Comments on IMF Natural Resources Wealth Management Paper

Revenue Watch, April 2012

Introduction

Oil, gas and mineral revenues have four distinctive characteristics that should inform their management:

- **Temporary windfall:** Since extractive resources' are non-renewable nature, extraction today prevents future generations from benefiting from derived revenues.
- **Volatility:** Oil, gas and mineral revenues are particularly volatile as a result of both price volatility and, in some countries, social / political conflict induced production uncertainty.
- **Macroeconomic effects:** Large capital inflows from extractive resource sales can have significant impacts on the real effective exchange rate (REER), both in terms of greater nominal exchange rate and inflation volatility and REER appreciation, which can lead to Dutch Disease.
- **Political economy effects:** Temporary windfall profits are often treated by governments as permanent, while permanent declines in revenue are often treated as temporary. This phenomenon often leads to pro-cyclical spending, unsustainable increases in public debt and over-dependence on natural resource revenues. Natural resource revenues are also associated with a high incidence of rent seeking and a shift in power within a country in favor of those involved in boom sectors (e.g. petroleum; mining; construction).

Each of these characteristics provides a justification for saving resource revenues:

- Since revenues are temporary, there is a reason to save revenues over the long-term to promote inter-generational equity.
- Smoothing expenditure volatility requires accumulating savings in the short- to medium-term for use when there is a revenue shortfall.
- Saving resource revenues and investing them in foreign assets can help sterilize capital inflows
- The effects of negative price or production shocks can be mitigated if there is a domestic source of precautionary savings; precautionary savings have the added benefit of reducing reliance on IFIs in the event of a natural, financial or balance-of-payments crisis.

The questions policymakers must therefore ask, in order, are:

- How much fiscal space should governments be provided to meet national development objectives (e.g. low unemployment; high growth; sustainable fiscal balance; poverty reduction)?
- Should fiscal space be dictated by a fiscal rule? If so, which rule?

- Given the fiscal envelope, what should be the allocation between domestic public investment, domestic 'consumption' (e.g. lower taxes; higher recurrent public expenditure; direct distribution of revenues to citizens) and reduction of public debt?

This paper will briefly cover the first two questions. Revenue Watch comments rely on a body of research and technical assistance support to oil, gas and mining rich countries including:

- Fool's Gold: Assessing the Performance of Alternative Fiscal Instruments During the Commodities Boom and the Global Crisis (Heuty and Aristi, 2010)
- Comments on Ghana's Petroleum Revenue Management Bill (Bell, Heller and Heuty, 2010)
- Comments on Uganda's Public Finance Bill- Part VII(RWI, 2012)

I/ Anchor for fiscal policy

RWI's research and experience suggests that a one-size-fits-all approach to fiscal anchors – namely adherence to the Permanent Income Hypothesis (PIH) or a version thereof to determine the appropriate fraction of resource revenues to be saved – fails to promote either national development objectives or prevent balance-of-payments crises in Low Income and Lower Middle Income Countries (LICs/LMICs). The first reason is that the PIH assumes that all countries have the same social rate of return on domestic investment, namely equal to the rate of return on foreign asset investments. In other words, it assumes that there is no tradeoff in welfare between investing domestically and investing overseas. In fact, many low-income countries have a much higher domestic rate of return, especially on public infrastructure and human capital investment, than the return on a bundle of low-to-medium risk foreign assets, particularly in this era of low global interest rates.

The second reason is that a PIH-rule is, in LICs and LMICs, usually politically unfeasible. In Timor-Leste, for example, adherence has proven to be unsustainable given the tremendous domestic investment needs combined with its stringency. The political difficulties inherent in saving a very large percentage of resource revenues in a low-income country with high poverty rates can lead to a backlash that encourages over-spending or artful circumvention of the fiscal rule. Since fiscal rules' effectiveness is a function of political buy-in and the strength and capacity of oversight bodies, it may be preferable to adopt a more flexible rule that is widely supported by citizens, parliament and policymakers.

That said, objective indicators should inform the process of deciding on a fiscal anchor. Below are some suggestions.

1. **Absorptive capacity:** The greater a government's capacity to analyze new information and revenues and transform them into tangible benefits for citizens, from roads to trained teachers to social welfare programs, the larger the fiscal space should be to accomplish those goals. *Suggested Indicators: Public investment execution rates; quality of public investment projects; education indicators; macroeconomic stability indicators; WEF governance indicators.*
2. **Potential absorptive capacity:** Governments, like businesses, learn by doing. Current lack of absorptive capacity should not limit fiscal space if there is an indication that the government's capacity to invest effectively will improve over time. *Suggested Indicators: Trend in absorptive capacity indicators.*

3. **Social rate of return on public investments:** High social return on domestic public investments, as measured in terms impact on aggregate output in the short-, medium- and long-term, warrants greater domestic investment and less foreign investment. That said, the social rate of return must be measured on a project-by-project basis, which can be quite difficult.
4. **Expected rate of return on foreign investments:** High interest rates on foreign investments increase the return on savings, justifying greater savings and less spending. *Suggested Indicators: Interest rates on US Treasuries.*
5. **Debt sustainability projections:** An unsustainable debt path requires fiscal space to pay down the principal.
6. **Resource depletion rate:** Since resources in the ground are an asset, depletion, in its first instance, implies replacing a fixed asset, essentially a saved asset, with a liquid asset, namely cash. As a consequence, faster depletion without appropriate absorptive capacity simply transforms savings into consumption, demanding less fiscal space. Slower depletion, being more conducive to "scaling up" spending, would indicate a need for greater fiscal space. *Suggested Indicator: 5-year average production volume as a percentage of proven reserves.*
7. **Absolute poverty rates:** High poverty rates provide a justification for increasing domestic investment *and* consumption. *Suggested Indicators: Percentage of the population living off less than $1.25 or $2 a day (PPP).*
8. **Potential for and history of negative fiscal or financial shocks:** The larger the probability of negative shocks, the greater the need for precautionary savings. The adverse implications of relying on international financial institutions for liquidity support in cases of balance-of-payments or financial crises can be greater than the efficiency losses associated with large precautionary savings.

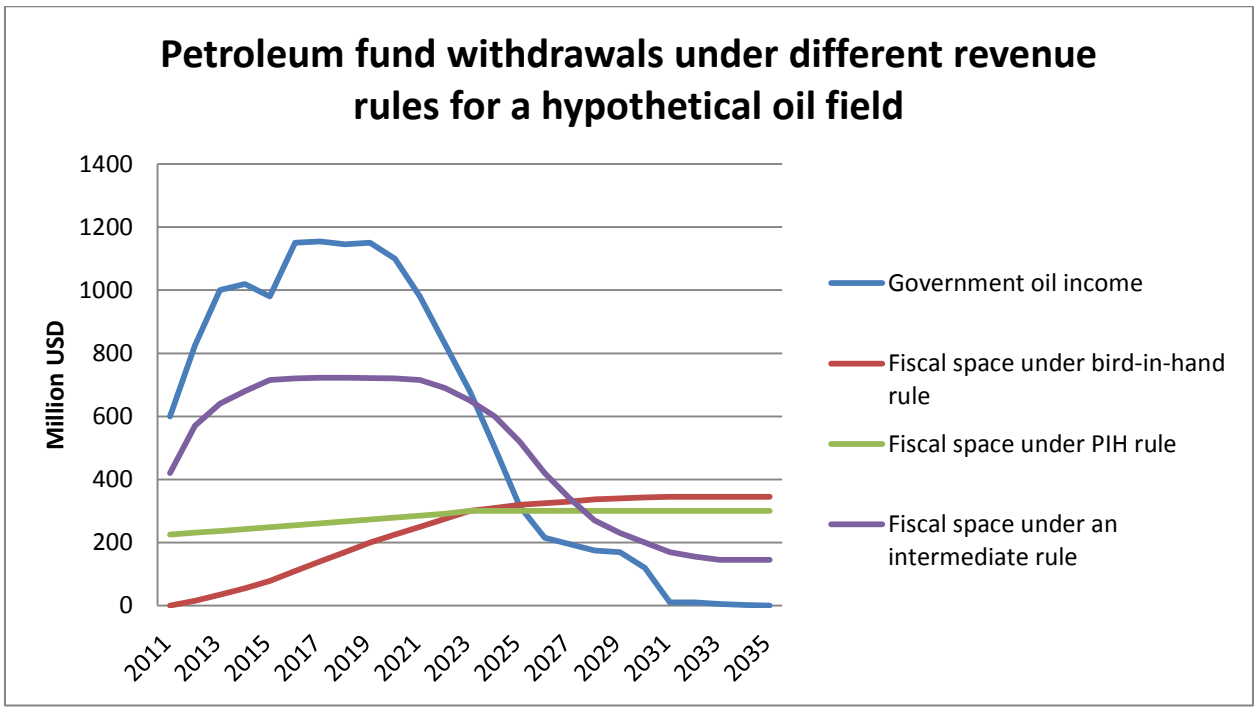
II/ Fiscal Rules and Resource Funds

Once an appropriate degree of fiscal space has been established, countries may wish to limit political discretion to deviate significantly from an agreed-upon saving-spending ratio. The IMF has pointed out that rules-based fiscal policy is generally associated with better fiscal performance. Yet a purely 'technocratic' approach to determining fiscal rules -through generic modeling or by economic theory - appears undesirable and impractical. First, given the lack of robust indicators of absorptive capacity and social rate of return, it is unlikely that a useful model can be developed in the near-term. Second, the effectiveness of fiscal rules to constrain governments is dependent on building a political consensus among policymakers and the general public, especially in a democracy. They must be a reflection of political realities, such as public demand for poverty alleviation or fiscal responsibility. The wide public consultation organized by the Government of Ghana around the Petroleum Revenue Management Act offers a good example of consensus building.

An alternative to the development of norms and standards for all resource-dependent countries is to develop fiscal space "bands" (e.g. 40-50% of oil revenue to be made available to the consolidated fund in any given year; 4-6% of oil wealth to be made available to the consolidated fund in any given year) based on a country-by-country assessment of an appropriate saving-spending ratio using the above indicators. This band would then inform the development of fiscal rules.

Ghana undertook this type of process prior to enactment of the Petroleum Revenue Management Act. Based on extensive public consultation and inputs from experts, the Ghanaian parliament chose to allocate a maximum of 70% of "benchmark revenue", estimated petroleum revenue based on a 7-year price average, to the consolidated fund, known as the Annual Budget Funding Amount (ABFA), and save the remaining minimum 30%. The 70-30 spending-saving split is a reflection of relatively small oil revenues as percentage of general government revenue, significant domestic investment needs and the government's absorptive capacity.

The Ghanaian case is an example of a revenue rule that limits the amount of public revenue that can enter the budget. The revenue rule ensures that a given amount of revenue, in this case min. 30% of benchmark revenue, is saved for the benefit of future generations. Short- and medium-term revenue volatility is also mitigated by the use of 'benchmark revenue' and a Stabilization Fund that ensures that ABFA payments to the budget are balanced every quarter.



Source: Drawn from IMF; own calculations

Resource Funds

An operational fiscal rule implies that there will be periods of time when revenues will surpass the revenue limit and need to be saved. In this case, governments must decide where to save this surplus.[1] One option is saving domestically by converting savings into domestic assets to be held with the central bank, private domestic banks

[1] This paper assumes that in LICs/LMICs, most other uses of fiscal surpluses are impractical. For example, taxes cannot be reduced since the tax base is generally limited and lower taxes for the short period when resource revenues are high creates uncertainty for businesses and citizens. Similarly, expenditure increases may be inappropriate in resource-rich environments where volatility / inter-generational equity are an issue and temporary expenditure increases can promote pro-cyclical fiscal policy / sharp cuts in public expenditure when revenues decline. One practical option could be to use temporary windfalls to reduce public debt in countries on unsustainable debt paths; however this paper does not focus on public debt issues.

or a state-owned corporation, such as a development bank. For example, Mongolia has recently chosen to deposit a portion of its mineral wealth in a state-owned development bank. While investing in financial assets domestically may provide capital for domestic private investment, risks include low-return relative to investment in foreign assets and that public investment through extra-budgetary processes may encourage nepotism and waste.

A second option is to invest in foreign assets, either on an *ad hoc* basis or using a natural resource fund (NRF) / sovereign wealth fund (SWF). Investing in foreign assets can help sterilize capital inflows, may be less risky than domestic investment, and can moderate rent seeking behavior. The virtue of a NRF is that, properly established and governed by enforceable rules, it can support predictable, transparent and accountable public policymaking.

However natural resource funds are only effective under certain conditions, namely the full implementation of appropriate fiscal, governance and transparency rules. In some countries, the lack of clear and enforceable rules or the presence of poorly designed rules has led to over-spending or over-saving or arbitrary withdrawals from the fund by the executive. In the most extreme cases, NRFs can become instruments of political control by government officials, wasting public resources or behaving as an unaccountable parallel budget, with their own expenditure responsibilities. The Libyan Investment Authority, for example, was, in large part, managed in the interest of political leaders and paid out millions of dollars in management fees only to accrue billions in losses. RWI is currently working with researchers across the Middle East, North Africa and Central Asia to document the behavior of these funds.

The following are some of the conditions under which NRFs are more likely to function in the public interest:

- **Clear objectives:** In general, NRFs serve some or all of the following goals:
    - Saving for future generations / improving inter-generational equity
    - Smoothing public expenditure / reducing public expenditure volatility
    - Sterilization of capital inflows / mitigating REER appreciation
    - Ring-fencing of natural resource revenues / improving transparency and accountability of the flow of natural resource funds
    - Earmarking natural resource revenues for development or capital expenditures

  Fund design should be a product of the objectives, which themselves should be function of country-specific revenue management challenges (e.g. excessive expenditure volatility; excessive recurrent spending; dearth of capital spending). Without clear objectives, it is difficult to assess the effectiveness of a fund or the suitability of fiscal rules.
- **Objective deposit rules aligned with NRF objective(s):** The rules governing which revenue streams are deposited into the fund (e.g. royalties; government equity; excise taxes; corporate taxes; fees) should be a reflection of the fund's objectives. For example, if it is a stabilization fund, it may be appropriate to include only volatile streams. For example, the Wyoming Permanent Mineral Trust Fund, essentially a stabilization fund, only requires that volatile excise taxes be deposited. On the other hand, it is appropriate for all streams to be deposited in a self-declared savings fund, as in the case of the Timor-Leste Petroleum Fund.
- **Objective withdrawal rules with NRF objective(s):** The rules outlining the conditions for withdrawal should also be a reflection of the objectives. For example, it may be appropriate to prevent withdrawal

from a savings fund until production has ceased, as in the case of the Ghana Heritage Fund. On the other hand, stabilization funds require rules that support that objective. For example, a rule can be enacted whereby withdrawals can only be made in the event that there is a deficit in the amount of resource revenues projected to enter the budget in any given quarter. Similarly, if the fund has a development objective, it may be appropriate for withdrawals to be made only for specific infrastructure projects approved by parliament.

- **Rules-based and predictable price assumptions and revenue projection criteria:** Some countries have generated additional fiscal space or greater fiscal flexibility by manipulating the price and revenue assumptions necessary for the calculation of permissible withdrawals from their NRF. In order to adhere to the spirit of the rules, it is essential that the formula for projecting resource revenues not be subject to manipulation. Including an objective price assumption in legislation or regulation, such as the World Energy Outlook's intermediate-scenario oil price forecast, may be helpful in this regard.
- **Clear investment rules consistent with objectives and capacity to invest:** Since it must be able to finance quarterly or annual shortfall in government revenue, stabilization fund assets must be sufficiently liquid and low-risk. Conversely, it may be appropriate to invest in higher-risk or alternative assets to generate a higher return if the fund has a savings objective. That said, the fund's risk profile should reflect the capacity to manage investment or to oversee the investment managers. The Libyan Investment Authority (LIA) offers a cautionary tale, having paid high management fees and received poor advice as a result of inadequate safeguards, rules or transparency. Institutions that invest public money should be held to a higher standard of transparency, accountability and risk mitigation.
- **Limited encumbrances on the fund:** Governments may find that using resource funds as collateral on debt, especially if the fund is large, can provide access to finance on good terms. However the value of improved borrowing terms must be balanced against the risk of squandering the public's savings. Furthermore, if savings are large, there is less justification for borrowing externally since the government can draw on these resources. The choice to encumber all or part of the fund should, again, be a reflection of the fund's objectives. For example, if the objective of the fund is to provide an endowment for future generations, over-risking the fund may not serve this objective.
- **Clear management structure and effective oversight bodies:** Faithful implementation of fiscal rules requires clear responsibilities and lines of communication between the board of directors / executive and operational managers. Safeguarding operational management from political interference can help promote adherence to rules. It is also essential that fund managers have the capacity and incentives to implement legislated policies. However internal accountability is usually not enough. NRF operations should be verified by external auditors and overseen by independent bodies with the capacity and technical knowledge to analyze NRF behavior. Formalized monitoring of activities by parliament and the establishment of a specialized oversight committee consisting of government officials and civil society, like the Ghana Public Interest and Accountability Committee (PIAC), may be necessary for promoting adherence to the rules.
- **Transparent, timely and detailed reporting according to international standards:** In order for oversight actors (civil society, parliamentarians, media) to fulfill their roles, there must also be a strong degree of transparency in all NRF operations. Information on annual activities, investment portfolio, flow-of-funds, governance structure, board of directors and managers should be made publicly available in a timely

manner. A citizens' version of the reports can also help increase public awareness around the management of oil, gas and mining revenues.

III/ Fiscal policy and the pace of scaling up

There are several justifications for limiting public expenditure growth. First, scaling up capital expenditures may require significant private sector capacity that is often undersupplied in LICs. Subjecting the private sector to a large one-time increase in output may overwhelm current capacity; the private sector may need time to hire and train workers, import parts and materials and gain experience in order to effectively deliver on public investment projects. Foreign contracting may permit faster scaling up, however the speed (and potentially quality) short-term gains associated with bringing in foreign contractors must be balanced against the benefits of sourcing locally to develop domestic capacity.

Second, public sector capacity to plan and manage larger and more sophisticated government programs and projects takes time and training to develop. Inadequate management capacity can lead to waste and poorly executed projects.

Third, scaling up quickly can generate inflation if adequate domestic capacity does not exist or, more commonly, relative price effects. Resources can shift into boom sectors like construction, drawing labor and capital out of sectors with more potential for sustainable growth. In short, scaling up too quickly can contribute to Dutch Disease.

While revenue rules, such as those employed in Ghana, Timor-Leste, and Mexico, limit fiscal space, they do not necessarily limit expenditure growth once oil, gas or mineral revenues begin to flow. In some cases, an expenditure rule that explicitly constrains expenditure growth, in absolute terms or as a percentage of GDP, may be justified. Botswana and Brazil are two resource-rich countries that have chosen to employ such a rule.

The design of expenditure rules should reflect the public and private sector's absorptive capacity, as well as plans to improve absorptive capacity and current trends. Absorptive capacity is not a static condition; it can be developed with the help of effective technical assistance, training and partnerships. Both governments and businesses "learn by doing" and must be given opportunities to succeed. Constraining fiscal rules assume that future generations will be more capable at spending efficiently, something that may not happen unless government and the private sector learns from its mistakes.

In short, while expenditure rules must be designed and evaluated on a country-by-country basis to determine an appropriate "speed limit", rules should err in favor of quicker spending rather than constraining the public service's ability to learn.

Additional steps can be taken to promote faster scaling up. Foremost is thorough and meticulous implementation of every step of capital expenditure process: Development planning, budgeting, cost-benefit analysis, technical review, competitive procurement, monitoring of project execution, and operations and maintenance. This work can be supported by IFIs, partner governments and private consultants. The capacity to carry out these activities well should also feed into any design of an expenditure rule.

Effective implementation can be encouraged through oversight, for example by parliament, auditors, civil society or independent public bodies. However effective oversight requires a strong degree of transparency in the capital expenditure process. Timor-Leste's Transparency and Procurement Portals are steps in the right direction, though oversight bodies must be trained on how to use the information. Also, information on speed and quality of project execution is as yet unavailable in Timor-Leste.

IV/ External Sector Assessments

The idiosyncratic determinants of fiscal and monetary policy sustainability make it particularly challenging –and potentially unhelpful- to discuss "optimal" savings and investment dynamics or generalizable "norms" for assessing current account sustainability or exchange rate policies. Existing models and available data currently fail to accurately determine current account or exchange rate sustainability.

Monetary policy options in resource-rich low-to-medium income countries' monetary policy options are more limited than non-resource-rich countries. Given the public sector's reliance on capital inflows, it is generally not in resource-rich countries' interest to impose capital controls. They often have to choose between exchange rate stability and monetary independence. Most resource-dependent countries tightly manage their exchange rates because of the impact of oil revenue volatility on short-term exchange rates and its cost for private sector development. Weak financial sectors and ineffective monetary transmission mechanisms in many LICs/LMICs reinforce the focus on exchange rate stability (or at least inflation control via the exchange rate transmission mechanism).

The inflationary impacts of exchange rate stability in cases of rising oil revenues do not necessarily need to be mitigated through monetary policy. Kazakhstan, Kuwait and Saudi Arabia, for example, exhibited limited REER appreciation from 2001 to 2007 when real oil prices increased by about 250 percent even though they each employed a currency peg (US dollar or composite).[2] One possible explanation is that all three countries undertook effective fiscal sterilization using their natural resource funds. In short, one-size-fits-all approaches to assessing exchange rate sustainability may be impractical for generating policy advice. A full understanding of the interaction between fiscal and monetary policy as well as an evaluation of the monetary transmission mechanisms may be more helpful for determining appropriate monetary policy.

Resource-rich countries are surprisingly not much more likely to run current account surpluses than non-resource rich countries. While a resource-rich country's current account balance can be an indicator of long-run sustainability, its interpretation should recognize the specific challenges resource dependent countries face. In order to determine whether a country will face a balance-of-payments crisis in the future, it may be useful to analyze whether investments from resource revenues are broadening the tax base and sustaining non-resource sector growth. A resource-rich country could be running a current account deficit yet, through quality investments in health, education, infrastructure and key industries, be on a sustainable long-run path. An important question is whether the current account deficit is fueling investment or consumption and whether the country has a comprehensive and compelling public investment plan.

[2] See Darvas, Zsolt. "Real Effective Exchange Rates for 178 Countries: A New Database". Bruegel Working Paper 2012/06, March 2012.

As such, macro benchmarks using savings and investment indicators may be less helpful than using governance and development benchmarks to analyze long-run fiscal sustainability. Balance-of-payments crises, and subsequent fiscal shocks, may occur when resource revenues decline. However they can be prevented through development of robust, diversified non-oil/mineral economies and broad tax bases. In LICs and LMICs, both require large-scale investment. Overly simplistic macro models could generate policy recommendations that unduly limit fiscal space and government discretion.

Table 1: Monetary regimes and current account positions for selected resource-dependent countries

	De facto **monetary regime (as of 2008)**	**Current account surplus (2010 actual or estimate)**
Angola	US dollar peg	8.8%
Azerbaijan	Composite crawling band	27.7%
Bolivia	US dollar crawling peg	4.6%
Botswana	Composite crawling peg	-4.9%
Equatorial Guinea	Euro peg	-24.2%
Iraq	US dollar crawling peg	-3.3%
Kazakhstan	US dollar peg	2.9%
Kuwait	Composite peg	27.8%
Nigeria	Money supply target with managed float	8.4%
Peru	Inflation target with managed float	-1.5%
Qatar	US dollar peg	25.3%
Russia	Composite peg	4.8%
Saudi Arabia	US dollar peg	14.9%
Timor-Leste	US dollar peg	227.1%
Trinidad and Tobago	US dollar peg	18.8%
Turkmenistan	US dollar peg	-11.7%
UAE	US dollar peg	7.0%
Yemen	US dollar peg	-4.5%

Source: IMF

Contact:

Andrew Bauer-Gador
Economic Analyst, Revenue Watch Institute
abauer@revenuewatch.org