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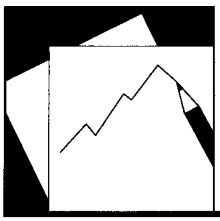

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A Public Financial Management Framework for Resource-Producing Countries

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A Public Financial Management Framework for Resource-Producing Countries

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Abstract

This working paper overviews the challenges posed by resource revenues management and the policy prescriptions to meet them, and focuses on the Public Financial Management (PFM) framework and reforms that resource-producing countries should adopt. The paper outlines a PFM framework and reform path that take into account the institutional diversity of resource-producing countries. In the short term, the proposed reforms highlights the tools that could be implemented even where the PFM system is rather basic, while over the medium and long term they aim at converging with best international PFM practices.

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I. INTRODUCTION

If well-managed, resource revenues could represent a big economic opportunity for resource-producing countries, and especially for low-income resource-producing countries (LIRPCs).[2] However, the management of resource revenues poses significant challenges in the form of the so-called "resource curse"—a complex phenomenon through which an abundance of resource revenues can translate into stagnation, waste, corruption and conflict. Some of the challenges derive from the macroeconomic and budgetary difficulties of managing large and volatile funds. Yet other challenges derive from the way in which resource revenues are generated. Because they derive from depleting an exhaustible asset and can, in some occasions, be generated without the scrutiny of taxpayers, donors, and lenders, resource revenues may pose important intergenerational, political economy and governance challenges.

To overcome these challenges, the existing large body of literature on the resource curse recommends the implementation of prudent macroeconomic policies and the strengthening of the institutional framework, and in particular, of the Public Financial Management (PFM) system. In implementing the latter recommendation, resource-producing countries need to consider the following questions: What are the minimum requirements for a PFM framework to be robust enough to prevent the resource curse? And, given LIRPCs' weak PFM systems, what essential PFM reforms are politically and technically feasible?

There exists little guidance in the PFM literature on answering these questions on a systematic and comprehensive way. Most of the literature focuses on some of the elements that underpin a sound resource revenue management framework, such as the establishment of well-defined resource funds and the promotion of transparency. In addition, recommendations to strengthen the PFM systems of resource-producing countries seldom take into account their wide diversity. This is a key issue, because the PFM systems of LIRPCs usually present substantial shortcomings and PFM reforms face significant difficulties.

This paper outlines a PFM framework and reform path for resource-producing countries that take into account the specific challenges that the management of resource revenues poses to LIRPCs. In the short term, the proposed reforms highlights the tools that could be implemented even in countries where the PFM system is rather rudimentary, while over the medium and long term they aim at converging with best international PFM practices. The structure of the paper is as follows: Section II provides an overview of resource-producing countries. Sections III and IV identify the specific advantages and challenges of resource revenues, the transmission mechanisms of the resource curse, and the usual policy prescriptions to prevent it. Section V presents LIRPC experience with the prevention of the resource curse. Finally, Section VI outlines a PFM framework and a reform path for the management of resource revenues. Section VII concludes.

[2] This paper focuses on "nonrenewable natural resource revenues" and "nonrenewable resource-producing countries," which for the sake of simplicity will be referred to in the text as "resource revenues" and "resource-producing countries."

II. AN OVERVIEW OF RESOURCE-PRODUCING COUNTRIES

Resource-producing countries are quite diverse. This diversity has been accentuated in the last few decades by the increasing exploration activity outside the world's traditional fields (see in Table 1 an illustration based on oil-producing countries), spurred by growing resource demand, rising interest in reducing dependence from established producing countries, and the development of new technologies. As a result, the current set of resource-producing countries varies widely in terms of income per capita, resource dependence, human development and transparency (see Figure 1). They also differ in regard to the size and diversification of their nonresource economy, the linkages between the resource industry and the nonresource sectors; the volume, time horizon, and profile of resource production; and the macroeconomic and financial situation of the government. On the institutional front, resource-producing countries also differ in regard to the ownership and fiscal regime of the resource industry and resource reserves; the stability of the political framework; the degree of social consensus and legitimization of authority; and the quality of the public administration.

A first group[3] comprises ***developed resource-producing countries.*** This group is characterized by low resource dependence, high GDP per capita, high indexes of both human development and transparency, and strong linkages between the resource sector and the rest of the economy. In most cases, resource production came on-stream once the country was at an advanced stage of economic and institutional development. On the political front, economic performance, transparency and reputation have become central to competition for political power. Citizens have the opportunity—and incentive—to hold governments accountable. Bureaucracies are competent and insulated from political influence. Property rights are well defined, the rule of law prevails, and the judiciary system is independent. Policies are usually underpinned by a broad social consensus, long-term perspectives, and prudent economic management.

A second group comprises ***Middle Eastern resource-producing countries,*** which are mostly specialized in oil production. Oil contributes about one-third of total GDP and three-fourths of annual government revenues. Government legitimacy is in most cases based on traditional and religious authority, underpinned in some cases by extensive welfare systems and large bureaucracies. This usually results in a high level of spending and inefficient non-oil sectors. More recently, some of these countries have managed to build consensus on the need to build infrastructure and diversify the non-oil economy while preserving long-term fiscal sustainability.

A third group of countries comprises ***emerging resource-producing economies*** from Latin America, Asia, and Eastern Europe. These countries are characterized by high resource dependence, unequal income distribution, and elusive social cohesion. In some of these countries, political support derives from systems of patronage, single-party dominance, and occasionally from military intervention in politics. The resulting institutional framework is characterized by limited accountability and transparency, an incomplete separation of powers, a great amount of discretion afforded to the government, and unclear property rights. Bureaucracies and groups of interest generally succeed in having public spending earmarked directly for their use, in a nontransparent way. Policies are underpinned by short-horizon politics of competition to control the resource earnings.

[3] These categories partially drawn on Eifert, Gelb, and Tallroth (2003).

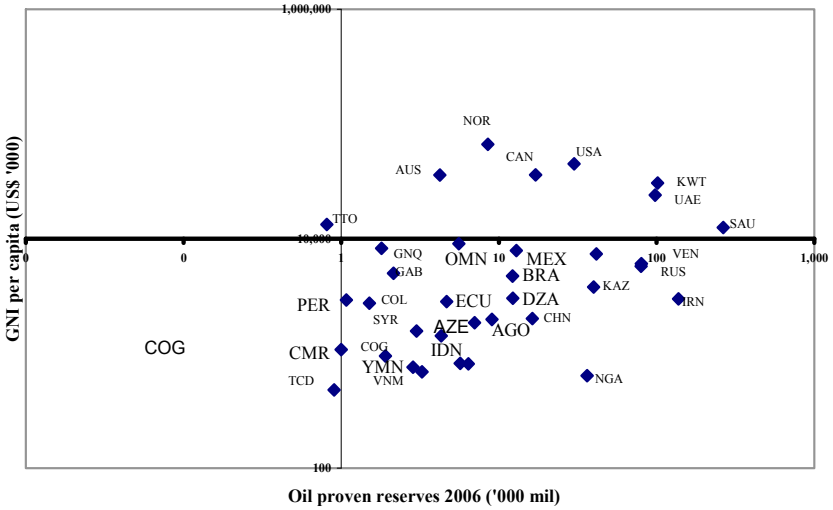
The ***LIRPC*** group includes large and small African oil producers and a few non-African small oil producers from Asia and Eastern Europe. Prevailing conditions are a rural economy, sometimes in extreme poverty, high resource dependence, and an absence of both an efficient bureaucracy and basic infrastructure. Some countries are making progress toward more accountable forms of government, but the exploitation of resource revenues by the elite is still too often embedded in institutionalized practices, rent-seeking behavior, and corruption. Overall, the rule of law is generally weak and accountability and transparency mechanisms need substantive improvements.

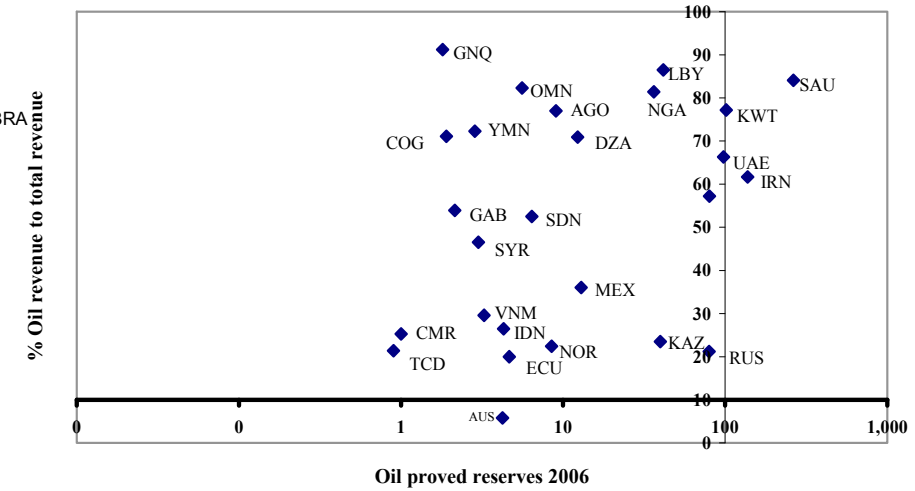
Table 1. Oil Production by Geographical Area and Level of Income 1965–2006

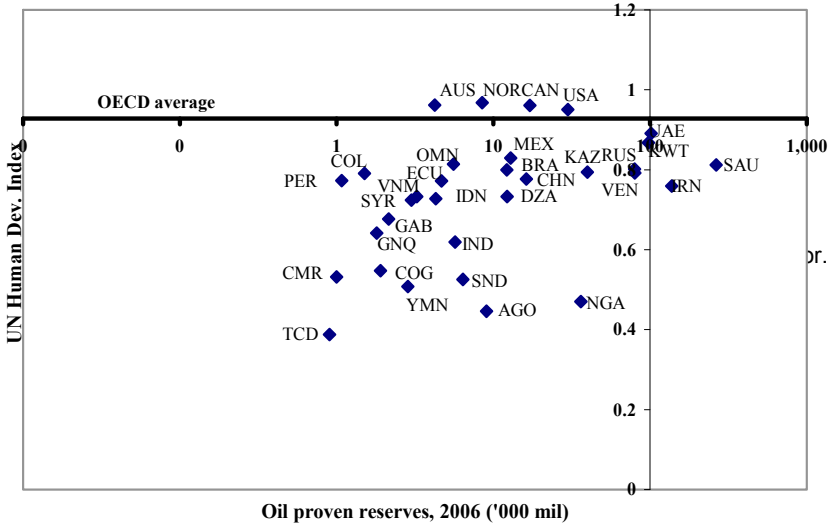
	1965	1970	1975	1980	1985	1990	1995	2000	2006
	(total production as a percent of total world production)								
Areas geographical									
Total North America	32	28	22	22	27	21	20	19	17
Total S. & Cent. America	14	10	7	6	6	7	8	9	8
Total Europe & Eurasia	18	17	20	24	29	25	20	20	22
Total Middle East	26	29	35	30	19	27	30	31	31
Total Africa	7	13	9	10	9	10	10	10	12
Total Asia Pacific	3	4	7	8	10	10	11	11	10
Level of Income 1/									
Low Income	1	3	4	4	4	5	5	5	6
Lower Middle Income	19	22	28	21	20	23	21	23	23
Upper Middle Income	22	22	14	16	35	32	27	27	30
High Income	58	53	54	59	41	41	47	45	41

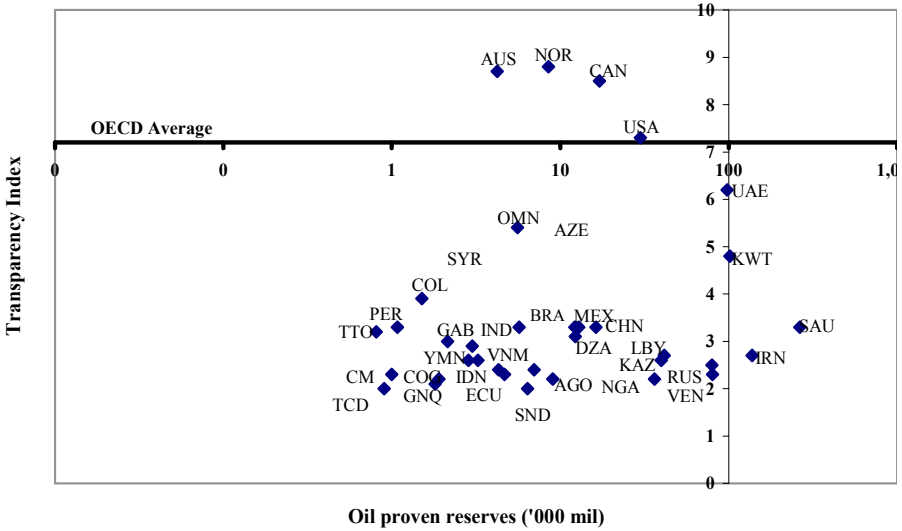
1/ World Bank Atlas Definition
Source: BP Statistical Review of World Energy June 2007

Figure 1. Overview of Selected Oil Producing Countries, 2006









III. THE SPECIFIC ADVANTAGES AND CHALLENGES OF RESOURCE REVENUES: THE "RESOURCE CURSE"

Resource revenues present specific *advantages* and *challenges* with respect to other government sources of financing.

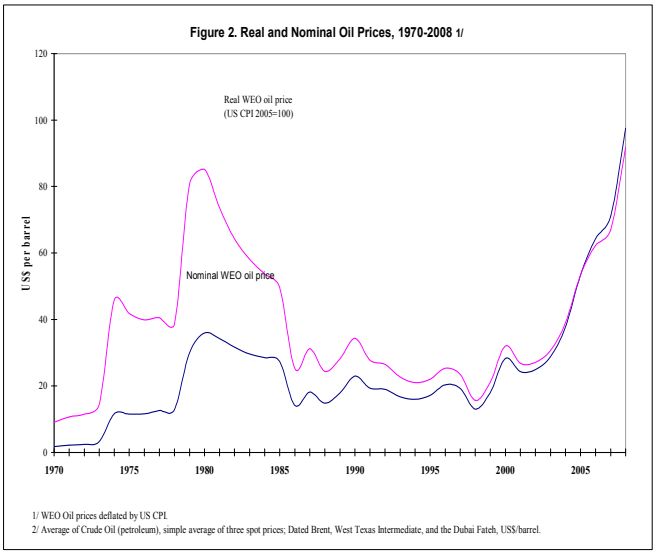
As regards the advantages, the most salient one is that resource revenues are generated by the **discovery of a subsoil asset**—the oil or mineral in the ground, a "gift from nature." Under current international standards for the formulation of national accounts (see Box 1), the discovery of resource proven reserves translates into an improvement in the government's net worth. The related resource revenues lead to an expansion in the country's GDP and the government's financial envelope**.** Another advantage of resource revenues—at least from the policy makers' point of view—is that they are not subject to the conditions that donors and lenders often impose on recipient countries. A third advantage resides in the "enclave" nature of resource revenues. Because of this enclave nature, resource revenues can be successfully produced in extremely challenging circumstances, as shown in the cases of **Colombia and Angola**, where internal armed conflicts did not stop oil production. This contrasts with the collection of nonresource revenues and borrowing, which are affected by domestic demand conditions and a country's credit rating.

Regarding resource revenues' challenges, the overarching one is how to avoid the resource curse,[4] a complex phenomenon in which, through several economic, institutional and political economy transmission mechanisms, resource abundance may translate into stagnation, waste, and conflict. One of the transmission mechanisms is the **"*Dutch disease,*"**[5] that is, the set of negative macroeconomic effects caused by a large increase in resource-funded spending. If mainly allocated to domestically produced goods, a large increase in spending can push up domestic prices, the nominal exchange rate, and eventually appreciate the real exchange rate. This results in a shift of capital and labor into the production of nontraded goods and an erosion of the competitiveness of the nonresource economy. Two very illustrative cases of Dutch disease are **Equatorial Guinea**, where cocoa and coffee production declined from approximately 60 percent of GDP in 1991 to less than 9 percent of GDP in 2001, and **Nigeria,** where, between 1970 and 2000, oil exports led to the rapid collapse of agriculture exports (see Gelb, 1988 and McSherry, 2006).

[4] The term resource curse was first used in formal economics literature by Auty (1994). This section draws on Tsalik (2003); Karl (2007); Weitnthal and Luong (2006); Stevens (2003); Rosser (2006); Robinson, Torvik, and Verdier (2006); Melhun, Moene, and Torvik (2006); Collier and Hoeffer (2005); Collier (2007); Collier and Goderis (2007); and Dietsch (2007).

[5] The term was coined in 1977 by *The Economist* to describe the overvaluation of the Dutch guilder and the decline in the manufacturing sector in the Netherlands after the discovery of natural gas in the 1960s.

A second transmission mechanism of the resource curse takes place through the **extreme volatility of resource revenues**—see Figure 2 for an illustration based on oil prices[6]—which can lead to **waste, boom and bust cycles**, and **excessive borrowing**. Waste could arise from the pressure that large and sudden increases in resource-funded spending put on the country's administrative capacity. It could also arise from the frequent upward and downward adjustments of expenditures, and the ensuing poor quality of spending programs that are increased or downsized at the last minute, in line with fluctuating revenues. Excessive borrowing could arise from the government's difficulties in cutting the budget during busts or from countries' tendency to over-borrow during oil booms. **Mexico**'s policy of borrowing against future oil earnings during its small oil windfall in 1979-81 triggered a spiraling growth in spending. Angola's practices of mortgaging future oil earnings to increase public outlays have repeatedly led to eventual budget and debt crisis. During the oil boom of the 1970s, **Nigeria** borrowed very heavily to finance public consumption and in the mid-1980s suffered two shocks: a reduction in the oil price from US$30 to US$18 per barrel and a swing from borrowing to repaying.



A third transmission mechanism arises from the fact that resource revenues are generated by **depleting a nonrenewable nonfinancial asset,** which means that resource revenues are exhaustible and temporary. The nonrenewable nature of resource revenues implies that, independently of their modality (e.g., taxes, royalties, fees, bonus, dividends), resource revenues could be considered as derived from the consumption or sale of an existing asset rather than an addition to income (see Box 2 for the current debate on this issue). It also implies that, if part of resource revenues are not saved or allocated to the production or acquisition of other forms of reproducible and productive (physical and financial) capital, the use of resource revenues could reduce the government's net worth for future generations.

Another mechanism is the risk that an excessive reliance on resource revenues could transform **resource-producing countries into *rentier states.*** The theory of *rentier states* holds that countries that receive substantial amounts of resource revenues from the outside world on a regular basis tend to become unaccountable to their citizens and less prone to promote political competition and representation (see Moore, 2004). This situation could encourage the governments of resource-producing countries to devote more attention to distributive functions (e.g., subsidies) and interventionist functions (e.g., creation of a national resource company (NRC)) than to functions related to the regulation, supervision, taxation, and management of the economy.

[6] Main sources of volatility are resource prices, the variation in the extraction rate, and the calendar of the payments by resource companies to governments. However, by far, world resource prices are the main source of volatility.

Box 1. Subsoil Assets in the National Accounts: Methodologies and Country Experiences

There exist several guidelines for reflecting subsoil assets in the national accounts: the 1993 System of National Accounts, SNA (United Nations, 1993), the System of Integrated Environmental and Economic Accounts, SEEA (United Nations, 1993 and 2003), the IMF Government Financial Statistics, GFS 2001 (IMF, 2001), EUROSTAT (2003), and the Bureau of Economic Analysis (BEA, 1994 and 2000).

Definition of subsoil assets or proven reserves: They are defined as nonfinancial, naturally occurring, nonproduced, and tangible assets, which are economically viable at the current technology and relative prices, and over which ownership rights are well-established and enforceable. Eurostat proposes to also include other discovered reserves to compensate for the oil companies' tendency to prove only a limited amount of reserves.

Valuation methods: Most guidelines recommend using the **Net Present Value (NPV)** of the future rents expected from subsoil assets, computed as the difference between the long-term estimates of gross output values and production costs. As the information needs of this method are very high, Eurostat proposes to use the three-year average of historical rents per unit of production. The discount rate should reflect the legal owner' time preference and risks. Eurostat proposes the average long-term interest rate of government bonds.

Changes in the value of subsoil assets: They arise from price variation, new discoveries, reappraisals, extractions and depletion. The SNA and GFS consider these operations to be nontransaction events, and therefore register them in the government's "other changes in asset account" without an impact on the government's capital account. The SEEA advocates for adjusting national accounts by the depletion of subsoil assets. The BEA proposes treating subsoil assets as fixed capital assets.

Accounting of subsoil reserves and revenues: Subsoil assets should be recorded in the balance sheet of oil companies, to whom the government—who usually holds the ownership—has granted a concession. Alternatively subsoil assets could be allocated between the government's and the oil companies' balance sheets according to the proportion of the rents that each is expected to retain. Subsoil revenues (e.g., royalties, taxes, and fees, etc.) are considered as property income that accrues to the government in return for putting the subsoil assets at the disposal of the extractor for a specified period of time.

Only a small number of developed countries reflect their subsoil assets in their national accounts. Usually as satellite accounts to reflect the impact of economic activity on the depletion of subsoil assets.

- **Australia, South Africa, United States, New Zealand and Canada** use either the SNA and SEEA or own-developed, slightly different guidelines (e.g., Australia's Mineral Account (see ABS, 1995 and 2000)).
- **EU countries** (**Denmark, Germany, France, the Netherlands, Austria, United Kingdom,** and **Norway)**[1] mostly follow EUROSTAT. An interesting case is the Netherlands, which weights oil reserves by the probability of being recoverable, treats the concession of subsoil assets as a financial asset, records the assets in the extractors' balance sheet, and assigns to the government a financial claim for the NPV of the related oil taxes, royalties and fees.

1/ For the Netherlands and Norway see Pommé (1998), van den Berg and van de Ven (2001), and Erlandsen (2004).

Rentier states are more prone to adopt ***inefficient redistribution mechanisms,*** to satisfy both the population's expectations—and pressures—for the government to share resource revenues, and politicians' incentives to use resource revenues to favor vested interests. These mechanisms could take the form of large wasteful investment projects (such as "white elephants", "prestige projects"), inefficient public enterprises (e.g., an NRC), low-quality spending programs (e.g., ill-targeted subsidies for failing industries) or overstaffed civil services. For instance, in **Nigeria,** the

Ajaokuta steel mill built in the 1970s absorbed over US$3 billion yet is not fully operational on a commercial basis. The **Kuwait** government employed 75 percent of the workforce in 1975, but, according to studies, most were under-qualified and underutilized (see Eifert, Gelb, and Tallroth, 2003).

Rentier states could have **weak incentives to build—or preserve already existing—strong institutions.** Rentier states may not feel compelled to (i) promote wealth creation, which they could subsequently tax; (ii) be accountable to taxpayers, who by the same token may not feel obliged to keep their government accountable; and (iii) build good relationships with international lenders and the donor community. As an example, with the oil windfall of the 1970s, **Saudi Arabia** lifted several taxes and downsized the tax administration department, while at the same time increasing spending substantially. When oil prices dropped in the 1980s, efforts to increase taxes and cut back spending were generally ineffective. As a result, the government incurred a 10 percent of GDP deficit, financed with oil savings and domestic borrowing (see Tsalik, 2003).

Box 2. Are Resource Revenues Part of Countries' Income?

There is at present an ongoing debate over whether resource revenues should be considered income in the usual sense. The fact from financial theory is that nonrenewable natural resources are an element of wealth in the country's portfolio of assets. Thus the production of resource revenues does not generate income as such. Rather, it simply swaps one asset—the oil or minerals in the ground—for another asset—natural resource revenues in cash above the ground. This approach contradicts the conventional national accounting methods discussed in Box 1, according to which natural resource revenues are regarded as a net addition of value added to countries' national income or GDP. According to this approach, the conventional national accounting method grossly overstates national income because it ignores the depletion of the wealth embodied in the extraction of the natural reserves.

Some authors have suggested alternative ways to measure the production of nonrenewable natural resources. The main approaches proposed include considering the use of resource revenues as:

(i) the use of an inventory carried over from previous periods, which should not be counted as part of GDP in the current period; or the depreciation of a capital asset which, though contributing to production, should not be counted as income (El Serafy, 1981; and Levin, 1991);

(ii) a "portfolio reallocation" derived from the gradual sale of an economic asset (Solow,1986; Hartwick, 1990; Stiglitz, 2005; Traa and Carare, 2007; and Heal, 2007); and

(iii) the amortization of a financial lease between the government (the lessor) and resource companies (the lessee) (see Pommé (1998) and the United Nations Statistical Commission "Canberra II Group on non financial assets"[1/] for the update of the SNA 1993). Under this approach (i) the lessor retains ownership of the natural resources, while the lessee controls the rate of extraction; (ii) the concession on subsoil assets is assimilated to a financial lease, whose payments of principal and interest are given by resource revenue payments; and (iii) the value of the subsoil asset is registered on the balance sheet of the extractor (the lessee), which is consistent with commercial accounting, while the balance sheet of the lessor includes a financial asset equivalent to the present value of the expected future resource revenues.

1/ The Canberra II Group membership includes national statisticians, public sector accountants, and representatives of international agencies (European Central Bank, Eurostat, International Monetary Fund, IFAC-IPSASB, OECD, and World Bank http://unstats.un.org.).

In addition, in *rentier states*, **resource revenues could easily be captured by narrow elites.** This could undermine the development of an open and inclusive policy decision-making process and induce political instability and conflict. Furthermore, some constituencies, including resource-producing regions, may feel that they have a particular claim on the resource wealth and may feel aggrieved if they see the wealth benefiting others. As a result, resource revenues could promote an increase in internal security spending—aimed at deterring opponents of government's policies—which could exacerbate even further the risk of conflict. The Biafra war of secession in **Nigeria** in the late 1960s and conflicts in the Cabinda region of **Angola** seemed to be related to resource revenues issues (see Eifert, Gelb, and Tallroth, 2003).

IV. Policy Prescriptions to Prevent the Resource Curse

What are the policy prescriptions for preventing the resource curse? And how can the PFM system of resource-producing countries contribute to implementing them?

The most imminent prescription is the adoption of a prudent fiscal policy, defined around a sustainable path for the nonresource deficit over the medium term. Such prudent fiscal policy would help avoid Dutch disease effects, boom and bust cycles, and excessive borrowing. It would also help in building a "resource buffer" that could be used in case of a depletion or shortfall of resource revenues.[7]

A second prescription is the adoption of a long-term fiscal strategy. The strategy should assess the pros and cons of possible alternative—although not mutually exclusive—compositions for the sustainable nonresource deficit path. The first option is a **frontloaded spending profile**. Arguments in favor of this option are (i) the need, especially in LIRPCs, for a critical mass of human and physical capital before economic takeoff can occur (Azariadis and Drazen, 1990); (ii) the positive impact of public spending on current and future economic growth (Takizawa, Gardner, and Ueda, 2004); and (iii) the possibility that the supply response of an increase in import-intensive public spending, such as infrastructure investment, could offset some of the adverse macroeconomic consequences (see Bevan, 2005 and Adam, 2005). There are, however, important arguments against frontloading the spending profile. An increase in spending could: (i) strain the country's macroeconomic and administrative capacity, creating waste and inflation pressures; and (ii) give rise to entrenched expenditure programs that could be difficult to cut back later. A second option is **cutting taxes.** This could reduce distortions and spur economic activity. However, in an LIRPC it could also jeopardize efforts to reduce the budget's resource dependence and discourage citizen scrutiny of the budget. Tax cuts may be also very difficult to justify in an LIRPC with short-lived resource production and low tax ratios. The third option is financial, that is, using resource revenues to **pay off public debt and build financial assets**. This could be a good option if debt service and the financial returns derived from investing resource savings are higher than the expected return of public spending. High income resource-producing countries, with serious demographic shocks in the horizon, could use resource revenues to build a resource buffer to support the budget burden of future pension liabilities.

[7] The literature on policy prescriptions to avoid the resource curse is abundant. See, for instance, Auty (1994), Tsalik (2003); Karl (2007); Weitnthal and Luong (2006); Stevens (2003); Rosser (2006); Robinson, Torvik, and Verdier (2006); Melhun, Moene, and Torvik (2006); Collier and Hoeffer (2005); Collier (2007); Collier and Goderis (2007); Dietsch (2007), and Davis and others (2003, 2005) and Ossowski and others (2008).

A third prescription, on which little guidance exists, is the development of a sound institutional framework. The framework should aim at avoiding the development of a rentier mentality. It would urge policy makers, public managers, and social actors to make a credible and sustainable commitment to use resource revenues in an efficient, sustainable, and transparent way. In addition, it should encourage, and allow, citizens to scrutinize the use of resource revenues. One of the components of such institutional system is a robust PFM framework which would (i) ensure citizens are well informed about the magnitude of resource revenues, the rate at which they are spent, and the composition of the spending; and (ii) include sound budget procedures and accountability mechanisms to maintain spending within the limits and allocations established by the budget. But what are the minimum requirements for a PFM framework to contribute to an efficient, transparent and sustainable management of resource revenues? This is the question that this paper aims at answering.

In this connection, a fourth prescription would be that the sequence of institutional reforms, especially on PFM, should be in line with the long-term fiscal strategies of resource-rich countries. For those resource-rich countries that decide to front-load their expenditure plans (i.e. spend-as-it-earns or a securitization of resource revenues in an extreme case), improvements in expenditure planning capacity, as well as an institutional arrangement to protect spending decisions from political pressures, could be more urgent than reforms in other areas. In contrast, for those countries that prefer saving part or all of their resource revenues for future generations, enhancing asset management capacity could usefully precede other reforms.

V. Why is Prevention of the Resource Curse so Difficult for LIRPCs?

The experience that resource-producing countries have had to date with the prevention of the resource curse is at best mixed. An examination of this experience suggests that the prevention of the resource curse has been very disappointing. Except for a few successful stories (see Box 3), the most common story of resource-producing countries responds to a cycle of high revenue/high expectations/high expenditure followed by an resource market slump, a decline in resource revenues, and social unrest caused by sharp budgetary adjustments. Moreover, most resource-producing countries tend to fall behind nonresource producing economies in economic development, rate of growth, GDP per capita and human development. In addition, resource-producing countries are more prone to the development of a rentier mentality and to experience armed civil conflict.

But why do some resource-producing countries continuously fail to implement policy prescriptions for countering the resource curse? This section distinguishes two sets of reasons: (i) the unfavorable preexisting economic and institutional conditions of some resource-producing countries; and (ii) the special challenges that the management of resource revenues poses to LIRPCs.

Box 3. The Prevention of the Resource Curse: A Few Successful Stories

USA, Australia, Canada, Scandinavia and Latin America. According to Wright and Czelusta (2002), the success of these countries has been the result of an institutional environment conducive to efficient government, robust political institutions, and strong positive spill-over from the resource sector to nonresource sectors. In fact, **Norway**'s great performance after the 1960s is the result of reorienting its traditional engineering skills from shipbuilding to the export of technology on deepwater drilling platforms (Ledermand and Maloney, 2008). The expansion of **Canada**'s manufacturing sector was driven by the innovations introduced by the resource sector. Success stories in **Latin America** include the mining-led industrial development of Monterrey (Mexico), Medellin (Colombia), and São Paulo (Brazil).

Botswana and Chile. Their success reflects favorable institutional frameworks that emerged prior to or during the discovery of the natural resources (see Kalter, and others, 2004 for Chile). In the case of **Botswana**, according to Beaulier and Subrick (2007), and Acemoglu, Johnson, and Robinson (2001), positive factors include (i) **sound pre-colonial tribal institutions,** which encouraged broad-based participation and constrained political leaders; (ii) **strong and wise leadership** by Botswana's earliest presidents, which helped to balance tribes' interests and build a "developmental state"; (iii) a **predictable legal environment** and an **effective medium-term hard budget constraint**, given by the Parliament-approved National Development Plan, which were adopted before the diamond era; and (iv) **government effectiveness**, partially reflecting a positive attitude toward involving expatriates in the government. **Namibia, Ghana, South Africa, Trinidad and Tobago, Indonesia,** and **Malaysia are also cited as successful stories in spite of their relatively less favorable institutional frameworks.** For instance, in the case of **Indonesia**, the lack of institutionalized transparency and accountability mechanisms allowed rent-seeking and corruption to flourish. However, this was somewhat compensated for by the existence of a technocratic bureaucracy that focused on improving the financial sector, preserving macroeconomic stability, and fostering infrastructure and agriculture activities (Eifert, Gelb and Tallroth, 2003).

A. Unfavorable Preexisting Economic and Institutional Conditions of Some Resource-Producing Countries

The country experiences examined in Box 3 show that success in preventing the recourse curse depends on the economic and institutional conditions that existed before the resource revenues came on-stream. LIRPCs, with weak institutional frameworks, adverse political arrangements, and bad economic conditions, are more prone to fail at preventing the recourse curse.[8]

In most LIRPCs, institutions existing in the pre-resource era are weak or nonexistent or the state is only partially formed. From a *technical point of view*, most LIRPCs lack both a PFM system and a public administration competent enough to design and implement a sound fiscal strategy. From an *institutional angle,* LIRPCs are usually characterized by the absence of predictable legal framework and the lack of strict enforcement of the rule of law. From a *political point of view*, the weak separation of powers of some LIRPCs undermines the effectiveness of the existing

[8] The impact of institutions is difficult to measure. Empirical evidence on the role of institutions is not fully conclusive. Sach and Warner (1997), Bulte, Damanai, and Deacon (2005), and Brunnschweiler (2006) do not find hard evidence that institutions are decisive in avoiding the resource curse. Other authors, however, find empirical evidence of the relevance of high quality institutions in avoiding the resource curse, such as Mehlum, Moene, and Torvik (2006), Collier and Hoeffler (2005), Sala-i-Martin and Subramanian (2003), and Atkinsons and Hamilton (2003).

transparency and accountability mechanisms. Under these conditions, politicians and groups of interest may not feel compelled to comply with commitments to use resource revenue in an efficient, transparent, and sustainable way (see Dunning, 2008). *All in all, LIRPCs' **institutional frameworks** are not fully equipped to handle the challenges related to the management of resource revenues.*

Moreover, although in all cases resource revenues give rise to **huge expectations,** these are expected to be larger in LIRPCs. This is usually the result of (i) high political pressures to increase spending to meet society's expectations for a rapid and visible improvement in welfare; (ii) the politicians' motivations to increase spending and/reduce taxes rather than leaving opportunities on the table for future political opponents (Humphreys and Sandbu, 2007); and (iii) the incentives of some constituencies—including resource-producing regions—to demand large spending increases in return for political support. *As a result, LIRPCs are more prone to suffer from Dutch disease, boom and bust cycles, excessive borrowing, and the proliferation of inefficient distributive mechanisms.*

Finally, LIRPC are more inclined to develop a **high and persistent "resource dependence,"** reflecting their chronic low tax mobilization, lack of access to borrowing, and poorly diversified nonresource economy. Combined with weak institutions, LIRPC have a tendency to develop a *rentier mentality.* LIRPCs tend to lack the incentives to build (i) a viable tax regime, because the government does not feel compelled to extract revenue from domestic sources; (ii) a competent bureaucracy and robust PFM system, which could limit politicians from favoring vested interests; and (iii) effective transparency and accountability systems, which could help combat rent-seeking and corruption. *As a result, resource revenues tend either to preserve LIRPCs' "unfavorable" institutional frameworks or drive a deterioration of preexisting institutions.*

B. Country Experience with the Management of Resource Revenue

The evaluation of country experience suggests that the management of resource revenues can be very challenging, especially for LIRPCs. To confront these challenges, governments usually adopt special operational mechanisms, sometimes in parallel to the traditional existing PFM tools. The most commonly used operational mechanisms include the adoption of special arrangements for the allocation and use of resource revenues, the creation of resource funds, the establishment of special parallel budgetary and treasury procedures, the creation of separated investment committees and oversight institutions, and the enactment of special legislation.

Special arrangements for the allocation and use of resource revenues

These arrangements are usually created to (i) generate political support for the destination of resource revenues to specific, priority, uses; (iii) provide a consistent source of funding for expenditures that yield high social benefits yet do not get much recognition in the budget preparation; and (iii) to ensure resource revenues are spent in a sustainable way over the medium term.

Some resource-producing countries have been successful with the design and implementation of these operational arrangements. Examples of successful countries are Norway, Botswana, and Chile. According to **Norway's** arrangements, the portion of resource revenues used to finance the nonresource deficit cannot be larger than 4 percent of the resource savings over the medium term. In **Botswana** the portion of diamond revenues used to finance the budget has to be equal to capital spending in the budget. **Chile's** arrangement is based on a structural balanced budget

mechanism. Another country that has shown a certain degree of success is **Timor-Leste,** which uses the Permanent Income Hypothesis (PIH). Under the PIH the government uses only the sustainable annual income in each fiscal year, which is the maximum amount that can be appropriated from oil savings in that fiscal year and still leave enough oil savings for an amount equal to the real value to be appropriated in all later fiscal years. Timor-Leste's relative positive outcomes reflect a high degree of ownership by the authorities and their intention to use the PIH in a flexible way (see Daniel and others, 2003). **São Tomé and Príncipe** (Segura, 2006, and Kim, 2005) also uses the PIH, which is enshrined in special legislation, and has been proposed for **Gabon** (Leigh and Olters, 2006), and **Trinidad and Tobago** (Velculescu and Rizavi, 2005).

However, in other cases the adoption of special arrangements for the allocation and use of resource revenues has not been as effective as originally envisaged, especially in LIRPCs. In **Chad** the establishment of multiple and complex earmarking arrangements led to separate budget and cash management systems for oil and non-oil-funded transactions, including a mechanism to save 10 percent of oil revenues in a Future Generation Fund. However, spending pressures in the country's non-oil budget resulted in arrears and costly borrowing, while low-yield assets were being accumulated in the oil accounts (see Dabán and Lacoche, 2007). Countries such as **Nigeria** and **Venezuela** have attempted to use a long-term oil price to determine the portion of oil revenues to be saved, but without much success, given the lack of realism of the oil price projections. In **Ecuador**, the proliferation of earmarking arrangements led to liquidity problems and weakened expenditure quality (see Ossowski and others, 2008). In **Algeria**, the creation of specific oil accounts allocated to multiyear public investment projects has complicated cash management and undermined transparency and accountability (see Humphreys and Sandbu, 2007).

Resource funds

Many resource-producing countries have created resource funds. In most cases, the funds have been created with stabilization and saving purposes, that is, they are designed to be used in the case of shortfall or depletion of resource revenues (e.g., **Norway** and **Chile,** among others). However, in some LIRPCs the creation of resource funds has also been justified on the grounds of PFM weaknesses. The lack of well-defined budget classifications and the absence of reliable internal controls and tracking expenditure systems have been used to justify the creation of special funds for the execution and payment of resource-funded spending (e.g., **Chad, Ecuador, Algeria**). Resource revenues are usually earmarked to the resource funds by applying predetermined and rigid allocation ratios[9] and used to fund the execution and payment of spending outside the budget circuit. In a few cases, the creation of resource funds has been justified on the need to protect resource revenues from public scrutiny. The **Kuwait** Reserve Fund for Future Generations is prohibited by law from disclosing its assets and investment strategy. The authorities justify this policy on the grounds that if the public knew the true extent of official assets, there would be greater pressure to spend (see Allen and Radev, 2006).

[9] This is sometimes done by introducing a classification of expenditures according to the source of financing. However, this could have the same negative results as implementing complex earmarking mechanisms to execute the budget (see Bouley, Helis, and Jacobs, 2008).

Resource-producing countries have used different institutional arrangements to create their resource funds.[10] In some cases, resource funds are created as separated Treasury accounts, which are managed in coordination with the budget circuit (e.g. Norway, East Timor). However, some countries have created a resource fund as a separate institution with own legal personality, institutional independence, and authority to spend resource revenues in certain uses. As these "separate" resource funds usually have their own boards, mandates and regulations, goes the argument, it could be more difficult to raid their assets. For example, the **Alaska** oil fund is a separate public corporation, with separate legal personality, and institutional and administrative independence. Its trustees are appointed by the government and its rules can only be changed by referendum. In **Azerbaijan, Kazakhstan,** and **Libya**, oil funds are managed off-budget through presidential directives, with a view to insulating oil revenues from spending pressures from the legislative. In **Chad,** to prevent oil revenues from being allocated to nonpriority spending, they are earmarked to separate funds managed outside the budget and treasury circuit.

The experience with resource funds has not always been as positive as originally envisaged. Country experience shows that the absence of liquidity constraints has in some occasions undermined the effectiveness of resource funds. If governments are not liquidity constrained, they could borrow (or withdraw accumulated assets) to increase public spending while at the same time resource revenues could be accumulated in the resource fund (Stevens and Mitchell, 2008). For example, in **Chad**, the growing balances in the Future Generation Fund were largely offset by increasing domestic borrowing and the accumulation of arrears. In addition, the existence of resource-funded expenditures that are executed and paid through separated funds, usually complicate cash and asset management.

Another factor that has sometimes undermined the effectiveness of resource funds has been political interference, even in developed countries. For example, in **Alberta (Canada)** the provincial authorities frequently changed and circumvented the rules governing the management of the Albertan Heritage Fund to allow the government to raid the fund. Finally, there is also evidence that resource funds have not always been successful in avoiding the development of a *rentier mentality*. In **Alaska**, there are some indications that the oil fund, which distributes a dividend directly to the people, is turning the Alaskan society into a rentier society (Stevens and Mitchell, 2008). The oil-funded annual dividend is somewhat discouraging the Alaskan population's entrepreneurship, eroding tax collections, and increasing public debt.

Special budgetary and treasury procedures

Some resource-producing countries have adopted separate procedures for the budget execution and payment of resource-funded spending, sometimes in connection with the creation of a resource fund. In **Chad**, the execution of oil-funded spending needs the prior authorization of the *Collège*, a joint government-civil society body. The objective was to add an extra layer of control to the execution of oil-funded spending. As long as the *Collège* is perceived as independent, the argument goes, its ex-ante intervention can offer some reputational advantages. However, the potential advantage of introducing special budgetary and treasury procedures may come at a very high price, especially in LIRPCs. The establishment of duplicated parallel budgetary and treasury systems can divert LIRPCs' limited administrative capacity and introduce delays and

[10] See Allen and Radev (2006) for a discussion of the pros and cons of different modalities of extrabudgetary funds and Potter and Diamond (1999) for a discussion of the allocation problems of earmarking, particularly through extrabudgetary funds.

complexities in the budget process. For instance, in **Chad**, the *Collège*'s ex ante intervention seems to have (i) delayed budget execution; (ii) discouraged staff performing existing financial controls; and (iii) led to situations where the *Collège* has interfered with the nature of spending made (due to the misuse of the *College*'s prerogative to grant or deny authorization to commit and pay a particular spending item). (See Dabán and Lacoche, 2007).

Separate investment bodies

Some resource-producing countries have created separate bodies to carry out resource-funded capital spending or to invest the balance of the resource fund. **Kuwait** and **Saudi Arabia** have longstanding investment agencies—the Kuwait Investment Authority and the Public Investment Fund, respectively—that undertake capital spending not integrated into the budget process. In addition, some resource-producing countries have created separate investment committees to design and monitor the resource fund's investment strategy. For instance, in **São Tome e Principe**, the Management and Investment Committee includes representatives of the ministry of finance and the central bank, a member appointed by the President, and two members appointed by the National Assembly, one of whom must be from the opposition. The creation of separate investment bodies could strengthen the decision making process, as long as they are perceived as independent and not subject to political pressures**.** However, in some cases, separate investment committees have often resulted in "dual budgeting and asset management" practices, with poor outcomes at the strategic, budgetary, and operational levels. In addition, in LIRPCs it could be difficult to find enough qualified people to staff these committees, which may end up not being independent and accumulating a lot of power.

Separate oversight bodies

Some resource-producing countries have attempted to add an extra layer of accountability to the standard accountability mechanisms provided by the Supreme Audit Institutions. Some countries have made mandatory the annual audit of the resource fund by an external independent auditor, as in **Azerbaijan** and **Kazakhstan**. Some other countries have created "parallel" oversight institutions. For instance, in **Chad** the *Collège* is responsible for conducting ex-post assessments of oil-funded expenditures. In **Timor-Leste,** a Petroleum Fund Consultative Council, made up of former government officials, provides opinions on major issues and acts as a medium of communication with the public. In **Mauritania**, the National Hydrocarbon Revenue Monitoring Committee, which is made of public officials, is responsible for estimating and monitoring the transfers from the oil fund to the TSA. **São Tome e Principe** has chosen to combine both options. On the one hand, it has created a joint government-civil society, the Petroleum Oversight Commission, which enjoys investigative, administrative, and judicatory powers. In addition, the oil account is subject to mandatory annual audits by an international accounting firm. Finally, the National Assembly conducts yearly public plenary sessions on oil sector issues.

The creation of separate oversight bodies may pose several challenges in LIRPCs. Their deliberations and advice to legislators, even if they do not have power of veto, would inevitably carry great weight. In fact, in countries with weak institutions, or where the State is only partially formed, separated oversight bodies could be perceived as a second "government" or "congress." Moreover, their existence may undermine the morale of existing oversight institutions and create further conflicts. Besides, in most LIRPCs, it can sometimes be difficult to find citizens with the appropriate skills and experience to place themselves in opposition to the government's decisions. For instance, in **Chad**, due to the lack of human and technical capacity, the *Collège*

has only implemented its oversight function sporadically, and overlapping with the *Cour de Comptes* (see Dabán and Lacoche, 2007).

Special legal frameworks

In some resource-producing countries, the management of resource revenues is regulated by the general budget legislation, which is usually complemented by additional legislation (e.g., Norway, Alaska) or by including special provisions in the fiscal responsibility legislation (e.g., Mexico, Ecuador). However, to counter the twin dangers of patronage and populist politics, some resource-producing countries have enshrined the management of resource revenues in the constitution, in an organic law, or in a special piece of legislation. Success stories include countries such as **São Tome e Principe, East Timor**, and **Mauritania**, which have enacted simple oil revenue management laws, adapted to their needs and capacities. However, the case of **Chad** is an illustration that excessive complexity and rigidity of the corresponding legal framework could jeopardize the success of an oil revenue management law (see Ossowski and others, 2008; and Dabán and Lacoche, 2007).

VI. A PFM Framework for Resource Revenue Management

On the basis of the previous analysis, this section proposes the adoption of a PFM framework for resource revenue management tailored to LIRPCs' reality. In defining such a PFM framework, the following two questions need to be considered: (i) what are the minimum requirements for a PFM framework to contribute to an efficient and transparent management of resource revenues?; and (ii) given LIRPC's weak PFM systems, what are the essential PFM reforms that are politically and technically feasible in a short period of time? With the purpose of better illustrating the design of the proposed PFM framework, this section will consider the case of a hypothetical resource-producing country X, which in year *t-2* knows it will receive an important amount of resource revenues starting in year *t* and beyond for a long-period of time (N years). There are eight PFM challenges that country X would face. These are successively examined in sub-sections A to H below.

A. How Should Countries Account for their Resource Reserves and Resource Revenues in the Budget Documents?

The challenges that country X would face include: (i) what should be the *definition and coverage of resource revenues*? (ii) how should the government account for its proven resource reserves and their depletion? and (iii) how should the government record *resource revenues* in the budget documents, as an *income* or as a *financing item*?

- ***The legal framework should include a broad definition and coverage of resource revenues.*** According to good practices,[11] the legal framework (such as the petroleum law, the contracts between the government and resource companies, the NRC legal framework, and the organic budget law) should cover all types of resource revenues, including royalties, taxes, bonus, dividends of the NRC, premiums, and in-kind revenues.[12] In addition, the legal framework should mandate that all resource revenues be

[11] IMF's *Guide on Resource Revenue Transparency.*

[12] The limited coverage of Chad's Petroleum Revenue Management Law (PRML) was one of the most important issue in the debate between Chad and the World Bank back in 2006. Strictly speaking the PRML only

(continued…)

included in the budget documents on a gross basis. If the coverage and definition of resource revenues in the legal framework is incomplete, it would be recommendable *in the short term* to introduce in the annual budget law (i) a comprehensive definition/list of resource revenues; and (ii) a mandate to include in the budget documents an estimation of all resource revenues. *In the medium term*, the legal framework, and especially the organic budget law, could be reformed to include a broad definition of resource revenues.

- ***The budget documents should include information on the resource reserves' contribution to the government net wealth.*** An appropriate accounting of resource reserves and their depletion is critical to assessing whether resource-producing countries are depleting their resource reserves in a sustainable way. The accounting of resource proven reserves could help put in perspective the volume of the country's resource wealth and deter over-expansive budgetary and borrowing policies, something that can be especially important in countries with a small and short-lived resource production. However, as shown in Box 1, the accounting of proven resource reserves poses huge information and technical challenges. One simple way of computing proven resource reserves *in the short run*, especially in LIRPC, could be to use the NPV of the resource revenues that are expected to be accrued in the future. Changes in the value of the reserves—due to changes in resource prices, resource production and extraction rates—will be reflected in changes in the NPV. Over the *medium to long term*, it would be recommendable to implement the measures needed to adopt international national accounting standards (as described in Box 4).

- ***The budget documents should make the resource revenues' contribution to financing the budget deficit explicit.*** The budget documents should make explicit: (i) the calculation of the nonresource deficit (NRD) as the difference between the nonresource revenues and all budgeted expenditures; (ii) the portion of resource revenues that will be used to finance the NRD; and (iii) the annual amounts of resource revenues that would be deposited in and withdrawn from the Treasury accounts. However, in some LIRPCs, politicians may be reluctant to center the budget debate on the concept of NRD. In addition, the usual inclusion of resource revenues in the revenue line of the budget, in line with GFS 2001 standards, may give rise to a surplus that may be difficult to justify from the political point of view. Under these circumstances, in LIRPC, it could be recommendable, *in the short term*, to explore the possibility of complementing the usual presentation of resource revenues in the budget with a below-the-line presentation. This complementary presentation, which will present resource revenues as a financing item, could help focus the attention on the NRD and on the exceptional and exhaustible nature of resource revenue (see Box 4 for a discussion).[13] Countries could continue to use the complementary presentation *in the medium term,* if need be, or focus

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covered the royalties derived from a sub-set of Chad oil fields (the Three-Fields in the Doha region). This shortcoming was partially overcome when the government agreed to extend de facto the PRML application to all oil fields. However, the limited PRML coverage posed serious problems when oil companies started to make sizeable tax payments, which were not covered by the PRML. See Dabán and Lacoche (2007) for a discussion.

[13] This recommendation has been followed by certain countries. For Timor-Leste see Daniel and others (2003). In the case of Chile, Kalter and others (2004) point out that the Copper Stabilization Fund was useful because of its special accounting regime, which allowed the government to avoid showing a surplus and therefore reduced political pressure for additional spending.

only on presenting the GFS 2001 table, as the public opinion and politicians become familiar with the NRD notion.

Box 4. The Presentation of Resource Revenues in Budget Documents

Country *X* in period *t*-2 learns that it will receive 300 and 400 monetary units (m.u.) in *t* and *t*+1 of resource revenues. With a discount rate of 10 percent, the NPV of future resource revenues will be 548, 603, and 364 m.u., respectively in *t*-2, *t*-1, and t. Resource revenues will be used to finance a moderate increase in expenditure, but the major part will be saved. Under GFS 2001, the NPV of expected resource revenues will be registered as part of the government's nonfinancial asset and resource revenues as an income. This would result in a large increase in the revenue profile and a huge overall surplus, which may not be easy to justify from the political point of view. This presentation could make it difficult to center the debate on the nonresource deficit (NRD). If considered as a financial item ("below the line"), the NPV of future resource revenues would be recorded as part of the government's financial assets. Under this alternative presentation the flow of resource revenues would be registered as the amortization of that financial asset. The profile of key fiscal variables, such as revenues and overall deficit are not altered compared to the pre-resource era. This presentation could help center the fiscal policy debate around the NRD.

Alternative ways of recording of resource revenues in the budget documents
(in units of the local currency of country X)

		As an income (GFS 2001)			*As a financial item*		
	t-2	***t-1***	***t***	***t+1***	***t-1***	***t***	***t+1***
				Balance Sheets (stocks)			
Non-financial assest	**548**	**603**	**379**	**30**	**0**	**15**	**30**
NPV of Resource Revenues	548	603	364	0	0	0	0
Infrastructure	0	0	15	30	0	15	30
Financial Assets	**...**	**...**	**285**	**699**	**603**	**649**	**699**
NPV of Resource Revenues	**...**	**...**	**...**	**...**	603	364	0
Accumulated Resource Deposits	...	...	285	699	**...**	285	699
+of which Resource Gross Inflow	...	...	300	400	**...**	300	400
+of which Resource Gross Outflo	...	...	-15	-15	**...**	-15	-15
Liabilities (Debt)	**50**	**70**	**95**	**125**	**70**	**95**	**125**
Net worth	**498**	**533**	**569**	**604**	**533**	**569**	**604**
				Fiscal Accounts (Flows)			
Total Revenues	**95**	**100**	**405**	**510**	**100**	**105**	**110**
Non-resource revenues	95	100	105	110	100	105	110
Resource revenues	0	0	300	400	0	0	0
Total Expenditures	**110**	**120**	**145**	**155**	**120**	**145**	**155**
+of which infrastructure	...	...	15	15	...	15	15
Non-resource balance	**-15**	**-20**	**-40**	**-45**	**-20**	**-40**	**-45**
Net lending (+)/borrowing(-)	**-15**	**-20**	**260**	**355**	**-20**	**-40**	**-45**
Financing	15	20	-260	-355	20	40	45
Non-resource financing	15	20	25	30	20	25	30
Resource-related financing	...	...	-285	-385	0	15	15
inflows	...	..	-300	-400	0	300	400
financing/accumulation	...	...	15	15	0	-285	-385

B. How Should Planning and Budgeting Practices be Enhanced to Cope With Large, Volatile and Exhaustible Resource Revenues?

Governments of resource-producing countries will need to: (i) formulate and assess *long-term projections of resource revenues*; (ii) outline a *long-term strategy* for the allocation of resource revenues among alternative uses; and (iii) design and implement *medium-term fiscal plans* conducive to achieving the country's long-term strategy.

- ***The budget documents should include a long-term assessment of resource revenues.*** This assessment should take into account the size of the resource proven reserves, costs of production, realistic projections for world prices, the extraction and depletion rates, and the fiscal regime of operators (including the NRC), with all the uncertainties attached to each of these items. They should be subject to regular sensitivity analysis and updates. In the case of an LIRPC, which may lack the technical and human capacity to develop such projections, it would be recommendable, *in the short run,* to formulate some rough aggregate long-term projections based on key parameters, some times taken directly from resource companies. *In the medium term,* governments would need to build capacity at the ministry of finance to formulate more sophisticated long-term resource projections.

- ***The government should formulate a long-term development/fiscal strategy.*** The strategy should assess the pros and cons of the alternative uses of resource revenues, including increasing expenditures, cutting taxes, paying back outstanding debts, and building resource savings. The strategy should include: (i) a prudent path of expenditure, with short-term adjustments due to cyclical variations; the possibility of a frontloaded expenditure path should be carefully assessed;[14] (ii) strong political commitment that resource savings will be used to finance future nonresource deficit; and (iii) a comprehensive asset strategy, including indicative targets for the government's net financial (e.g., resource savings) and physical wealth (e.g., stock of infrastructure); in LIRPCs the strategy would also target a gradual increase in nonresource revenues. In an LIRPC with elusive social cohesion, it would be recommendable to develop a *comprehensive long-term national development strategy*[15] based on a kind of social contract or consensus (a fiscal pact).

- ***The government should adopt medium-term fiscal plans.*** The long-term strategy would be implemented through the adoption of medium-term (three-year) fiscal/expenditure frameworks (MTFF/MTEF) (see Box 5 on international experience). The MTFF/MTEF would include (i) three-year rolling ceilings, for both the level of spending and NRD, consistent with the long-term fiscal strategy; (ii) the integration of the capital and recurrent spending paths; and (iii) the annual withdrawals of resource revenues from the Treasury accounts to finance the NRD. The MTFF/MTEF would be based on (i) the formulation of alternative scenarios; and (ii) the reconciliation of the spending ceilings set by the ministry of finance for each line ministry (*top-down approach*) and the spending paths that arise from considering the country's administrative capacity and most urgent social needs (*bottom-up approach*). The MTFF/MTEF would be updated each

[14] See Bevan (2005) and Adam (2005) for the advantages of focusing on high import content items and frontloading aid-financed spending in low-income countries.

[15] See Dabán and Lacoche (2007) for a proposal for Chad.

year just before the budget for the following year is drafted so that its allocations correspond to the first year of the rolling three-year spending ceiling. Given the LIRPC's weak capacity, *in the short term,* the MTFF/MTEF: could be very simple and include very aggregate estimates of government revenues and spending, the NRD, and the budget composition (capital, current and priority expenditure). *In the medium term*, reforms should aim at building capacity to ensure that the MTFF/MTEF becomes an efficient budget management tool, operational for the preparation of the budget.

- ***The medium-term fiscal plans would need to be fully integrated in the budget process, to ensure an appropriate management of volatile resource revenues.*** In many countries, poor integration of an MTEF with the annual budget process limits the usefulness of the medium-term framework. Particularly, the medium-term policy stance and outer-year projections in the MTEF often fail to guide the annual budget process. This disconnect limits the effectiveness of the medium-term framework in dealing with procyclical biases in the budget formulation. In this regard, a resource-rich country may consider adopting fiscal rules, by imposing a durable numerical constraint on the amount of nonresource deficit to be financed from resource revenues. This can be an effective tool to mitigate procyclical biases of fiscal policies in resource producing countries.

Box 5. Country Experience with MTFF/MTEFs in Resource-Producing Countries

A number of resource-producing countries are re-orienting their budget processes to lengthen the period covered by their fiscal frameworks. These reforms generally do not mean extending the legal appropriations beyond one year. Most include: a clear fiscal policy statement establishing a medium-term path for expenditure aggregates; medium-term macroeconomic forecasts; requirements for ministries to maintain budget estimates beyond the budget year and to explicitly cost new measures; and hard cash budget constraints for ministries.

In a number of cases, countries have introduced legislation on medium-term budgeting. In **Azerbaijan** the organic budget law requires the preparation of a budget for the upcoming year as well as for the three following years. The government prepares medium-term economic forecasts including the government priorities and the public investment plan, which are updated annually. In **Russia**, as of 2007, the parliament approves a full-fledged rolling three-**year** federal budget. The deficit should comply with a 2 percent of GDP rule when oil prices are lower than a threshold price, and a balanced-or-surplus rule when oil prices are above the threshold. **Timor-Leste** is also making efforts to include three-year budget projections in the budget documents.

Some countries have introduced fiscal responsibility laws (FRLs). Mexico's FRL, approved in March 2006, mandates the inclusion of five-year quantitative projections and costing for new fiscal measures in the budget documents. It also envisages a balance-or-surplus rule and the use of a reference oil price to smooth expenditures. With a view to addressing oil revenues' exhaustivity, **Ecuador**'s FRL, approved in 2002, requires a reduction in the NRD of the central government by at least 0.2 percent of GDP a year until the non-oil balance reaches zero.

C. How Should Resource Revenues be Integrated With the Rest of Treasury Operations?

According to best practices, resource revenues should be deposited in the TSA together with the rest of the government revenues. However, some countries may find it useful to create a separate Resource Revenue Account (RRA). The key questions to be considered in this section are: (i) what is the *rationale* for establishing a RRA?; (ii) if created, what should be the *status* of the

RRA?; (iii) where should it be *located*?; and (iv) how should the management of the RRA be integrated into the budget process?

- ***Some resource-producing countries may find it useful to set up a resource revenue account (RRA).*** In an LIRPC with weak treasury infrastructure and cash management, *in the short term*, it could be recommendable to set up an RRA in which to deposit all resource revenues and from which to withdraw the portion of resource revenues that will be used to finance the annual budget. The creation of the RRA could (i) help crystallize public support for building a resource buffer for the future; and (ii) provide an easy and transparent way to present and manage the stocks and flows of resource revenues. *In the medium term*, all resource revenues could be deposited in the TSA, as well as the rest of government revenues.

- ***If created, the RRA should preferably be established as an account.*** Some resource-producing countries have established an RRA as a separate institution with separate legal personality. The main argument for the creation of a separate institution is to protect resource savings from vested interests. Another argument is that the separate institutions could help promote budget reforms, by adopting appropriate budgetary mechanisms and putting them to work in a highly visible manner. However, country experience shows that, in absence of strong institutional frameworks, resource funds created as separate institutions may lead to an excessive concentration of power, the fragmentation of the budget process, and even discourage reform efforts in existing budgetary institutions (see Humphreys and Sandbu, 2007, and discussion in Section V).

- ***The location and status of the RRA should be determined according to the volume, main expected use, and time horizon of the resource savings.*** *In the case of small-to-moderate resource deposits*, which the authorities expect to use in the short to medium term, and mainly on domestic transactions, the RRA could be a domestic currency-denominated account at the central bank. *In the case of large resource deposits*, which the authorities expect to use in the long run, it would be advisable to maintain the RRA as a foreign-currency denominated off-shore account. An off-shore account could (i) help curb the pressures on the government to use the resource revenues to provide guarantee or lending in favor of certain vested domestic interests; and (ii) dampen the volatility of the real exchange rate by holding resource revenues and savings abroad.

- ***The RRA's inflows and outflows of resource revenues should be coherently integrated into the budget process.*** This is best achieved by having the RRA serve as both a "checking" and "savings" account for the budget. Under this formula, and in the short term, countries should establish a system according to which: (i) all resource revenues will be deposited in the RRA; (ii) annual withdrawals from the RRA will be determined in the annual budget law and aimed at financing the nonresource deficit; and (iii) the authorization of larger-than-budgeted withdrawals from the RRA will be subject to transparent and stringent conditions, at least equal to those contemplated in the budget law to alter budget appropriations, to ensure accountability and prevent misuse. *In the medium term*, resource-producing countries will also need to develop an integrated asset-liability management strategy, which would also cover the management of the balance of the RRA (see sub-section E).

D. How Should Resource Revenues be Handled in the Budget Execution Process?

In theory, resource revenues should be handled in the budget execution process as the rest of government revenues. However, resource revenues may create great pressures to either increase spending above the budget appropriations or divert the use of resource revenues to nonpriority spending. The key questions are: (i) how to ensure that budget appropriations and the annual withdrawals from the RRA are not surpassed?; (ii) how to establish a well-designed mechanism to amend the budget, in case such mechanism does not exist?; and (iii) how to enhance the tracking of spending execution?

- ***The government should enhance expenditure controls to prevent budget overruns.*** The main challenge in resource-producing countries is how to combat pressures to increase the annual withdrawal from the RRA above the level originally budgeted. The budget annual law should clearly establish that the annual withdrawal from the RRA should not exceed the amount explicitly authorized for this purpose in the budget law. To facilitate enforcement of this provision it would be critical to (i) ensure that there is a strong political commitment to the approved budget and that the ministry of finance has the powers and responsibilities within the cabinet to enforce it; (ii) avoid surprises, and last minute requests, by formulating—and regularly updating— prudent and sound commitment plans, in coordination with line ministries; and (iii) enhance the accounting, reporting and internal control systems. As these are reforms that may take time to implement, LIRPC should focus *in the short-term* on implementing prudent commitment plans, at least for main line spending ministries, and to put in place a well-defined reporting system. *In the medium-term,* internal controls could be upgraded and the budget legislation reformed, to reinforce the prerogatives of the ministry of finance vis-à-vis line ministries.

- ***The government should establish a well-designed mechanism for the orderly amendment of the budget.*** According to good practices, the government should conduct a mid-year review of budget execution. In the case of an important shortfall in financing resources (in resource revenues, nonresource revenues, or budget support, among others) or an increase in expenditures beyond the authorities' control, the government should assess the following courses of action: (i) seeking additional financing, without undermining the sustainability of the government's net financial position; (ii) reducing/ reallocating some budget allocations or/and increasing nonresource revenues; and (iii) requesting from congress the authorization for a higher-than-budgeted withdrawal from the RRA. To ensure this practice is followed in LIRPC, *in the short term,* the government could issue a political commitment stating that the budget, and the withdrawals from the RRA, will be amended in an orderly and transparent way. *In the medium term,* the budget legislation should be reformed to ensure it includes a well-established mechanism to amend the budget.

- ***The government should adopt a system to track spending execution.*** In some resource-producing countries, the establishment of earmarking provisions, separate special accounts, and special budgetary bodies (e.g., the "*Collège*" in Chad) is justified by the usual budgetary procedures' lack of reliability, and especially by the lack of a credible system to track spending execution. However, as discussed in Section V, such "parallel" mechanisms may hamper the implementation of a unified budget and liquidity management. They may also undermine the efficiency of government spending, by discouraging competition for resources within the budget process. To discourage

pressures to adopt "parallel" budget execution mechanisms, LIRPCs should adopt, *as quickly as possible,* an interim system, based on a simple set of codes, to track expenditures from commitment to payment. *Over the medium term,* they should adopt a sound budget and accounting classification system and a well-defined reporting system.

E. How Would Asset Management Practices Need to be Adapted and Strengthened?

If the budget has been executed in line with original estimates, country X of our example would have accumulated some resource deposits in the RRA at the end of the fiscal year. The main questions that now arise are: (i) what should be the criteria for investing the balance of the RRA; (ii) what are the advantages and challenges of creating a separate Investment Committee?; (iii) which institution should be in charge of managing the RRA's balance?; and (iv) how to ensure that the RRA is managed in an integrated way with the rest of the government's assets and liabilities?

- ***The criteria for investing the balance of the RRA are determined according to the volume, main expected use, and time horizon of resource savings.*** *In the case of small-to-moderate resource deposits,* which the authorities expect to use in the short to medium term, there may not be need for an investment policy other than holding the RRA's balance in a domestic currency-denominated account at the central bank and conducting unsophisticated and limited investment operations. However, *the accumulation of large resource deposits,* preferably in an offshore account, which the authorities expect to use in the long run, could call for the design of a more sophisticated investment strategy.[16] The strategy could (i) be return-driven, yet conservative, with prudent provisions for diversification of risks and liquidity; (ii) preferably focus on offshore operations, which could help curb the pressures on the government to favor certain vested interests; and (iii) not be used to lend or provide guarantees that may put the resource-related deposits at risk. Especially in LIRPCs, it would be advisable to invest the RRA abroad, in foreign currency-denominated instruments, as the domestic economy will be unable to absorb investments of large magnitude.

- ***With the accumulation of large resource deposits, resource-producing countries may want to create a separate Investment Committee.*** In general, the responsibility of designing the investment strategy of government assets, including the RRA, should lie with the ministry of finance. However, many resource-producing countries have created specific separate institutions, usually called Investment Committees, with the purpose of adding an extra layer of independent control. The Investment Committee would advise the minister of finance on the liquidity requirements of the RRA in light of the annual budget and the MTFF. According to good practices, the Committee would include representatives of the central bank, the ministry of finance, a few members from nongovernment sectors qualified in finance or economics, and one member with experience in the international financial investment field. The Committee should not have direct investment responsibilities, which would remain with the financial agent of the Treasury (e.g., central bank, or an international financial institution). Each resource-

[16] Under this scenario the resource fund could qualify as a Sovereign Wealth Fund (SWF). The government could adhere to the Santiago Principles on the Management of SWFs, which have been proposed by the IMF-sponsored International Working Group. According to these principles, compliant SWFs commit themselves to contribute to the stability of the global financial system.

producing country should decide on the creation of an Investment Committee according to its capacities and the amounts to be invested. In LIRPCs it may sometimes be difficult to find enough people to staff these committees, which may end up not being able to provide the ministry of finance with an independent and nonpartisan opinion. An alternative could be that the financial agent of the Treasury (e.g., central bank or an international financial institution) act at the same time as an investment advisor to the ministry of finance.

- ***The designation of the financial institution in charge of the operational management of the RRA will depend on local capacity and the volume to be invested.*** *In the case of small-to-moderate resource deposits,* which the authorities expect to use in the short to-medium term, the management of the RRA could be outsourced to the central bank, under a well-designed protocol. *In the case of large resource deposits,* which are maintained in a foreign-currency denominated offshore account, the Treasury could either rely on the central bank (e.g., Norway), or instead contract the services of a major international financial institution (e.g. Sao Tome e Principe). Outsourcing would be especially advisable in the case of an LIRPC. The international financial institution should be selected in a competitive open tender.

- ***The management of the balance of the RRA should be integrated into the government asset-liability strategy.*** The balance sheet of the RRA should be consolidated with other government financial operations into a statement of assets and liabilities that is audited and presented annually to the legislative branch. This statement could include information on public debt and the asset and liability positions of the NRC, if it exists. A key objective of the statement would be to present an estimate of the *government's net financial wealth* and permit congress, and the public at large, to review the *net saving* resulting from the operations of the RRA, when consolidated with other government financial operations. In LIRPCs, this integrated statement could help appease the resource euphoria and assess the government's borrowing policy.

F. How to Enhance the Accountability and Transparency of Government Operations?

Regarding transparency and accountability, the key questions are the following: (i) how to enhance the transparency and political legitimacy of the budget documents; (ii) how to enhance the reporting of the operations of the RRA; and (iii) what are the advantages and challenges of creating special separate oversight boards?

- ***All payments of resource revenues to the government, including by the NRC, should be as transparent as possible.*** This has been the focus of the Extractive Industry Transparency Initiative (EITI) and the Fund's Guide on Resource Revenue Transparency (see Box 6). However, full participation to these initiatives or adherence to these principles could take time and require complex organizational arrangements. *In the short term* LIRPCs could mandate that a unit at the ministry of finance be in charge of collecting, reconciling and disseminating the information on the payments of resource revenues by resource companies. *Over the medium term,* LIRPCs could aim at becoming full members of the EITI.

- ***The government should enhance the political legitimacy and transparency of the budget.*** *In the short run,* this can be done by expanding the content of the budget documents to include, aside from annual budget estimates, the long-term resource

revenue projections, the MTFF/MTEF, a detailed explanation of the long-term fiscal strategy and its assessment, an estimation of the government's nonresource sources of financing, and the share of budget appropriations allocated to priority spending. In addition, resource-producing countries should ensure that draft budgets are made publicly available and openly discussed in the legislature before the final vote. *Over the medium term,* the organic budget law could be amended to ensure this is done on a routine basis.

- ***The RRA's operations could be subjected to special reporting mechanisms.*** The success of the RRA—in terms of both actual financial returns and public perception—will depend in part on the transparency of its operations. Therefore, it would be advisable to establish specific reporting mechanisms. One critical element of such mechanisms would include (see Table 2) the production and dissemination of an audited Annual Report on the Operations of the RRA. The report would comprise: (i) a letter/report signed by the minister of finance describing the year's activities and drawing attention to particular matters of interest; (ii) the overall position of the RRA, comprising an inflow and outflow statement and a balance sheet presentation; (iii) the overall annual return on the assets of the RRA (at market value and in real terms), including prior year comparisons; and (iv) a statement by the external auditors on the RRA.

Box 6. Country Experience with Enhancement of the Transparency of Resource Revenues

In the last decade, a powerful movement has emerged to advocate the transparency of the payments of resource revenues made by resource companies to governments. Main initiatives include:

(i) the **Publish What you Pay campaign** launched by Global Witness, OSI, Save the Children UK, and Transparency International UK, which mainly seeks to persuade resource companies to publish data on how much they actually pay to host countries;

(ii) the **Extractive Industries Transparency Initiative (EITI)**, which provides countries and resource companies with guidelines for reporting all material payments made by resource companies to the government and all material revenues received by governments, and for aggregation and analysis of the data by an independent third party;

(iv) the **Revenue Watch Institute (www.revenuewatch.org),** sponsored by the Hewlett Foundation, whose efforts focus on equipping citizens with the information, training, networks, and funding they need to become more effective monitors of government revenues and expenditures;

(iv) the **International Monetary Fund's Guide on Resource Revenue Transparency**, which since its inception in 2005, has become a major reference source for civil society organizations and governments in resource abundant countries;

(v) the **World Bank-supported EITI++ Initiative**, which is based on a new holistic approach, also referred as "the value chain approach." The EITI++ Initiative aims at promoting a transparent sale of resource rights; a rigorous regulatory regime; a tax regime free of corruption; sound macroeconomic management; and a policy framework to ensure that natural resource revenues are effectively used to support sustainable growth and poverty reduction.

- ***The RRA's operations could be subjected to special oversight mechanisms.*** To the extend that a public sector's body has the power and responsibility to audit the State's accounts, such an institution—the Supreme Audit Institution— should be in charge of auditing the activities of the RRA. However, in LIRPCs or countries with weak institutional frameworks, the audit of the RRA could also be conducted by an

independent external auditor of international reputation. The audits would include audited and reconciled data on resource revenues, production, sales, and prices. Furthermore, the government should disseminate the RRA's audits and make an explicit commitment to implement a plan of corrective actions to address detected irregularities. The plan could be made public together with the draft budget law. The ministry of finance would also report on progress made on addressing irregularities reported in previous fiscal years.

Table 2. Best Practices on Transparency and Accountability of the Operations of the RRA

Government	Investment Manager	Audit Body
1. The annual budget law should contain three-year forward estimates of the Treasury's expected withdrawals from the RRA for NRD financing purposes, plus actual historical data on the previous two years.	1. The Investment Manager (e.g., ministry of finance, Investment Committee, etc) shall report quarterly on the financial operations of the RRA, drawing where necessary on reports of the delegated manager(s) of the RRA (e.g., central bank, an international financial institution).	1. The concerned audit body (e.g., the Supreme Audit Institution, an international audit firm, etc.) should audit the RRA at least semiannually and should submit its reports to the minister of finance.
2. The annual budget law and the audited annual Final Accounts should contain a Statement of Assets and Liabilities that includes the assets held in the RRA.	2. The Investment Manager should, in consultation with the ministry of finance, prepare an annual Business Plan by 30 June setting out the proposed investment strategy for the RRA, including proposed risk management strategy.	2. The minister of finance may request the concerned audit body to audit the operations of the RRA at any time.
3. An externally audited Annual Report of the RRA should be prepared by the ministry of finance and presented to congress in conjunction with the Final Accounts. Quarterly reports on financial operations of the RRA should be produced and disseminated.	3. The Investment Manager should include accounts and reporting relating to the RRA in its Annual Report, so far as this is appropriate to its role in the custody and/or management of assets held in the RRA.	3. Congress would have the authority to request the minister of finance to prepare a special report on the operations of the RRA at any time.

- ***Giving the significance of resource revenues, resource-producing countries may create special oversight boards.*** An additional oversight body could: (i) help counterbalance conflicting political interests, by broadening society's participation in the decision-making process (e.g., by allowing for consultation of civil society, eminent citizens, etc.); (ii) improve transparency and promote public debate on resource issues; and (iii) build up trust in the government's determination to scrutinize any critical issue or doubt. Given the limitations of their Supreme Audit Institutions, LIRPCs could explore the possibility of creating an additional oversight body. However, the creation of separate oversight bodies could pose several challenges, especially in LIRPCs, as mentioned in Section V. In the medium to long term, countries should strengthen their Supreme Audit Institutions.

G. How Should the Management of Resource Revenues be Reflected in the Legal Framework?

The questions that arise in this area are; (i) is there a need for a special resource revenue management law?; (ii) if so, how should such a law be discussed and drafted?; and (iii) what should be the content of a well-designed resource revenue management law?

- ***The institutional and legal provisions recommended previously could be reflected in the country PFM legal framework.*** It may suffice to reflect these provisions in a high-ranking piece of legislation, such as organic budget laws, which can be altered only under special majorities in congress. The use of a high-ranking piece of legislation could help provide stability to the legal framework governing the management of resource revenues. Although any high-ranking piece of legislation can be always overturned, the act of doing so is unlikely to be casual and ill-considered.
- ***If finally adopted, a resource revenue management law must be based on strong ownership and broad consensus.*** In addition, the law should be drafted in line with the parameters of the local legal system and be integrated with existing expenditure regulations, limitations, and laws that govern budget processes.
- ***Resource revenue management laws should be simple and customized to countries' PFM systems.*** Drafters should be careful to avoid excessive complexity. Particularly in LIRPCs, it is important the law specifies, according to clear rules, the responsibilities of each entity. In addition, the law should avoid duplications. It should not regulate subjects that might be already addressed in other legislation and regulations, such as public procurement, public information, disclosure, conflicts of interest, and judicial review.

H. How to Sequence the Implementation of PFM Reforms in Resource-Producing Countries?

The questions that arise in this section are: (i) what is the sequenced path of PFM reforms needed for adopting the proposed PFM framework for resource-producing countries?; and (ii) what reforms should an LIRPC with weak PFM systems implement in the short term, and what reforms should be envisaged for the medium term?

- ***In the short term, reforms should focus on adopting basic PFM tools (see Table 3).*** Reforms should focus on (i) including a comprehensive definition and long-term projection of resource revenues in the budget documents, as well as an estimation of the nonresource deficit; (ii) adopting a MTFF and introducing a simple code to track the execution of priority spending; (iii) setting up an RRA, fully integrated with the budget process; (iv) formulating commitment plans and a simple investment strategy for the RRA; and (v) creating a special unit at the ministry of finance to reconcile and disseminate information on resource revenues. These reforms could be introduced in the annual budget law.
- ***Over the medium term, reforms should aim at making the LIRPC's PFM systems converge with best international practices (see Table 3).*** Reform would focus on (i) building capacity on formulating long-term alternative scenarios and sensitivity analysis for resource revenues, adopting a long-term fiscal strategy, an MTEF, and well-defined budget classifications; (ii) strengthening the central bank's capacity to manage the government's resource deposits in the TSA, and developing an integrated asset-

liability strategy for the government; (iii) developing a more sophisticated return-driven investment strategy for the resource savings; (iv) adopting special reporting mechanisms for resource-revenue-related operations; and (v) strengthening the Supreme Audit Institution to oversee resource revenue operations, or eventually creating a special oversight institutions. These reforms would require reforming the general budget law.

Table 3. Sequencing of PFM Reforms for Resource-Producing Countries

	Short term	Medium term
Budget presentation	Include in the budget law (i) a comprehensive definition and sound projections of resource revenues; and (ii) an estimation of the nonresource deficit and contribution of resource revenues to finance it. The budget law may present resource revenues as a financing item.	Reform of the general budget law.
Planning and Budgeting	Formulate rough long-term resource projections based on resource companies' inputs and an aggregate MTFF. Adopt a code to monitor the execution of priority programs.	Build capacity on long-term resource projections; adopt a long-term fiscal strategy, an MTEF and a well-defined budget classification.
RRA	Set up a RRA fully integrated in the budget process; if resource deposits are large in size, they shall be managed by international financial institutions and deposited offshore.	Deposit all resource revenues in the TSA. Strengthen central bank's capacity to manage resource deposits. Develop an integrated asset-liability strategy.
Budget Execution	Formulate commitment plans and an interim reporting and tracking system; political commitment to amend the budget in an orderly way.	Reinforce ministry of finance's prerogatives within the cabinet. Reform the general budget law.
Asset Management	Adopt a simple investment strategy for the RRA.	Develop a more sophisticated return-driven investment portfolio. Explore setting up an investment committee.
Oversight and Transparency	Establish a special unit at the ministry of finance to reconcile and disseminate resource revenue information; strengthen the content of budget documents; commission external audits of the RRA by an independent firm.	Reform of the organic budget law to establish a special reporting mechanism for resource-revenue-related operations; exploring setting a special oversight institution; strengthen the Supreme Audit Institution.
Legal Framework	Relay on the annual budget law and other pieces of legislation, if possible.	Adopt a simple resource revenue management law based on a broad consensus.

VII. Summary and Conclusions

This paper outlines a PFM framework for resource-producing countries, which, while drawing on good international practices, takes into account the large diversity of resource-producing countries and incorporates the PFM weaknesses of LIRPCs. The development of such a PFM framework is warranted for three related reasons.

First, the management of resource revenues poses particular challenges when compared to other government revenues, the "resource curse." Some of the challenges derive from the macroeconomic and budgetary difficulties of managing large and volatile resource revenues. Yet other challenges derive from the way in which resource revenues are generated. As they derive usually from depleting an exhaustible asset, the "resource in the ground," and can be generated without the scrutiny of taxpayers, donors, and lenders, the management of resource revenues poses important intergenerational, political economy, and governance challenges.

Second, country experience shows that only those resource-producing countries with a sound institutional framework and a robust PFM system have managed to escape the resource curse. This experience proves that the resource curse is not an "iron law" (Auty, 1994), but a disease that can be prevented. It also shows that resource-producing countries need to gear their institutional systems toward the successful implementation of policy prescriptions to combat the resource curse. These prescriptions include the implementation of prudent macroeconomic policies, the adoption of a sound strategy to promote development and economic diversification, and the enhancement of the country's PFM framework.

Another reason to define a specific PFM framework for resource revenues is the existing wide diversity of resource-producing countries. Country experience shows that success in preventing the resource curse depends on countries' preexisting conditions and institutions before the resource revenues come on-stream. In fact, most developed resource-producing countries have a quite diversified economy and a sound governance system prior to the resource era. Therefore, they are better equipped to prevent the resource curse. However, LIRPCs usually have unfavorable preexisting institutional and economic conditions and are more prone to fail at preventing the resource curse. Against this backdrop, the design of a PFM framework for resource revenues needs to be tailored to countries' specific institutional and political economy circumstances.

The paper also overviews cross-country experience with the design and implementation of special operational mechanisms for the management of resource revenues. The most used operational mechanisms include special arrangements for the allocation and use of resource revenues, the creation of resource funds, the adoption of parallel budgetary and treasury procedures, the creation of separate investment committees and oversight institutions, and the enactment of special legal frameworks. Three rationales are usually put forward to justify the adoption of these special mechanisms: (i) the convenience of crystallizing public support for the government's management of resource revenues, even in countries with an acceptable institutional framework; (ii) the need to overcome the weaknesses of the existing PFM system, by implementing quickly certain special operational mechanisms, given that PFM reforms are likely to take time; and (iii) the expediency of carving out a space within the public sector in which the appropriate budgetary mechanisms and transparency standards can be put to work in a highly visible. The objective is to start PFM reforms in a stand-alone separate body or procedure, instead of reforming the whole system.

Drawing on country experience, the paper shows that in a few cases the adoption of special operational mechanisms for the management of resource revenue has been successful. However, it also shows that the design and implementation of these operational mechanisms pose significant challenges to LIRPCs. For instance, earmarking mechanisms, when designed and implemented in a very rigid way, have sometimes hampered the implementation of unified budget and liquidity management. They have also eroded the competition for resources within the budget, affected the efficiency of government spending, and led to the fragmentation and delay of the budget process, especially in countries with poor sharing-information practices. In some other cases, the establishment of separate investment committee and oversight bodies has resulted in high administrative costs, reflecting the differentiated, expensive, and sometime privileged bureaucracy of the separate bodies. In addition, in LIRPC it could be difficult to find enough qualified people to staff these committees, which may end up not being independent and accumulating a lot of power. Moreover, if they are not well designed, the existence of separate budgetary bodies in LIRPCs could erode incentives for reforming existing budgetary institutions and building an efficient and merit-based civil service.

Against this background, this paper outlines a PFM framework and reform path for the management of resource revenues that takes into account the institutional diversity of resource-producing countries, and specifically the special challenges that resource revenues pose to LIRPC. The proposed PFM system would include: (i) a transparent and comprehensive presentation of resource revenue in the budget—emphasizing the role of the nonresource deficit; (ii) a set of sound long-term projections, a sustainable long-term fiscal strategy, realistic medium-term fiscal frameworks, and a set of well-defined budget classification; (iii) a system of flexible and transparent transfers from the treasury accounts to finance the nonresource budget deficit; (iv) the development of an unified budget execution process, avoiding rigid earmarking mechanisms; (v) sound cash flow management, based on a simple and integrated banking circuit and a TSA; (vi) sound and integrated asset-liability management; and (vii) enhanced accountability and transparency mechanisms. In addition, the paper outlines the adoption of a sequenced path of PFM reforms which focuses in the short term on tools that could be implemented even in countries where PFM is rather basic, while over the medium and long term aim at converging with best—and more sophisticated— international practices.

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