

Discussion of Guyana's Green Paper on “Managing Future Petroleum Revenues and Establishment of a Fiscal Rule and Sovereign Wealth Fund”

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Key messages

- The government of Guyana is about to launch a new sovereign wealth fund to manage its future oil wealth, which is likely to be significant. While the government’s approach includes a commendable framework, there is also a risk that without several key improvements the fund will not function as intended.
- We recommend that the Guyanese government:
 - Manage citizen expectations by informing the public about the uncertainty of revenue projections and by mitigating the risk of taking on too much debt prior to generation of large oil revenues.
 - Further professionalize fund management, for instance by considering a board of directors, ensuring that advisors are qualified and using a custodian bank.
 - Strengthen constraints around fund asset purchases, including explicitly prohibiting the riskiest asset classes (e.g., commodities, real estate).
 - Modify the proposed fiscal rule to better promote fiscal sustainability, effectively smooth overall fiscal expenditures, allow for escape in times of crisis and reduce complexity.
 - Build consensus on the rules among political parties and the general public.

Executive summary

Guyana is on the verge of becoming an oil-rich country. In absolute terms, Guyana's petroleum wealth is modest, representing approximately 0.2 percent of global reserves, which places the country 26th globally. However, it possesses the world's seventh-largest oil reserves per capita, second-largest in Latin America behind Venezuela.

If revenue estimates from the Liza field prove to be accurate, Guyana could become one of the world's largest per capita oil producers over the course of several years in the mid-2020s. According to independent projections, fiscal revenues from the petroleum sector could range between USD 7 and 27 billion over the next 30 years. Between 2025 and 2028, revenues could peak at between USD 800 million and 2.5 billion in a given year, at least doubling Guyana's national budget in some years. That said, delays on these types of megaprojects are common and some revenue estimates may be optimistic.

Along with the opportunity to use these windfalls to finance much-needed education, healthcare and infrastructure come the risks of mismanagement, waste and even conflict. The Ministry of Finance has released a green paper proposing policies to avoid these pitfalls. It rightly highlights the "presource curse," expenditure volatility, exhaustibility of petroleum resources and "Dutch disease" as key challenges that can be partially mitigated through the establishment of fiscal rules and a sovereign wealth fund.

We at the Natural Resource Governance Institute (NRGI) are providing comments on the green paper proposals in the hope that they can be a useful public resource for discussion. In doing so, we draw on our experience researching, writing and providing advice on sovereign wealth fund governance, as well as our mandate as an independent international organization working on natural resource governance issues.

Our analysis suggests that the green paper establishes a commendable framework for addressing some of the most severe risks, including: a system of multi-layered internal accountability aligned with international good practice; listing eligible asset classes consistent with a low-to-medium-risk investment strategy; limiting investments exclusively to foreign assets; requirements to publish quarterly and annual reports; parliamentary review of annual reports and approval of withdrawals; and fiscal rules whose objectives are to prevent over-spending.

Our comments recommend several modifications or additions to the green paper's proposals. Central to our advice are the following recommendations:

Management of citizen expectations

- Informing the public about revenue projections and their uncertainty, the fact that large revenues are a decade away, and the risks of over-indebting the government prior to the collection of large oil revenues.

Fund management

- Considering a board of directors structure and using a custodian bank to support financial transactions and to help with fund reporting requirements.
- Ensuring that the investment committee consists of professionals who do not have any conflicts of interest and have investment expertise.
- Eliminating the senior investment advisor and analyst position.

Investment rules

- Explicitly listing the fund's prohibited asset classes, including private market and high-risk instruments (e.g., commodities, real estate) and assets held in volatile or non-convertible currencies.
- Consider eliminating or revising asset class floors and ceilings and incorporate a clear process for managing risk; and reconsider use of indices for determining asset purchases.
- Clarifying oversight of external asset managers.
- Referencing development of a code of conduct for all asset managers (internal and external).
- Consider adopting ethical investment guidelines for the fund.

Transparency and oversight

- Elaborating on the list of information the government will publicly disclose on fund activities and finances.
- Encouraging the use of external audits, especially of financial statements, by the Office of the Auditor-General.
- Consider establishing an independent external oversight body, including potentially reformulating the role of the Macroeconomic Committee to possibly play the role, amongst others, of monitoring adherence to fiscal rules to make independent revenue projections and approving exemptions to the fiscal rule in case of national emergency or economic crisis.

Fiscal rule (objectives)

Consider modifying the proposed fiscal rule approach to:

- *Better promote fiscal sustainability.* The rule ought to prevent the government from saving a portion of resource revenues in a fund while simultaneously borrowing at moderate-to-high interest rates.
- *More effectively smooth expenditures.* The proposed fiscal rule is unlikely to effectively mitigate the negative impacts of fiscal revenue volatility. First, the rule could lead to occasional upward and downward shocks in spending. Second, one part of the rule links spending to non-oil revenues, which are themselves volatile and are likely to become more so as Guyana becomes oil-dependent. Third, because there is no constraint on non-oil spending or borrowing, the rule does not smooth overall fiscal revenues, which is one of its ultimate aims. The government may wish to consider an expenditure smoothing rule to address these shortcomings.
- *Better address “presource curse” risks.* The rule should explicitly target “presource curse” risks of increased spending on wages and subsidies as well as borrowing to fuel consumption today, when petroleum revenues remain negligible. Public borrowing has been on an upward trend since 2016. We recommend clear caps on fiscal expenditure starting as soon as possible.
- *Reduce excessive discretion of the Macroeconomic Committee on Economically Sustainable Amount.* We have reservations as to the committee’s ability and authority to determine the “economically sustainable amount” as well as the necessity of an economically sustainable amount in addition to other elements of a fiscal rule. We recommend eliminating the economically sustainable amount element and having the Macroeconomic Committee be tasked with providing independent revenue forecasts for benchmark calculations, approving the temporary suspension of the fiscal rule in the eventuality of *force majeure*, and monitoring the functioning of the rule.
- *Reduce complexity.* The rule in its current form is so complex that it could complicate comprehension and monitoring by oversight actors. We recommend a simpler rule in line with the options below which eliminate several elements of the proposed rule.
- *Add an escape clause.* We recommend incorporating a well-defined escape clause and procedural guidance on how the government may revise rule targets in a transparent and open manner in the case of major shocks.
- *Address earmarking of oil revenues for investment.* The government could report annually on total spending allocated toward developmental priorities and ensure that net spending on these projects increases over time.

Fiscal rules (options)

In light of the above, consider adopting a revised fiscal rule. For example:

- *Option 1.* Replace the proposed fiscal rules with a limit on current primary expenditure growth (e.g. x percent annually in real terms). Capital expenditures could be capped at a certain percentage of benchmark revenues (e.g., x percent of a seven-year average of fiscal revenues plus interest earned on sovereign wealth fund investments) and spent according to a costed national development strategy.
- *Option 2.* Maintain the fiscally sustainable amount's spending of two-thirds of benchmark revenues calculated by the Macroeconomic Committee or independent external entity and, once the fund is large enough, limiting spending to a five-year average of interest on the fund, but eliminate all production-based ceilings and 25 percent fiscally sustainable amount ceiling based on non-petroleum revenues. Add a limit on current primary expenditure growth (e.g., three percent annually in real terms).
- *Option 3.* Same as Option 2, but instead of a limit on current primary expenditure growth, enact a cap on government wage growth and a non-concessional debt growth rule.

Consensus building

Engaging in a cross-country consensus-building exercise before establishment of the fund.

Fiscal rules and a sovereign wealth fund can help smooth fiscal expenditures, save for future generations or overcome macroeconomic challenges, as we have seen in jurisdictions as diverse as Chile, Norway, Peru, Timor-Leste and Wyoming (U.S.). However, weak design can undermine these objectives, harming citizens' faith in the government's ability to act as stewards of the nation's natural resource wealth. While there is no perfect oil revenue management system, we believe that the recommendations in NRG's comments could strengthen an already sturdy policy foundation described in the green paper.

1. Introduction

NRGI AND OUR EXPERTISE

NRGI is an independent international organization headquartered in New York and with offices around the world. We help people to realize the benefits of their countries' endowments of oil, gas and minerals, and promotes sustainable and inclusive development. We do this through technical assistance, advocacy, applied research, policy analysis and capacity development.

Philanthropic organizations and national governments fund our work. We work in-depth in a number of carefully selected priority countries, focusing on critical aspects of the natural resource decision chain, based on country needs and demand. We collaborate with citizens, governments and innovative agents of change in the field of natural resource governance to ensure maximum impact globally and at the country level.

Our key areas of work are designing and promoting mechanisms for transparency and oversight; strengthening fiscal systems and contracts; reforming state-owned enterprises and sovereign wealth funds; and managing resource revenues.

WHY WE ARE COMMENTING ON THE GREEN PAPER

NRGI has done extensive research, writing and advisory work on the structure, management, performance and governance of sovereign wealth funds. We have analyzed why some funds are successful and others are not, identifying the elements that make for effective design and management of the funds.¹ We have worked in a wide range of oil- and mineral-rich countries to support the efforts of policy-makers to design, manage and implement funds to promote stable macroeconomic management and transparent and accountable governance.

Our work at a country level draws heavily on the lessons learned through our international research and technical assistance experiences elsewhere. Because each country's economy and political system is different, there is no one-size-fits-all approach to devising an effective system. That said, a comparative perspective on what approaches have worked in different contexts can provide an objective lens that can inform country specific decisions. The bibliography details our most relevant publications.

In recent years, we have drawn attention to the macroeconomic challenges facing countries that are on the precipice of producing oil for the first time, via our research on the phenomenon now known as the "presource curse."² Our research has underscored the particular importance of avoiding the common trap of taking on excessive debt during the build-up to first production.

1 Andrew Bauer (ed.) (2014) *Managing the Public Trust: How to make natural resource funds work for citizens*. NRGI-CCSI. Online: https://resourcegovernance.org/sites/default/files/NRF_RWI_Complete_Report_EN.pdf.

2 James Cust and David Mihalyi (2017) *Evidence for a presource curse? Oil discoveries, elevated expectations and growth disappointments*. World Bank Policy Research Working Paper Series.

NRGI has not been involved in the efforts of the government of Guyana and its advisors to develop the general policies or specific proposals reflected in the green paper. We commend the government for the seriousness of its efforts to address the major macroeconomic challenges that Guyana faces, and for the evident amount of consideration that has gone into the development of the proposals. We opted to prepare these comments as an input to the government's efforts at public consultation for several reasons:

- The onset of oil production and associated revenue flows represents a massively important moment for Guyana, presenting several risks as well as opportunities. The decisions made today about the structure and rules of the sovereign wealth fund will have major ramifications on the country's economic future and the well-being of its citizens.
- NRGI's global research on sovereign wealth funds and the "resource curse" are cited in the green paper, and we have received requests from Guyanese civil society groups and from national and international media to comment on the government's proposals. Rather than sharing our perspective in a limited or *ad hoc* way, we opted to prepare a set of general remarks and share them publicly. We are available to respond to any questions that these comments elicit from stakeholders in Guyana, including providing further examples of country practice to support our recommendations.
- The process of public consultation on sovereign wealth funds is of critical importance. The opportunity to get feedback can be important to refine proposals and craft a well-tailored system. But more broadly speaking, the public education process has proven critical for ensuring that rules are consistently followed. Our research has shown that even the most brilliantly crafted fiscal rules are on their own insufficient to ensure consistent or responsible macroeconomic management, and that many governments ultimately fail to follow their own rules as circumstances evolve.³ Significant public understanding of the system and buy-in to its necessity encourages governments to abide by the system, today and in the future. As such, public education and a consultation process should be prioritized. As an independent body, we feel that our views might provide an objective input that could be a useful resource during a public debate.

It is important to note at the outset that while NRGI is one of the convening organizations of the global New Petroleum Producers Project (led by Chatham House), this analysis reflects only the views of NRGI's macroeconomic analysts and does not purport to reflect the views of the member countries or other organizations supporting the New Petroleum Producers Project.⁴ Likewise, though NRGI has engaged with Guyanese public officials in the context of general meetings organized under the auspices of the New Petroleum Producers Project, we have not participated directly in the efforts to develop the green paper nor the country's detailed approach to revenue management policies. Nothing in these comments should be interpreted to reflect any inside information about the government's goals or processes.

3 David Mihalyi and Liliana Fernandez, *How Did Fiscal Rules Hold Up in the Commodity Price Crash*, Natural Resource Governance Institute, June 2018, resourcegovernance.org/sites/default/files/documents/fiscal-rules-commodity-crash.pdf.

4 Information on the New Petroleum Producers Discussion Group project can be found at www.chathamhouse.org/about/structure/department/new-petroleum-producers-discussion-group-project#.

2. Challenges and opportunities

GUYANA’S ECONOMIC CONTEXT AND MACROECONOMIC CHALLENGES

Following decades of unsuccessful exploration, a consortium of international oil companies led by ExxonMobil made an exceptional oil discovery off the coast of Guyana in 2015. The Liza oil field, located in the deep-water Stabroek oil block, holds a billion barrels in reserves. Finding what geologists call a “giant oil field”—one with 500 million barrels or more of recoverable oil or gas equivalent—is a relatively rare occurrence. Since this initial discovery, additional drilling activities in the same block have found more oil in the Payara, Snoek and Turbot fields, pushing the proven reserve estimate to 3.7 billion barrels as of June 2018.⁵

Based on recent proven discoveries and on a per capita basis, Guyana is on the verge of becoming a petroleum-rich country. While its 3.7 billion barrels of recoverable oil reserves are not very large in absolute terms—representing approximately 0.2 percent of global reserves, which ranks Guyana 26th globally—they are significant relative to Guyana’s economy and population. Guyana will likely have the world’s seventh largest per capita oil reserves and the second largest in Latin America after Venezuela.⁶

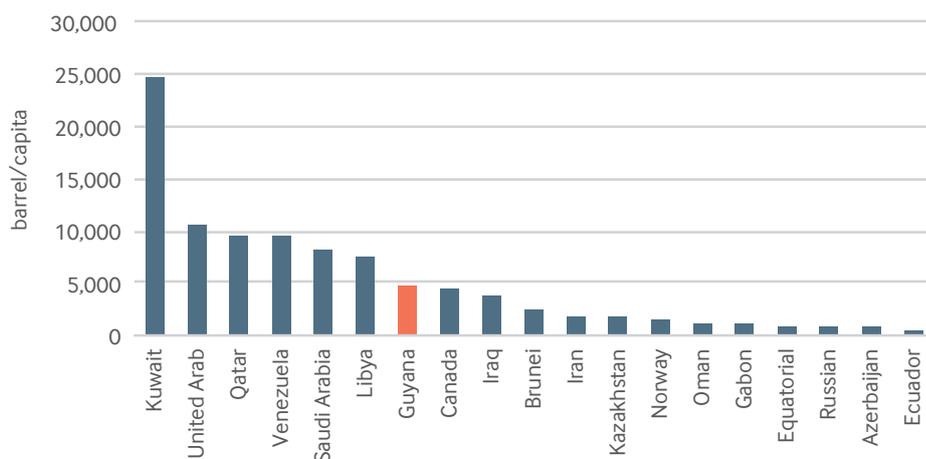


Figure 1. Countries with the highest petroleum reserves per capita (Source: BP statistics except Guyana)

These nearly 5,000 barrels of oil reserves per citizen represent an opportunity to alleviate poverty and propel development. However, this is by no means a given. A number of countries, including Azerbaijan, Iran and Venezuela, have mismanaged their petroleum wealth, leading to benefits accruing to some at the expense of the majority. In other countries, such as Angola, Iraq, Libya and Nigeria, oil wealth has directly financed violent conflict. Part of the challenge relates to getting a good deal; attracting oil sector investment while maximizing revenues accruing to the state. Another challenge relates to revenue management; ensuring that the government uses oil revenues to foster sustainable development.

5 Stabroek News June 2018. www.stabroeknews.com/2018/news/guyana/06/21/oil-reserves-now-at-3-7b-barrels/

6 Based on end-2017 reserve figures collected by BP Statistical Review.

In response to the green paper, this brief focuses on the latter challenges, more specifically on the proposal to adopt a fiscal rule and establish a sovereign wealth fund.

Revenue projections and implications

As Guyana makes decisions about its revenue management system, projections about the size of revenue flows to the state under various scenarios can provide an important basis for concrete analysis of various potential rules and approaches. NRGi has not constructed its own independent scenarios of likely revenue flows from discovered resources. Rather for purposes of this analysis we rely on the two most prominent public assessments, which OpenOil and the IMF have published.^{7,8} Table 1 presents key estimates and assumptions from the respective models.

Table 1. OpenOil and IMF fiscal model estimates

	OpenOil (1)	OpenOil (2)	IMF
Maximum annual revenue at peak production	USD 800 million	USD 1.8 billion	USD 2.5 billion
Year of maximum revenue	2025	2028	2028
Government revenue over lifespan of field(s)	USD 7 billion	USD 18 billion	USD 26.7 billion ⁹
Assumptions			
<i>Fields</i>	Liza I	Liza I and II	Liza I and II
<i>Barrels produced</i>	450 million	1 billion	1.4 billion
<i>Barrels per day at peak production</i>	120 thousand	340 thousand	340 thousand
<i>Price per barrel</i>	USD 57	USD 57	USD 55
<i>Cost per barrel</i>	USD 23	USD 23	-
<i>Start of production</i>	2020	2020	2020
<i>Peak production</i>	2021-26	2023-26	2024-28

The significant uncertainty of revenue estimates bears emphasizing, especially in relation to production profiles, investments, timelines and costs under different production phases. For instance, in the above estimates, the costs for Liza II are assumed to be similar to Liza I, though this may be an unrealistic assumption.

7 OpenOil, *Stabroek Oil Field, Guyana Model and Narrative Report* (2018). Online: openoil.net/2018/03/15/guyanas-oil-deal-is-outlier-low-government-takes-just-over-half/. OpenOil (1) represents the baseline assumption, while OpenOil (2) assumes a second phase with identical project economics.

8 International Monetary Fund (IMF), *Guyana: 2018 Article IV Consultation-Press Release and Staff Report* (2018).

9 Approximation based on Guyana dollar plotted values in IMF report and assuming current exchange rate.

In Figure 2, we show projections of future oil revenues based on OpenOil's model and the simple assumption of the non-oil economy, excluding expected volatility.¹⁰ This allows us to judge the magnitude and timing of the expected windfall to the budget under one scenario.

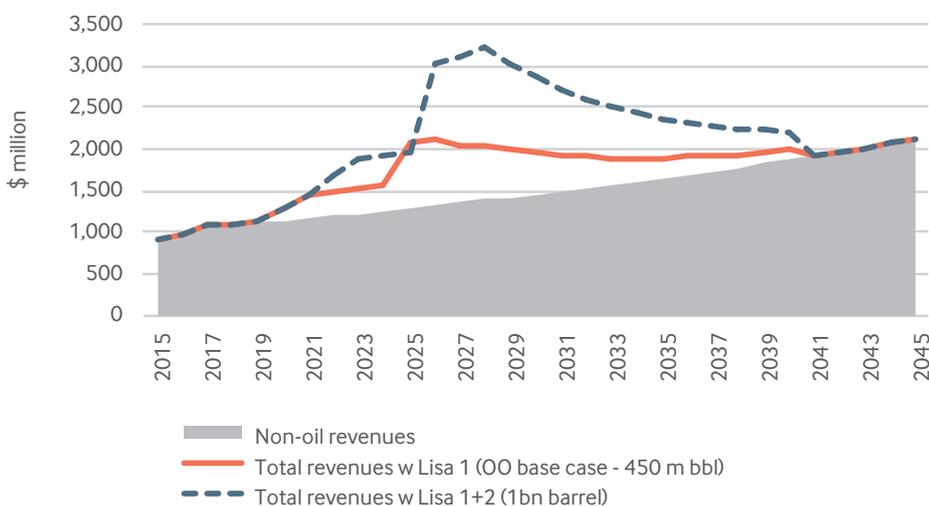


Figure 2. Smoothed oil revenue projections for Guyana¹¹

Sources: OpenOil and NRGi

There are four important takeaways from these projections in evaluating an adequate framework for oil revenue management in Guyana. First, the expected government revenues from the recent discoveries are going to be sizable. Based on the OpenOil and IMF projections, oil is expected to gradually become the major source of government revenue, contributing between one third and half of all government receipts over the 2022-2035 period. Hence, good oil revenue management will become the central tenant of good macroeconomic management.

Second, while the government is already collecting some oil revenues today, the expected large revenue windfalls to the government are relatively distant, approximately a decade away.¹² Revenues early in the production cycle are mainly used by investors to cover exploration and development costs. Furthermore, project delays are common. As such, major macroeconomic impacts generated by oil revenue inflows are also several years away.

10 Assuming 2.5 percent average annual non-oil revenue growth. All figures are presented in real 2018 USD

11 OpenOil (2018)

12 The government has already collected a USD 18 million signing bonus from ExxonMobil and other small revenues from oil and gas companies.

Third, Guyana can expect oil revenues to generate severe revenue volatility once they become the dominant source of revenues, which will translate into expenditure volatility unless a robust counter-cyclical fiscal rule is established. Production can start and stop suddenly in response to environmental events or technological challenges. More importantly, oil price volatility generates major revenue volatility. Based on the OpenOil model, a 30 percent increase in oil price (\$74/barrel) would lead to 50 percent higher petroleum revenues, while a 30 percent decline (\$40/barrel) would lead to 50 percent less petroleum revenues (see Figure 3). Short- to medium-term fluctuations are normal and to be expected.

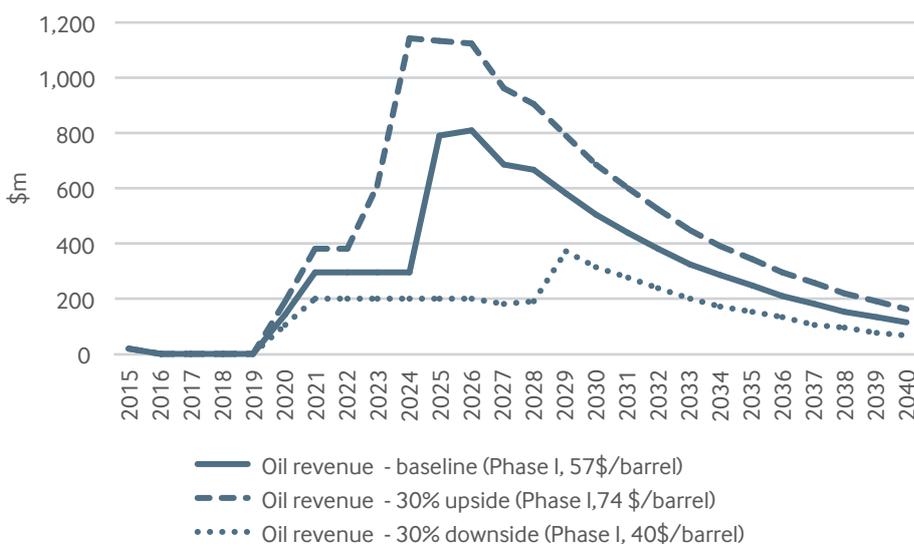


Figure 3. Oil revenues under three different price scenarios

Highly volatile budget expenditures create incentives to spend money poorly. Governments of many countries have treated an increase in oil revenues as though it was permanent and to be spent immediately, provoking spending on legacy projects such as monuments and expensive government buildings. Conversely, governments have treated a decline in revenues as temporary, leading to an increase in public debt or expenditure cuts, leaving half-finished roads or unmaintained buildings.¹³ The negative impact of excessive expenditure volatility on public investments and growth is a key contributor to the “resource curse” and is arguably the biggest macroeconomic risk facing Guyana today.

Fourth, the oil revenues are finite. Though the current highly successful exploration program is still not completed, and potentially will add more reserves, these revenues represent an opportunity for growth that will likely last one generation. The favorable external environment, including a recent upswing in oil prices and cheap financing, means that there is an opportunity to develop the Liza oil field. However, the current demand is not necessarily indicative of future demand: as countries move away from fossil fuels to cleaner substitutes, new projects may become harder to develop.¹⁴ Therefore, it would be unwise to count on all reserves to be developed and for similarly large petroleum revenues to accrue to the next generation.

13 Andrew Bauer, *Subnational Oil, Gas and Mineral Revenue Management* (Natural Resource Governance Institute, 2013).

14 David Manley et al., *Stranded Nations? The Climate Policy Implications for Fossil Fuel-Rich Developing Countries*. OxCarre Policy Paper 34 (University of Oxford, 2017). Online: www.oxcarre.ox.ac.uk/images/stories/papers/PolicyPapers/oxcarrepp201634.pdf.

SOVEREIGN WEALTH FUNDS AND FISCAL RULES: GLOBAL USES AND MISUSES

Two tools commonly used to address the four challenges identified above are fiscal rules and sovereign wealth funds. Ideally, the fiscal surpluses generated by fiscal rules generate the savings that finance a sovereign wealth fund. Unfortunately, many countries establish sovereign wealth funds without a clear consensus on why they are creating them. As a result, sovereign wealth funds often fail to address fiscal volatility, improve intergenerational equity or mitigate absorptive capacity constraints and Dutch disease effects.

Guyana's green paper proposes establishing a sovereign wealth fund to manage a portion of the nation's petroleum revenues. As of 2018, there are approximately 60 sovereign wealth funds financed explicitly by oil, gas or mineral revenues or by fiscal surpluses in countries dependent on natural resources. In the Caribbean and South America, the governments of Chile, Colombia, Peru, Trinidad and Tobago and Venezuela have established at least one fund each, sometimes multiple.

Sovereign wealth funds are generally created to serve one or several of the following purposes: smoothing expenditures; sterilizing capital inflows; saving fiscal surpluses; earmarking resource revenues for specific public investments (through withdrawals rather than choices in asset allocation); or ring-fencing natural resource revenues, thereby improving transparency and accountability.¹⁵

Yet, as commonly as countries establish sovereign wealth funds to address a justified economic or political need, governments use them to avoid public scrutiny or finance pet projects. For each case of a well-run sovereign wealth fund, there is a case where a fund is a problematic source of corruption and patronage. Of course, there are also cases where a fund is simultaneously a macroeconomic tool and serves the personal interests of the political elite. Moreover, there are cases where the government mismanages funds or takes excessive risks, making the funds therefore ineffective.

There are several categories of risks related to sovereign wealth funds. Among them are the following:

- **Undermining public financial management systems and accountability.** Many governments design sovereign wealth funds to circumvent normal budgetary processes. These processes can range from parliamentary approval to procurement systems to reporting requirements. While in some cases these measures to bypass the public financial management system can help improve government decision-making, in most cases they slow down improvements to the main system and create parallel budgets that are difficult to manage. In the extreme cases, they lead to states-within-states or competing power structures within the government. The Azerbaijani and Iranian funds, described below, are examples.

¹⁵ Andrew Bauer, "Playthings and Parallel Budgets: Sovereign Wealth Fund Economic and Governance Performance" in *The New Frontiers of Sovereign Investment* (Columbia University Press, 2017).

- **Not achieving macroeconomic or policy objectives.** Some governments create sovereign wealth funds to supposedly address a macroeconomic problem, such as excessive expenditure volatility, mismatching time horizons or to generate an endowment to finance a certain expenditure. Yet many funds do not achieve those objectives since they do not have inflow, outflow or investment rules necessary to achieve their objectives. In some cases this is due to poor fund design; in others it is because the actual objectives are different from the stated objectives. The case of Alberta described below is an example.
- “Unsustained funds.” Many funds are established with the best of intentions only to be raided or misused after they have accumulated large balances. For instance, following suspension of fiscal rules in 2010, the oil-financed Russian Reserve Fund and National Welfare Fund were depleted of tens of billions of dollars to finance large budget deficits. While the Reserve Fund was designed for such a purpose, the National Wealth Fund was meant to co-finance voluntary pension savings of Russian citizens.¹⁶
- Excessive risk-taking/lack of due diligence in investments. Many funds invest in complex or risky assets without the fund managers being fully aware of the risks involved. In some cases, this is a result of lack of due diligence—fund managers do not adequately research their investments or inadequate information is provided by external managers or asset owners. In other cases, fund managers simply take excessive risks without fully understanding the consequences of their actions. The cases of Angola and Libya described below provide examples.
- High management fees. Some funds pay excessive management fees given the services provided. Passive investment managers generally charge approximately 0.5 percent of the value of assets annually. While more complex investment strategies and more services, such as accounting and reporting, justify higher fees, in some cases fees paid have far exceeded market rates. Furthermore, performance incentives for investment managers, while common, often lead to high fund costs that are not justified by earnings. The Albertan (Canada) and Libyan funds provide good examples.
- Patronage and corruption. Some funds have become outright sources of patronage or corruption through their asset purchases. Fund managers can invest directly in companies where they are beneficial owners, can invest in companies in exchange for a kickback, or can use fund money to invest to serve their political interests. The mineral-financed Regional Development Funds in Kyrgyzstan, which the government designed to fund local infrastructure, socioeconomic programs and small loans, but which instead local officials operate virtually without oversight, are an example.¹⁷ The Angola and Malaysia examples below provide more detail.

16 NRGI-CCSI, Russia: Reserve Fund and National Wealth Fund (2013). Online: www.resourcegovernance.org/sites/default/files/NRF_Russia_September2013.pdf.

17 NRGI-UNDP, *Natural Resource Revenue Sharing* (2016). www.resourcegovernance.org/analysis-tools/publications/natural-resource-revenue-sharing.

Box 1. Case studies of sovereign wealth fund mismanagement

Libya

One of the extreme examples of excessive risk-taking, poor managerial capacity, conflict of interest and high management fees is the case of the Libyan Investment Authority (LIA). As an example of excessive risk-taking, in 2010, the LIA made a \$1.2 billion investment with Goldman Sachs on a derivative instrument. It lost \$1.18 billion out of the \$1.2 billion. The LIA's 2012 \$300 million investment in Palladyne International Asset Management, a previously unheard-of fund with links to the former chairman of Libya's National Oil Corporation, is an example of a clear conflict of interest. Of note, despite investing only slightly more than half of the money the government of Libya allocated to it, Palladyne recorded more than \$50 million in losses from 2008 to mid-2010. One example of high management fees is the LIA payment of \$27 million in fees on a \$300 million investment with Permal, a fund manager. The fund lost \$120 million with Permal.¹⁸

Malaysia

The 1Malaysia Development Berhad (1MDB) fund, established in 2009, has proven to be another major source of alleged corruption and mismanagement. Designed to attract investment into Malaysia by forming joint ventures with foreign firms, the fund actually indebted itself to over \$11 billion by 2014. Among its more suspect transactions are a \$1 billion investment in a Saudi oil company in 2009 which has gone missing; funds that were diverted in 2012 from an Abu Dhabi state fund to a firm in the British Virgin Islands (a secrecy jurisdiction); and \$4 billion that has been misappropriated from Malaysian state firms.¹⁹ Malaysia, the U.S., Switzerland, Singapore and the U.K. have laid criminal charges or continue corruption and money laundering investigations related to the fund.

Angola

The recently established Fundo Soberano de Angola has also become a source of patronage and suffers from many of the same problems as the funds mentioned above. The fund signed a contract with a company, Caioporto, to build a \$500 million port. The company had never previously built a port and a business associate of the head of the fund owns it. Given that the project could not find any private financing, the government guaranteed the company against all losses. While all profits will go to the company, the fund, and therefore the state, takes on all the risk and losses.²⁰

Canada

Stories of mismanagement occur in advanced economies as well. As mentioned, many natural resource funds either do not serve a well-defined purpose or do not meet their objectives. One fund with an explicit mandate to save oil revenues for future generations, the Canadian province of Alberta's Heritage Savings Trust Fund, failed to save for much of a 25-year period. Despite peak production and historically high prices at times from 1987 to 2013, the government only input two relatively small deposits over this period. This encouraged unsustainable consumption in the province, and today Alberta is facing a fiscal crunch. Additionally, some self-declared stabilization funds, such as those in Azerbaijan, Kazakhstan, Trinidad and Tobago and Venezuela, have failed to counteract the negative impacts of oil price volatility on government spending.²¹ In each of these cases, fiscal rules were either inappropriately designed or they did not exist at all.

Azerbaijan and Iran

The Azerbaijani and Iranian funds are examples of extra-budgetary funds becoming parallel budgets or states-within-states, undermining parliamentary accountability, democratic institutions and public financial management systems. In Azerbaijan, for instance, government authorities have used the State Oil Fund (SOFAZ) to directly finance strategic government projects such as the railway between Azerbaijan, Georgia and Turkey. These expenditure items were not subject to the same reporting or public procurement requirements as those financed through the regular budget process, nor were they subject to as much parliamentary oversight.²²

In Iran, the \$40 billion National Development Fund provided loans to private-sector companies, cooperatives and economic enterprises owned by public non-governmental institutions through agent banks. While the fund did not provide information on the current investment allocation of its portfolio, news reports indicated that the government allocated fund money to the domestic tourism, petrochemical, upstream petroleum and water sectors, among others. The executive directly controlled the fund and therefore some decisions bypass normal budgetary and parliamentary procedures.²³

18 Andrew Bauer, *Managing the Public Trust: How to make natural resource funds work for citizens* (NRGI-CCSI, 2014).

19 *The Economist*, "The 1MDB Affair" (27 May 2016).

20 Rafael Marques de Morais, "Stealing with Presidential Decrees" (Maka Angola, 2017).

21 Bauer, *Managing the Public Trust*.

22 *Ibid.*

23 *Islamic Republic of Iran: Oil Stabilization Fund and the National Development Fund of Iran*, (NRGI-CCSI, 2014). www.resourcegovernance.org/sites/default/files/NRF_Iran_February_2014.pdf.

While the stories in Box 1 illustrate the dangers of mismanaged sovereign wealth funds, there are measures that governments can take to improve the chances that funds will improve public financial management. Chile's Pension Reserve Fund and Social and Economic Stabilization Fund, Norway's Government Pension Fund Global, Timor-Leste's Petroleum Fund, the Texas Permanent University Fund, and Botswana's Pula Fund have arguably each helped manage their governments' resource wealth.

In each of these successful cases, *fiscal rules* have determined the inflows/deposits into the fund and the outflows/withdrawals to the governments' treasury accounts. A fiscal rule is a permanent quantitative constraint on government finances. Fiscal rules take many forms, from limits on expenditure growth to limits on borrowing to requirements to balance the budget to forced savings from a specific revenue source. Table 2 provides examples of fiscal rules from resource-dependent countries. They are particularly important in resource-dependent settings as expenditure volatility, real exchange rate appreciation, and boom-bust cycles can dangerously destabilize economies.

Table 2. Examples of fiscal rules in resource-rich states²⁴

Rule Type	Explanation ²⁵	Example	
Budget balance rule	Limit on overall, primary, or current budget balances in headline or structural terms	Chile (statutory since 2006)	Structural surplus of one percent of GDP with an escape clause. A 10-year forecast of copper revenues as determined by an independent committee determines what constitutes a "structural balance."
		Norway (political commitment since 2001)	Non-oil structural deficit cannot exceed three percent of value of the fund. The fiscal guidelines allow for temporary deviations from the rule under specific circumstances.
Debt rule	Limit on public debt as a percent of GDP	Indonesia (coalition agreement since 2004)	Total central and local government debt should not exceed 60 percent of GDP.
Expenditure rule	Limit on total, primary, or current spending, either in absolute terms, growth rates, or in percent of GDP	Botswana (political commitment since 2003)	Ceiling on the expenditure-to-GDP ratio of 40 percent.
		Peru (statutory since 2003; rule changed in 2009)	Real growth current expenditure ceiling of 4 percent. Exceptions made if Congress declares an emergency.
Revenue rule	Ceiling on spending of overall revenues or revenues from oil, gas or minerals	Alaska, U.S. (statutory since 1976)	50–75 percent of oil revenues minus income tax and property tax enter the budget; the government saves the rest in the Alaska Permanent Fund, which retains some revenues and disburses the rest directly to citizens.
		Botswana (political commitment since 1994)	The government may only use mineral revenues for public investment or save them in the Pula Fund.
		Ghana (statutory since 2011)	Maximum 70 percent of seven-year average of petroleum revenue enters the budget. The government allocates a maximum of 21 percent to a stabilization fund. It allocates a minimum nine percent to a heritage fund for future generations. Parliament reviews percentages every three years.
		Kazakhstan (government policy since 2010)	The government transfers \$8 billion USD plus/minus 15 percent (depending on economic growth) of petroleum revenue from the national fund to the budget annually.
		Timor-Leste (statutory since 2005)	Revenue entering the budget from the Petroleum Fund cannot exceed 3 percent of national petroleum wealth. Exceptions made if the government provides a detailed explanation to parliament and certain reports.
		Trinidad and Tobago (statutory since 2007)	The government uses a maximum of 40 percent of excess oil and gas revenue above estimated revenue to finance the budget; the rest goes into the heritage and stabilization funds. The government uses an 11-year revenue average for budget estimates.

24 NRGi; Victor Lledo et al., "Fiscal Rules at a Glance," (IMF, 2017).

25 Overall fiscal balance means that expenditures equal revenues; primary fiscal balance means that total expenditures *minus interest payments* on debt equal revenues; current fiscal balance means that total expenditures *minus spending on capital expenditures* equal revenues; headline fiscal balance refers to expenditures equaling revenues at any time; structural fiscal balance refers to expenditures equaling revenues when the economy is working at "potential" or full capacity; a deficit refers to when expenditures are greater than revenues; a surplus is when revenues are greater than expenditures.

Governments operationalize these fiscal rules in sovereign wealth funds through “inflow-outflow” or “deposit-withdrawal” rules. Inflow or deposit rules determine which revenue streams (e.g., license fees, royalties, oil revenues) will enter the fund, where the money comes from (e.g., the treasury department, internal revenue department, directly from companies) and the timing of such deposits (e.g., monthly, annually). The outflow or withdrawal rules determine how much money, which flows (e.g., interest, a percentage of principal), and when revenues will be transferred from the fund to the treasury to be spent according to the annual budget. These sets of rules are distinct from the allocation of assets for investment purposes.²⁶

As the green paper rightly points out, fiscal rules and funds are not intrinsically a panacea for the challenges of managing an oil-rich state. Public financial management reforms, diversification, strengthened government institutions and better oversight are equally important. However, fiscal rules and sovereign wealth funds have their role to play.

In the next sections, we discuss the green paper proposals in detail. Our experience with other funds around the world provides the analytical framework for our assessment.

26 Bauer, *Managing the Public Trust*.

3. NREGI comments on the green paper

MANAGING EXPECTATIONS

Guyana is fast approaching first oil, however much remains tentative. The Liza field is a large and complex project, with great uncertainties regarding subsequent development and risks of legal disputes or technical problems.²⁷ Given what we know, large tax revenues from the oil sector are a decade away, but there is also a risk of payments being delayed even further. Legal provisions, such as cost deductions, and tax avoidance measures may also reduce actual payments. A survey of major global oil and gas projects found that 73 percent face delays and 64 percent face cost overruns.²⁸

The news of such a large oil discovery can fuel unrealistic expectations among politicians, government officials and citizens alike. The hopes of imminent wealth may be used to justify policies that harm the government's developmental plan and are detrimental to sustainable economic growth, such as overspending, overborrowing or spending on legacy projects rather than social services and infrastructure with long-term impact.

In order to avoid the "presource curse," it will be important to keep Guyanese citizens well informed of the distance and uncertainties inherent in collecting petroleum revenues. For this reason, the government could task the proposed and soon-to-be-established Macroeconomic Committee with providing independent projections and informing the public of oil revenues for the coming years. Its independence and technical credibility could help the government fend off policy proposals that may derail the country's future growth and development.

FUND MANAGEMENT

Strong institutional structure, staffing policies and internal controls of a fund are essential. This involves clear lines of communication between different levels of the institutional hierarchy and a strong internal chain of accountability, both within the fund and between the fund and higher authorities.

The green paper outlines a system of multilayered internal accountability aligned with international good practice. Private external managers would be subject to a management agreement and investment instructions and report to the Bank of Guyana. The Bank of Guyana would be the operational manager and subject to an operational agreement and investment mandate. It would in turn be accountable to the Ministry of Finance. The Ministry of Finance would draft the investment mandate, enter into an operational agreement with the Bank of Guyana and, using information provided to it from the Bank of Guyana, draft the annual report. It would also be in charge of requested withdrawals in the annual budget proposal. Finally, the Ministry of Finance would be accountable to parliament, which would approve the annual withdrawals and review the annual report.

27 For example, maritime boundaries between Guyana and its neighbors are contested and Liza II's development is still uncertain.

28 EY, *Spotlight on oil and gas megaprojects* (2014). [www.ey.com/Publication/vwLUAssets/EY-spotlight-on-oil-and-gas-megaprojects/\\$FILE/EY-spotlight-on-oil-and-gas-megaprojects.pdf](http://www.ey.com/Publication/vwLUAssets/EY-spotlight-on-oil-and-gas-megaprojects/$FILE/EY-spotlight-on-oil-and-gas-megaprojects.pdf).

The green paper also refers to a sovereign investment committee, which would advise the Ministry of Finance on the investment mandate. Many countries use this type of committee, including Alaska's Investment Advisory Group, Ghana's Investment Advisory Committee and North Dakota's Legacy and Budget Stabilization Fund Advisory Board. The main difference between these advisory bodies and the one proposed for Guyana is that other countries draw their members largely from the academic and professional investment management community within or outside the country or region, whereas the Guyanese committee also has political appointees.

Finally, there is significant discussion in the green paper on the use of one or multiple funds to achieve different fund objectives. While we subscribe to the arguments for a single fund found in the green paper, we are of the opinion that the question of one or multiple funds is less crucial than the proper drafting and implementation of inflow and outflow rules, organizational structure, investment rules, and oversight and transparency requirements.

While the section on fund management is robust, we would suggest that the government consider the following options as tools for strengthening it further:

1. Board structure. A sovereign wealth fund manages public funds. As such, we would suggest the establishment of a board of directors structure for the fund that represents the public interest. The board would determine the investment mandate; approve the fund's operational budget and strategic plans; approve changes to risk management and reporting processes; advise and approve changes to asset allocation; review quarterly and annual reports; review manager performance; and hire, promote and terminate managers. The board could consist of professionals as well as political appointees, especially from the Ministry of Finance. Similar board structures exist for the Abu Dhabi Investment Authority, the Alberta (Canada) Heritage Savings Trust Fund, the State Oil Fund of the Republic of Azerbaijan, and the Libyan Investment Authority, among others. In Botswana and Norway, the central bank's executive board plays the same role. Should Guyana not consider a board structure, parliament may be able to play some of these roles.

2. Investment committee. As mentioned, many sovereign wealth funds use investment committees to advise the Ministry of Finance. We recommend that the investment committee consist exclusively of professional investment managers who have no direct or indirect interest in the management of the Guyanese fund. We also suggest elimination of the superfluous senior investment advisor position, whose mandate would overlap with the investment committee, potentially complicating management of the fund.

3. Custodianship. Governments can establish sovereign wealth funds as special accounts within the central bank or treasury, or as separate institutions. Custodian banks usually service fund managers by helping with accounting, tax issues and reporting. What matters more than the physical location of the money is the fund's institutional structure. However, many funds have chosen to use external custodians in countries with stable banking systems in order to safeguard the money and provide administrative support. For example, the Libyan Investment Authority uses the ABC Bank in Bahrain, Chile's funds use JPMorgan Chase Bank in the U.S. and Azerbaijan's SOFAZ uses Bank of New York Mellon as a custodian. The Guyana fund could employ the services of a custodian bank, which would support the day-to-day operational management of the Bank of Guyana.

INVESTMENT RULES

Funds' investment decisions are generally subject to guidelines, constraints and prohibitions. These are designed to prevent excessive risk-taking, mismanagement and conflict of interest. Among the rules commonly prescribed in legislation or regulation are asset allocation criteria, ethical standards, eligible assets, currency restrictions, minimum credit ratings, limits on high-risk assets, restrictions on private market instruments, and liability limits.

The green paper proposes a number of investment rules that would protect the Guyanese public against excessive risk-taking and mismanagement of the fund's assets. The proposal includes several investment rules found in the legislation governing some of the world's best-managed funds, including in Chile, Norway, Timor-Leste and Trinidad and Tobago. For instance, it lists eligible asset classes that are consistent with a low-to-medium-risk investment strategy and does not refer to exceptions or exemptions in applying these guidelines.

Additionally, the green paper proposes that the fund invest exclusively in foreign assets. This is a sound approach given that domestic investments *through the fund's asset purchases rather than via withdrawals to the treasury* can: (1) Undermine the fund's macroeconomic objectives; (2) Undermine public financial management systems and safeguards to public spending; (3) Undermine public accountability; and (4) Lead to poor investment decisions. Essentially, this rule would prevent the establishment of a parallel, less accountable budget.²⁹

At the same time, we would suggest several areas of improvement to the government's proposed investment rules. These include:

1. Explicitly listing prohibited asset classes. While the draft lists eligible assets, it is not explicit about which assets the fund may not purchase. From an oversight and governance perspective, the decision of which assets are eligible and prohibited requires careful consideration of whether the fund has the systems in place to adopt complex or risky investment practices. If they are well understood and carefully monitored, complex instruments and strategies, such as hedging, can help manage risks and enhance returns. However, very often they introduce significant operational and default risk, incur high management fees and become tools for excessive speculation. The green paper implies some restrictions based on indices listing (e.g., MSCI World Index). However, countries with sovereign wealth funds often employ several different types of detailed constraints on investments not covered in the green paper, including:

- **Restrictions on private market instruments:** Publicly traded instruments—stocks and bonds that are traded on public exchanges—have features that are desirable from a transparency and risk perspective. The market prices them (their value can be determined at any point in time, because buyers and sellers interact through public exchanges to determine prices), trading volumes are much higher (so that there are always buyers and sellers for marketable securities) and there is little risk that a counterparty or investment partner will default. In practice, sovereign wealth funds may look to start trading only in public assets and only gradually make allocations to private assets, such as real

²⁹ Andrew Bauer, *Six Reasons Why Sovereign Wealth Funds Should Not Invest or Spend at Home*, (NRGI, 2015). www.resourcegovernance.org/blog/six-reasons-why-sovereign-wealth-funds-should-not-invest-or-spend-home-0.

estate and other alternative assets. The Norwegian Government Pension Fund Global, for example, made its first allocation to private assets (real estate) in 2011, almost two decades after the fund's inception. New Zealand and Trinidad and Tobago have managed above average returns since 2010 without any alternative assets (e.g., commodities, real estate, art) in their portfolios.

- **Restrictions on other high-risk instruments.** Over-the-counter currency derivatives (futures, options) can help protect a portfolio against risks of exchange rate movements if governments understand them well enough to use them appropriately. However, they also introduce bilateral counterparty risk because they are traded between two financial institutions rather than on an exchange. These bilateral trades are often relatively complex and opaque. The key considerations for authorizing the use of derivatives are whether the fund has the requisite technical capacity to protect itself against the risks and obligations associated with these contracts and whether the investment guidelines ensure that the derivatives are being used for hedging (insurance) rather than speculative purposes.
- **Currency restrictions.** Some countries restrict investments to assets denominated in convertible currencies or specific currencies. For example, Botswana's Pula Fund makes fixed income investments denominated in only convertible currencies, mainly the U.S. dollar, Euro, pound sterling and yen. Chile's Economic and Social Stabilization Fund may only purchase assets in U.S. dollars, Euros, yen and Swiss francs. The rationale for this type of rule is that governments can convert or trade assets denominated in convertible and abundantly traded currencies relatively quickly.
- **Restrictions on taking on debt.** Most sovereign wealth funds are prohibited from using leverage, meaning that they cannot use fund assets to borrow money to purchase additional assets. While using leverage may increase financial returns, it also creates a risk that the additional investment will lose money, risking not only that asset but also additional fund principal required to pay off creditors. These restrictions essentially prevent managers from risking large losses on public funds. Most countries also prohibit the fund itself from borrowing.

2. Consider replacing indices and asset class floors and ceilings with clear process for managing risk. The green paper proposes specific floors and ceilings for purchases of assets by class. Sovereign wealth fund investment guidelines generally include such floors and ceilings; however, they are rarely included in legislation. Investment strategies can and should change over time as sovereign wealth fund managers gain experience and knowledge of the asset management industry. As such, these might not be the most appropriate brackets at this stage of Guyana's sovereign wealth fund development, especially the 70 percent ceiling on equities and eligibility of commodities and derivatives purchases. Furthermore, oddly, corporate bonds are not listed as an eligible asset class though they are a relatively low-risk asset class.

Ideally, asset allocation would be determined following a three-step process:

Step 1. Based on an evaluation of projected revenue volatility, the risk of Dutch disease, and absorptive capacity constraints, determine what portion of the fund is to be designated for long-term savings and what portion would be for short-to-medium-term fiscal stabilization.

Step 2. Determine the return target for each of the savings and stabilization portfolios based on evaluations of political risk appetite and degree of management sophistication.

Step 3. Based on return targets, determine asset class brackets by portfolio, to be reviewed every 5-10 years by parliament.

We are particularly concerned that the eligibility of alternative assets (e.g., real estate, commodities, derivatives) generates unnecessary risk, especially at this early stage. Investing in such assets is risky, not simply in terms of returns but especially in terms of ability of external asset managers to convince sovereign wealth fund officials to purchase assets that might not serve the interests of the state. Sovereign wealth funds in Chile, New Mexico (U.S.), New Zealand, Timor-Leste and Trinidad and Tobago do not hold alternative assets, yet average returns remain robust.³⁰

We also have reservations as to the use of indices to determine asset purchases. These benchmarks are useful, even critical, tools to measure manager performance. However, they are not designed to guide asset managers in their portfolio management decisions.

3. Clarify oversight of external asset managers. Excessive risk-taking by external investment managers can create challenges. Since much of their compensation comes from management fees and they can charge higher fees for trading more complex, higher-risk financial products, external managers have an incentive to push sovereign wealth funds to invest in risky assets like derivatives. While high-risk/high-return investments may have a place within even a very conservative private institutional investor's overall portfolio, as custodians of public funds, sovereign wealth fund managers have a responsibility to safeguard assets and prevent waste or excessive risk-taking. Detailed investment rules, such as those limiting purchases of high-risk assets, can help address excessive risk-taking. However, an external management policy is also essential to prevent malfeasance and protect the fund's integrity. Guyana's sovereign wealth fund legislation could include elements on: types of assets the sovereign wealth fund will manage internally versus externally; maximum size or percentage of portfolio to be managed by a single asset manager; and qualifications of fund managers. Similar rules are included in Timor-Leste's Petroleum Fund Law, for example. This would be in addition to model contracts for external asset managers, compensation framework, a reporting framework for external managers, and selection and termination criteria, which the fund manager and operational manager would develop in the implementation phase of the sovereign wealth fund.

30 Andrew Bauer, *How Good are Sovereign Wealth Funds at Investing Money Made from Natural Resources?* (NRGI, 2018). www.resourcegovernance.org/blog/how-good-are-sovereign-wealth-funds-investing-money-made-natural-resources.

4. Refer to development of a code of conduct for all asset managers (internal and external). As a public institution entrusted with managing the sovereign wealth of Guyana, the fund derives its license to operate from the public trust in its professional conduct. To promote a culture based on ethical awareness and integrity, the board, internal and external managers and staff behavior ought to be subject to a standard code of conduct and conflict management guidelines, like other well-governed funds such as those in Abu Dhabi (ADIA), Alaska (U.S.), Alberta (Canada), Botswana, Chile, Kuwait, Norway, Texas (U.S.) and Trinidad and Tobago. The code and guidelines should include, at a minimum: professional conduct and duty of employees; legal compliance; confidential information; conflicts of interest; personal disclosures; insider trading; financial interest; political activities; travel, hospitality and gifts; bribes and corruption; money laundering and terrorist financing; duty to report wrongdoings; and self-assessments. There should also be clear consequences for malfeasance. Governments sometimes include codes of conduct such as these in legislation, however they often leave the details to regulation.

5. Consider ethical investment guidelines. While uncommon globally, at least three sovereign wealth funds have adopted guidelines on corporate responsibility (Alaska, Dubai (DIC) and Norway) and at least four have adopted ethical investment guidelines (Dubai (DIC), Kuwait, Norway and Wyoming). These rules are generally included in the fund's investment guidelines that the board of directors drafts. The Kuwait Investment Authority does not invest in sectors where gaming and alcohol-related activities constitute the main source of business. Norway's responsible investment policy calls for investments in companies that work seriously toward anticorruption objectives; pay their taxes; reasonably remunerate corporate managers; protect children's rights; manage water appropriately; and have low greenhouse gas emissions or invest in alternative energies. This policy led to divestment from six companies in 2017—four due to deforestation, one due to water usage and one tobacco company for social and governance reasons—and exclusion of 11 companies from the list of future asset purchases. The board was less active than in 2015 when the Norwegian fund divested from 73 companies. Adopting ethical investment guidelines would be in line with Guyana's Development Strategy, which calls for a green economy. We encourage the government of Guyana to include a reference to ethical investment guidelines in the green paper.

TRANSPARENCY AND OVERSIGHT

Accountability to the cabinet, parliament and the public are essential for overcoming some of the risks mentioned earlier in this paper. In practice, this means setting up an institutional structure whereby at least two organizations, one internal and one external, oversee all decisions. Internal organizations can refer to managers, internal auditors, ministries, supervisory councils or elected officials. External organizations can refer to parliament-appointed supervisory councils, independent external auditors, the media, civil society organizations or the judiciary. While the details are context-specific, there are proven strategies to ensuring that managerial structures and oversight are effective, including full transparency of fund activities and finances to the public.

The green paper reflects many of the good practices for sovereign wealth fund transparency and oversight, including alignment with many of the Santiago Principles and good governance standards described through NRG's Resource Governance Index and natural resource fund assessments. Among the strongest elements are requirements to: publish quarterly and annual reports covering deposits, withdrawals and investments; performing annual internal and external audits; parliamentary review of annual reports and approval of withdrawals; and disclosure of summary investment reports from external managers. We assume that the intent is for all these reports to be publicly available on a government website on a timely basis, and that such a requirement would be included in legislation, though this is not made explicit in the green paper.

That said, there are several potential areas for improvement:

1. List information to be publicly disclosed. The green paper and legislation could list information to be disclosed publicly through quarterly and annual reports, including: balances; board members and senior managers; external managers; significant activities and transactions; deposits and withdrawals; returns on investments by asset class; geographic location of assets; currency composition of assets; and specific asset holdings. The government should also make investment guidelines and audits public. The governments of Alaska (U.S.), Chile, Norway and Timor-Leste make all this information on their funds publicly available.³¹ As well, all reports from the Macroeconomic Committee should be published on a government website.

2. Encourage the use of external audits, especially of financial statements, by the Auditor-General. The Auditor-General could consider mandating that an internationally recognized auditing firm with experience in audits and investments conducts or co-conducts audits of the sovereign wealth fund's financials and activities. Alaska (U.S.), Chile, North Dakota (U.S.), Norway, Texas (U.S.), Timor-Leste and Wyoming (U.S.) each require that an independent external auditor that meets international standards audit their funds. While our understanding is that constitutional provisions prohibit legislated requirements to use external auditors, the Office of the Auditor-General could make clear that it intends to hire external auditors with expertise in auditing investment funds.

3. External independent oversight body. While audits and parliamentary approval of the withdrawal amount and reviewing of the annual report are necessary, the government may wish to consider additional oversight to safeguard the fund's operations and investments. For example, Ghana's Public Interest and Accountability Committee, a statutory body consisting of professional organizations and civil society leaders, supports parliament and the public by providing annual reports on the management of the country's oil and gas revenues. In other jurisdictions, such as Alberta (Canada) and New Mexico (U.S.), the government or legislature puts out regular press releases and holds information sessions to inform the media and public on fund activities and balances. Guyana may wish to consider an oversight body that monitors adherence to the fiscal rule and management of the natural resource fund. This could take the form of an independent fiscal council or a Ghana-type statutory body of independent experts. The government could also modify the mandate of the proposed Macroeconomic Committee to play this role.

31 See natural resource fund profiles at www.resourcegovernance.org/natural-resource-funds.

FISCAL RULES

The green paper rightly identifies four key risks regarding petroleum revenue management in Guyana. These are the “presource curse,” volatility, exhaustibility and Dutch disease. We wish to highlight the “presource curse”—the challenges caused by expectations of large future revenues—as one of the key challenges for Guyana today. Reports of the massive oil finds have generated hopes of imminent wealth and have compared the discoveries to the country winning the lottery.³² In such an environment, as international experience suggests, there will be increased pressures to spend on recurrent expenditures including wages and subsidies. The country will also face pressures to borrow from commercial creditors and be tempted to borrow heavily, even before large-scale production begins. Such imprudent fiscal behavior tends to backfire, as the examples of Ghana and Mozambique show, both of which fell into debt distress within a decade of large oil discoveries.³³

As production begins, the challenges of expenditure volatility, exhaustibility and Dutch disease are likely to increase in severity. In response, the government plans to establish a sovereign wealth fund and a fiscal rule. Given Guyana's expected oil boom, we agree with the diagnosis of key risks presented in the green paper and that fiscal rules and the sovereign wealth fund should form an integral part of the strategy to mitigate them. With oil production expected to start in 2020, the timing is right to legislate now.

The green paper establishes the need for a robust fiscal rule to ensure sustainable use of resource revenues. It proposes a so-called revenue rule, which sets out how much resource revenue should enter the budget and how much the government should deposit into a sovereign wealth fund. The fiscally sustainable amount rule allows for a higher proportion of spending out of oil revenues when oil production is more modest and a lower proportion when production is very high.³⁴

The green paper calculates the amounts that the government can spend using an average oil price over time, which is designed to mitigate the effects of global oil price volatility on spending permitted. There are also additional caps, which limit the maximum amount of oil revenue that can be spent: the government would not be permitted to spend beyond 25 percent of (the previous year's) non-oil revenues, nor would it be able to spend more than what is deemed economically sustainable by the Macroeconomic Committee. Once savings accumulated in the sovereign wealth fund would grow large enough, the fiscal rule proposes that the budget rely on earnings from the sovereign wealth fund rather than on oil revenues.

Notwithstanding the positive aspects, there are areas for possible improvement in the proposed rules. These are, in the order addressed further below, that the rules should be modified to: (1) better ensure fiscal sustainability and constrain borrowing; (2) more effectively smooth fiscal expenditures; (3) better address “presource curse” risks; (4) reduce excessive discretion of the Macroeconomic Committee on the economically sustainable amount; (5) reduce complexity; (6) introduce an escape clause; and (7) address earmarking of oil revenues for

32 Steven Gibbs, “Guyana Strikes it Rich With Huge Oil Discovery,” *The Times*, 8 March 2017.

33 James Cust and David Mihalyi, *The Presource Curse*, (NRGI, 2017). www.imf.org/external/pubs/ft/fandd/2017/12/cust.htm?cid=sm-com-TW

34 The green paper presents three options. Option 1 allows government to spend 2/3 under lower production, 1/2 under moderate production volumes and 1/3 when production volumes are high. Option 2 sets these ratios at 4/5, 3/5 and 2/5. Option 3 sets these ratios at 1/2, 1/3 and 1/5. In our analysis we focused on Option 1, though our policy conclusions apply equally to the alternative options.

growth-enhancing investments. We will discuss the challenges and potential areas for improvement one by one, following by a presentation of policy options.

1. Ensuring fiscal sustainability and constraining borrowing. While the revenue rule restricts how much resource revenue the government can transfer to the budget, it does not constrain how much the government can actually spend. Under the proposed rule, the government can save a portion of resource revenues in the sovereign wealth fund while borrowing and ratcheting up spending at the same time, hence failing to achieve its revenue management objectives.³⁵

Ghana, Kazakhstan and other countries have used similar revenue rules to that presented in the green paper. In each of these cases, the government has saved vast revenues in its sovereign wealth fund while borrowing. At a certain point, debt levels rose so high that the interest paid on sovereign debt was higher than the interest earned on sovereign wealth fund savings, implying that each dollar saved rather than used to pay down debt *lost* the government money. In the case of Ghana, excessive borrowing while saving led to a sovereign debt crisis that necessitated an IMF program. This resulted in sudden, severe and damaging cuts to government spending.

In short, a revenue rule without a constraint on borrowing or spending can leave a country worse off than not having a savings rule at all. In order to address this, the proposed revenue rule in the green paper could be complemented with additional rules to prevent borrowing or spending or replace them with rules that do represent a binding constraint on government finances, as Peru has done. We provide options below.

2. Smoothing expenditures: The proposed fiscal rule proposal (as detailed in Annex 2 of the green paper) sets out to stabilize government expenditures primarily by relying on the use of Benchmark Petroleum Revenues for budgeting purposes. The Benchmark Petroleum Revenues is an estimate of a given year's petroleum revenues assuming a long-term oil price. It bases the long-term price on a seven-year average (three prior, current and three future years). The proportion of oil revenues the government will spend through the budget also depends on the level of production. Three production levels are set—less than 200,000 barrels per day, between 200,000 and 400,000 barrels per day, and more than 400,000 barrels per day—each resulting in different ratio of a year's petroleum revenues that can be spent (2/3, 1/2 and 1/3 respectively).

A number of resource-rich countries use similar approaches to determine a reference commodity price for budgeting or fiscal rule purposes. Mongolia and Russia rely on historical prices; Ghana and Mexico use a combination of historical prices and estimated future prices similar to what the green paper suggests. This approach to smooth the impact of price fluctuation on revenue projections is simple and limits unnecessary discretion in these calculations.

Unfortunately, using a benchmark price does not help effectively smooth fiscal expenditures, which is one of the key aims of the fiscal rule. A benchmark price is only one input into revenue projections and serves as a poor proxy for changes in revenues. Other inputs include the fiscal terms, production levels, costs and efficiency of tax administration. In short, smoothing the price of oil is not the same

³⁵ See Premature Fund briefing: <https://resourcegovernance.org/analysis-tools/publications/premature-funds>.

as smoothing revenue. If one wishes to smooth the impact of oil revenue volatility on fiscal spending, it does not make sense to target a benchmark price but rather to target benchmark *revenue*. We would suggest that Guyana not only estimate oil prices but also total benchmark oil revenues by using a seven-year average approach (similar to how Ghana's benchmark revenues are calculated).

Moreover, non-oil revenue is generally highly correlated with oil revenue in small oil-dependent countries, meaning that even if non-oil revenue were smooth before large-scale oil production, it would likely no longer be smooth after. Some academics have termed the correlation a "synergy effect," meaning that in some contexts there are linkages between the oil sector and non-oil economy. This effect has been documented in Algeria, Azerbaijan, Bolivia, Chad, Sudan and Trinidad and Tobago, among others.³⁶ The green paper's suggested cap limiting oil revenues for the budget at 25 percent of previous year's non-oil revenues could exacerbate this problem.

Another point relates to the use of production levels to determine fiscal expenditures. The proposed fiscally sustainable amount rule may exacerbate rather than moderate expenditure volatility. A marginal increase in production at the threshold may lead to a substantial cut in fiscal spending. Similarly, a marginal increase would suddenly make more money available for public spending, potentially leading to poor investment decisions.

To better understand the economic implications of the rule, we prepared some illustrative calculations of the workings of the fiscally sustainable amount rule. We assumed a large windfall from Liza 1 (see Figure 4) and possibly Liza 2 (see Figure 5) but did not model oil or non-oil revenue volatility in these illustrations.³⁷ We found that in the early years of production and at the end of production, the binding constraint on oil revenue spending would be that the first production threshold would apply, limiting spending to 2/3 of oil revenues calculated using the benchmark price (represented by "I." in the charts). Once investors recover their costs and revenues accruing to the government increase substantially, the binding constraint is 25 percent of non-oil revenues in the prior year (a highly volatile numerator) (represented by "II." in the charts). In case of a favorable oil boom scenario with sustained high levels of production, this is likely to remain the main binding constraint, assuming that the government does not circumvent the rule by indebting itself. Once savings in the sovereign wealth fund become quite large, Guyana would draw on sovereign wealth fund income, so the binding constraint would be 3 percent of the fund's value (represented by "III." in the charts).

36 Justine Knebelmann, *Natural resources' impact on government revenues*, WIDER Working Paper 2017/10, (UNU-WIDER, 2017). www.wider.unu.edu/sites/default/files/wp2017-10.pdf; Fakhri Hasanov et al., *The effects of fiscal policy on non-oil economic growth*, (MDPI, 2018); Imène Laourari and Farid Gasmî, *The impact of real oil revenue fluctuations on economic growth in Algeria: evidence from 1960-2015 data*, (MPRA, 2016). mpra.ub.uni-muenchen.de/77590/1/MPRA_paper_77590.pdf; Guillermo Perry and Sebastien Bustos, *The effects of oil and mineral taxation on noncommodity fiscal revenues*, IDB-WP-348, (IDB, 2012).

37 See previous section for oil sector assumptions using OpenOil's model. Additional assumptions: No borrowing; fiscally sustainable amount rules are applied on saving; non-oil revenues grow at four percent GDP; all figures in real 2018 terms.

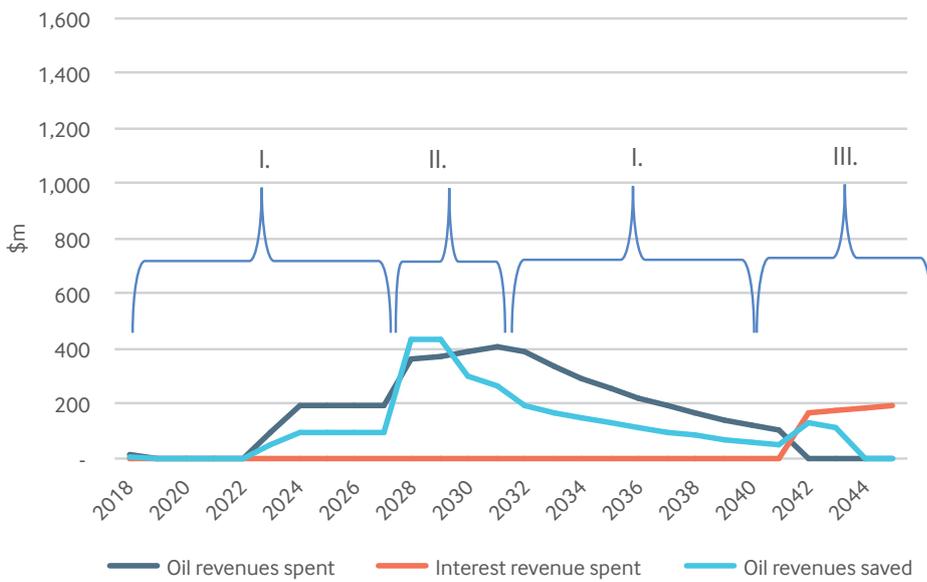


Figure 4. Allocation of Liza 1 oil revenues under the proposed fiscally sustainable amount rule

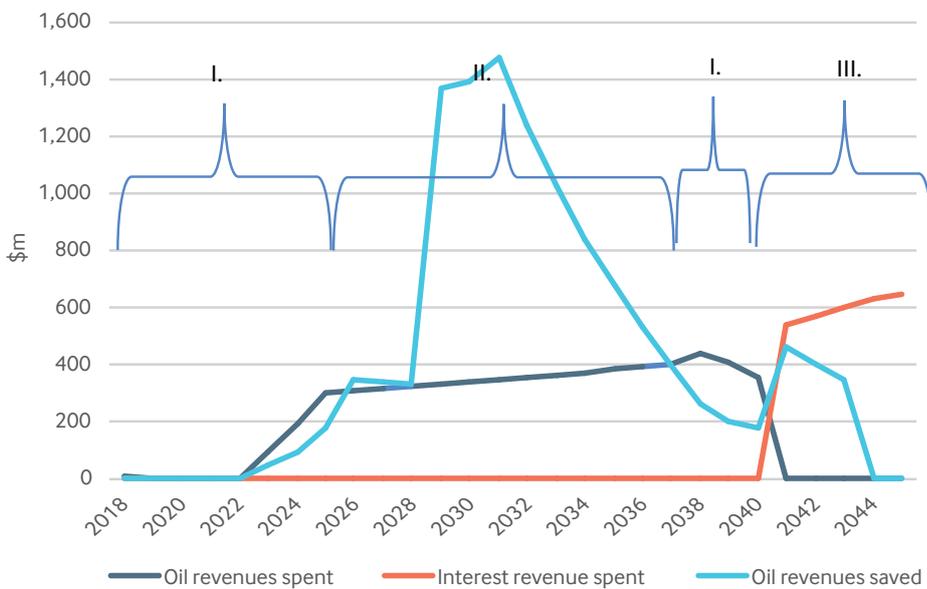


Figure 5. Allocation of Liza 1 and 2 oil revenues under proposed fiscally sustainable amount rule

As one can see from the charts, the proposed system leads to arbitrary increases and decreases in oil revenue spending at the different thresholds. That said, the modelling actually underestimates the volatility of fiscal spending for four reasons: (1) As mentioned, the spending constraint in some periods is based on oil production rather than oil revenues, thus an oil price shock can lead to a sudden shift in spending even if oil production remains constant; (2) Oil production can be volatile, especially if there is an environmental event like a hurricane that stops production or the rig is in need of repairs, thus production-based brackets may cause excessive volatility in available spending in given years; (3) The model does not incorporate borrowing, thus it reflects only fiscal spending *out of oil revenues* rather than fiscal revenues generally; and (4) Non-oil revenue is highly volatile in small, open, low-income diversified economies like Guyana and is correlated with oil revenues in oil-dependent countries, thus using non-oil revenue as a numerator in a fiscal rule is likely to exacerbate spending volatility.

All this matters a lot since fiscal volatility is perhaps the most important factor determining whether Guyana will spend its oil wealth efficiently on productive infrastructure and social programs or will spend on wasteful legacy projects such as stadiums, unnecessary roads or fountains. A fiscal rule that smooths year-to-year spending regardless of oil revenues is crucial.

Finally, similar to the point above, there is nothing in the fiscal rule constraining the government from borrowing. Thus, without addressing that issue, even if the other design flaws corrected, the rule might still not smooth fiscal expenditures.

To summarize, there are four reasons that the proposed fiscal rule is unlikely to smooth fiscal expenditures: The use of a benchmark price rather than benchmark revenue; lack of consideration of non-oil revenue volatility; the use of production levels to determine spending; and the lack of constraints on borrowing or rapid increases in general government expenditures. Several options are available to mitigate the negative impacts of oil revenue volatility on public spending, including imposing an expenditure smoothing rule (e.g., maximum 4 percent increase in recurrent spending annually) or enacting a debt growth rule in combination with a revenue rule that utilizes benchmark revenues using an estimated seven-year moving average of oil revenues. We would also suggest dropping the 25 percent oil to non-oil spending constraint, which exacerbates volatility and greatly limits spending under some scenarios.

3. Addressing the “presource curse.” Current estimates put the start of production for the year 2020 with larger windfalls in the second half of the decade. Yet, there is a risk of delays due to planning problems, financial problems or disputes between parties involved. This leaves the government open to pressures to increase spending on wages and subsidies, while petroleum revenues remain negligible. Furthermore, government borrowing has taken off since 2016.³⁸ As of June 2018, government debt totaled USD 1.63 billion—representing approximately 50 percent of GDP—of which 77 percent was owed to foreign creditors.³⁹ The average interest paid in 2017 was 4.3 percent, costing taxpayers USD 72 million last year.⁴⁰ While some borrowing is on concessional terms, much of the country’s historic debt and some new debt, for example, the 2018 approximate USD 140 million loan to recapitalize the Guyana Sugar Corporation, was purchased based on market rates.⁴¹ The risk of over-borrowing is likely to increase as the country heads into an election in 2020. The government has already signaled its intention to borrow more.⁴²

Continuing to borrow based on uncertain projections risks undermining the framework laid out for long-term use of petroleum revenues. In order to avoid these pitfalls, the government could lay out a fiscal rule with clear targets as to how it plans to spend on recurrent expenditure in the years ahead of a major windfall (i.e. prior to 2025). Guyana could do this through a cap on recurrent expenditure growth (as in Peru) or on wage growth, as well as a cap on capital spending in line with our options below.

38 www.bankofguyana.org.gy/bog/images/research/Reports/Dec2017.pdf#page=74

39 Cooperative Republic of Guyana, *Public Debt Report: Quarterly Statistics* (June 2018). finance.gov.gy/publications/reports/

40 finance.gov.gy/wp-content/uploads/END-OF-YEAR-OUTCOME-2017.pdf

41 Cooperative Republic of Guyana, *Public Debt Report: Quarterly Statistics* (June 2018). finance.gov.gy/publications/reports/; <https://guyanatimesgy.com/we-must-borrow-jordan-on-public-debt/>

42 guyanatimesgy.com/we-must-borrow-jordan-on-public-debt/

4. Reducing excessive discretion of Macroeconomic Committee on economically sustainable amount. The green paper sets out to establish an expert committee, the Macroeconomic Committee, to oversee effective functioning of the fiscal rule. The Macroeconomic Committee would set a ceiling on withdrawal from the fund based on economic conditions (the economically sustainable amount).

Expert committees can play a very important role in supporting the functioning of fiscal rules. For example, they can monitor that the government is following fiscal rules or sound the alarm when they see risks to fiscal sustainability. In the case of Chile, they also provide critical inputs in setting fiscal targets by providing future growth and copper price estimates. As set out in Chile's fiscal rules, the experts provide their estimates independently, which they then average (after excluding lowest and highest estimate) and then apply to a formula to calculate the fiscal target.⁴³

In contrast, in Guyana's case the fiscal rule provides only vague guidance on how the green paper authors expect the expert committee to set the economically sustainable amount. The economically sustainable amount would act as a more restrictive ceiling on spending than the numerical fiscal rules, which would require when the committee decides that macroeconomic circumstances warrant restraint. Under the proposal, the committee does not have the authority to allow more spending than the fiscally sustainable amount ceiling set by the numerical rule.

How much oil revenue the economy can absorb is a very contentious and difficult question. Deriving an exact number deemed economically sustainable based on the variables listed in the green paper (inflation, real exchange rate, balance of payments, non-oil growth, external debt and spending composition) is virtually impossible. Any conscientious approach would likely require substantial calculation into one single amount deemed economically sustainable. A committee with no staff or remuneration may not be prepared to provide yearly ceilings on spending. There is also not one consensual analytical approach to calculate absorptive capacity and risk of Dutch disease. Therefore, the committee is likely to strongly disagree on the matter, making deliberation very difficult. Moreover, forcing elected government and parliament to spend less than it plans may raise legitimacy questions and political problems. Parliament is fully capable of reducing fiscal spending below that which any fiscal rule would allow without requiring a Macroeconomic Committee.

Therefore, we have great reservations as to how the Macroeconomic Committee may be able to deliberate on this important question. We recommend that this independent body of experts instead be tasked with providing independent revenue forecast for benchmark calculation, approve of the temporary suspension of fiscal rule in the eventuality of *force majeure*, and monitoring the functioning of the rule. Examples of similar bodies include Chile's Advisory Committee for Trend GDP and Ghana's Public Interest and Accountability Committee. We also recommend eliminating the economically sustainable amount element from the fiscal rule.

43 Klaus Schmidt-Hebbel, *Fiscal Policy for Commodity Exporting Countries: Chile's Experience*, Documentos de Trabajo 415 (Instituto de Economía, Pontificia Universidad Católica de Chile, 2012). ideas.repec.org/p/ioe/doctra/415.html.

5. Reducing complexity. The numerical revenue rule in its current form is rather complex. There are seven different ceilings, which determine the fiscally sustainable amount, which is the core element of the revenue rule. Additionally, there is a discretionary and complex economically sustainable amount element. The rule is also so complex that it is unlikely that independent monitors, whether in parliament, civil society or the media, would be able to judge compliance. Thus, enforcement is likely to be weak. Other jurisdictions, such as Peru and Wyoming (U.S.), have enacted simple, easy-to-understand rules that achieve the macroeconomic objectives outlined in the green paper. We recommend a significantly simpler fiscal rule, as described below.

6. Adding an escape clause. The proposal discusses volatility induced by the oil sector, which will clearly become the dominant source of economic fluctuations. However, it will by no means be the only one. Natural disasters, regional or global economic turmoil and domestic economic problems may potentially require the use of funds to prevent major catastrophes. Negative changes in the oil sector's outlook could also lead to problems for the non-oil economy.

International experience suggests that in difficult economic times, governments violated, revised or discarded fiscal rules in the majority of cases.⁴⁴ Even Chile, a country known as exemplary for the use of its prudent and flexible fiscal rule, revised its fiscal rule to allow for more spending after it was hit by a tsunami and an earthquake in 2010.

Via their structural balanced budget rules, Chile and Norway have automatic escape mechanisms. However, several other countries have included explicit escape clauses in their fiscal rules, including Brazil, Colombia, Jamaica, Mexico, Panama, Peru, Russia and Timor-Leste. In each case, governments may circumvent the fiscal rule due to exceptional circumstances for a single year at a time. The justifications for such escapes are often defined as a state of emergency or economic crisis. While in some cases, the Minister of Finance must simply justify the reason to parliament (e.g., Jamaica, Timor-Leste), in others, the government can only invoke the escape clause with parliamentary approval (e.g., Brazil, Peru).⁴⁵

In order to build a lasting fiscal rule, it is best to prepare for the worst eventualities. Therefore, we recommend incorporating a well-defined escape clause in the case of major shocks and procedural guidance on how the government may revise rule targets in a transparent and open manner. The fiscal rule should detail the conditions, which may warrant the temporary suspension of fiscal rules, such as clearly defined national emergency or economic crises. The cabinet would then need to seek the Macroeconomic Committee's approval and a two-thirds majority in parliament for any temporary suspension of the rule and present a plan for returning to the rule once the causes for departure are resolved.

44 Mihalyi and Fernandez, *How Did Fiscal Rules Hold up in the Commodity Price Crash?*

45 Lledo, "Fiscal Rules at a Glance."

7. Earmarking oil revenues for investment. In order for future generations to benefit to the same degree as present generations from Guyana's oil wealth, the government must invest proceeds from oil production in education and productive infrastructure. Guyana may wish to heed the lessons of over-consumption at the expense of investment as we have seen in Azerbaijan, Nauru and Yemen. Though the green paper discusses the importance of directing the resource revenues allocated to the budget toward priorities identified in the national development strategy, there are no safeguards to ensure that this happens. Even if the government commits to spending oil money on certain priorities, there is also a risk that non-oil allocations on these items decrease, implying no net change in spending on development priorities.⁴⁶ The government could report annually on total spending allocated toward developmental priorities and ensure that net spending on these projects increases over time. Alternatively, Guyana could impose a symbolic Malaysia-style "golden rule" whereby oil revenues must be spent on investments for future generations, including scholarships, schools and productive infrastructure.

Recommendations

We propose that Guyanese officials consider altering the fiscal rules presented in the green paper so that they:

- 1 represent binding constraints on government finances
- 2 smooth year-to-year fiscal expenditures
- 3 are easy to understand and enforce
- 4 balance today's needs for spending on development priorities against the financial requirements of future generations, taking into account absorptive capacity constraints.

We suggest one of the following options replace the fiscal rules in the green paper:

Option 1. Replace the proposed fiscal rules with a limit on current primary expenditure growth (e.g., x percent annually in real terms). Capital expenditures could be capped at a certain percentage of benchmark revenues (e.g., x percent of a seven-year average of fiscal revenues plus interest earned on sovereign wealth fund investments) and spent according to a costed national development strategy.

Option 2. Maintain the fiscally sustainable amount's spending of two-thirds of benchmark revenues calculated by the Macroeconomic Committee or independent external entity and, once the fund is large enough, limit spending to a five-year average of interest on the fund. Also eliminate all production-based ceilings and the 25 percent fiscally sustainable amount ceiling based on non-petroleum revenues. Add a limit on current primary expenditure growth (e.g., 3 percent annually in real terms).

⁴⁶ This is referred to as the "fungibility problem."

Option 3. Same as Option 2 but instead of a limit on current primary expenditure growth, enact a cap on government wage growth and introduce a non-concessional debt growth rule.

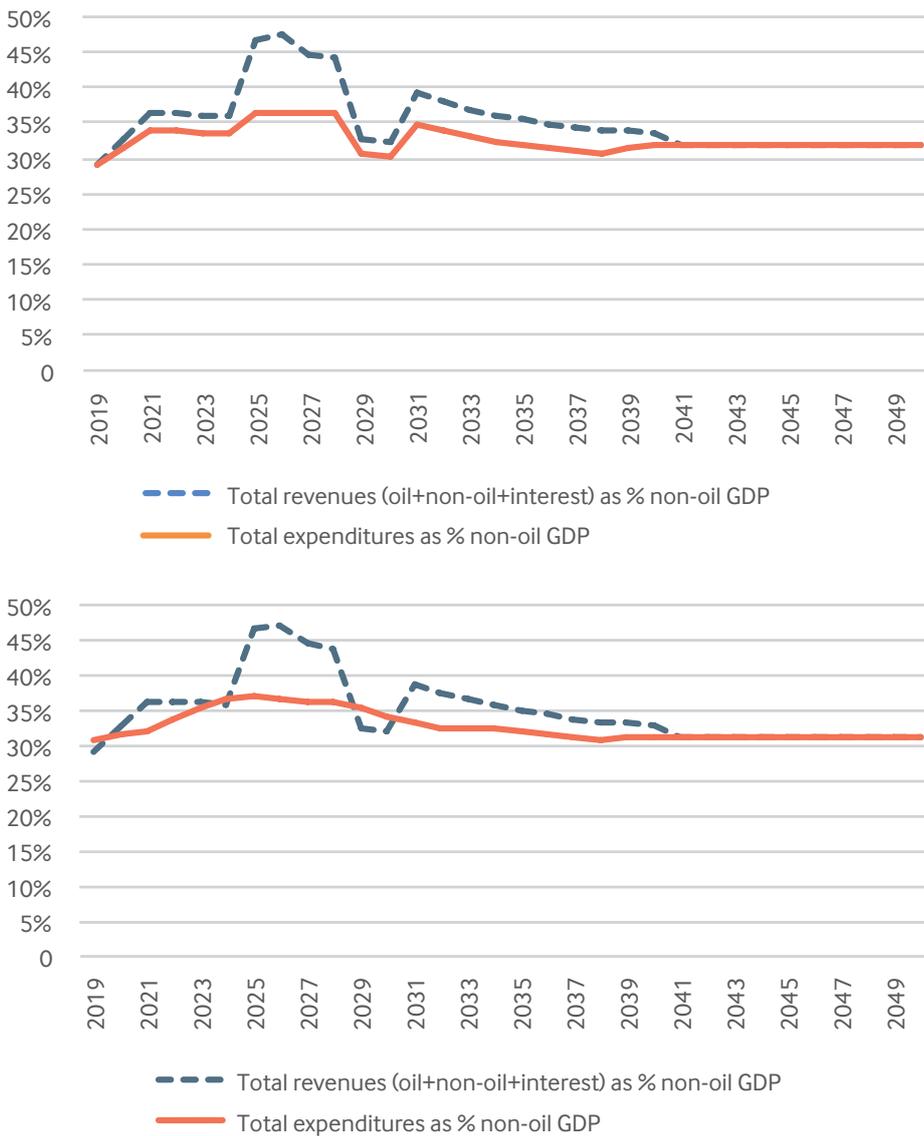
To illustrate the implications of our options compared to the current proposal, we present a simplified model of the effects of a single oil revenue shock in 2029/30 on revenues derived from Liza I. As can be seen in Figure 6, the current fiscal rule proposal forces the government to cut spending out of oil revenues when revenues drop suddenly. Since the rule does not allow the government to draw down on fund savings at this point, the expectant result would be either: (1) a ratcheting up of debt to cover the shortfall; or (2) unexpected or potential harmful cuts in spending. In fact, this is likely an underestimate of the true negative impacts of the revenue drop on the economy since lower government spending has negative multiplier effects on non-oil GDP.

Such expenditure volatility is likely to harm Guyana's long-term growth prospects as it creates incentives to spend funds poorly.⁴⁷ Volatility greatly increases the chances that the next generation of government finances will be characterized by profligate spending on wasteful projects, occasional fiscal crises and a ratcheting up of public debt levels. The quality of public investment could suffer, squandering Guyana's opportunity to use its oil resources to grow the economy sustainably.

Figure 7 illustrates that, under Option 2, an unexpected drop in oil revenues does not lead to a sudden drop in spending. Rather, it smooths spending during oil revenue shocks. This would allow the government to continue financing the national development plan even when oil prices or production decline. It has the added benefit of promoting fiscal sustainability by limiting recurrent expenditure growth and thereby controlling the impulse to borrow on favourable terms during the oil boom.

The annex illustrates further implications of the green paper proposed rule and the Option 2 rule by modeling, for each fiscal rule, oil revenue spending and balance of the fund under different scenarios for Liza I and II.

47 See Serven, 1998; Perry, 2008; Ramey and Ramey, 1995; Fatas, 2002; Pallage and Robe, 2003.



Figures 6 and 7. Impact of an oil revenue shock on oil revenue spending under proposed fiscal rule and Option 2

While each of our options presented above has its advantages and disadvantages—for instance, debt rules are more difficult to enforce than expenditure rules—any of the three options achieve the four objectives listed above (represent binding constraints on government finances; smooth year-to-year fiscal expenditures; are easy to understand and enforce; and balance today’s needs for spending on development priorities against the financial requirements of future generations). Our aspiration is that the government considers one of these alternatives or another rule that would achieve the same ends. NRGi is prepared to submit a comprehensive analysis of different fiscal rule options should the government of Guyana request such a document, as we have done recently for the governments of Mongolia and Uganda.⁴⁸

48 See www.resourcegovernance.org/sites/default/files/documents/uganda_policypaper_web20140505.pdf and www.resourcegovernance.org/analysis-tools/tools/mongolia-macro-fiscal-model.

We also reiterate the recommendations related to the fiscal rules from the discussion above:

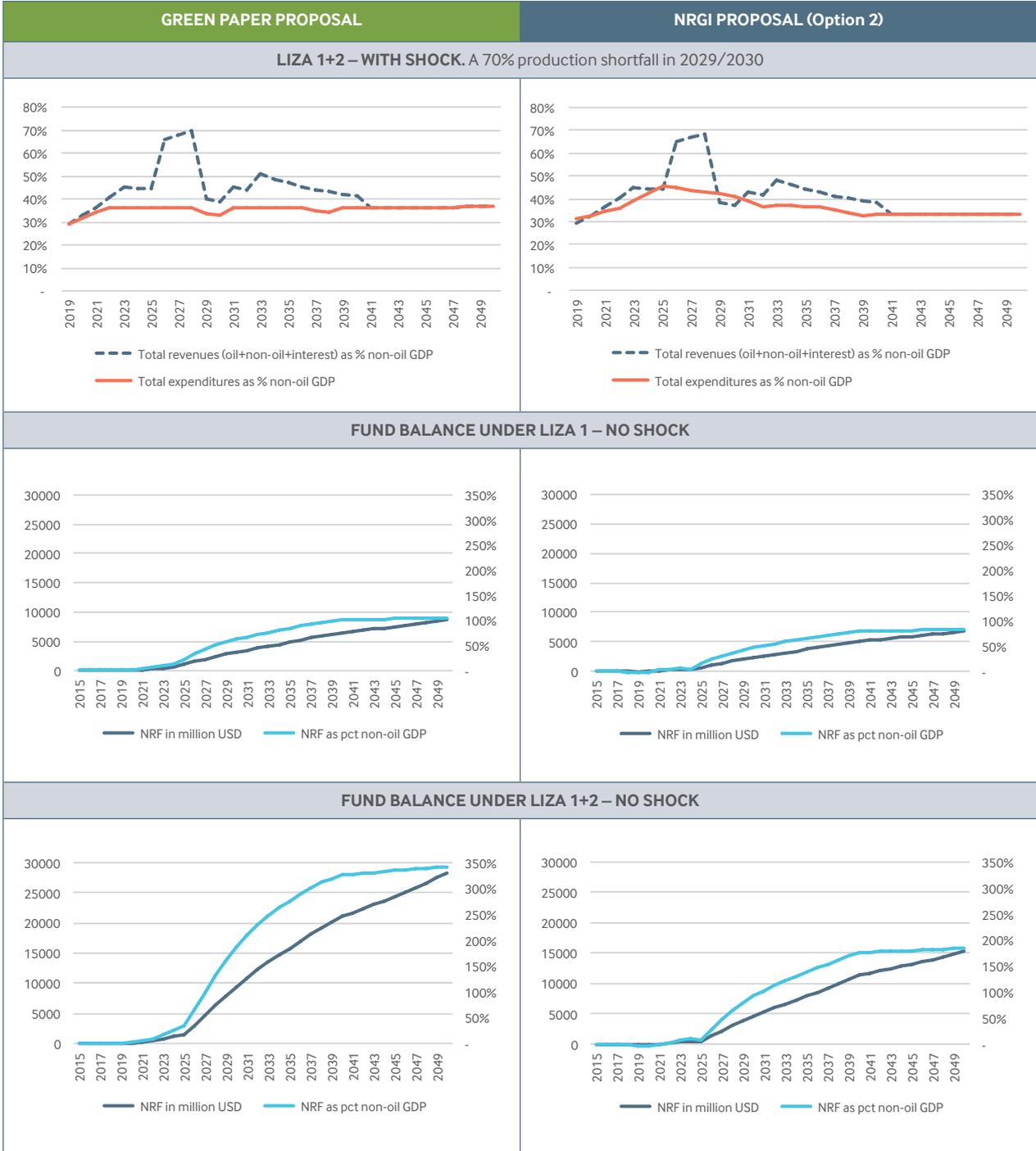
- Should the fiscally sustainable amount rule be maintained, the benchmark revenue calculation ought to be based on a seven-year moving average of petroleum revenues rather than prices alone, as is done in Ghana. The Macroeconomic Committee using independent external inputs including price, production and cost information could calculate projected revenues independently.
- Eliminate the 25 percent oil to non-oil spending constraint since non-oil revenues are volatile and correlated with oil revenues in small open oil-dependent countries, therefore this rule could exacerbate expenditure volatility.
- Eliminate the arbitrary and discretionary economically sustainable amount from the fiscal rule.
- The government could report annually on total spending allocated toward developmental priorities and ensure that net spending on these projects increases over time. Alternatively, Guyana could enact a symbolic Malaysia-style “golden rule” whereby oil revenues must be spent on investments for future generations, including scholarships, schools and productive infrastructure.
- The green paper authors could reformulate the role of the Macroeconomic Committee to make independent revenue projections, approve exemptions to the fiscal rule in cases of national emergency or economic crisis and monitor adherence to fiscal rules.
- Incorporate well-defined escape clauses and procedural guidance on how the government may revise rule targets in a transparent and open manner in the case of major shocks.
- The government could publish its own simulations of revenue accumulation in the natural resource fund and yearly spending under various scenarios, including scenarios with revenue volatility.

CONSENSUS BUILDING

Consensus building is critical to the success of any sovereign wealth fund or fiscal rules, as politicians and oversight bodies are unlikely to enforce the rules unless they have a feeling of ownership over them. There are many models of consensus building, from parliamentary debates to public surveys to political ententes. In Ghana and the Northwest Territories (Canada), the ministries of finance toured the country before the establishment of their funds to request citizen views on the management of natural resource revenues. In Norway, the political parties negotiated the fiscal rules so that each would abide by the rules once they entered government. We would encourage the government of Guyana to follow suit and engage in a cross-country consensus-building exercise before establishment of the fund.

Annex





Bibliography

- Baksa, Daniel, David Mihalyi and Balazs Romhanyi. *Mongolia Macro-Fiscal Model: Model Guide*. Natural Resource Governance Institute, 2017. www.resourcegovernance.org/analysis-tools/tools/mongolia-macro-fiscal-model
- Bauer, Andrew. (2014) (ed.) *Managing the Public Trust: How to make natural resource funds work for citizens*. Natural Resource Governance Institute-Columbia Center on Sustainable Investment (Columbia University). www.resourcegovernance.org/sites/default/files/NRF_Complete_Report_EN.pdf.
- Bauer, Andrew. "Playthings and Parallel Budgets: Sovereign Wealth Fund Economic and Governance Performance" in *The New Frontiers of Sovereign Investment* (eds. Malan Reitveld and Perrine Toledano). Columbia University Press, 2017.
- Bauer, Andrew. *Subnational Oil, Gas and Mineral Revenue Management*. Revenue Watch Institute, 2017. www.resourcegovernance.org/sites/default/files/RWI_Sub_Oil_Gas_Mgmt_EN_rev1.pdf
- Bauer, Andrew and David Mihalyi. *Premature Funds: How Overenthusiasm and Bad Advice Can Leave Countries Poorer*. Natural Resource Governance Institute, 2018. www.resourcegovernance.org/analysis-tools/publications/premature-funds
- Baunsgaard, Thomas et al. *Fiscal Frameworks for Resource Rich Developing Countries*. IMF, 2012. www.imf.org/external/pubs/ft/sdn/2012/sdn1204.pdf
- Castelli, Massimiliano and Fabio Scacciavillani. *The New Economics of Sovereign Wealth Funds*. Wiley, 2012.
- Collier, Paul and Anthony J. Venables. *Plundered Nations? Successes and Failures in Natural Resource Extraction*. Palgrave Macmillan, 2011.
- Cust, James, Frederick and David Mihalyi. *Evidence for a Resource Curse? Oil Discoveries, Elevated Expectations, and Growth Disappointments*. World Bank Policy Research Working Paper No. 8140, 2017.
- Das, Udaibir S., Adnan Mazarei and Han van der Hoorn. *Economics of Sovereign Wealth Funds: Issues for Policymakers*. IMF, 2010.
- Johnson-Calari, Jennifer and Malan Rietveld. *Sovereign Wealth Management*. Central Banking Publications, 2007.
- IMF (2018) Guyana: 2018 Article IV Consultation - Staff Report. www.imf.org/en/Publications/CR/Issues/2018/07/16/Guyana-2018-Article-IV-Consultation-Press-Release-and-Staff-Report-46083.

Lassourd, Thomas and Andrew Bauer. *Fiscal Rule Options for Petroleum Revenue Management in Uganda*. Revenue Watch Institute, 2014. www.resourcegovernance.org/publications/fact_sheets/how-can-ugandans-benefit-oil-windfall-policy-options-manage-petroleum-reven.

Mihalyi, David and Liliana Fernández. *How Did Fiscal Rules Hold Up in the Commodity Price Crash?* Natural Resource Governance Institute, 2018. www.resourcegovernance.org/analysis-tools/publications/how-did-fiscal-rules-hold-commodity-price-crash.

OpenOil Starbroek Oil Field, Guyana Model and Narrative Report. 2018. openoil.net/2018/03/15/guyanas-oil-deal-is-outlier-low-government-takes-just-over-half/.

Pallage, Stéphane and Michel A. Robe. "On the Welfare Costs of Economic Fluctuations in Developing Countries" in *International Economic Review*, Volume 44, Issue 2, May 2003.

Perry, Guillermo E. "Fiscal Rules and Procyclicality" in *Fiscal Policy, Stabilization, and Growth: Prudence or Abstinence* (eds. Guillermo Perry, Luis Servén and Rodrigo Suescun). World Bank, 2008.

Servén, Luis. *Macroeconomic Uncertainty and Private Investment in LDCs: An Empirical Investigation*. Working Paper. World Bank, 1998.

Truman, Edwin. *Sovereign Wealth Funds: Threat or Salvation?* Peterson Institute for International Economics, 2010.

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