 percent, also in response to planned policies to increase lending to small and medium size enterprises (SMEs) as well as further adjustments in the interest rates that would stimulate credit demand. Given recent trends in lending and weakening loan-portfolio, credit growth could be lower.

37. **Inflation is expected to pick up but remain in low single digit area.** Further fiscal consolidation, low pressure over income, moderate credit growth and gradual recovery in commodity prices are **likely to keep inflationary pressures moderate and within the Government's target of less than 5 percent.**

38. **Risks to this outlook are mainly tilted towards the downside.** Steeper than expected adjustment in China or a reversal in recent trends in Thailand could depress demand for Lao

exports and put pressure on reserves and macroeconomic stability. Similarly, greater global financial and exchange rate disturbances could undermine capital inflows to Lao (bonds for public and private sector financing, loans etc.) with negative implications for growth and stability. The rapid expansion of power sector in Lao PDR resulted in buildup of significant liabilities which could threaten its sustainability. The thematic section on **“Lao PDR Power Sector: Grow without Sorrow”** discusses the opportunities and risks in the power sector development. On the other hand, the authorities have recently shown greater commitment to improving the business environment and facilitating private sector development. Genuine efforts in this direction could unlock opportunities for Lao PDR and boost growth. The recently proposed increase in minimum wages if not coupled with productivity improvement can hurt the competitiveness of the nascent manufacturing sector.

Policy Considerations

Addressing risks to macroeconomic vulnerabilities is a key priority

39. Staying the course on the fiscal consolidation plan and fiscal discipline remains a priority. The preliminary 2018 Budget appears to indicate a slower pace of fiscal consolidation. In addition, given the relatively ambitious revenue target and not-fully clear treatment of arrears settlement, the Budget deficit could easily increase in 2018. Careful monitoring and adjustment is required. It would be important that any slippages in revenue collection are addressed through controlling public spending and improving spending efficiency in order to keep the deficit and public debt contained. Controlling spending growth should continue to focus on curbing non-essential spending, foreign loan financed public investment as well as strengthening the project selection processes.

40. On debt management, given the elevated debt and growing reliance on market-based financing, continued efforts on strengthening public debt management is equally important. As the adoption of the draft Public Debt Management Law has been delayed to 2018, it is essential to take this opportunity to prepare the necessary secondary regulations and institutional setup to properly support its implementation. The Law aims to strengthen public debt management through a stronger and more accountable Ministry of Finance and provides a legal basis for the formulation of the medium-term debt management strategy, on which discussion has just started. Institutional reorganization within the Ministry of Finance (domestic and external debt management are to be integrated into one department), which is now taking place will also support such reform.

41. Advancing reforms in the financial sector can reduce risks. It is important to ensure that the planned restructuring of the weaker SOCBs is done in line with good practices and that measures are taken to deal with identified weaknesses in the sector. As the authorities are revising the legal framework, such as the Laws on the Bank of Lao PDR and Commercial Banks, it is a good opportunity to consider good practices, including on the management of the BOL, relations with market participants including the Government, supervision authority, etc.

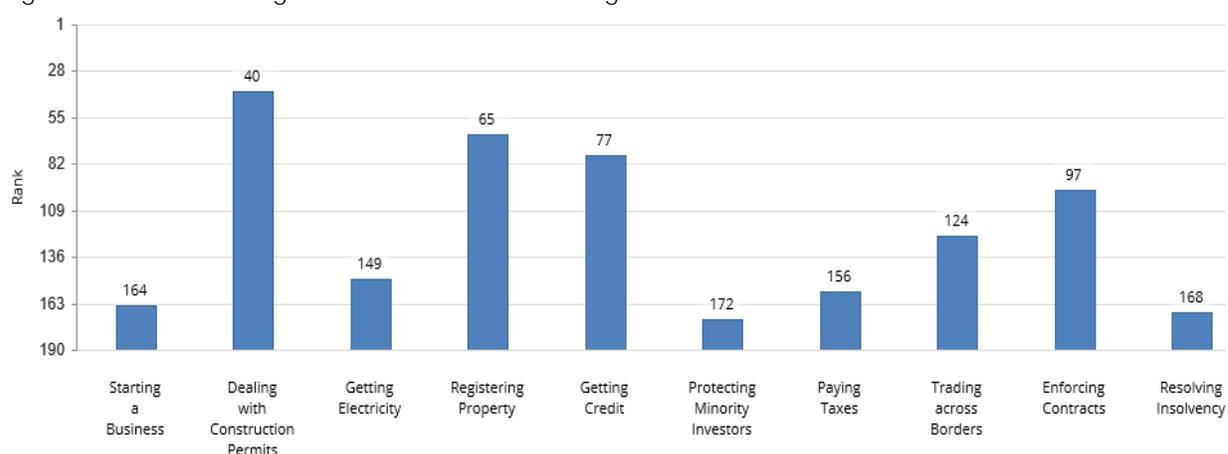
Achieving more sustainable and stable growth will require a genuine and vibrant private sector

42. Boosting growth outside of the resource sector will need improvement in business environment. Tourism is a sector with significant potential for Lao PDR. After the downturn in tourism sector for the past two years, the Government announced the Lao tourism year in 2018 with promotional plans for cultural, historical and natural tourism activities across the 18 provinces. **However, reforms to improve the sector's competitiveness and branding are much needed to support its long-term development.** Importantly, in addition to sector-specific interventions, at the broader level, promoting broad-base economic activities will require improvements in the general business environment. The ranking for Lao PDR in 2018 Doing Business report dropped to 141 in 2018 ranking from 139 in 2017. The most lagging indicators are

starting a business (from rank 160 in 2017 to 164 in 2018 report), getting electricity (from 155 last year to 149), protecting minority investors (from 165 to 172), paying taxes (from 146 to 156), trading across border (120 to 124) and resolving insolvency (from 169 to 168) (Figure 29, 30).

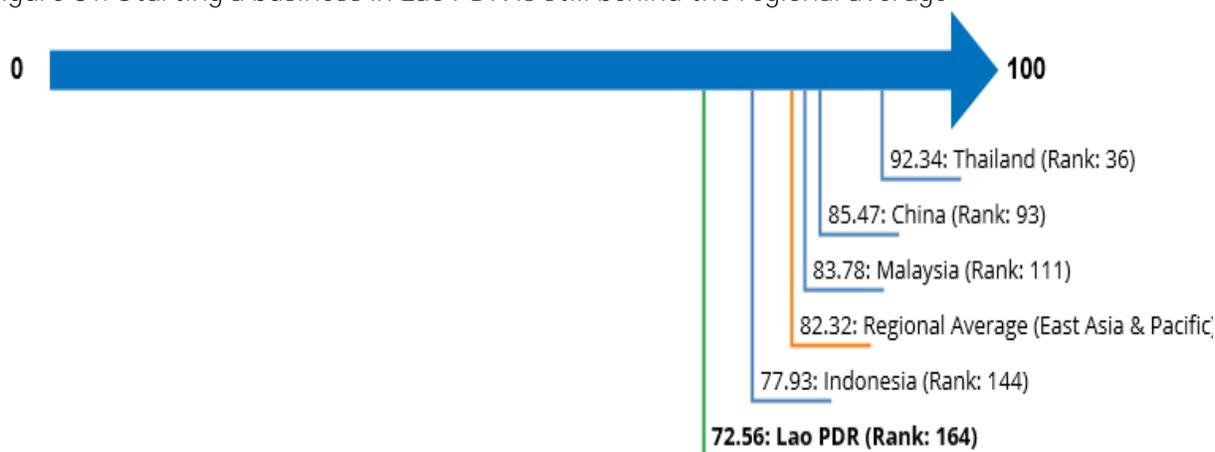
43. In addition, the recent Enterprise Survey showed that informality is one of the top constraints for businesses. Informality involves unevenly enforced regulations and inadequate business registration to avoid costs and complexity of the formal system, tax evasion, and a culture of non-compliance¹⁰ or bypassing the regulations. Therefore, reforms to provide level playing fields to businesses, simplifying processes for starting and doing a business in Lao PDR as well as investing in human capital can better stimulate private sector growth, which is also important for improving the fiscal performance and provides an opportunity to accelerate fiscal consolidation plan.

Figure 30: Lao PDR lags in several areas of Doing Business



Source: Doing Business 2018, <http://www.doingbusiness.org/data/exploreeconomies/lao-pdr>

Figure 31: Starting a business in Lao PDR is still behind the regional average



Source: Doing Business 2018, <http://www.doingbusiness.org/data/exploreeconomies/lao-pdr>

¹⁰ World Bank (2017). "Formal Formality: Informal practices of formal firms as a key business constraints".

Table 2. Key Macroeconomic Indicators and Projections

	2015	2016 Est.	2017 Proj.	2018 Proj.	2019 Proj.
Real Economy	Annual percentage change, unless otherwise indicated				
Real GDP	7.4	7.0	6.7	6.6	6.9
GNI per capita, US\$ (nominal)	2,000	2,150
GDP deflator	2.3	3.0	1.4	2.8	2.8
CPI (average)	1.3	1.6	1.0	3.0	3.0
Fiscal Accounts	Percent of GDP				
Revenues	19.8	16.4	15.9	16.6	17.2
Expenditures	24.2	20.9	20.3	20.7	20.7
General Government Balance	-4.4	-4.5	-4.4	-4.3	-3.5
General Government Total Debt	59.2	58.7	59.5	59.0	58.3
Selected Monetary Indicators	Percent of GDP, unless otherwise indicated				
M2 (% of GDP)	51.2	51.5	54.7	57.4	60.0
Domestic Credit to the economy (% of GDP)	46.7	51.2	55.5	60.5	65.5
Domestic Credit to the economy (% y/y)	16.8	20.9	17.2	19.6	19.0
Balance of Payments	Percent of GDP, unless otherwise indicated				
Current Account Balance	-16.2	-13.2	-13.0	-15.8	-15.4
Merchandise exports	29	27	27	27	28
Merchandise imports	46	41	39	42	41
Services, net	3.4	3.1	1.9	1.5	1.0
Gross Reserves (in US\$ million, eop)	987	815	986	1,134	1,299
In months of imports	2.2	1.6	1.8	1.8	1.9
Exchange Rate, USD (average)	8,117	8,198	8,280		..
Other memo items					
GDP (nominal, billion Kip)	117	129	140	153	169
GDP nominal in US\$ billion	14.5	15.9	16.9	18.3	20.0

Source: Lao Authorities, trading partners' data, staff calculations and projections.

Note: The ratios to GDP are based on the rebased GDP to 2012 which was recently released by the Lao Statistics Bureau. The fiscal deficit for 2018 approved by the National Assembly is 4.9 percent of GDP.

Part II: Lao PDR power sector: grow without sorrow

Summary

Lao PDR's power sector played a major role in the country's development record over the last two decades; its influence over the future can be equally dramatic. The sector expanded robustly as investors exploited the ample hydro potential, and more recently thermal while also exploring other sources of energy. The expansion boosted growth and poverty reduction through investments, provision of reliable, clean, and affordable energy, higher exports, and government revenues. The remaining potential in the sector is significant; however, so are the risks. This note focuses on the achievements as well as the financial risks. The expansion has saddled the public sector with significant debt and contingent liabilities. Strengthening the sustainability prospects of the sector will require strengthened project selection and scaling back planned investments, securing well-paying markets for rapidly growing electricity generation as well as improving the commercial operations, organizational and ownership structure of the public utilities.

The power sector has fueled investment and growth

1. **The adoption of the “New Economic Mechanism” in 1986 marked an important milestone in Lao PDR development.** A decade after it was introduced, the planned socialist economy model came under strain in the mid-1980s. Growth averaged a respectable 5 percent during 1975–1986, but it was accompanied with high current account and fiscal deficits and inflation rates prompting the launch of early market-oriented reforms. The supply response was robust and a limited structural transformation was initiated. Output expanded on average by 6.3 percent per year during the 1990s. Importantly, the second half of the 1990s also saw the launch of hydropower projects which defines Lao PDR's growth model to this day.

Box 2: Power sector potential

Hydro

The annual water discharge is around 270–333 billion m³, representing a hydropower potential of up to 25,000 MW. Of the total capacity, about 18,000MW is technically exploitable, with 12,500MW found in the major Mekong sub-basins (Source: Ministry of Energy and Mines). The 1,700 km of the Mekong River flowing through Lao PDR is also the second-most-diverse watershed in the world in fish biodiversity.

Thermal

Hongsa Lignite (1,878MW installed capacity) commenced operation in 2016 and is the biggest thermal power plant; few smaller ones operate mostly connected to local industries. There are plans to develop additional thermal capacity utilizing domestic and imported coal. These plants will provide additional baseload power and generate export revenues; however, there are concerns on new coal fired plants which use inefficient sub-critical technology burning low calorific value coal with serious environment impacts.

Bioenergy

Traditionally, wood and charcoal are being used for cooking and heating in rural areas. Commercial use of biomass for electricity generation is limited to couple of facilities using sugarcane and corn with a total installed capacity of around 40MW. Given substantial amount of waste from agriculture and forestry and the potential to cultivate energy crops, there are opportunities to scale up bioenergy generation.

Wind and Solar

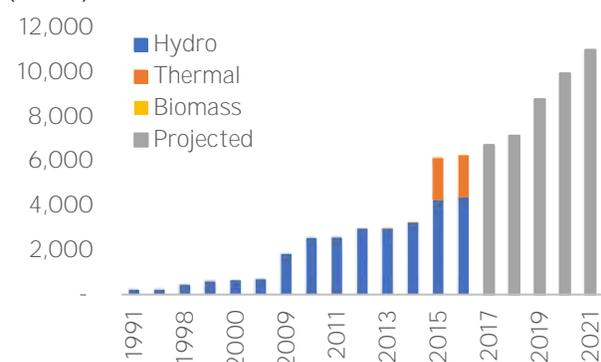
There is growing interest in developing Lao PDR’s wind and solar potential. Preliminary measurements have been undertaken of the wind potential and a more comprehensive measurement campaign is under way for both wind and solar. The prospects for solar appear more favorable given good solar power given the seasonality in water flows. Still, a more robust legal or regulatory framework is needed to promote development non-hydropower renewable energy.

1. **By mid-2000s, the power sector became a major source of growth as investors began to tap into the ample potential to meet the demand from the fast-growing region.** The construction of the Nam Theun 2 (NT2) power plant (project cost of US\$1.2 billion, or around 25 percent of annual GDP in the construction period, and installed capacity of 1,070MW) signaled the start of rapid development of the sector. Investment in the sector surged from US\$183 million in 2005 to above US\$2 billion by 2015 with the sector accounting for 36 percent of all approved investments between 2010 and 2015. Installed capacity increased from less than 700MW in 2005 to around 6,400MW in 2016 and this could reach 11,000MW by 2021. Electricity exports account for a growing share of Lao PDR’s exports with Lao PDR recently entering the list of top ten per capita exporters of electricity.

Figure 32: Power sector at a glance

Installed capacity

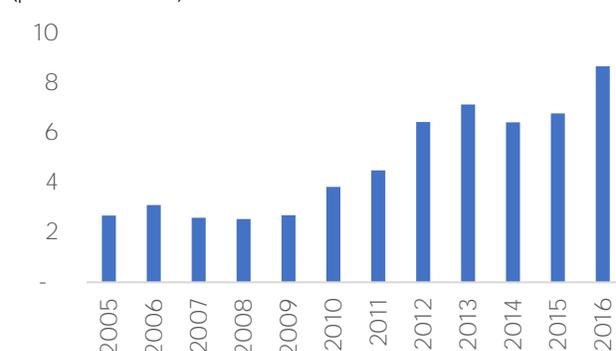
(in MW)



Source: 2016 Electricity Statistics and WB staff estimates; Note: Projections include all energy sources

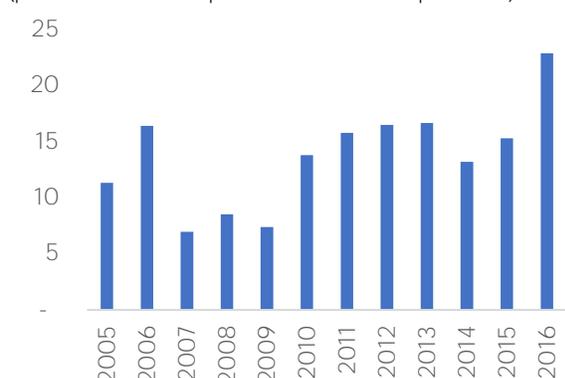
Power sector value added,

(percent of GDP)



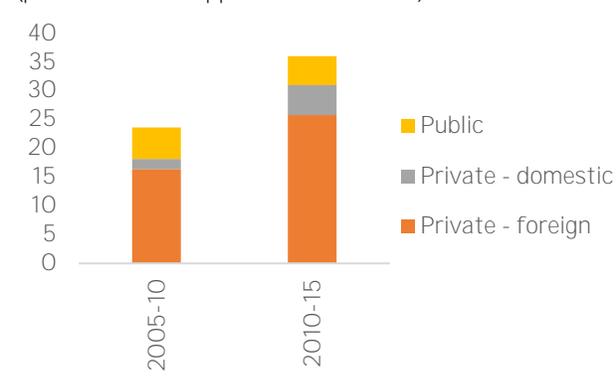
Source: Lao PDR Statistics Bureau

Electricity exports to Thailand, (percent of total exports to three main partners)



Source: Staff calculations based on data from Customs departments of Thailand, Vietnam and China

Approved investments in power sector, (percent of total approved investment)



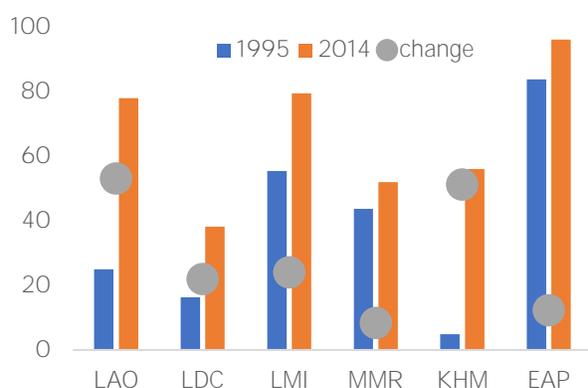
Source: Lao PDR Ministry of Planning and Investment

2. **The contribution to employment has been more modest.** Given the capital-intensive nature of the sector, the sector generated few jobs directly (around 20,000 jobs in 2013 together with mining). Still, the construction of power plants contributed to the significant growth in the employment in the construction sector (almost 50 percent increase between 2003 and 2013 to 113,000 jobs), though anecdotal evidence suggests that a considerable share of the labor needs during construction has been met with foreign labor, mostly from neighboring countries.

Reliable and affordable energy for people and businesses

3. **The expansion of the power sector also supported an impressive electrification effort, improving livelihoods and supporting businesses.** By end 2016, around 92 percent of the households were electrified (94 percent by mid-2017)¹¹, up from 78.5 percent in 2011 and only 15 percent in 1995 and significantly above levels observed in Myanmar and Cambodia. In general, Lao PDR businesses rate the quality of electricity supply more favorably compared to neighboring countries as well as more advanced developing countries. Around half of companies experienced electrical outages in Lao PDR in 2016, down from almost 90 percent in 2012 and similar to the EAP region average. Furthermore, companies reported less than 1 outage per month, performing considerably better compared to the EAP region average of around 5 outages in a typical month. Both the average duration of the outages and the associated losses were lower in Lao PDR compared to the EAP average also reflected in a smaller share of firms that own generators. Lao PDR ranks 149 (out of 190 economies) on the 2018 Doing Business Getting Electricity indicator as relatively good performance on frequency and duration of outages as well as affordability of electricity is offset by burdensome and costly procedures required to obtain a permanent electricity connection.

Figure 33: Access to electricity has increased
(percent of population)

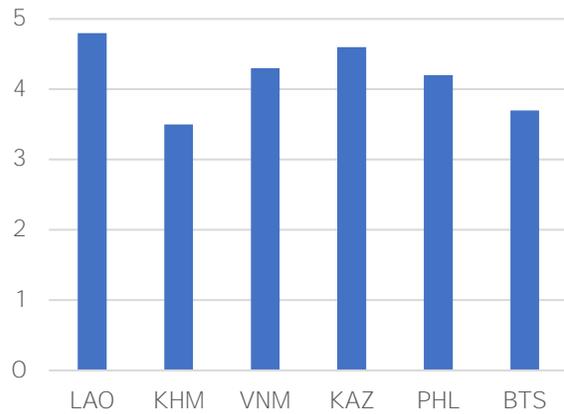


Notes:
LDC: Least-developed countries,
LMI: lower middle income,
MMR: Myanmar;
KHM: Cambodia;
EAP: East Asia and Pacific (excluding high income)

Source: World Development Indicators

¹¹ This translates into a smaller share of the total population as the remaining households without access to electricity tend to be in remote areas where household size is bigger.

Figure 34: Quality of electricity supply



Notes:
Score on a scale from 1 to 7 with higher value denoting better performance.

KHM: Cambodia;
VNM: Vietnam
KAZ: Kazakhstan
PHL: Phillipines
BTS: Botswana

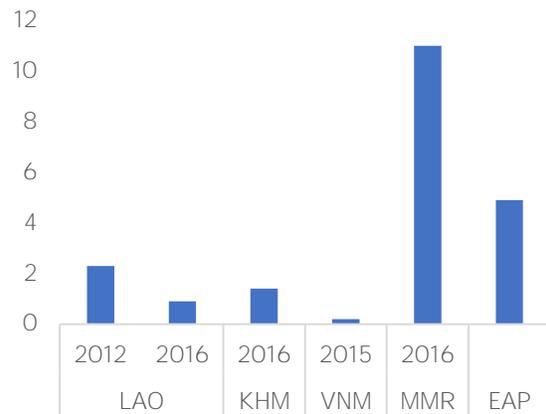
Source: World Economic Forum, Global Competitiveness Report 2017-18

Figure 35: The power sector and the business environment

Firms experiencing power outages
(percent of all firms)



Frequency of outages
(Number of outages in a typical month)



Losses due to outages
(percent of annual sales)



Firms owning generators
(percent of all firms)

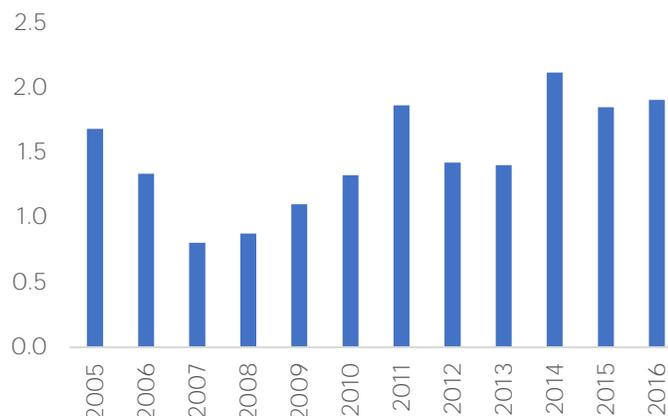


Notes: KHM: Cambodia, VNM: Vietnam; MMR: Myanmar; EAP: East Asia and Pacific
Source: World Bank Enterprises Surveys; available at www.enterprisesurveys.org

Contribution to the budget has been growing, but remains modest

4. While the financial flows in the power sector have been growing rapidly, its contribution to the Government Budget has been less commensurate. So far, the sector's contribution to fiscal revenues has been relatively small. Royalties reached around US\$45 million in the last three completed fiscal years (FY2013/14 to FY2015/16), up from around US\$20 million in the earlier period. Information on the collection of other revenues (taxes, dividends, dividend tax, in-kind payments) is not easily available, but rough estimates put total revenues at around US\$100 million, or 0.6 percent of GDP and 4 percent of government revenues, in 2016. Power sector projects usually benefit from extended profit tax exemptions, low royalty rate and other incentives in the early years of their operations which is keeping the effective tax rate relatively low.

Figure 36: Power sector royalties are growing slowly (as percent of total fiscal revenues)



Source: Staff calculations based on data from Lao PDR Ministry of Finance

5. **Still, Government revenues from the power sector are expected to gradually increase going forward.** Revenues are expected to double to around US\$200 million by 2020 and reach around US\$300 million by 2025. Revenues may grow faster afterwards as tax exemptions and incentives expire, and assets are transferred to Lao PDR ownership following the end of the build-operate-transfer (BOT) arrangements.

Who is who in the power sector

6. **Ministry of Energy and Mines (MEM)** is the Government entity in charge of setting the strategy and developing policies for the power sector. It also engages with public and private sector companies in processing investment proposals, including technical designs, financial analysis, environmental assessment, negotiations etc. MEM oversees the work of all public enterprises in the power sector (see below) and monitors the performance of the private enterprises operating in the sector.

7. **Electricite du Laos (EdL)** is a public electric utility, 100 percent owned by the Government of Lao PDR. After having divested most of its generation capacity to EDL-GEN, it currently operates the transmission and distribution grids. By end 2016, it owned 8 plants with an installed capacity of just 3MW and owns the transmission network (except for dedicated transmission lines built by investors operating power plants that export directly to neighboring countries) as well as the distribution network. However, EdL still invests in new generation projects and takes on project debt on behalf of EDL-GEN.

8. **EDL Generation Public Company (EDL-GEN)** was established in late 2010 as spin off (subsidiary) of EdL. EDL-GEN was publicly listed in the Lao Stock Exchange in early 2011. EdL has a 75 percent equity stake, with the remaining 25 percent held by domestic and foreign private entities¹². It is increasingly taking over the generation capacities from EdL through agreements for transfer of assets and liabilities agreements with EdL, financed through issuance of bonds (as of mid-2017 around \$500 million) as well as loans (around US\$580 million as of mid-2017). By end-2016, it owned 10 power plants with installed capacity of 619MW. It also has equity stakes of 20 percent – 60 percent in power plants developed by private investors (around 10 plants with total installed capacity of 2,300MW with EDL-GEN accounting for around 635MW).

9. **The Lao Holding State Enterprise (LHSE)** is a 100 percent government owned entity which manages government investment in power projects dedicated for exports. So far, Nam Theun 2 (1,070MW with LHSE holding 25 percent stake) and Hongsa (1,878MW with LHSE holding 20 percent stake) are in operation with LHSE accounting for 644MW. Two large projects are expected to come on stream within the next 3-4 years: Xe Pian – Xe Nam Noy (410MW with LHSE holding a 24 percent share) and Nam Ngiep 1 (290MW with LHSE holding 25 percent stake).

10. **A wide range of investors are involved in the Lao PDR power sector.** With limited public financing, Lao PDR encouraged foreign participation in the sector, largely through build-operate-transfer (BOT) arrangements with concession periods of around 30 years. While most of the development costs are borne by private investor, public enterprises (EDL, EDL-GEN or LHSE) do own equity stakes in a number of these projects (see above). Thai investors account for around **one third of the total installed capacity due to Thailand's strong demand, need to diversify its energy mix, and difficulties to build new electricity infrastructure domestically.** Chinese companies, supported by near-**concessional financing from China's EXIM Bank and Development Bank,** are rapidly gaining share and account for around 13 percent of the installed capacity, up from 7 percent in 2014. European investors, who accounted for 22 percent of installed capacity in 2014, have seen their share drop to 9 percent **recently. Vietnam's role remains limited (7-8 percent of installed capacity)** with few plants that appear to have faced some delays. The producers can be classified in three broad groups:

- Independent Power Producer (IPP) dedicated for export. These are typically large power plants where most of the generated power is exported, in most cases with the Electricity Generation Authority of Thailand (EGAT) as the main off-taker. Long-term Power Purchase Agreements (PPA) with EGAT, a financially creditworthy electric utility, have allowed developers access to long-term affordable financing. Five entities (installed capacity 4,200MW) produced an estimated 19,000GWh in 2016, out of which 18,300GWh were exported via dedicated transmission lines to Thailand generating revenues of US\$960 million. One more producer has a connection to Vietnam. Around 5–10 percent of generated electricity from these IPPs is delivered to the Lao national power grid. Going

¹² The second largest entity is a Thai company holding 5.65% of shares, followed by a Singapore-based entity with 4.49% of shares. BCEL, a Lao state-owned commercial bank holds 2.28% of shares and Krung Thai Bank has 1.54% of shares. The other investors have less than 1% each. According to company reports available at www.edlgen.com.la.

forward, by 2020 it is expected that an additional 2,500MW will come on stream in IPPs dedicated to export.

- IPPs supplying the domestic market. This segment accounts for a growing share of **production reflecting the Government's intention** to better manage the power sector and position EdL in negotiations with foreign electricity markets. Also, smaller power plants are not conducive for direct export arrangements making it more efficient to connect these to the national grid where EdL is the off-taker. In 2016, these producers delivered an estimated 3,300GWh to EdL, up from around 900GWh in 2013. Generation from these **producers and EdL's obligations to purchase electricity are expected to grow strongly** in the years ahead.
- Small Power Producer (SPPs) refer to power plants with installed capacity of up to 15MW. SPPs sold 181GWh to EdL in 2016, more than a fourfold increase compared to 2013 (47GWh). With almost two dozen of new SPPs expected to come on stream until 2020, electricity generation from these producers is expected to exceed 1,000GWh by 2020.

11. **Imports have been declining as the country has been able to meet an increasing share of its consumption.** While around two-thirds of the installed capacity is exported, the fragmentation of the transmission system, the seasonality of hydropower production as well as rapid demand growth keeps Lao PDR reliant on power imports; though these are expected to decline going forward. Imports accounted for 17 percent of domestic consumption in 2016 compared to around 30-40 percent during most of the previous decade.

Table 3: Electricity generation, consumption and trade
(In GWh)

Generation	25,066	Domestic Consumption	4,660
EdL	13	Exports	19,869
EDLGEN	2,629	EdL	1,538
IPP – EGAT off-take	18,331	IPP – EGAT off-take	18,331
IPP – EdL off-take	3,912	Other	1,330
SPP	181		
Imports	793		
Supply	25,859	Use	25,859

Note: Other includes losses.

Source: Staff estimates based on Lao Statistic Bureau (total generation) and EdL 2016 Electricity Statistics

12. **The transmission and distribution grid has expanded.** The length of the transmission grid (35kV voltage and above) more than doubled over a period of just five years between 2011 and 2015. Similar improvements were made to the distribution network which facilitated the strong improvement in electrification rate and the relatively favorable assessment of the quality of electricity supply.

13. **However, remaining weaknesses in transmission and distribution make Lao PDR reliant on imports and prevent the country from fully exploiting its export potential.** Further effective integration of the national transmission grid is needed to connect parts of the country with surplus power to areas where supply is insufficient. Also, the capacity to move electricity to

external markets is constrained by the limited availability of higher-voltage transmission lines. There is one 500kV transmission line to Thailand, two 230kV lines and six 115kV lines, most of which are owned and operated by the IPPs dedicated for exports where EGAT is the off-taker and a 230KV line dedicated to Vietnam. There is one 110kV line to China and additional smaller voltage (10-35kV) connections to Thailand, Vietnam and China which are insufficient to accommodate significant electricity flows. On the distribution side, the electrification rate increased from 15 percent of households in 1995 to 92 percent of households in 2016; though the remaining unserved areas are remote and difficult to reach.

Power sector finances

14. **EdL made payments of US\$340 million in 2015 for purchases of electricity from EDL-GEN, IPPs, SPPs as well as from imports.** Preliminary estimates suggest that purchases may have reached to above US\$420 million in 2016. This translates into average cost of supply of around 5.7 US\$ cents/kWh. The price has been edging upward slightly over the last few years due to growing purchases from IPPs and SPPs with higher negotiated tariffs.

- Staff calculations based on EDL-GEN financial statements suggest that EdL paid around 5 US\$ cents/kWh for its purchases of electricity from EDL-GEN until 2015 and increasing to around 5.6-5.7 US\$ cents/kWh per the Government approved tariffs for 2012–2017.
- The average prices for purchases from IPPs (where EdL is the off-taker) was around 5.3 US\$ cents/kWh in 2016, up from below 5 US\$ cents/kWh in the years before. Importantly, several newer projects appear to have power purchase agreements with prices closer to 6 US\$ cents/kWh suggesting that the average price is likely to increase slightly going forward.
- The average price for electricity purchased from SPPs was 6.7 US\$ cents/kWh reflecting efforts by the authorities to stimulate the SPPs. SPPs account for a relatively small share of EdL's costs of supply (US\$12 million in 2016); however this will grow as a relatively large number of SPPs come on stream.
- The average prices of imported electricity was around 5.5 US\$ cents/kWh in 2016, up from 5 US\$ cents/kWh a year earlier, but varies from around 4 US\$ cents/kWh to above 10 US\$ cents/kWh depending on the supplier as well as the terms (scheduled vs unscheduled).

15. **In 2015, EdL collected US\$455 million from selling electricity domestically and for exports.** The average selling price (from both exports and domestic sales) was around 7.6 US\$ cents/kWh; additional revenues are collected from meter maintenance charges.

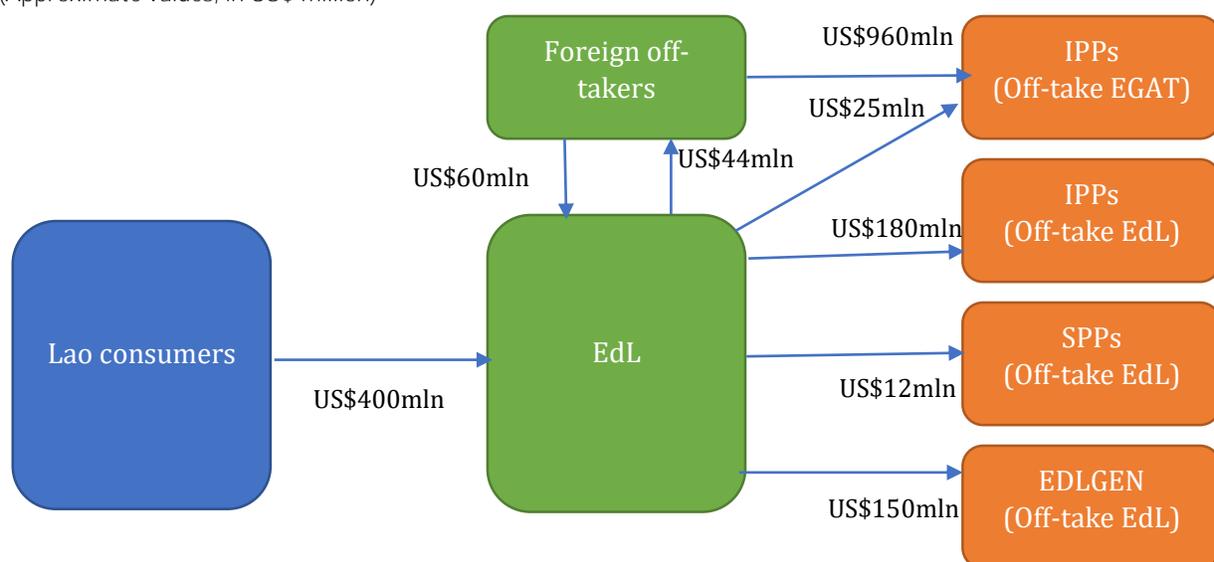
- The average price for domestic sales was 8.8 US\$ cents/kWh. Following relatively rapid upwards adjustments until 2013, domestic electricity prices have been trending upwards only very gradually in more recent years. A relatively complex tariff schedule provides for significant cross-subsidies among various consumption segments. Prices are lower for residential consumption with relatively low consumption levels (a household consuming 150kWh per month is paying 422 kips/kWh or 5.1 US\$ cents/kWh), as well as for irrigation and industry. On the other hand, entertainment venues as well as international

organization pay significantly higher rates (more than 1,400 kips/kWh or 16.9 US\$ cents/kWh). Also, as a general principle, prices are lower as voltage increases.

- Average price for EdL exports was around 3.8 US\$ cents/kWh in 2016. The relatively low export price is because most EdL export are treated as non-firm¹³ wholesale exports without guarantee of availability.

16. **EDL-GEN had revenues of around US\$150 million in 2016, largely from selling electricity to EdL.** The revenues have been increasing reflecting higher volumes as well as adjustment in prices. The costs of sales were close to US\$60 million, translating into average costs of around 2.3 US\$ cents/kWh.

Figure 37: Financial flows in the power sector
(Approximate values, in US\$ million)



Source: Staff calculations based on EdL 2016 Electricity Statistics, EdL Annual Report, EDL GEN Financial statements and Thailand Customs Department data

17. **Prices at which IPPs with dedicated exports to EGAT are selling the electricity are somewhat higher.** These tariffs are, in general, not disclosed; however, information derived from foreign trade statistics suggests an average price of around 5.2 US\$ cents/kWh.

Growing risks

18. **While bringing enormous benefits; the expansion of the power sector resulted in high debt and significant contingent liabilities which could undermine gains.** The expansion of EdL's and EDL-GEN's assets has been financed largely by debt, increasingly on market terms. High debt levels have weakened the financial position of EdL which poses significant risks to the sustainable development of the sector, but also to the Budget and the overall macroeconomic stability. In fact,

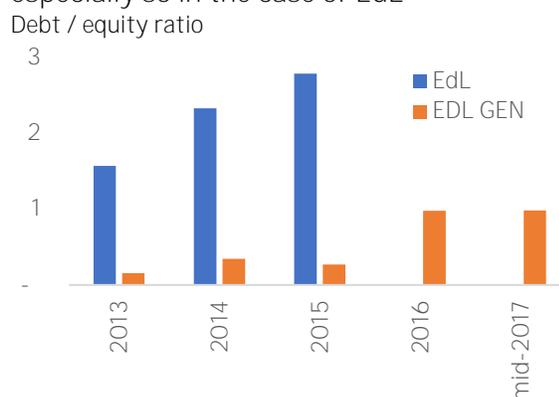
¹³ Power is generally considered "firm" if it is available at least 16 hours a day and 7 days a week.

borrowing to fund the expansion of EdL and EDL-GEN has been a significant contributor to public debt and the reclassification of Lao PDR to high risk of debt distress.

19. **At the end of 2015, EdL debt liabilities were close to US\$3 billion, most of which in the form of government debt on-lent to EdL.** Debt accumulation has been very rapid with debt more than doubling over a period of only two years between 2013 and 2015. The debt/equity ratio¹⁴ at the end of 2015 reached 2.8, up from 1.6 in 2013. A generally accepted debt/equity ratio for utilities in the gas and electricity sector is around 1-1.5. Consequently, debt servicing costs (interest expenses and principal amortization) are rising rapidly reaching 30% of revenues in 2015 (compared to 20% in 2013). Despite this, significant amounts of new loans were signed during 2016 while an equally ambitious expansion plan is being proposed for the years ahead.

20. **EDL-GEN's financial position is better, though debt levels are increasing fast.** At the end of June 2017, EDL-GEN debt liabilities were close to US\$1.1 billion, largely raised at market terms through bonds issuance and loans (domestically and abroad).¹⁵ This puts EDL-GEN's debt/equity ratio at almost 1 in mid-2017, compared to 0.16 in 2013. While not part of public debt, the government's majority equity stake in EDL-GEN exposes the Budget to risks.

Figure 38: Debt levels have been increasing, especially so in the case of EdL



Source: Staff calculations based on 2014 and 2015 audited EdL Annual Reports and EDL GEN Reports 2011-2017

21. **Significant additional risks come from contingent liabilities from Power Purchase Agreements with domestic IPPs and SPPs.** Power generation may be growing faster than the ability to find markets for the produced electricity. At the same time, most of the PPAs are “take-or-pay” contracts without seasonal or peak/off-peak differentiation which will contractually bind EdL to purchase the generated electricity even if it does not need the power. It is estimated that electric energy available/contractually required to be purchased by EdL would almost double from around 11,000GWh (2017) to over 21,000GWh by 2020, and approach 30,000GWh by 2025. Most of the incremental energy is expected from domestic private power producers. Unless EdL can secure markets for this energy, and importantly at above cost prices, the impact over EdL finances is likely to be severe.

¹⁴ Staff estimates based on unaudited statements from 2015 EdL Annual Report. Debt includes long-term borrowing, current portion of long-term borrowing and debentures.

¹⁵ Some of EDL-GEN debt is also recorded as EdL debt. Part of the government strategy is to transfer generation assets from EdL to EDL-GEN. Together with the assets, the responsibility to service the associated liabilities is also transferred to EDL-GEN.

22. **Finally, the commercial orientation of the power sector utilities can be improved.** In general, indicators of profitability (Returns on Equity, Return on Assets) are low for both public entities. **Administrative expenses are a growing share of EdL's expenditures, covering 32 percent** of revenues in 2015 (up from 27 percent in 2013). For example, employment in the sector increased to above 6,000 at the end of 2016, almost doubling over a period of only five years (3,239 in 2011) and faster than the growth of revenues resulting in a continuous decline in revenues per worker. In addition, significant accounts receivable and payable reflects limited financial liquidity and suggests a need to improve financial management in the sector. Accounts receivable at EdL increased from 16.8 percent of sales in 2013 to 21.1 percent of sales in 2015, indicative of weak payment discipline, though anecdotal evidence suggests that this appears to be concentrated among certain groups. Accounts receivable in EDL-GEN rose rapidly during 2016 and 2017; with EdL being the single buyer of EDL-GEN, this could be indicative of liquidity crunch.

Recommendations

23. **Prompt action is needed to ensure that the power sector remains a driver for economic development for Lao PDR.** Under current trends, the financial performance of the public sector entities will continue to deteriorate and risks undermining the investment and growth prospects for the sector as well as creating a significant liability for the Government Budget. The following recommendations could help:

- **Strengthen the project selection process to ensure that only economically viable, fiscally sustainable and environmentally justifiable projects are selected.** This should be undertaken as part of a robust integrated power sector planning exercise. In general, non-critical investments should be postponed. The proposed stronger selectivity of projects will lead to fewer investments but with higher economic and social returns, will better match the growth in installed capacity with infrastructure improvements and demand and with a noticeably smaller footprint over land and water use. This will slow down the expansion of the balance sheet of EdL and EDL-GEN, reduce debt financing and lower their investment costs.
- **Improve the commercial orientation of the power sector, including stronger financial management arrangements and adopting cost-reflective tariffs.** Measures to control costs, such as stronger procurement, better payment discipline and limiting intake of new staff can help the power sector utilities. Importantly, the new domestic electricity tariffs, scheduled to become effective in 2018, will be an important opportunity to minimize untargeted subsidies to customers and reflect the full cost of supply, including generation, transmission and distribution. Any subsidies should be identified and budgeted for.
- **Re-designing the PPAs with IPPs where EdL is the off-taker.** EdL should explore options with IPPs for mutually acceptable revisions to the PPAs to lower the costs and liabilities of EdL. More generally, direct project negotiation for new projects can be replaced by a more systematic and competitive process where potential developers bid on key aspects of the PPA (tariff, partial revenue assurance).

- **Secure markets for rapidly growing power generation capacity.** The slower-than-expected domestic growth and demand from Thailand as well as the gaps in the institutional and physical infrastructure to facilitate efficient cross-border power exchanges will make this more challenging. Furthermore, the prolonged period of low oil and gas prices environment is reducing the attractiveness of Lao PDR's power. Still, other countries in the region are potential markets for Lao PDR. A recently signed agreement will see 100MW of power exported to Malaysia in 2018, potentially 1 GW to Vietnam by 2020 and discussion are ongoing to open up Myanmar market. Export to China is technically feasible but unclear if economically viable due to the large capacity surpluses in the Southern China grid.
- **Explore economical and non-debt creating ways of completing the infrastructure gap.** To optimize benefits in an environment of growing number of smaller- and medium-size hydropower plants and growing surplus electricity, Lao PDR needs a new strategy for system-to-system transactions and efficient integration of the domestic power grid. However, the proposed plans for expansion of the transmission and distribution grids appear to be excessive. Furthermore, investments shouldn't necessarily be undertaken by the public sector. Several transmission projects appear viable and could attract private sector investment on Build-Operate-Transfer (BOT) basis.
- **Attract additional resources in the sector.** The overall fiscal position is likely to remain challenging going forward and may prevent the Government from providing additional equity to the sector. Still, new external equity (such as through a capital increase of EDL-GEN) can be attracted while still preserving a majority share for the Government. Also, EDL-GEN may consider spinning off some generation projects. And, it is worthwhile to review the option of separating the electricity transmission function, to create financial flexibility outside of EDL Group and attract private investment in transmission network.

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