

Financing Options for the Ugandan National Oil Company

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INTRODUCTION

The government of Uganda incorporated its national oil company (NOC) on 12 June 2015. Its board was nominated and approved by parliament last year. In parallel, the Petroleum Authority, the regulatory agency for the oil and gas sector, has recently been formed; its board has been approved by parliament. The NOC is expected to play a key role in the oil and gas sector, managing the state's interest in upstream and downstream ventures. We understand that debates relating to the financing of the NOC are ongoing.

Funding a new NOC is a form of public investment—the government chooses to dedicate budget allocation or a specific share of oil revenues to the development and operation of its national company, rather than to finance other government projects. In many countries, building an effective and empowered NOC has proven to be an important component of successful oil sector strategy. However, the tradeoffs inherent in carving out a fiscal space for a company make it important to define and assess the NOC's objectives carefully in light of alternative use of public funds.

In this briefing note, we offer different options for the financing of the newly created NOC. Based on the Natural Resource Governance Institute (NRGI)'s international experience and research on national oil companies and our understanding of the Ugandan context, this briefing note is an effort to help frame the main tradeoffs and assess several options for financing the NOC in Uganda.

We acknowledge that our understanding of the specific objectives and challenges of the government of Uganda in setting up a NOC is limited. We would therefore welcome an opportunity for further discussions with officials from the Directorate for Petroleum Exploration and Production (formerly PEPD) of the Ministry of Energy and Minerals (MEM), the Ministry of Finance, Planning and Economic Development (MFPED) and the NOC to discuss any additional resources or international examples that might be of value as Uganda seeks to develop resilient and accountable institutions to manage the oil sector in the best interest of its people.

We understand from the National Oil and Gas Policy and public government communications that the NOC is expected to professionally manage all aspects of state participation in the sector and act as a center of expertise for the government. It is also expected to play a strong role as a minority equity partner in the USD 4.3 billion Hoima refinery project and potentially in a USD 4 billion export pipeline. On that basis and using 12 other NOCs as benchmarks, we discuss several models to ensure adequate

financing for the NOC to achieve its objectives, which we present in more detail in this briefing:

- 1 All revenues to the consolidated fund, with annual budgeting for NOC
- 2 All revenues to the consolidated fund, with multiyear budgeting for NOC
- 3 A formula-based model, with a cap
- 4 A fixed formula-based model

Different funding models could work for the NOC in Uganda. Option 1 may be somewhat too constraining, but Option 2 has more flexibility while preserving a strong oversight by parliament, which might be more concerned by the risks of revenue leakage at this stage of development of the sector. Option 3 provides a funding limit that, if well-defined, could reflect precisely how much revenue the government is willing to invest in its NOC. Option 4 provides additional market-based incentives and less control, which can lead to more efficiency if the NOC is ready to operate with more independence. Under all options, strong audit and reporting processes should be required, as well as parliamentary oversight.

The options presented above and discussed in this memorandum can be modified and adapted as needed to fit Uganda's needs and policies. NRCI would be happy to provide additional inputs and discuss these options with members of parliament and/or representatives of the government.

I. BALANCING THE NEEDS OF THE NOC WITH OTHER NATIONAL DEVELOPMENT NEEDS

Funding a NOC in an emerging oil producing context usually means striking a balance between providing the NOC with resources that will allow it to successfully execute its strategy and the use of those resources to meet other governmental needs. In a context of limited fiscal space, investment decisions should be made in a manner consistent with the objectives of the state as an investor, as revenue retained by the NOC can represent a cost in the form of foregone education, health, agricultural, infrastructure and other investment expenditures. It is therefore important for changes to the objectives and priorities of public investments to be clearly articulated and have broad-based support from the country's various stakeholders.

As a first general recommendation, therefore, when choosing a financing model for the NOC, Uganda might want to consider whether the benefits attached to a certain level of NOC funding or revenue retention are worth the loss of revenues to support other governmental activity incurred. Or, put another way, whether funding the NOC to perform certain tasks and achieve certain objectives is a worthwhile investment for the state.

The second general consideration is that financing should depend on the country's expectations from its NOC. Depending on many factors—including the size of the resource base, the expected duration of oil exploration and production, the foreign investment policy and domestic capacity in the public and private sectors—a more or less expansive role can be assigned to the NOC. Determining financing options for the NOC should take into account the roles it has been assigned. Management tools such as Real Options Valuation exist that could be applied to such public investment decisions under uncertainty and limited resources, allowing for different scenarios to be modeled and comparing the relative values of different outcomes and their multiplier effects, risked

appropriately. Uganda can also refer to the Chatham House Emerging Producers guideline for recommendations on key decisions around the institutional role of the NOC.¹

II. THE EXPECTED ROLE OF THE NOC IN UGANDA

Our understanding of the roles assigned to the NOC and the government's expectations from it are limited to public positions and official documents, including the National Oil and Gas Policy (2008) and the Petroleum Bill (2012). Based on these and other public information sources described below, we assume a certain level of financing required for the NOC. We would be happy to have follow-up discussions with government officials and members of parliament to refine our description of the environment the NOC should thrive in.

According to the petroleum bill and in line with the National Oil and Gas Policy, the NOC in Uganda “*shall be wholly owned by the state to manage Uganda’s commercial aspects of petroleum activities and the participating interests of the state in the petroleum agreements.*” Its particular functions will be:

- (a) to handle the state’s commercial interests in the petroleum subsector
- (b) to manage state participation in petroleum activities
- (c) to manage the marketing of the country’s share of petroleum received in kind
- (d) to manage the business aspects of state participation
- (e) to develop in depth expertise in the oil and gas industry
- (f) to optimize value to its shareholders
- (g) to participate in accordance with the terms of the petroleum agreement, in joint ventures in which it holds an interest on behalf of the state
- (h) to participate in meetings of the operating committees in furtherance of its participation in the respective joint operating agreements
- (i) to investigate and propose new upstream, midstream and downstream ventures initially locally, but later internationally.

Functions **b**, **d** and **g** are linked to the management of the state’s interests in petroleum activities. We understand that the state participation that will be managed by the NOC is in the order of 15 percent to 20 percent in existing (signed) production sharing agreements (PSAs), as indicated by terms and PSAs that have been disclosed or otherwise become public. The participation will be carried through development to production, with interest, which means that international oil companies (IOCs) will initially pay for the expenses associated with the state’s shares and will be reimbursed through cost recovery. This means that the NOC will not have to pay anything until production begins, but that when production does begin the profit it would otherwise receive will be reduced through higher cost recovery to reimburse costs incurred on its behalf. Estimates are still very uncertain, but, for instance, a realistic figure of USD 8

¹ Being a member of the group, the Ugandan government has contributed to these guidelines and their adaptation to new producers’ contexts. See: https://www.chathamhouse.org/sites/files/chathamhouse/field/field_document/20150624GuidelinesGoodGovernanceMarcel.pdf

billion of capital expenditure on field development would lead to the USD 1.2 to USD 1.6 billion state participation being carried by IOCs in the development stages. This would be recovered, with interest, through deductions from future state profit from oil income.

When production starts, the NOC would be liable for the operating costs in proportion of its share. For example, if operating costs amount to \$20 per barrel on average and state participation in oil projects is 15 percent, the share of operating costs to be paid by the NOC would amount to USD 66m per year for a production rate of 60,000 bbpd, and to USD 240 million per year for a production rate of 220,000 bpd.

We also understand that, regarding function **c** (marketing of in-kind petroleum received on behalf of the state) the NOC will be selling between 20 percent and 40 percent of total output minus royalty during the cost recovery period and even more after that. Selling such quantities of oil requires some in-house expertise, but for a small producer like Uganda, especially in the early stages, the marketing of oil to end-users can be outsourced to specialized trading corporations, thereby limiting the role of the NOC to selecting and monitoring contracts with trading firms.

Functions **e**, **f** and **h** (on the expertise the NOC will provide in shareholders' meetings and as an advisor to the ministry) will require mostly human capital, acquired through extensive training and capacity building of in-house staff and international hires whenever necessary. Long-term capacity building plans need consistent and predictable funding, though these are likely to be dwarfed by actual petroleum operation costs.

Functions **g** and **i** involve the NOC actually funding petroleum upstream, midstream and downstream activities, and are therefore likely to incur the highest costs for the NOC. As such, the government's decisions about how ambitious the company should be in its investment plans will have major implications on financing arrangements. We understand that the NOC will own up to 40 percent of the Hoima refinery, depending on other EAC governments' ownership. With investment costs estimated at USD 4.3 billion and a debt level of 70 percent, this would imply that the NOC would need to finance a share of USD 516 million (USD 4.3 billion x 30 percent x 40 percent) between 2015 and 2017/18. A participation in the investment of the export pipeline to the East African coast would likely imply costs in the same order of magnitude. As these costs will be incurred in the development stage, the NOC will not be able to finance them through any incoming revenue from oil. Funding will have to come from the central government's budget, or from additional project financing (of which there are different mechanisms, beyond standard loans). Both would represent a cost to Uganda, either in terms of capital today or through loan or other repayments in the future. It is, therefore, an investment. It should be undertaken if it is assessed that this will yield stronger returns for the Ugandan economy than alternative uses of public funds.

Beyond the initial investment costs, transport and refining infrastructure will require maintenance and upgrades. If the NOC is a significant partner in these ventures, it would have to contribute to such costs, which could amount to tens of millions of dollars annually and severely reduce the profits of the NOC. If maintenance costs are not covered, this could lead to underfunding and deteriorating infrastructure. The alternative is to structure project financing in a way that ensures sufficient contribution to maintenance costs, though this requires discipline and strong financing/project management capacity to be put in place in the near term.

Our preliminary assessment is that the NOC, to support the functions assigned by the Petroleum Bill and the National Oil and Gas Policy, will require:

- i initial financial support from the government to effectively contribute to the development of midstream and downstream ventures
- ii a steady, predictable, but relatively limited flow of funds to support its efforts in building capacity, developing expertise and effectively managing the state's participation in upstream ventures
- iii a steady and relatively large flow of funds to contribute to its share of operating costs in the upstream venture, as well as its share of maintenance and upgrades of the midstream and downstream infrastructure

As Ugandan authorities consider these funding requirements, it is important to realize that the more the NOC is involved in the upstream, midstream and downstream segments of the oil sector, the more critical it is for the NOC to be efficient. Very large shares of public revenues are at stake. An inefficient or politicized NOC could lead to important revenue losses, while a professional and efficient NOC could increase the profits that fall back to the state in the forms of dividends. It is also a timing and risk-appetite issue. High and certain costs will be incurred by the NOC in the development stage for midstream and downstream investments. But these investments may only yield high returns over a longer period of time. The returns may also prove to be disappointing, given the volatility of oil prices and the risk that oil might lose its appeal as a global commodity in a distant future. There are therefore two key questions to consider:

- 1 a tradeoff between investing in a large NOC role and the immediate financial needs to accomplish the broader development agenda of the government
- 2 a choice to make on how much financial risk the Uganda government is willing to take by investing in its NOC

III. INTERNATIONAL EXPERIENCE

In July 2014, NRG published *Reforming National Oil Companies: Nine Recommendations*. In this paper, NRG looks at 12 country case studies and analyzes whether NOCs have played a positive role in increasing the country's benefits from its oil resources. In terms of financing, we find that a NOC's ability to execute its chosen commercial strategy is heavily influenced by the extent to which it can retain earnings from its activities. Also important is the manner in which it transfers money to the treasury and/or receives budgetary allocations from the treasury.

Appendix 1 describes the revenue retention models in our 12 case study countries. The NOCs in our sample that do not have predictable access to sufficient revenue flows to consistently cover their operational costs—NNPC (Nigeria), Pemex (Mexico) and Petronas (Malaysia)—lose significant ability to execute commercial strategies as a result. Petronas, which has in recent years paid dividends to the state of up to 74 percent of net income, has charged that its production capacity is challenged by ever-higher required transfers of profits. At the same time, as illustrated by the experiences of countries such as Angola, Azerbaijan and Congo-Brazzaville, where NOC exports represent more than 80 percent of government revenues, too much revenue-retention can have grave consequences for the national budget. Hence, there is no universal model

appropriate for all countries. With this in mind, Ugandan authorities should give careful consideration to the revenue retention system that best suits their country’s goals and evolving capacities.

Figure 1 below categorizes NOCs based on the extensiveness of their commercial needs (assuming these commercial needs are properly assessed and based on the company’s operational capacities) and how much the government’s budget depends on their activity. This categorization helps in assessing factors for determining an NOC financing model.

Objective investment needs	High	I. Highest justification for NOC revenue retention (e.g., Norway)	II. High justification for NOC revenue retention, but checks and balances are of heightened importance (e.g., Mexico)
	Low	III. Reduced justification for NOC revenue retention (e.g., Ghana, especially before production began)	IV. Lowest justification for NOC revenue retention (e.g., Congo-Brazzaville)
		Low	High

Share of total government revenues coming from NOC activities

Figure 1. Factors for determining NOC financing model

Quadrant I represents countries in which the NOC is a sophisticated commercial entity with a need for large-scale investment to finance activities and in which the company’s revenues do not dominate the public budget. These countries present the strongest case for a model in which the NOC is able to retain its revenues and pay taxes, much like a private entity. Quadrant II is in the middle ground, where the company faces heavy operational costs and where a lack of predictable access to capital can be crippling, but also where the government needs to take special care to ensure the integrity of public revenues and the coherence of the budget. Countries in quadrant III, where the risks of total disruption to the economy may not be large but where the company’s needs for capital are not huge either, should consider a model where revenue retention is relatively limited. Finally, quadrant IV represents countries where the company is not a traditional commercial player—and thus its capital needs are relatively small and/or predictable—and where simultaneously a large share of public revenues pass through the company, subjecting the country to massive risks if the company budget becomes the de facto national budget. In these countries, there may be little to no justification for substantial revenue retention.

It is possible that companies might wish to migrate to different quadrants as activity levels, production and revenues increase. Some level of revenue retention would therefore be required for growth, though the pace of migration would have to closely follow the company’s skills and institutional development.

Another factor to be considered in the setting of the revenue retention model is the efficiency of the national budget process. In a situation where the company does not retain significant revenues, the use of the budget process to finance NOC operations is not inherently problematic. However, where budgeting is overly slow, unpredictable or political, total reliance by the NOC on budget allocations can be crippling.

IV. FINANCING OPTIONS FOR THE NOC IN UGANDA'S PUBLIC FINANCE BILL

Based on the NOC revenue retention models we have analyzed, Uganda would fall in quadrant III at this stage, with a reduced justification for revenue retention by the NOC. The need for the company to receive a sufficient budget to develop its capacities and carry out its mandate effectively does not require a massive amount of money, but needs a steady flow of funds from the start of operations. Financing midstream and downstream ventures will require substantial funds, but in the short-to-medium run, before any meaningful government revenue, so that revenue retention could not provide the necessary capital. These investments will require alternative ways of financing the NOC. In the long run, revenue retention to fulfill the objectives currently assigned to the NOC would only need to be of modest proportion. Of course, these objectives could change as opportunities arise: for example, new fields that the NOC could develop by itself or in joint ventures, or new midstream and downstream operations with strong impact on revenue generation or Uganda's economic growth. When these are identified by the government and approved by parliament, the revenue-retention model could be amended as necessary.

The following options represent the range of financing possibilities that Uganda might want to consider.

In some countries the NOC acts essentially as a privately-owned company would. It retains all revenues from its participation in joint ventures and the sale of profit oil and pays for its share of costs. It pays corporate income tax as a company and distributes dividends to its shareholder (the state). The critical problem in this model is that the control of the decision to retain revenue for investment or operations (whether cost-efficient or not) rather than to distribute to the state remains with the NOC, which is therefore subject to a conflict of interest. (We do not discuss this option in detail here as we understand that it is not being contemplated by Ugandan authorities.)

Option 1. All revenues to the consolidated fund, with annual budgeting for NOC

In this model, the NOC's budget is submitted to the Ministry of Finance by the company (directly or through the Ministry of Petroleum) and approved by parliament as part of the annual budget process. The NOC would not be allowed to retain revenues from its sale of profit oil or other activities; rather it would have to execute its commercial activities solely based on the budget allocation it receives.

Pros	<ul style="list-style-type: none"> • High level of control over NOC activities by the state: Since parliament and government have to approve the planned activities of the NOC for the following year, the company will be subjected to high levels of public scrutiny and will have to develop and justify its plans carefully. • Limit risk of NOC becoming a “state-within-a-state”: Because of the size of the revenue flows, an NOC can become a very powerful entity in the national economy. It can use petroleum revenues to expand activities outside the petroleum sector. Requiring that the NOC participates in the regular budget process can mitigate this risk. • Annual public debate on the trade-off between investments in the petroleum sector and other sectors of the economy: The annual budget process is the platform for debate on how government revenues should be allocated. The question of whether petroleum revenues are invested in public infrastructure or exploration activities could be an integral part of this debate.
Cons	<ul style="list-style-type: none"> • Inability to effectively execute on mandate because of inefficiencies in the budget process and lack of funding: Delays in the budget process can lead to temporary illiquidity. Structural shortages can lead to insolvency. Even if it does not lead to insolvency, a lack of funds can hamper the operations of the NOC (e.g., inability to meet any cash calls to which it is subject, inability to hire high quality personnel). • Inability to plan for long-term financial commitments for large-scale investment in capital goods, R&D and human capacity development: Having to apply to the government every year for a budget can create great uncertainty. Not knowing how much it will get the next year might discourage a company from making multiyear investments. This can be harmful for the economic performance of the NOC. • Risk that NOC becomes a “budget-driven organization:” These risks include that the NOC annually applies for a higher budget than is strictly necessary out of fear of cuts in the budget process. It could also lead to a situation whereby toward the end of the year wasteful expenditures are being made in order to spend the full budget (also out of fear of getting a budget reduction in the next year).

Option 2. All revenues to the consolidated fund, with multiyear budgeting for NOC

In this model, a variation of option 1, a provision is made for the NOC to engage in longer-term planning. Revenues are transferred to a centrally controlled fund, but instead of voting on the NOC’s budget every year, parliament makes a multi-year budget allocation. If the allocated amount is not sufficient for a given year, the NOC must apply for supplemental funding.

Pros	<ul style="list-style-type: none"> • Same as under option 1 above • In addition, the NOC has freedom to make longer-term financial commitments, which can increase its efficiency.
Cons	<ul style="list-style-type: none"> • Same as under option 1 above, with partially reduced risk inefficiency and a lack of medium-term planning.

Option 3. A formula-based model with a cap

In this model, the NOC is allowed by parliament to retain some revenue to fund its operations, up to a maximum. For example, in Ghana, the NOC will receive up to 55 percent of “the net cash flow from the carried and participating interests after deducting the equity financing costs” (section 7(3) of the Revenue Management Act 2011). This model is an intermediary between the parliamentary budget approach (options 1 or 2) and the fixed formula-based revenue retention (or allocation) approach (option 4), with a cap that limits how much revenue can be ultimately retained by

the NOC. In addition, in Ghana, parliament has the power to review the percentage every three years, so it can set the figure lower if deemed appropriate; it has done so in recent years (at 30 percent over 2014-2016). This is a significant amount of power for parliament in the medium-term, while retaining most of the benefits of allowing the NOC to plan on three-year increments as in option 2.

It must be noted that this maximum has been set very high in Ghana and the process linking GNPC's financing needs to an investment strategy remains ill-defined. The risks here are that: (a) a significant share of the revenue that would have been made available to the consolidated budget is not used as effectively; and (b) GNPC does not pace investment in its ambitious commercial plans with regard the remaining uncertainty about how much oil Ghana actually owns. Despite a justified aspiration to a sophisticated commercial role, Ghana may end up overinvesting public revenues in an NOC with limited potential.

In recent years, GNPC has found itself sitting on considerable cash holdings. Some advocacy groups have suggested that this implies too much monies were ceded to the company that could have otherwise been put to work in the government budget. Some of this cash has reportedly been used to guarantee financing for downstream projects beyond GNPC's usual remit—a clear risk of allowing too much to flow to an NOC. GNPC also has a range of investments in hotels, the national football team, a major telecommunications company, a gold mine, and a range of other quasi-fiscal expenditures. While many NOCs take on a range of roles outside their core remit, GNPC's activities in these areas are not defined in any published strategy subject to robust parliamentary oversight or in legislation. Our takeaway from the Ghana experience is that a more staged approach to NOC development—conditional on better geological and commercial information, with realistic goals and a publicly approved strategy—is more likely to help the Ugandan authorities find the right balance between using oil revenues to increase state participation in the oil sector or to develop other sectors of the economy.

To share an order of magnitude, under a set of reasonable assumptions² on future oil production in Uganda, a cap of 10 percent of “the net cash flow from the carried and participating interests after deducting the equity financing costs” could amount to the NOC retaining as much as USD 20 million a year at a production level of 60,000 barrels per day or USD 60 million a year at a production level of 220,000 barrels per day. Better estimates, based on actual cost estimates from IOCs and the government, would be needed to decide on the right cap for the Ugandan NOC.

Options 2 and 3 are not fundamentally different, but choosing one or the other depends on how involved the parliament is in reviewing budget requests from the NOC, and if a fixed cap can act as a useful safety net in case of inflated requests from the NOC.

2 See footnote 1 above.

Pros	<ul style="list-style-type: none"> • This model is a compromise between parliamentary powers over financing and predictability of funding for the NOC. • The NOC can enjoy incentives to increase its efficiency when its needs are capped by the maximum revenue retention, as generating more profits for the state can increase its maximum budget allocation. • The risk of revenue leakage is limited to the agreed ceiling on revenue retention. • The state retains control over the activities the NOC can undertake. Because the maximum amount of resources that can be transferred to the NOC is capped, growth of the company's budget will remain under control. If the NOC wants to use a larger share of the petroleum revenues for operations, the law needs to be adjusted.
Cons	<ul style="list-style-type: none"> • Without strong oversight and adequate capacity within parliament, the NOC may systematically reach the ceiling on revenue retention by inflating costs or adding unnecessary/prestige spending to its costs. • If the ceiling is too high, this might still lead to revenue loss for the state.

Option 4. A fixed formula-based model

In this model, a formula determines how much petroleum revenue is retained by the NOC, usually without annual approval by parliament through the budgetary process. There are many possible formulas. For instance, a small proportion of all revenue generated by oil sales could be retained. In Kuwait, for example, while the Kuwait Oil Company's capital expenditures are funded by the state budget, it is allowed to retain a so-called "marketing fee" of 50 cents per barrel of crude sold.³ More practically, it could be a fixed percentage of the net cash flow from the state's equity interests, so as to be profit-based, and induce the NOC to maximize profits. However, there are two main problems with this option.

Firstly, a fixed formula does not adapt to the evolving needs of the NOC. One option to solve this while remaining a long-term horizon would be for parliament to be able to approve the percentage that will be retained for a period of years with the ability to revise the percentage after this period ends. A review by parliament every three years under clear and consistent rules and procedures (as mentioned under option 3 above) would be a strong improvement.

Secondly, the cash flow from the state's equity interests is not only the result of the company's efficiency, but also of international oil prices outside the NOC's control. In a high-price scenario, the NOC would participate in the windfall, disproportionately to its needs. To solve this issue, there may be a need to cap the amount received by the NOC by an absolute or relative figure, though this would go against the simple features of this option.

To share an order of magnitude, a rule of revenue retention for the NOC of USD 1 per barrel would amount to USD 22 million a year at a production level of 60,000 barrels per day and to USD 80 million a year at a production level of 220,000 barrels per day. It would then be necessary to adjust this rule to the business plan and the actual multiyear budget requirements of the NOC.

3 Commodity traders would generally earn a much smaller margin, particularly for large volumes. This marketing fee is not perfectly replicating market incentives and it could provide the NOC with too much funds if it's not operating efficiently.

Pros	<ul style="list-style-type: none"> • Having a fixed percentage of profit-based revenues incentivizes the NOC to maximize these profits, therefore operating under market rules, leading to more economically rational decisionmaking. • The risk of revenue leakage is limited to the agreed percentage of revenue retention. • The NOC has freedom to make expenditure and investment decisions (within certain limits). Being able to retain a certain part of oil revenues will also make the revenue stream to the NOC more predictable and free from political considerations. This can help financial management of the organization and enable the NOC to make longer term financial commitments.
Cons	<ul style="list-style-type: none"> • The choice of percentage may not exactly represent the financing needs of the NOC every year. If the amount that can be retained is too high it might lead to wasteful expenditure and investment by the NOC and revenue loss for the state. • If the percentage is too low, it can result in a situation whereby the NOC is not able to execute its mandate effectively due to a lack of funds.

V. OTHER CONSIDERATIONS

Cost control

Efficient oversight of the NOC requires strict audit and reporting processes, whichever financing option is chosen. In absence of such requirements, NOC budget requests can be inflated, with money spent unwisely.

In many jurisdictions (e.g., Ghana, Cameroon, Iran), the NOC is allowed to retain revenue in proportion of its costs, especially under formula-based revenue retention models. The major risk of this model is that it sets as the default that the NOC itself has the power to decide how much to hold back from the treasury, rather than requiring parliamentary approval *before* costs are allocated. There is logic to this approach, since it decreases the chances that the NOC will find itself short of funds. However, the risks of cost inflation make it even more important that the company be subject to strong reporting and auditing. Tying cost increases to industry cost indexes might be a way to limit the risks of cost inflation.

Borrowing

In most models, including what is envisioned by Uganda’s legislation, the NOC is a wholly state-owned entity, for which the state is fiscally responsible. Any loan taken by the NOC therefore commits the government of Uganda, with an impact on overall debt sustainability and an opportunity cost in terms of other public investment needs. In addition, money borrowed upfront can sometimes be subject to less scrutiny than actual oil revenues, while such borrowing is effectively equivalent to frontloading future oil revenues. Therefore, we recommend that any NOC loan should only be taken if: i) it conforms to market conditions; ii) there is a commercial case for taking the loan; and iii) it is approved by the minister of finance, with regards to the debt sustainability position of the government.

Private endowments

Private donations to an NOC can be highly suspicious. Given the amount of revenue generated by an NOC and its power as the entity in charge of managing public participation in petroleum projects, private companies and individuals may want to influence its decisionmaking power by different means. To protect the company’s ability to act in the public interest, financial autonomy from private business interests is required.

VI. CONCLUSION

The Ugandan national oil company has been created, its board appointed and its main missions set in the Petroleum Policy. The next critical step in shaping the NOC is the financing option. Depending on the option chosen, the NOC will have the means to achieve none, some, or all of its objectives. But the option chosen will also impact how much revenue from the upstream petroleum sector ends up in the government's petroleum fund and ultimately the consolidated budget. We therefore recommend the Uganda authorities to look at the cost of the role of the NOC in the oil sector relative to other development needs as described in the Vision 2040 and the five-year development plans.

Different funding models described above can work for the NOC in Uganda. Option 1 may be somewhat too constraining, but option 2 has more flexibility while preserving a strong oversight by parliament, which might be more concerned by the risks of revenue leakage at this stage of development of the sector. Option 3 provides a funding limit that, if well-defined, can reflect precisely how much revenue the government is willing to invest in its NOC. Option 4 provides additional market-based incentives and less control, which can lead to more efficiency if the NOC is ready to operate with more independence. Under all options, strong audit and reporting processes should be required, as well as parliamentary oversight.

The options presented above can be modified and adapted as needed to fit Uganda's needs and policies. NRG I would be happy to provide additional inputs and discuss these options with members of parliament and/or government representatives.

Thomas Lassourd is an economic analyst with NRG I.

Appendix 1. Revenue retention models

Country	Revenue retention system	Notes
<i>Lowest NOC autonomy over revenues</i>		
Cameroon	Company transfers revenues in excess of costs to government.	Accounting of what constitutes proper SNH "costs" has posed challenges, and government agencies have sought advance payments directly from SNH.
Iran*	NOC retains cost recovery from oil revenues, and transfers the rest (plus profit oil from "buyback" service contracts) to government.	Government uses NOC as tool for distribution of social benefits and employment (more pronounced during the Ahmadinejad era, 2005-2012); some retained revenues are diverted to these objectives by the government.
Nigeria	NNPC does not retain revenue; it passes through the company to the state.	NNPC often lacks funds to pay its share of costs, which is a result of weak financial controls and administrative processes.
<i>Moderate NOC autonomy over revenues</i>		
Ghana	GNPC pays revenues into petroleum fund, but can retain "equity financing cost" and additional amount as approved by parliament (not to exceed 55 percent of net cash flow from government interests).	During first year of production, 46 percent of all collected petroleum revenues stayed with GNPC.
Malaysia*	Petronas retains profits on earnings and transfers dividends, royalties, export duties to the state; it also pays heavy taxes on its own profits.	Some Malaysian analysts have argued that burden on Petronas is excessive; dividend payout ratio between 2008 and 2012 ranged from 38 to 74 percent, with other fiscal payments on top. ¹
Mexico (pre-reform)*	Pemex retained revenues and paid income taxes (official rule) or share of gross revenues (frequent practice).	Pemex was constitutionally the only operator in Mexico; this will change per reforms enacted at the end of 2013.
Vietnam	PetroVietnam retains a set percentage of various revenue flows (e.g., 50 percent of dividends and royalties) and pays the rest to the state.	PetroVietnam operates primarily through joint ventures.
<i>Highest NOC autonomy over revenues</i>		
Angola	Formal rule has been for Sonangol to transfer revenues to treasury with minimal retention, but in practice Sonangol has retained massive amounts of revenue with little formal constraint. Sonangol retains massive amounts of revenue, without constraint.	Angola and IMF have announced plan to hold Sonangol more firmly to account. As of 2013 Budget Law, rule calls for the company will be able to retain 7 percent of revenues and transfer rest to Treasury. ²
Brazil*	Highly-commercialized, partially privatized NOC retains revenues and pays taxes/dividends to state.	From 1997 to 2010, Petrobras acted as an almost purely commercial body. State pressure to provide subsidies has returned in recent years, at high cost.
Norway*	Statoil retains revenues, pays income taxes and dividends to the state.	Statoil acts as almost purely commercial body.
Saudi Arabia*	Saudi Aramco retains revenue to cover its costs, then pays royalties and dividends equivalent to 93 percent of its profits. ³	Saudi Aramco operates with a corporatized structure, with little evidence of heavy scrutiny of costs by the state.

1 Petronas Annual Reports, 2012 (p. 39) and 2010 (p. 12), <http://www.petronas.com.my/investor-relations/Pages/annual-report.aspx>.

2 International Monetary Fund, Angola: Second Post-Program Monitoring: Press Release; and Statement by the Executive Director for Angola, IMF Country Report No. 14/81, March 2014, <http://www.imf.org/external/pubs/ft/scr/2014/cr1481.pdf>.

3 Paul Stevens, "Saudi Aramco: the jewel in the crown," in David G. Victor, David Hults and Mark C. Thurber (eds.), *Oil and Governance* (Cambridge: Cambridge University Press, 2012), 193.