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ORIGINAL ARTICLE

Credit crunch: Chinese infrastructure lending and Lao sovereign debt

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Abstract

Lao PDR's push for large infrastructure-led economic growth has been delivered through a significant amount of financial leverage and a build-up of sovereign debt obligations. The government now finds itself in danger of a sovereign default. This article traces the roots of this debt crisis over the past decade, focusing particularly on the role of hydropower. A significant share of infrastructure lending to Laos has been through Chinese policy banks. We argue that over-lending to dam projects focused on the domestic energy market has been at the core of Laos' debt situation. Through 2020 the Lao Government has undertaken a series of restructuring measures, including privatisation of state assets, engaging in debt renegotiations with China, and attempts to secure new short-term credit. We outline a range of other options Laos has to reschedule or restructure their sovereign debt, and offer policy targeted recommendations focusing on reforms in the energy sector.

KEYWORDS

COVID-19, hydropower, infrastructure, Laos, sovereign debt

1 | INTRODUCTION: A RIVER OF DEBT

Over the past two decades, Lao PDR (Laos) can claim a strong economic record. National GDP growth has been robust, averaging 7.5% annually between 2004 and 2018, one of the best records in the developing world. Per capita GDP has increased over eightfold, from $672 in 2000 to $1840 in 2019.[1] While the distribution of benefits has been uneven, a significant dent has been made in national poverty rates, and this has placed the Lao Government on the cusp of reaching a key objective, first articulated by the Lao People's Revolutionary Party leadership in 1993, of graduating from the United Nation's Least Developed Country listing.

Laos' capital Vientiane has been experiencing an age of prosperity. Real estate has boomed and high-end luxury vehicles have proliferated. The new wealth has been closely tied to resource-led development, largely involving hydropower, mining, agribusiness and infrastructure projects. Tourism and special economic zones (SEZs) have also supported Laos' strong economic progress over the past decade, while overseas labour remittances have supported household expenditures (Sunam et al., 2021). In the countryside a spate of new hydroelectric dam projects have been built, although evidence for the new resource wealth finding its way to rural communities has been more difficult to detect.

For an agrarian-dominated economy with a low domestic savings rate, the focus on large, capital-intensive infrastructure projects has been accompanied by a steady accumulation of government debt. Much of Laos' public and publicly guaranteed debt is linked to the controversial hydropower sector, as well as other big-ticket infrastructure projects such as a $5.9 billion Lao-China Railway project (World Bank, 2020b). Innovative infrastructure financing arrangements, involving both Western and Asian banks, a successful foray into international commercial bond issuances, and ready access to concessional bilateral funding via China's Belt and Road Initiative (BRI), have enabled Laos' rapid development, while also exposing the country to financial risk.

Following Ernest Hemingway's adage that one goes bankrupt in two stages, 'gradually, and then suddenly', those risks have now materialised. Although years in the making, the global coronavirus shock has tipped Laos into recession, to the brink of a liquidity crisis and a potential sovereign bond default. A debt default by Laos would place increased pressure on borrowing costs, and reduce the scope for public investment in social welfare and poverty reduction. How Laos and its development partners resolve this situation will thus shape the country for many years into the future.

In this article, we examine the roots and contributing factors to Laos' debt vulnerability, homing in on large infrastructure projects including hydropower and rail investments. As with a number of other Global South states, a significant share of the lending for Laos's infrastructure boom has come from loans through Chinese state-owned policy banks—the China Development Bank (CDB) and Export-Import (Exim) Bank of China. We examine the response by the Government of Lao PDR (GoL) up to January 2021, which has included privatisation of state assets and (an apparent) debt-for-equity swap with a Chinese firm, before identifying a further range of seven non-exclusive options that the government could follow in rebuilding their debt servicing capacity. The strategies that Laos uses to resolve its sovereign debt situation, and the responses from key external actors, including the multilateral banks, the International Monetary Fund (IMF), private bondholders, China, and other bilateral donors and creditors,

[1]Per capita GDP (constant 2010 US$) – Lao PDR: https://data.worldbank.org/indicator/NY.GDP.PCAP.KD?end=2019%26;locations=LA%26;start=1984%26;view=chart. All dollar figures in this article are in US$.

could also have implications for other countries in similar credit crunch situations. We close by offering targeted recommendations for how Laos could improve regulation in the strategic hydropower sector, and navigate a route out of its river of debt.

2 | LAO SOVEREIGN DEBT AND THE COVID EFFECT

Even before the onset of COVID-19, in 2017 the World Bank and IMF (2019) identified Laos as at a high risk of debt distress, through the Low-Income Country Debt Sustainability Framework.[2] While the accumulation of sovereign debt in itself is not necessarily a problem, Laos' position as a small, emerging economy places the country at heightened risk of distress. Funding for resource projects has produced mismatches between the short-term maturity of debt obligations and the longer-term mobilisation of state revenue. The foreign currency denomination of much of the debt, which exceeds Laos' foreign exchange reserves, is now at risk of producing a reinforcing financial (banking and liquidity) crunch.

By 2019, according to the World Bank (2020c, p. 93), Laos' total external debt stood at $16.9 billion, of which $10.3 billion was public and publicly guaranteed (PPG) debt, corresponding to 88% and 54% of GDP, respectively.[3] While these levels of debt to GDP are not in themselves exceptionally high, in their initial sovereign rating of Laos, Fitch Ratings (2020a) noted the risks of possible additional 'contingent liabilities', estimated at up to 30% of GDP, from public-private partnerships (PPPs). These PPPs are concentrated in hydropower and the Lao-China Railway project. The liabilities of Laos' state-owned utility Électricité du Laos (EDL), estimated at up to $8 billion or about 41% of GDP in 2020, have come under specific scrutiny (AMRO, 2020; Reed, 2020). Particularly concerning has been Laos' ratio of external debt to exports, indicative of an ability to generate foreign exchange for foreign denominated debt repayments, which reached a sharply elevated level of 328% in 2016, by far the highest in ASEAN (FT Confidential Research, 2018).[4]

In terms of the composition of creditors, in mid-2020 China accounted for nearly half (47%) of Laos' total external public debt, with the remainder consisting of multilateral concessionary loans (split between the Asian Development Bank and the World Bank, 17%), 17% through the commercial bond market, ex-China bilateral loans (11%) and other non-concessional loans (8%) (World Bank, 2020d, p. 26). About 50% of Laos' debt is in foreign currencies, largely Thai baht and US dollars (World Bank, 2020d). Importantly, the January 2021 Lao Economic Monitor (World Bank, 2021, p. 38) identified expensive non-concessional commercial loans and commercial bonds as a key source of Laos' immediate debt stress in 2020, although it is not made clear if CDB loans are included in that category.

The GoL also has domestic creditors, especially state-linked construction companies that have been awarded contracts for roads and large government buildings. The Vientiane Times (2020b) indicated that, as of the end of 2019, 10.14 trillion Lao kip (approximately $1.07 billion) was outstanding on these domestic debts, with interest potentially accumulating. Investigations by the GoL's State Audit Organization on overpayment and corruption in these deals are ongoing

[2]The IMF (2017) increased Laos' risk of debt distress from moderate to high in 2017.

[3]Despite initially being eligible, Laos declined to join the Highly Indebted Poor Countries (HIPC) Initiative, established by the IMF in 1996. By late 2010 Laos was considered as no longer eligible (International Development Association & International Monetary Fund, 2011, p. 34).

[4]In comparison, in 2016 the next highest in Southeast Asia was Indonesia, at 184% (FT Confidential Research, 2018).

(Vientiane Times, 2020a), with some of the liabilities transferred to Lao commercial banks under a 'triangle-debt-diversion disbursement initiative' (Vientiane Times, 2019).

While the Lao population has avoided high COVID infection rates, with just 44 confirmed cases and no deaths as at January 2021,[5] the broader crisis has accelerated Laos' slide into debt distress. The GoL moved swiftly on 30 March 2020, implementing a month-long national COVID-19 lockdown, and a 20-day national closure of industrial plants and SEZ factories. A drastic fall in tourism revenue, disruption to supply chains, and a loss of up to $100 million in remittances from workers forced to return from Thailand (World Bank, 2021, p. 25), have added to the financial hit of the pandemic. Fitch Ratings (2020b) identifies that Lao government revenues are set to decline by a quarter in 2020, with the ratio of PPG to government revenue set to hit 590% in 2020, while debt repayments are forecasted to account for a startling 55% of annual domestic revenue on average between 2020 and 2023 (World Bank, 2020d, pp. 4–5). This will squeeze state budgets, and reduce scope for COVID relief.[6] According to the Jubilee Debt Campaign (2020), in 2019, the GoL spent more than five times of its budget on debt servicing (27.9%) than on public health (4.9%)—the seventh highest divergence in the world, and a gap that will only have widened.

As fiscal pressure on Laos was building, in May and June 2020 Fitch and Moody's, respectively, issued sovereign credit downgrade warnings. The crunches arrived in mid-August 2020, with Moody's downgrading the GoL's sovereign issuer rating from B3 to 'Caa2', the last rating before debt default, with a negative outlook. Fitch followed suit in mid-September 2020, lowering Laos' Long-Term Foreign-Currency Issuer Default Rating (IDR) to 'CCC', again the lowest rung on their ratings ladder before default. Over 2019–2021, the Lao kip has depreciated by 6.2% to the US dollar and by 15.6% to the Thai baht, introducing exchange rate pressure on foreign denominated debt servicing.

For the GoL, the immediate pressure is with upcoming, short-term debt servicing obligations. The government reportedly needed to make $1.2 billion in external debt repayments in 2020. The GoL will then repay an average of $1.1 billion annually to its international creditors each year between 2021 and 2025, with total foreign exchange reserves currently hovering at a similar level (Fitch Ratings, 2020b). Included in Laos' 2021 debt repayment schedule are international bonds listed in Thai baht worth $165 million, and $150 million in US dollar denominated bonds issued at 6.875% interest due July 2021 (Oppenheimer & Co, 2019). In a statement from August 2020, Moody's (2020) rating agency identified uncertainties with Laos' financing strategy, a lack of transparency in the GoL's negotiations with bilateral creditors (of which China is the largest), and the likelihood of slower growth in the coming years. High ESG (Environmental, Social and Governance) risk, a catch-all category that includes everything from corruption and rule of law, to natural disasters and climate change (which can affect hydropower generation), add to the negative sentiment (Moody's, 2020).

3 | FOCUS ON LAO INFRASTRUCTURE

In discussions of Laos' debt situation, significant attention has been paid to the Lao-China Railway project, financed through China's Exim Bank under the umbrella of the BRI. The

[5]See https://covid19.who.int/region/wpro/country/la.

[6]To compare, the IMF's indicative threshold for debt servicing as a per cent of revenue in low-income countries is 23% (IMF, 2020a).

railway will run north from the capital Vientiane to the Chinese border, linking up with a railway to Kunming, and south from the capital to Bangkok in neighbouring Thailand. Construction on the $5.9 billion railway project is on target and set for completion by the end of 2021. Although the GoL's financial picture is not currently being helped by this megaproject, Laos' joint venture share is just $715 million, leveraged through a $465 million concessionary loan from China's Exim Bank. The GoL's direct equity contribution is thus a more manageable $250 million, spread over five years, resulting in a 30% share in the Lao-China Railway joint venture company (World Bank, 2020b). While the GoL is optimistic for this railway to serve as an export and trans-shipment gateway between the Mekong region and China, there is also a high probability that the railway will be unprofitable for the coming years (Lane, 2020). On the Thai side, the connection from Bangkok to Nakhon Ratchasima in northeast Thailand will not be completed until at least 2026 (Kishimoto, 2020), which means the completed connection of higher-speed rail to the Lao border may be a decade away. Future operating losses could place even greater pressure on GoL revenues. In addition, there have been other major infrastructure projects that have been formally linked to the BRI in Laos, including the $2.7 billion Nam Ou hydroelectric scheme managed by the Power Construction Corporation of China (Power China, 2016), and the Nam Tha 1 dam, a smaller hydroelectric project near the Lao-China border developed through China Southern Power Grid Company (China Southern Power Grid [CSG], 2019).

More central than the railway to Laos' current debt distress is the energy sector. As indicated, the liabilities of the state-owned EDL may be as high as $8 billion, and EDL's debt servicing obligations are only set to increase, from $400 million in 2020 up to $800 million in 2023, before slowly declining (AMRO, 2020). The forecasted decline of EDL's debt obligations is based on the idea that the concession period for a number of the country's Build-Operate-Transfer (BOT) Independent Power Producer (IPP) investors will draw to a close, with the GoL enjoying increased revenue streams from full ownership of the dams thereafter. However, in our analysis only two IPP projects are set to be transferred to the full ownership of the GoL in the coming years: the 1998 Theun-Hinboun Hydropower Project (THHP) in central Laos, and the 1999 Huay Ho dam in southern Laos, following the close of their 30-year concession periods. In the case of THHP, government royalties from electricity sales would then increase from around $25 million per year up to $45 million; a welcome addition, but insufficient to truly address the overall problem of EDL debt. The pressure on EDL's debt servicing over the coming years could also be affected by any new investments the utility makes in hydropower and transmission projects, and require successful resolution of domestic oversupply problems that are currently plaguing the utility.

Founded in 1961 under the Royal Lao Government, EDL is a state-owned enterprise with a mandate to own and operate electricity generation, transmission and distribution facilities (Barma & Oksen, 2014). Prior to the creation of EDL Transmission Company in late 2020 (see below), it held a monopoly over domestic energy transmission and distribution in Laos. EDL participates in electricity projects through different modalities: as a minority partner in foreign-backed IPP projects targeting the domestic or export markets, or as a sole owner-investor. At times the investments have been in collaboration with its publicly listed investing arm: EDL-Generation Public Company (EDL-GEN, listed on the Lao Securities Exchange in 2011). In the state bureaucracy, EDL is located under the Ministry of Energy and Mines but the Ministry of Finance also plays a key role, including on debt financing issues. Unlike for the publicly listed EDL-GEN, there is no independent financial auditor of EDL. Rather, internal, non-disclosed reviews are conducted by Laos' State Audit Organization and the Ministry of Finance. The Chair of the Board of Directors for EDL is appointed by the Minister of Finance.

How exactly EDL found itself in such a precarious financial situation is a complex story. In a recent Lao power sector master plan study, the Japan International Cooperation Agency (JICA, 2020, p. 7) frames EDL's financial status as 'not good and contin[uing] to deteriorate', noting 'EDL currently continues to invest via borrowings [sic] with business & financial structures which cannot generate cash flow from operating activities, and it continues to be caught in a vicious cycle financially'. AMRO (2020, p. 49) points to a scenario of 'overly optimistic domestic electricity demand projections' leading to an oversupply of electricity in the domestic market. Reduced operating performance caused by Mekong regional droughts have not helped revenue generation in the past few years, nor have the low domestic tariff rates which subsidise the agricultural and residential sectors (Asian Development Bank [ADB], 2019, p. 55). Nor has the wide gap between the price of wet season exports of electricity versus dry season imports from Thailand (Vientiane Times, 2020d). The World Bank (2020d, p. 28) homes in on 'rapid investments in transmission lines and power projects' as a key source of overcapacity and indebtedness, and the ADB (2019, p. 58) outlines a concerning picture whereby: 'Little analysis on the actual export demand … seems to have been undertaken, nor is there a cost-benefit analysis of exports given the small tax and royalty gains and the high cost of investment in both power and transmission infrastructure'. The ADB (2019, p. 57), World Bank (2020d) and AMRO (2020) note that EDL agreed to 'take-or-pay' contracts with numerous domestic-focused IPP projects, which meant that the state utility would shoulder most of the financial risk if demand for that energy did not materialise—which indeed it has not. JICA (2020, pp. 4–7) also points to a 'large amount of surplus power from hydropower plants in the Laos north-central system', extending up to 2030.

This reference to northern Laos is important as it points towards Power China's 1272 megawatt (MW) $2.7 billion Nam Ou River Cascade, constructed by Sinohydro, and financed by the China Development Bank under the auspices of the BRI. This series of seven dams blocks and segments the (formerly) majestic Ou River, the cultural and geographical lifeblood of northern Laos. The Nam Ou Cascade is separated from the key domestic demand centre in the Vientiane Capital region by distance and mountain ranges. Notably, in 2020 the Minister of Energy and Mines confirmed that part of the economic justification for the Nam Ou Cascade was to supply electricity to the Lao-China Railway (Radio Free Asia [RFA], 2020a), highlighting the functional integration of megaprojects being developed across different sectors.[7] The delay in the completion of the railway from the first Memorandum of Understanding of 2010, and the uncompleted domestic transmission grid, has constrained options to reallocate excess capacity in northern Laos. This has required EDL to reduce capacity utilisation on some of its own new, fully state-owned dam facilities, such as the two Nam Khan dams in Luang Phrabang Province (190 MW capacity), and to continue purchasing power from the Nam Ou Phase 1 dams (630 MW capacity), in an effort to limit the impact of breaking the latter's take-or-pay contract with PowerChina.[8] The Deputy Minister of Energy and Mines alluded to this situation recently, remarking: 'Some large hydropower plants could

[7]Japan International Cooperation Agency (2020, p. 5-4) provides a chart indicating that there have been significant discrepancies in forecasted versus actually realised electricity demand from planned major projects across Laos that had not come to fruition. Just for 2016, the discrepancy totalled 127 MW, with missing demand from delayed construction of the Lao-China Railway accounting for 27 MW of this total. Japan International Cooperation Agency (2020, p. 5-4) notes: "it is clear that EDL experienced challenges not only in long term forecasting but also in short term forecasting, such as one year-forecasting."

[8]Even with this move, EDL was still required to purchase the excess output of the Nam Ou dams, even though the water was simply being released downstream.

not run at full capacity due to limited transmission capacity. We just release water downstream wastefully' (Xinhua, 2020).

A second issue which appears to have landed EDL into debt distress relates to its participation in Engineering Procurement Construction (EPC) contracts, or so-called 'turnkey' construction contracts. EDL and EDL-GEN borrowed large sums in external loans for building dams and transmission lines. Chinese banks have financed all of Laos' fully state-owned dams since 2005, starting with the Nam Mang 3 project, almost all through China Exim Bank, but with CDB funding the Nam Ou Cascade (see Tables A1 and A2). Under such EPC contracts, Chinese bilateral loans were typically recycled back into Chinese engineering and construction companies, including Sinohydro, CGGC (China Gezhouba Group Company), Sinomach (China National Machinery Industry Corporation Ltd) and CHMC (China National Heavy Machinery Corporation). To provide an indication of their value, one such EPC contract, involving the China Exim-financed Nam Ngum 4 Hydropower Project in 2015 (see The Nation, 2016), involved a design-build and turnkey agreement of $706 million. The construction companies would then make their profits before the handover of the project (the 'turnkey'). This mechanism appears to have provided scope for inflated cost structures and rent-seeking, particularly for Lao state-owned dam development and transmission line construction projects (see ADB, 2019, pp. 57–58).[9]

In response to this situation, in the lead up to the critical January 2021 Party Congress, the GoL and EDL have taken a number of key steps towards restructuring the nation's energy sector. **The first move** came in mid-September 2020, and involved spinning off ownership of the nation's domestic electricity transmission grid out of EDL, creating a new entity called Électricité du Laos Transmission Company Limited (EDL-T). CSG then took a majority share (reportedly 90%) in EDL-T, with its first core objective to complete the national transmission grid for Laos (Zhai & Johnson, 2020). This could facilitate improved cross-border interconnection with neighbouring countries in support of broader Greater Mekong Subregion (GMS) energy interconnectivity (JICA, 2020; Ricardo Energy and Environment, 2019).

For decision makers, selling EDL-T to CSG may have been one of the better options in a difficult predicament. EDL (2020) has maintained that the sale does not represent a loss of sovereignty; that CSG is a large and professionally-run utility with deep pockets; and that the completion of the domestic grid through the CSG investment could allow for more efficient and profitable distribution of energy production within the country, while also placing both EDL and EDL-T in a stronger position to bargain with external electricity off-takers. There is poor transparency around the deal however; for example, it is not clear how much CSG paid for their 90% stake in EDL-T, or to what extent this has resulted in a lower debt load for the GoL. JICA (2020, pp. 3–4) outlines how CSG could recoup their investment through the future profits of EDL-T.[10]

[9]Article 52 of the revised 2017 Lao Electricity Law does not require competitive bidding for 'strategic' EDL projects. Sinohydro has received most of the EPC contracts for sole-owned EDL dam projects, with CSG handling most of the EPCs in the domestic transmission network.

[10]After 2030, as the GoL takes full control over an increasing number of BOT projects coming to the end of their concession periods, the profits for CSG could be much more significant. CSG could also benefit by routing excess hydroelectricity capacity from Yunnan Province in China through Laos and onwards to other Greater Mekong Subregion countries. Yet, as a Chinese state-linked firm, CSG's control over the Lao energy grid could produce regulatory or security concerns among regional energy importers such as Thailand and Vietnam (see Japan International Cooperation Agency, 2020, p. 0-4).

Here, the question arises as to why EDL did not complete the national power grid earlier, indeed as a matter of some urgency. First, the estimated cost for completing such a grid is about \$2 billion (Vientiane Times, 2020c), which has been beyond the direct financial capacity of EDL. Second, recall that Laos has largely built its hydraulic empire through arrangements with regional and global financial institutions organised into IPP projects. The IPP model provided a key strategic pathway for Laos—it allowed the government to develop major resource infrastructure projects with low domestic financing capacity (Wyatt, 2004), and facilitated the spread of investor risk across large consortia, even as it shifted social and environmental risks onto local communities (Middleton et al., 2015). Under the export-based IPP model, private investors such as those investing in the country's flagship Theun-Hinboun and Nam Theun 2 projects were responsible for the development of both the dams and the transmission lines, which mostly head across the Mekong River to Thailand. This allowed private investors to control their own cost and profit structures, in the process creating an 'enclave' style electricity sector, with a heavy focus on exports, that did not support an integrated domestic production and distribution system.[11] As Souvannaseng (2019, p. 20) has argued, given the GoL's limited capacity, especially in the 1990s and 2000s, to finance their own energy investments, and the decline of a post-World War II Bretton Woods development model that provided direct subsidised financing to state utilities to drive national development, such were the choices and trade-offs that the GoL faced as a 'very late' developing country. However, there is a distinction between using the IPP model for export-led revenue generation and its use for projects ostensibly aimed at the far smaller domestic energy market. Much of the debt overhang in the Lao energy sector is associated with IPP dams and transmission lines aimed at domestic supply. Such projects, both Chinese-backed IPP dams and (solely) EDL-owned projects, are mostly funded by Chinese banks (see Tables A1 and A2).

A second key move came on 12 October 2020 when, again in response to debt pressures, EDL sold off 24% of its interests in EDL-GEN, its publicly listed investing arm that comprises more than half of the value of the Lao Securities Exchange. Up to this point, EDL owned 75% of the shares in EDL-GEN, so this sale reduces its stake in the company to about 51%—still a majority interest. The purchaser of the shares in EDL-GEN was Phongsubthavi Group, a domestic firm that has played an increasing role in the energy sector as a construction contractor. The value of the sale corresponds to about \$160 million (RFA, 2020b), which could be helpful for the GoL in meeting upcoming bond payment obligations, but would not address EDL's overall debt load of \$8 billion. The sale of this portion of EDL's interests in EDL-GEN also means that a reduced share of future profits will flow into government coffers. This can also be seen as another least-worst decision by the GoL in the face of a difficult situation. EDL still maintains a majority share in EDL-GEN, which at least means that the GoL has not completely sold off a 'strategic' crown jewel of its state-owned enterprise sector.

The GoL may also make a **third move**, involving a potential sale of EDL's equity stake in the major Nam Ngum 3 (NN3) hydropower project in Xaysomboun Province, set for commissioning in 2021–2022. In 2013 EDL assumed full ownership of the 480 MW project, facilitated through a \$1.29 billion loan from China's Exim Bank. When commissioned, NN3 would be EDL's largest wholly owned and operated hydropower facility. However, there have been unconfirmed reports that the NN3 facility could be sold to new investors, with EGATi—the

[11]Some existing export-oriented IPP projects transmit 5% or more of their power production for domestic supply, at the project owners' cost. However, this is aimed at supplying the local area of the projects, not the regional or national grid system.

international investing arm of the state-owned Electricity Generating Authority of Thailand[12]—and another Lao domestic construction firm active in the hydropower sector—Chaleun Sekong Group—mentioned as buyers.

Despite this, the overall dilemma remains. Laos has now joined a number of other developing countries, including Zambia and Angola, who have overextended themselves on loans from Chinese banks. To be sure, the roots of the problem both precede, and are in addition to, the BRI and the COVID-19 crisis, and also relate to other commercial lenders. However, the cumulative result for the GoL has been higher debt loads, credit downgrades, higher borrowing costs and material risk of sovereign loan default. The worst-case scenario is a continued debt spiral, through currency and inflation channels, leading to slower growth and further increases in the cost of debt servicing. The issues must be addressed because, as one analyst forthrightly stated, even with global interest rates at an all-time low, 'at some point, the budgetary constraints become such that governments can't meet both their expenditures and interest payments ... If debt continues to balloon at such a pace, it becomes unsustainable' (Wheatley, 2020). For Laos, it is not yet clear where the crisis point lies, and how far these recent policy moves might stave off the risk of a sovereign debt default, or whether the Chinese banks, for example, are offering further support or a deferral of debt repayments.

4 | LAOS' OPTIONS FOR DEBT SERVICING AND RESTRUCTURING

This leads us to examine the responses of the international community to the debt crisis affecting Laos and some other developing countries. The GoL has a number of options to try to reschedule and/or restructure their debt. These include, but are not limited to:

1. Further private borrowing through Thai or international bond markets (Thai Baht or US dollar denominated).
2. Multilateral and bilateral COVID-19 support programs.
3. Participating in the IMF through its Rapid Credit Facility.
4. Participation in the G20 Debt Service Suspension Initiative.
5. Participation in the Chiang Mai Initiative Multilateralisation.
6. Accessing ADB COVID-19 Active Response and Expenditure Support, via the Counter-Cyclical Support Facility.
7. Direct negotiations with China as the major bilateral creditor (including a China-Laos currency swap arrangement).

The remaining part of this section will expand on this list in sequence, to better understand Laos' options for further debt servicing and restructuring.

First, with Laos' sovereign ratings just a step above default, further international demand for Lao sovereign debt may be limited, and new bond issuances may go undersubscribed. In late January 2021, the GoL issued a high-yield, 5-year US-denominated bond of $350 million, reportedly in the price range of 10%, again through Oppenheimer & Co (Stanton, 2021). Given the loose monetary policies of central banks in the United States and European Union, and the

[12]See https://www.egati.co.th/namngum3?lang=en.

amount of global capital currently seeking any sort of yield (Hudson & Hale, 2020), this bond offering, if successfully subscribed, could assist the GoL's immediate financial stress, although the core of the problem may just be delayed, and the interest rate is punishing. There is some additional potential to raise funding through domestic bond issuances which have the benefit of being denominated in Lao kip; however, that market is reported as limited (Laos Securities Exchange, 2020).

Second, there are multilateral and bilateral COVID-19 support programs, largely through the ADB and World Bank. According to the ADB's COVID-19 Policy Database,[13] as of November 2020 Laos has received $22.9 million from the ADB, $18 million from the World Bank, $26.79 million through bilateral aid and $1 million from the United Nations since the onset of the coronavirus pandemic. Notably, this development support also holds the potential to free up resources that the GoL could use to meet short-term debt repayments.

A third option for Laos is to access the Rapid Credit Facility (RCF) of the IMF. Here, Laos could access Special Drawing Rights (SDR) 105.5, which translates into $148 million (International Monetary Fund [IMF], 2020b). For Laos to access further funding through this channel would require the government to enter into a fully-fledged IMF debt restructuring program, which would necessitate greater budget transparency (IMF & World Bank, 2019). Moreover, the IMF RCF is usually reserved for countries facing a temporary economic shock, and while COVID-19 certainly fits that bill, the IMF may also consider the recent non-COVID-related run-up in Laos' external debt, the deterioration in their exchange rate, and governance issues including corruption, before approving such a move. The GoL may also have its own reservations about entering into an IMF package, given the controversial history of the IMF during the 1997–98 Asian Economic Crisis across the Southeast Asian region.

A fourth move would be to access funding support through the G20 Debt Service Suspension Initiative (DSSI). Laos has so far chosen not to participate in this, despite the risk of debt default and the chance to directly save $315 million in debt servicing costs (World Bank, 2020a). Some countries have shown caution with participating in the DSSI, based on the possibility that this could result in a credit downgrade, affecting their ability to access non-concessional private finance in the future,[14] although others argue that 'the debtors should not have allowed themselves to be intimidated' by the credit rating agencies on this issue (Kaiser & Kopper, 2020). The G20 DSSI is also situated in the ongoing geopolitical competition between the United States and China, which is playing out in part over questions of whether Chinese loans secured through their large state-owned, government-controlled financial institutions (specifically the CDB) should be considered as commercial loans (as China prefers) or as public loans. World Bank President David Malpass has argued that the CDB would need to take part as an official bilateral lender for the G20 DSSI to increase the level of support (Nyabiage, 2020b). In effect the US-dominated World Bank is indicating concern over providing a subsidy for developing countries to make debt repayments to the CDB. In the meantime, Laos has not indicated any move towards participation in the G20 DSSI emergency response initiative.

The next option for Laos is the Chiang Mai Initiative Multilateralisation (CMIM), a $240 billion pool of funds established by the ASEAN governments plus China, Japan and South Korea, expressly designed to provide liquidity support (through currency swap arrangements)

[13]Available at https://covid19policy.adb.org/policy-measures/LAO.

[14]That said, so would a debt default; see Nyabiage (2020a). In addition, a country that signs up to the G20 DSSI may find themselves in breach of Eurobond contracts, of which Laos has $150 million (Olander, 2020a).

during a financial crisis, for the benefit of its membership.[15] The CMIM was initially established as a regional bulwark against what was considered as undue IMF influence and mistakes made during the Asian Financial Crisis, with some referring to it as an 'Asian IMF'. Here again, however, the details appear to work against the mobilisation of this fund, which could otherwise easily deal with Laos' (relatively minor) liquidity issues. In September 2020, the CMIM increased the amount of the swap account quota that members can access from 30% to 40% without becoming subject to IMF conditions. Since Laos originally contributed $60 million into the CMIM fund, and the withdrawal multiplier is 5, that would indicate Laos could access a maximum of $300 million under IMF-type conditions, or $120 million (i.e., 40% of $300 million) if Laos wished to avoid IMF conditions. Any extension of the CMIM current swap line would be subject to broader membership approval, with Laos holding a small voting share. The amount of support available would thus not address the overall debt situation, and historically the GoL shows caution on covenants, such as the IMF would require, that would entail regulatory and institutional reforms such as improved budget transparency: 'the party leadership avoids reforms it believes might undermine its own political interests … reforms promoted by international donors, such as those aimed at strengthening the rule of law, environmental management, or civil society, can often be left only partially implemented for fear they might weaken the party, its development strategy, or the political position of powerful individuals' (Bertelsmann Stiftung, 2020, p. 28).

A sixth path for Laos is to engage with the ADB's Counter-Cyclical Support Facility (CSF) and the COVID-19 Active Response and Expenditure Support Program, which is a $3 billion fund established in 2009 in the aftermath of the Global Financial Crisis. A key policy document guiding the CSF, however, indicates that 'proper macroeconomic policy management is a prerequisite for CSF operations', with a definition provided of 'sound macroeconomic management' that Laos may struggle to meet (ADB, 2009, pp. 4–5). Laos' debt sustainability problems may present concerns for the ADB, as Laos has adopted a highly leveraged investment model to drive large BOT projects for revenue generation that will not be fully realised for years or decades into the future.

Then there is option 7: direct bilateral debt negotiations with China including a currency swap. There is a clear logic to this since much of Laos' sovereign debt is linked to EDL, and most of EDL's loans are from China and in yuan renminbi (RMB). This option has the benefit of low transparency requirements, which, as indicated above, is an ongoing focus for the Lao party state. According to the World Bank (2021, p. 40) the GoL is engaged in negotiations on debt re-profiling with China's Exim Bank, although few specifics were available at the time of writing. World Bank President David Malpass previously named Laos along with Angola as countries engaged in 'secretive reschedulings', with an implied reference towards China (Malpass, 2020; see also Nyabiage, 2020b). A Moody's (2020) Laos ratings statement from August also notes this lack of clarity:

> Uncertainty remains around the status of bilateral discussions surrounding recent and upcoming maturities. In general, the absence of a transparent financing strategy and opacity around how maturing debt obligations have and will continue to be met, raise uncertainty about the capacity for the government to secure financing in time and at affordable costs.

[15]During a financial crisis, currency swaps are useful because they allow a country under liquidity stress to access foreign exchange to service foreign denominated debt, without driving down their exchange rate.

The option could include a direct China-Laos currency swap, which would match well with the RMB-denominated debts to China. A currency swap denominated in any strong and stable currency would be helpful, as with further declines in the value of the Lao kip the pressing need would be for access to foreign exchange.[16] According to the World Bank (2021, p. 28), very recently the People's Bank of China extended a 6 billion RMB ($900 million) currency swap with the Bank of Laos with a 3-year maturity. However, the swap was extended on condition that the funds be used to facilitate imports of goods from China, as opposed to paying down Lao debt, and thus would not meet the definition of a 'reserve asset'.

Direct loan forgiveness from China is a related possibility, which could solidify Laos as a strategic ally of China (although see Vu, 2020, on Vietnam). However, given the extent of lending to developing countries under the BRI, Chinese financial institutions themselves could come under financial strain if this is offered to too many governments, and Beijing may also be wary of establishing a public precedent on debt renegotiations, if indeed any are occurring. Åslund and Otorbaev (2020) also note that Beijing lacks experience with managing numerous, complex and cascading sovereign defaults.

Laos' move in September 2020 to invite CSG into majority ownership of a nationally strategic state enterprise provides an indication of how the 'China option' is playing out in practice so far, that is through the privatisation and sale of state assets, possibly organised through debt-for-equity swaps. The GoL may feel more comfortable, and face less public pressure, in dealing with its socialist neighbour through debt-for-equity swap arrangements compared to other debt-distressed governments in Africa (Olander, 2020b). However, for Laos as well, news of the sale of EDL-T led some observers to use the language of a loss of sovereignty (Lintner, 2020), and the GoL and EDL appear sensitive to this charge (Électricité du Laos, 2020).

5 | CONCLUSION AND POLICY RECOMMENDATIONS FOR LAOS

While various scholars argue that the narratives of a Beijing-led 'debt trap' are misplaced (Jones & Hameiri, 2020), as this discussion has outlined, Laos is in danger of falling into a vicious debt cycle, and this is closely related to infrastructure lending from Chinese financial institutions. We have noted the propensity of Chinese financial institutions to facilitate hydropower overinvestment in Laos. When combined with strict contract provisions, this has subsequently forced the hand of EDL to sell off critical state infrastructure to a Chinese firm. Whether or not this was part of a BRI 'strategy' (see also Sims, 2020), the end result has been high debt loads, credit downgrades, and higher borrowing costs, which could easily lead into a currency-debt spiral. The people most impacted will be Laos' rural and urban poor, as the government faces reduced capacity to extend social protection programs.

It may be that by selling off some state assets, selling shares in state enterprises, cobbling together new concessional financing packages, and tightening up the governance of the hydropower sector, combined with a timely rebound from the COVID recession, and some strategic assistance from their neighbour to the north, Laos may be able to avoid a debt default. China may also be keen to avoid a messy Lao debt restructuring process that would add to narratives of 'debt-trap diplomacy'. A completed domestic grid could then address Laos' energy transmission bottleneck and allow for improved revenue collection, while the passing of the COVID-19

[16]Any currency swap arrangement with Japan would also benefit Laos.

crisis would provide a welcome boost to the national economy. New export-based hydropower plants are still coming online, and a string of planned investments along the route of the Lao-China Railway (Vientiane Times, 2020e), could possibly spur greater economic activity and generate cash flows to repay debts, although this is a medium- to longer-term prospect. Clearly, both the Lao and Chinese governments should have been paying much closer attention to Laos' debt servicing capacity, the number of energy projects that were being funded, and the potential of those investments to generate domestic revenues in a timely manner. In the meantime, the GoL has found itself swimming in a river of debt, and it's hard to eschew the conclusion that this was eminently avoidable.

The recent restructuring of EDL's business operations, through the invitation to CSG to take a 90% share in the new EDL-T company, and through selling off a significant portion of its equity stake in its subsidiary company EDL-GEN, helps to stabilise, but does not completely ameliorate, EDL's financial stress. These policy decisions were also made under a sharply narrowed range of options for the GoL. The fuller resolution of this crisis will now fall to the 11th Congress of the Lao People's Revolutionary Party, and the new Politburo and Central Committee, that will be formed in early 2021. In the medium to longer term, we argue that the GoL and its donor partners should consider a targeted set of additional strategic measures, that could help improve energy sector regulation, broaden its flexibility and resilience, and promote more equitable and sustainable future development.

First, the GoL should reconsider the current situation that provides significant operational autonomy for EDL, especially in terms of financial decision-making powers (see Barma & Oksen, 2014). Some have called for a fully independent energy regulator (ADB, 2019, p. 62). While potentially useful, this is unlikely to occur in the political context of Laos, where the party state seeks to retain full control over key institutions (Creak & Barney, 2018). It is also unlikely that EDL would be placed under a single Ministry. A more realistic scenario would be to require greater transparency in the hydraulic-energy infrastructure approval and project development process within EDL, especially in bidding and project cost design, and in adjudicating the economic risks and returns of proposed projects. Such transparency could be facilitated by the formation of an arm's length committee working with EDL, with membership drawn from key institutions such as the State Inspection Authority, the Central Bank of the Lao PDR, the National Assembly and, potentially, experts at the National University of Laos. To help improve regulatory transparency, the GoL could seek to increase the power of line agencies at provincial and district levels in monitoring the performance of EDL projects. The pressing need for such reforms is evidenced by the increasing oversupply of domestic power, and the reportedly high-cost of hydropower and transmission facilities undertaken by EDL as compared with IPP projects.

Second, given the state of current electricity oversupply, the GoL should suspend EDL's existing pipeline of EPC contracts (involving both hydropower dams and transmission infrastructure), to avoid incurring new debts. This should include placing a hold on several planned, environmentally-damaging coal-fired power plants, that simply add to overcapacity issues. Third, EDL and other stakeholders should seek solutions for the ongoing problem of existing domestic oversupply. This would involve exporting excess energy production from some domestic-oriented IPP projects to neighbouring countries through existing Memoranda of Understanding, which could be facilitated by the new, CSG-controlled, EDL-T company.

Clearly there are significant financial interests in play, and thus in Laos' politically centralised system, coordinated and effective action from the party state leadership would be required to make these reforms a reality.

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DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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APPENDIX A

TABLE A1 Fully owned EDL and EDL-GEN hydropower projects with installed capacity above 10 MW

Project name	Capacity (MW)	Year of commissioning	Funding source	Market[a]
Nam Khan 3	60	2016	China Exim Bank	Domestic
Nam Khan 2	130	2015	China Exim Bank	Domestic
Nam Chien	104	2018	China	Domestic
Nam Ngum 1	155	1971	Multiple countries	Domestic
Nam Mang 3	40	2005	China Exim Bank (80%) EDL (20%)	Domestic
Nam Leuk	60	2000	Asian Development Bank	Domestic
Nam Sana	14	2014	Not available	Domestic
Nam Ngum 1 (Expansion)	80	2018	China Exim Bank	Domestic
Xeset 3	23	2016	China Exim Bank	Domestic
Xeset 2	76	2009	China Exim Bank	Domestic
Xeset 1	45	1991	Asian Development Bank	Domestic
Houay Lamphan	88	2015	China	Domestic
Total	875 MW			

Abbreviations: China Exim Bank, China Export-Import Bank; EDL, Électricité du Laos; MW, megawatt.
[a]EDL *Power Development Plan* 2018–2030 (see Électricité du Laos, 2019).
Source: Author compilation.

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TABLE A2 List of current Chinese-funded hydropower projects in Laos

Project name	Current status	Capacity (MW)	Year of completion	Cost (million US$)	Lender/financier	Market[a]
Nam Khan 2	Operational	130	2016	308	China Exim Bank	Domestic
Nam Khan 3	Operational	60	2017	127	China Exim Bank	Domestic
Nam Lik 1–2	Operational	100	2010	150	China Exim Bank	Domestic
Nam Mang 3	Operational	40	2005	63	China Exim Bank (80%) EDL (20%)	Domestic
Nam Ngiep 2	Operational	130	2015	345	CDB	Domestic
Nam Ngum Extension Phase 1	Operational	80	2017	200	China Exim Bank	Domestic
Nam Ngum 3	Under construction	480	2020	1200	China Exim Bank	Not confirmed
Nam Ngum 4	Planned	240	2023	700	China Exim Bank	Domestic
Nam Ngum 5	Operational	120	2012	200	China Exim Bank	Domestic
Nam Ou 1	Under construction	180	2020	2800	CDB	Domestic
Nam Ou 2	Operational	120	2016	660	CDB	Domestic
Nam Ou 3	Under construction	210	2020		CDB	Domestic
Nam Ou 4	Under construction	132	2020		CDB	Domestic
Nam Ou 5	Operational	240	2016		CDB	Domestic
Nam Ou 6	Operational	180	2016		CDB	Domestic
Nam Ou 7	Under construction	210	2020		CDB	Domestic
Nam Phay	Operational	86	2018	218	China Exim Bank	Domestic
Nam Tha 1	Operational	168	2019	340	China	Domestic

(Continues)

TABLE A2 (Continued)

Project name	Current status	Capacity (MW)	Year of completion	Cost (million US$)	Lender/financier	Market[a]
Nam Theun 1	Under construction	670			China	Domestic and export
Pak Lay	Planned	770	2029		China Exim Bank	Not confirmed
Xe Lanong 1	Planned	60	2020		Yunnan Energy Investment Group	Domestic
Xeset 2	Operational	76	2009	135	China Exim Bank	Domestic
Xeset 3	Operational	23	2016	50	China Exim Bank	Domestic

Abbreviations: CDB, China Development Bank; China Exim Bank, China Export-Import Bank; EDL, Électricité du Laos; MW, megawatt.

[a]EDL *Power Development Plan* 2018–2030 (see Électricité du Laos, 2019).

Source: Stimson Centre (2020).